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REGULATIONS

FOR

INTERNAL STUDENTS

FOR THE SESSION

1950—51



PUBLISHED FOR THE UNIVERSITY OF LONDON

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Academic Diploma in Theology 1882
Academic Diploma in Town Planning and Civic Architecture 1887
Academic Diploma in Town Planning and Civic Engineering 1888
Academic Postgraduate Certificate and Diploma in Tropical Medicine and Hygiene 1890

UNIVERSITY OF LONDON

PRELIMINARY INFORMATION FOR INTERNAL STUDENTS

Session 1950-51

The teaching work of the University is carried on in its Schools and Institutions and a list of these, with their present addresses, is appended. Fuller information regarding these Schools and Institutions will be found in the pamphlet entitled " General Information for Internal Students " which may be obtained on application to the Academic Registrar, Senate House, University of London, W.C.1.

Application for admission *must be addressed direct to the authorities of the School or Institution at which the student wishes to attend.*

Possession of a Matriculation Certificate or of a General Certificate of Education does not in itself entitle any student to admission. The appropriate application form and particulars regarding tuition fees, scholarships and residential accommodation must be obtained from the authorities of the relevant School or Institution.

The courses for University Degrees and Diplomas begin in October, and it is advisable to apply for admission *at least six months* beforehand. As a general rule men are not admitted under the age of 17 nor women under the age of 18. Students living abroad are strongly advised to make sure that they can be admitted before coming to this country.

Courses for Degrees are held at the following :—

Theology :—King's College Theological Department, New College, Richmond College, St. John's Hall.

Arts :—Courtauld Institute of Art, School of Slavonic and East European Studies, Bedford College (for women), Birkbeck College (for part-time students), King's College, London School of Economics (*Anthropology, History, Geography* and *Sociology* only), Queen Mary College, Royal Holloway College (for women), School of Oriental and African Studies, University College, Westfield College (for women), Goldsmiths' College, Jews' College.

Architecture :—University College.

Laws :—King's College, London School of Economics, School of Oriental and African Studies, University College.

Music :—Battersea Polytechnic, Royal Academy of Music, Royal College of Music, Trinity College of Music.

Medicine :—Guy's Hospital Medical School, Middlesex Hospital Medical School, Royal Free Hospital School of Medicine, St. Bartholomew's Hospital Medical College, St. Mary's Hospital Medical School, St. Thomas's Hospital Medical School, and, with the exception of the first year, Charing Cross Hospital Medical School and the London Hospital Medical College. Courses for the First and Second Examinations for Medical Degrees are provided at King's College and University College ; students from King's College attend the clinical course at King's College Hospital Medical School, St. George's Hospital Medical School or Westminster Medical School; students from University College attend the clinical course at University College Hospital Medical School. Courses for the First Examination for Medical Degrees are also held at Queen Mary College, Chelsea Polytechnic and Northern Polytechnic.

Dental Surgery :—Guy's Hospital Medical School, King's College Hospital Medical School, London Hospital Medical College, Royal Dental Hospital of London School of Dental Surgery, University College Hospital Medical School.

Pharmacy :—School of Pharmacy, Chelsea Polytechnic.

Postgraduate :—British Postgraduate Medical Federation, London School of Hygiene and Tropical Medicine, Lister Institute of Preventive Medicine, Royal Cancer Hospital.

Science :—Bedford College (for women), Birkbeck College (for part-time students), Imperial College of Science and Technology, King's College, Queen Mary College, Royal Holloway College (for women), University College, London School of Hygiene and Tropical Medicine, Battersea Polytechnic, Chelsea Polytechnic, Northern Polytechnic, Sir John Cass College, West Ham Municipal College, Woolwich Polytechnic.

Agriculture and Horticulture :—Wye College.

Household and Social Science :—King's College of Household and Social Science (for women).

Veterinary Science :—Royal Veterinary College.

Engineering :—Imperial College of Science and Technology, King's College, Queen Mary College, University College, Battersea Polytechnic, Northampton Polytechnic, West Ham Municipal College, Woolwich Polytechnic.

Economics :—London School of Economics and University College.

Estate Management :—College of Estate Management.

Postgraduate Courses for the Postgraduate Certificate in Education are held at the Institute of Education, King's College and Goldsmiths' College.

UNIVERSITY DEPARTMENTS

Brown Animal Sanatory Institution	*Closed*
Courtauld Institute of Art	20 Portman Square, W.1
Institute of Advanced Legal Studies	25 Russell Square, W.C.1
Institute of Archæology	Inner Circle, Regent's Park, N.W.1
Institute of Commonwealth Studies	27 Russell Square, W.C.1
Institute of Education	Malet Street, W.C.1
Institute of Germanic Languages and Literatures	26 Russell Square, W.C.1
Institute of Historical Research	University of London, W.C.1
School of Slavonic and East European Studies	University of London, W.C.1
University Observatory	Mill Hill Park, N.W.7
Warburg Institute	Imperial Institute Buildings, South Kensington, S.W.7

SCHOOLS OF THE UNIVERSITY

Schools in receipt of U.G.C. Grants

(a) Non-Medical

Bedford College	Regent's Park, N.W.1
Birkbeck College [evening courses]	Breams Buildings, Fetter Lane, E.C.4
Imperial College of Science and Technology	Prince Consort Road, South Kensington, S.W.7

King's College	Strand, W.C.2
King's College of Household and Social Science	Campden Hill Road, W.8
London School of Economics and Political Science	Houghton Street, Aldwych, W.C.2
Queen Mary College	Mile End Road, E.1
Royal Holloway College	Englefield Green, Surrey
Royal Veterinary College	Royal College Street, N.W.1
School of Oriental and African Studies	University of London, W.C.1
School of Pharmacy	17 Bloomsbury Square, W.C.1
University College	Gower Street, W.C.1
Westfield College	Kidderpore Avenue, N.W.3
Wye College	Wye, near Ashford, Kent

(b) Undergraduate Medical and Dental

Charing Cross Hospital Medical School	Chandos Place, Charing Cross, W.C.2
Guy's Hospital Medical School	St. Thomas' Street, S.E.1
King's College Hospital Medical School	Denmark Hill, S.E.5
London Hospital Medical College	Turner Street, E.1
Middlesex Hospital Medical School	Mortimer Street, W.1
Royal Dental Hospital of London School of Dental Surgery	32 Leicester Square, W.C.2
Royal Free Hospital School of Medicine	8 Hunter Street, Brunswick Square, W.C.1
St. Bartholomew's Hospital Medical College	West Smithfield, E.C.1
St. George's Hospital Medical School	Hyde Park Corner, S.W.1
St. Mary's Hospital Medical School	Norfolk Place, Paddington, W.2
St. Thomas's Hospital Medical School	Albert Embankment, S.E.1
University College Hospital Medical School	University Street, W.C.1
Westminster Medical School	Horseferry Road, Westminster, S.W.1

(c) Postgraduate Medical

British Postgraduate Medical Federation	2–4 Gordon Square, W.C.1
Postgraduate Medical School of London	Ducane Road, Shepherd's Bush, W.12
Institute of Psychiatry	Denmark Hill, S.E.5
Institute of Child Health	Hospital for Sick Children, Gt. Ormond Street, W.C.1
Institute of Ophthalmology	Judd Street, W.C.1
Institute of Laryngology and Otology	330–332 Gray's Inn Road, W.C.1
Institute of Obstetrics and Gynaecology	The Chelsea Hospital for Women, Dovehouse Street, S.W.3
Institute of Neurology	The National Hospital, Queen Square, W.C.1

London School of Hygiene and Tropical Medicine	Keppel Street, W.C.1

Schools not in receipt of U.G.C. Grants

King's College: Theological Department	Strand, W.C.2
New College	527 Finchley Road, N.W.3
Richmond College	Richmond, Surrey
St. John's Hall	Ford Manor, Lingfield, Surrey
Lister Institute of Preventive Medicine	Chelsea Bridge Road, S.W.1
Royal Cancer Hospital	Fulham Road, S.W.3

INSTITUTIONS HAVING RECOGNISED TEACHERS

University of London: Goldsmiths' College	Lewisham Way, New Cross, S.E.14
Battersea Polytechnic	Battersea Park Road, S.W.11
Chelsea Polytechnic	Manresa Road, S.W.3
College of Estate Management	St. Alban's Grove, W.8
East Malling Research Station	East Malling, near Maidstone, Kent
Jews' College	Woburn House, Tavistock Square, W.C.1
John Innes Horticultural Institution	Bayfordbury, Hertford, Herts
Maria Grey Training College	11 The Avenue, N.W.6
National Institute for Medical Research	The Ridgeway, Mill Hill, N.W.7
Northampton Polytechnic	St. John Street, E.C.1
Northern Polytechnic	Holloway Road, N.7
Rothamsted Experimental Station	Harpenden, Herts
Royal Academy of Music	Marylebone Road, N.W.1
Royal College of Music	Prince Consort Road, S.W.7
Royal Institution	20–21 Albemarle Street, W.1
Sir John Cass College	Jewry Street, Aldgate, E.C.3
Trinity College of Music	Mandeville Place, W.1
West Ham Municipal College	Romford Road, E.15
Woolwich Polytechnic	Thomas Street, S.E.18

Lodgings Bureau	28 Woburn Square, W.C.1 [Museum 2818]
University Union	30–31 Woburn Square, W.C.1

UNIVERSITY OF LONDON

GENERAL REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

1. Matriculation

A student may matriculate in the University either :—

(i) By passing the Matriculation Examination of the University of London, or

(ii) By passing the Special University Entrance Examination of the University of London, or

(iii) By satisfying the conditions for Matriculation at the General School Examination, or

(iv) By obtaining exemption from the Matriculation Examination in view of his holding some other qualification accepted for the purpose by the University of London.

The terms " matriculation " and " matriculate " in these regulations apply to any one of these four means of matriculating.

[*Note.*—The present Matriculation Examination will be held for the last time in June, 1951. In and after 1951 the Examination for the General Certificate of Education will be conducted by the University in secondary schools in place of the present General and Higher School Certificate Examinations. It will be possible for candidates who pass this new Examination to satisfy the minimum entrance requirements of the University.]

All Internal Students who wish to proceed to a Degree of the University must matriculate. Internal Diploma Students need not matriculate unless the regulations for the particular Diploma for which they wish to study require it. Internal Research Students, under section 2 (5) below, need not matriculate.

Enquiries with regard to Matriculation should be addressed to the Secretary to the Matriculation and School Examinations Council, University of London, The Senate House, W.C.1.

Applications for exemption from the Matriculation Examination must be accompanied by the proper fee (3 guineas or, in the case of Advanced and Postgraduate Students, 5 guineas) and official documentary evidence of qualification in accordance with the regulations. Cheques must be made payable to the University of London, or Bearer and crossed Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account. The fee and evidence must be forwarded together by registered post, and addressed to The Cashier, University of London, The Senate House, W.C.1.

2. Admission of Students

Internal Students are admitted in one or other of the following classes :—

(1) Undergraduates, registered in accordance with the following conditions :—

(i) as matriculated, and

(ii) as pursuing an approved course of study for a first degree of the University in a School of the University or under Recognised Teachers.

[For *General Regulations for Approved Courses of Study*, see p. 6]

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(2) Advanced Students registered in accordance with the following conditions :—

(i) as having passed (*a*) the examinations required for an Internal or an External degree of the University, or (*b*) approved examinations required for a degree in another university ; and

(ii) as matriculated ; and

(iii) as pursuing an approved course of study in a School of the University or under Recognised Teachers for a first or bachelor's degree of the University.

[For *Regulations for Advanced Students*, see p. 14]

(3) Postgraduate Students registered in accordance with the following conditions :—

(i) as having passed (*a*) the examinations required for an Internal or an External degree of the University, or (*b*) examinations required for a degree in another University, or (*c*) equivalent approved examinations ; and

(ii) as matriculated ; and

(iii) as pursuing a course of study in a School of the University or under Recognised Teachers for a Master's or Ph.D. degree.

[For *Regulations for Postgraduate Students*, see p. 101]

[*Note.*—A student who has taken a lower degree of the University as an Internal Student and is proceeding to a higher degree in the same Faculty is not required to pursue a course of study and need not be registered afresh as an Internal Student except in the case of candidates

(i) for the M.A. Degree in Education.

(ii) for the M.A. Degree in Archaeology, or the M.Sc. Degree in Biochemistry or in Biophysics not exempted from a course.

(iii) for the M.Sc. Degrees in Chemical Engineering, in Crystallography, or in the History and Philosophy of Science.

(iv) proceeding from the B.Com. or B.Sc. (Est. Man.) to the M.Sc.(Econ.) Degree.

(v) for the M.Sc.(Eng.) Degree in Chemical Engineering, other than those who have obtained the B.Sc.(Eng.) Degree in Chemical Engineering as Internal Students.

(vi) for the Ph.D. Degree.]

(4) Diploma Students, registered as pursuing a course of study :—

(i) in a School of the University or under Recognised Teachers for a postgraduate diploma, or

(ii) in a School of the University for an ordinary diploma.

(5) Research Students, registered under Statute 21 (iii) as pursuing in a School or in a public educational institution under one or more Teachers of the University, an approved course of research.

[For *Regulations for Research Students*, see p. 116]

3. Registration

[*Note.*—It should be clearly understood that matriculation is distinct from registration as an Internal Student, but that it is an essential preliminary to registration as an Internal Student for all who wish to proceed to degrees of the University as Internal Students. Matriculation is not required for diploma students, except in so far as prescribed by the regulations for any particular diploma.]

Students who wish to proceed to any Internal Degree are required, and students pursuing an approved course of research are permitted, to register as Internal Students. Application for registration must be made through the authorities of the School or Institution at which the student is to pursue his course (except in the case of overseas applicants for admission as Advanced Students or as Postgraduate Students who may be permitted to apply to the University direct (*see* pp. 14 and 101). Students attending at more than one School or Institution must register at each such School or Institution. Except with the special permission of the Academic Council, an Internal Student will not be permitted to register concurrently for more than one Degree or Diploma nor for a Degree and a Diploma.

[*Note.*—No student who is registered as an External Student or as an Associate Student may be registered concurrently as an Internal Student.]

No fee is required for registration as an Internal Student except in the following cases :—

(i) A Diploma Student who has not matriculated in this University—3 guineas. If he is subsequently exempted from the Matriculation Examination he will on application be credited with the fee already paid.

(ii) An Advanced Student or a Postgraduate Student who is not a graduate of this University—5 guineas, or if he has already matriculated in this University—2 guineas.

(iii) A Research Student under Statute 21 (iii) who has not matriculated—10*s.* 6*d.* to cover the whole period of his registration provided that his course is continuously pursued. He may apply for re-registration on payment of a fee of 5*s.*

Applications for registration as an Internal Student should normally be made within three months from the first attendance at the course on account of which registration is desired and before the end of the session in which such course was begun. The period of three months will be reckoned as from the last day of the month in which the course in question was begun.

A fee of 10*s.* 6*d.* is payable in respect of each application received at a later date, and acceded to.

Students who begin their course of study in October and who pass either the Matriculation Examination in the following January or the Special University Entrance Examination in the following March may be registered without payment of a fee, on the receipt by the University of a registration schedule not later than March 31st.

A fee of 10*s.* 6*d.* will be payable in respect of applications for the retrospective approval of courses for higher Degrees.

Note.—Registration Schedules on which applications for Registration may be made are sent by the Academic Registrar to the authorities of Schools and Institutions, who will issue them to students on application and will forward them, when filled up, to the Registrar. A card is sent by the Registrar (through the authorities of the School or Institution concerned) to each student whose application for Registration is approved, notifying his registration as an Internal Student. Students are advised to apply for registration as soon as qualified. Students whose names have been returned by the authorities of a School or Institution as having discontinued attendance at an Approved Course of Study and whose names have consequently been removed from the Register of Internal Students may be re-registered, after notification by the authorities of a School or Institution that they have resumed an Approved Course of Study.

4. Academic Year

The word " year " when used without limitation means a calendar year.

By the term " academic year " is ordinarily meant the period intervening between any Examination and an Examination of the next higher grade in the following year ; which period may be either *more* or *less* than a calendar year.

5. Communications from University

Communications sent from the University to an individual student must be regarded as applying to that student only.

6. Applications for Exemptions

Applications to the Academic Council by Internal Students for exemption from any of the Regulations for Internal Students shall be made through the Head of the College, School or Institution to which they are attached, and shall not be entertained by the Council unless accompanied by a statement from such Head stating whether he supports the applications or not.

7. Examination Tests

The questions and other tests at all examinations in the Faculties of Theology, Arts, Music, Science, Engineering, and Economics, will be so selected as duly to represent any different schools of thought or modes of dealing with the subject which may exist among Teachers of the University.

All answers to examination questions must be written in English unless instructions are given to the contrary.

8. Practical Examinations

At any Examination in which there is a practical examination in an Experimental Science Subject, a candidate must satisfy the Examiners in both the practical and written parts of the Examination.

Candidates taking Biology, Physiology, and Anatomy will be expected to bring their own instruments for use at the practical examinations. The instruments referred to are :—razors, razor strops, forceps (fine and coarse), scalpels, scissors (fine and coarse), section lifters, seekers, mounted needles, and hand lenses.

For the practical examinations in Chemistry candidates must provide themselves with platinum wire and foil and candidates at Final Examinations in Chemistry are advised to bring into the examination-room, for use in the examination, prepared crucibles with a note of their approximate weight. No other chemical apparatus may be introduced into the examination-room.

At practical examinations in Biology and Botany, candidates will be permitted to provide for themselves and use hand-microtomes if they so desire.

At the Examination in Physiology forming part of the Second Examination for Medical Degrees, candidates may use their own microscopes, subject to the Examiners' approval.

At the practical examination in Pathology forming part of the M.B., B.S. Examination, and at the Examination in Veterinary Pathology at the B.Sc. (Veterinary Science) Examination, each candidate must provide for his own use a microscope with a $\frac{1}{2}$-inch lens, a $\frac{1}{4}$-inch lens, and a $\frac{1}{12}$-inch immersion lens. The University will supply a microscope, with the necessary lenses, for use at the examination, on payment of a fee of Ten Shillings, to any candidate who shall have given notice on his entry-form.

9. Return of Examination Fees

MATRICULATION, DIPLOMA AND FIRST DEGREE EXAMINATIONS

1. Registration Fees and Special Fees (*e.g.* late entry fees for Internal B.A. and B.Sc. Examinations) are not returnable.

2. Examination Fees cannot be transferred from one Examination to a later one, and the full Examination Fee will be payable by a candidate at any subsequent entry, which must be made by the date given in the Regulations.

3. A candidate whose provisional entry for an examination is accepted pending the result of an earlier examination and who is subsequently found to be ineligible or is not required to sit for the second examination may receive back the fee paid less £1 1s. 0d.

4. No entry fee that has been paid by or on behalf of a candidate for a Matriculation, Diploma or First Degree Examination held in the United Kingdom who withdraws from the Examination will be refunded, except in cases provided for in paragraph 3 (above) and in others for one of the following reasons :—

(a) *Inability to take the examination owing to candidate's illness, or to death of parent.*

The Principal may at his discretion and on receipt of medical evidence satisfactory to him return the examination fee paid.

In cases of infectious illness of a person with whom the candidate has been in contact, the Principal may at his discretion return the whole examination fee paid.

A medical certificate certifying illness at the time of the examination must be sent with any application.

(b) *Inability to take the examination by reason of National Service.*

A candidate who is prevented from sitting by approved National Service may, at the discretion of the Principal, have his entry fee returned in full.

(c) *Death of Candidate.*

Entry fee returnable in full.

5. Applications from Internal Students for return of fees should be addressed to the Academic Registrar. Application must be made not later than one month after the commencement of the Examination.

MASTERS' AND M.D. DEGREE EXAMINATIONS

1. A candidate who withdraws from an examination before the last day of entry shall receive back the examination fee paid.

2. A candidate who withdraws from an examination after the last day of entry for reasons other than those set out in 3 below, shall receive back the entry fee paid less £3 3s.

3. The entry fee paid shall be returned in the following cases, unless the ruling in 4 below is relevant :—

(*a*) *Inability to take the examination owing to candidate's illness or to death of near relative.*

A medical certificate certifying illness at the time of the examination must be sent with any application.

(*b*) *Inability to take the examination by reason of National Service.*

(*c*) *Death of candidate.*

4. A candidate for the M.D. or M.S. Examination under old Regulations whose thesis has been examined but who is prevented by illness or other approved reason from attending any written or practical examination which he may then be required to take, shall receive back the entry fee paid less £5 5s.

5. A candidate who fails to present his thesis (or dissertation) by a specified date at a Master's Degree Examination shall receive back the entry fee paid less £2 2s. (or less £1 1s. if the candidate is exempted from the written part of examination).

6. A candidate whose provisional entry for an examination is accepted pending the result of an earlier examination and who is subsequently found to be ineligible or is not required to sit for the second examination shall receive back the fee paid less £1 1s.

10. Theses for Higher Degrees

Theses shall be deposited in the University Library and shall be open for public reference, and a register shall be kept in which the names of persons referring to these Theses shall be entered.

11. Approved Courses of Study

NOTE.—*References to the Final Pass and Final Honours Examinations and Courses are applicable, respectively, to the B.A. (General) or B.Sc. (General) and to the B.Sc. (Special) Examinations and Courses.*

1. No student will be admitted to an examination as an Internal Student unless he shall present a certificate of having attended the appropriate course of study therefor in accordance with the regulations.

2. An approved course of study for a first Degree must, in accordance with the Statutes, extend over not less than three years, and must also, unless special exemption be obtained, be continuously pursued. (*See* also Section 14 below.)

(*Note.*—In the case of students admitted under the Regulations for Advanced Students the duration of the course of study may be not less than two years [see p. 14].)

3. An Internal Student after completing an approved course of study for a first Degree will be permitted to present himself for the Final Examination for that Degree at any time subsequently, provided that he shall be examined in accordance with such regulations for the Degree as may be current when he presents himself for examination.

4. An approved course of study for an Intermediate Examination shall extend over at least one academic year and an approved course of study for a Final Examination shall extend over at least two academic years.

5. A certificate of attendance at an approved course of study for an Intermediate or Final Pass Examination shall certify, subject to any exemptions granted under these regulations, that the student has attended an approved Instruction-course in each subject in which he

presents himself for examination, to the satisfaction of the Teachers concerned, such attendance being attested by the Officer approved for the purpose at each School or Institution concerned.

6. A student may be permitted to take subsequently to the passing of the Intermediate Examination a course of study extending over not more than one year in another University approved for the purpose in lieu of an approved course of study taken in this University, provided that not later than 30th June in the session previous to that which he proposes to spend in such other University he submit to the University for approval details of the course of study which he proposes to pursue therein.

It will be required as a general rule that the extent and nature of the course taken in another University should be similar to that which the student would have been required to take in this University.

A student availing himself of this regulation will be required to submit together with his entry-form for the Final Examination (i) certificates of attendance in respect of the portion of his course pursued in the University of London in accordance with the General Regulations as to Approved Courses of Study, and (ii) certificates of satisfactory attendance and progress in each of the subjects in which he has attended a course at another University duly signed by the authorities of that University.

7. A certificate of attendance for an Honours Examination shall certify that the course of study has been pursued to the satisfaction of the teachers, in so far as they are severally concerned. The certificate shall be attested by the Principal Officer of the School or Institution concerned (or by the Officer approved for the purpose at each School or Institution concerned) and by the Teacher or Teachers under whose direction the student has pursued his course.

8. If dissatisfied with the conduct or diligence of any student the certifying authority may withhold a certificate of attendance either temporarily or permanently.

9.* Should the Teacher responsible for an Instruction-course in one of the subjects of the Intermediate Examination certify through the authorities of the School or Institution concerned that a student who would in ordinary circumstances attend this course has such knowledge of this subject as to render it undesirable that he should attend it, then the student shall be permitted to omit the course, but he will be required to substitute therefor, either in the Intermediate year, or in the year next following, such approved Instruction-course (in the same or another subject) as shall be sanctioned by the authorities of the School or Institution to which he is attached, provided

(1) that no students shall be allowed to omit the Instruction-courses for the Intermediate Examination in more than one subject unless the substituted courses be taken in his first year;

(2) that no person shall be admitted to the final examination for a first degree in the University as an Internal Student unless and until he has completed an approved course of study comprising *all the subjects* in which he presents himself.

10. If the attendance of a student, through illness or other exceptional circumstances, shall fall short of the requirements set forth in the foregoing regulations, he shall only be admitted to examination after special application made on his behalf by the authorities of the School or Institution to which he is attached.

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* This regulation does not apply to Examinations in Medicine.

11. Courses for the B.A. (Honours), B.Sc. (Special) and B.Sc. (Econ.) Degrees will be arranged by the authorities of the School or Institution at which the student is studying. Evening students are recommended, in ordinary circumstances, to devote three years to the preparation for the Final Examination.

12. Internal Students who have pursued an Honours course and who, with the approval of the authorities of the School or Institution at which they are studying, desire to substitute therefor a Pass course may, with the approval of the Academic Council, be exempted from attendance in subjects other than those originally included in the Honours course for the period during which that course has been pursued, provided that such exemption shall not be granted in respect of a period exceeding one session.

If such change from an Honours to a Pass course be made not later than the beginning of the second term of the Honours course, with the approval of the authorities of the School or Institution at which it is pursued, exemption from attendance as above will be granted without application to the Academic Council.

Internal Students who have pursued a Pass Course extending over not more than one session may, with the consent of the authorities of the School or Institution at which they are studying, substitute therefor an Honours Course including a subsidiary subject in subjects in which they have already attended Pass Courses.

13. A student who has matriculated in January, or has been exempted from Matriculation as from January, may be registered as an Internal Student as from the date of the beginning of his course of study, provided that such date be not anterior by more than four months to the date of the first day of the Matriculation Examination which he passed, or in respect of which he was registered.

14. Any student who has passed the Intermediate Examination in any Faculty as an External Student* or who has been exempted from the Internal Intermediate Examination on the ground of having passed a Higher School Examination may be admitted to the Final Examination in the same Faculty as an Internal Student, if he has attended satisfactorily an approved course of study for the Final Examination extending over at least three years. If, however, he has attended as an Internal Student an approved course of study extending over two years for the Final Degree Examination in the same Faculty as that in which he passed, or was exempted from, the Intermediate Examination, in accordance with the requirements of the University, he may present himself for the Final Degree Examination at the end of such two years' course.†

(1) If he passes that Examination he will be admitted to the Degree without further examination, but not until he has completed

* A student who has (1) been "referred" in one subject at an External Intermediate Examination, *or* (2) is required to pass in one subject in order to qualify in accordance with the Regulations for exemption from the Intermediate Examination on the ground of having passed a Higher School Examination, may enter on an approved course of study for the Final Examination as an Internal Student under this Regulation as if he had completed the Intermediate Examination; but he shall be required to complete the Intermediate Examination or his qualification for exemption therefrom (at an *Internal* General or Special Intermediate Examination) before entering for the Final Examination for Internal Students.

† This Regulation will not apply to students proceeding under the revised Regulations to Degrees in subjects for which the Final course extends over three years.

three years of study in the University as an Internal Student by attending, subsequently to passing the Final Examination, a further course of study approved for the purpose and not unless the authorities of the School or Institution at which such course is held have certified that his attendance and progress have been satisfactory.

The Senate will approve in individual cases as a third year's course of study for such students (i) a course of one year approved as part of the course for the Final B.D. Degree ; or (ii) a course for an Honours Degree* ; or (iii) a course of one year approved as part of the course for a Higher Degree ; or (iv) an advanced course of study consisting of portions of two or more Honours courses in the Faculties of Arts, Science or Economics ; or (v) research under a Teacher approved for the purpose ; or (vi) in the case of a student who has passed the B.Sc. (H. & S.S.) Examination, the course of study for the Academic Post-graduate Diploma in Dietetics, provided the student attends the whole course at a School or Schools of the University.

In no case will a course for an Intermediate Examination be approved as a third year's course under this regulation. The third year's course of study must be continuously pursued and subsequent alteration of an approved course will be allowed only in exceptional circumstances.

(2) If he fails at that Examination he will not be permitted to re-enter for the Examination until he has either—

(*a*) completed three years of study as an Internal Student in the manner provided above for a student who passes the Examination ; or

(*b*) completed three years of study as an Internal Student by attending during one year Instruction-courses approved for the Final Examination (Pass or Honours) in one or more of the subjects in which he presents himself.

15. All questions relating to the modification of courses of study by students or to the granting of exemptions from such courses, except in so far as they are dealt with in the foregoing regulations, shall stand referred to the Academic Council.

12. Intermediate Examinations

1. A General Intermediate Examination shall be held for Internal Students in each of the Faculties under the conditions hereinafter set forth.

2. The Governing Body of any School of the University which desires that the Senate shall hold a Special Intermediate Examination or some part thereof jointly with the Governing Body of such School, shall make application to the Senate to that effect.

3. As far as possible (1) the standard of Special and General Intermediate Examinations for Internal Students shall be the same ; and (2) it shall be an instruction to Internal and External Examiners that the standard of the Internal and External Intermediate Examinations shall be as nearly as possible the same.

4. A student of a School of the University in which a Special Intermediate Examination is held shall not be allowed to enter for the General Intermediate Examination for Internal Students without the consent of the Governing Body of the School.

*** Students are expected normally to include in such course one of the subjects taken by them for the Pass Degree.**

5. A student who has failed in a Special Intermediate Examination shall not be admitted to the General Intermediate Examination without the consent of the Academic Council, and of the Governing Body of the School in which he is a student.

6. The Intermediate Examination for Internal Students shall be a Pass Examination only, and the list of successful candidates shall be published in alphabetical order without division into classes.

7.* A candidate who fails to reach the minimum standard in one subject only at a General or Special Intermediate Examination may be permitted, if in the opinion of the Examiners his performance in the subjects in which he has passed is of sufficient merit, to present himself on one or more occasions for re-examination in that subject or for examination in another subject allowed by the Regulations at a subsequent Intermediate Examination (General or Special). The approval of the authorities of the School or Institution at which the candidate is registered must be obtained to any change of subject and a candidate offering a new subject must have followed an approved course of study in that subject.

8.* A candidate who has failed in one subject only at a General or Special Intermediate Examination may present himself for re-examination in that subject, or for examination in another subject as prescribed in paragraph 7 above, at any of the following Examinations :—

(1) At a Special Intermediate Examination at his own School.

(2) At a Special Intermediate Examination at another School after attending the prescribed course of study in the relevant subject at that School.

(3) At a General Intermediate Examination subject to the conditions stated in paragraph 5 above.

(4) At an Intermediate Examination in November.

9. At each entry for an Intermediate Examination the student will be examined in accordance with the Regulations and Syllabuses in force at the time of his entry.

10. A student who has presented himself at a General or Special Intermediate Examination for Internal Students and who has failed will not be required to attend, before entering for re-examination, a further approved Instruction-course in any subject in which he has previously presented himself for examination.

11. In the Faculties of Theology, Arts, Science, Engineering, and Economics—

(*a*) If a student attend approved Instruction-courses for an Intermediate Examination in one or more subjects at one School and in the remaining subjects or subject at another School, he will be allowed to enter for Special Intermediate Examinations held at those Schools in the corresponding subjects, if the time-tables of the two Examinations permit; and failing such possibility he will be allowed to enter for the General Intermediate Examination in the remaining subjects or subject provided that a separate entry-form for the General Intermediate Examination is received by the latest date of entry to the Examination in question.

* This Regulation does not apply to candidates offering three subjects at the Intermediate Examination in Arts or Science.

(*b*) If a student attend approved Instruction-courses for an Intermediate Examination in one or more subjects at a School and in the remaining subjects or subject at an Institution under Recognised Teachers of the University, he will be allowed to enter for the Special Intermediate Examination held at the School and for the General Intermediate Examination in the corresponding subjects provided that a separate entry-form for the General Intermediate Examination is received by the latest date of entry to the Examination in question.

(*c*) Special cases of difficulty arising out of the matters dealt with in the foregoing paragraphs will be referred for final decision to the Principal.

12. Internal Students who, under the terms of Section 9 of the Regulations for Approved Courses of Study (p. 7) are permitted to substitute more advanced courses, approved by the University, for the ordinary courses for the Intermediate Examinations in the Faculties of Theology, Arts, Science, Engineering, and Economics (including Commerce) may be examined at the appropriate Intermediate Examination (on the recommendation in each case of the authorities of the College, School, or Institution to which they are attached) on the syllabuses of such advanced courses in lieu of the ordinary syllabuses of the Intermediate Examination ; but the ordinary regulations in regard to the number and choice of subjects to be taken at the several Intermediate Examinations will apply to such students.

13.* It shall be an instruction to the Examiners that weakness in one of the subjects may be compensated by excellence in the other subjects.

* This Regulation does not apply to candidates offering three subjects at the Intermediate Examination in Arts or Science.

UNIVERSITY OF LONDON

War Concessions for Internal Students

Session 1950-51

The War Concession Regulations introduced for the benefit of students whose studies were interrupted by National Service during the War ceased as from 31 August, 1948. No further concessions will be granted to Service or ex-Service students except that, in exceptional cases, the University will consider applications for exemption from the third year's course in respect of students who have had a substantial period of approved National Service *during the war period.* A student so exempted will be eligible for the award of the Degree on passing the Final Examination provided that the date of his Matriculation complies with Statute 134 (1).

Applications must be submitted through the authorities of the student's College and his age and the exact nature (with dates) of his National Service must be given.

[All concessions (or extensions of concessions), other than exemption from the third year's course, whenever granted, ceased to be operative on 31 August, 1950.]

POSTGRADUATE STUDENTSHIPS

The following Studentships, each of the value of £250 and tenable for one year, are offered to candidates at the B.A. (Honours), B.A. (Architecture), LL.B., B.Sc. (Special), B.Sc. (Eng.), and B.Sc. (Economics) Examinations for Internal and External Students, and at the Examination for the Diploma in Fine Art.

Arthur Platt Studentship in Classics.
Derby Studentship in History.
George Smith Studentship in English (*for Internal Students only*).
Granville Studentship in Physics.
Sherbrooke Studentship in Mathematics.
Neil Arnott Studentship in Chemistry.
Gerstenberg Studentship in Economics
Two Studentships for Classics.
Three Studentships for English.
Three Studentships for History.
Four Studentships for Romance Languages.
Three Studentships for Germanic Languages.
One Studentship for Slavonic and East European Languages.
Two Studentships for Oriental Languages and Literatures.
One Studentship for Sociology.
One Studentship for Architecture *or* History of Art.
One Studentship for Philosophy.
Two Studentships for Geography.
One Studentship for Mathematics.
One Studentship for Psychology.
One Studentship for Anthropology.
One Studentship for Laws.
One Studentship for Chemistry.
Two Studentships for Botany *or* Zoology.
One Studentship for Physiology.
One Studentship for Anatomy.
One Studentship for Geology.
One Studentship for Physics.
Eight Studentships for Engineering.
Two Studentships for Economics.
One Studentship in Fine Art.

A candidate wishing to be considered for an award must make application on his entry-form for the relevant Final Examination. The names of two persons to whom reference can be made must be given and, where possible, one of the referees should be the Head of the Department in which the applicant is a student. This information must be given on the entry-form in the special place provided.

A candidate selected for an award must satisfy the University of his intention to pursue a full-time course of advanced study or research and will be required, from time to time, to present during the tenure of his Studentship such reports upon the progress of his studies as the University may determine. The holder of a Studentship will normally be required to carry out his postgraduate studies in a School or Institution of the University and to begin his studies at the beginning of the University Session following the award. In cases where this is not possible (*e.g.*, owing to the claims of National Service) the relevant University authorities will give sympathetic consideration to any application for postponement of the tenure of the award.

The award of the above Studentships will be made by the Scholarships Committee of the University after considering reports from the relevant Examiners. Selected candidates may be required to attend for interview with the Examiners. Expenses incurred by candidates in attending such interviews cannot be refunded by the University.

REGULATIONS FOR ADVANCED STUDENTS PROCEEDING TO A BACHELOR'S DEGREE

1. The following persons may apply for admission as Internal Students and for permission to proceed to a first Degree in the University (except in Medicine and Surgery) without their having previously satisfied the Examiners at an Intermediate or Preliminary Examination and after the completion of an approved course of study as Internal Students comprising all the subjects in which they present themselves and extending over not less than two years :—

(i) Persons who have passed approved examinations required for a degree in another University; provided that prior to admission as Internal Students they have pursued an approved course extending over not less than three years,

(ii) Graduates of the University of London who have taken degrees as Internal or as External Students.

In the Faculty of Engineering a student who holds an appropriate Degree approved by the relevant University authorities for this purpose may apply for permission to take Part I of the B.Sc.(Eng.) Examination as an entrance examination and, if successful at that Examination, be credited with Part I and be permitted to proceed to the B.Sc.(Eng.) Degree after an approved course of study as an Internal Student extending over not less than two years at one of the Schools of the University at which the post-intermediate course for the B.Sc.(Eng.) Degree extends over three years.

2. Applications may be submitted on the prescribed form from students whose qualifications satisfy the requirements set forth above for permission to be admitted as candidates for the Bachelor's Degree in the Faculties of Theology, Arts, Laws, Music, Science, Engineering, and Economics.

3. Applications are considered individually.

4. Except in the case of overseas students, applications should be submitted through the authorities of a College, School or Institution of the University.

5. Overseas students may apply directly to the University and ask to be advised with regard to the College, School or Institution to which they should attach themselves, and *are strongly recommended to await the decision of the Senate before leaving their own country.*

[*Note.*—Graduates of Indian Universities are advised to submit their applications through their local University Students' Bureau or Advisory Committee.]

6. Applications from overseas students should be received at the University not later than May 1st, or in the case of students from Australia or New Zealand, not later than March 1st. These dates have been chosen in order that students whose applications are acceded to may, if possible, be informed of the decision of the Senate in time for them to enter upon their course of study early in October (*i.e.*, at the beginning of a session).

7. As a general rule candidates will be exempted only from that portion of the Intermediate or Preliminary Examination in which they produce evidence that they have at least attained the standard which would be required of students of the University of London for the Intermediate or Preliminary Examination in question.

Students who have been granted exemption from the Matriculation Examination in virtue of qualifications obtained in a foreign University may be required to submit to the University satisfactory evidence of their competence to express themselves in the English language.

8. Students who are exempted from part of the Intermediate or Preliminary Examination will be required to pass the remaining part of the Examination before beginning the second year of their course of study for the Final Examination. They will be required to complete the whole of the Intermediate or Preliminary Examination, or in the case of Examinations divided into two Parts the whole of one Part of the Examination, on one and the same occasion.

Students exempted from two subjects other than Greek or Latin at the Intermediate Examination in Arts may take the *special* examination in Greek or Latin prescribed for students exempted through a Higher School Certificate (see Regulations for Intermediate Examination in Arts).

9. Students whose applications have been acceded to should register as quickly as possible. In no case will such students be permitted to defer registration to a later session than that in which they begin their approved course of study.

10. If a student does not begin his course of study in the University within one calendar year from the date of the approval of his application for registration, the approval of his application will lapse and he must apply again to the University for registration if he still desires to proceed to a Degree in this University.

Fees

No fee is required for registration as an Advanced Student in the case of a graduate of this University.

The fee for registration as an Advanced Student in the case of a student of another University is 5 guineas, or, if he has already matriculated in this University, 2 guineas.

The fee payable on entry for part of an Intermediate or Preliminary Examination is 1 guinea per paper or practical examination taken up to a maximum of 6 guineas. This fee must be forwarded with an entry-form to the Academic Registrar not later than the date prescribed in the Regulations for the relevant examination.

Master's Degree

1. A person who has obtained a first degree as an Internal Student is not required to register or to follow any prescribed course of study as a preliminary to taking a Master's Degree in the same Faculty except in the case of candidates

(i) for the M.A. Degree in Education ;
(ii) for the M.A. Degree in Archæology not exempted from a course ;
(iii) for the M.Sc. Degrees in Biochemistry and in Biophysics not exempted from a course ;
(iv) for the M.Sc. Degrees in Chemical Engineering, in Crystallography and in the History and Philosophy of Science ;
(v) proceeding from the B.Com. or B.Sc. (Est. Man.) to the M.Sc.(Econ.) Degree ;
(vi) for the M.Sc.(Eng.) Degree in Chemical Engineering, other than those who have obtained the B.Sc.(Eng.) Degree in Chemical Engineering as Internal Students.

2. The following persons may apply for permission to proceed to the Master's Degree as Internal Students after completing a prescribed course of study in a College or School of the University or under a Recognised Teacher or Teachers of the University :—

(i) Graduates of this University who obtained their first Degree either as Internal or External Students ;

(ii) Persons who have passed examinations required for a Degree in another University ;

(iii) Persons who have passed examinations required for an approved diploma in certain approved educational institutions of University rank.

3. The Degrees to which a candidate may proceed under these Regulations are as follows :—

M.Th.
M.A.
M.A. (Architecture).
LL.M.
M.Sc.
M.Sc. (Agriculture).
M.Sc. (Engineering).
M.Sc. (Economics).
M.Sc. (Estate Management).

[*Note*.—Details of the requirements for the various Degrees for Internal Students will be found in Regulations for Internal Students in the several Faculties, copies of which will be forwarded on application to the Academic Registrar, University of London, Senate House, W.C.1.]

A prospective candidate for a Master's Degree in the field of Chemical Engineering is advised to consult both the Regulations for the M.Sc. Degree in Chemical Engineering (*see* Regulations in the Faculty of Science for Internal Students) and the Regulations for the M.Sc. (Eng.) Degree in Chemical Engineering (*see* Regulations in the Faculty of Engineering for Internal Students).

4. A student applying for registration as a candidate for a Master's Degree must :—

(*a*) Produce appropriate evidence if applying under 2 (ii) or 2 (iii) above.

(*b*) State what Degree of the University of London he selects as the object of his studies, and declare that he is willing to study for that Degree as an Internal Student for such period and under such general supervision as the Senate may appoint.

(*c*) Produce a certificate from the Governing Body of a College or School of the University, or from a Teacher or Teachers of the University, stating that the candidate is, in their opinion, a fit person to undertake a course of study or research with a view to the Degree he has selected, and that the College, School or Teacher is willing to undertake the responsibility of supervising the studies or research work of the candidate, and of reporting to the Senate at the end of the course of study, whether the candidate has pursued to the satisfaction of his Teacher or Teachers the course of study prescribed in his case.

5. Applications for registration submitted later than three months after the date on which the course was begun must be accompanied by a statement from the Head of the College, School or Institution in explanation of the delay. Retrospective registration will be allowed in exceptional circumstances only. A whole-time student may be granted retrospective registration for not more than four terms and a part-time student for not more than seven terms.

6. A candidate whose application has been acceded to must register without delay. In no case will such student be permitted to defer registration to a later session than that in which he began his approved course of study.

No fee is required for registration as a Postgraduate Student in the case of a graduate of this University.

The fee for registration in the case of a Postgraduate Student who is not a graduate of this University is 5 guineas, or, if he has already matriculated in this University, 2 guineas.

7. If a student does not begin his course of study in the University within one calendar year from the date of the approval of his application for registration the approval of his application will lapse and he must apply again to the University for registration if he still desires to proceed to a higher Degree.

8. A candidate registered for the Master's Degree who desires to proceed instead to the Ph.D. Degree must apply through the authorities of his College, School or Institution for permission to do so. A whole-time student may be granted retrospective registration for another Degree in respect of four terms, and a part-time student in respect of seven terms, of his previous course of study.

9. Persons applying for admission must produce evidence of having passed a general examination approved in each case by the University for the purpose, or conducted by the University in the subject in which they desire to proceed to a higher Degree or in a cognate subject.

10. Students required to enter for the whole or a part of an Examination for a lower Degree as a qualification for admission to the Examination for a Master's Degree, may enter for such qualifying Examination at any time during the period of study under the control of the University. The lower Degree, however, will not be granted to such persons.

The fee payable on entry for a qualifying examination is :—

For a special examination, 5 guineas. (The candidate must forward an entry-form by a date to be notified to him) ;

or for part or the whole of an Intermediate or Degree Examination, 1 guinea per paper or practical examination up to a maximum of the total fee for the relevant Examination. (The candidate must forward an entry-form by the date prescribed in the Regulations for the relevant Examination.)

11. If a student fails to pass the qualifying examination prescribed in his case at his first entry therefor he will not be permitted to proceed with his course or to enter again for the qualifying examination without the permission of the University.

12. The *minimum* period of time during which a registered student is required to study as an Internal Student for the Degree of Master in the Faculties of Theology, Arts, Laws, Science, Engineering and Economics is two years. (The Degree of Master is not instituted in the Faculty of Music.)

[NOTE.—*The expression "two years" in these Regulations will be interpreted in the case of students registered in October as the period from that month to the June (or May where the relevant examination is held in that month) in the second year following; in other cases it will be interpreted as two calendar years.*]

13. Except by special permission of the Senate, graduates of this University will not be permitted to proceed to the M.A. or the M.Sc. Degrees in the subjects of Geography, Mathematics or Psychology unless they have taken a first Degree in the Faculty concerned.

Graduates who have taken the subjects of Geography, Mathematics or Psychology for the Degrees of other Universities will, except by special permission of the Senate, be required to proceed to the Master's Degree in the Faculty corresponding to that in which they have taken a first Degree.

Except by special permission of the Senate, graduates in Science or Engineering of this or other Universities desiring to proceed to the Master's Degree in a subject falling within the purview of both the Faculty of Science and the Faculty of Engineering will be required to proceed to such Degree in the Faculty corresponding to that in which they have taken a first Degree.

14. It is essential that the student, whilst pursuing his course of study as an Internal Student, should be prepared to attend personally for study in a College, School or Institution of the University during the ordinary terms at such time or times as his supervising Teacher may require.

15. If the material for the work of a student exists elsewhere, the student may under proper conditions be allowed leave of absence, if such absence does not exceed two terms out of a total of six, and provided that neither of these two terms is the first or the last of the course. Such leave will not be granted during the first year of the course in the case of students who are attending the course in order to qualify for conferment of their first Degree.

16. The student shall during his course of study be required to pay a fee to the College, School or Institution in which he is working.

17. Students admitted as candidates for a higher Degree after having studied to the satisfaction of the authorities of the College or School, or in the case of an Institution other than a College or School, of the Recognised Teacher or Teachers concerned, for the minimum period prescribed by the University under the foregoing regulations, may be admitted at any time within one calendar year of the completion of such period to the examination for the Degree. A student who does not present himself within one calendar year of the completion of the prescribed period must apply again to the University for admission to the examination if he still desires to proceed to the Degree.

18. In the event of the student having other occupations, the University must be informed of their precise nature, and, in view of such other occupations, the University may require an extension of the normal period prescribed.

19. The greater portion of the work submitted as a thesis for a Degree must have been done since the student was registered as an Internal Student of the University.

20. All theses must be written in English and every candidate will be required to forward to the University with his thesis a short abstract thereof comprising not more than 300 words.

21. A candidate will not be permitted to submit as his thesis a thesis for which a Degree has been conferred on him in this or any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

22. A student who fails to pass the Master's Degree Examination will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

23. A candidate who has obtained the Master's Degree in the Faculty of Theology, Arts, Laws, Science, Engineering, or Economics, as an Internal Student may proceed to the higher Doctorate (D.D., D.Lit., LL.D., D.Sc., D.Sc.(Eng.), or D.Sc.(Econ.), as the case may be) in the *same* Faculty at any time subsequently without attending any further course of study.

Ph.D. Degree

1. The Degree of Ph.D. for Internal Students is conferred in the Faculties of Theology, Arts, Laws, Music (for Research in Music), Medicine (in non-clinical subjects only), Science, Engineering and Economics.

2. The standard of the Ph.D. Degree is definitely higher than that of the M.A. and M.Sc. Degrees in the same subject.

Qualifications for Registration

3. A candidate for registration for the Degree of Ph.D. must either—

(*a*) have previously graduated in any Faculty as an Internal or External Student in the University, or

(*b*) have passed examinations required for a Degree in another University, or

(*c*) have passed examinations required for an approved diploma in certain approved educational institutions of University rank.

4. A student who, having passed the External Intermediate Examination in any Faculty, is admitted as an Internal Student to the Final Examination after pursuing a two years' course of study and passes that Examination, may submit as his third year's course of study for the Bachelor's Degree a course for the Ph.D. Degree, in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). Before presenting himself for the Ph.D. Degree, every student will be required to have pursued, after passing the Final Examination, a course of study for the Ph.D. Degree to be approved by the University.

5. A candidate for the Ph.D. Degree must, *before* registration, comply with the following requirements unless exempted therefrom in special cases :—

(i) He must produce a certificate from the Governing Body of a College or School of the University, or from a Teacher or Teachers of the University, stating that the candidate is in their opinion a fit person to undertake a course of study or research with a view to the Ph.D. Degree, and that the College, School or Teacher is willing to undertake the responsibility of supervising the work of the candidate, and of reporting to the Senate at the end of the course of study whether the candidate has pursued to the satisfaction of his Teacher or Teachers the course of study prescribed in his case.

(ii) He must produce evidence satisfactory to the University of the standard he has already attained and of his ability to profit by the course. If the evidence first submitted is not satisfactory, the candidate may be required to undergo such examination as may be prescribed by the University.

(iii) In the Faculty of Theology he must either have obtained Honours at the B.D. Examination or after obtaining the B.D. Pass Degree have passed a qualifying examination consisting of the whole of the B.D. Examination and have reached at least Second Class standard therein.

[Candidates for the Ph.D. Degree in Theology who obtained the B.D. Pass Degree in or before 1937 are not required to comply with the above Regulations but will be required to take two qualifying papers to be prescribed.]

(iv) In the Faculties of Arts, Science or Economics, he must possess qualifications not inferior to those required before proceeding to the M.A. or M.Sc. or M.Sc.(Econ.) Degree in the same branch (*see* also para. 6 below).

(v) In the Faculty of Laws, he must either have obtained the LL.B. Degree with First Class Honours or the LL.M. Degree of this University, or a Degree of another University equivalent to one of these. In exceptional cases exemption from these requirements may be granted.

(vi) For the Ph.D. Degree in the Faculty of Medicine he must hold, in a branch of study akin to that in which he proposes to proceed to the Ph.D. Degree, the Degrees of M.B., B.S., or B.D.S., or B.Pharm., or B.Sc., or an equivalent degree of an approved University.

Candidates who hold the Degree of D.Mus. or M.D. or M.S. of this University will not be debarred from applying for registration as candidates for the Ph.D. Degree.

[*Note.*—For fees payable on entry for a qualifying examination *see* p. 114.]

6. Candidates who propose to carry out research for the Ph.D. Degree in the subjects set forth below will be required, before registration, to comply with the following Regulations :—

Archæology

A candidate is recommended to proceed, in the first instance, to the M.A. and not to the Ph.D. Degree. Before registering for the Ph.D. Degree a candidate should normally hold the M.A. Degree in Archæology of this University, or some academic qualification considered by the University adequate to justify exemption from the normal requirement.

Biochemistry

A candidate shall be required

(*a*) To have obtained the Internal or External B.Sc. (Special) Degree in Chemistry with Honours and with a biological subject as subsidiary, or the B.Sc. (Special) Degree in a biological subject with Honours and with Chemistry as subsidiary and may be required to undergo a further course of study in a biological subject or in Chemistry.

or (*b*) If he is an Internal or External graduate who does not fulfil these conditions, to follow an approved course of training in Chemistry or in a biological subject and to produce evidence that he has attained a satisfactory standard of proficiency in that subject by examination or otherwise.

or (*c*) If he holds a Degree of another University, to produce evidence, satisfactory to the University, of having attained a standard equal to that demanded of graduates of this University, failing which he may be required to pass a qualifying examination.

In special circumstances a candidate who has qualified in Chemistry only or in a biological subject only will be permitted to register for the Ph.D. Degree in Biochemistry, but will be required to attend a course extending over not less than three years of whole-time study (or four or five years of part-time study), and to include in that course training in the other subjects (a biological subject or Chemistry as the case may be).

Chemical Engineering

A candidate shall be required *before registration* :—

(*a*) to have obtained a B.Sc. (Eng.) Degree in Chemical Engineering in this University ;

or (*b*) to have obtained the B.Sc. (Special) Degree in Chemistry of this University with Mathematics or Physics as a subsidiary or ancillary subject, or B.Sc. (General) with at least Second Class Standard in Chemistry, and to produce evidence of adequate knowledge of Engineering ;

or (*c*) to have obtained the B.Sc. (Eng.) Degree of this University, and to produce evidence of adequate knowledge of Chemistry;

or (*d*) if he is a graduate of this University who does not fulfil the above conditions, to follow an approved course of study and, if required, to pass a qualifying examination ;

or (*e*) if he holds a Degree of another University, to produce satisfactory evidence of having attained the standard demanded of graduates of this University, failing which he may be required to follow an approved course of study, and to pass a qualifying examination.

Candidates who apply under options (*b*), (*c*), (*d*), or (*e*) must, in addition, pass or have passed an examination satisfactory to the University as being equivalent to that at the end of the final year of the B.Sc. (Eng.) Degree in Chemical Engineering.

Education

A candidate must have passed the M.A. or M.Sc. Examination in Education of the University, or must produce evidence, satisfactory to the University, of his competence to undertake research work of the standard required for the Ph.D. Degree in the field of Education.

English Language and Literature

A candidate must have passed the M.A. Examination of this University in English or must produce evidence satisfactory to the University of the standard he has already attained and of his ability to profit by the course.

German

A candidate applying for registration for the Ph.D. Degree in German shortly after taking the first degree is recommended to proceed, in the first instance, to the M.A. and not to the Ph.D. Degree. Before proceeding to the Ph.D. Degree a candidate should normally hold the M.A. Degree of this University or its equivalent.

History of Art

A candidate should normally hold the M.A. Degree of this University in the History of Art; or hold some academic qualification (such as the Academic Diploma in the History of Art), or give such other proof of fitness as in the opinion of the University will enable him to profit by the course.

History and Philosophy of Science

A candidate must have obtained the M.Sc. Degree in the History and Philosophy of Science. In exceptional cases exemption from this requirement may be granted provided that the candidate has published adequate research of a sufficient standing, but he may, nevertheless, be required to take some or all of the written papers at Part I of the M.Sc. Examination in the History and Philosophy of Science as a qualifying test.

Military Studies

A candidate should hold a postgraduate qualification or possess such other qualification as in the opinion of the University will enable him to profit by the course.

Philosophy

A candidate who does not possess the M.A. Degree in Philosophy of this University must produce evidence of his competence to undertake research work of the standard required for the Ph.D. Degree in Philosophy.

Physiology

A candidate shall be required

(*a*) To have obtained the Internal or External B.Sc. (Special) Degree in Physiology with Honours, or the B.Sc. (Special) Degree in Botany, Chemistry, Anatomy, Physics or Zoology, with Honours and with Physiology as subsidiary and may be required to undergo a further course of study in a biological subject or in Physiology, *or*—

(*b*) If he is an Internal or External graduate who does not fulfil these conditions, to follow an approved course of training in Physiology and

to produce evidence that he has attained a satisfactory standard of proficiency in that subject by examination or otherwise, *or*—

(*c*) If he holds a Degree of another University, to produce evidence satisfactory to the University of having attained a standard equal to that demanded of graduates of this University, failing which he may be required to pass a qualifying examination.

Psychology

A candidate who is not already qualified by a B.A. Honours or B.Sc. (Special) Degree in Psychology of this University, or an equivalent Degree, shall satisfy the University of his suitability either by passing such portions of the B.A. Honours or B.Sc. (Special) Examination in Psychology as the University shall determine, or by passing a special equivalent written or practical examination at such other time as the University shall recommend.

Slavonic and East European Studies

Except in special circumstances to be determined by the University a candidate shall be required to have obtained the M.A. Degree of this University in the relevant branch of Slavonic and East European Studies.

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7. Except by special permission of the Senate, graduates of this University in Science or Engineering desiring to proceed to the Ph.D. Degree in a subject falling within the purview of both the Faculty of Science and the Faculty of Engineering will normally be required to proceed to such Degree in the Faculty in which they have taken a first Degree.

Graduates in Science or Engineering of other Universities desiring to proceed to the Ph.D. Degree in a subject falling within the purview of both the Faculty of Science and the Faculty of Engineering will, except by special permission of the Senate, be required to proceed to such Degree in the Faculty corresponding to that in which they have taken a first Degree.

8. If a student fails to pass the qualifying examination prescribed in his case at his first entry therefor, he will not be permitted to proceed with his course or to enter again for the qualifying examination without the permission of the University.

9. No student who is or has been registered as an Internal Student for the Ph.D. Degree will be permitted to proceed to the Ph.D. Degree as an External Student except in special cases and with the approval of the Academic Council.

[*Note.*—The External Ph.D. Degree is open only to graduates of this University.]

10. Applications for registration submitted later than three months after the date on which the course was begun must be accompanied by a statement from the Head of the College, School or Institution in explanation of the delay. Retrospective registration will be allowed in appropriate circumstances. A whole-time student may be granted retrospective registration for not more than four terms and a part-time student for not more than seven terms.

11. A candidate whose application has been acceded to must register without delay. In no case will such student be permitted to defer registration to a later session than that in which he began his approved course of study.

No fee is required for registration as a Postgraduate Student in the case of a graduate of this University.

The fee for registration in the case of a Postgraduate Student who is not a graduate of this University is 5 guineas, or, if he has already matriculated in this University, 2 guineas.

12. If a student does not begin his course of study in the University within one calendar year from the date of the approval of his application for registration the approval of his application will lapse and he must apply again to the University for registration if he still desires to proceed to a higher Degree.

13. A candidate for the Ph.D. Degree who desires to proceed instead to the Master's Degree must apply through the authorities of his College, School or Institution for permission to do so. The amount of the further course of study, if any, which he will be required to pursue for the Master's Degree will be prescribed in each case by the University.

COURSE OF STUDY

14. Every candidate registering for the Ph.D. Degree before October 1951 must pursue as an Internal Student—

(*a*) a course of not less than two years of full-time training in research and research methods, or

(*b*) A part-time course of training in research and research methods of not less than two years and not more than four years as may be prescribed in each individual case by the Academic Council.

[*Note.*—The expression "two years" in these regulations will be interpreted in the case of students registering for the Ph.D. Degree in October as the period from the beginning of that month to the June in the second year following. In other cases it will be interpreted as two calendar years. Nevertheless a student proceeding to the Ph.D. Degree in a biological subject who begins his course of study after the month of October may in exceptional circumstances, after report from the relevant Board of Studies, be permitted to enter for the examination after a course of study extending over less than two calendar years.]

[*Candidates who register for the Ph.D. Degree on or after* 1 *October,* 1951, *will be required to comply with the following amended Regulation* 14 :—

14. (1) Every candidate for the Ph.D. Degree in the Faculties of Theology, Arts, Laws, Music and Economics must pursue as an Internal Student—

(*a*) a course of not less than two academic years of full-time training in research and research methods, or

(*b*) a part-time course of training in research and research methods of not less than two and not more than four academic years, as may be prescribed in each individual case by the Academic Council.

[*Note.*—Students registering for the Ph.D. Degree at any time other than the beginning of a session will be required to pursue a full-time course of not less than two calendar years, or a part-time course of not less than two and not more than four calendar years.]

(2) Every candidate for the Ph.D. Degree in the Faculties of Medicine and Engineering must pursue as an Internal Student—

(*a*) a course of not less than two calendar years of full-time training in research and research methods, except in special cases when permission may be given for a candidate to complete the course in not less than two academic years, or

(*b*) a part-time course of training in research and research methods of not less than two and not more than four calendar years as may be prescribed in each individual case by the Academic Council.

(3) Every candidate for the Ph.D. Degree in the Faculty of Science must pursue as an Internal Student—

(*a*) a course of not less than two calendar years of full-time training in research and research methods, or

(*b*) a part-time course of training in research and research methods of not less than two and not more than four calendar years as may be prescribed in each individual case by the Academic Council.]

15. A Research Student engaged in teaching work in a School of the University or elsewhere, may be accepted as a full-time student provided that the total demand made on his time, including any preparation which may be required, does not exceed six hours a week.

16. The course must be pursued continuously, except by special permission of the Senate.

17. It is essential that the student, whilst pursuing his course of study as an Internal Student, should be prepared to attend personally for study in a College, School or Institution of the University during the ordinary terms at such a time or times as his supervising Teacher may require.

18. The student shall during his course of study pay a fee to the College, School or Institution in which he is working.

19. If the material for the work of a student exists elsewhere, the student may under proper conditions be allowed leave of absence, if such absence does not exceed two terms out of a total of six, and provided that neither of these two terms is the first or the last of the course. Such leave will not be granted during the first year of the course in the case of students who are attending the course in order to qualify for the conferment of their first Degree.

20. Not later than one calendar year before the date when he proposes to enter for the examination the student must submit the subject of his thesis for approval by the University. The University will at the time of the approval of the subject of a thesis inform the candidate of the Faculty within whose purview the thesis will be deemed to fall. After the subject of the thesis has been approved it may not be changed except with the permission of the University.

21. A student is not allowed to register for or to proceed to another Degree of the University during the currency of his registration for the Ph.D. Degree (except as in para. 4 above). If he is allowed to change his registration for registration for another Degree (*see* para. 13 above) his Ph.D. registration will lapse.

22. A student registered as a candidate for the Ph.D. Degree, after having studied to the satisfaction of the authorities of the College or School (or in the case of an Institution other than a College or School of the Recognised Teacher or Teachers) concerned for the period prescribed by the University, may be admitted at any time within one calendar year of the completion of such period to the examination for the Degree. A student who does not present himself within one calendar year of the completion of the prescribed period must apply again to the University for admission to the examination if he still desires to proceed to the Degree.

Thesis

23. On completing his course of study every candidate must submit a thesis which must comply with the following conditions :—

(*a*) The greater portion of the work submitted therein must have been done subsequently to the registration of the student as a candidate for the Ph.D. Degree.

(*b*) It must form a distinct contribution to the knowledge of the subject and afford evidence of originality, shown either by the discovery of new facts or by the exercise of independent critical power.

(*c*) It must be written in English and must be satisfactory as regards literary presentation, and if not already published in an approved form, must be suitable for publication, either as submitted or in an abridged form.

24. The Degree will not be conferred upon a candidate unless the Examiners certify that the thesis is worthy of publication as a " Thesis approved for the Degree of Doctor of Philosophy in the University of London."

25. The thesis must consist of the candidate's own account of his research. It may describe work done in conjunction with the teacher who has supervised the work provided that the candidate clearly states his personal share in the investigation, and that this statement is certified by the teacher. In no case will a paper written or published in the joint names of two or more persons be accepted as a thesis. Work done conjointly with persons other than the candidate's teacher will be accepted as a thesis in special cases only.

26. The candidate must indicate how far the thesis embodies the result of his own research or observation, and in what respects his investigations appear to him to advance the study of his subject.

27. Every candidate will be required to forward to the University with his entry-form a short abstract of his thesis comprising not more than 300 words.

28. A candidate will not be permitted to submit as his thesis a thesis for which a Degree has been conferred on him in this or in any other University; but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his form of entry and also on his thesis any work which has been so incorporated.

Entry for Examination

29. Every candidate must apply to the Academic Registrar for a form of entry, which must be returned accompanied by (i) four copies of his thesis, printed, type-written, or published in his own name, (ii) the proper fee, and (iii) a certificate of having completed the course of study prescribed in his case.

[*Note.*—In view of the Long Vacation, which extends from the end of June until October, a candidate who is eligible to enter for the examination at the end of the session runs the risk of considerable delay in the decision as to the result. Such a candidate will, therefore, be permitted to submit his entry-form and fee between April 15th and May 1st and his thesis between June 1st and June 5th.]

30. An Internal Student submitting a thesis in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows :—art vellum or cloth; overcast; edges uncut; lettered boldly up back in gold (¼ inch to ⅛ inch letters), DEGREE, DATE, NAME; short title written or printed neatly and legibly on the front cover.

A thesis which consists of a collection of pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, who will bind theses to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

31. The candidate is also invited to submit as subsidiary matter in support of his candidature any printed contribution or contributions to the advancement of his subject which he may have published independently or conjointly. In the event of a candidate submitting such subsidiary matter he will be required to state fully his own share in any conjoint work.

FEES

32. The fees payable on entry for a qualifying examination are as follows :—

(i) for a special examination, 5 guineas. (The candidate must forward an entry-form by a date to be notified to him.)

(ii) for part or the whole of an Intermediate or First Degree Examination, 1 guinea per paper or practical examination up to a maximum of the total fee for the relevant Examination. (The candidate must forward an entry-form by the date prescribed in the Regulations for the relevant Examination.)

(iii) for part of a Master's Degree Examination :—

(*a*) 1 guinea per paper which has already been set for other candidates.

(*b*) the actual cost to the University, up to a maximum of 12 guineas, if special papers have to be set, or if an oral examination is required.

(The candidate must forward an entry-form by the date prescribed in the Regulations for the relevant Examination.)

33. Except as provided below, a candidate for the Ph.D. Degree must pay on each entry a fee of 20 guineas. A candidate who has previously taken the Master's Degree (M.Th., M.A., LL.M., M.Sc., or M.Com.) in the same Faculty in this University will be required to pay a fee of 10 guineas only. All cheques should be made payable to the " University of London, or Bearer," and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

EXAMINATION

34. After the Examiners have read the thesis they may, if they think fit and without further test, recommend that the candidate be rejected.

35. If the thesis is adequate the Examiners shall examine the candidate orally and at their discretion by printed papers or practical examinations or by both methods on the subject of the thesis and, if they see fit, on subjects relevant thereto ; provided that a candidate for the Ph.D. Degree in the Faculty of Arts who has obtained the Degree of M.A. in the same subject in this University shall in any case be exempted from a written examination.

36. If the thesis is adequate but the candidate fails to satisfy the Examiners at the oral, practical or written examination held in connection therewith, the Examiners may recommend the Senate to permit the candidate to re-present the same thesis and submit to a further oral, practical or written examination within a period not exceeding eighteen months specified by them, and the fee on re-entry, if the Senate adopt the recommendation of the Examiners, shall be half the fee originally paid.

37. If the thesis, though inadequate, shall seem of sufficient merit to justify such action, the Examiners may recommend the Senate to permit the candidate to re-present his thesis in a revised form within eighteen months from the decision of the Senate with regard thereto and the fee on re-entry, if the Senate adopt such recommendation, shall be half the fee originally paid. Examiners shall not, however, make such recommendation without submitting the candidate to an oral examination.

38. For the purposes of the oral, practical or written examination held in connection with his thesis the candidate will be required to present himself at such place as the University may direct and upon such day or days as shall be notified to him.

39. Each Report of the Examiners shall state (*a*) the subject of the thesis submitted by the candidate; (*b*) a list of his other original contributions (if any) to the advancement of his subject; (*c*) a concise statement of the grounds upon which he is recommended by the Examiners for the Degree.

40. A diploma for the Degree of Ph.D., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

41. Copies of all successful theses, whether published or not, will be deposited for reference in the University Library.

42. Work approved for the Degree of Ph.D. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

43. A person who has taken the Ph.D. Degree as an Internal Student in the Faculty of Arts, Laws, Science, Engineering or Economics may proceed to the higher Doctorate (D.Lit., LL.D., D.Sc., D.Sc. (Engineering), or D.Sc.(Economics), as the case may be), in the same Faculty without pursuing any further course of study. For the further conditions under which such higher Doctorates may be taken, reference must be made to the special Regulations relating to them.

44. Candidates who have obtained the Ph.D. Degree in the Faculty of Theology or the Faculty of Music are not on that ground exempted from any of the requirements for the D.D. or D.Mus. Degrees respectively.

45. A student who fails to pass the Ph.D. Degree Examination will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

CANDIDATURE OF TEACHERS AT PROVINCIAL AND COLONIAL UNIVERSITY COLLEGES

46. The following class of persons will be granted the status of Internal Student for the purpose of proceeding to the Ph.D. Degree, provided that they have obtained an approved Degree in this or another University :—

Full-time members of the teaching staffs of the following Colleges :—

University College, Exeter,
University College, Hull,
University College, Leicester,
University College, Southampton,
Gordon College, Khartoum,
University College of the West Indies,
University College, Ibadan (Nigeria),
University College of the Gold Coast,
Makerere College (in respect of the Faculties of Arts and Science).

The supervisor under whom the candidate is required to study will be appointed by the University.

If an appropriate supervisor is not available at the College of which the student is a member of the teaching staff, a Teacher of the University of London, who is an expert in the subject proposed for the Ph.D. Degree, may be appointed. In such a case it shall be a requirement that a responsible member of the academic staff of the College, generally the Head of the Department in which the student is working, be appointed as a joint supervisor.

If before completing his prescribed course of study the student ceases to be a full-time member of the teaching staff of one of the above Colleges, his registration as a candidate for the Degree shall cease at the same time.

The students will be required to comply with the general Regulations for the Ph.D. Degree for Internal Students so far as these are relevant.

CENTRAL RESEARCH FUND

A Research Fund has been instituted for the purpose of making grants to members and teachers of the University for specific projects of research, such as the provision of materials and apparatus, and approved expenses. Applications for grants from the Research Fund will be invited through the public Press and must be forwarded to the Academic Registrar so as to reach him not later than 31 March, 31 August and 30 November in each year. Awards will ordinarily be made by the Senate at their meetings in July, December and March, respectively. Detailed Regulations may be obtained from the Academic Registrar, University of London, Senate House, W.C.1.

REGULATIONS FOR RESEARCH STUDENTS

1. In accordance with Statute 21 (iii) a student may be an Internal Student if he " is registered as pursuing, in a School, or in a public educational institution under one or more Teachers of the University an approved course of research."

2. No student who is registered as an Internal Student for a degree or diploma of the University, or as an External Student, or as an Associate Student, may be registered at the same time as an Internal Student under Statute 21 (iii).

3. Any School of the University may submit for approval by the University the details of any course of research pursued by students in that School who are not registered as Internal or External Students. Recognised Teachers in other Institutions may similarly submit details of courses of research pursued under them by students who are not registered as Internal or as External Students. In all such applications the following points shall be clearly stated :—

(i) the name of the School or Institution ;

(ii) the name of the Teacher or Teachers under whom the student is working ;

(iii) the name of the student ;

(iv) the length of the contemplated course of research ;

(v) a statement that the student is not working for any degree, diploma or certificate of proficiency other than a degree, diploma or certificate of proficiency of the University of London.

4. On the approval of the course of research by the University, a student following it may apply for registration. Students who have already matriculated in the University shall be registered without payment of fee. Students who have not matriculated shall be registered on payment of a fee of 10*s.* 6*d.*

5. On the registration of any Internal Student a card shall be sent by the Academic Registrar to the student notifying him of his registration.

6. An Internal Student registered under Statute 21 (iii) may, on the completion of his course of study, apply to the University through the School, or in the case of a student working in a public educational Institution under a Recognised Teacher through that Teacher, for a certificate that he has completed a course of research as an Internal Student of the University. If the reports of the authorities of the School recommend it, such a certificate shall be issued to the student in the form approved, signed by the Academic Registrar.

UNIVERSITY OF LONDON

Faculty of Theology

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following Degrees in the Faculty of Theology :—

Bachelor of Divinity (B.D.).

Master of Theology (M.Th.).

Doctor of Philosophy (Ph.D.).

Doctor of Divinity (D.D.).

In order to be admitted to the Degree of B.D. as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Divinity, unless exempted therefrom.

(3) Follow an approved course of study at one or more Schools of the University. The total length of the course for the Intermediate and Final Examinations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Divinity.

INTERMEDIATE EXAMINATION IN DIVINITY

Course of Study

The Intermediate Course extends over not less than one academic year.

The subjects of the Intermediate Course are as follows :—

New Testament Greek.

Four of the following :—General Ethics ; Ethics (set book) ; Classical Greek ; Elementary Hebrew ; Ancient History ; Latin ; General Psychology ; Psychology of Religion.

Candidates who wish to obtain Honours at the B.D. Examination must *either* have passed in Elementary Hebrew at the Intermediate Examination in Divinity, *or* have obtained exemption therefrom, *or* must offer at the B.D. Examination Sections (i) (*c*) and (ii) (*c*) in the papers on Old Testament.

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Exemptions

Graduates in Arts of this University are exempted from the Intermediate Examination in Divinity. Such candidates will not, however, be eligible for the award of Honours at the B.D. Examination unless they have *either*

(*a*) passed in Elementary Hebrew as a supplementary subject at the Intermediate Examination in Divinity ;

or (*b*) passed in sections (i) (*c*) and (ii) (*c*) (Hebrew Texts) in the paper on Old Testament at the B.D. Examination ;

or (*c*) passed in Classical Hebrew at the Intermediate Examination in Arts or in Hebrew at the B.A. (General) Examination, or in Hebrew and Aramaic at the B.A. Honours Examination ;

or (*d*) obtained exemption from Hebrew under the Regulations for Advanced Students, or in virtue of the Diploma in Theology of this University.

Candidates who have passed the Intermediate Examination in Arts with Classical Greek, or with Latin, or with Ethics, or with Ancient History, or with Classical Hebrew, and candidates who have passed the Diploma in Theology Examination of this University with Hebrew as the optional subject, will be exempted at the Intermediate Examination in Divinity from examination in the subject or subjects in which they have so passed, but will be required to attend in the Intermediate year, or in the year next following, Final courses in the same or other subjects (as their teachers may advise) in substitution therefor.

Higher School Certificates

(i) Students who are matriculated students of the University and have passed a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools may apply for admission as Internal Students and for exemption from part or the whole of an Intermediate Examination.

(ii) Applications must be submitted by the authorities of the School of the University at which the student proposes to follow his course of study.

(iii) Applications for exemption at the Intermediate Examination in Divinity will be considered in respect of students who have obtained Higher School Certificates and have passed in any of the subjects, as main subjects, corresponding to those required for the Intermediate Examination in Divinity. A candidate who holds such a certificate may apply for exemption from Latin, Classical Greek, and Ancient History at the Intermediate Examination in Divinity in virtue of a pass at Main (Principal) Subject standard in two of those subjects and a pass at Subsidiary Subject standard in the third subject. A student who has been exempted from part of the Intermediate Examination will be required to take the remaining subject or subjects at the Intermediate Examination in Divinity for Internal Students. A student who is required to take two or more subjects at the Intermediate Examination must satisfy the Examiners in both or all such subjects on the same occasion.

(iv) Students who are granted exemption must pay a fee of six guineas on entry for examination in the remaining subject or subjects at the Intermediate Examination in Divinity.

Date of Examination

The General Intermediate Examination in Divinity will take place once in each academic year, commencing on the last Monday in June.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than April 1st, which must be returned, duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than May 24th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the Examination.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination and 2 guineas for re-examination in one subject. Registered Advanced Students and Graduates in Arts of this University who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper up to a maximum of 6 guineas. Other candidates exempted from part of the Examination on the ground of having passed Examinations in this University are required to pay a fee of 2 guineas for each subject offered, up to a maximum of 6 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

Candidates will be required to pass in the following five subjects :—

New Testament Greek (two papers).

Any four of the following (one paper in each) :—

General Ethics.

Ethics (set book).

Classical Greek.

Elementary Hebrew.

Ancient History.

Latin.

General Psychology.

Psychology of Religion.

Candidates shall not be approved unless they have shown a competent knowledge in each of the five subjects selected. A candidate who enters for the whole Examination at one and the same time may, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the remaining subjects is of sufficient merit, be credited with the four subjects in which he has satisfied the Examiners and permitted to present himself on one or more occasions for re-examination in the fifth subject alone, or for examination in another subject allowed by the Regulations, at a subsequent Intermediate Examination (see General Regulations for Intermediate Examinations, p. 10). The approval of the authorities of the School at which the student is registered must be obtained for any change of subject and a candidate offering a new subject must have followed an approved course of study in that subject.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of successful candidates will be published in alphabetical order by the Academic Registrar at 2 o'clock on August 3rd.

Certificates of having passed the Examination, will not be issued except to qualified students applying for such certificates.

SUPPLEMENTARY SUBJECTS

Candidates who have passed, or obtained exemption from, the Intermediate Examination in Divinity, may enter for examination in one or more supplementary subjects, after having attended an approved course of study in such subject or subjects.

SYLLABUSES

The following syllabuses are intended to indicate the general scope and character of the courses without being exhaustive of all parts of the subjects :—

[For Prescribed Books and Special Subjects *see* p. 215.]

General Ethics

Scope of Ethics. Moral concepts and judgments. General nature of desire and will. Conduct and character. Customary morality. Reflective morality. Theories of moral sense and of moral intuition. Conscience, conception of a moral end. Pleasure, happiness, moral excellence, etc. Relation of the individual to society. Duties and rights. Moral institutions. The ethical virtues. Human freedom and responsibility.

Ethics (Set Book)

Plato's *Republic*.

So much knowledge of the general problems will be expected as is necessary for the intelligent study of the prescribed work.

Classical Greek

Prepared set book (Prose). Translation of easy sentences into Greek. Translation into English of easy passages not prescribed. Questions on Grammar.

New Testament Greek

(*a*) Grammar, syntax and composition of simple sentences.

(*b*) A set portion of the Greek Testament with translation, grammar subject-matter and simple retranslation.

Elementary Hebrew

Accidence. Easy translation from short set portion of the Old Testament, and retranslation. Easy composition. Vocabulary to be given so far as not taken from the set portion. Pointing passages from the set portion.

Ancient History

Roman History from Sulla to Marcus Aurelius.

Latin

Prepared set book (Prose or Verse). Translation into English of easy passages not prescribed. Translation of English sentences into Latin. Questions on Grammar.

General Psychology

Scope and methods of Psychology. The leading schools of Psychology. The body-mind relationship. The principles of mental development. Consciousness, subconsciousness, the unconscious. Sensation and perception. Attention, association, assimilation, volition, emotion and sentiment, imitation and suggestion, imagination, memory, habit, belief, conception and reasoning. The innate constitution of man. Dreams, hallucinations and illusions. Rationalization, sublimation and projection. The elements of psycho-pathology. Hypnotic phenomena. Self and not-self. Personality.

Psychology of Religion

The development of religious psychology. The religious consciousness. Religion as individual and social. Cult, rites and worship. The psychology of religious belief. The religion of childhood and adolescence. Conversions and methods of obtaining conversion. Sin and repentance. Prayers. Religious knowledge and the place of intuition and inference therein. Saintliness. Mysticism. Asceticism. Religious symbolism. Belief and faith. The place and limitations of psychology in the study of religion.

B.D. DEGREE

Course of Study

The course for the Final Examination normally extends over not less than two academic years.

The subjects are as follows :—

Old Testament. New Testament. Biblical and Historical Theology.

Church History. Philosophical Introduction to Theology.

One of the following alternative subjects :—

Old Testament Hebrew Text. English Church History. Patristic or Scholastic Texts. Study of Religions. Christian Ethics. History of Christian Worship.

Candidates who wish to obtain Honours at the B.D. Examination must *either* have passed in Elementary Hebrew at the Intermediate Examination in Divinity, *or* have obtained exemption therefrom, *or* must offer at the B.D. Examination Sections (i) (*c*) and (ii) (*c*) in the papers on Old Testament.

Date of Examination

The B.D. Examination will take place once in each year, commencing on the second Monday prior to the first Monday in July.

Every student entering for the B.D. Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study not earlier than April 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than May 15th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the Examination.

Fee

The fee for each student is 6 guineas for each entry to the B.D. Examination.

All cheques should be made payable to the University of London or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Final Examination are as follows :—

Old Testament (two papers).

New Testament (two papers).

Biblical and Historical Theology (two papers).

Church History (one paper).

Philosophical Introduction to Theology (one paper).

One of the following alternative subjects (one paper) :—

Old Testament Hebrew Text.

English Church History.

Patristic or Scholastic Texts.

Study of Religions.

Christian Ethics.

History of Christian Worship.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the subjects of Examination.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar at 2 o'clock on August 11th. Successful candidates will be awarded a First or Second Class Honours Degree or a Pass Degree and their names will be arranged in alphabetical order in these three divisions.

A diploma for the B.D. Degree, under the Seal of the University, will be issued to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.D. Examination who have completed more than half of the Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such

part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

The syllabuses are as follows :—

[For Prescribed Books and Special Subjects *see* p. 215.]

Old Testament

(i) (*a*) The History of Israel to A.D. 70 with *either* (*b*) a detailed study, including Introduction, of selected books in the Revised Version of the Old Testament or of the Apocrypha *or* (*c*) a detailed study of the Hebrew text of a portion of one of the selected books of the Old Testament, including translation, pointing, and critical, grammatical, and exegetical notes.

(ii) (*a*) The Religion of Israel to A.D. 70 with *either* (*b*) a detailed study, including Introduction, of selected books in the Revised Version of the Old Testament or of the Apocrypha *or* (*c*) a detailed study of the Hebrew text of a portion of one of the selected books of the Old Testament, including translation, pointing, and critical, grammatical, and exegetical notes.

A general knowledge of the contents of the Old Testament and the Apocrypha will be required.

New Testament

i. (One paper.) Translation, introduction, criticism and exegesis of specified books.

ii. (One paper.) Textual criticism, general introduction, contents, formation of canon of the whole New Testament, unprepared translation from the New Testament.

Biblical and Historical Theology

(Two papers, containing respectively questions on some branch of Biblical and Historical Theology and the History of Christian Doctrine.)

Specified Subject for **1951** : *The Incarnation and the Trinity.*

A. *Biblical,* with special reference to the following :—

(i) The Doctrine of God and the conception of Spirit in the Old Testament.

(ii) The Old Testament antecedents to the New Testament doctrine of the Person of Christ ; the Jewish ideas in the time of Christ concerning mediation, the Messiah, the Son of Man and the Logos.

(iii) The teaching of the New Testament as to the Person of Christ.

(iv) The data for the doctrine of the Trinity contained in the New Testament.

B. *Historical,* with special reference to the following :—

(i) The doctrine of the Incarnation and the Trinity in relation to Greek thought and to the Arian and Macedonian Controversies.

(ii) The Christological Controversies of the Conciliar Period.

(iii) The history of the doctrine of the Procession of the Holy Spirit.

(iv) The doctrine of the Incarnation and the Trinity in the Middle Ages and in the Reformation Period.

(v) Modern theories.

Specified Subject for **1952** : *The Work of Christ.*

A. *Biblical,* with special reference to the following :—

(i) The Covenant relation in the Old Testament ; the moral and ceremonial conditions of fellowship with God ; the idea of holiness ; the sacrificial system in outline and meaning ; the Old Testament conceptions of salvation, redemption and life after death ; the soteriological and eschatological conceptions in the time of Christ in Jewish and Greek thought.

(ii) The New Testament teaching as to the work of Christ.

B. *Historical,* with special reference to the following :—

(i) Early Christian conceptions, Greek and Latin, of salvation as wrought by Christ.

(ii) Soteriology of Anselm, Abailard, and the Schools.

(iii) Reformation and Post-Reformation theories of atonement and redemption.

(iv) Modern theories.

[*Note.*—Special attention should be given to the inter-relation of the doctrines of the Person and Work of Christ in the different periods.]

Specified Subject for **1953** : *Man, Sin and Grace.*

A. *Biblical,* with special reference to the following :—

(i) The psychological terms of the Old Testament ; the ideas of corporate personality, life and death ; the terminology of sin and grace in primitive, prophetic and legalistic ideas ; the development of the relevant ideas in Judaism to the time of Christ.

(ii) The New Testament experience of salvation, with its implications regarding man and sin and the work of the Holy Spirit.

B. *Historical,* with special reference to the following :—

(i) The Gnostic, Manichean, and Pelagian Controversies.

(ii) Mediæval and Tridentine Doctrine.

(iii) Reformation Doctrine.

(iv) Jansenism and Arminianism.

(v) The modern approach to these doctrines through philosophy and psychology.

[*Note.*—Special attention should be given to the relation of the doctrine of Grace to the Work of the Spirit.]

Church History

General Paper on the History of the Christian Church to A.D. 451.

Philosophical Introduction to Theology

A. The Problem of Knowledge—(*a*) The Purpose of Philosophy. (*b*) The Nature of Knowledge—Intuitionalism, Idealism, Empiricism, Scepticism, Agnosticism, Pragmatism.

B. The Problem of Morality.—(*a*) The scope of Ethics: its relation to Psychology, Sociology, Metaphysics and Art. (*b*) The relation of the individual to society. (*c*) The nature of the Good—Hedonism, Utilitarianism, Evolutionism, Intuitionalism, Perfectionism. (*d*) Personality and the freedom of the will.

C. The Problem of Religion.—(*a*) Definition of Religion and theories of its origin. The relation of Religion to Science, Morality, Philosophy and Art. (*b*) Belief in God and proofs of the Divine Existence. (*c*) Relation of Natural Theology to Revelation.

D. The Problem of Reality.—(*a*) Dualism, Materialism, Monism, Theism. (*b*) Polytheism, Pantheism, Deism. (*c*) The Monotheistic Doctrine of God's Nature and Attributes. (*d*) God's Relation to the World. (*e*) The Religious Conception of Man: Immortality.

ALTERNATIVE SUBJECTS

Old Testament Hebrew Text

Translation, exegesis, retranslation, textual criticism, pointing and grammar of specified portions of the Old Testament.

English Church History

A selected period.

Patristic or Scholastic Texts

Some selected patristic or scholastic texts, illustrative of the selected branch of Biblical and Historical Theology.

Study of Religions

An historical and comparative study of the main principles of Brahmanism (with Hinduism), Buddhism, Zoroastrianism, Judaism (since the fall of Jerusalem, A.D. 70), Islam, Confucianism (with Taoism), Shinto.

Christian Ethics

Ethical codes and summaries in the Old Testament (Decalogue, *Leviticus* XIX, *Job* XXXI). The prophets as moral teachers and social reformers. The kingdom of God and the commands of Jesus. The relation of New Testament Ethics to New Testament Theology with special reference to the ethical teaching of St. Paul. The relation of the Holy Spirit to the moral life.

The practice of the Early Church as regards family, property, slavery and State. Christian and Pagan Ethics compared. The moral discipline of the Mediæval Church. The ascetic ideal.

The ethical teaching of the Reformers. Lutheran and Calvinistic ethics compared. Modern Society and its need of moral guidance in domestic, economic, political and international relations. The Church's authority in that guidance, and its relation to the State.

Suggested Bibliography

L. E. Dewar & C. E. Hudson : *Christian Morals* (London University Press), and S. Cave : *The Christian Way* (Nisbet) deal from different standpoints with much of the syllabus and should be consulted.

A. E. Osborn : *Christian Ethics* (O.U.P.) is a comprehensive text-book covering briefly much of the syllabus.

The following books deal with New Testament Ethics : F. B. Clogg *The Christian Character in the Early Church* (Epworth Press). L. E. Dewar : *An Outline of New Testament Ethics* (London University Press). C. A. Scott : *New Testament Ethics* (C.U.P.).

A useful source-book is C. E. Hudson & M. Reckitt : *The Church and the World* (3 vols., Allen and Unwin).

History of Christian Worship

The nature and functions of worship. The differentia of Christian worship ; and the influence of racial and national characteristics in determining the forms of worship.

The history of worship in Eastern and Western Christendom down to the 16th century ; and the growth of the liturgical books.

The work of the Reformation, and the Counter-Reformation, in the field of worship and liturgy.

The subsequent history of the Book of Common Prayer down to the latest revision ; and the general tendencies of modern worship.

MASTER OF THEOLOGY (M.Th.) DEGREE

A candidate for the M.Th. Examination must *either* have obtained Honours at the B.D. Examination *or* after obtaining the B.D. Pass Degree have passed a qualifying examination consisting of the whole of the B.D. Examination and have reached at least Second Class standard therein. Nevertheless a candidate who passed the B.D. Pass Examination in, or prior to, 1937 will be admitted to the M.Th. Examination without further qualification.

A candidate who has passed the B.D. Examination as an Internal Student is not required to pursue a course of study approved by the University before entering for the M.Th. Examination.

A candidate who has passed the B.D. Examination as an External Student may present himself for the M.Th. Examination as an Internal Student after an approved course of study of not less than two years in a School of the University in the Faculty of Theology.

A candidate may present himself for examination in *not more than three* of the following five subjects, not more than one to be taken in any one year :—

Hebrew and Aramaic, including Syriac. Greek New Testament and Apocrypha. Church History. Biblical and Historical Theology. The Study of Religion.

EXAMINATION

The M.Th. Examination will take place once in each year, commencing on the Tuesday after the last Monday in June.

Every student entering for the Examination must apply to the Academic Registrar for an entry-form, which must be returned on or before February 1st, accompanied by the candidate's fee.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the Examination.

The fee for each entry to the Examination is 15 guineas*.

All cheques should be made payable to the University of London or Bearer, and crossed, "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The Examiners shall be at liberty to test any candidate by means of oral questions.

Provisional lists of successful candidates, arranged in alphabetical order in the several branches, will be published by the Academic Registrar at 2 o'clock on August 11th.

A diploma for the M.Th. Degree, under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

SYLLABUSES

The syllabuses are as follows :—

[For Prescribed Books and Special Subjects *see* p. 216]

Hebrew and Aramaic, including Syriac

A. *Biblical Hebrew* (three papers) :—

1 and 2. Translation of pointed and unpointed passages from set books, with questions on grammar, text, etc.

3. *In* **1951** *and* **1952.** Composition ; translation of unseen passages, pointed and unpointed ; Grammar, Philology, Epigraphy, with special reference to Moabite Stone (Driver's *Samuel*, pp. 1–35, 85–94).

In and after **1953.** Composition ; translation of unseen passages, pointed and unpointed ; Grammar, Philology, Epigraphy, with special reference to Driver : *Notes on the Hebrew Text of the books of Samuel* (2nd edition, 1913), pp. i-xxxiii, lxxxiv-xciv.

B. *Post-Biblical Hebrew* (one paper) :—

Mishna, Pirke Aboth : Rashi on *Genesis* I–XI. Translation of unprepared passages.

C. *Aramaic and Syriac* (two papers) :—

1. Pointed and unpointed passages of the Aramaic portions of the Old Testament ; Targum of Onkelos on Exodus i–xii ; Luke i–xii, in the Old Syriac and Peshitta Versions ; *Odes of Solomon* 3–42 (ed: Rendell Harris, Cambridge University Press). [For Examinations in and after 1952 Targum of Onkelos on Exodus i-xii will be replaced by

* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for examinations, see p. 5.

Targum of Isaiah i-xvi (ed. J. F. Stenning, Clarendon Press, 1949), and the edition of *Odes of Solomon* 3-42 will be that of Rendell Harris and A. Mingana, Manchester University Press.]

2. Composition, and translation of unprepared passages. Acquaintance with the Estrangelo, Jacobite and Nestorian scripts and punctuation is expected, also superlinear punctuation in Aramaic.

D. *Old Testament Introduction* (one paper) :—

(*a*) Introduction (date, authorship, composition, etc.) to all the books of the Old Testament (Hebrew and Aramaic). (*b*) Special questions on the introduction to the books set in A, 1 and 2 ; and also in C (*i.e.*, *Ezra* and *Daniel*). (*c*) *In* **1951** *and* **1952.** Canon. *In and after* **1953.** Introduction to the chief Ancient Versions of the Old Testament, viz., Septuagint, Old Latin, Vulgate and Peshitta.

Greek New Testament and Apocrypha

A. Translation and exegesis of the Greek New Testament (two papers).—(*a*) General Paper ; (*b*) Prescribed Books.

B. Introduction to the Apocrypha together with translation and exegesis of prescribed books (one paper).

C. Grammar, vocabulary and diction of the Greek Testament. Re-translation of the New Testament into Greek. Composition in Hellenistic Greek (one paper).

D. Introduction to the New Testament (one paper).

E. Textual Criticism and History of the Canon of the New Testament (one paper).

F. The Theology of the New Testament (one paper).

Church History

A, B, C. Three general papers on Church History : A, to A.D. 800 ; B, A.D. 800–1500 ; C, A.D. 1500–1900.

D. A paper on a special subject or period before A.D. 800, to be studied with prescribed authorities.

E. A paper on a special subject or period between A.D. 800 and the end of the nineteenth century, to be studied with prescribed authorities.

F. A paper on the original authorities prescribed under D and E.

G. An Essay.

Biblical and Historical Theology

A. *Old Testament Theology* with Jewish Theology down to the commencement of the Christian Era (one paper).

B. *New Testament Theology* (one general paper, one paper on a selected subject, or the Theology of a selected book).

C. *History of Doctrine* to the Second Council of Nicæa, A.D. 787 (one paper). Two selected periods or subjects (two papers). One paper of Essay subjects.

The Study of Religion

A. *Historical and Comparative.*

(i) The definition of Religion. Theories of the origin of Religion. Early forms of belief, rite and worship.

(ii) A comparison of religious conceptions in respect to God or gods, creation, cosmology, cosmogony, man, incarnation, sin, sacrifice, forgiveness, the state of the dead; in Brahmanism and Hinduism, Zoroastrianism, Judaism (after A.D. 70), Buddhism, Chinese and Japanese religions; Islam (one paper).

B. *Psychological.*

The religious consciousness, its character, origin and development; its place in the life of man. The relation of the individual to the community in respect to religion. Worship and prayer, faith, sin and guilt, conversion, mysticism (one paper).

C. *Philosophical.*

Religious doctrines as intellectual constructions, in relation to science and metaphysics. Religious doctrines as practical principles of individual life and social order, in relation to ethics, æsthetics and sociology. The idea of God. Theistic arguments. Freedom, Immortality. The problem of evil. Religion and morality (one paper).

Paper 4. A subject selected for comparative study.

Paper 5. A religion selected for historical study.

Paper 6. A school, writer or treatise selected for philosophical study.

Paper 7. A paper of subjects for essays.

DOCTOR OF PHILOSOPHY (Ph.D.)

[Regulations for the Degree of Ph.D. will be found on pp. 106–115. Copies may be obtained from the Academic Registrar.]

DOCTOR OF DIVINITY (D.D.)

(*a*) *General Regulations*

A candidate for the D.D. Degree must have previously obtained either the B.D. Degree as an Internal Student, or the Ph.D. Degree as an Internal Student subsequently to having obtained the B.D. Degree as an External Student.

Every candidate for the D.D. Degree must further have passed the M.Th. Examination in this University in at least one subject.

No candidate will be exempted from any of the requirements for the D.D. Degree on the ground of having obtained the Ph.D. Degree.

A candidate may make application at any time for the Degree. He must apply to the Academic Registrar for an entry-form, which must be returned accompanied by published work or works or by a thesis, and by the proper fee.

Every candidate for the D.D. Degree must at each entry pay a fee of 20 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The candidate must furnish not less than four copies of the published work or thesis submitted to the Examiners.

The Examiners may at their discretion require the candidate to present himself for an interview.

A diploma for the Degree of D.D., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

A candidate who fails to pass the D.D. Examination will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

(*b*) *Applications in respect of published work*

Together with his entry-form the candidate must submit evidence of his qualifications, such evidence to consist of published papers or books containing original contributions to the advancement of theological learning. In the event of a candidate submitting any conjoint work in support of his candidature he must state fully his own share in such conjoint work. The Degree will not be conferred in respect of conjoint work only.

(*c*) *Applications in respect of unpublished work*

Every candidate for the Degree of D.D. shall submit together with the entry-form four copies of his thesis, printed or typewritten, containing original contributions to the advancement of theological learning.

The candidate must state how far the thesis embodies the result of his own research, whether it has been conducted independently, or in co-operation with others.

Any thesis submitted for the D.D. Degree must be written in English and must be satisfactory as regards literary presentation, as well as in other respects, and must be submitted in a form suitable for publication.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of the study of Theology which he may have published independently or conjointly.

A candidate will not be permitted to submit as his thesis work for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or any other University in a thesis covering a wider field, provided that he shall indicate clearly any work which has been so incorporated.

A candidate for the Degree who has been approved by the Examiners shall be required to publish his thesis as a whole, and the Degree shall not be conferred on him until four copies of the published work as approved by the Examiners have been received by the Senate.

Work approved for the Degree of D.D. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

EXAMINATION-PAPERS

The following pamphlets of past examination-papers can be obtained from the University of London (Publications Section), Senate House, W.C.1 :—

	s.	*d.*	
Intermediate Theology	1	6	post free.
B.D. and M.Th.	2	0	,,

A complete list of examination-papers published by the University can be obtained on application.

FACULTY OF THEOLOGY

PRESCRIBED BOOKS AND SPECIAL SUBJECTS FOR INTERNAL STUDENTS

INTERMEDIATE EXAMINATION IN DIVINITY

Elementary Hebrew

1951. *Ruth* ; *Jonah.*
1952. *Genesis* xl–xliv.
1953. *Genesis* i-iv and vi-viii.

New Testament Greek

1951. *Acts* i–xii.
1952. *St. Luke* xiii–xxiv.
1953. *St. Mark* (omitting vii, 1–viii, 26).

Classical Greek

1951. Plato : *Apology.*
1952. Plato : *Euthyphro.*
1953. Xenophon : *Memorabilia,* Book I.

Latin

1951. Cicero : *In Catilinam,* books i–iv.
1952. Cicero : *Pro Archia* and *Somnium Scipionis.*
1953. Cicero : *De Senectute.*

B.D. EXAMINATION

Old Testament

1951

(i) (*b*) *Judges* and 1 *Maccabees* ; (*c*) *Judges* vi–ix.
(ii) (*b*) *Daniel* and *Jeremiah* ; (*c*) *Jeremiah* i–iii, vii and xxxi.

1952.

(i) (*b*) 1 *Maccabees* and 2 *Samuel* ; (*c*) 2 *Samuel* i-vii.
(ii) (*b*) *Jeremiah* and *Isaiah* i-xxxv ; (*c*) *Jeremiah* i–iii, vii and xxxi.

1953.

(i) (*b*) 2 *Samuel, Ezra-Nehemiah;* (*c*) 2 *Samuel* i-vii.
(ii) (*b*) *Isaiah* 1-xxxv. *Job ;* (*c*) *Isaiah* xxviii-xxxii.

New Testament

1951. *St. John* ; 1 *Corinthians.*
1952. *St. John : Romans.*
1953. *Romans ; St. Matthew.*

Old Testament Hebrew Text

1951. *Deuteronomy* i-xv ; *Amos* ; *Isaiah* i-vi.

1952. *Amos ; Isaiah* i-vi ; *Judges* iv-xvi.

1953. *Judges* iv-xvi ; *Isaiah* xl-xlviii ; *Haggai.*

English Church History

1951. History of Christianity in England, 1509–1603.

1952. History of Christianity in England, 1603–1714.

1953. History of Christianity in England, 1714–1900.

Patristic or Scholastic Texts

1951. Athanasius : *De Incarnatione.* St. Cyril : *Epistles* ii and iii to Nestorius and to John of Antioch. *The Tome of Leo.* The Chalcedonian Definition of the Faith. [*Note.*—These texts, with the exception of *De Incarnatione*, may be studied in T. H. Bindley : " *The Œcumenical Documents of the Faith* " (Methuen).]

1952. Lightfoot : *The Apostolic Fathers*, omitting *The Shepherd of Hermas* (ed. Harmer, 1 vol. ed., Macmillan, 1891) ; Anselm : *Cur Deus Homo.*

1953. Origen : *De Principiis*, lib. iii, cap. I ; Augustine : *De Natura et Gratia* ; *De Peccato Originali.*

M.Th. EXAMINATION

Hebrew and Aramaic

1951 and 1952. *Joshua ; Job* i–xxxi ; *Nahum ; Micah ; Zachariah.*

1953. *Exodus* i-xxiv ; *Psalms*, Books I and II ; *The Song of Songs ; Ecclesiastes ; Lamentations.*

Greek New Testament and Apocrypha

1951. A. *St. Luke* ; *Philippians* ; *Galatians* ; *The Epistle of James.* B. 1 *Maccabees* and *Tobit.*

1952. A. *Acts* ; *The Pastoral Epistles* ; *Hebrews.* B. *Ecclesiasticus.*

1953. A. *St. Mark ; Ephesians ; Colossians ; 1 Peter* ; B. *Wisdom* and *Baruch.*

Church History

1951

D. The Early History of Christian Monasticism (to St. Benedict). Authorities :—Palladius : *Lausiac History* (ed. C. Butler, 2 vols., Cambridge University Press). St. Benedict : *Rule* (ed. C. Butler, Herder, Freiburg *or* ed. Lindenbauer, Hanstein, Bonn).

E. John Wesley and the Evangelical Revival. Authorities :—John Wesley : *Works*, vol. 8 (Appeals to Men of Reason and Religion, and other documents). John Wesley : *Standard Sermons* (ed. E. H. Sugden, 2 vols., Epworth Press, 1935).

1952.

D. The Age of the Apostolic Fathers. Lightfoot : *The Apostolic Fathers* (ed. Harmer, one-volume edition, Macmillan, 1891). N.B.—The four-volume edition should also be consulted.

E. The Age of St. Bernard. St. Bernard : *De Consideratione.* Migne : *Patrologia Latina*, vol. 182, columns 727–808 (trans. G. Lewis, Oxford Univ. Press, 1908). John of Salisbury : *Historia Pontificalis* (ed. Poole, Oxford Univ. Press, 1927).

1953.

D. The Age of the Apologists. Justin: *Apologies* (ed. Blunt, Cambridge Patristic Texts, 1911). Tertullian: *Apology* (ed. Mayor and Souter, Cambridge).

E. The Conversion of England, 597–755. Bede: *Historia Ecclesiastica Gentis Anglorum* (ed. Plummer, Oxford, 1896).

Biblical and Historical Theology

1951

B. The relation of Pauline theology to the teaching of the Synoptic Gospels.

C. The Theology of Athanasius and Hooker.

1952.

B. The Epistle to the Hebrews in relation to other types of New Testament Theology.

C. The Theology of the Cappadocian Fathers and Aquinas.

1953

B. The Theology of the Johannine Writings.

C. The Theology of Nestorius and of Cyril of Alexandria; The Theology of Arminius and the *De Satisfactione* of Grotius.

The Study of Religion

1951

4. Prayer.

5. The Religion of Ancient Greece to B.C. 300, with special reference to Immortality.

6. Lotze.

1952.

4. Mythology

5. The Religion of Ancient Rome to the fall of the Republic.

6. Leibnitz.

1953.

4. Totemism.

5. The Religion of Assyria and Babylon.

6. The English Neo-Hegelians, John and Edward Caird and T. H. Green.

UNIVERSITY OF LONDON

Faculty of Arts

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following Degrees in the Faculty of Arts:
Bachelor of Arts (B.A.).
Master of Arts (M.A.).
Doctor of Philosophy (Ph.D.).
Doctor of Literature (D.Lit.).

Regulations for Admission in Session 1950-51

In order to be admitted to the Degree of B.A. as an Internal Student a candidate must :—

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Arts, unless exempted therefrom.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the course for the Intermediate and Final Examinations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Arts (B.A. (General) or B.A. Honours).

[For information regarding the B.A. (Architecture) Degree *see* separate Regulations, pp. 501–509 below.]

Regulations for Admission in and after October 1951

In order to be admitted to the Degree of B.A. as an Internal Student a candidate must :—

(1) Satisfy the minimum University entrance requirements in one of the ways provided by the Regulations.

(2) Satisfy the additional requirement for admission to the Faculty of Arts.

(3) Pass the Intermediate Examination in Arts, unless exempted therefrom.

(4) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. Except where the Regulations for Degrees in certain subjects state otherwise, the total length of the course of study is normally not less than three academic years. Nevertheless the course of study for students admitted as Advanced Students may be reduced to a period of not less than two academic years.

[For Regulations for Advanced Students, see pp. 14–15]

(5) Pass the Final Examination in Arts (B.A. (General) or B.A. Honours).

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The additional requirement for admission to the Faculty of Arts referred to in (2) above is :—

either a pass in a second language other than English at ordinary or advanced level at an approved General Certificate of Education Examination, one at least of the two languages to be Latin or Greek,*

or (in the case of a candidate who has obtained Certificate(s) in School or other Examinations prior to 1951)
†a pass at not less than minimum University entrance level in a second language other than English at the examination recognised by the University for the purposes of his matriculation. One at least of the languages must be Latin or Greek*.

INTERMEDIATE EXAMINATION IN ARTS

Course of Study

The Intermediate Course normally extends over not less than one academic year.

The subjects of the Intermediate Course are as follows :—

Classical Arabic.	Geology.	Music.
History of Architecture.	German.	Norwegian
Classical Armenian.	Greek.	Pali.
Modern Armenian.	Gujarati.	Classical Persian.
History of Art.	Classical Hebrew.	Physics.
Bengali.	Hindi.	Polish.
Biology.	History.	Portuguese.
Botany.	Ancient History.	Psychology.
Bulgarian.	Oriental History.	Roumanian.
Burmese.	Hungarian.	Russian.
Chemistry.	Italian.	Sanskrit.
Classical Chinese.	Classical Japanese.	Serbo-Croat.
Czech.	Modern Japanese.	Sinhalese.
Danish.	Latin.	Slovak.
Dutch.	Logic.	Slovene.
Economics.	Malay.	Spanish.
Ancient Egyptian.	Marathi.	Swedish.
English.	Applied Mathematics.	Tamil.
Ethics.	Pure Mathematics.	Theology.
French.	Mathematics (Pure and Applied).	Turkish.
Geography.	Military Studies.	Urdu.
		Zoology.

Three subjects are to be chosen from the foregoing list according to the following rules :—

(1) and (2) Two languages, of which one must be either Latin or Greek. (Both Latin and Greek may be taken.)

(3) A subject not already taken.

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*The conditions under which a candidate may offer a Classical Oriental Language in place of Latin or Greek are given on p. 303.

†Nevertheless, special applications for exemption from this regulation will be considered on their merits in respect of students who have matriculated prior to July, 1951, and who have been prevented from entering the University

(*a*) by National Service;

(*b*) by sickness or other exceptional cause ;

(*c*) by lack of accommodation in a School or Institution of the University ;

(*d*) on account of the student's youth.

Students will be encouraged to attend in their first year at the University courses of lectures in at least one subject other than those in which they are required to pass an examination.

The following subjects may not be offered together :—

Classical Japanese and Modern Japanese.
Classical Armenian and Modern Armenian.
Czech and Slovak.
Serbo-Croat and Slovene.

No student will be permitted to offer the subject of Military Studies unless, in the opinion of the University, he is suitably qualified to attend the course in that subject.

Note.—A candidate who is a native of Asia or of Africa and is not of European or American parentage may apply to the Academic Registrar for permission to substitute for Latin or Greek any one of the following languages : Classical Arabic, Classical Armenian, Classical Chinese, Classical Hebrew, Classical Japanese, Sanskrit, Pali, Classical Persian, but a candidate whose mother-tongue is Hebrew or Persian or Japanese may not take Classical Hebrew or Classical Persian or Classical Japanese respectively. Applications should be made within one month of the beginning of the session. A candidate will be required to send to the University original documentary evidence clearly establishing his claim to take a substituted language.

Any candidate, however, who is proceeding either to the B.A. Honours Degree in History (Branches III, IV or V) or to an Honours Degree in Oriental Languages (other than Hebrew) or to a B.A. (General) Degree with at least two Oriental Languages may apply to the Academic Registrar for permission to offer a Classical Oriental Language in lieu of Latin or Greek. A candidate who is proceeding to the B.A. Honours Examination in Hebrew will be required, except in special circumstances, to offer Latin or Greek.

Students intending to proceed to the B.A. Honours Examination in the History of Art are required to pass in a modern language other than English and are recommended to select History of Art at the Intermediate Examination in Arts.

Students intending to proceed to the B.A. Honours Examination in English for Internal Students are recommended to take History at the Intermediate Examination in Arts.

Students intending to proceed to the B.A. Honours Examination in History for Internal Students are recommended to select their subjects for the Intermediate Examination in Arts from the following :—

Latin, Greek, French, German, English, History, Ancient History (alternative (*b*)).

Students intending to proceed to the B.A. Honours Examination in Malay are required to pass in Dutch at the Intermediate Examination in Arts.

Students intending to proceed to the B.A. Honours Examination in Philosophy are recommended to take Logic or Ethics at the Intermediate Examination in Arts.

Students intending to proceed in or after 1952 to the B.A. Honours Examination in either Russian Regional Studies, Central European Regional Studies or South-East European Regional Studies are recommended to take a relevant Slavonic Language and either European History or Economics at the Intermediate Examination in Arts.

Students intending to proceed to the B.A. Honours Examination in Turkish are required to pass in Classical Arabic and in Oriental History, Section (*a*) Outlines of the History of the Near and Middle East from A.D. 600, at the Intermediate Examination in Arts.

In order to be admitted to the Intermediate course in Latin a student must satisfy the authorities of his College or School *either*

(1) that he is a graduate of this University;

or (2) that he is a matriculated student who has satisfied the Examiners in Latin (alone or as one of the subjects) at one of the following examinations:—

(i) The Matriculation Examination or any Examination conducted by the University in lieu thereof. (The alternative lower paper in Latin at the Matriculation Examination will not be accepted.)

(ii) An Examination accepted by the University as exempting from the Matriculation Examination, provided that the student has passed in Latin in accordance with the conditions laid down in the "Regulations Relating to Exemption from the Matriculation Examination."

(iii) The General School Examination, provided he has reached the standard in Latin normally required for Matriculation.

(iv) The Higher School Examination.

(v) A Higher Certificate Examination of a University of which the School Certificate Examination is accepted as exempting from the Matriculation Examination of this University.

(vi) The Intermediate Examination in Divinity for Internal or External Students.

(vii) The Examination for the Degree of B.-ès-L. in the University of Paris.

[*Note.*—A student who is not able to satisfy this requirement at the beginning of his course may, with the consent of his College or School, do so not later than the January preceding his Intermediate Examination.]

or (3) that he has had an adequate preliminary training in the subject.

Students who have failed at the External Intermediate Examination in Arts but have passed in Latin at that Examination will be exempted from the requirements in respect of Latin set forth above.

EXEMPTIONS

The following exemptions will be granted at the Intermediate Examination in Arts. A student exempted from the Intermediate Course and Examination in any subject or subjects will be required to attend in the Intermediate year or in the year next following Final courses in the same or other subjects (as his teachers may advise) in substitution therefor.

Students who have obtained the B.D. Degree and have passed in Classical Greek or Latin at the Intermediate Examination in Divinity will be exempted from the Intermediate Examination in Arts.

Students who have obtained the B.D. Degree without passing at the Intermediate Examination in Classical Greek or Latin will be exempted from two subjects only of the Intermediate Examination in Arts, and required to complete that Examination by passing in a Classical Language.

Students who passed the Intermediate Examination in Divinity in or before 1929 will be exempted from examination in Latin and Greek.

Students who have passed the Intermediate Examination in Music will be exempted from examination in Music.

Students who have passed the Intermediate Examination in Science or the B.Sc. Examination with Pure Mathematics, Applied Mathematics, Botany, Chemistry, Geology, Physics, or Zoology, will be exempted from examination in one of those subjects.

Students who have passed the Intermediate Examination in Engineering will be exempted from examination in Pure or Applied Mathematics.

Students who have passed the Intermediate or Final Examination in Science with Geography or the B.Sc. (Economics) Examination with Geography as a special subject or the Academic or External Diplomas in Geography will be exempted from examination in Geography.

Students who have passed the B.Com. Examination with French as the compulsory foreign language, or as the second foreign language in Group D, will be exempted from examination in French.

Students who have passed the Intermediate Examination in Agriculture or Economics or Commerce with Economics will be exempted from examination in Economics.

Students who have obtained the Academic Postgraduate Diploma in Psychology will be exempted from examination in Psychology.

Students who have obtained the Academic or the External or the Extension Diploma in Theology will be exempted from examination in Theology.

[*The following Regulations will apply for Exemptions in Session* **1950-51** *only.*]

*Higher School Certificates**

1. Students who are matriculated students of the University and have obtained a Higher School Certificate recognised by the Ministry of Education may apply for admission as Internal Students and for permission to proceed to a first Degree in the University without having previously satisfied the Examiners at an Intermediate Examination.

2. Applications must be submitted by the authorities of the School or Institution of the University at which the student proposes to follow his course of study.

3. (*a*) Applications for complete exemption from the Intermediate Examination in Arts and for direct entry to B.A. Honours and B.A. (General) Courses will be considered in respect of students who have obtained a Higher School Certificate in or after July 1947 and have, on one and the same occasion in subjects corresponding to those which may be offered at the Intermediate Examination in Arts, satisfied the following requirements :—

either (i) attained an approved standard in three principal (main) subjects, provided that these subjects include a classical language and one other language (which may be English) ;

or (ii) attained an approved standard in three principal (main) subjects and in a subsidiary subject, provided that these subjects include (as above) a classical and another language (the classical language may be the subsidiary subject) ;

or (iii) attained an approved standard in two principal (main) subjects and in two subsidiary subjects, provided that these subjects include (as above) a classical and another language, one of which languages must be a main subject.

NOTE.—The approved standard required under (i) and (ii) above is not less than a clear pass in all subjects whether taken at main or at subsidiary standard.

The approved standard required under (iii) above is not less than a clear pass in each of the two subsidiary subjects and *either* " Good " (or the equivalent) in each of the two main subjects *or* " Distinction " (or the equivalent) in one of the main subjects and a clear pass in the other.

*For entrance requirements applicable to the B.A. Honours Degree in Mathematics, *see* p. 395.

(*b*) Students who in or after July 1947 have obtained a Higher School Certificate by passing on one and the same occasion in three main subjects at an approved standard, which do not include a classical language, but which otherwise comply with the necessary conditions for exemption from the Intermediate Examination in Arts, will be allowed to enter on a B.A. Honours or a B.A. (General) course, but will be required to enter for a special examination in a classical language†, at an approved standard, at the end of the first year of their course at the University. A candidate who fails at the examination will be permitted to re-enter but must pass the examination not less than one year before he presents himself for his Final Examination.

(*c*) Students who have direct entry to the B.A. Honours or B.A. (General) course will be encouraged to attend in their first year at the University courses of lectures in at least one subject other than those in which they are required to pass an examination.

4. In respect of Higher School Certificates obtained prior to July 1947 or which in choice of subjects do not conform to the requirements of paragraph 3 above, complete or partial exemption from the Intermediate Examination in Arts will be considered under the following conditions* :—

(i) Applications for complete exemption will be considered in respect of students who have obtained a Higher School Certificate and have passed in four subjects, as main subjects, which correspond to four subjects in the list on p. 302 above and which include two languages, one of which must be either Greek or Latin.

Note.—Students who offer either Botany or Zoology as one of these subjects are not permitted to offer also Biology.

(ii) Students who have obtained a Higher School Certificate with three such main subjects may be allowed to complete the Intermediate Examination of this University by passing in the fourth subject at a subsequent Higher School Examination or at a subsequent Intermediate Examination of this University.

(iii) As a temporary measure and subject to the approval of the authorities of the College concerned, an Internal Student who has obtained a Higher School Certificate with either one such main subject or two such main subjects may be allowed to complete the Intermediate Examination of this University by passing in the remaining three subjects or two subjects respectively at a subsequent Intermediate Examination in Arts of this University. Before entering for the Final Examination the student must have attended a course of study extending over at least two years *subsequently* to completing the Intermediate Examination for Internal Students.

(iv) A student who is required to take two or three subjects at the Intermediate Examination must satisfy the Examiners in both or all the subjects on the same occasion.

5. Students who are granted exemption must pay a fee of six guineas, this fee to include a first entry for examination in any remaining subject or subjects at the Intermediate Examination in Arts.

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† For syllabuses of special examinations in Greek and Latin see pp. 320 and 321–2 below.

*Nevertheless, special applications will be considered on their merits as under paragraph 3 above in respect of students who have obtained a Higher School Certificate prior to July 1947 and whose education has been interrupted by—

(*a*) National Service or other circumstances arising out of war conditions ;

(*b*) sickness or other exceptional causes ;

(*c*) failure to obtain admission to a School or Provincial University College owing to lack of accommodation.

6. Students who have been exempted from the Intermediate Examination in Arts may be permitted to proceed to the Final Examination after a course of study extending over two sessions from the date of their registration as Internal Students, and to qualify subsequently for the award of the Degree by attending a further approved course of study extending over not less than one academic year, as prescribed in Section 14 of the Regulations for Approved Courses of Study.

[*The following Regulations will apply for Exemptions in and after* **October 1951**]

*General Certificate of Education and Higher School Certificate**

Students who have satisfied the minimum University and Faculty entrance requirements and who fulfil the conditions given below may apply for admission as Internal Students and for permission to proceed to a first Degree in the University without having previously satisfied the Examiners at an Intermediate Examination.

Applications must be submitted by the authorities of the School or Institution of the University at which the student proposes to follow his course of study.

1. Applications for exemption from the Intermediate Examination in Arts and for direct entry to B.A. Honours and B.A. (General) courses will be considered in respect of students who have

either (i) passed, on one and the same occasion, at an Examination for a General Certificate of Education awarded by one of the approved University Examining Bodies, in three Advanced subjects corresponding to those which may be offered at the Intermediate examination in Arts. One at least of the subjects must be a language, which may be English;

or (ii) obtained a Higher School Certificate recognised by the Ministry of Education and have, on one and the same occasion, passed at main standard in three subjects corresponding to those which may be offered at the Intermediate Examination in Arts. One at least of the subjects must be a language, which may be English.

Students claiming exemption under (i) and (ii) above who have not passed in Latin or Greek at Advanced level at a General Certificate of Education Examination or at main standard at a Higher School Certificate Examination, will be required to enter for a special examination in either Latin or Greek at an approved standard at the end of the first year of their course at the University. A candidate who fails at the examination will be permitted to re-enter but must pass the examination not less than one year before he presents himself for his Final Examination.

[For syllabuses of special examinations in Latin and Greek see pp. 320 and 321–2 below.]

The conditions under which a candidate may offer a Classical Oriental Language in place of Latin or Greek are given on page 303. Candidates eligible to offer a Classical Oriental Language in place of Latin or Greek will be required to pass the whole of the Intermediate Examination in that subject.

2. Students who have, on one and the same occasion, passed at Advanced Standard at an Examination for a General Certificate of Education awarded by one of the approved University Examining Bodies or at main standard at a Higher School Certificate Examination in three subjects corresponding to those which may be offered at the Intermediate Examination in Arts, but who have not passed at that

*For entrance requirements applicable to the B.A. Honours Degree in Mathematics, *see* pp. 395–6.

standard in a language, may be allowed to complete the Intermediate Examination in Arts by passing in Latin or Greek at Advanced standard at a subsequent General Certificate of Education Examination or at a subsequent Intermediate Examination of this University.

3. Students who have—

either passed, on one and the same occasion, at Advanced standard at an Examination for a General Certificate of Education awarded by one of the approved University Examining Bodies in two subjects corresponding to those which may be offered at the Intermediate Examination in Arts ;

or obtained a Higher School Certificate with passes at main standard in two such subjects ;

may complete the Intermediate Examination in Arts of this University by passing in *two* further such subjects at a subsequent Intermediate Examination in Arts or at Advanced Standard at a subsequent General Certificate of Education Examination. Two of the four subjects passed must be Latin or Greek,* and another language. Before entering for the Final Examination the student must have attended a course of study extending over at least two years *subsequently* to completing the Intermediate Examination for Internal Students.

A student who is required to pass in two subjects in order to complete the Intermediate Examination must satisfy the Examiners in both the subjects on the same occasion.

4. Special applications for complete exemption from the Intermediate Examination in Arts will be considered on their merits from students who fulfil the following two conditions :—

I. Who have been prevented from entering the University—

(*a*) by National Service ;

(*b*) by sickness or other exceptional cause ;

(*c*) by lack of accommodation in a School or Institution of the University ;

(*d*) on account of the student's youth :

and II. who have obtained a Higher School Certificate prior to 1951 and have attained an approved standard, on one and the same occasion, in—

(i) three principal (main) subjects and a subsidiary subject, provided that these subjects include either Latin or Greek* and another language. (Latin or Greek* may be taken as subsidiary.)

or (ii) two principal (main) subjects and two subsidiary subjects, provided that these subjects include either Latin or Greek* and another language, one of which languages must be a main subject.

The approved standard required under (i) is not less than a clear pass in all subjects, whether at main or at subsidiary standard.

The approved standard required under (ii) is not less than a clear pass in each of the two subsidiary subjects and *either* " Good " (or the equivalent) in each of the two main subjects *or* " Distinction " (or the equivalent) in one of the main subjects and a clear pass in the other.

*The conditions under which a candidate may offer a Classical Oriental Language in place of Latin or Greek are given on p. 303.

5. Students who are granted exemption must pay a fee of six guineas, this fee to include a first entry for examination in any remaining subject or subjects at the Intermediate Examination in Arts.

6. Students who have been exempted from the Intermediate Examination in Arts may be permitted to proceed to the Final Examination after a course of study extending over two sessions from the date of their registration as Internal Students, and to qualify subsequently for the award of the Degree by attending a further approved course of study extending over not less than one academic year, as prescribed in Section 14 of the Regulations for Approved Courses of Study.

7. Students who have direct entry to the B.A. Honours or B.A. (General) course will be encouraged to attend in their first year at the University courses of lectures in at least one subject other than those in which they are required to pass an examination.

Date of Examination

[*Note.*—Special Intermediate Examinations in the Faculty of Arts are held at the following Schools of the University: Bedford College; Birkbeck College; King's College and the London School of Economics (jointly); Queen Mary College; Royal Holloway College; School of Oriental and African Studies; University College; Westfield College.]

The General Intermediate Examination in Arts will take place once in each academic year commencing on the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations for Approved Courses of Study (pp. 6–9), together with the proper fee, not later than April 17th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written, practical, and oral examinations.

Fees*

The fee for each student is 6 guineas for each entry to the whole Examination and 2 guineas for re-examination in one subject.

Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper or practical examination up to a maximum of 6 guineas. Other candidates exempted from part of the Examination on the ground of having passed Examinations in this University are required to pay a fee of 2 guineas for each subject offered up to a maximum of 6 guineas.

The fee for examination in a supplementary subject is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

In each subject, except Mathematics (Pure and Applied), the Examination will consist of two papers of three hours each, together with, in the case of Botany, Chemistry, Geology, Physics, Psychology, Zoology, and Military Studies, a practical examination; in the case of Biology, two practical examinations of 3 hours each; in the case of Geography, an examination in map work; and in the case of Music, an oral examination. In Mathematics (Pure and Applied) there will be three papers.

There will be an oral examination in all modern foreign languages which shall test the candidate's knowledge of the spoken language.

*For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5

Candidates shall not be approved unless they have shown a competent knowledge in each of the three subjects selected.

The Examiners shall be at liberty to test any candidate by means of oral questions.

The Examination will be a Pass Examination only, and the list of successful candidates will present the names in alphabetical order without division into classes.

A provisional list of successful candidates in alphabetical order will be published at 2 o'clock on August 20th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SUPPLEMENTARY SUBJECTS

Candidates who have passed or obtained exemption from the Intermediate Examination in Arts may enter for examination in one or more supplementary subjects, after having attended an approved course of study in such subject or subjects.

SYLLABUSES

The following syllabuses of the Intermediate Course are intended to indicate the general scope and character of the instruction-courses without being exhaustive of all parts of the subjects :—

[For details of set books *see* Appendix to these Regulations.]

Classical Arabic

1. Translation from specified texts with questions on their language and subject-matter. Arab History, A.D. 600–750.

2. Translation from unspecified texts. Translation from English. Grammar.

History of Architecture

1. Greek and Roman Architecture. (One paper.)

2. History of Greek and Roman Art. (One paper.)

[*Note.*—In both papers candidates will be required to illustrate their answers with freehand sketches.]

3. Drawings of Greek and Roman Orders done during the session to be submitted and marked.

Candidates must take Section 1, and *either* Section 2 or Section 3.

Classical Armenian

1. Translation from specified texts, with questions on their language and subject-matter. Armenian History, 5th century A.D.

2. Translation from unspecified texts. Translation from English. Grammar.

Modern Armenian

1. Translation from specified texts with questions on their language and subject-matter.

2. Translation from unspecified texts. Translation from English. Grammar.

History of Art

Outlines of Art History in the following fields :—

1. French and English architecture and sculpture from *c.* 1000–*c.* 1350.

2. Italian Painting, Sculpture and Architecture from Giotto to Michelangelo.

Bengali

1. Translation from specified texts, with questions on their language and subject-matter.

2. Translation from unspecified texts ; translation from English ; questions on Grammar.

Biology

1. The general structure, physiology and life-history of :—*Amœba, Paramecium, Hydra,* earthworm, cockroach, dogfish, frog, and rabbit ; *Chlamydomonas, Pleurococcus, Spirogyra, Fucus, Dryopteris* and of the flowering plant, as illustrating various grades in animal and plant organisation. The salient distinctions between sedentary and motile organisms.

2. The nature of protoplasm. The structure and physiology of the cell ; cell-division ; gamete-formation and its relation to the mechanism of heredity. Cell-differentiation and tissue-formation, including an elementary knowledge of the histology and functions of :—epithelia, blood, connective, skeletal, muscular and nervous tissues of animals and of the epidermis, parenchyma, collenchyma, sclerenchyma, xylem, phloem, and the primary and secondary meristems (including cork formation) in plants. The structure and functions of the more important organs of a flowering-plant and of the mammalian body.

3. Sexual and non-sexual reproduction ; parthenogenesis.

4. The embryology of the flowering plant. The elements of vertebrate embryology with special reference to (*a*) cleavage and origin of germ layers in *Amphioxus,* the frog, the fowl and the rabbit ; (*b*) the formation of the embryonic membranes in the fowl and the rabbit ; (*c*) the outlines of organogeny as illustrated by the study of the fowl as far as the end of the third day of incubation ; (*d*) the modes of nutrition during development.

5. An elementary knowledge of carbohydrates, fats and proteins and their recognition by simple chemical tests.

6. Nutrition in plants and animals. Photosynthesis. The commonly cultivated food plants and their nutritional significance. An elementary knowledge of the soil as it affects plant life, and the importance of nitrates, sulphates and phosphates to the plant.

7. Digestion, absorption and assimilation in animals. An elementary knowledge of vitamins. The nature of enzyme action and the transport and storage of food material in animals and plants.

8. Respiration and the energy changes involved. Excretion. The water relations of plants and animals. Growth. Stimulus and response in plants and animals. An elementary knowledge of the endocrine system in animals.

9. The parasitic and saprophytic modes of life as exemplified by *Pythium*, *Mucor*, the yeast plant, the bacteria and *Cuscuta*; *Monocystis*, the malarial parasite, the tape-worm and a nematode parasite of plants. (A knowledge of the structure and life-history of these organisms only so far as it is of importance in relation to the special mode of life.) Insects as pests (e.g., Cabbage white butterfly), as pollinators (e.g., Bee) and as vectors of disease (e.g., *Anopheles*, *Aphis*).

10. The principal facts of heredity, including a knowledge of simple Mendelian experiments, the evidence for evolution, and an outline of the principal theories of the mode in which it takes place.

Practical Work.

The practical work will be based on the above syllabus and should include :—

1. Dissection or microscopical examination of the animal and plant types cited.

2. In addition to the general external and internal anatomical features of the earthworm, cockroach, dogfish, frog and rabbit, the student is expected to have made the following special dissections :—

Cockroach (*a*) Preparation of salivary glands and of mouth parts.

Dogfish (*b*) Heart, afferent and efferent branchial systems.

(*c*) Brain and cranial nerves.

Frog (*d*) Heart and principal vessels of the arterial and venous systems.

(*e*) Spinal and sympathetic nerves; removal of brain and spinal cord.

(*f*) Urinogenital system.

Rabbit (*g*) Heart and principal vessels of arterial and venous systems. (The heart of a sheep should be examined.)

(*h*) Removal and gross anatomy of brain.

(*i*) Urinogenital system.

(*j*) The eye of an ox.

3. In the study of the mammalian skeleton the skull of the dog will be substituted for that of the rabbit.

4. Microscopical preparation and examination of suitable animal and plant tissues.

5. Simple experiments in plant physiology, and detection of food stores by simple chemical tests.

6. A study of the external changes during development of the frog from fertilisation to the end of metamorphosis. The examination of whole mounts and representative sections illustrating the development of the frog to the beginning of germ-layer formation and of the chick during the first, second and third days. The external features of a fairly advanced mammalian embryo attached to the wall of the uterus by the umbilical cord (museum specimen).

Botany

Morphology.—The structure and properties of the cell. The plant body, its structure, development and modifications. Nuclear and cell division.

Special Morphology, Reproduction and Taxonomy.—The general characters of the following groups :—

Bacteria.

Fungi, especially *Mucor, Penicillium, Saccharomyces,* any common gill-bearing fungus, and a plant pathogen.

Algæ, especially *Chlamydomonas, Spirogyra, Vaucheria* and *Fucus.*

Bryophyta, especially *Pellia,* and *Funaria,* the latter with special reference to its life history, and without detailed treatment of the sporophyte.

Pteridophyta, especially *Dryopteris,* and the special features of *Selaginella.*

Gymnosperms, especially *Pinus.*

Angiosperms, a study of the morphology and biology of the flower, with some training in the use of a flora. Family characters not to be emphasised.

Elements of Physiology.—The mineral nutrition and water relations of plants. Outlines of metabolic changes in the plant, especially respiration and photosynthesis. Growth. Geotropism and phototropism. An elementary knowledge of the soil in relation to the plant.

Elements of genetics and their cytological basis. Evolution.

Practical Examination

The practical work will include the dissection and examination of plants or parts of plants, and the reference to the systematic position of the plants or parts of plants comprised in the foregoing syllabus. Simple experiments in practical physiology may be set.

Candidates may bring their own stains to the practical examination, but double staining is not desired. Candidates will be permitted to provide for themselves and use hand-microtomes if they desire.

Bulgarian

Grammar ; Translation ; Composition.

Composition to be (i) translation from English, and (ii) some form of free composition.

[*Note.*—Books will not be prescribed]

The course of study will also include writing from dictation, reading, and simple conversation.

Burmese

1 Translation from specified texts with questions on their language and subject-matter.

2. Translation from unspecified texts. Translation from English. Grammar.

Chemistry

The following outline is not to be regarded as a rigid syllabus of instruction, but is given in continuation of the Matriculation or General School Examination syllabus for the general guidance of candidates as indicating the range of the written part (I) and the experimental part (II) of the examination in Chemistry.

The whole syllabus is to be treated in an elementary manner and as far as possible experimentally. More importance will be attached to a sound understanding of fundamental principles and standard experimental methods than to an acquaintance with advanced theoretical ideas.

I.

The laws of chemical combination. History of the discovery of the composition of air and water. The atomic and molecular theories. Equivalent, atomic, and molecular weights and methods for determining them. Valency. Atomic structure in so far as it is necessary to explain simply (*a*) the different types of valency and (*b*) the periodicity in the properties of the elements of atomic number 1 to 18.

The periodic classification of elements, as illustrated by the chemistry of: H, He, Ne, A, Li, Na, K, Cu, Ag, Be, Mg, Ca, Sr, Ba, Zn, Cd, Hg, B, Al, C, Si, Sn, Pb, N, P, As, Sb, Bi, O, S, Cr, F, Cl, Br, I, Mn, Fe, Co, Ni. The treatment of the descriptive chemistry should be extended to include the preparation and properties of the more important compounds of: H, B, C, N, P, As, O, S, Cl, Br, I, Na, K, Cu, Ag, Mg, Ca, Ba, Zn, Hg, Al, Sn, Pb, Cr, Mn, Fe.

[*Note.*—For the purposes of this syllabus, " important compounds " means (*a*) compounds in common laboratory use for work up to Intermediate standard, or (*b*) compounds which have well-known uses.]

Sources and common processes for the manufacture or production of: H, He, Ne, A, O, N, Cl, Br, I, C, P, S; Na, Cu, Ag, Mg, Zn, Hg, Al, Sn, Pb, Cr, Mn, Fe, Ni. [*Note.*—A knowledge of metallurgical and other manufacturing operations will not be required except in broad outline.] Common processes for the manufacture of the following materials: Na_2CO_3, $NaHCO_3$, NaOH, CaO, SO_2, H_2SO_4, NH_3, HNO_3, HCl, hypochlorites, chlorates, bleaching powder, CO_2 and the fuel gases.

The chemistry involved in inorganic qualitative and volumetric analysis (*see* Part II).

The chemistry involved in the detection of C, H, N, Cl, Br, I, and S, in organic compounds. Calculation of empirical and molecular formulæ from experimental data.

Elementary principles of Organic Chemistry including the following :—

The quadrivalence of carbon and its power of forming stable bonds with non-metals and especially with itself. Relationship of structural formulæ (excluding, except as mentioned below, the stereochemical aspect) of saturated open-chain hydrocarbons containing not more than 4 carbon atoms. Homology, Isomerism. Candidates should be able to give examples of structural isomerism, and should know why plane formulæ are not universally acceptable, but they are not expected to be familiar with the formulæ or behaviour of specific mirror-image or geometrical isomerides.

Typical properties conferred by substituents, emphasis being laid on the behaviour of groups rather than on the technique of preparation or recognition of individual substances. Nevertheless certain simple substances (mentioned below in parentheses) should be included among those selected as types; candidates will be expected to be familiar with the usual origin or method of preparation and characteristics of these compounds. Substitution in saturated open-chain hydrocarbons (methane) by chlorine. The radicals C_nH_{2n+1}. Reactions of compounds C_nH_{2n+1}. 1 Cl (Br or I) with alkali and ammonia. Alcohols of the general formula $R{\cdot}CH_2{\cdot}OH$ (methyl and ethyl alcohols), $R_2CH{\cdot}OH$, $R_3C{\cdot}OH$, and their behaviour towards sodium, phosphorus halides (or phosphorus together with halogens), hydrogen halides, oxidising agents, and dehydrating agents, including sulphuric acid.

Formation of ethers (diethyl ether). Unsaturated hydrocarbons, C_nH_{2n} (ethylene). Addition of H_2, Cl_2, Br_2, and HBr to olefins. Action of alkali on the products formed from olefins by addition of Cl_2 or Br_2 (acetylene). The carbonyl group in aldehydes, R·CHO, and ketones, R_2CO (formaldehyde, acetaldehyde, acetone). The action of reducing and oxidising agents on these substances, and the addition of HCN to them. Monobasic carboxylic acids, $R{\cdot}CO_2H$ (formic and acetic acid). Reaction of acids with PCl_5 (acetyl chloride) and the behaviour of acid chlorides with water, alcohol, and ammonia. Esterification of acids (ethyl acetate) and the behaviour of esters towards acids, alkalis, and ammonia. Acid anhydrides (acetic anhydride), amides (acetamide) and their hydrolysis. Amines, RNH_2, R_2NH and R_3N (methylamine, dimethylamine, trimethylamine).

Modifications of group function as illustrated by the following :—

Difference in the properties dependent on the group OH in alcohols and in acids. Differences exhibited by the group C = O in aldehydes and ketones on the one hand, and in acids, esters, etc., on the other. Differences in the properties of the NH_2 group in amines and amides.

The elementary principles of Physical chemistry, which will find illustration throughout the subject-matter of the syllabus. The following topics should be included among those studied :—The properties of gases ; The laws of Boyle, Charles, Avogadro, Gay Lussac, and Graham, and the law of partial pressures. Difference of specific heats of gases at constant pressure and at constant volume. Ratio of the specific heats and its connection with atomicity treated empirically. Determination of molecular weights of gases and vapours. Thermal dissociation. The properties of solutions : Distribution law. Henry's law. Osmotic pressure. Proportionality of lowering of vapour pressure, raising of boiling point, and lowering of freezing point to molar concentration. Determination of molecular weights in solution. The essential differences between colloidal and true solutions. Electrolysis and electrolytic dissociation. Chemical equilibrium and simple applications of the law of mass action. Le Chatelier's principle. Solubility product. Simple treatment of the strength of acids and bases, indicators, and the hydrolysis of salts. Effect of concentration, temperature, and catalysts on rate of reaction. Exothermic and endothermic reactions. Hess's law.

II

Practical Examination

Qualitative analysis of simple mixtures of not more than four inorganic radicals. (Phosphate separations will not be required.)

Preparation and use of volumetric solutions of :—acids and alkalis, potassium permanganate, potassium dichromate, sodium thiosulphate, iodine, arsenious oxide, silver nitrate, and potassium thiocyanate.

Candidates may also be required to examine the action of heat and reagents on substances supplied and to identify well-known products including gases, produced in the reactions. The practical exercises may also include the preparation and purification of substances by methods involving solution, precipitation, crystallisation, distillation, and sublimation.

Candidates are permitted to bring for use in the practical examination any book or books they desire, including their own laboratory note-books. They are required to bring to the practical examination their *original* laboratory note-books for inspection by the examiners should they so desire. These note-books must be taken away by the candidates at the close of the examination.

Candidates' practical note-books must contain a certificate by their teachers that the work is the student's original experimental work carried out in the laboratory.

Classical Chinese

1. Translation from specified texts with questions on their language and subject-matter. Translation from unspecified texts.

2. Translation from English (" National Language " (Kuo Yü) will be accepted as an alternative to " Literary Style "). Chinese History, A.D. 1644–1834.

Czech

[Syllabus as for Bulgarian above]

Danish

[Syllabus as for Bulgarian above]

Dutch

[Syllabus as for Bulgarian above]

Economics

1. ECONOMICS

The Economic Structure of the United Kingdom

Population: size, sex- and age-distribution. Geographical and occupational distribution.

Industrial Structure: relative size of main industries, their location and organisation, including agriculture, coal, steel, textiles.

The Labour Market: trade unions and collective bargaining.

International Trade: visible and invisible imports and exports.

National Income and Output: meaning, composition and distribution.

Public Finance: the main sources of revenue and types of expenditure.

Financial Organisation: the commercial banks. The Bank of England. The capital market.

Some Elements of Economic Analysis

Division of Labour. The Factors determining average income per head. Causes of Location of Industry. Advantages of International Trade.

An outline of the functions of the price-mechanism; supply and demand in relation to the allocation of resources.

Causes and effects of changes in demand for and supply of goods and factors. Elasticities of demand and supply. The effects of maximum and minimum prices. The incidence of direct and indirect taxes. Causes and effects of monopoly.

The nature and function of money, banks, and the foreign exchange market. The measurement of charges in the general level of prices and their causes.

2. ENGLISH ECONOMIC HISTORY

The outlines of the economic and social development of England. The questions will deal mainly with the period from the eighteenth century to the present day, but candidates should be familiar with the nature of the open-field system of farming, with the handicraft system of industry, and with the system of foreign trade which existed before 1700. The aim of the syllabus is to enable students to disentangle the causes as well as the course of economic and social change.

Agriculture.—The history of agriculture to include changes in agrarian organisation and farming methods, "high farming", and agricultural adjustments in the late nineteenth and early twentieth centuries.

Industry.—The transition to industrialism. Factors in industrial development—invention and technological change, the application of science, the widening of internal and external markets, increasing productivity. Iron, coal, and textiles. The growth and extension of the factory system. Changes in the location of industry. Roads, canals, and evolution of railways. The course of railway legislation. The outline history of shipping from sail to steam. Cheap steel and the subsequent course of industrial change; the new industries of the late nineteenth and early twentieth centuries. Industrial concentration and combination. The industrial policy of governments since the last quarter of the nineteenth century.

Commerce and Finance.—Economic problems and policy during and after the American and French Wars. The growth of the liberal economy; the establishment of free trade. The growth of the banking system before, and after, the Act of 1844. The financing of railways, the achievement of general limited liability and the spread of joint-stock organisation. The expansion of home, and the changing character of foreign trade. The growth and distribution of foreign investments. Major changes in the general price level. The alternation of good and bad times. Major changes in taxation and government expenditure. Tariff policy in the twentieth century. The economic consequences of twentieth-century wars.

Social Organisation.—The expansion of population. Changes in the mobility of labour. The problems created by the growth of towns. The declining influence of the land-owning classes. The growth and influence of the middle classes. The growth and composition of the working-classes; changes in their standard of living; the history of Trade Unionism; the Co-operative movement. Changes in the franchise and their economic consequences. The social policy of governments including the history and break-up of the Poor Law, public health and factory legislation, education, the expansion of the socal services.

Ancient Egyptian

1. Translations from set books, consisting of Middle Egyptian Texts. Middle Egyptian Grammar.

2. Translation of unspecified passages. Questions on the history of the period covered by the prescribed texts and on their subject-matter.

English

1. Texts set for detailed study from the works of Chaucer, Shakespeare and *either* Spenser *or* Milton.

The paper will be literary rather than linguistic in character. Candidates should be able to discuss and criticise each of the books prescribed as a whole and also to identify and discuss the meaning and interest of significant passages in them.

2. Texts illustrative of the development of English Literature from 1579 to 1800 for more general study.

The paper will not include passages for identification and comment.

Ethics

I. Scope of Ethics. Moral concepts and judgments. General nature of desire and will. Conduct and character. Customary morality. Reflective morality. Theories of moral sense and of moral intuition. Conscience, conception of a moral end. Pleasure, happiness, moral excellence, etc. Relation of the individual to society. Duties and rights. Moral institutions. The ethical virtues. Human freedom and responsibility.

II. Leading ideas of Plato's *Republic*.

French

1 and 2. Grammar ; translation from and into English ; essay. Oral : Dictation ; reading ; conversation.

[*Note*.—Books will not be prescribed]

Geography

1. *General Geography* (one paper). General principles as exemplified in the world considered as a whole.

The Earth's Crust :—Nature of the earth's crust. The internal and external forces modifying the crust in so far as they determine :—(*a*) General structure and leading relief features of the continental masses and ocean basins ; (*b*) Types and distributions of rocks, minerals and soils.

Climate :—Broad seasonal distribution of insolation, temperature, pressure, winds and rainfall, leading to a recognition of chief climate types and their associated weather conditions. (The physical conditions and movements of the oceans should be considered only in so far as they affect climate.)

Vegetation :—General distribution of forest, woodland, scrub and grassland in relation to climate, soil and relief.

Major Geographical Regions :—The division of the world into major geographical regions.

Human Geography :—The influence of the foregoing physical factors upon the distribution of man and upon the production of food and raw materials, and the consequent development of the geographical regions.

2. *Regional Geography* (one paper)

(*a*) Europe with special reference to the British Isles, France, Germany, Italy, Switzerland and Scandinavia.

(*b*) North America with special reference to the north-eastern industrial areas, and the United States east of the Mississippi.

(*c*) The Monsoon lands with special reference to the Indian sub-continent.

3. *Map Work* (one paper)

The map work should be carried on in connection with the general and regional geography and should include :—The study of topographic maps (including section drawing) as exemplified by one-inch and six-inch Ordnance Survey maps of the British Isles ; the use and study

of atlas maps, including the advantages and disadvantages of the principal projections employed, climate and weather maps; cartographical and diagrammatic representation of geographical data.

Geology

I. *Physical Geology.*—The Earth as a planet; Origin and general characters of its chief surface features. The physical condition of the earth's crust and interior; Evidences of internal activity such as volcanic, seismic, and diastrophic phenomena. General characters and inter-relationships of rocks. The work of geological agents; the circulation of rock material, including the processes of denudation, transport, deposition, and deformation.

II. *Mineralogy and Petrology.*—Elements of crystallography and crystallographic projection and notation. The common rock-forming and vein-forming minerals; Their physical characters, chemical composition and modes of origin and occurrence. The simpler optical properties of the common rock-forming minerals and the physical principles on which these properties depend. The general characters and relationships of the chief types of sedimentary, igneous, and metamorphic rocks.

III. *Historical Geology.*—The disposition of rocks and its representation on maps; Evidences of relative ages of rocks; Fossils, their preservation and distribution in rocks of different ages; The geological systems, their broad characters and distribution in Great Britain.

Practical Work

Interpretation of simple geological maps in terms of rock-structure and its relation to topography; Expression of this interpretation by means of sections; Graphic methods of finding thickness, dip and strike of beds, of completing outcrops and of tracing the underground extension of strata.

Identification and description of common minerals and typical rocks, with and without the microscope; Exercises in projection of crystals; identification and description of crystal forms of common minerals, both on models and on actual crystals.

Reference of fossils to their broad biological groups and geological periods.

German

[Syllabus as for Bulgarian above]

Greek

(1) Prescribed prose or verse book.

Questions on one of the following:—

(*a*) Greek History from 776 to 323 B.C.

*(*b*) Greek and Roman political and social institutions.

*(*c*) History of ideas in classical antiquity.

Questions on Grammar.

*This section may not be offered in both Latin and Greek.

(2) Prescribed verse or prose book† ; *or* Questions on the Outlines of Greek Literature.

Translation of sentences into Greek.

Translation into English of passages not prescribed.

†The candidate will be required to offer the alternative text to the one selected by him under (1) above.

[Candidates may, with the consent of their teachers, offer additional passages of unseen translation in Greek, prose and verse, of a higher standard than that required of all candidates, as an alternative to the translation from, and questions on, set books. Such candidates will be required to give notice of their intention not later than April 1st in the year of the examination.]

All candidates will be required to attain a reasonable standard in translation into Greek and in unseen translation from Greek.

Greek

Syllabus for special examination under para. 3 (*b*) *on p.* 306 *of Regulations or, in and after* **1951** *for special examination under para.* 1 *on pp.* 307 *and* 396 *of Regulations*

[One paper of 3 hours and one paper of 2 hours]

(1) Prescribed verse or verse book.

Questions on one of the following :—

(*a*) Greek History from 776 to 323 B.C.

(*b*) Greek and Roman political and social institutions.

(*c*) History of ideas in classical antiquity.

(*d*) Outlines of Greek Literature.

Questions on Grammar.

(2) Translation of sentences into Greek. Translation into English of passages not prescribed.

All candidates will be required to attain a reasonable standard in translation into Greek and in unseen translation from Greek.

Gujarati

[Syllabus as for Bengali above]

Classical Hebrew

1. Translation from specified texts with questions on their language and subject-matter. Grammar. History (the Assyrian and Babylonian supremacy in Western Asia from 800 B.C. to 586 B.C.). Questions will be set on the historical and physical geography of Palestine in the period above mentioned.

2. Translation from unspecified texts. Translation from English. Pointing.

Hindi

[Syllabus as for Bengali above]

History

1. Outlines of Mediæval European History.

2. Outlines of Modern European History.

Ancient History

(1) The History of Egypt and Western Asia, Greece and Rome, from the Earliest Dynasties to 336 B.C.

(2) Greek History from 776 B.C. to 146 B.C.

(3) Roman History from 753 B.C. to A.D. 337.

Candidates will be required to offer either Sections (1) and (2) or Sections (2) and (3).

Oriental History

One of the following :—

(*a*) Outlines of the History of the Near and Middle East from A.D. 600.

(*b*) Outlines of the History of India.

(*c*) Outlines of the History of East Asia.

Hungarian

[Syllabus as for Bulgarian above]

Italian

[Syllabus as for French above]

Classical Japanese

1. (*a*) Translation from specified texts, with questions on their language.
   (*b*) Translation from unspecified texts.
   (*c*) Questions on the Japanese language.
2. (*a*) Translation into Japanese (*rooma-zi* or Japanese script).
   (*b*) Questions on Japanese history, A.D. 1600–1868.

Modern Japanese

[Syllabus as for Bulgarian above]

Latin

(1) Prescribed verse book.

Questions on one of the following :—

(*a*) Roman History from 218 B.C. to A.D. 69.

*(*b*) Greek and Roman political and social institutions.

*(*c*) History of ideas in classical antiquity.

Questions on Grammar.

* This section may not be offered in both Latin and Greek.

(2) Prescribed prose book ; *or* Questions on the Outlines of Roman Literature.

Translation of sentences into Latin.

Translation into English of passages not prescribed.

[Candidates may, with the consent of their teachers, offer additional passages of unseen translation in Latin, prose and verse, of a higher standard than that required of all candidates, as an alternative to the translation from, and questions on, set books. Such candidates will be required to give notice of their intention not later than April 1st in the year of the examination.]

All candidates will be required to attain a reasonable standard in translation into Latin and in unseen translation from Latin.

Latin

Syllabus for special examination under para. 3 (*b*) *on p.* 306 *of Regulations or, in and after* **1951** *for special examination under para.* 1 *on pp.* 307 *and* 396 *of Regulations*

[One paper of 3 hours and one paper of 2 hours]

(1) Prescribed verse book.

Questions on one of the following :—

(*a*) Roman History from 218 B.C. to A.D. 69.

(*b*) Greek and Roman political and social institutions.

(*c*) History of ideas in classical antiquity.

(*d*) Outlines of Roman Literature.

Questions on Grammar.

(2) Translation of sentences into Latin. Translation into English of passages not prescribed.

All candidates will be required to attain a reasonable standard in translation into Latin and in unseen translation from Latin.

Logic

Scope of Logic. Laws of thought. Terms. Formal division and definition. Predicables. Propositions and their import. Forms of immediate inference. Syllogism and other varieties of deductive reasoning. Trains of reasoning. Functions of syllogism. Inductive inference. Postulates of induction. Induction and analogy. The relation of induction to deduction. Theory of scientific method. Observation and experiment. Hypothesis. Empirical and causal laws. Methods of scientific explanation. Elimination of chance. Scientific definition and classification. Nomenclature and terminology. Fallacies.

Malay

[Syllabus as for Burmese above]

Marathi

[Syllabus as for Bengali above]

Applied Mathematics

Equilibrium of one or more bodies under the action of uniplanar forces, or of parallel forces. Smoothly jointed frameworks including graphical solutions. Properties of mass centres, and their determination in simple cases. Determination of second moments of solid figures. The laws of friction.

Relative velocity and acceleration, their resolution and composition. Graphical representation of relations between displacement, velocity, acceleration, and time. Mass, momentum, force, impulse, work, energy, and power. Simple cases of direct and oblique impact. Motion under the action of a constant force. Rectilinear motion of two connected particles. Simple problems on the motion of projectiles. Uniform circular motion. The conical pendulum. Simple harmonic motion. Motion in a vertical circle under gravity. Motion of a rigid body about a fixed axis. Dimensions. Change of units.

Pressure of a fluid at a point. Magnitude and direction of resultant thrust of liquids on plane and spherical surfaces. Centres of pressure in simple cases. Resultant force of buoyancy on bodies partially or wholly immersed.

Elementary ideas of statistics. Frequency diagram. Calculation of the mean. Standard deviation. Standard deviation of the mean.

Pure Mathematics

The theory of quadratic equations. The convergence of the geometric series. Permutations and combinations, including simple applications to probability. The binomial theorem for positive integral indices. The theory of indices. The nature and use of logarithms.

The geometry of similar rectilinear figures. Mensuration of plane rectilinear figures. The angles made by planes and straight lines with one another. Mensuration of simple solid figures, including the tetrahedron, cylinder, cone and sphere (the methods of the calculus may be used where suitable). Rectangular cartesian coordinates applied to the straight line, circle, parabola, ellipse, and hyperbola.

Plane trigonometry up to and including the solution of triangles. Trigonometric, exponential, and logarithmic functions, and their graphs.

The definition of a derivative. Differentiation of x^n (n an integer, positive or negative), sin x, cos x, tan x, e^x, and log x. Differentiations of a sum, a product, a quotient, and in simple cases of a function of a function. Definite and indefinite integration of the above functions and of simple functions of them. Areas and volumes. Representation of equations by curves, with easy applications. Simple examples on maxima and minima.

Mathematics (Pure and Applied)

The theory of quadratic equations. The convergence of the geometric series. The binomial theorem for positive integral indices. The theory of indices. The nature and use of logarithms.

The geometry of similar rectilinear figures. Mensuration of plane rectilinear figures. The angles made by planes and straight lines with one another. Mensuration of simple solid figures, including the tetrahedron, cylinder, cone and sphere (the methods of the calculus may be used where suitable). Rectangular cartesian coordinates applied to easy exercises on straight line, the circle and the parabola.

Plane trigonometry up to and including the solution of triangles.

Exponential and logarithmic functions, and their graphs.

The definition of a derivative.

Differentiation of x^n (n an integer, positive or negative), sin x, cos x, tan x, e^x, and log x. Differentiation of a sum, a product, a quotient, and in simple cases of a function of a function. Definite and indefinite integration of the above functions and simple functions of them. Areas and volumes. Representation of equations by curves, with easy applications. Simple examples on maxima and minima.

Equilibrium of one or more bodies under the action of uniplanar forces, or of parallel forces. Smoothly jointed frameworks including graphical solutions. Properties of mass centres, and their determination in simple cases. Determination of second moments of simple figures. The laws of friction.

Relative velocity and acceleration, their resolution and composition. Graphical representation of relations between displacement, velocity, acceleration, and time. Mass, momentum, force, impulse, work, energy and power. Simple cases of direct and oblique impact. Motion under the action of a constant force. Rectilinear motion of two connected particles. Simple problems on the motion of projectiles. Uniform circular motion. The conical pendulum. Simple harmonic motion. Motion in a verticle circle under gravity. Motion of a rigid body about a fixed axis. Dimensions. Change of units.

Military Studies

Paper 1 will be devoted mainly, but not exclusively, to the Principles of War.

Paper 2 will be devoted mainly, but not exclusively, to Military Geography.

The Practical Examination will consist of a test of Map Reading.

The subjects of the three sections of the examination are to be studied in the following authorities :—

Maurice : *British Strategy* (Constable).

Pargiter and Eady : *The Army and Sea Power* (Benn).

Cole : *Imperial Military Geography* (Sefton Praed).

Slessor : *Air Power and Armies* (Oxford Univ. Press).

Either Squadron Leader : *Basic Principles of Air Warfare* (Gale and Polden), **or** Sir Arthur Tedder : *Air, Land and Sea Warfare* (R.U.S.I. Journal, February, 1946).

Manual of Map Reading (Stationery Office).

Note.—At the examination in this subject questions will be set involving (1) translation of French and German passages and (2) answers in regard to the subject-matter thereof. Without answering the question set in *one* of these languages a candidate cannot make up the full number of questions to be answered. Additional credit is not obtainable for a knowledge of more than one language. The use of French and German dictionaries, provided by the University, will be permitted.

Music

Harmony in not more than four parts, for voices only (1 paper of 3 hours). Candidates will be required to show a competent knowledge of all diatonic triads, the dominant seventh and ninth, and secondary sevenths (with the available inversions of those chords), suspensions, passing notes and auxiliary notes (accented and unaccented, diatonic and chromatic), and modulation through a cycle of keys nearly related to the tonic key.

The tests under this heading may include :—

(i) The continuing of a melody of not less than eight bars in all the opening of which will be given. The melody must modulate at least once, and return finally to the original key.

(ii) The addition of a melodious bass to a given melody, or of a melodious upper part to a given bass (unfigured). In either case the added part must present features of independent movement.

(iii) The harmonization of a melody in four vocal parts.

(iv) The writing of modulations between specified keys. Only the closely related keys will be asked for.

[*Note.*—Open score with C clefs will be required for at least one question.]

Counterpoint up to three parts for voices only (1 paper of 3 hours).

[*Note.*—Open score with C clefs may be required]

There will also be an oral examination on the outlines of musical history and elementary questions on form (simple binary, ternary, and first movement form. Knowledge of Rondo sonata form is not required).

Norwegian

[Syllabus as for Bulgarian above]

Pali

1. Translation from specified texts with questions on their language and subject-matter. Grammar.

2. Translation from unspecified texts. Translation from English. Outline of Indian History from 6th century B.C. to 7th century A.D.

Classical Persian

1. Translation from specified and unspecified texts with questions on their language and subject-matter.

2. Translation from English. Grammar (Platt: *Persian Grammar*, ed. Ranking, is recommended). Outlines of Persian History during the 9th and 10th centuries A.D.

Physics

[Candidates will be expected to show an acquaintance with the fundamental principles of mechanics up to the standard of the Matriculation Examination, and to acquire a general knowledge of the apparatus by which the elementary principles of Physics are illustrated and applied.]

General Properties of Solids, Liquids, and Gases.—Relation between volume and pressure in gases. Friction and viscosity. Surface tension. Diffusion. Osmosis. Stretching of wires.

Heat.—Temperature. Instruments for the measurement of temperature. Expansion of solids, liquids, and gases with rise of temperature, isothermal and adiabatic expansion. Quantity of heat. Specific heat. Change of state. Latent heat. Vapour pressure. Boiling point. Dew-point. Formation of cloud, fog, and dew. Conduction. Definition of thermal conductivity. Convection. Radiation. Newton's law of cooling. The mechanical equivalent of heat and modes of determination. The conservation of energy.

Sound.—The production and propagation of sound. Nature of wave-motion. Amplitude. Wave-length. Frequency. Experimental determination of the velocity of sound in air. Effect of change of temperature on the velocity. Reflexion. Determination of frequency by simple methods. Experimental investigation of the modes of vibration of strings by means of the sonometer. Experimental investigation of the vibrations of air in pipes by resonance to tuning forks. Organ pipes. Position of nodes and antinodes.

Light.—Propagation of light. Laws of reflexion and refraction. Photometry. Reflexion at plane and spherical surfaces and the formation of images. Refraction at plane surfaces and by prisms. Minimum deviation. Chromatic dispersion. The general laws of radiation : visible, ultra-violet, infra-red. Emission and absorption. Heating effects of radiation. Phosphorescence and fluorescence. The formation of images by single lenses. Long and short sight and their correction by lenses. The combination of two lenses to form a simple telescope or microscope. Measurement of velocity of light. Simple properties of polarised light.

Magnetism and Electricity.—Properties of magnets. Simple phenomena of magnetisation. The magnetic field : lines of force. The law of magnetic force. Magnetic moment. Intensity of magnetisation. The earth as a magnet. The magnetic properties of iron and the elementary laws of the magnetic circuit. The simpler phenomena of electrified bodies. Conduction and insulation. Electrification by friction and by induction (influence). Distribution of electrification on conductors. Electric field : strength of field. The law of electric force. Potential. Capacity. Energy of charge. Electroscopes and electrometers. Electric current. Magnetic field of current. Magnetic measurement of current. Galvanometers. Work done by an electric current. Electromotive force. Difference of potential. Resistance. Ohm's Law. Wheatstone's bridge. Potentiometer. Resistance of cells. Volt. Ohm. Ampere. Ammeters. Voltmeters. Heating

effects of currents. Elementary phenomena of electrolysis : Faraday's law. Voltameters. Primary and secondary batteries. Action on current circuits in a magnetic field. Electro-magnetic induction : Faraday's law ; Lenz's law ; Induction coil. A thermo-electric couple. Simple phenomena of discharge in gases.

Practical Examination

[The following scheme is not exhaustive, and is intended merely to show the general nature of the exercises at the practical examination. The examiners are not precluded from setting other exercises and practical problems illustrative of the principles set forth in the syllabus.]

Measurements of length, mass, and time, involving eye-estimation of tenths of a division, use of Vernier, use of the balance (weighing to one centigramme), use of a seconds-hand watch. Determination of volumes. Specific gravities of solids, powders, and liquids. Use of the hydrometer. Verification of Boyle's Law. Determination of the centre of gravity of a plate. Determination of g by simple pendulum. Determination of velocity of sound in a tube by resonance with a fork. Use of sonometer. Use of thermometers and determination of fixed points. Simple methods of determining specific heat and latent heat of fusion and of evaporation. Determination of dew-point. Use of simple photometers. Focal lengths of mirrors. Focal lengths of lenses. Arrangement of two lenses to make simple forms of telescope, microscope, and projection lantern. Simple use of spectrometer. Tracing the path of a ray of light through a block of glass and deduction of refractive index. Refractive index by method of apparent thickness. Tracing the lines of force in the neighbourhood of a magnet. Comparison of magnetic moments and fields. Measurement of resistance of wires and cells. Comparison of electromotive forces with potentiometer. Measurement of electro-chemical equivalent.

Polish

[Syllabus as for Bulgarian above]

Portuguese

[Syllabus as for French above]

Psychology

Definition, Scope and Methods of Psychology. Conscious and unconscious processes. The cognitive, affective and conative aspects of mental activity. The relations of stimulus and response at reflex and higher levels. An elementary knowledge of the central and autonomic nervous system, muscle, sense organs and endocrine glands as far as they are concerned in mental processes.

Cognitive Psychology. Sensation and perception, retentivity, imagery, associative and reproductive processes, memory and habit-formation, attention, higher thought processes.

Affective and Conative Psychology. The dynamic characteristics of mental life. Instincts and emotions. Pleasure and unpleasure. Sentiments and complexes.

Practical Work

An elementary acquaintance with the chief psychophysical and statistical methods. Methods of investigating sensory acuity, sensory discrimination and manifestations of emotion.

Simple experiments in reaction times, muscular and mental work, imagery, memory and habit formation.

Verbal and non-verbal tests of intelligence.

Roumanian

[Syllabus as for Bulgarian above]

Russian

[Syllabus as for Bulgarian above]

Sanskrit

[Syllabus as for Pali above]

Serbo-Croat

[Syllabus as for Bulgarian above]

The candidate may use either the Cyrillic script (for Serbian) or the Latin script (for Croat) provided he is consistent.

Sinhalese

[Syllabus as for Bengali above]

Slovak

[Syllabus as for Bulgarian above]

Slovene

[Syllabus as for Bulgarian above]

Spanish

[Syllabus as for French above]

Swedish

[Syllabus as for Bulgarian above]

Tamil

[Syllabus as for Bengali above]

Theology

Any *two* of the following three papers :—

1. New Testament Greek (one paper). Grammar and Composition. The Greek Text of St. Mark's Gospel.

2. Old Testament (one paper). Doctrine of God and the Messianic Hope. The Covenant Relation. Conceptions of Salvation, Redemption and Life after Death.

3. New Testament (one paper). The Person and Work of Christ as presented in the Gospels and interpreted in the Epistles. The Doctrine of the Last Things.

Turkish

1. Translation from set modern texts with questions on their language and subject-matter.

2. Translation from unspecified modern texts. Translation into modern Turkish. Grammar.

Urdu

[Syllabus as for Bengali above]

Zoology

1. A study of the structure and of the elementary physiology of the rabbit.

2. The structure, mode and life and life-history of the following animals, to illustrate the general characteristics of animal organisation:—

Amœba, Euglena, Paramecium, Hydra, Obelia, the earthworm, the crayfish, amphioxus, the dogfish, frog and rabbit.

3. Elementary physiology: metabolism; nutrition (digestion, assimilation and food storage); respiration; excretion; movement, response to stimuli and reflex action; growth and reproduction. The differences between plants and animals.

4. The modifications of structure, habit and life-history associated with parasitism (including the mode of transmission from host to host) as exemplified by Monocystis, Trypanosoma, the malarial parasite, the liver-fluke and the tape-worm. Symbiosis.

5. The principles of classification and nomenclature. A discussion of the systematic position of the animals mentioned in paras. 2 and 4, and of their place in their respective phyla, and of these phyla in the animal kingdom.

6. The structure of a cell. Cell division. The multicellular organism illustrating morphological differentiation and the division of labour. The essential characteristics of the following:—epithelial tissues, connective and supporting tissues (including the process of ossification); blood and lymph; muscular tissues; nervous tissues.

7. Sexual and asexual reproduction. The chief types of ova. Gameto-genesis. Fertilisation and cleavage. The germ layers and their formation in amphioxus, frog and chick. The development and metamorphosis of the frog. The development of the chick up to the end of the third day of incubation. The development and functions of the fœtal membranes of the chick and mammal.

8. Variation and heredity, including a simple treatment of the facts of genetics and nuclear cytology.

9. The evidence bearing on the occurrence of organic evolution. The theories of Lamarck and Darwin as to the method of evolution.

Practical Work

Observations on living animals should be made wherever possible. Candidates are expected to make adequate labelled drawings of all the preparations they examine and of all the dissections they make.

A. The dissection, or microscopical examination of whole mounts and sections, of the animals mentioned in paras. 2 and 4 (except the malarial parasite and Trypanosoma).

B. The examination of the skeleton of the vertebrate types mentioned in para. 2, together with the skull of the dog.

C. The examination of preparations representing the chief varieties of the tissues mentioned in para. 6.

D. The examination of prepared sections of the following vertebrate organs:—skin, stomach, intestine, liver, kidney, ovary, testis and spinal cord.

E. The preparation of stained permanent mounts of suitable whole animals, parts of animals and tissues.

F. A study of the external changes during the development of the frog from fertilisation to the end of metamorphosis.

G. The examination of whole mounts and representative sections through:—

(*a*) The early stages of frog development to the time of the first appearance of the external gills.

(*b*) Stages illustrating the development of the chick during the first, second and third days.

B.A. DEGREE

The B.A. Degree is obtainable in two ways, viz. :—by passing (1) the B.A. (*General*) examination in three subjects or (2) the B.A. *Honours*, an examination of a specialised nature in a specific branch. In certain branches a subsidiary subject is prescribed at the Honours examination and, unless exempted therefrom, the student must pass an examination in such subsidiary subject, at which examination a qualifying minimum standard must be attained.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) The following candidates are eligible to apply for an Aegrotat Degree :—

(*a*) Candidates at the B.A. (General) Examination who have satisfied the Examiners in two subjects and have completed part of the examination in the third subject.

(*b*) Candidates at the B.A. Honours Examination,

(i) who have entered for examination in both principal and subsidiary subjects and have completed more than half of the Examination.

(ii) who, having already passed in, or been exempted from, the subsidiary subject, have entered for examination in the principal subject only and have completed more than half of the examination in the principal subject.

(iii) who, having been previously credited with 1st or 2nd class Honours in the principal subject, have entered for re-examination in the subsidiary subject only and have completed half of the examination in such subsidiary subject.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

B.A. (GENERAL) DEGREE

Course of Study

The course of study for the B.A. (General) Degree normally extends over not less than two years, but students who have passed the B.A. Honours Examination as Internal Students will be required to follow a course extending over one year only.

A student who has obtained the B.A. Honours Degree as an External Student may present himself for the B.A. (General) Examination after having attended an approved course of study extending over not less than two years.

The subjects of the course are as follows :—

Afrikaans.	Greek.	Persian.
Anthropology.	Gujarati.	History of Philosophy.
Arabic.	Hebrew.	Polish.
Armenian.	Hindi.	Portuguese.
History of Art.	History.	Prehistory of Western Europe.
Bengali.	Hungarian.	
Bulgarian.	Italian.	Psychology, General and Experimental.
Burmese.	Japanese.	
Classical Chinese.	Latin.	Roumanian.
Modern Chinese (*in and after* **1952**).	Law.	Russian.
	Logic.	Sanskrit.
Czech and Slovak.	Malay.	Serbo-Croat and Slovene.
Danish.	Marathi.	Sinhalese.
Dutch.	Applied Mathematics.	Spanish.
Economics.	Pure Mathematics.	Swedish.
English.	Military Studies.	Tamil.
Ethics.	Music.	Theology.
French.	Old Norse.	Turkish.
Geography.	Norwegian.	Urdu.
German.	Pali.	

Any three of the foregoing subjects may be chosen except that no candidate will be permitted to offer both Afrikaans and Dutch or both Classical Chinese and Modern Chinese.

No exemptions are granted at the B.A. (General) Examination. A student who has passed the B.Sc. (General) Examination with one or more subjects which are common to the B.A. and B.Sc. (General) Examinations may offer as one of his subjects at the B.A. (General) Examination not more than one of the common subjects in which he has already passed at the B.Sc. (General) Examination.

No student will be permitted to offer the subject of Military Studies unless, in the opinion of the University, he is suitably qualified to attend the course in that subject.

Students offering Czech and Slovak, or Polish, or Russian, or Serbo-Croat and Slovene are recommended to take History also.

Date of Examination

The B.A. (General) Examination will take place once in each year, commencing on the Thursday after June 5th.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate showing both the time and place of the written, practical, and oral examinations.

A candidate for this Examination who fails to send his entry-form and fee to the Academic Registrar on or before March 7th can only be admitted provided there is accommodation and that arrangements have already been made for holding the Examination in the subject or subjects in which the candidate desires to be examined. All such applications received after March 7th must be accompanied by an extra

fee of 2 guineas, which extra fee will be returned if it is found impossible to make the necessary arrangements for the examination of the candidate. Such late entry cannot be accepted if received after April 7th.

FEES

The fee for each student is 6 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

DETAILS OF EXAMINATION

The examination in all subjects except Geography, Prehistory of Western Europe, and Psychology will consist of three written papers of three hours each, together with, in the case of all modern foreign languages, an oral examination which shall test the candidate's knowledge of the spoken language. In Geography there will be two written papers and a practical test. In the Prehistory of Western Europe there will be two written papers and a short practical examination. In Psychology there will be two written papers, a practical examination, and an oral examination.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the three subjects which they have selected.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of successful candidates at the B.A. (General) Examination, arranged in three Divisions, and in alphabetical order in each Division, will be published by the Academic Registrar at 2 o'clock on August 15th.

A diploma for the Degree of B.A., under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

AEGROTAT DEGREE

[*See* p. 329]

SYLLABUSES

[For details of set books and special subjects *see* Appendix to these Regulations.]

Afrikaans

1. Translation from and into Afrikaans. An Essay.

2. History of Afrikaans Literature. History of Dutch Literature to 1880. Prescribed Dutch and Afrikaans texts.

3. Outlines of Dutch Historical Grammar to 1700. Outlines of Afrikaans Historical Grammar. The development of Standard Afrikaans. An easy Middle Dutch text.

There will be an oral examination which shall test the candidate's knowledge of the spoken language.

Anthropology

A. *Physical and Psychological Anthropology :—*

Zoological.—Man's place in nature as evidenced by the study of comparative anatomy and physiology; special attention being paid to the group anthropomorpha.

Palæontological.—The antiquity of man as evidenced by fossil and semi-fossilised remains.

Psychological.—Analytical and comparative study of mind, especially in reference to innate and environmental factors.

Ethnological.—A comparative study of the physical characters which distinguish the various races and sub-races of man. Classification of the human race in accordance with physical characters. Geographical distribution of races, etc., and the influence of environment on physique.

B. *Cultural Anthropology :—*

Archæological.—The antiquity of man as revealed by the earliest remains of his handiwork. The prehistoric periods, their characteristics, sequences, and duration. The survival of early conditions of culture in later times.

Technological.—The comparative study of arts and industries, their origin, development, and geographical distribution.

Sociological.—Comparative study of social phenomena and organisation. Birth, education, marriage, and death customs and systems. Tribal and other associations. Government and laws. Moral ideas and codes. Magical and religious practices.

Linguistic.—Elementary comparative study of language.

Ethnological.—Comparative study and classification of peoples based upon cultural conditions and characteristics. Influence of environment upon culture.

[The three papers in Anthropology will be as follows :—

(1) Social Anthropology.

(2) Human Biology with *either* Archæology (including Technology) *or* Linguistics.

(3) *Either* Physical Anthropology (including Human Palæontology) *or* the Ethnography of a special region (including Technology).

At the examination in this subject questions will be set involving (1) translation of passages in French and German and (2) answers in regard to the subject-matter thereof. Without answering the questions set in *one* of these languages a candidate cannot make up the full number of questions to be answered.]

Arabic

1. Translation from specified texts with questions on their language and subject-matter.

2. Translation from unspecified texts. Translation from English.

3. Grammar. History of the Muslim Empire from A.D. 750 to 833.

Armenian

1. Translation from specified texts with questions on their language and subject-matter (both Classical and Modern texts will be set).

2. Translation from unspecified Classical and Modern Texts. Translation from English.

(Candidates may write in Classical Armenian or Modern Armenian, either Western or Eastern.)

3. Questions on Language and Literature. The following periods of literature are to be studied :—(*a*) fifth century A.D., (*b*) 1850–1920.

History of Art

Three of the following subjects of which not more than two may be taken from either Section :—

Section A

1. Greek and Roman Sculpture.

Or alternatively—Mediæval painting in England, France and the Netherlands, with special reference to :—

(*a*) England *c.* 700—*c.* 1500 ; and
(*b*) France *c.* 1200—*c.* 1500 ; and
(*c*) The Netherlands *c.* 1350—*c.* 1500.

2. Italian painting from *c.* 1250—*c.* 1600, with special reference to :—

(*a*) Schools of Florence and Siena in the thirteenth and fourteenth centuries ; and
(*b*) Schools of Florence, Umbria, Venice and the Venetian Mainland in the fifteenth century ; and
(*c*) Schools of Florence, Venice, Rome, Lombardy and Emilia in the sixteenth century ; and
(*d*) The Carracci and Caravaggio.

3. European painting in the seventeenth and eighteenth centuries.

Section B

1. Greek, Roman and Byzantine architecture.

2. Architecture in Western Europe from *c.* 800—*c.* 1500, including Germany, Italy and Spain.

3. Architecture in Italy in the fifteenth century and in Italy, France and England in the sixteenth and seventeenth centuries.

Bengali

1. Translation from specified texts, with questions on their language and subject-matter.

[If this language is not the mother-tongue of the candidate he may, as an alternative to some of the specified texts, be examined orally. *See* note in set book Appendix.]

2. Translation from unspecified texts ; translation from English.

3. Language. Literature. Grammar.

An elementary knowledge of Sanskrit will be assumed.

Bulgarian

1. (*a*) Translation into English, *and*
either (*b*) Translation into Bulgarian,
or (*c*) A composition in Bulgarian. (A choice of subjects is given.)

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*) :—

(*a*) Elementary Bulgarian historical grammar and the place of Bulgarian in the Slavonic family.

(*b*) A general knowledge of Bulgarian literature, with special reference to the period since 1762.

(*c*) A general knowledge of Bulgarian history, with special reference to the period since 1878.

(*d*) A general knowledge of the economic development of Bulgaria, with special reference to the period since 1800.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Burmese

1. Translation from specified texts with questions on their language and subject-matter.

2. Translation from unspecified texts. Translation from English.

3. Language. Literature. Grammar.

Classical Chinese

1. Translation from specified texts with questions on their language and subject-matter.

2. Translation from unspecified texts.

3. Translation from English ("National Language" (Kuo Yü) will be accepted as an alternative to "Literary Style"). History of the Manchu Dynasty.

Modern Chinese

[*For Examinations in and after* **1952**]

1. Translation from specified texts with questions on their language and subject-matter.

2. Translation from unspecified texts.

3. Translation from English. History of China 1834–1911.

Czech and Slovak

1. (*a*) Translation into English from Czech and Slovak *and*

either (*b*) Translation into Czech or Slovak.

or (*c*) A composition in Czech or Slovak. (A choice of subjects is given.)

[*Note.*—In translation and essay papers candidates must use *either* Czech *or* Slovak consistently]

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*) :—

(*a*) Elementary Czech and Slovak Historical Grammar, and the place of Czech and Slovak in the Slavonic Family.

(*b*) A general knowledge of Czech and Slovak Literature, with special reference to the period since 1780.

(*c*) A general knowledge of Czech and Slovak History, with special reference to the period since 1780.

(*d*) A general knowledge of the economic development of the Czechs and Slovaks, with special reference to the period since 1800.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken languages.

Danish

1. Translation from and into Danish. An Essay in Danish.

2. Prescribed modern texts.

3. Outlines of the History of Danish Literature. Outlines of Historical Grammar.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Dutch

1. Translation from and into Dutch. An Essay in Dutch.

2. Outlines of the History of Dutch Literature. Prescribed modern texts.

3. Outlines of Historical Grammar, with the study of an easy Middle Dutch text.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Economics

Economics, analytical and descriptive, with special reference to the United Kingdom.

1. The Social and Economic History of England, with special reference to the period subsequent to 1760.

2 and 3. The Principles of Economics and their applications, as for the Intermediate Examination in Arts (*see* p. 316 above) carried to a more advanced stage ; to include also :—

The problems of business enterprise (including the theory of business fluctuations) ; the theory of money and credit, together with the organisation of currency and banking ; international trade ; and public finance.

English

1. (*a*) Old and Middle English prescribed texts.
   (*b*) Old and Middle English Literature, and (at the option of the student) the History of the English Language.
2. (*a*) English Literature 1579–1700 with prescribed books.
   (*b*) Shakespeare and *either* Spenser *or* Milton ; prescribed books.
3. Later periods of English Literature with special reference to prescribed authors.

Ethics

(1) *General Principles of Ethics.*—The nature of ethical judgments. The relation of Ethics to the natural sciences and to metaphysics. Action, causation, and motivation. The moral predicament. Types of motive and their relations. Free choice and determination. The grounds of choice : the good and the right. Natural good and moral good. Theories of the good ; utilitarianism, moral sense, self-realization, *etc.* Egoism, altruism, and the common good. The nature of right : *prima facie* and true duties. Conscience, its nature, authority, and education. Morality and the community. Moral and political obligation. Morality and religion.

(2) *History of Ethics.*—Outlines of Greek Ethics to Aristotle ; the Stoics ; Epicurus ; modern hedonistic theories (Hobbes, Bentham, and J. S. Mill) ; moral sense theories (Shaftesbury, Hutcheson, and Hume) ; intuitional theories (Cudworth, More, Clarke, and Reid) ; Butler ; Kant.

(3) *Prescribed Texts.*—Selected works of a leading moralist, ancient or modern, or of a leading ethical school.

French

1. Composition (translation into French). Translation of unseen French passages. The candidate's knowledge of grammar will be tested.

2. General study of the literature of the 17th and 18th centuries, with prescribed texts.

3. General study of the literature of the 19th century, with prescribed texts.

One question in each of papers 2 and 3 must be answered in French.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Geography

Regional Geography. The relief and land-forms in relation to the structure and climate. The distribution of soils and minerals. The river system. Climate and weather conditions. The neighbouring seas and ocean and their influence on the lands and their inhabitants. The distribution of natural vegetation, cultivated products, and animals. The sources of mineral power. The distribution of industries as related to the foregoing physical factors. Trade centres and trade routes; the character of the trade. The distribution of population; the chief racial, religious and linguistic characteristics of the people. A synthetic study of geographical regions. States and the interrelations of political, economic and physical conditions.

General Physical Geography. A broad knowledge of the physical geography of the world to serve as a basis for the study of regional geography.

The earth as a planet; its movements and relation to the sun; the consequent distribution and seasonal variation of insolation over the earth's surface.

The atmosphere. Distribution and periodic variation of the pressure and temperature of the air, of air movements and wind systems, of humidity and precipitation; climate types and regions.

The oceans. Form of sea and ocean beds. Temperature and salinity of oceans and seas; wave and tidal movements and their effects; ocean circulation, its origin and effects.

The lands. General classification of the materials of the earth's crust—sedimentary, igneous, and metamorphic rocks; crustal movements—the normal cycle of erosion and its principal interruptions; processes of denudation and deposition; chief effects of glaciation; development of river systems.

Practical Work

I. Representation and interpretation by maps and diagrams: (*a*) land forms; (*b*) their development; (*c*) their relation to structure; (*d*) their influence on human geography. Candidates will be expected to have done field work on these subjects and to be familiar with maps of the Ordnance Survey, Geological Survey, and the International 1 to 1 million map.

II. Principles of Surveying, including an elementary knowledge of the following instruments: prismatic compass, plane-table, clinometer, aneroid barometer, chain, theodolite.

The principles of the following map projections:—Conical with one or two standard parallels, Bonne, polyconic, international, sinusoidal, Mollweide, Mercator, zenithal equidistant, zenithal equal area, and

zenithal orthomorphic or stereographic. Candidates are expected to know the principle underlying each projection, its defects, and its suitability for particular purposes or areas.

Construction and interpretation of weather and climate maps. The cartographic and diagrammatic representation of geographical data.

The examination will consist of two written papers, a written examination of not more than six hours on practical work, and of inspection by the Examiners of the note-books and any other evidence of his practical work in the field that the candidate may desire to submit.

Paper 1. Europe (including British Isles) and the Mediterranean lands of Africa and Asia.

Paper 2. (*a*) *One* of the following areas, selected by the candidate :—

(i) Asia, excluding the Mediterranean lands.

(ii) North America.

(iii) Africa, south of the Mediterranean lands.

(iv) South America.

(v) Australia, New Zealand, and the Pacific Islands.

(*b*) General Physical Geography.

Practical examination on the sections I and II above.

No candidate will be allowed to pass who fails to satisfy the Examiners in the practical part as well as in the written part of the examination, nor unless the original note-books or other evidence of practical work in the field reach an adequate standard.

German

1. Translation from and into German. An Essay in German.

2. History of German Literature from 1150 to 1250 and from 1740 to 1914. Prescribed modern texts.

3. Outlines of Historical Grammar, with the study of an easy Middle High German text.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Greek

1. Prose Composition and translation at sight. Candidates will be required to attain a certain standard in unprepared translation and prose composition.

2. Passages for translation from prescribed books.

3. (*a*) Questions on the subject-matter and historical and literary background of the prescribed books, and (*b*) questions on Grammar, some of which will be based on the texts read. A choice of questions will be allowed in each part of this paper.

Gujarati

[Syllabus as for Bengali above]

An elementary knowledge of Sanskrit will be assumed.

Hebrew

1. Translation from specified and unspecified books of the Old Testament.

2. Translation into Hebrew. Grammar. Pointing.

3. History of the Hebrew monarchy down to 586 B.C. Geography (historical and physical) of Palestine with special reference to the prescribed texts.

Hindi

[Syllabus as for Bengali above]

An elementary knowledge of Sanskrit will be assumed.

History

Two of the following (one paper on each) :—

(*a*) History of Greece to 146 B.C.

(*b*) History of Rome to A.D. 325.

(*c*) Mediæval European History from the middle of the to the end of the 15th century.

(*d*) Mediæval English History to the end of the 15th century.

(*e*) Modern English History from the beginning of the 16th century.

(*f*) Modern European History from the beginning of the 16th century.

Candidates must offer (*a*) and (*b*), or (*b*) and (*c*), or (*c*) and (*d*), or (*d*) and (*e*), or (*e*) and (*f*).

One of the following (one paper) :—

(*g*) Greek and Roman Constitutions.

(*h*) The Religions of Greece and Rome down to A.D. 325.

(*i*) English Constitutional History.

(*j*) English Economic History.

(*k*) British Colonial History.

(*l*) Diplomatic Relations of the Great Powers since 1815.

Hungarian

1. (*a*) Translation into English, *and*

either (*b*) Translation into Hungarian

or (*c*) A composition in Hungarian. (A choice of subjects is given.)

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*) :—

(*a*) Elementary Hungarian Historical Grammar, and the place of Hungarian in the Finno-Ugrian family.

(*b*) A general knowledge of Hungarian Literature, with special reference to the period since 1830.

(*c*) A general knowledge of Hungarian history, with special reference to the period since 1790.

(*d*) A general knowledge of the economic development of Hungary, with special reference to the period since 1830.

The examination includes an oral examination, which shall test the candidate's knowledge of the spoken language.

Italian

1. Composition (translation into Italian). Translation of unseen Italian passages. The candidate's knowledge of grammar will be tested.

2. Outlines of the History of Italian Literature, from Dante to Tasso, with special reference to the *Divina Commedia*.

3. A general study of Italian Literature from 1816 to the present day, with prescribed texts.

One question in each of papers 2 and 3 must be answered in Italian.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Japanese

1. T[illegible] validity. Sy[illegible] theory of th[illegible] pecified texts with questions on their language a[illegible]

2. T[illegible] nspecified texts. Translation into Japanese (to be [illegible] Japa[illegible] script).

3. Japanese language. Japanese History, A.D. 1185–1867.

Latin

[Syllabus as for Greek above]

Law

Any *one* of the following three sections :—

I. *Constitutional Laws of the British Empire*

The nature of constitutional law and constitutional conventions. The legal organisation of the British Empire ; the relation between English Constitutional Law and the government of the United Kingdom ; the application of the principles of English Constitutional Law to the relations between the United Kingdom and the Dominions and Colonies and India. The legal and constitutional distinctions between mandated territories, protectorates, Crown colonies and Dominions. Legislative powers of Dominion and Colonial legislatures in general. Legal and constitutional position of the Governor or Governor-General. Appeals to the Judicial Committee of the Privy Council. The Imperial Conference. The Dominions and foreign relations. The comparative study of the constitutions of the Dominions and India. The King and his ministers ; the Cabinet system. Parliament, its organisation, powers and privileges. The nature of a[illegible]inistrative law. The general principles relating to the organisation a[illegible]unctioning of public authorities, central and local. The relations between central and local government. The constitutional position of the judges. The general principles governing powers ; the royal prerogative ; the doctrine of *ultra vires*. The judicial control of public authorities. The prerogative writs. The elements of the law relating to proceedings by and against the Crown, and to proceedings against public authorities and officials.

II. *Public International Law*

(*a*) General Principles : The Foundations of International Law. International Personality. State Jurisdiction. Objects of International Law. International Transactions. War and Neutrality.

(*b*) Special Subject : *Either* The Law of International Institutions *or* Elements of International Economic and Financial Law.

The following books are recommended for the study of this alternative :—

Text Books :—

Brierly : *The Law of Nations* (3rd ed.).
Oppenheim : *International Law* (2 vols., ed. Lauterpacht, 7th ed.).
Schwarzenberger : *Manual of International Law.*
Schwarzenberger : *International Law as Applied by International Courts and Tribunals ; Manual of International Law* (2nd ed.).
Winfield : *Foundation and Future of International Law.*

For further reading :—

Keeton & Schwarzenberger : *Making International Law Work* (2nd ed.).
Smith : *Great Britain and the Law of Nations* (2 vols.).

For reference :—

Briggs : *The Law of Nations.*
Hall : *International Law* (ed. Higgins, 8th ed.).
Scott-Jaeger : *Cases on International Law* (2nd ed.).
Wheaton : *International Law* (ed. Keith, 7th and 8th edns.).

III. *The General Principles of English Private Law*

(*a*) Sources of English Law : statutes and the elementary rules for their interpretation ; case law and judicial precedent ; custom, general and particular : organisation of the Courts of civil jurisdiction in outline.

(*b*) Elementary principles of contract—history of contract in outline —types of contract, formal and parol contracts—contracts under seal—contract by parol, offer and acceptance—consideration—contracts evidenced in writing—contract void or voidable on the grounds of illegality, fraud, misrepresentation and mistake—performance and discharge of contract—capacity to contract of infants and corporations —special rules relating to mercantile contracts—disclosure and contracts *uberimæ fidei*—assignability and negotiability (of negotiable instruments).

(*c*) Elementary principles of tort—history in outline—general principles of liability—liability of infants, corporations and public authorities—specific torts of trespass to person and false imprisonment, trespass to land and nuisance, trespass to chattels and conversion, defamation, deceit, inducing a breach of contract and seduction, conspiracy, negligence, liability under the Rule in Rylands *v.* Fletcher, for dangerous premises and chattels and for animals.

(*d*) Land Law : elementary principles of modern law—nature of estates in land—the classification of estates in land—legal estates in fee simple and terms of years (in outline only)—equitable estates in land and settlements—equitable estates under a settlement, life estates, entails, estates in expectancy (in outline only)—concurrent interests in land (in outline only)—comparison with interests in chattels personal.

(*e*) The general principles of Equity with special reference to the law of trusts—outline of the history and nature of equitable jurisdiction—formation of trusts—classification of trusts—rights and duties of trustees —breach of trust.

(*f*) Ownership and possession of chattels personal.

Textbooks :

(*a*) Geldart : *Elements of English Law* (ed. Holdsworth).

The relevant parts of :—

(*b*) Cheshire and Fifoot : *Law of Contract* (2nd ed.).

(*c*) Blackburn and George : *Law of Tort.*

(*d*) Hargreaves : *Introduction to Principles of Land Law* (2nd ed.).

(*e*) Keeton : *Law of Trusts and Trustees* (4th ed.).

Logic

(1) *Deductive Logic.*—Propositions and propositional forms ; their classification and analysis. The logical relations of propositions. Propositions and judgments. Inference and the conditions of its validity. Syllogism and the logic of classes and relations. The theory of the predicables. Logic, language, and symbolism.

(2) *Inductive Logic.*—Induction, deduction, and analogy. Scientific induction. The order of nature. Notions of cause. Laws of nature. Experimental methods. The nature and use of hypothesis. Explanation and description. Scientific theory. Methods of investigation. The nature of evidence : probability and certainty. the scope of scientific method.

(3) *Epistemological Logic.*—The relation between Logic and Epistemology. Propositions and existents. The " constitutive " and " epistemic " factors in logical theory. The forms of judgment. The relation between affirmation and negation. Categorical and conditional assertion. The modality of judgments and its epistemological significance. The nature of truth : correspondence, coherence, and self-evidence. Analytic and synthetic judgments. The *a priori* and the *a posteriori.* Knowledge and belief. The problem of error and the nature of supposal and doubt.

Malay

1. Translation from specified texts, with questions on their language and subject-matter.

2. Translation from unspecified texts. Translation from English.

3. Grammar. History of British Malaya, 1786–1876.

Marathi

[Syllabus as for Bengali above]

An elementary knowledge of Sanskrit will be assumed.

Applied Mathematics

The Applied Mathematics of the Intermediate Course (*see* p. 322) treated more fully, a knowledge of Elementary Differential and Integral Calculus being assumed, together with :

Simple parts of uniplanar kinematics.

General dynamical notions.

Motion of a particle under a constant force. Motion of a particle under a central force varying inversely as the square of the distance or as the distance.

Rotation of a rigid body about a fixed axis, and simple cases of uniplanar motion of a rigid body.

Elementary theory of potential.

Common catenary and suspension bridge.

Pressures of liquids on plane areas, pressure of liquids on solid bodies wholly or partially immersed, and conditions of equilibrium of such bodies, specific gravities and densities of substances, solid and liquid, and methods of determining them. Meta-centre in simple cases.

The elementary methods of graphical statics.

Pure Mathematics

Pure Mathematics of the Intermediate Course (*see* pp. 322–23) together with :—

SECTION A.—Determinants of the second and third order. Partial fractions. Summation of easy series. Use of the binomial, exponential, logarithmic, sine and cosine series, absolute convergence and the d'Alembert's ratio test as applied to these series. Hyperbolic functions. Exponential values of sines and cosines. Complex numbers with their representation in a plane. Demoivre's theorem and easy applications.

SECTION B.—The simpler properties of plane figures involving straight lines and conic sections treated by the methods of co-ordinate geometry (excluding the use of homogeneous co-ordinates).

SECTION C.—Simple differentiation and integration of functions of one variable. Maxima and minima of functions of one independent variable. Use of Taylor's and Maclaurin's theorems. The principle of superposition of small errors. Tangents, normals, and curvature of plane curves. Plane areas. Lengths of plane curves. Areas of surfaces of revolution. Volumes of solids of revolution.

SECTION D.—The simple properties of plane figures involving straight lines and conic sections treated by Euclidean methods. The straight line, the plane, the sphere, the ellipsoid referred to its principal axes. Ordinary differential equations of the first order. Linear equations of the first and second orders with constant co-efficients. Partial differentiation and simple applications.

Paper I will consist of Algebra and Trigonometry and Analytical Geometry; Paper II of Analytical Geometry and Calculus; Paper III of Section D of the syllabus.

Military Studies

Questions will be set involving (1) translation of French and German passages, and (2) answers in regard to their subject-matter. Without answering the questions set in *one* of these languages a candidate cannot make up the full number of questions to be answered. Addi-

tional credit is not given for a knowledge of more than one language. Dictionaries will be provided for the use of candidates at this Examination.

1. General Principles of War. To be studied in the following authorities :—

The books prescribed for the Intermediate Examination, except for Map Reading, together with the following :—

Grant & Temperley : *Europe in the 19th and 20th centuries* (Longmans).

Trevelyan : *History of England*, Books V and VI (Longmans).

Harding Newman : *Modern Military Administration, Organisation and Transportation* (Gale & Polden).

Bird : *Direction of War* (Cambridge Press).

Mahan : *Influence of Sea Power on History* (Sampson Low).

Hearnshaw : *Sea Power and Empire* (Harrap).

Thuillier : *Gas in the next War* (Geoffrey Bles).

2. Economic Problems of Warfare.—The Control and use of Manpower, Raw Materials, Shipping. The Planning and Procurement of War Supplies. The Supply and Distribution of Food and Civilian Supplies. War Finance, Prices and Wages Policy. Economic Problems of Occupation.

To be studied mainly in the following :—

A. C. Pigou : *Political Economy of War* (Macmillan).

Lionel Robbins : *The Economic Problem in Peace and War* (Macmillan).

W. K. Hancock (Editor) : *History of the Second World War* (United Kingdom Civil Series (H.M.S.O.).

In particular, W. K. Hancock and M. M. Gowing : *British War Economy ;* and (when published) M. M. Posten : *British War Production.*

J. M. Keynes : *How to Pay for the War* (Macmillan).

University of Oxford Institute of Statistics : *Studies in War Economics* (Blackwell).

A. J. Brown : *Applied Economics*, Chs. 1–3 (Allen & Unwin).

3. **Either** section (*a*) **or** (*b*) **or** (*c*) :—

Section (*a*) will relate mainly to the study of a Campaign (for the set subject, see Appendix).

Section (*b*) will relate mainly to the influence of Air Power on Modern Warfare.

To be studied in the following authorities :—

Spaight : *The Beginnings of Organised Air Power* (Longmans).

Jones : *The War in the Air*, Vol. VI (O.U.P.).

Golovine : *Air Strategy* (Gale & Polden).

Section (*c*) The application of Science to Warfare.

The paper will be divided into four sections as below, the candidate to answer questions from *two* sections only.

(i) *Chemistry.* Employment of Gas. Defence against Gas. Smoke Screens. Explosives and Ammunition.

To be studied mainly in the following authorities :—

Prentiss : *Chemicals in War* (McGraw-Hill).
Sartori (trans. Morrison) : *The War Gases* (Churchill).
Farmer : *The Manufacture and Uses of Explosives* (Pitmans).
Thorpe : *Dictionary of Applied Chemistry*, 4th edition, Vol. IV, Article on Explosives (Longmans.)
de Barry Barnett : *Explosives* (Baillière).
Yarsley & Couzins : *Plastics* (Lane, Penguin series).

(ii) *Physics.* Theory and use of optical instruments (*e.g.*, Director and Dial Sight, Range Finder). Sound Ranging and Sound Detection. Method of location by observation and flashes. Visual signalling. Terrestrial Magnetism. Elementary Meteorolgy. Line and Wireless Telegraphy and Telephony.

To be studied mainly in the following authority :—
Saunders : *Physics for College Students* (Bell).

(iii) *Mechanics.* Ballistics : applications of the gyrostat. Reaction of fluid and moving bodies. Elementary strength of materials. Framework.

To be studied mainly in the following authorities :—

Low : *Engineering Mechanics.*
Charnock : *Mechanical Technology* (Constable).
Encyclopaedia Britannica—Article on Ballistics.
Text Book of Mechanical Engineering, 1940 (Stationery Office).

(iv) *Biology.* Physiology of diet and exertion. Elementary bacteriology. Hygiene.

To be studied mainly in the following authorities :—

Whillis : *Elementary Anatomy and Physiology* (Churchill).
Plummer : *Food, Health, Vitamins* (Longmans).
Best & Taylor : *The Living Body* (Holt, New York).
Army Sanitation (H.M.S.O.).
Eastwood : *Hygiene for Students and Teachers* (Arnold).

Music

General Outlines of Musical History. Principles of design as illustrated in both vocal and instrumental compositions (1 paper of 3 hours).

Harmony (1 paper of 3 hours) and Counterpoint (1 paper of 3 hours) in not more than four parts, vocal and instrumental.

There will also be an oral examination in general musical knowledge, including elementary Acoustics as affecting musical instruments.

Old Norse

1. Passages for translation with commentary from prescribed books.

2. Questions on the literature, language and historical background of Old Norse.

3. Passages for translation, with commentary, from the Poetic *Edda*.

Norwegian

1. Translation from and into Norwegian. An Essay in Norwegian.

2. Prescribed modern texts.

3. Outlines of the History of Norwegian Literature. Outlines of Historical Grammar. A knowledge of the *Landsmål*.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Pali

1. Translation from specified texts, with questions on their language and subject-matter.

2. Translation from unspecified texts. Grammar.

3. Translation from English. Literature.

Persian

1. Translation from specified texts with questions on their language and subject matter.

2. Translation from unspecified texts. Questions on grammar.

3. Translation from English. History with reference to the literature and culture from the Islamic conquest to the death of Nādir Shāh.

History of Philosophy

(1) *Greek Philosophy.*—From the beginnings to Aristotle.
(2) *Modern Rationalistic Philosophy.*—From Descartes to Leibniz, with outlines of empiricistic and Kantian criticisms of rationalism, and a short prescribed text.
(3) *Modern Empiricistic Philosophy.*—From Francis Bacon to Thomas Reid, with outlines of rationalistic and Kantian criticisms of empiricism, and a short prescribed text.

Polish

1. (*a*) Translation into English, *and*
either (*b*) Translation into Polish,
or (*c*) A composition in Polish. (A choice of subjects is given.)

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*).

(*a*) Elementary Polish Historical Grammar, and the place of Polish in the Slavonic Family.
(*b*) A general knowledge of Polish Literature, with special reference to the period since 1772.
(*c*) A general knowledge of Polish History, with special reference to the period since 1772.
(*d*) A general knowledge of the economic development of Poland, with special reference to the period since 1815.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Portuguese

1. Composition (translation into Portuguese). Translation of unseen Portuguese passages. The candidate's knowledge of grammar will be tested.

2. General study of the literature of the 16th and 17th centuries, with prescribed texts.

3. General study of the literature of the 19th and 20th centuries, with prescribed texts.

One question in each of papers 2 and 3 must be answered in Portuguese.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Prehistory of Western Europe

A general survey of the prehistory of Western Europe from the end of the Pleistocene period to the beginning of the first century A.D. Two papers will be set, dealing with the main features of the principal post-palæolithic cultures (Mesolithic, Neolithic, Bronze Age, Early Iron Age) of Western Europe, with special reference to Great Britain. The papers will be supplemented by a short practical examination.

Psychology—General and Experimental

(i) *General and Comparative Psychology*

Scope and methods of psychology. The relation of analytical psychology to physiological, pathological, and comparative psychology. The relation of physical states to physiological processes. Subconsciousness. Unconsciousness. Analysis and classification of mental states. Fundamental processes of mental development: attention, discrimination, assimilation, association, apperception. Sensation and perception. Illusions. Images. Association of ideas and suggestion. Memory. Memory-types. Disturbances of memory. Apprehension of time. Dreams. Hallucinations and hypnotic states. Productive imagination. Early forms of imagination in individual and in race. Exceptional forms of imagination. Abstraction and generalisation. Conception. Judgment and reasoning. Thought and language. Aphasia. Idea of self and its variations, normal and abnormal. Belief. Primitive forms of belief. Pleasure and pain. Bodily concomitants of feeling. Emotion and its expression. Classification of emotions. Instinct, imitation, voluntary movement and habit. Appetite and desire. Higher forms of volition. Normal and abnormal types of volition.

[*Note.*—Students are expected to acquire some knowledge of mental phenomena as displayed in primitive races and the animal kingdom].

(ii) *Experimental Psychology*

Qualities of sensation. Theory of specific nervous energy. Touch; temperature; sense; pain, tastes, and smells. Simple and complex tones; noises and their analysis; partial tones; beats, combination tones. Light and colour sense. Movements. Effort, muscular fatigue, sense of weight. Equilibrium and orientation.

Intensities of sensation ; liminal sensations ; threshold of difference. Weber's law. Fechner's laws. The psycho-physical methods.

Analysis of perception ; localisation and projection of impressions. Tactile space ; spatial perception of the blind. Visual space ; binocular vision. Eye movements and accommodation. Perception of form, distance, and size. Visual perception of movement. Binaural audition. Localisation of sound. Consonance, harmony, tact, rhythm. Illusions. Preperceptions.

Reaction-time, experiments and methods. Simple and complex reaction-times. Subjective estimation of time length and time order.

Experimental investigation of recognition, memory, association of ideas, span of apprehension.

Fatigue and practice in mental work. Action of drugs on mental processes. The physiological accompaniments of pleasure, pain, the emotions, attention, etc.

(iii) *Experimental Psychology*

Practical Work

Examination on apparatus and technical methods generally.

Examination of an individual on acuity of senses ; colour, vision, tone discrimination ; estimation of spatial and temporal magnitudes ; reaction-times ; association of ideas, etc.

Examination on the psycho-physical methods and on the treatment of statistics.

Examination on the method of carrying out an experimental investigation submitted to the candidate.

Candidates will be allowed to take into the examination-room, and to consult during the Practical Examination, note-books containing mathematical formulæ only.

Normally the note-books to be brought to the Practical Examination must show that the candidates have regularly taken part in courses of work in Experimental Psychology extending over at least one year.

Roumanian

1. (*a*) Translation into English, *and*

either (*b*) Translation into Roumanian,

or (*c*) A composition in Roumanian. (A choice of subjects is given.)

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*) :—

(*a*) Elementary Roumanian historical grammar.

(*b*) A general knowledge of Roumanian literature, with special reference to the period since 1850.

(*c*) A general knowledge of Roumanian history, with special reference to the period since 1820.

(*d*) A general knowledge of the economic development of Roumania, with special reference to the period since 1800.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Russian

1. (*a*) Translation into English, *and*

either (*b*) Translation into Russian,

or (*c*) A composition in Russian. (A choice of subjects is given.)

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*) :—

(*a*) Elementary Russian Historical Grammar, and the place of Russian in the Slavonic Family.

(*b*) A general knowledge of Russian Literature, with special reference to the period since 1800.

(*c*) A general knowledge of Russian History, with special reference to the period since 1700.

(*d*) A general knowledge of the economic development of Russia, with special reference to the period since 1861.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Sanskrit

[Syllabus as for Pali above]

Serbo-Croat and Slovene

1. (*a*) Translation into English from *either* Serbo-Croat *or* Slovene, *and*

(*b*) Translation into, and free composition in, *either* Serbo-Croat *or* Slovene. (A choice of subjects is given.)

2 and 3. Two of the papers below, *either* (*a*) and (*b*), *or* (*b*) and (*c*), *or* (*c*) and (*d*) :—

(*a*) Elementary Serbo-Croat or Slovene Historical Grammar and the place of the Serbo-Croat and Slovene languages in the Slavonic Family.

(*b*) A general knowledge of Serbo-Croat or Slovene Literature, with special reference to the period since 1800 (including the Ballads).

(*c*) A general knowledge of the History of the Serbs, Croats and Slovenes, with special reference to the period since 1800.

(*d*) A general knowledge of the economic development of the Serbs, Croats and Slovenes, with special reference to the period since 1800.

Candidates offering Serbo-Croat will be tested in their ability to write both the Latin and Cyrillic scripts.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Sinhalese

[Syllabus as for Bengali above]

An elementary knowledge of Pali will be assumed.

Spanish

1. Composition (translation into Spanish). Translation of unseen Spanish passages. The candidate's knowledge of grammar will be tested.

2. General study of the literature of the 16th and 17th centuries, with prescribed texts.

3. General study of the literature of the 19th and 20th centuries, with prescribed texts.

One question in each of papers 2 and 3 must be answered in Spanish.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Swedish

1. Translation from and into Swedish. An Essay in Swedish.

2. Prescribed modern texts.

3. Outlines of the History of Swedish Literature. Outlines of Historical Grammar.

The examination includes an oral examination which shall test the candidate's knowledge of the spoken language.

Tamil

1. Translation from specified texts, with questions on their language and subject-matter.

2. Translation from unspecified texts ; translation from English.

3. Language. Literature. Grammar.

Theology

Any three of the following :—

(*a*) *Greek Testament* (one paper)

Grammar of the Greek Testament and unprepared translation. Prepared books from the New Testament, Translation, Exegesis and Introduction.

(*b*) *Church History* (one paper)

Early Church History to A.D. 325.

(*c*) *Philosophy of Religion* (one paper)

Purpose and scope of the Philosophy of Religion. The relation of Religion to morality, art and science. Theistic and anti-theistic theories, and modes of theistic proof. The relation of God to the world and to man ; the problem of evil. Immortality. Reason and revelation.

(*d*) *Biblical and Historical Theology* (one paper).

Turkish

1. Translation from set Ottoman and modern texts with questions on their language and subject-matter.

2. Translation from unspecified Ottoman and modern texts. Translation into modern Turkish.

3. Grammar. Ottoman history and institutions.

[Candidates will use the Latin characters in writing Turkish ; but they are required to be able to read the Arabic characters, and the examination will include a Turkish passage in Arabic script for unseen translation]

Urdu

[Syllabus as for Tamil above].

B.A. HONOURS DEGREE

COURSE OF STUDY

The Course for the B.A. Honours Degree normally extends over not less than two academic years but under revised Regulations in Branches where these have been introduced the course normally extends over not less than three academic years.

The B.A. Honours Degree may be taken in any of the following Branches :—

Anthropology.†
Arabic.
History of Art.
Bengali.
Burmese.
Classical Chinese.
Modern Chinese.
Classics.
Czech and Slovak Language and Literature.
Czechoslovak Regional Studies.§
Dutch.
English.
French.
Geography.‡
German.
Greek.
Gujarati.
Hebrew.
Hindi.
History.
Hungarian Language and Literature.
Hungarian Regional Studies.§
Italian.
Japanese.
Modern Japanese.
Latin.
Malay.
Marathi.
Mathematics.‡
Pali.
Persian.
Philosophy.‡
Polish Language and Literature.
Polish Regional Studies.§
Portuguese.
Psychology.§
Russian Language and Literature.
Russian Regional Studies.§
Sanskrit.
Scandinavian Languages.
Serbo-Croat and Slovene Language and Literature.
Sinhalese.
Slavonic and East European Regional Studies (*in and after* **1952**).
Sociology.†
Spanish.
Tamil.
Turkish.
Urdu.
Yugoslav Regional Studies.§

Candidates for the B.A. Honours Degree in the following subjects must also offer a subsidiary subject, unless exempted therefrom (*see below*) :—Mediæval and Modern (European) Languages (except English), Bengali, Burmese, Gujarati, Hindi, Malay, Marathi, Sinhalese, Tamil, Urdu, Anthropology, Geography, Psychology and Sociology (revised Regulations).

Candidates in the Final B.A. Examination for Honours in a specified group of subjects will not be required to take any Pass Examination.

Students who have passed the B.A. Honours Examination in one principal subject may enter for another principal subject after a further approved course of study extending over at least one year, but candidates who have obtained the B.A. Honours Degree in Classics are not permitted to present themselves for the Honours Degree in Latin or Greek.

[*Note.*—A candidate who fails to obtain Honours at the B.A. Honours Examination in Classics will be permitted to present himself on a subsequent occasion for the B.A. Honours Examination in Latin or in Greek, without attending any further course of study]

A student who has obtained the B.A. Pass or B.A. (General) Degree as an Internal Student may present himself for the B.A. Honours Examination in any one branch after having attended a further approved

§For revised Regulations for Examinations in and after 1952, *see* pp. 403–05 and 409–10 below. In the case of Psychology, the Final Examination under the existing Regulations will be held for the last time in 1953.

†For revised Regulations for Examinations in and after 1953, *see* pp. 356–60 and 412–16 below. In the case of Anthropology, the Final Examination under the existing Regulations will be held for the last time in 1953.

‡Examinations in these subjects are now held only under revised Regulations.

course of study therefor extending over not less than one year. A student who has obtained the B.A. Pass or B.A. (General) Degree as an External Student may present himself for the B.A. Honours Examination in any one branch after having attended an approved course of study therefor extending over not less than two years.

A student who has obtained the B.A. Honours Degree in any one branch as an External Student may present himself for the B.A. Honours Examination in another branch after having attended an approved course of study therefor extending over not less than two years.

Students who have taken the B.Sc. Honours or B.Sc. (Special) Degree in Anthropology or in Geography or in Mathematics or in Psychology will not be permitted to proceed to the B.A. Honours Degree in the same subject.

SUBSIDIARY SUBJECTS

At the beginning of his Honours Course, a candidate is required to select his subsidiary subject after consultation with his teacher.

The subsidiary subjects for the B.A. Honours Degrees in Anthropology, Bengali, Burmese, Czech and Slovak, Geography, Gujarati, Hindi, Hungarian, Malay, Marathi, Polish, Psychology, Russian, Serbo-Croat and Slovene, Sinhalese, Tamil and Urdu, are set out in the syllabus in the relevant subject.

The subsidiary subject for the B.A. Honours Degrees in Dutch, French, German, Italian, Portuguese, Spanish, and Scandinavian Languages must be one of the subjects (*a*) to (*h*) below. The examination in the subsidiary subject will consist of two or three papers as stated below.

(*a*) **Language and Literature.** The examination will as a rule consist of the *whole* of the B.A. (General) Examination in the relevant language. In the following languages the examination will be as stated below :—

(i) *English :* Papers 1 and either paper 2 or paper 3 at the B.A. (General) Examination in English.

(ii) *Afrikaans, Dutch, Danish, German, Norwegian, Swedish :* The B.A. (General) Examination with the omission of two of the Set books.

(iii) *French,* (iv) *Italian,* (v) *Portuguese,* or (vi) *Spanish :* Paper 1 and *either* Paper 2 *or* Paper 3 at the B.A. (General) Examination in the relevant language, and an oral examination.

(vii) *Greek* or (viii) *Latin :* Either (*a*) papers 1 and 2 at the B.A. (General) Examination in the relevant language, with the omission of two of the Set books in each case ; or (*b*), with the consent of the candidate's teachers, the papers in Greek or Latin as a subsidiary subject at the B.A. Honours Examination in Latin or Greek respectively (*see* pp. 393–4 and 379–81 respectively below).

(ix) *Old Norse :* Papers 1 and 2 at the B.A. (General) Examination in Old Norse, with the omission of the Poetic *Edda.*

(x) *Russian,* (xi) *Polish,* (xii) *Czech and Slovak,* (xiii) *Serbo-Croat and Slovene,* (xiv) *Bulgarian,* (xv) *Hungarian,* (xvi) *Roumanian :* Paper 1 and one of the papers (*a*), (*b*), (*c*), or (*d*), under the heading " Papers 2 and 3 " of the relevant syllabus for the B.A. (General) Examination, together with an oral examination.

(*b*) **History.** Either (i) two of the papers (*a—l*) at the B.A. (General) Examination in History, of which one must be a paper chosen from papers (*a—f*) ; or (ii) one of the papers (*a—f*) at the B.A. (General) Examination in History and a special paper on the History (1500—1914) of the country whose language the candidate is studying.

(*c*) **Philosophy.** (i) *History of Philosophy*, (ii) *Ethics*, or (iii) *Logic* : Any two of the papers at the B.A. (General) Examination in the relevant subject ; or two papers on a special syllabus which shall have been submitted to and approved by the University.

(*d*) **Psychology.** The B.A. (General) Examination in Psychology.

(*e*) In the case of *Romance Languages* and *Germanic Languages*, **The History of Art.** The B.A. (General) Examination, provided that students in Germanic Languages must take as one of their papers Section B. 2. Architecture in Western Europe from c. 800—c. 1500, including Germany, Italy, and Spain.

(*f*) In the case of *Romance Languages* and *Germanic Languages*, **Economics.** Two papers on the following syllabus :—

I. The general principles of Economics, to include :—

The theory of value and of price ; the theory of costs and of distribution ; the theory of money and credit, of the foreign exchanges and of international trade and of industrial fluctuations.

II. Descriptive Economics, to include :—

The contemporary economic and social organisation of the United Kingdom and its development since the Industrial Revolution, with special reference to the organisation of industry and agriculture, transport and the means of communication, organised labour, methods of industrial conciliation and the social services, the organisation of banking and finance and the history of tariffs.

(*g*) **Music.** The B.A. (General) Examination in Music.

(*h*) In the case of *Romance Languages*, **Military Studies.** The B.A. (General) Examination in Military Studies.

A candidate must enter for examination in his subsidiary subject either on the same occasion as he enters in the principal subject or at any other B.A. Examination held subsequently to his passing the Intermediate Examination in Arts and before the commencement of the calendar year in which his examination in the principal subject takes place. A candidate may not enter for examination in the principal subject separately from the subsidiary subject unless he has already passed the examination in the subsidiary subject or is exempted therefrom.

Nevertheless a candidate who has been referred in one subject at the Intermediate Examination prior to 1948 may enter both for re-examination in that subject at the Intermediate Examination and for examination in his subsidiary subject at the Final Examination in the year before the commencement of the calendar year in which he will enter for examination in his principal subject, but he will not be informed of the result of his candidature in the subsidiary subject unless he has satisfied the Examiners in his referred subject.

A candidate who enters for examination in the principal and subsidiary subjects on the same occasion and fails in the subsidiary subject may, if the Examiners have recommended him for First or Second Class Honours in the principal subject, be credited with such Honours and allowed to enter for re-examination in the subsidiary subject alone on one subsequent occasion only. A candidate who is recommended for Third Class Honours and fails in the subsidiary subject will not be credited with any part of the examination.

A candidate who satisfies the Examiners in his subsidiary subject will not be required to enter again for examination in the subsidiary subject.

A candidate who has passed in a subsidiary subject may enter for examination in a second subsidiary subject either before or on the same occasion as his entry for examination in his principal subject or subsequently to passing in his principal subject.

Exemption from Subsidiary Subject

Candidates who have obtained the B.A. or B.Sc. Degree either as Internal or as External Students are exempt from examination in a subsidiary subject, provided that a subject in which they have passed is included in the list of subsidiary subjects for the B.A. Honours Examination to which they intend to proceed.

Candidates who have obtained the B.D., B.Mus., B.Sc.(Econ.) or B.Com. Degree either as Internal or as External Students are exempt from examination in the subsidiary subjects of Theology, Music or Economics respectively.

Candidates who as External Students have passed the examination in a subsidiary subject in accordance with the conditions that were then in force for Internal Students, may be credited with that subsidiary subject for the purpose of an Internal Degree.

Candidates who, while failing in the Examination as a whole, have satisfied the Examiners in two subjects at the B.Sc. or B.A. (General) Examinations, may apply for exemption from examination in a subsidiary subject, provided that a subject in which they have passed is included in the list of subsidiary subjects for the B.A. Honours Examination to which they intend to proceed. All such applications will be considered individually on their merits.

DATE OF EXAMINATION

The B.A. Honours Examination will take place once in each year in the week beginning on the Thursday after June 5th.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

Candidates for Honours are required to submit entry-forms whether entering for examination in principal and subsidiary subjects taken together or in principal or subsidiary subjects taken separately.

A candidate for this Examination who fails to send his entry-form and fee to the Academic Registrar on or before March 7th can only be admitted provided there is accommodation and that arrangements have already been made for holding the Examination in the subject or subjects in which the candidate desires to be examined. All such applications received after March 7th must be accompanied by an extra fee of 2 guineas, which extra fee will be returned if it is found impossible to make the necessary arrangements for the examination of the candidate. Such late entry cannot be accepted if received after April 7th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate showing both the time and place of the written, practical, and oral examinations.

Fees

The fee for each student is 7 guineas for each entry to the whole Examination, except as provided below.

A candidate who enters for the B.A. Honours Examination in order to qualify for entry to the M.A. Examination in accordance with the special Regulations in certain branches will be required on each entry to the B.A. Honours Examination to pay a fee of 1 guinea per paper or practical examination taken, up to a maximum of 7 guineas. In no case will the names of such students appear on the Honours lists of the year.

A candidate who enters for the first six papers only at the B.A. Honours Examination in Mathematics will be required to pay a fee of 7 guineas and a further fee of 3 guineas on entry for the remaining two papers at a subsequent Examination.

A candidate who enters simultaneously for Parts 1 and 2 of the Final Examination for the B.A. Honours in Psychology under revised Regulations will be required to pay a fee of 5 guineas.

A candidate who enters simultaneously for examination or re-examination in his principal subject and his subsidiary subject will be required to pay a fee of 7 guineas.

A candidate who enters for examination or re-examination in his subsidiary subject only, will be required to pay a fee of 2 guineas.

A candidate who enters for examination or re-examination in his principal subject only, will be required to pay a fee of 5 guineas.

A candidate exempted from a subsidiary subject will be required to pay the full fee of 7 guineas at his first entry and a fee of 5 guineas at any subsequent entry for the examination in his principal subject.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examiners shall be at liberty to test any candidate by means of oral questions.

In all modern foreign languages there will be an oral examination which shall test scholarship as well as command of the spoken language.

Successful candidates at the Honours Examination will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) Third Class Honours. The Second Class Honours list will be sub-divided into an Upper and Lower Division, except in the subjects of Psychology, Geography, and Anthropology. The names will be in alphabetical order in each class or division.

The class assigned to candidates will depend solely on the examination in the principal subject.

A candidate who fails to satisfy the Examiners in an Honours B.A. Examination shall in no case be allowed a Pass B.A. Degree.

A diploma for the Degree of B.A., under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

STUDENTSHIPS AND PRIZES

The following Studentships, each of the value of £250 and tenable for one year, are offered at the B.A. Honours Examination :—

Arthur Platt Studentship in Classics.

George Smith Studentship in English (and books to value of £5).

Derby Studentship in History.

Sherbrooke Studentship in Mathematics.

Four Studentships for Romance Languages.

Three Studentships in each of the following : English ; Germanic Languages ; History.

Two Studentships in each of the following : Classics ; Geography ; Oriental Languages and Literature.

One Studentship in each of the following : Architecture *or* History of Art ; Anthropology ; Mathematics ; Philosophy ; Psychology ; Slavonic and East European Languages and Literatures ; Sociology.

[For detailed Regulations in regard to these Studentships *see* p. 13 of the General Regulations.]

The following Prizes are also awarded :—

The Robert Priebsch Memorial Prize (£5) to the best candidate in Mediæval German at the B.A. Honours Examination in German for Internal Students.

Sir John William Lubbock Memorial Prize in Mathematics (£30).

[For detailed Regulations in regard to these Prizes *see* Scholarships Pamphlet.]

AEGROTAT DEGREE

[*See* p. 329]

SYLLABUSES

[For details of prescribed books and special subjects *see* Appendix to these Regulations.]

Anthropology

[*For Examinations in* **1951, 1952** *and* **1953.**]

1. ***Physical.***—The elementary study of the general structure of Man, past and present. Comparative study of the physical characters of the various races and sub-races of Man.

[***Note.***—An elementary knowledge of general principles of zoological classification and of genetics will be required, with special reference to problems of hybridisation and descent in relation to Man.]

2. ***Geographical.***—Geological and geographical conditions of racial and cultural development. The distribution of races.

3. ***Psychological.***—Analytical and comparative study of mind, especially in reference to innate and environmental factors.

4. ***Social.***—Comparative study of social phenomena and organisation. Government, law and moral ideas. Magical and religious beliefs and practices.

5. ***Technological.***—Comparative study of the arts, industries, and occupations from the earliest times.

6. ***Linguistic.***—Elementary comparative study of language.

The following papers will be set :—

(1) Physical Anthropology.
(2) Prehistoric Archæology of Europe and the Near East.
(3) Technology and Linguistics.
(4) Social Organisation.
(5) Religion and Magic.
(6) Ethnography of a selected region.
(7) Essay.

A general knowledge will be required in all branches, but credit will be given for special knowledge in any branch or branches previously selected by the candidate.

Subsidiary Subjects

Candidates, other than those who have obtained the B.A. or B.Sc. Degree as Internal or External Students, will be required to present themselves for examination in one of the following subsidiary subjects, in accordance with the Regulations in regard to subsidiary subjects, *see* pp. 351–53 above, so far as applicable and subject to the exceptions noted below :—

Geography.
History of Ancient Egypt.
Military Studies.
Psychology.
Sociology.

The examinations in Geography and Military Studies will consist of the three papers of the B.A. (General) Examination in the relevant subject.

The examination in History of Ancient Egypt will consist of two papers :—

(1) On the political and social history of a period of Ancient Egyptian History to be selected by the responsible Teacher after consultation with the candidate.
(2) The historical sources of the period chosen, from either (*a*) the textual or (*b*) the archæological evidence.

Candidates intending to choose (2) (*a*) are advised to take Ancient Egyptian as one of their subjects for the Intermediate Examination in Arts.

The examination in Psychology will consist of the two papers and the practical examination of the B.A. (General) Examination in Psychology.

The examination in Sociology will consist of two of the following four papers of the B.A. Honours Examination in Sociology (*see* p. 411) provided that Social Institutions II is taken only in conjunction with Social Institutions I :—

1. Social Institutions—I.
2. Social Institutions—II.
5. Social Psychology.
C. 2. Contemporary Social Conditions in Modern England.

Anthropology

REVISED REGULATIONS FOR B.A. HONOURS IN ANTHROPOLOGY

[*For Examinations in and after* **1953**]

The course of study will normally extend over not less than three years but for advanced students the period may be two years.

The Examination will consist of eight papers, as follows :—

1. General Principles of Cultural Anthropology,
2. Economic and Political Systems,
3. Moral and Ritual Systems,
4. Ethnography of Special Area,
5. The Evolution of Man,
6. Racial Variation among Living Peoples,
7. Archaeological Study of the Development of Culture,
8. ONE of the following options :—

   General Linguistics,
   Technology,
   The Prehistoric Archaeology of a Special Area,
   Race Relations,

together with a practical examination of three hours with reference to the papers on the Evolution of Man, Racial Variation among Living Peoples, and the Archaeological Study of the Development of Culture and that on Technology if taken as an option.

In addition, a subsidiary subject must be take (*see* below).

Candidates, other than those who have obtained the B.A., B.Sc., or B.Sc.(Econ.) Degree as Internal or External Students, will be required also to present themselves for examination in one of the subsidiary subjects set forth below, in accordance with the Regulations with regard to Subsidiary Subjects on pp. 351–53 as far as applicable and subject to the special requirements noted below :—

Economics.	Geology.	Sociology.
French.	Italian.	Spanish.
Geography.	Psychology.	Statistics.
German.		

In special circumstances other subjects may be approved by the University.

The examination in Geography will consist of the three papers of the B.A. (General) Examination.

The examination in Economics will consist of two papers on the syllabus set out on p. 352 above.

The examination in French, Italian and Spanish will consist of Paper 1, and either Paper 2 or Paper 3 at the B.A. (General) Examination in the relevant language, together with an oral examination.

The examination in German will consist of the B.A. (General) Examination in German with the omission of two of the Set Books, together with an oral examination.

The examination in Geology will consist of the two papers and the practical examination of the B.Sc. (General) Examination in the relevant subject.

The examination in Sociology will consist of two of the following three papers of the B.A. Honours Examination in Sociology (*see* p. 412) provided that Social Institutions II is taken only in conjunction with Social Institutions I :—

Social Institutions—I,
Social Institutions—II,
Social Psychology (*i.e.*, Psychology with special reference to the psychological basis of social relations and the effect of social interactions).

The examination in Statistics will cover the same syllabus, and be examined by the same papers, as the two-year ancillary in Statistics at the B.Sc. (Special) Examination in Anthropology under revised Regulations. (*See* Regulations for Internal Students in the Faculty of Science.)

The syllabuses in the principal subject are as follows :—

1. General Principles

The scope of Cultural and Social Anthropology ; problems of method and technique.

Theories of culture and society ; adaptive aspects of culture ; the role of biological, psychological and environmental factors ; inter-relations of culture and social structure ; cultural development and change.

Social structure ; analysis of groups and institutions. Locality, sex, age and kinship as factors in social grouping. Types of family structure. Lineage, clan and community. Occupational and other associations. Rank and status, prestige and authority. Stratified groups ; class and caste structures. Marriage and other institutions associated with kinship.

2. Economic and Political Systems

Organisations of economic activities in primitive and peasant societies ; land tenure and property rights ; conception of wealth and capital organisation of labour ; principles of exchange of goods and services. Allocation of the products of industry.

Political organisation ; authority in states and in stateless societies ; role of public opinion ; chieftainship, councils and executive organisations.

Legal rules and procedures ; the concept of sanctions ; civil and criminal law in primitive societies ; the relation of law to custom and to morality.

3. Moral and Ritual Systems

Social control and social values. Culture patterns. Religion, belief, dogma and ritual. The concepts of spirits. Religion and society. Relations between religion and magic ; types of magic ; fertility cults and totemism ; mythology. The role of art in primitive culture.

4. Ethnography of a Special Area

The applications of the principles, problems and methods of the preceding sections to the more detailed study of a special region. Regions approved for selection are :—

(*a*) Eastern Africa.
(*b*) Central Africa.
(*c*) Western Africa.
(*d*) Southern Africa.
(*e*) America North of Mexico—Amerindian and Eskimo cultures.
(*f*) India (tribal cultures).
(*g*) South-eastern Asia.
(*h*) Pacific Islands (Melanesia, Polynesia and Micronesia).
(*i*) Australia and New Guinea.

5. THE EVOLUTION OF MAN

The evidence for organic evolution ; the mammalian and primate characteristics of man ; the varieties of living primates ; the evolution of the human body as deduced from comparative anatomy and fossil remains. (Human Palæontology and the Comparative Anatomy of Primates and early hominoids are to be dealt with in sufficient detail to illustrate the major features of human evolution and the methods used in such studies.)

6. RACIAL VARIATION AMONG LIVING PEOPLES

The zoological concept of race considered with reference to the bases of linguistic, political and other classifications of living man.

Racial classifications and the chief physical characters used in constructing them. Methods of Anthropometry. The statistical examination of anthropometric data by simple methods.

An outline of human genetics with particular reference to serological characters and their application in Anthropology.

7. ARCHÆOLOGICAL STUDY OF CULTURE.

Archæological study of the development of culture with particular reference to the prehistory and protohistory of Europe and the Orient.

Principles and methods of archæological classifications. The traditional "Three Ages" cultural phases and sequences. Man as a tool maker ; archæological evidence for the antiquity of man. Early art and ritual. Cults ; fertility cults and cults of the dead.

Development of techniques during the Pleistocene period, with special reference to adjustment to environment, productivity of labour in the food quest, density of population, and social organisation.

Food gathering and food producing in post-pleistocene time as condition by environment and technology. Methods of farming ; extra-subsistence production ; division of labour ; beginnings of trade. The metallurgy of copper and bronze ; the development of full-time specialisation and regular trade.

Early growth of complex civilisations. Irrigation agriculture with special reference to the Nile and Tigris-Euphrates valleys ; the growth of urban agglomerations. Temples and Pyramids. The development of writing and numeral notation ; standardisation of weights and measures, calendar and geometry.

8. OPTIONS

General Linguistics

An outline of the principles and methods of descriptive linguistics with reference to :—Phonetic notation and phonological systems ; grammatical categories ; dictionary methods and the presentation of language material in texts ; the sociology of language (the relations of linguistic categories and forms to social and cultural conditions).

Technology

Relation between material and social aspects of culture. Concepts of technique and technical knowledge, skill and efficiency and their evaluation. Techniques in non-industrial communities. Relation of

techniques to physical environment. Relation of changes in techniques to changes in population density, settlement and social organisations. Types and uses of materials. Discovery, invention, evolution and diffusion.

Simple systems of counting, measurement and time reckoning and their contexts.

Artifacts; tools; categories; classification of materials; manufacture and use. Implements of war, means of transport, ceremonial objects and ornaments.

Harnessing of energy, *e.g.*, fire and water, forms of power.

Principles of simple machinery, *e.g.*, wheels, pulleys and levers, compressors, projectile implements.

Modes of production. Hunting and collecting; fishing; pastoralism; agriculture in simple and in more developed forms.

Specific crafts, considered with reference both to techniques (*e.g.*, wood working, pottery, weaving, metal work,) and major products, (*e.g.*, houses, clothes and baskets.)

The Prehistoric Archæology of a Special Area

The more detailed archæological study of Prehistoric Britain, including the Iron Age cultures prior to the Roman conquest.

(Approval may be given for the selection of other special areas.)

Race Relations

The significance of " race " and " culture " in contemporary problems of society; racial antagonism in relation to other forms of intergroup hostility.

The rise of modern racial antagonisms; the colour bar and other methods of regulating the relations of racial groups; " race consciousness " and ethnic nationalism; the role of the " mixed blood " in racial and cultural contacts.

Studies of racial conflict and co-operation in selected areas, such as the United States, Brazil, the Far East, Africa and the United Kingdom.

Arabic

Nine papers will be set, with an additional optional paper.

1–3. Translation from specified books.

4. *Either* (*a*) Translation from specified books. This paper will contain questions on Grammar and the technical terms of Arabic Grammar.
   or (*b*) Arabic Palæography, Epigraphy and Numismatics.
   or (*c*) The Theory and History of Islamic Law.
   or (*d*) Translation from specified South Arabian Inscriptions.

5. Translation from unspecified books.

6. Translation into Arabic.

7. Arabic Literature.

8. *Either* the Historical Development of Islam,

or the Grammar of the South Semitic Inscriptions. The following books are recommended for study :—C. Brockelmann : *Grundriss der vergleichenden Grammatik der Semitischen Sprachen*, Band I (Berlin, 1908–13). M. Höfner : *Altsüdarabische Grammatik* (Leipzig, 1943).

9. (i) The History of the Caliphate to 1258.

(ii) Mediæval Islamic Institutions.

(iii) The History of Political Ideas.

10. An additional optional paper :—

Either (*a*) Islamic Art and Archæology.

or (*b*) Elementary Hebrew and Aramaic, consisting of pointed passages for translation from specified texts and questions in accidence.

or (*c*) Elementary Persian.

or (*d*) Elementary Turkish. Candidates are recommended to use P. Wittek : *Turkish* (London, 1945).

or (*e*) Law of Personal Status. Candidates must study at least *two* of the following Schools of Law :—

(*a*) the Hanafis,

(*b*) the Mālikis,

(*c*) the Shāfi'is,

(*d*) the Ithnā'Asharis.

In special circumstances permission to offer another School in place of *one* of these may be granted on application.

[A special note will be placed against the names of the successful candidates who have satisfied the Examiners in the optional paper]

History of Art

The examination will consist of nine papers and an oral examination, as follows :—

(1) and (2) History of Art in the Renaissance c. 1300—c. 1600.

Particular attention should be paid to the history of Art in Italy throughout the period, and that in Northern Europe during the 15th and 16th centuries.

(3) Renaissance : a critical study of prescribed texts.

(4) and (5). The History of Art in England *either*—

(*a*) up to c. 1550 *or*

(*b*) from c. 1550 onwards.

(6) A paper in which candidates will be required to discuss works of art of which photographs are provided. The material will be taken from the Renaissance and the two English papers as defined above.

(7), (8) and (9). One of the following special periods in the History of Art in Western Europe :—

(*a*) Byzantine, c. 400 to 1400.
(*b*) Carolingian and Romanesque, c. 800 to c. 1200.
(*c*) Gothic, c. 1100 to c. 1500.
(*d*) 17th Century.
(*e*) c. 1700–c. 1830.
(*f*) c. 1830 to the present day.

Candidates will be expected to show a knowledge of the principal schools of Painting, Architecture, Sculpture and the Applied Arts in the periods with which they are concerned. They will also be expected to show some knowledge of :—

(*a*) Iconography.
(*b*) The history of Costume.
(*c*) Technical methods.
(*d*) The history of Art Criticism.

Paper 9 in the examination will consist of questions on the general historical background of both the Renaissance and Special Period chosen. Emphasis will be placed on social and cultural rather than on political history.

Students must satisfy the authorities of the School concerned that they are able to translate from at least two modern languages, other than their own, of value for the study of the history of art.

Bengali

1. Earlier literature
2. Later literature

} Passages from the specified texts for translation into English, with short comments on points of language, literary forms or subject-matter.

3. Translation from unspecified texts.
4. Translation into Bengali prose.
5. Free Composition.
6. Essay in English.
7. Cultural, religious, political and administrative history of the language area in outline.
8. *Part I.*
   (*a*) Phonetics of the language.
   (*b*) History of the language as illustrated in the specified texts.

   Part II.
   History of literature.
   Sections (*a*) and (*b*) of Part I shall contain three or more questions each, and Part II six or more questions. Candidates will be required to answer six questions in all, *of which at least two must be chosen from Part II and at least one from each section of Part I.*
9. An oral examination conducted partly in the language and partly in English which shall test scholarship as well as command of the spoken language.
10. Subsidiary subject—Sanskrit. The three papers of the B.A. (Gen.) Examination (*see* pp. 345 and 348 so far as relevant).

Burmese

Syllabus as for Bengali, above, except that papers 4 and 10 will be :—

4. Translation into Burmese.

10. Subsidiary subject—Sanskrit *or* Pali.

Classical Chinese

1–3. Translation from specified texts with comments on points of language, literary forms or subject-matter.

4. *Either* Translation from specified texts with comments on points of language, literary forms or subject-matter ; *or*

Translation and romanisation of passages from specified and unspecified Chinese texts according to the traditional Japanese reading, with questions on the principles of this reading and on the grammar of classical literary Japanese.

5. Translation from unspecified texts.

6. Translation into Chinese (' National Language ' (Kuo Yü)) will be accepted as an alternative to " Literary Style ".

7. Questions on a prescribed period of Chinese History.

8. Questions on a prescribed period of Chinese Literature.

Modern Chinese

1. Earlier literature.
2 and 3. Later literature.

} Passages from the prescribed texts for translation into English, with short comments on points of language, literary forms or subject-matter.

4 and 5. Translation from unspecified texts :—(*a*) Modern novels, essays, etc. (*b*) Newspapers *or* essays in either classical or modern style.

6. Translation into Chinese and free composition, *or* (for candidates who choose alternative prescribed texts in the classical style) Translation only.

7. History of China since 1834, *or* History of the T'ang Dynasty.

8. History of Chinese Literature.

9. An oral examination conducted partly in the language and partly in English which shall test scholarship as well as command of the spoken language.

Classics

[*For Examination in* **1951** *only*]

Eleven papers of three hours each, as follows :—

1. Translation into Latin prose.

2. Translation into Greek prose.

3–6. Unseen translation, Greek and Latin in equal proportion (4 papers).

7. Prescribed texts : one of the sections under " A. Latin Books " or " B. Greek Books " selected by the candidate from the prescribed list ; the paper to consist both of passages for translation and of questions.

8. Grammar and Literature, consisting of (1) passages for grammatical comment, and general questions on grammar and metre ; (2) questions on Greek and Latin Literature. There will be one compulsory question, giving a choice of passages for grammatical comment. Sufficient options will be given throughout the paper to afford opportunities to candidates who specialise on the Greek or the Latin side.

9*a*. *Either* (1) Greek and Roman Thought (the more important features), and (2) Antiquities, including Art and Archæology, and Public and Private Life. The translation and explanation of passages from Greek and Latin authors will form a compulsory part of (1).

9*b*. *Or* a Second section, selected by the candidate from the list of prescribed texts. A candidate who thus offers two sections must select one section under "A. Latin Books" and one section under "B. Greek Books."

10. A Special Subject to be selected from the following list :—

(*a*) Translation into Greek verse.

(*b*) Translation into Latin verse.

(*c*) (i) The Comparative Philology of the Greek and Latin Languages with special reference to Greek.

(ii) The Comparative Philology of the Greek and Latin Languages with special reference to Latin.

Passages for translation and linguistic comment will be set (*see* set book Appendix).

[*Note*.—Except with the special permission of the Board of Studies in Classics, no candidate may offer both these subjects.]

(*d*) History of Greek Drama, with a knowledge of Aristotle's *Poetics*.

(*e*) Satire in Latin Prose and Poetry.

(*f*) History of Greek Philosophy to Aristotle (inclusive).

(*g*) Stoicism and Epicureanism in Roman Life and Thought.

(*h*) A Greek Historical subject.

(*i*) A Roman Historical subject.

(*j*) Greek Sculpture, pottery and vase painting from 800 to 350 B.C.

(*k*) History and Archæology of Roman Britain.

(*l*) Civilisation in Greece from 2000 to 600 B.C.—the archæological material.

Note.—If a candidate so desire, he may offer (*a*) *or* (*b*) or both (*a*) *and* (*b*) as additional special subjects.

11. General Ancient History. The Outlines of Greek and Roman History (660 B.C. to A.D. 180) should be studied with special reference to the periods 500–323 B.C. and 133 B.C.–A.D. 96. Candidates who have passed in Ancient History at the Intermediate Examination or in History at the B.A. (General) Examination (provided that they took paper (*a*) History of Greece to 146 B.C. and paper (*b*) History of Rome to A.D. 325, as two of their three papers in History) will be allowed to substitute a second special subject for this History paper. [This concession is not accorded to candidates who have been exempted from the Intermediate Examination.] Candidates who have not offered Ancient History at the Intermediate Examination, and candidates who have not offered the above-mentioned papers in History

at the B.A. (General) Examination, but wish to avail themselves of this option, may take the papers in Ancient History at any Intermediate Examination in Arts for Internal Students which precedes their Honours Examination. The fee for such Intermediate Examination is 2 guineas.

Note.—The texts used by the Examiners in setting question-papers will be the Oxford Classical Texts (published by the Clarendon Press), unless some other text is specified.

Classics

[*For Examinations in and after* **1952**]

[*Note.*—All candidates will be required to have satisfied the examiners, not later than the November preceding the date of their Final Examination, in the following papers of the Intermediate Examination in Arts :—

Ancient History Paper (2) Greek History from 776 B.C. to 146 B.C. and Paper (3) Roman History from 753 B.C. to A.D. 337.]

The Final Examination will consist of eleven papers of three hours each, as follows :—

1. Translation into Latin prose.

2. Translation into Greek prose.

3–6. Unseen translation, Greek and Latin in equal proportion (4 papers).

7–8. Prescribed texts. One of the sections under " A. Latin Books " and one of the sections under " B. Greek Books " selected by the candidate from the prescribed list.

Candidates will be required to translate, to write an essay to explain points of grammar, subject matter and allusions ; and to comment on points of textual criticism, in so far as they are of importance to the interpretation.

9. Grammar and Literature, consisting of : (1) passages for grammatical comment, and general questions on grammar and metre; (2) questions on Greek and Latin Literature. There will be one compulsory question, giving a choice of passages for grammatical comments. Sufficient options will be given throughout the paper to afford opportunities to candidates who specialise on the Greek or the Latin side.

10. A Special Subject to be selected from the following list :—

(*a*) Translation into Greek verse.

(*b*) Translation into Latin verse.

(*c*) (i) The Comparative Philology of the Greek and Latin Languages with special reference to Greek.

(ii) The Comparative Philology of the Greek and Latin Languages with special reference to Latin.
Passages for translation and linguistic comment will be set (*see* set book Appendix).

[*Note.*—Except with the special permission of the Board of Studies in Classics, no candidate may offer both subjects (*c*) (i) and (*c*) (ii).]

(*d*) History of Greek Drama, with a knowledge of Aristotle's *Poetics*.

(*e*) Satire in Latin Prose and Poetry.

(*f*) History of Greek Philosophy to Aristotle (inclusive).

(*g*) Stoicism and Epicureanism in Roman Life and Thought.
(*h*) A Greek historical subject.
(*i*) A Roman historical subject.
(*j*) Greek Sculpture, pottery and vase painting from 800 to 350 B.C.
(*k*) History and Archæology of Roman Britain.
(*l*) Civilisation in Greece from 2000 to 600 B.C.— the archæological material.

[*Note.*—If a candidate so desire, he may offer (*a*) *or* (*b*) or both (*a*) *and* (*b*) as additional special subjects.

11. *Either* A paper in two sections (1) Greek and Roman Religion and (2) Greek and Roman Political Ideas.

Candidates will be required to show knowledge of both sections, but opportunity will be given them to display a special interest in either section.

The following reading list is intended to indicate the scope of the paper; the books are not prescribed :—
[Reading list will be announced later.]

Candidates who have passed in this paper at a previous Honours examination will not be permitted to offer it again;

or A second Special Subject to be selected from the list given above under 10.

Candidates will not be permitted to offer a Special Subject taken in a previous Honours examination.

Czech and Slovak (Language and Literature)

(1) Translation from Czech *and* Slovak; translation into Czech *or* Slovak.

(2) Essay in Czech or Slovak.

[*Note.*—In translation and essay papers the candidate must use *either* Czech *or* Slovak consistently.]

(3) History of the Czech and Slovak languages.

(4) General history of Czech and Slovak literature.

(5) *One* of the following special periods of Czech and Slovak literature :—

(*a*) The old Czechoslovak literature from the beginning to the middle of the 18th century.
(*b*) From the National Resurrection (middle of the 18th century).
(*c*) Modern Slovak Literature.

(6) Essay in English.

(7) *Either* (i) Comparative Slavonic Philology with Phonetics, *or* (ii) History of Czechoslovak literary criticism.

(8) An oral examination, partly conducted in the Czech or Slovak language, which shall test scholarship as well as command of the spoken languages.

(9) Subsidiary subject—German or other approved language (*see* pp. 351–53, as far as applicable).

Czechoslovak (Regional Studies)

[*For Examination in* **1951**]

(1) Translation and Composition.

[*Note.*—In translation and essay papers the candidate must use *either* Czech *or* Slovak consistently.]

(2) Place of the Czechs and Slovaks in the Slavonic family.

(3) General history of Bohemia and Slovakia.

(4) *One* of the following special periods of Bohemian history :—

(*a*) Mediæval Bohemia to 1346.

(*b*) The Golden Era, 1346 to 1526.

(*c*) Decay, 1526–1780.

(*d*) National Renaissance from 1780.

(*e*) History of the Slovaks.

(5) General history of Austria-Hungary since 1526.

(6) General history of Europe since the French Revolution, with special reference to national movements. [*Note.*—Other periods of European history may be submitted for approval.]

(7) *Either* (*a*) General history of Czech and Slovak literature, or (*b*) Economic history and geography of Bohemia and the Danube Basin.

(8) Essay in English.

(9) An oral examination, partly conducted in Czech or Slovak.

[*Note.*—A knowledge of the German language is essential for this course]

Dutch

(*a*) *For* **1951.** Prescribed texts and literature either as for English Honours under Old English (*b*) in the year in question or as for German Honours under Syllabus I (*a*) (Old High German and either Old Saxon or Gothic) in the year in question. Some knowledge of Gothic will be expected.

In and after **1952.** Prescribed texts and literature in either Old High German, Old Saxon or Old English.

(*b*) Historical Grammar, with special reference to the position of Dutch in the Germanic group of languages and to the development of modern Dutch.

(*c*) Prescribed and Unprescribed Middle Dutch texts, and Middle Dutch Literature.

(*d*) Modern Literature from 1500.

(*e*) Prescribed Modern Texts.

(*f*) Translation from and into Dutch.

(*g*) Essay in Dutch.

(*h*) An oral examination which shall test scholarship as well as command of the spoken language.

(*i*) Subsidiary subject (*see* pp. 351–53).

In those parts of the examination in which the candidates are required to write in Dutch, they will be expected to conform to present-day official usage in respect of orthography and grammar.

English

All candidates will be required to take the eight sections (*a*) to (*h*) below, except that candidates will be permitted to offer a paper (*i*) on the " History and Principles of Literary Criticism " (in and after **1952** " Principles of Literary Criticism ") in place of the paper (*a*) on the " History of the Language " *or* to offer a paper (*j*) on " Old Icelandic " in place of paper (*f*) on " English Literature 1700–1880."

Books are not prescribed for the literature papers, except for Shakespeare and the History and Principles of Literary Criticism, but students are not expected to cover the whole field with equal emphasis. A wide range of questions in each paper will allow each candidate opportunity to show his special interests.

(*a*) *History of the Language*, viz., the main outlines of the History of English from the beginning of the Old English period to the present day : orthography, pronunciation, grammar and syntax, vocabulary,

meanings, word formation, loan words. In the Old and Middle English periods, students should base their study of the language on the texts prescribed for this paper. The study of Modern English (spoken and written standard) is further defined under the following aspects: (i) the pronunciation of modern spoken English; (ii) the intonation of spoken English; (iii) the grammar of literary and spoken English; (iv) the syntax of modern English; (v) dictionaries and words; (vi) loan words and word formations.

The paper will include a compulsory section consisting of passages from the prescribed texts and some unseen passages including one from earlier M.E. and one (compulsory) from current English.

(In connection with the aspects of Modern English set out above the following books are recommended for reference, but not prescribed:—(i) Ida Ward: *The Phonetics of English*: (ii) Daniel Jones: *An Outline of English Phonetics* (the section on Intonation only); (iii) Henry Sweet: *A New English Grammar* and Harold Palmer: *A Grammar of Spoken English*; (iv) Henry Sweet: *A New English Grammar* (Vol. II); (v) *Preface to Johnson's Dictionary*, Introductions to Volumes of N.E.D., esp. Vols. A, B, S and supplements to N.E.D.; (vi) A. C. Baugh: *History of the English Language*, and M. S. Serjeantson: *History of Foreign Loan Words in English*.)

(*b*) *Old English Texts*:—

(i) Prescribed Texts: Translation.

(ii) Commentary and questions on subject-matter, interpretation, forms (including metre), expression.

(iii) Compulsory unseen translation.

(*c*) *Middle English Texts*:—

(i) Prescribed Texts: Translation.

(ii) Commentary and questions on subject-matter, interpretation, forms (including metre), expression.

(iii) Compulsory unseen translation.

(*d*) The History of English Literature to 1475 with the Scottish Chaucerians.

(*e*) The History of English Literature 1475–1700.

(*f*) The History of English Literature 1700–1880.

(*g*) *Shakespeare* (with five or six plays to be specially studied).

(*h*) Special Subject (one paper). *See* below.

(*i*) *In* **1951.** History and Principles of Literary Criticism (as an alternative to (*a*) above). Syllabus as for Special Subject (ii) below. *In and after* **1952.** Principles of Literary Criticism (as an alternative to (*a*) above. Syllabus as for Special Subject (ii) below.

(*j*) Old Icelandic (as an alternative to (*f*) above). Syllabus as for Special Subject (viii) below.

Special Subjects

(i) Introduction to Bibliography and Palæography. An elementary knowledge of mediæval and secretary handwriting in England, with practice in reading literary, legal and state documents in reproduction, as an introduction to textual study and the study of archives. An introduction to bibliography, with especial reference to printing and book production in England in the 16th and 17th centuries, and the bearing of these upon problems of textual criticism and literary history.

(ii) *In* **1951** History and Principles of Literary Criticism (provided it is not offered under (*i*) above). The bases of criticism in the classical period; developments during the Middle Ages; the emergence of forms in the Renaissance and of standards in the neo-classic period; subsequent changes and developments in the Romantic and modern periods.

Prescribed Texts : the texts may be read in translation, but candidates will be given an opportunity of showing their knowledge of the original texts.

In and after **1952**. Principles of Literary Criticism (provided it is not offered under (*i*) above). The scope of the paper is indicated by the following books. Questions will be set on some or all of the books, but will not be restricted to them :—

> Aristotle, *Poetics ;* Horace, *Ars Poetica ;* Longinus, *On the Sublime ;* Sidney, *Apologie for Poetrie ;* Dryden, *Essays* (ed. W. P. Ker, 2 vols.) ; Boileau, *L'Art Poétique ;* Pope, *Essay on Criticism ;* Burke, *Essay on the Sublime and Beautiful ;* Johnson, *Lives of the Poets* (Cowley, Milton, Dryden, Pope, Gray) ; Lessing, *Laocoon ;* Wordsworth, *Prefaces and Supplementary Essays ;* Coleridge, *Biographia Literaria ;* Arnold, *Essays in Criticism* (First and Second Series) and Preface to *Poems*, 1853 ; Pater, *Appreciations* and *The Renaissance ;* Sainte-Beuve, "*Qu'est-ce que c'est qu'un Classique*," and *Taine ;* T. S. Eliot, *Selected Essays*.

Candidates may read in translation such of these books as are not in English.

Questions will be included on critical method as well as on principles. Candidates should be prepared to show how creative writing at different periods was influenced by current critical theory.

(iii) The Development of the Drama and Theatre in Europe and America from 1850 to the present day. (*a*) The most important general movements ; (*b*) the work of some particular playwright or playwrights to be prescribed from year to year.

(iv) *In* **1951**. English and American Literature from 1880 to the present day. (*a*) The most important developments in poetry and prose, including the literary drama ; (*b*) prescribed authors.

In and after **1952**. English Literature from 1880 to the present day. (*a*) The most important developments in poetry and prose, including the literary drama ; (*b*) prescribed authors. The paper will include questions upon some or all of the following authors, but questions will not be restricted to these authors :—

> Thomas Hardy, Henry James, Joseph Conrad, Oscar Wilde, W. B. Yeats, G. Bernard Shaw, E. M. Forster, D. H. Lawrence, Virginia Woolf, T. S. Eliot.

(v) American Literature. (*For Examinations in and after* **1952**.) A survey of American literature from 1776 to the present day, with special study of certain prescribed authors.

(vi) Phonetics. The examination will consist of a paper on phonetic theory and its place in general linguistics (3 hours), an English phonetic dictation (½ hour) and an oral test (¼ hour for each candidate). The theory required includes the mechanism of utterance, the analysis of English and important non-English speech sounds, the use of sounds in connected speech, processes of sound change, practical applications of Phonetics. The relation of phonetics to phonology and general linguistics, with special reference to the comparative method as applied to the Germanic languages. The paper will also contain a passage of English to be transcribed phonetically. In the phonetic dictation test the candidates will be required to transcribe phonetically the pronunciation of the examiner. In the oral test the candidate may be required to read aloud an unseen passage of English phonetic transcription and will be required to answer questions on elementary phonetic theory and its practical applications.

[The following books are recommended for reference, but not prescribed :—F. de Saussure : *Cours de Linguistique Générale ;* A. Meillet : *La Méthode Comparative en Linguistique Historique*]

(vii) Old English in relation to Gothic and other Germanic Languages. Candidates will be expected to show a knowledge of Old English and Gothic, and at least one of the following :—Old Norse, Old Frisian, Old Saxon, Old High German. The paper will include a compulsory section consisting of passages from the prescribed texts for comment, and in addition translation and comment from the prescribed Gothic texts. There will be general questions covering the principal Germanic sound changes, changes at work in the grammatical system (excluding the detailed history of inflexional endings), word formation, changes of meaning, and loan words.

(viii) Old Icelandic with prescribed texts, provided it is not offered under (*j*) above. The subject will include the cultural and literary, as well as the linguistic features of the texts studied.

(ix) Old Saxon and Old High German, with prescribed texts. This subject will include the cultural and literary, as well as the linguistic features of the texts studied.

(x) The Classical Background to English Literature : (*a*) *Two* of the more important classical forms in their relation to English Literature, as prescribed from year to year ; (*b*) Prescribed texts, of which set portions must be read in the original Latin *or* Greek.

(xi) Anglo-Saxon Archæology. This will comprise a study of the main archæological problems of the Anglo-Saxon settlement, the evolution of Anglo-Saxon art, and the study of archæological remains bearing upon Anglo-Saxon literature. The following scheme indicates the ground to be covered, but candidates may emphasize one or other of the two main sections of the subject of their study :—

Pre-Christian Period.—General characteristics of metal ornaments, weapons and pottery of the period ; cemeteries and funeral practices, dwelling sites. Continental and Scandinavian connections (general outlines only) ; imported objects. Literary evidences. Evidences of Place-names. The Roman heritage : towns, villages, roads, agriculture, horticulture, ornaments, etc. Problems of the Invasion and subsequent settlements.

Christian Period.—Early period, from the Conversion to Christianity to the end of Alfred the Great. Surviving monuments and art objects : architecture (ecclesiastic), sculpture (stone), painting (MSS), metal-work, ornaments and weapons ; coins ; ivory. Runic inscriptions. (Only a general knowledge and some acquaintance with the outstanding examples will be expected.) Late Period, from Alfred the Great to the Norman Conquest. General characteristics of civilisation ; towns (especially London), villages, houses, ecclesiastical sites, monastic life, agriculture, trade, ships, fortifications.

[The following books are recommended for reference, but not prescribed :—G. Baldwin Brown : *The Arts in Early England ;* E. T. Leeds : *Archæology of the Anglo-Saxon Settlements ;* E. T. Leeds : *Anglo-Saxon Art and Archæology ;* The Ordnance Survey map of Britain the Dark Ages ; R. G. Collingwood and J. N. L. Myres : *The Oxford History of England,* vol. I ; N. Åberg : *Anglo-Saxons in England ;* R. E. M. Wheeler : *London and the Saxons ;* H. Shetelig and H. Falk (trans. E. V. Gordon) : *Scandinavian Archæology ;* A. W. Clapham : *Early Romanesque Architecture ;* W. G. Collingwood : *Northumbrian Crosses ;* J. Brønsted : *Early English Ornament ;* R. H. Hodgkin : *History of the Anglo-Saxons ; British Museum Guides to Anglo-Saxon Antiquities ;* Publications of the Place-name Society, especially Vol. I.]

French

(*a*) (i) History of the French language to the present day, including Vulgar Latin, Historical Phonetics, Morphology, Syntax, Vocabulary and Semantics. Candidates should have some knowledge of the whole field and of the main principles of General Linguistics, but will not be required to show a specialised knowledge of all branches of the subject. Those who choose questions on Historical Phonetics are recommended to make use of a recognised system of phonetic symbols. Candidates will have an opportunity of showing a linguistic knowledge of the prescribed texts of the mediæval and Renaissance periods. Three questions must be answered from this part of the paper.

(ii) Unseen translation from Old French into English.

(*b*) Mediæval and Renaissance Literature, with prescribed texts before 1600.

(*c*) Modern Literature from 1600.

(*d*) Special subject in Modern French Literature with prescribed books.

(*e*) *Either* (i) Commentary on unseen texts (alternative passages from Old, Middle and Modern French will be set, and the commentary may be literary or philological at the choice of the candidate) or (ii) Special subject in Mediæval Literature, with prescribed books, or (iii) Special subject in Renaissance Literature, with prescribed books.

(*f*) Translation from French into English.

(*g*) Translation from English into French.

(*h*) Essay in French.

(*i*) An oral examination which shall test scholarship as well as command of the spoken language.

(*j*) Subsidiary subject (*see* pp. 351–53).

Geography

REVISED REGULATIONS FOR B.A. HONOURS IN GEOGRAPHY

The course of study will normally extend over not less than three years.

The Examination in Geography will consist of nine papers, as follows :—

1. Physical Basis of Geography.
2. Elements of Cartography and Map Interpretation.
3. Elements of Comparative Regional Geography.
4. The British Isles.
5. Advanced Regional Geography (two papers).
6. Problems of Modern Geography, and
7. *One* optional subject (two papers), chosen from the following :—
   - (i) Mathematical Geography and Surveying ;
   - (ii) Geomorphology ;
   - (iii) Meteorology and Climatology ;
   - (iv) Plant Geography ;
   - (v) Economic Geography ;
   - (vi) Historical Geography ;
   - (vii) History of Geographical Ideas and Discovery ;
   - (viii) Political Geography.

Satisfactory evidence must be given of adequate instruction having been received in the field.

In addition, a subsidiary subject must be taken (*see* below).

Subsidiary Subjects

Candidates, other than those who have obtained the B.A., B.Sc., or B.Sc. (Econ.) Degree as Internal or External Students, will be required also to present themselves for examination in one of the subsidiary subjects set forth below, in accordance with the Regulations with regard to Subsidiary Subjects on pp. 351–53 as far as applicable and subject to the exceptions noted below :—

Anthropology.	Pure Mathematics.
Economics.	Applied Mathematics.
English.	Military Studies.
French.	Pre-history of Western Europe.
Geology.	Russian.
German.	Sociology.
History.	Spanish.
Italian.	Statistics.

In special circumstances other subjects may be approved by the University.

The examination in Pre-history of Western Europe will consist of the two papers and the practical examination of the B.A. (General) examination in that subject.

The examination in Statistics will consist of the two papers and the practical examination of the B.Sc. (General) Examination in Statistics.

The examination in Anthropology, Pure Mathematics, Applied Mathematics, and Military Studies will consist of the three papers of the B.A. (General) Examination in the relevant subject.

The examination in Geology will consist of the two papers and the practical examination of the B.Sc. (General) Examination in that subject.

The examination in Economics will consist of two papers on the syllabus set out on p. 352 above.

The examination in French, Italian and Spanish will consist of Paper I and *either* Paper 2 *or* Paper 3 at the B.A. (General) Examination in the relevant language, together with an oral examination.

The examination in German will consist of the B.A. (General) Examination in German with the omission of two of the Set Books, together with an oral examination.

The examination in History will consist of two of the papers (*a*—*l*) at the B.A. (General) Examination in History, of which one must be a paper chosen from the papers (*a*–*f*).

The examination in Russian will consist of paper (1) and one of the papers (*a*), (*b*), (*c*) and (*d*) under the heading Papers 2 and 3 of the syllabus for the B.A. (General) Examination in Russian, together with an oral examination.

The examination in Sociology will consist of two of the following four papers of the B.A. Honours Examination in Sociology (*see* p. 411) provided that Social Institutions II is taken only in conjunction with Social Institutions I :—

1. Social Institutions—I.
2. Social Institutions—II.
5. Social Psychology (*i.e.*, Psychology with especial reference to the psychological basis of social relations and the effect of social interactions).

C. 2. Contemporary Social Conditions in Modern England.

The Syllabuses are as follows :—

1. *Physical Basis of Geography*

Outline survey of the physical geography of Land, Air and Ocean and of major biological distributions as constituents of the human environment.

(i) *The Land.* Nature and effects of tectonic and erosional processes in the evolution of landscape. Water supply, soils and metallogenesis (nature and emplacement of ore bodies).

(ii) *The Air.* Elementary descriptive and synoptic meteorology. Data and methods of climatology, and the elements of micro-climatology.

(iii) *The Ocean.* The history of oceanographic discovery. Salinity, temperature, density and structure of water masses. The circulation of the oceans. The oceanography of enclosed seas. The tides.

(iv) *Biogeography.* Vegetation. Principles of transpiration, respiration, growth and reproduction. Food requirements. Photosynthesis and the nitrogen cycle. Fertility under conditions of cropping and grazing. Principles of plant succession and classification of plant communities. Certain aspects of animal ecology ; marine life and fisheries. Insects and insect-borne diseases.

Knowledge of (*a*) such general Geology as is relevant to the study of Geography, and (*b*) maps appropriate to this syllabus, will be regarded as an integral part of the work in this subject. The examination may include questions involving map interpretation.

2. *Elements of Cartography and Map Interpretation*

A. (i) The cartographic characteristics of the major topographical and other survey maps of Europe and North America.

(ii) The broad outlines of the history of map-making, with special reference to the development of Ordnance Survey maps.

(iii) Cartographic and diagrammatic methods of expressing data relating to weather, climate, economic and population conditions. Candidates will be expected to be familiar with : *a.* The more important sources of statistical information ; *b.* The use and general significance of simple statistical methods ; *c.* The technique of drawing maps and diagrams ; *d.* The interpretation of (including measurements from) such maps and diagrams.

B. (i) General principles of topographic survey, including the use of instruments in the field.

(ii) The principles and properties of the following map projections : Zenithal (gnomonic, stereographic, orthographic, equal area, equidistant). Simple conical with one and two standard parallels. Bonne, Polyconic, International ; Sinusoidal, Mollweide, Cassini and Mercator. Candidates will be expected to construct these projections by simple graphical methods where possible, or from simple tables.

N.B.—The necessary knowledge of very elementary plane trigonometry is assumed.

C. Map Interpretation.

3. *Elements of Comparative Regional Geography*

(i) Elements of human geography. Consideration of the facts and concepts of the geography of society ; types of settlements, population densities, economy and political organisation.

(ii) The forms and inter-relations between the main land and water masses of the Earth in their bearing upon world relations in human geography and the geographical orientation of regions.

(iii) A reasoned and critical comparative study of the nature and diversity of human settlement and economy in regions generally homologous in climate and physiography.

The ground covered in this syllabus is intended to constitute a general survey of the principles of human geography, pursued throughout by reference to specific regional examples.

4. *The British Isles*

(i) The present conditions, the inter-relations and the evolution of the various physical, biological and human elements in the geography of the British Isles. A study of regions, including an evaluation of the relative importance of their component elements.

(ii) Historical geography ; the study of the past as an aid to the interpretation of the present with special reference to distributions of human significance.

(iii) Candidates will be expected to use and interpret the published maps of the Ordnance Survey, Geological Survey and Land Utilisation Survey, and to show a more detailed knowledge of areas which they have studied in the field.

5. *Advanced Regional Geography*

The two papers under this heading will include special reference to the British Isles and Western and Central Europe and another approved Region (*e.g.*, North America *or* Monsoon Asia).

6. *Problems of Modern Geography*

The scope and method of modern Geography.

The critical appreciation of the place of the chief types of region, physical and cultural, in human geography.

Topics concerned with the subject-matter of the syllabus as a whole, excluding only the specialist aspects of the Optional Subjects.

7 (i). *Mathematical Geography and Surveying*

The principal methods of Topographical Surveying : Air Survey ; Elements of Field Astronomy. The principles of Geodesy. An advanced study of Map Projections including those studied in Section 2 of the syllabus, above.

An elementary knowledge of plane and spherical trigonometry will be assumed.

7 (ii). *Geomorphology*

i. The Earth, its nature, constitution and physical condition. Continents and ocean basins, their nature, significance and the theories of their origin. Mountain-building : Theories of orogenesis and of the related fields of tectonic geology and geo-physics. Vulcanicity.

ii. A critical study of the processes and results of land sculpture and the contributions of rock character thereto, under different climatic conditions. The concept of the cycle of erosion in its various applications. Drainage development and the principles employed in reconstructing the physical history or denudation chronology of a landscape.

7 (iii). *Meteorology and Climatology*

The more advanced study of the subject-matter of the relevant sections of the syllabus in " Physical Basis of Geography " with particular reference to the following :—

i. The construction and use of the chief meteorological instruments. The physical processes of the atmosphere. Radiation and heat-balance. Condensation and precipitation. Stability and instability.

ii. The origin, characteristics and transformations of air masses, considered in relation to the general circulation of the atmosphere and to weather forecasting.

iii. The application of the general principles of elementary physical, dynamical and synoptic meteorology to the study and classification of climates.

iv. The evidence for climatic changes during geological and historical times and the theories of causation of such changes.

7 (iv). *Plant Geography*

i. A systematic study of characteristic economic plants (in the widest sense) and of their biological attributes, including factors in distribution.

ii. Plant ecology with special reference to the operation of habitat factors.

iii. Distribution of vegetation in Britain and the factors controlling it.

iv. General regional plant geography.

A knowledge of Botany to Intermediate or Higher School standard is assumed. Section ii will involve work in the field.

7 (v). *Economic Geography*

The geography of production in a modern economy, with particular reference to the selection and utilisation in production of the physical conditions in the light of the economic conditions. Geographical application of distinctive economic principles such as equi-marginal utility and comparative cost ; evaluation of geographical margins of production.

i. Geography of primary production—Agriculture, Forestry, Mining, Fisheries.

ii. Geography of Manufacturing Industry.

iii. Geography of Trade and Transport.

A knowledge of Economics to Intermediate or Higher School standard will be assumed.

7 (vi). *Historical Geography*

i. A general study of the inter-relation between man and his physical environment in historical time, to be illustrated by specific instances.

ii. A more detailed study of the historical geography as thus defined of the first and one other of the following regions :—

The British Isles.
The Mediterranean Region.
Western and Central Europe.
North America.
Latin America.

7 (vii). *History of Geographical Ideas and Discovery*

Candidates will be required to show an outline knowledge of the subject and will be examined also in a special study of the geographical ideas and discoveries of *one* of the following periods :—

i. Ancient times to A.D. 500.
ii. Mediæval times up to the early 15th century.
iii. The 15th and 16th centuries.
iv. The 17th and 18th centuries.
v. The 19th century.

Candidates will be expected to show some first-hand acquaintance with original sources of their chosen period.

7 (viii). *Political Geography*

I. A general study of the inter-relations of the geography (physical and human) and the State since the early nineteenth century.

II. Specialised study from the politico-geographical standpoint of *two* of the following subjects, one chosen from Section A, the other from Section B.

A. Specific aspects
(i) Imperial expansion—in relation to particular examples.
(ii) Frontiers and boundaries.
(iii) Internal administrative divisions.
(iv) Strategic geography.
(v) Demographic geography (including migration and population trends).
(vi) The changing political map of Europe since 1815.

B. Specific areas
(i) The Far East.
(ii) The U.S.S.R.
(iii) The Muhammadan World.
(iv) The Americas.
(v) Western Europe.
(vi) Central Europe.
(vii) Eastern Europe.
(viii) The Mediterranean Lands.
(ix) The Pacific Basin.

In respect of the chosen sections of A and B above, candidates will be expected to show an adequate knowledge of the relevant political and economic history.

German

[*For Examination in* **1951**]

Candidates may offer either Syllabus I or Syllabus II below.

Syllabus I

(*a*) Prescribed Old High German and either Old Saxon or Gothic texts, together with literature of the same period.

(*b*) Historical Grammar, with special reference to the position of German in the Germanic group of languages and to the development of modern German. Candidates will be required to answer questions on phonology. They will also be expected to have a knowledge of some other aspects of the historical development of the language, *e.g.*, morphology, syntax, vocabulary, phonetics. Some knowledge of Gothic will be expected. (Students are recommended to use Priebsch and Collinson : *The German Language*, Faber & Faber.)

(*c*) Prescribed and unprescribed Middle High German texts, and Middle High German Literature.

(*d*) Modern Literature from 1500.

(*e*) Prescribed Modern texts.

(*f*) Translation from and into German.

(*g*) Essay in German.

(*h*) An oral examination which shall test scholarship as well as command of the spoken language.

(*i*) Subsidiary subject (*see* pp. 351–53).

Syllabus II

(*a*) *Either* (i) The History of Germany from 919 to 1273, with special reference to the period 1150–1254,

or (ii) The History of Germany from 1740 to 1914.

(*b*) *Either* (i) Introduction to Modern German Philosophy.

The beginning of modern philosophy in Bacon, Descartes, and Spinoza : Substance and Cause, Attribute and Mode. Spinoza on *conatus :* his relation to Leibniz.

Leibniz : his criticism of Descartes' physics ; substance and the monad ; activity and passivity ; the world of phenomena ; pre-established harmony. His logical investigations ; principles of sufficient reason, and of continuity ; eternal and contingent truths. Perfection and infinity ; the possible and the compossible ; liberty and theodicy.

Kant : Criticism, dogmatism and scepticism ; the critical method ; the *Critique of Pure Reason* : its problem and answer ; its theory of knowledge ; application to mathematics, natural science, and metaphysics ; the forms of intuition and the categories of the understanding ; the " transcendental unity of apperception " ; " things-in-themselves " ; the " antinomies " and " ideas of reason." Relation to the other *Critiques ;* his moral philosophy.

Some account of the philosophies and relations of Fichte, Schelling, and Hegel to one another and to their precursors.

or (ii) Special Period of Literature (*see* set book Appendix).

(*c*) Prescribed and unprescribed Middle High German texts, and Middle High German Literature.

(*d*) Modern Literature from 1500.

(*e*) Prescribed Modern texts.

(*f*) Translation from and into German.

(*g*) Essay in German.

(*h*) An oral examination which shall test scholarship as well as command of the spoken language.

(*i*) Subsidiary subject (*see* pp. 351–53).

German

[*For Examinations in and after* **1952**]

All candidates will be required to take the sections (*a*) to (*h*) listed below :—

(*a*) The development of the German language, and prescribed Old High German texts.

(All students will be required to be familiar with :—

(i) The position of German in the Germanic languages.

(ii) The main distinguishing features of High and Low German.

(iii) The language at the Old High German stage, taking for this, East Franconian as a basis.

(iv) The development of Old High German into Middle High German illustrated by the usage of mediæval authors.

(v) The rise and development of Modern Standard German, illustrated by the usage of authors from the 16th century to modern times, and covering in broad outline not only phonological and morphological aspects, but also syntactical usage.)

(*b*) Prescribed and unprescribed Middle High German texts, and mediæval literature.

(In relation to the texts, students will be required to make comments of literary, linguistic, cultural or metrical interest.)

(*c*) German literature from 1500 to the present day.

(*d*) Prescribed modern texts.

(*e*) Translation from and into German.

(*f*) Essay in German.

(*g*) An oral examination which shall test scholarship as well as command of the spoken language.

(*h*) Subsidiary subject (*see* pp. 351–53).

In addition to the above, every candidate must choose *one* of the following subjects for special study :—

(i) Germanic Philology. A detailed knowledge of Old High German and *one* of the following languages, Gothic, Old Saxon, Old Norse, will be required.

(ii) Selected literary monuments on *one* of the following :

(*a*) Old Saxon with Old High German,

(*b*) Old Norse,

(*c*) Middle Low German,

(*d*) Middle Dutch.

(iii) *One* of the following :—

(*a*) The German novel in the 17th century,

(*b*) Goethe,

(*c*) The Romantic Movement in German Literature (1795–1830),

(*d*) German Drama in the 19th century,

(*e*) German Lyric poetry since 1880.

(iv) Stylistic analysis and interpretation of texts, both prescribed and unprescribed.

(v) *One* of the following periods of German History :—

(*a*) The Hohenstaufen period, 1150–1254.

(*b*) The Revolutionary and Napoleonic Age.

(vi) The Philosophy of Kant.

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*This option is open only to students taking History as a subsidiary subject.

†This option is open only to candidates taking History of Philosophy as a subsidiary subject.

Greek

[*For Examination in* **1951** *only*]

Ten papers of three hours each, as follows :—

1. Translation into Greek prose.

2–3. Unseen translation from Greek (2 papers).

4. Prescribed texts : One of the sections in Groups A or B, selected by the candidate from the prescribed list.

5 and 6*a*. (As for Classics, papers 8 and 9*a*, page 364.)

6*b*. *Or* a second section, selected by the candidate from the prescribed list. A candidate who thus offers two sections must select one from Group A and one from Group B.

[Candidates who have obtained the B.A. Honours Degree in Latin will not be required to take paper 6*a* or 6*b*.]

7. A special subject to be selected from the following list :—

(*a*) Translation into Greek verse.
(*b*) Translation into Latin verse.
(*c*) The Comparative Philology of the Greek and Latin Languages, (as for Classics, paper 10 (*c*), p. 364).
(*d*) History of Greek Drama, with a knowledge of Aristotle's *Poetics*.
(*e*) Satire in Latin Prose and Poetry.
(*f*) History of Greek Philosophy to Aristotle (inclusive).
(*g*) Stoicism and Epicureanism in Roman Life and Thought.
(*h*) A Greek Historical subject.
(*i*) A Roman Historical subject.
(*j*) Greek sculpture, pottery and vase painting from 800 to 350 B.C.
(*k*) Civilisation in Greece from 2000 to 600 B.C.—the archæological material.

Note.—If a candidate so desire, he may offer (*a*) *or* (*b*) or both (*a*) *and* (*b*) as additional special subjects.

8. General Ancient History (as for Classics, paper 11, pp. 364–65 above).

[Candidates who have obtained the B.A. Honours Degree in Latin are not required to take this paper, but may, if they wish, take a second special subject.]

Candidates who have not obtained the B.A. Honours Degree in Latin are further required to take :—

9. Translation into Latin prose and questions on Latin grammar.

10. Unseen translation from Latin. Questions arising out of the subject-matter of the passages set may be asked.

The standard of the two papers in Latin will not be so high as that for the B.A. Honours Examination. A pass in these two papers is essential.

[*Note*.—Candidates who under these Regulations are entitled to exemptions on the ground of having previously obtained the B.A. Honours Degree in Latin may either avail themselves of the whole of such exemptions or take the whole of the Examination prescribed in the case of candidates who have not obtained the B.A. Honours Degree in Latin. Candidates who avail themselves of the exemptions to which they are entitled are informed that the Class to be assigned to them at the Honours Examinations in Greek will be determined solely by the work actually presented at that Examination]

Note.—The texts used by the Examiners in setting examination-papers will be the Oxford Classical Texts (published by the Clarendon Press), unless some other text is specified.

Greek

[*For Examinations in and after* **1952**]

[*Note.*—All candidates will be required to have satisfied the examiners, not later than the November preceding the date of their Final Examination, in the following papers of the Intermediate Examination in Arts :—

Ancient History Paper (2) Greek History from 776 B.C. to 146 B.C. and Paper (3) Roman History from 753 B.C. to A.D. 337.]

The Final Examination will consist of ten papers of three hours each, as follows :—

1. Translation into Greek prose.

2–3. Unseen translation from Greek (2 papers).

4–5. Prescribed texts. One of the sections under Group A and one section under Group B, selected by the candidate from the prescribed list.

Candidates will be required to translate, to write an essay, to explain points of grammar, subject matter and allusions ; and to comment on points of textual criticism, in so far as they are of importance to the interpretation.

Candidates who have obtained the B.A. Honours Degree in Latin will not be required to take Paper 5.

6. Grammar and Literature, consisting of : (1) passages for grammatical comment, and general questions on grammar and metre ; (2) questions on Greek and Latin Literature. There will be one compulsory question, giving a choice of passages for grammatical comment. Sufficient options will be given throughout the paper to afford opportunities to candidates who specialise on the Greek or the Latin side.

7. A Special Subject to be selected from the following list :—

(*a*) Translation into Greek verse.

(*b*) Translation into Latin verse.

(*c*) The Comparative Philology of the Greek and Latin Languages. [As for Classics, paper 10 (*c*), p. 365.]

(*d*) History of Greek Drama, with a knowledge of Aristotle's *Poetics*.

(*e*) Satire in Latin Prose and Poetry.

(*f*) History of Greek Philosophy to Aristotle (inclusive).

(*g*) Stoicism and Epicureanism in Roman Life and Thought.

(*h*) A Greek historical subject.

(*i*) A Roman historical subject.

(*j*) Greek sculpture, pottery and vase painting from 800 to 350 B.C.

(*k*) Civilization in Greece from 2000 to 600 B.C.—the archæological material.

[*Note.*—If a candidate so desire, he may offer (*a*) *or* (*b*) or both (*a*) *and* (*b*) as additional special subjects.]

Candidates who have obtained the B.A. Honours Degree in Latin will not be required to offer paper 7.

8. *Either* A paper in two sections (1) Greek and Roman Religion and (2) Greek and Roman Political Ideas.

Candidates will be required to show knowledge of both Sections, but opportunity will be given them to display a special interest in either Section.

The following reading list is intended to indicate the scope of the paper ; the books are not prescribed :—

[Reading list will be announced later.]

Candidates who have passed in this paper at a previous Honours examination will not be permitted to offer it again ;

or A second Special Subject to be selected from the list given above under 7.

Candidates will not be permitted to offer a Special Subject taken in a previous Honours examination.

Candidates who have not obtained the B.A. Honours Degree in Latin are further required to take :—

9. Translation into Latin prose and questions on Latin grammar.

10. Unseen translation from Latin. Questions may be asked arising out of the subject-matter of the passages set.

The standard of the two papers in Latin will not be so high as that for the B.A. Honours Examination. A pass in these two papers is essential.

[*Note.*—Candidates who under these Regulations are entitled to exemptions on the ground of having previously obtained the B.A. Honours Degree in Latin may either avail themselves of the whole of such exemptions or take the whole of the Examination prescribed in the case of candidates who have not obtained the B.A. Honours Degree in Latin. Candidates who avail themselves of the exemptions to which they are entitled are informed that the Class to be assigned to them at the Honours Examinations in Greek will be determined solely by the work actually presented at the Examination.]

Gujarati

Syllabus as for Bengali, p. 362 above, except that papers 4 and 10 will be :—

4. Translation into Gujarati prose.

10. Subsidiary subject—Sanskrit.

Hebrew

Candidates will be required to take one of the following Sections, in each of which there will be an oral examination which shall be a general test of the candidate's knowledge of his subject.

I. Hebrew with Aramaic (including Syriac)

(1) Selections from unspecified books of the Old Testament for translation and comment.

(2) Selections from specified books of the Old Testament for translation and comment, with special regard to the Greek version.

(3) Selections from both specified and unspecified post-Biblical works for translation and comment.

(4) Hebrew composition.

(5) Hebrew Grammar, Syntax and Pointing.

(6) Selections from unspecified Aramaic and Syriac texts for translation and comment, and Syriac composition.

(7) Selections from specified Syriac texts for translation and comment.

(8) Selections from specified texts of Biblical Aramaic and Targum for translation and comment.

(9) Comparative Grammar and North Semitic Epigraphy.

(10) Hebrew, Syriac and Aramaic Literary History, including introduction to the Books of the Old Testament, Text and Ancient Versions, and an outline of a literary period or periods to be fixed and announced previously in the Regulations.

(11) An additional optional paper on (*a*) elementary Arabic, consisting of passages from selected easy prose text, vocalised and unvocalised, together with questions on accidence, *or* (*b*) Palestinian Archæology to 300 B.C., *or* (*c*) The Archæology of Syria, *or* (*d*) The Archæology of Mesopotamia.

[A special note will be placed against the names of successful candidates who have satisfied the Examiners in the optional paper]

Note.—The candidate is recommended to make use of the following works :—

Gesenius Kautzsch : *Hebrew Grammar* (translation by Cowley).

Dalman : *Grammatik des Jüdisch-Palästinischen Aramäisch.*

Nöldeke : *Die Semitischen Sprachen.*

Nöldeke : *Kurzgefasste Syrische Grammatik.*

Driver : *Notes on the Hebrew text of the Books of Samuel with an Introduction, etc.*

Driver : *A treatise on the Hebrew Tenses.*

Strack : *Grammatik des Biblisch-Aramäisch.*

Strack-Siegfried : *Die neuhebräische Sprache.*

Wright : *Lectures on the Comparative Grammar of the Semitic Languages.*

Wright : *A Short History of Syriac Literature.*

R. Duval : *La Littérature syriaque* (Vol. 11 of Anciennes littératures chrétiennes).

II. Hebrew (Ancient and Mediæval) with Aramaic

(1) Selections from unspecified books of the Old Testament for translation and comment.

(2) Selections from specified books of the Old Testament for translation and comment.

(3) Selections from both specified and unspecified post-Biblical works for translation and comment.

(4) Hebrew Composition.

(5) Hebrew Grammar, Syntax and Pointing.

(6) Selections from specified Mediæval Hebrew texts for translation and comment.

(7) Selections from unspecified Mediæval Hebrew texts for translation and comment.

(8) Selections from specified texts of Biblical Aramaic and Targum for translation and comment.

(9) Comparative Grammar and North Semitic Epigraphy.

(10) Hebrew and Aramaic Literary History, including introduction to the books of the Old Testament Texts and Ancient Versions, and questions on Mediæval Hebrew Literature to A.D. 1500.

(11) An additional optional paper on (*a*) Palestinian Archæology to 300 B.C., *or* (*b*) The Archæology of Syria, *or* (*c*) The Archæology of Mesopotamia.

[A special note will be placed against the names of the successful candidates who have satisfied the Examiners in the optional paper]

III. Hebrew with Arabic

(1) Selections from unspecified books of the Old Testament for translation and comment.
(2) Selections from specified books of the Old Testament for translation and comment.
(3) Hebrew Composition.
(4) Hebrew Grammar, Syntax and Pointing.
(5) Comparative Grammar.
(6–7) Translation from specified Arabic books.
(8) Translation from unspecified Arabic books.
(9) Translation into Arabic.
(10) Arabic Grammar (including Arabic technical terms).
(11) An additional optional paper on (*a*) Palestinian Archæology to 300 B.C., *or* (*b*) The Archæology of Syria, *or* (*c*) The Archæology of Mesopotamia.

[A special note will be placed against the names of successful candidates who have satisfied the Examiners in the optional paper]

IV. Hebrew with Assyrian

(1) Selections from unspecified books of the Old Testament for translation and comment.
(2) Selections from specified books of the Old Testament for translation and comment.
(3) Hebrew Composition.
(4) Hebrew Grammar, Syntax and Pointing.
(5) Comparative Grammar.
(6) The Ancient History of the Near East to 330 B.C.
(7) The Religion of Mesopotamia.
(8) Translation from specified and unspecified Assyrian Texts.
(9) Assyrian Grammar.
(10) An additional optional paper on (*a*) Palestinian Archæology to 300 B.C., *or* (*b*) The Archæology of Syria, *or* (*c*) The Archæology of Mesopotamia.

[A special note will be placed against the names of successful candidates who have satisfied the Examiners in the optional paper]

Hindi

Syllabus as for Bengali, p. 362 above, except that papers 4 and 10 will be :—

4. Translation into Hindi prose.
10. Subsidiary subject—Sanskrit.

History

Candidates will be required to take one of the following Branches :—

BRANCH I.—ANCIENT AND MEDIÆVAL HISTORY

Either A :—

1. The History of the Near East down to 1200 B.C.*
2. The History of the Near East from 1200 to 336 B.C.*

*The History of the Near East is defined as including the civilisations of Egypt and Western Asia and the Minoan Mycenaean civilisations.

3. The History of the Greek and Roman World down to 336 B.C.
4. The History of the Greek and Roman World from 336 to 30 B.C.
5. The History of the Roman Empire from 30 B.C. to A.D. 641.
6. The History of Ancient Political Institutions and Ideas.‡
7. An Optional Subject selected from the list below (1 paper).
8 and 9. A Special Subject selected from the list below (2 papers).
10. One paper containing passages for translation into English from the following languages:—Greek, Latin, French, German. Candidates will be expected to attempt translation of passages from at least two languages. They will be permitted to bring dictionaries for use in the examination. Passages will also be set in Italian, Spanish and Ancient Egyptian if candidates when submitting their entry-forms notify the University of their intention to offer these languages. Permission may be granted to offer another language in place of one of the foregoing, provided that candidates apply for such permission not less than 6 months before the examination.

A candidate entering for this Branch will be expected to have a knowledge of 2 of the 3 following languages—Ancient Egyptian, Greek, and Latin. Such candidates will be tested in papers 1–9 and are not obliged to offer these languages in paper 10.

or B:—

1. The History of the Greek and Roman World down to 336 B.C.
2. The History of the Greek and Roman World from 336 to 30 B.C.
3. The History of the Roman Empire from 30 B.C. to A.D. 400.
4. Mediæval European History from 400 to 1200.
5. *Either* (*a*) Mediæval European History from 1200 to 1500,
   or (*b*) English History down to the middle of the 15th century.†
6. History of Political Ideas, Ancient and Mediæval.‡

Papers 7, 8, 9 and 10 as for Branch I, A.

Branch II.—Mediæval and Modern History

1. English History down to the middle of the 15th century.†
2. English History from the middle of the 15th century to 1760.†
3. English History from 1760 to the present day.†
4 and 5. Two of the following papers:—
   (*a*) Mediæval European History from 400 to 1200.
   (*b*) Mediæval European History from 1200 to 1500.
   (*c*) Modern European History from 1500 to the middle of the 18th century.
   (*d*) Modern European History from the middle of the 18th century to the present day.

† Candidates may select questions from any two or from all three sections of the paper which will be divided chronologically.

‡*See* footnote on p. 385.

6. *Either* (*a*) History of Political Ideas.‡
   or (*b*) Theory of the Modern State.
   or (*c*) Principles of Public International Law considered in its historical setting.
7. An Optional Subject selected from the list below (1 paper).
8 and 9. A Special Subject selected from the list below (2 papers).
10. One paper containing passages for translation into English from the following languages :—Greek, Latin, French, German. Candidates will be expected to attempt translation of passages from at least two languages. They will be permitted to bring dictionaries for use in the examination. Passages will also be set in Italian and Spanish if candidates when submitting their entry-forms notify the University of their intention to offer these languages Permission may be granted to offer another language in place of one of the foregoing, provided that candidates apply for such permission not less than 6 months before the examination.

BRANCH III.—ORIENTAL HISTORY WITH SPECIAL REFERENCE TO THE HISTORY OF INDIA

1. The History of India : Hindu and Muslim.†
2. The History of India from the middle of the eighteenth century.†
3. *Either* (*a*) English History from the middle of the 15th century to 1760.†
   or (*b*) English History from 1760 to the present day.†

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† *See* footnote on p. 384.

‡ The paper will be divided into two sections :—(i) Ancient and Mediæval ; (ii) Modern. Candidates in Branch I may confine their choice of questions to section (i). Candidates in Branch II must attempt questions selected from both sections. Candidates are recommended to read some of the following works or portions thereof :—

(i) Plato : *Republic ; The Laws.*
Aristotle : *Politics.*
Cicero : *De Legibus.*
St. Augustine : *City of God* (Temple Classics), Books V, XII, XIII, XV.
Aquinas : *Summa Theologica*, Translation by the English Fathers of the Dominican Order (Burns, Oates & Washbourne), (*a*) Treatise on Law, Part II [first part], Questions 90–97 and 105, (*b*) Treatise on the Vices and the Virtues, Part II [second part], Questions 57–61.
Dante : *De Monarchia.*
Marsiglio : *Defensor Pacis.*

(ii) Machiavelli : *The Prince.*
"Junius Brutus" : *Vindiciae contra Tyrannos* (*A defence of liberty against tyrants*, edited by Prof. H. J. Laski in "Classics of Social and Political Science," Bell).
Hobbes : *Leviathan*, Part I : of Man ; Part II : of Commonwealth.
Locke : *Second treatise of Civil Government ; A letter concerning Toleration.*
Rousseau : *The Social Contract ; Three Discourses.* (As in Everyman edition.)
Burke : *Reflections on the French Revolution ; Thoughts on the cause of the present discontents ; Speeches on Conciliation, on America, etc.*
Bentham : *Fragment on Government.*
Hegel : *The Philosophy of Right.*
Marx and Engels : *The Communist Manifesto.*
J. S. Mill : *On Liberty ; Representative Government.*
T. H. Green : *Principles of Political Obligation.*

4. The History of European activities in Asia from 1500.†

5. *Either* (*a*) Modern European History from 1500 to the middle of the 18th century.

or (*b*) Modern European History from the middle of the 18th century to the present day.

6. *Either* (*a*) History of Political Ideas. The paper will be divided into three sections:—(i) Ancient and Mediæval; (ii) Modern; (iii) Indian and Islamic. Candidates must select questions from sections (ii) and (iii).

or (*b*) Theory of the Modern State.

or (*c*) Principles of Public International Law considered in its historical setting.

7. An Optional Subject selected from the list below (1 paper).

8 and 9. A Special Subject selected from the list below (2 papers).

10. Passages for translation into English from the following languages:—Greek, Latin, French, German. Passages will also be set in Italian, Spanish, Sanskrit, Persian, Urdu, Marathi, Sinhalese, Tamil and Pali if candidates when submitting their entry-forms notify the University of their intention to offer these languages. Candidates desiring to offer another language in place of one of the foregoing must apply for permission not less than six months before the date of the examination. Candidates may not offer both Tamil and Sinhalese and candidates offering either Tamil or Sinhalese must offer also either Sanskrit or Pali. Candidates offering a classical oriental language may substitute an English essay for their second language. Candidates will be expected to attempt the translation of passages from at least two languages. They will be permitted to bring dictionaries for use in the examination.

BRANCH IV.—ORIENTAL HISTORY WITH SPECIAL REFERENCE TO THE HISTORY OF THE NEAR AND MIDDLE EAST.

1. History of the Near and Middle East 395 to 1040.

2. History of the Near and Middle East since 1040.

3. The History of European activities in Asia since 1500.†

4 and 5. Two of the following papers:—

(*a*) Mediæval European History from 400 to 1200.

(*b*) Mediæval European History from 1200 to 1500.

(*c*) Modern European History from 1500 to the middle of the 18th century.

(*d*) Modern European History from the middle of the 18th century to the present day.

(*e*) The History of the Arabs in Europe.

6. *Either* (*a*) History of Political Ideas. The paper will be divided into three sections:—(i) Ancient and Mediæval; (ii) Modern; (iii) Indian and Islamic. Candidates must select questions from section (iii) and *either* section (i) *or* section (ii).

or (*b*) Theory of the Modern State.

or (*c*) Principles of Public International Law considered in its historical setting. (Questions on Islamic concepts of International Law will be included.)

† See footnote on page 384.

7. An Optional Subject selected from the list below (1 paper).

8 and 9. A Special Subject selected from the list below (2 papers).

10. Passages for translation into English from the following languages :—Greek, Latin, French, German. Passages will also be set in Italian, Spanish, Arabic, Persian, Turkish and Russian if candidates when submitting their entry-forms notify the University of their intention to offer these languages. Permission may be granted to offer another language in place of one of the foregoing, provided that candidates apply for such permission not less than 6 months before the examination. Candidates must attempt translation of passages from at least two languages, at least one of which is to be an oriental language. They will be permitted to bring dictionaries for use in the examination.

BRANCH V.—ORIENTAL HISTORY, WITH SPECIAL REFERENCE TO THE HISTORY OF THE FAR EAST AND SOUTH-EAST ASIA

1. & 2. Two papers on *either* Chinese History *or* Japanese History, *or* History of the Indo-Chinese Peninsula and Indonesia, viz.,

Either (*a*) The History of China to 1644 ; and
(*b*) The History of China from 1644.
or (*a*) The History of Japan to 1568 ; and
(*b*) The History of Japan from 1568.
or (*a*) The History of the Indo-Chinese Peninsula and Indonesia to the beginning of the 17th century ; and
(*b*) The History of the Indo-Chinese Peninsula and Indonesia from the beginning of the 17th century ;

3. The History of European activities in Asia from 1500.†

4. One of the following papers :—
(*a*) Modern European History from 1500 to the middle of the 18th century ;
(*b*) Modern European History from the middle of the 18th century to the present day.

5. *Either* (*a*) The History of China in outline ;
or (*b*) The History of Japan in outline.
or (*c*) Outlines of the History of the Indo-Chinese Peninsula and Indonesia ;
or (*d*) Outlines of Indian History.

Candidates choosing the first option for papers 1 and 2 may not offer (*a*) or (*d*) ; those choosing the second option for papers 1 and 2 may not offer (*b*) or (*d*) ; those choosing the third option for papers 1 and 2 may not offer (*c*).

6. *Either* (*a*) History of Political Ideas. The paper will be divided into four sections :—(i) Ancient and Mediæval ; (ii) Modern ; (iii) Indian and Islamic ; (iv) Chinese and Japanese. Candidates offering the History of China or the History of Japan for papers 1 and 2 must select questions from sections (ii) and (iv) ; those offering the History of the Indo-Chinese Peninsula and Indonesia for papers 1 and 2 must select questions from sections (ii) and *either* (iii) or (iv).

† See footnote on page 384.

or (*b*) Theory of the Modern State.

or (*c*) Principles of Public International Law, considered in its historical setting.

7. An Optional Subject selected from the list below (1 paper).

8. and 9. A Special Subject selected from the list below (2 papers).

10. Passages for translation into English from the following languages :—French, German. Passages will also be set in Chinese, Japanese, Mongol, Manchu, Portuguese, Dutch and Russian if candidates when submitting their entry-forms notify the University of their intention to offer these languages. Permission may be granted to offer another language in place of one of the foregoing, provided that candidates apply for such permission not less than six months before the examination. Candidates will be expected to attempt the translation of passages from at least two languages, of which it is desirable that one should be an oriental language. They will be permitted to bring dictionaries for use in the examination.

Branch VI.—East European History

1. The History of Eastern Europe, 400–1500 A.D.

2. The History of Russia from 1500 A.D. to the present.

3. The History of the Hapsburg Monarchy from 1500 to 1918 A.D.

4. and 5. Two of the following papers :—

(*a*) Mediæval European History from 400 to 1200.

(*b*) Mediæval European History from 1200 to 1500.

(*c*) Modern European History from 1500 to the middle of the 18th century.

(*d*) Modern European History from the middle of the 18th century to the present day.

6. *Either* (*a*) History of Political Ideas. The paper will be divided into two sections :—(i) Ancient and Mediæval ; (ii) Modern. Candidates must attempt questions selected from both sections.

or (*b*) Theory of the Modern State.

or (*c*) Principles of Public International Law, considered in its historical setting.

7. An Optional Subject selected from the list below (1 paper).

8. and 9. A special Subject selected from the list below (2 papers).

10. Translation from two languages, one from each of the following groups :—

(*a*) Classical Greek, Latin, French, German, Spanish, Italian.

(*b*) Bulgarian, Czech, Modern Greek, Hungarian, Polish. Roumanian, Russian, Serbo-Croat, Slovak, Slovene. Turkish.

Note.—Students taking papers 4 and 5 (*a*) and/or (*b*) may be permitted to offer German.

Candidates must specify six months before the Examination which languages they propose to offer.

European History shall include some reference to the History of European Colonies.

The Theory of the Modern State shall be defined as a study of the nature of the state and the grounds of political obligation considered in relation to the problems of government in the modern world.

The Special Subjects shall be selected by candidates from a list of such subjects to be prescribed from time to time. Part at least of one of the Special Subject papers will be devoted to historical evidence, and questions thereupon will be compulsory for all candidates. Candidates will be supplied in the examination room with the appropriate collection of prescribed documents.

Optional Subjects

(*a*) The General History of Ancient Egypt down to the close of the Saite Period.

(*b*) The Economic Life of the Greek City.

(*c*) The Administration of the Roman Empire from 241 B.C. to A.D. 337. (To be studied as far as possible in original documents.)

(*d*) Classical Art and Architecture.

(*e*) Italy and the Byzantine Empire from Justinian to the end of the 12th Century.

(*f*) The History of Northern India from *c.* 550 B.C. to A.D. 1000. (To be studied as far as possible in original documents.)

(*g*) Indian Political Institutions. [For candidates taking Branches III, IV and V only.]

(*h*) Islamic Art and Archæology.

(*i*) Islamic Institutions. [For candidates taking Branches III, IV and V only.]

(*j*) Ecclesiastical Institutions of the Middle Ages.

(*k*) English Constitutional History.

(*l*) English Economic History.

(*m*) The Civilisation of the Renaissance in Italy, 1400–1550.

(*n*) Dutch History, 1609–1815.

(*o*) British Colonial History.

(*p*) The History of Latin America since 1776.

(*q*) The History of the United States since 1783.

(*r*) Diplomatic Relations of the Great Powers since 1815.

(*s*) Islamic Law.

(*t*) The History of the Arabs in Europe. (Not for students taking Branch IV.)

(*u*) The ecclesiastical history of Central Europe, 1346–1648.

(*v*) The history of industry and commerce *either* in Russia and the U.S.S.R. since 1815, *or* in Central and S.E. Europe since 1815.

(*w*) The Constitutional History of France since 1715.

(*x*) The History of British Malaya and the Netherlands Indies from the end of the 16th century.

Options (*a*), (*b*), (*c*), (*d*), (*e*), (*j*), (*k*), (*r*) and (*w*) are to be studied as far as possible in original documents.

Special Subjects

[For Authorities and Prescribed Texts, *see* Appendix to these Regulations]

(1) A period in the History of Ancient Egypt.

The period and original authorities must be selected by the responsible teacher after consultation with the candidate, and submitted for approval to the University one year before the candidate enters for the Examination.

(2) Greek History, 500–433 B.C.

(3) Philip II and Alexander of Macedon, 356–323 B.C.

(4) Roman History, 133–70 B.C.

(5) The Principates of Augustus and Tiberius, 30 B.C.–A.D. 37.

(6) The History and Archæology of Roman Britain.

(7) The History and Archæology of Britain in the Anglo-Saxon Period from A.D. 400 to 735.

In and after **1952.** The Conversion and the Age of Bede (597–735 A.D.).

(8) The Byzantine Empire from the Accession of Basil II to the First Crusade with special reference to its relations with the Papacy and the Holy Roman Empire.

(9) England in the Reign of Henry II, 1154–1189.

(10) Florence and the Renaissance, 1464–1530.

(11) The Economic and Social History of Tudor England.

(12) The Diplomatic History of the War of the Spanish Succession, 1705–1714.

(13) The French Revolution, 1787–1795.

(14) The Emancipation of Latin-America, 1808–1826.

(15) The Reconstruction of Europe and the European Alliance, 1813–1822.

(16) The Eastern Question, 1856–1878. (For candidates taking Branch IV only.)

(17) Constitutional Development in British India, 1858–1917.

(18) The Growth of the British Commonwealth, 1880–1932, with special reference to the development of Dominion status and Imperial co-operation and the evolution of British colonial administration in the Tropical Dependencies.

(19) The Closing of the Frontier in the United States, 1885–1896.

(20) The Anglo-French Entente, 1898–1912.

(21) Ahmad ibn Tūlūn and his time (835–884).

(22) The Conciliar Movement, 1378–1450 A.D.

In and after **1952.** The Conciliar Movement (1378–1450 A.D.) with special reference to heresy.

(23) The Age of Peter the Great.

(24) The Age of the Guptas, *c.* A.D. 320 to *c.* A.D. 550.

(25) The English Pioneers in South-East Asia, 1587–1623.

Hungarian (Language and Literature)

(1) Translation from and into Hungarian.

(2) Essay in Hungarian.

(3) Outlines of the development of the Hungarian language.

(4) Hungarian literature.

(5) *One* of the following special periods of Hungarian literature :—

(*a*) Early Hungarian literature up to the end of the 16th century.

(*b*) Religious controversy and Baroque literature, 1594–1772.

(*c*) Period of National Renaissance (1772–1830).

(*d*) National Classicism (1830–1882).

(*e*) Modern Hungarian literature since 1882.

(6) Essay in English.

(7) *Either* (*a*) History of the Hungarian language with Phonetics and its relations to the other Finno-Ugrian languages, *or* (*b*) History of Hungarian literary criticism.

(8) Oral examination, partly conducted in Hungarian, which shall test scholarship as well as command of the spoken language.

(9) Subsidiary subject—German or other approved language (*see* pp. 351–53 as far as applicable).

Hungarian (Regional Studies)

[*For Examination in* **1951**]

(1) Translation and Composition.

(2) General history of Hungary.

(3) *One* of the following special periods of Hungarian history :—

(*a*) Mediæval Hungary to 1301.

(*b*) Hungary under foreign dynasties, 1301–1526.

(*c*) The Turkish Era, 1526–1686.

(*d*) Hungary from 1686–1849.

(*e*) The age of reform and the Dual System (1825–1914).

(4) Diplomatic History of the Habsburg Monarchy since 1526.

(5) General history of Europe since the French Revolution, with special reference to national movements. [*Note.*—Other periods of European history may be submitted for approval.]

(6) *Either* (*a*) General survey of Hungarian constitutional history, *or* (*b*) Hungarian literature.

(7) The economic development of Hungary and the Danube basin.

(8) Essay in English.

(9) An oral examination, partly conducted in Hungarian.

[*Note.*—A knowledge of the German language is essential for this course]

Italian

(*a*) History of the Language to the present day, with illustrative texts.

(*b*) Early Literature to the death of Dante, with prescribed texts, including a portion of the *Divina Commedia*.

(*c*) and (*d*) Modern Literature from the death of Dante, with prescribed texts.

(*e*) Special subject.

(*f*) Translation from Italian into English.

(*g*) Translation from English into Italian.

(*h*) Essay in Italian.

(*i*) An oral examination which shall test scholarship as well as command of the spoken language.

(*j*) Subsidiary subject (*see* pp. 351–53).

Japanese

Eight papers will be set.

1–4. Translation from specified texts with questions on their language and subject-matter.

5. Translation from unspecified texts.

6. Translation into Japanese (to be written in Japanese script).

7. *Either* Japanese Poetry *or* translation from specified Chinese texts.

8. A prescribed period of history and *either* literature *or* language.

Modern Japanese

1. Earlier literature.
2. Later literature.

} Passages from the prescribed texts for translation into English with short comments on points of language, literary forms, or subject-matter.

3. Translation from unspecified texts (literary prose or verse).

4. Translation from unspecified texts (factual or polemical prose).

5. Translation into Japanese.

6. Composition in Japanese.

7. Cultural and political history of Japan since 1854.

8. History of Japanese literature.

9. An oral examination conducted partly in the language and partly in English which shall test scholarship as well as command of the spoken language.

Latin

[*For Examination in* **1951** *only*]

Ten papers of three hours each, as follows :—

1. Translation into Latin prose.

2–3. Unseen translation from Latin (2 papers).

4. Prescribed texts : one of the Sections in Groups A or B, selected by the candidate from the prescribed list.

5. and 6*a*. (As for Classics, papers 8 and 9*a*, p. 364.)

6*b*. *Or* a second section, selected by the candidate from the prescribed list. A candidate who thus offers two sections must select one from Group A and one from Group B.

Candidates who have obtained the B.A. Honours Degree in Greek will not be required to take paper 6*a* or 6*b*.

7. A special subject to be selected from the following list :—

(*a*) Translation into Greek verse.

(*b*) Translation into Latin verse.

(*c*) The Comparative Philology of the Greek and Latin Languages. [As for Classics, paper 10 (*c*), p. 364.]

(*d*) History of Greek Drama, with a knowledge of Aristotle's *Poetics*.

(*e*) Satire in Latin Prose and Poetry.

(*f*) History of Greek Philosophy to Aristotle (inclusive).

(*g*) Stoicism and Epicureanism in Roman Life and Thought.

(*h*) A Greek Historical subject.

(*i*) A Roman Historical subject.

(*j*) Greek sculpture, pottery and vase painting from 800 to 350 B.C.

(*k*) History and Archæology of Roman Britain.

(*l*) Civilization in Greece from 2000 to 600 B.C.—the archæologica material.

Note.—If a candidate so desire, he may offer (*a*) *or* (*b*) or both (*a*) *and* (*b*) as additional special subjects.

8. General Ancient History (as for Classics, paper 11, pp. 364–65 above). Candidates who have obtained the B.A. Honours Degree in Greek are not required to take this paper, but may, if they wish, take a second special subject.

Candidates who have not obtained the B.A. Honours Degree in Greek are further required to take :—

9. Translation into Greek prose and questions on Greek grammar.

10. Unseen translation from Greek. Questions arising out of the subject-matter of the passages set may be asked.

The standard of the two papers in Greek will not be so high as that for the B.A. Honours Examination. A pass in these two papers is essential.

[*Note.*—Candidates who under these Regulations are entitled to exemptions on the ground of having previously obtained the B.A. Honours Degree in Greek may either avail themselves of the whole of such exemptions or take the whole of the Examination prescribed in the case of candidates who have not obtained the B.A. Honours Degree in Greek. Candidates who avail themselves of the exemptions to which they are entitled are informed that the Class to be assigned to them at the Honours Examinations in Latin will be determined solely by the work actually presented at that Examination.]

Note.—The texts used by the Examiners in setting examination-papers will be the Oxford Classical Texts (published by the Clarendon Press), unless some other text is specified.

Latin

[*For Examinations in and after* **1952**]

[*Note.*—All candidates will be required to have satisfied the examiners, not later than the November preceding the date of their Final Examination, in the following papers of the Intermediate Examination in Arts :—

Ancient History Paper (2) Greek History from 776 B.C. to 146 B.C.
and Paper (3) Roman History from 753 B.C. to A.D. 337.]

The Final Examination will consist of ten papers of three hours each, as follows :—

1. Translation into Latin prose.

2–3. Unseen translation from Latin (2 papers).

4–5. Prescribed texts. One of the sections under Group A and one section under Group B, selected by the candidate from the prescribed list.

Candidates will be required to translate, to write an essay, to explain points of grammar, subject matter and allusions ; and to comment on points of textual criticism, in so far as they are of importance to the interpretation.

Candidates who have obtained the B.A. Honours Degree in Greek will not be required to take Paper 5.

6. Grammar and Literature, consisting of : (1) passages for grammatical comment, and general questions on grammar and metre ; (2) questions on Greek and Latin Literature. There will be one compulsory question, giving a choice of passages for grammatical comment. Sufficient options will be given throughout the paper to afford opportunities to candidates who specialise on the Greek or the Latin side.

7. A Special Subject to be selected from the following list :—

(*a*) Translation into Greek verse.
(*b*) Translation into Latin verse.
(*c*) The Comparative Philology of the Greek and Latin Languages.
[As for Classics, paper 10 (*c*), p. 365.]

(*d*) History of Greek Drama, with a knowledge of Aristotle's *Poetics*.

(*e*) Satire in Latin Prose and Poetry.

(*f*) History of Greek Philosophy to Aristotle (inclusive).

(*g*) Stoicism and Epicureanism in Roman Life and Thought.

(*h*) A Greek historical subject.

(*i*) A Roman historical subject.

(*j*) Greek sculpture, pottery and vase painting from 800 to 350 B.C.

(*k*) History and Archæology of Roman Britain.

(*l*) Civilization in Greece from 2000 to 600 B.C.—the archæological material.

[*Note.*—If a candidate so desire, he may offer (*a*) *or* (*b*) or both (*a*) *and* (*b*) as additional special subjects.]

Candidates who have obtained the B.A. Honours Degree in Greek will not be required to offer paper 7.

8. *Either* A paper in two sections (1) Greek and Roman Religion and (2) Greek and Roman Political Ideas.

Candidates will be required to show knowledge of both Sections, but opportunity will be given them to display a special interest in either Section.

The following reading list is intended to indicate the scope of the paper ; the books are not prescribed :—

[Reading list will be announced later.]

Candidates who have passed in this paper at a previous Honours examination will not be permitted to offer it again ;

or A second Special Subject to be selected from the list given above under 7.

Candidates will not be permitted to offer a Special Subject taken in a previous Honours examination.

Candidates who have not obtained the B.A. Honours Degree in Greek are further required to take :—

9. Translation into Greek prose and questions on Greek grammar.

10. Unseen translation from Greek. Questions may be asked arising out of the subject-matter of the passages set.

The standard of the two papers in Greek will not be as high as that for the B.A. Honours Examination. A pass in these two papers is essential.

[*Note.*—Candidates who under these Regulations are entitled to exemptions on the ground of having previously obtained the B.A. Honours Degree in Greek may either avail themselves of the whole of such exemptions or take the whole of the Examination prescribed in the case of candidates who have not obtained the B.A. Honours Degree in Greek. Candidates who avail themselves of the exemptions to which they are entitled are informed that the Class to be assigned to them at the Honours Examinations in Latin will be determined solely by the work actually presented at that Examination.]

Malay

1. Earlier literature.
2. Later literature.

} Passages from the specified texts for translation into English, with short comments on points of language, literary forms or subject-matter.

3. Translation from unspecified texts.
4. Translation into Malay.
5. Essay in Malay.
6. Essay in English.
7. Cultural, religious, political and administrative history of the language area in outline.
8. *Part I.*—History of the language as illustrated in the specified texts ; *Part II.*—History of literature. Each part will contain 6 or more questions. Candidates will be required to answer 6 questions in all *of which at least two must be chosen from each Part.*
9. An oral examination conducted partly in the language and partly in English which shall test scholarship as well as command of the spoken language.
10. Subsidiary subject—Sanskrit or Arabic or Dutch.

Marathi

Syllabus as for Bengali, pp. 362 above, except that papers 4 and 10 will be :—

4. Translation into Marathi prose.
10. Subsidiary subject—Sanskrit.

Mathematics

REVISED REGULATIONS FOR B.A. HONOURS IN MATHEMATICS

[*The following Regulation will apply to students entering the course during the Session* **1950-51.**]

1. Before admission to the course a student must matriculate and must also :—

Either (i) possess a Higher School Certificate with passes at an approved standard in three principal subjects and in a subsidiary subject provided that the principal subjects shall include Pure and Applied Mathematics as separate subjects, or Pure and Applied Mathematics combined in one subject (provided that, in this case, the standard attained by the student was "Very Good"), and that two of the subjects shall be a classical language and another language, either of which may be the subsidiary subject ;

or (ii) pass a Preliminary Examination at an approved standard in Pure Mathematics, Applied Mathematics, a classical language and another language.

[Until further order the Preliminary Examination will be the Intermediate Examination in the relevant subject or subjects. The latest date for the receipt of entries is 17th April and the fee is 2 guineas for each subject taken up to a maximum of 6 guineas]

[*The following revised Regulation* 1 *will apply to students entering the course in and after October,* **1951.**]

1. For admission to the course a student must have satisfied the University entrance requirements and the requirements for admission to the Faculty of Arts and must also :—

Either (i) hold a General Certificate of Education awarded by one of the approved University Examining Bodies with passes at Advanced Level in three Arts subjects taken on the same occasion, provided that the Advanced Level subjects shall include a language* (which may be English), Pure Mathematics, and *either* Applied Mathematics *or* Physics;

or (ii) hold a Higher School Certificate with passes at main standard in three Arts subjects which shall include a language* (which may be English) and *either* Pure Mathematics and Applied Mathematics *or* Pure Mathematics and Physics *or* the combined subject Mathematics (Pure and Applied), provided that, in this case, the standard attained by the student is "Very Good";

or (iii) pass a Preliminary Examination at an approved standard in Pure Mathematics, Applied Mathematics, Latin or Greek, and another language.

[Until further order the Preliminary Examination will be the Intermediate Examination in the relevant subject or subjects. The latest date for the receipt of entries is 17th April and the fee is 2 guineas for each subject taken up to a maximum of 6 guineas.]

Students who have passed, on one and the same occasion, in two only of the required subjects may complete the requirements for admission by conforming with regulation 3. Exemptions—General Certificate of Education and Higher School Certificate p. 308 above.

2. The candidate will not be required to pass the Intermediate Examination in Arts.

3. A student must follow an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. Nevertheless a student who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all. The course will consist of Pure and Applied Mathematics. There will be no Ancillary subjects, but certain topics of general interest, not suitable for examination, will be dealt with in courses of intercollegiate lectures, attendance at which will be regarded as an integral part of the course. Every student must attend at least three such courses, each extending over one term.

4. In order to qualify for admission to the Degree a student must satisfy the Examiners at an examination consisting of eight papers of which the first six will be on the syllabus printed below, and alternative papers may be submitted by individual Colleges, Schools, or Institutions in respect of the last two papers, the syllabuses on which these papers are set being approved by the University. The Examination will be taken not earlier than the end of the third year, but candidates may take the first six papers not earlier than the end of the second year.

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*If the language in which the candidate has passed is not Latin or Greek, he will be required to enter for a special examination in either Latin or Greek at approved standard at the end of the first year of his course at the University. A candidate who fails at the examination will be permitted to re-enter but must pass the examination not less than one year before he presents himself for his Final Examination.

For syllabuses of Special Examination in Latin and Greek *see* pp. 321–2 and 320 below.

Special regulations applicable to candidates who are natives of Asia or Africa may be found on p. 303, above.

If a candidate takes the first six papers separately he will be informed if he has passed or failed in this part of the Examination. If he passed in this part of the Examination he may not take it again and may complete the Examination by taking the remaining two papers at the end of the third year or any subsequent occasion. If he fails in the first six papers he may take them again either separately or together with the two remaining papers. A candidate will not be given any credit for the last two papers unless he has satisfied the Examiners in the first six papers on the same or a previous occasion.

5. Successful candidates will be awarded (1) First Class Honours, (2) Second Class Honours, *or* (3) Third Class Honours. The Second Class Honours list will be sub-divided into an Upper and a Lower Division. The class will be determined with regard to the candidate's performances in the whole Examination. The name of a candidate shall not be included in the list until he has taken all eight papers.

6. Of the first six papers three will be on Pure Mathematics and three on Applied Mathematics in accordance with the following syllabus :—

Pure Mathematics

Algebra

Properties of polynomials in one variable. Theory of equations. Determinants and matrices ; applications. Concept of a group.

Real Variable

Definition and properties of real numbers. General theory of limits. Continuous functions, differentiable functions, functions of bounded variation. Riemann integration. Convergence and uniform convergence of sequences, series, products and integrals ; properties of functions defined as limits. Double series.

Properties of functions of several variables and of implicit functions. Use of Jacobians and Lagrange multipliers. Double integrals and line integrals.

Simple properties of sets of points in one and two dimensions.

Complex Variable

Elementary single valued and many valued functions of a complex variable. Differentiable functions. Elementary conformal transformations. Simple cases of factorization. Cauchy's theorem for simple contours. Theorems of Taylor, Laurent, Liouville. Residues.

Differential Equations

Existence theorem for the equation $\frac{dy}{dx}=f(x, y)$. Elementary theory of ordinary differential equations. Solution in series. Total differential equations. Simple partial differential equations. Boundary conditions.

Geometry

Elementary pure and analytical geometry of two and three dimensions. Inversion.

Foundations of pure and analytical projective geometry in the plane and in space. General theory of homographic correspondences. Projective geometry of conics and systems of conics, with metrical examples. The relation of apolarity. Theory and applications of symmetrical (2, 2) correspondences.

Plane collineations, correlations, and the standard quadratic transformation.

Projective geometry of quadrics, systems of quadrics, and of the twisted cubic curve ; simple metrical applications. Simple space collineations.

Differential geometry of plane curves. The Frenet-Serret formulæ for a space curve. Elementary differential geometry of surfaces. Geodesics.

Applied Mathematics

Vector Algebra :—Elementary operations, localized vectors. Kinematics of points, reference frames and rigid bodies.

Mechanics :—General Principles of Newtonian mechanics :—Newton's Laws, D'Alembert's Principle, linear and angular momentum, power, work and energy, constants of inertia. Statics, particle dynamics. Rigid dynamics in two and three dimensions. Analytical dynamics—Lagrange's equations.

Theory of vibrations and waves :—Theory of vector fields with application to gravitation.

Hydrodynamics of perfect fluids :—Fundamental equations with application to steady flow.

Electromagnetic Theory :—Electrostatics—simple two- and three-dimensional fields in the presence of conductors and dielectrics. Magnetostatics. Steady current flow in linear circuits and in two- and three-dimensional media. Magnetic fields of currents—self and mutual inductance. Mechanical actions between electric currents and magnetic material. Electromagnetic induction. Displacement currents and Maxwell's equations.

Statistics :—Frequency distribution. Correlation. Method of least squares. Simple tests of significance.

7. Subjects for the last two papers may be chosen from the following list or other subjects may be submitted for approval. The syllabus in any subjects chosen must be submitted for the approval of the University by the authorities of the School concerned not later than 31st December preceding the Examination.

Pure Mathematics

Projective Geometry. Algebraic Geometry. Differential Geometry. Functions of a Real Variable. Functions of a Complex Variable. Differential Equations. Theory of Numbers. Group Theory. Modern Algebra. Infinite Matrices. Special Functions occurring in Mathematical Physics. Mathematical Theory of Statistics. Calculus of Finite Differences.

Applied Mathematics

Dynamics. Potential theory. Hydromechanics. Elasticity. Mathematical Astronomy. Geometrical optics. Physical optics. Electromagnetic theory. Thermodynamics. Quantum theory. Kinetic theory of gases. Statistical mechanics. Theory of Relativity.

Pali (with Sanskrit)

Eight papers will be set :—

1, 2. Translation from specified Pali texts, with questions on their language and subject-matter.
3, 4. Translation from unspecified Pali texts.
5. Translation into Pali : questions on Pali grammar.
6. Translation from specified Sanskrit texts.
7. Translation from unspecified Sanskrit texts.
8. General paper on (1) the history of literature and religion in India, and (2) the comparative philology of Sanskrit, Pali and Prakrit, which may include questions relating to the principles and history of the subject and to the sounds, forms, meanings and syntax of Sanskrit, Pali and Prakrit. Each section will contain six or more questions. Candidates will be required to answer six questions in all, *of which at least two must be chosen from each part.*

Persian

Nine papers will be set.

1–3. Translation from specified books.

4. Translation from specified books in either (*a*) Arabic, or (*b*) Old Persian, or (*c*) Middle Persian. With (*b*) and (*c*) questions on phonetics will be set.

5. Translation from unspecified books.

6. Translation into Persian.

7. Persian and Arabic Grammar.

8. Persian Literature ; the historical development of Islam.

9. The History of Persia from the 7th–17th century ; Islamic Institutions ; the history of political ideas.

10. An additional optional paper on :—
   (*a*) Islamic Art and Archæology, or
   (*b*) Persian Architecture from 700 B.C. to 200 A.D.

[A special note will be placed against the names of the successful candidates who have satisfied the Examiners in the optional paper]

Philosophy

REVISED REGULATIONS FOR B.A. HONOURS IN PHILOSOPHY

The course of study will normally extend over not less than three years.

The Examination will consist of nine papers as follows :—

1. *Logic and Methodology.*—The outlines of the history of logic, of the main principles of its traditional Aristotelian and modern epistemological and formal developments, and of the methods of the natural and social sciences and of philosophy.

2. *Epistemology and Metaphysics.*—The chief theories of the nature of truth and error, doubt and supposition, of the kinds of knowledge (perceptual, conceptual, etc.), of the types of epistemology (rationalism, empiricism, transcendentalism, etc.), of the nature of being and its kinds (mental, physical, etc.) and of the types of metaphysics (idealism, realism, etc.).

3. *Ethics.*—The general principles and history of ethics.

4. *Political Philosophy.*—The general principles and history of political philosophy.

5. *Greek Philosophy from the beginnings to Aristotle.*—The main doctrines of the chief philosophers of the period.

6. *Modern Philosophy from Bacon and Descartes to Kant.*—The main doctrines of the chief philosophers of the period.

7. *Prescribed Author with Texts.*—Detailed knowledge of the philosophy in its full extent, with texts, of a prescribed philosopher, ancient or modern.

8. *Essay.*—A wide choice of subjects will be given.

9. *Optional Subject.*—To be selected by the candidate, subject to the approval of the Head of the Department of Philosophy in which the student is registered, and to the availability of courses of instruction suitable for Honours students of Philosophy, from the following :—

   (*a*) *Psychology.*—The general principles and history of psychology in its philosophical bearing.

   (*b*) *Aesthetics.*—The general principles and history of Aesthetics.

   (*c*) *Symbolic Logic.*—Candidates are required to be familiar with some of the elementary techniques of symbolic logic and to have a knowledge of the history of the main problems in this field and of their philosophical bearings.

(*d*) *Post-Aristotelian and Mediæval Philosophy.*—The main doctrines of the chief philosophers of the period.
(*e*) *Post-Kantian Philosophy to Schopenhauer.*—The main doctrines of the chief philosophers of the period.
(*f*) *Recent Philosophy.*—The main trends of Philosophy since Schopenhauer.
(*g*) *Sociology.*—The general principles and history of Sociology.
(*h*) *Economics.*—The Principles of Economics and their applications, as for the Intermediate Examination in Arts carried to a more advanced stage; to include also:—The problems of business enterprise (including the theory of business fluctuations); the theory of money and credit, together with the organisation of currency and banking; international trade; public finance.

Candidates are required to attend for an oral examination.

Polish (Language and Literature)

(1) Translation from and into Polish.
(2) Essay in Polish.
(3) History of the Polish language.
(4) General history of Polish literature.
(5) *One* of the following special periods of Polish literature:—
(*a*) Early Polish period, up to 1543.
(*b*) From 1543 to 1795.
(*c*) From 1795 to 1863.
(*d*) From 1863 to 1907.
(*e*) From 1907 to 1939.
(6) Essay in English.
(7) *Either* (i) Comparative Slavonic Philology with Phonetics, *or*
(ii) History of Polish literary criticism.
(8) An oral examination, partly conducted in the Polish language which shall test scholarship as well as command of the spoken language.
(9) Subsidiary subject—Russian, German or other approved language (*see* pp. 351–53, as far as applicable).

Polish (Regional Studies)

[*For Examination in* **1951**]

(1) Translation and Composition.
(2) Place of the Poles in the Slavonic family.
(3) General history of Poland and of the races subject to the old Polish State.
(4) *One* of the following special periods of Polish history:—
(*a*) Mediæval Poland to 1386.
(*b*) Poland from 1386 to the death of Batory (1586).
(*c*) Poland in decline, 1586–1795.
(*d*) Era of Partition, struggles for independence and reconstitution.
(5) Diplomatic history of Russia, Germany and Austro-Hungary in the 19th century.
(6) General history of Europe since the French Revolution, with special reference to national movements. [*Note.*—Other periods of European history may be submitted for approval.]
(7) *Either* (*a*) General history of Polish Literature, *or* (*b*) Economic history and geography of Poland.
(8) Essay in English.
(9) An oral examination, partly conducted in Polish.

[*Note.*—A knowledge of the German or Russian language is essential for this course.]

Portuguese

(*a*) History of the language to the present day with illustrative texts.
(*b*) Early literature to the death of Fernao Lopes with prescribed and unseen early texts.
(*c*) and (*d*) Modern Literature from 1500.
(*e*) Translation from Portuguese into English.
(*f*) Translation from English into Portuguese.
(*g*) Essay in Portuguese.
(*h*) An oral examination which shall test the candidate's scholarship as well as his command of the spoken language.
(*i*) Subsidiary subject (see pp. 351–53).

Psychology

[*For Examinations in* **1951, 1952** *and* **1953**]

The subjects of the B.A. (General) Examination (*see* pp. 346–47) carried to a higher stage, with a knowledge of current controversies.

The examination in Psychology will consist of :—

Two papers on General Psychology.

One paper on History of Modern Philosophy (Descartes to Kant).

One paper on Comparative and Abnormal Psychology.

One paper on the Physiology of the Nervous System and Sense Organs.

One paper on Experimental Psychology.

Two days' Practical Examination.

Questions will be set involving (1) the translation of passages in French and German, and (2) answers with regard to the subject-matter thereof. Without answering the questions set in *one* of these languages a candidate cannot make up the full number of questions to be answered.

Candidates will be allowed to take into the examination-room, and to consult during the practical examination, note-books containing mathematical formulæ only.

Candidates will be required to bring to the practical examination for inspection by the Examiners their note-books, certified by their teachers as being the actual working notes made by them in the Laboratory. The note-books must be taken away by the candidates at the close of the Examination.

Normally the note-books to be brought to the practical examination must show that the candidates have regularly taken part in courses of work in Experimental Psychology extending over at least two years.

Subsidiary Subjects

Candidates, other than those who have obtained the B.A. or B.Sc. Degree as Internal or External Students, will be required also to present themselves for examination in one of the subsidiary subjects set forth below, in accordance with the Regulations with regard to Subsidiary Subjects on pp. 351–53 so far as applicable :—

Anthropology.
Aesthetics.
Comparative Philology. (*For Examination in* **1951** *only.*)
Ethics.
Economics.
French.
German.
General Linguistics. (*For Examinations in and after* **1952.**)
History of Philosophy.
Italian.
Logic.
Military Studies.
Physiology.
Pure Mathematics.
Russian.
Sociology.
Theology.

The examination in Anthropology, Pure Mathematics, Military Studies, and Theology will consist of the three papers of the B.A. (General) Examination in the relevant subject.

The examination in Ethics, History of Philosophy, and Logic will consist of any two papers of the B.A. (General) Examination in the relevant subject.

The examination in Economics, French, German, Italian and Russian will be as set out on pp. 351–53 above.

The examination in Aesthetics will consist of two papers on the following syllabus :—

Analysis of the aesthetic experience. Is there a unique aesthetic emotion ? The creative process in the artist's mind. The attitude of the recipient ; the beliefs of the artist and the work of art. The function of imagery in art.

Beauty in Art and in Nature. Representative and formal theories of art. Symbolism and Art. The function of medium in art. Art and intuition. Some classical theories of art.

The examination in Comparative Philology will consist of two papers on the following syllabus and an oral examination :—

Paper (1) A. General Phonetics.
B. Principles of Grammar : Historical and Descriptive.
C. Semasiology.

Paper (2) A. Speech : its acquisition and development.
B. Speech and Language Standards (dialects, technical languages, cant, slang).
C. Psychological and sociological approach to the study of meaning.

The following books will serve as a guide to the scope of the examination :—

(1) A :—Daniel Jones : *Outline of English Phonetics.* Noel Armfield : *General Phonetics.*
B :—F. de Saussure : *Cours de Linguistique Générale.* O. Jespersen : *The Philosophy of Grammar.* H. Pedersen : *History of Linguistic Science in the Nineteenth Century.*
C :—Henry Bradley : *The Making of English.* M. Bréal : *Essai de Sémantique* (English translation by Cust). J. B. Greenough and G. L. Kittredge : *Words and their Ways in English Speech.* Prefaces and Introductions to the New English Dictionary.

(2) A :—A. Markey : *The Symbolic Process.* C. & W. Stern : *Die Kindersprache.*
B :—O. Jespersen : *Language.* J. Vendryès : *Le Langage.*
C :—Preface to Dr. Johnson's Dictionary. C. K. Ogden and I. A. Richards : *The Meaning of Meaning.*

The examination in General Linguistics will consist of two papers on the following syllabus and an oral examination :—

Paper (1) A. Introduction to the study of general linguistic theory.
B. The principles of phonetics and phonology (with special reference to English).
C. Historical linguistics and the comparative method.

Paper (2) A. Systems of grammar ; grammatical categories.
B. Language and dialect. Standards and the individual.
C. Sociology of language.

The following books will serve as a guide to the scope of the examination :—

J. Vendryès : *Language* (Trans. Radin). E. Sapir : *Language*. E. H. Sturtevant : *Introduction to Linguistic Science*.

(1) A :—F. de Saussure : *Cours de Linguistique Générale*.
B. :—Daniel Jones : *Outline of English Phonetics*. I. C. Ward : *The Phonetics of English*. J. R. Firth : *Speech*.
C :—A. Meillet : *La Méthode Comparative en Linguistique Historique*. H. Pedersen : *Linguistic Science in the 19th Century*. L. R. Palmer : *Introduction to Modern Linguistics*. T. Hudson-Williams : *Introduction to the study of Comparative Grammar*.

(2) A :—H. Sweet : *New English Grammar* (pp. 1–225). O. Jespersen : *Philosophy of Grammar*.
B :—O. Jespersen : *Mankind, Nation and Individual from a Linguistic Point of View*.
C :—C. K. Ogden and A. I. Richards : *Meaning of Meaning, with Supplement* 1. (*The Problem of Meaning in Primitive Languages*) by Malinowski. B. Malinowski : *Coral Gardens and Their Magic*, Vol. II, Part IV. J. R. Firth : *Tongues of Men*.

The examination in Physiology will consist of the two papers and practical examination of the B.Sc. (General) Examination.

The examination in Sociology will consist of two of the following four papers of the B.A. Honours Examination in Sociology (*see* p. 411), provided that Social Institutions II is taken only in conjunction with Social Institutions I :—

1. Social Institutions—I.
2. Social Institutions—II.
5. Social Psychology.
C. 2. Contemporary Social Conditions in Modern England.

Psychology

REVISED REGULATIONS FOR B.A. HONOURS IN PSYCHOLOGY

[*For Examinations in and after* **1952**]

The course of study will normally extend over not less than three years.

The examination in Psychology will be divided into two Parts, both of which must be taken in the same year.

Part I of the examination will consist of four written papers and a practical examination. The written papers will be :—

General Psychology I.

Experimental Psychology I.

Comparative Psychology I.

History of Psychology.

The General paper will contain questions on any topic within the scope of a comprehensive general course in psychology, including the relevant experimental work. The paper on Experimental Psychology will deal with those matters usually dealt with in standard textbooks on the subject, including a study of work on conditioned reflexes and its bearing on general psychology. Comparative Psychology I will consist of two sections, (*a*) Animal Psychology and (*b*) Psychology of Childhood. Both sections will presuppose acquaintance with such

parts of the sciences of biology, physiology and statistics as may be relevant to the topics included in the paper. The paper on History of Psychology will consist of two or more sections. The first section, which will be compulsory, will presuppose general acquaintance with the main stages in the history of psychology from the period of ancient Greek thought to the end of the nineteenth century. The other sections, from which options may be selected, will require more specialised knowledge of some period or movement in the history of psychology or in the development of scientific method in psychology.

The practical examination may include questions on any topic forming part of a general laboratory course in psychology. The candidate may be examined orally or in other ways.

Part II of the examination will consist of four written papers and a practical examination. The written papers will be :—

General Psychology II.

Experimental Psychology II.

Comparative Psychology II.

Essay.

The papers on General and Experimental Psychology will carry the work of Part I to a more specialised stage. Comparative Psychology II will consist of two sections (*a*) Abnormal Psychology, and (*b*) Social Psychology and the Psychology of Primitive Peoples. The section on Abnormal Psychology will presuppose knowledge not only of the functional disorders in mental processes, but also of those disturbances in function for the organic basis of which there is physiological and anatomical evidence. The section on Social Psychology and the Psychology of Primitive Peoples will presuppose knowledge of the statistical and experimental methods of Social Psychology and of the principles of Anthropology. The Essay paper will require either one or two essays on subjects to be selected from any part of the syllabus for the whole examination.

The Practical examination in Part II will consist of questions which require more specialised experimental and statistical methods than those in Part I, and the candidate may be required to plan and in part carry out an investigation of a research character, requiring the adaptation of laboratory methods to problems not usually included in a laboratory course. He may also be examined orally or in other ways.

In addition, a subsidiary subject must be taken.

Subsidiary Subjects

Candidates, other than those who have obtained the B.A., B.Sc., or B.Sc (Econ.) Degree as Internal or External Students, will be required also to present themselves for examination in one of the subsidiary subjects set forth below, in accordance with the Regulations with regard to Subsidiary Subjects as far as applicable and subject to the exceptions noted below :—

Aesthetics.
Anthropology.
English.
Ethics.
Economics.
French.
German.
General Linguistics.
History of Philosophy.
Italian.
Logic.
Military Studies.
Physiology.
Pure Mathematics.
Russian.
Sociology.
Statistics.
Theology.

In special circumstances other subjects may be approved by the University.

The examination in Statistics will consist of the two papers and the practical examination of the B.Sc.(General) Examination in Statistics.

The examination in the other Subsidiary subjects will be as set out in the present regulations.

Russian (Language and Literature)

(1) Translation from Russian.

(2) Translation into Russian.

(3) Essay in Russian.

(4) History of the Russian language.

(5) History of Russian literature to 1800 with prescribed texts.

(6) History of Russian literature, including literary criticism, since 1800.

(7) and (8) *Either* (*a*) a special subject of Russian literature, *or* (*b*) Comparative Slavonic Philology and Phonetics.

(9) An oral examination, partly conducted in Russian, which will test scholarship as well as command of the spoken language.

(10) Subsidiary subject—German ; *or*, with the consent of the candidate's teachers, one of the following : French, English, Latin or another Slavonic or East European language ; *or* another subject approved by the University.

Russian (Regional Studies)

[*For Examination in* **1951**]

(1) Translation and Composition.

(2) Russian history, with political geography.

(3) Russian economic history.

(4) Russian laws and institutions.

(5) *Either one* of the following special periods of Russian history :—

(*a*) To 1480 ; (*b*) 1240 to Peter the Great ; (*c*) Peter the Great to 1861 ; (*d*) From 1815. (*Note.*—Students of period (*d*) will be expected to attend lectures on the economic history and organisation of Russia.)

or one of the following special subjects of Russian economics :—

(*a*) Agriculture ; (*b*) Industry ; (*c*) Transport ; (*d*) Finance.

(6) *Either* (*a*) General history of Russian literature, *or* (*b*) Economic history and geography of Russia.

(7) *Either* Modern European history from the accession of Peter the Great, including the history of political ideas. [*Note.*—Other periods of European or Asiatic history may be submitted for approval.]

or Modern economic theory and history.

[*Note.*—Candidates taking the second alternative under sections (5), (6) and (7) will also be expected to attend lectures in Modern European history]

(8) Essay in English.

(9) An oral examination, partly conducted in Russian.

Sanskrit

Eight papers will be set :—

1, 2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Translation from specified texts in *either* (*a*) Pali, *or* (*b*) Prakrit, *or* (*c*) Avestan.

5. Translation into Sanskrit : questions on grammar.

6. History of Sanskrit literature (including the Vedic period).

7, 8. Two papers on any one of the following special subjects :—

(*a*) Indian History to A.D. 1000.

The following books are recommended for study :—

D. C. Sircar : *Select Inscriptions bearing on Indian History and Civilization.* Vol. I (Calcutta, 1942).

Special attention should be given to the following inscriptions :—

Page 169, Inscription of Rudradāman I, Junāgaṛh. Ep. Ind. VIII, p. 42.

Page 254, Inscription of Samudragupta, Allahābād. Corp. Ins. Ind. III, p. 6.

Page 386ff, Inscriptions of Yaśodharman, Mandasor. Corp. Ins. Ind. III, pp. 146ff, 152ff.

Cambridge History of India, Vol. I.

H. Raychaudhuri : *Political History of Ancient India* (3rd ed., Calcutta, 1932).

C. V. Vaidya : *History of Mediæval Hindu India,* Vols. I and II (Poona, 1921–4).

Beni Prasad : *The State in Ancient India* (Allahābād, 1928).

A. Bose : *Social and Rural Economy of North India,* 600 B.C.–A.D. 200 (2 vols., Calcutta, 1942).

(*b*) Indian Archæology to A.D. 1000.

(*c*) Indian Art to A.D. 1000.

(*d*) Indian Philosophy, with prescribed texts.

(*e*) Indian Religions.

Candidates will be required to show a knowledge of the main lines of development of the history of religion in India, and a more detailed knowledge of any one of the following : (*a*) Vedic religion ; (*b*) Mediæval Hinduism ; (*c*) Jainism ; (*d*) Buddhism.

The following authorities are recommended for study :—

A. Berriedale Keith : *Religion and Philosophy of the Veda and Upanishads* (Harvard Oriental Series).

A. Berriedale Keith : *Buddhist Philosophy in India and Ceylon.*

E. J. Thomas : *History of Buddhist Thought.*

H. Kern : *Manual of Indian Buddhism.*

Jagmanderlal Jaini : *Outlines of Jainism.*

H. von Glasenapp : *Der Jainismus ; Der Hinduismus : Der Buddhismus.*

W. Schubring : *Die Lehre der Jainas.*

R. G. Bhandarkar : *Vaiṣṇavism, Śaivism,* and *minor religious systems.*

F. Edgerton : *Introduction to edition of Bhagavad-gītā* (Harvard Oriental Series).

J. N. Farquhar : *Outline of the Religious Literature of India.*

L. S. S. O'Malley : *Popular Hinduism.*

(*f*) Hindu Law.

The persons to whom, and the cases in which, the Hindu Law is applicable in India. Statutory limitations on its application. Sources. History and development. Custom and its relation with the literary law. Change of personal law. The different schools of Hindu Law and their rules concerning marriage; adoption; the joint family and the rights and duties of its members; maintenance; partition; guardianship and minority; inheritance and survivorship; the estate taken by female heirs; *strīdhana* (but not the special rules of succession to *strīdhana*).

The standard will be similar to that of the Hindu Law paper in the LL.B. examination, but although candidates will be required to know the modern application of the law the emphasis will rather be on its historical development than on modern details. Statements of leading principles in the original Sanskrit may be set for translation and comment. For such statements see Ganganatha Jha : *Hindu Law in its Sources*, Vol. II; J. C. Ghose : *The Principles of Hindu Law;* and Golapchandra Sarkar Sastri : *Hindu Law.*

Of the law of *strīdhana* candidates will only be required to know general principles, and not detail. Of the law of inheritance to males they will be required to know the principles in outline, but problems set will be simple in character and such as might easily arise in everyday life.

The following book is recommended for study :—

Mayne : *Hindu Law and Usage* (10th edition by Srinivasa Iyer, 1938), especially Chapters 1–3 and 21.

(*g*) Sanskrit Buddhist literature, with prescribed texts.

Winternitz : *History of Indian Literature, Vol. II, Part I,* is recommended for general study.

(*h*) Sanskrit Drama, with prescribed texts.

The general history of the subject may be studied in A. Berriedale Keith : *The Sanskrit Drama.*

(*i*) Sanskrit Poetics, with prescribed texts.

The following books are recommended for general study :—

S. K. De : *Sanskrit Poetics*, especially Vol. II.

P. V. Kane : *History of Alankāra Literature* (introduction to his edition of the *Sāhityadarpana*).

(*j*) Comparative Philology of the Indo-European languages, with special reference to Sanskrit, Greek and Latin.

Scandinavian Languages

(*a*) Germanic Philology. Old Norse with translation of prescribed texts.

(*b*) History of the Scandinavian Languages, with special reference to mediæval texts prescribed for detailed linguistic study.

(*c*) General History of the Scandinavian Literatures.

(*d*) History of (i) Danish Literature, or (ii) Norwegian Literature, or (iii) Swedish Literature, with, in each case, the special study of selected authors and texts.

(*e*) Prescribed texts as under (*d*); translation and commentary.

(*f*) Translation from the Scandinavian Languages, and translation into the language selected for special study by the candidate. Candidates will be expected to show an efficient reading knowledge of the two Scandinavian Languages not chosen for special study (including Landsmål).

(*g*) Essay in the language selected for special study.

(*h*) An oral examination which shall test scholarship as well as command of the spoken language.

(*i*) Subsidiary subject (*see* pp. 351–53). (*Note.*—Danish, Norwegian, Swedish or Old Norse should not be offered by candidates taking an Honours Degree in Scandinavian Languages.)

Serbo-Croat and Slovene (Language and Literature)

(1) Translation from and into Serbo-Croat or Slovene.

(2) Essay in Serbo-Croat or Slovene.

(3) History of the Serbo-Croat and Slovene languages.

(4) General History of Serbo-Croat and Slovene literature.

(5) *One* of the following special periods of Serbo-Croat and Slovene literature :—

(*a*) Serbo-Croat Literature from the beginnings to Obradović.

(*b*) Serbo-Croat Literature from Obradović to 1890.

(*c*) Serbo-Croat Literature from 1890.

(*d*) Slovene Literature from the beginning to 1848.

(*e*) Slovene Literature from 1848.

(6) Essay in English.

(7) *Either* (i) Comparative Slavonic Philology with Phonetics, *or* (ii) History of Serbo-Croat and Slovene literary criticism.

(8) An oral examination, partly conducted in the Serbo-Croat or Slovene language, which shall test scholarship as well as command of the spoken languages.

(9) Subsidiary subject—German or other approved language (*see* pp. 351–53, as far as applicable).

In translation and essay papers the candidate must use *either* Serbo-Croat *or* Slovene consistently, but candidates offering Serbo-Croat will be expected to use both the Latin and the Cyrillic scripts in answering paper (1).

Sinhalese

The examination will consist of eight papers as set out below and an examination in a subsidiary subject consisting of the B.A. (General) papers in Pali *or* Sanskrit *or* Tamil. Each paper will be of three hours.

1–3. Translation from specified texts, with questions on their language and subject-matter and on grammar and prosody.

4–5. Translations from unspecified texts.

6. Translation from English into Sinhalese and free composition.

7. Sinhalese literature and culture and their historical background.

8. History of the Sinhalese language and its relation to other Indo-Aryan languages.

Candidates whose mother-tongue is not Sinhalese may, if they wish, offer in place of paper 1 an oral examination which shall test scholarship as well as command of the spoken language.

Slavonic and East European Regional Studies

REVISED REGULATIONS FOR B.A. HONOURS DEGREE IN SLAVONIC AND EAST EUROPEAN REGIONAL STUDIES

[*For Examinations in and after* **1952**]

The course of study for the Final Examination will normally extend over three years.

Candidates must choose one of the following branches :—

Russian Regional Studies,
Central European Regional Studies,
South-East European Regional Studies.

Before admission to the course for the Final Examination all candidates must have reached the standard of the Intermediate Examination in Arts in the following subjects :—a Slavonic or other East European Language relevant to the branch chosen, European History, and Economics. Candidates who have not this qualification will be required to pursue a course of study in those subjects extending over one year. Candidates who have attained the necessary standard in two (including the language) of the foregoing subjects, but not the third, may be admitted to the course for the Final Examination provided that they pursue a course of study in the third subject extending over one year.

The course for the Final Examination will provide instruction in the Geography of the region chosen.

The Final Examination in each branch will consist of ten papers and an oral examination. A subsidiary subject will not be required.

The syllabuses are as follows :—

RUSSIAN REGIONAL STUDIES

1. Translation from Russian.
2. Russian Prose and Composition.
3. Translation from and commentary on prescribed texts.
4. The History of Russian Literature since 1800.
5. *Either* (*a*) the History of Europe from 1500 to the middle of the 18th Century ;
   or (*b*) Economic History since 1850 with special reference to the economic development of the Great Powers.

Note.—Candidates offering special subject (*a*) or (*b*) must take paper 5 (*a*), and those offering special subject (*c*) must take paper 5 (*b*).

6. and 7. The History of Russia, including the Economic History of Russia.

8. *Either* (*a*) the History of Political Ideas since 1500 ;
   or (*b*) Theory of the Modern State.

9 and 10. Special subject :—

(*a*) The Reign of Ivan IV ; for authorities prescribed *see* set book Appendix.

or (*b*) The Reign of Peter I ; for authorities prescribed *see* set book Appendix.

or (*c*) Soviet Economic Structure.

11. An oral examination, in which the candidate's ability to speak Russian, as well as his knowledge of the Region will be tested.

Central European Regional Studies

1. Translation from and Composition in Czech, or Hungarian, or Polish, or Slovak.

2. The History of the Literature of the country selected for Paper 6.

3. *One* of the following periods of European History :—

(*a*) from 400–1200 A.D.;

or (*b*) from 1200–1500 A.D. ;

or (*c*) from 1500 to the middle of the 18th century ;

or (*d*) from the middle of the 18th century to the present day.

4 and 5. The History of Central Europe, including its Economic History.

6. The History of the Czechoslovak lands, or of Hungary, or of Poland.

7. Modern Economic Structure and Institutions, with special reference to Central Europe.

8. The History of Political Ideas.

9 and 10. Special subject :—

(*a*) The Reform Movement in Bohemia, 1346–1415 ; for authorities prescribed *see* set book Appendix.

or (*b*) Hungary, 1382 to 1526 ;

or (*c*) Poland, 1733 to 1795 ; for authorities prescribed *see* set book Appendix.

or (*d*) The Land Question in Central Europe since 1918.

11. An oral examination, which will test the candidate's ability to speak Czech, or Hungarian, or Polish, or Slovak, as well as his knowledge of Central Europe.

South-East European Regional Studies

1. Translation from and Composition in Bulgarian, or Hungarian, or Rumanian, or Serbo-Croat, or Slovene.

2. The History of the Literature of the country selected for Paper 6.

3. *One* of the following periods of European History :—

(*a*) from 400–1200 A.D. ;

or (*b*) from 1200–1500 A.D. ;

or (*c*) from 1500 to the middle of the 18th century ;

or (*d*) from the middle of the 18th century to the present day.

4. and 5. The History of South-Eastern Europe, including its Economic History.

6. The History of Bulgaria, or Hungary, or Rumania, or the Yugoslav lands.

7. Modern Economic Structure and Institutions, with special reference to South Eastern Europe.

8. The History of Political Ideas.

9 and 10. Special subject :—

(*a*) the First Bulgarian Empire, 679 to 1018 ;

or (*b*) Hungary, 1382 to 1526 ;

or (*c*) Rumania, 1856 to 1914 ;

or (*d*) the Land Question in S.E. Europe since 1918.

[Authorities will be prescribed later]

11. An oral examination, which will test the candidate's ability to speak Bulgarian, or Hungarian, or Rumanian, or Serbo-Croat, or Slovene, as well as his knowledge of South-Eastern Europe.

Sociology

[*For Examinations in* **1951** *and* **1952**]

Nine papers will be set.

Compulsory Papers :—

1 and 2. Social Institutions (two papers).

Social Institutions I.—Formation and growth of communities : kinship and inter-marriage ; basis of custom and law ; development of political authority and responsibility ; social differentiation ; caste and class ; rise and decay of slavery and serfdom ; property and economic organisation ; relations between communities and their bearing on internal structure ; intellectual and moral conditions of social development.

Social Institutions II.—(*a*) The family ; (*b*) A comparative study of religions and of moral ideas ; (*c*) The paper may include some more advanced questions on the subjects covered by Social Institutions I.

3 and 4. Social Philosophy (one paper predominantly on Ethics, and one on Social Philosophy).

5. Social Psychology, *i.e.*, Psychology with especial reference to the psychological basis of social relations and the effect of social interactions (one paper).

6. Principles of method, *i.e.*, relation of Sociology to other sciences and questions of scientific and philosophic treatment of the subject (one paper).

Optional Subjects (three papers) :—

A. Some of the Simpler Societies :—

1. Social Institutions including political, economic and legal institutions.
2. Ritual and belief.
3. Regional Social Anthropology.

One of the following approved regions :—

(*a*) Eastern Africa.
(*b*) Central Africa.
(*c*) Western Africa.
(*d*) Southern Africa.
(*e*) America north of Mexico (Amerindian and Eskimo cultures).
(*f*) Indian (tribal cultures).
(*g*) South-eastern Asia.
(*h*) Pacific Islands.

or B either (i) An Oriental Civilisation, Ancient, *or* Mediæval, *or* Modern ; or (ii) Graeco-Roman Civilisation ; or (iii) Civilisation of the Middle Ages ; or (iv) A Modern Community :—

1. Political and social institutions.
2. Religions and ethics.
3. Political and social ideas.

or C. Modern England :—

1. Social and industrial development.
2. Contemporary social conditions.
3. Political Structure of Modern England.

[*Note*.—A candidate who wishes to offer *A* or *B* must apply, not later than December 31st preceding the Honours Examination, for the approval of the University]

Sociology

REVISED REGULATIONS FOR B.A. HONOURS IN SOCIOLOGY

[*For Examinations in and after* **1953.**]

The course of study will normally extend over not less than three years but for Advanced Students the period may be two years.

The Examination will consist of ten written papers on one of the following three Options :—

Option A

1. Theories and Methods of Sociology.
2. Statistical Methods in Social Investigation.
3. Social Institutions (I).
4. Social Institutions (II).
5. Ethics.
6. Social Philosophy.
7. Social Psychology.
8. *Either* Modern England (2 papers) ((i) Social Structure
9. (ii) Social History),
   or Two papers on one of the following :—
   A. Some other Modern Community to be specified from time to time (2 papers as for Modern England).
   B. An Oriental Civilisation, ancient, mediaeval or modern.
   C. Graeco-Roman Civilisation.
   D. Civilisation of the Middle Ages :—
   (1. Political & Social Institutions.
   2. Religions & Ethics.)
10. *Either* (i) Demography
    or (ii) Criminology.

OR

Option B

For those wishing to specialise in Social Administration, the following ten subjects :—

1. Theories and Methods of Sociology.
2. Statistical Methods of Social Investigation.
3. Social Institutions (II).
4. Social Administration (I).
5. Social Administration (II).
6. Social Philosophy.
7. Social Psychology.
8. *Either* Modern England (2 papers) ((i) Social Structure
9. (ii) Social History),
   or Some other Modern Community to be specified from time to time (2 papers as for Modern England).
10. *Either* (i) Demography
    or (ii) Criminology.

OR

Option C

For those wishing to specialise in Social Anthropology, the following ten subjects :—

1. Theories and Methods of Sociology.
2. Statistical Methods in Social Investigation.
3. Social Institutions (II).
4. Social Anthropology (I).

5. Social Anthropology (II).
6. Regional Social Anthropology : an approved area.
7. Ethics.
8. Social Philosophy.
9. Social Psychology.
10. *Either* (i) Demography.
or (ii) Criminology.

In addition to the above, a candidate will be required to pass an examination at the end of the 2nd year in a subsidiary subject, which will be Economics. A candidate who fails in the subsidiary subject may be referred in that subject and permitted to re-enter for it on any subsequent occasion.

Satisfactory evidence must be given of adequate instruction having been received in some form of sociological investigation.

Syllabuses

Sociology : Theories and Methods

The development of Sociology since Comte. Biological factors in social life. Problems of heredity and environment : studies of twins, foster children and orphans ; distribution and trend of intelligence ; the social use of intelligence ; genetic and social aspects of race problems. The role of psychology in sociological explanation : the study of personality types in relation to social structure. The use of anthropological and historical data in sociology : the use of personal documents in sociological investigation. The value and limitations of the comparative method. The classification of social aggregates and institutions and the analysis of social processes : the concepts of social class and social status in the analysis of social structure. The concepts of culture and civilisation. Theories of social development, arrest, and decay. The nature of sociological generalisations and the methods used in testing them.

Statistical Methods in Social Investigation

1. *Elementary statistical methods.* Collection, definition and tabulation of data. Approximations and error. Frequency groups, time series and graphical representation. Measures of average and dispersion. Index numbers. The elements of the analysis of time series. The elementary theory of regression and correlation. Sampling of proportions. Samplings for Totals and Averages from a normal population. Elementary theory of sampling design. Stratification.

2. *Sources of social statistics in the United Kingdom.* Population and vital statistics. Manpower. Health and housing. Education. Crime. Nutrition. Cost of living. The nature and limitation of these statistics and the application of elementary statistical methods to them.

3. *Techniques and problems in social and sociological surveys.* Planning social investigations. Questionnaires and interviewing. Interviewer bias. The analysis and interpretation of survey data.

Note.—Students will be expected to be familiar with the technique and results of the major social and sociological surveys in Great Britain and the United States.

[*Note.*—Logarithm tables will be provided by the University, and slide rules may be brought to the examination in this subject.]

Social Institutions

Papers I and II : (Paper II will be devoted mainly to the more complex societies.)

(i) The main forms of family structure : the family and the kindred ; maternal and paternal descent ; the joint family ; regulation of marriage.

(ii) Types of political structure ; the clan and tribe ; monarchy ; feudalism ; the City State ; the forms of the modern state.

(iii) Forms of aggregation : urban and rural developments. Patterns of urban life.

(iv) Development of social control : Retaliation and the Blood Feud ; the growth of public justice and rational procedure ; individual and collective responsibility ; punishment and the prevention of crime.

(v) The forms of property and economic organisation : common, collective and private property, and their interrelations.

(vi) Social differentiation : slavery and serfdom ; nobility ; caste ; the main varieties of modern class structure.

(vii) Religion and other beliefs in their bearing on social relations ; relations of religion and morals.

(viii) Relations between intellectual development as seen in the control of natural forces and social change ; levels of social development.

Ethics

(i) The psychological presuppositions of ethics ; impulse, desire and will. The moral sentiments.

(ii) The principal types of ethical theory : the intuitionist, rationalist and empiricist approach to ethical problems. The theory of evolution applied to morals.

(iii) The relations of sociology to ethics. The problem of moral progress.

Social Philosophy

Ethics as applied to problems of social organisation. Rights and Duties. The theory of justice, distributive and corrective. Responsibility. Liberty and Equality. The ends and limits of political action. Compulsion and consent. Ethical aspects of Marriage and the Family. Ethical aspects of Property. Ethical aspects of the relations between States.

Social Psychology

Relations between Sociology and Psychology. Self-regarding and other regarding elements in human nature. Sympathy, Co-operation, competition, aggression. Social factors in the formation of personality. Psychological analysis of group structure. Group sentiments, and group consciousness. Theories of group mentality. Public Opinion and factors affecting its formation. Methods of investigating Public Opinion. Suggestion, Propaganda. Group differences in intelligence. Relative influence of heredity and environment. The psychology of Family Relationships. Psychological aspects of Property.

Modern England

(i) *Social Structure*

The recruitment, distribution and composition of the population. Households and families. Family characteristics. Family and poverty.

The educational process. Ability and opportunity. The changing structure of education.

The entry to employment. The recruitment of the professions. Occupational and social mobility. The structure of occupations. Occupation status and levels of living. The Government in relation to levels and standards of living.

Groups—religious, professional and others. The relation between group and community. Social stratification and group consciousness.

(ii) *Social History*

The social development and industrialism since 1815.

The sources and character of industrial progress. The social background of technical developments ; the rise of the factory system and industrial concentration and combination ; the growth of capital and the adaptation of labour ; mass production and new forms of private enterprise ; the growth of public enterprise ; the growth of capital, the agencies of capital formation and the historical problems associated with them ; the new systems of communication ; the functions of the State in economic development ; the changing forms of property.

The growth of towns. The historical problems of urbanisation and suburbanisation ; immigrant communities and their control ; the rise of town planning and the development of new branches of urban administration ; the growth of urban amenities and the provision for leisure and common enjoyment.

The class structure of industrialism. The growth and distribution of the population ; the displacement of the landed aristocracy and the growth of the middle classes ; the changing status of the working classes ; occupational specialisation, the growth of the professions, and the definition of new occupations ; the family in urban and rural communities ; the economic and social status of women ; the smaller family and the treatment of children ; the shorter working day ; the growth and distribution of the national income ; the change in standards of living ; the evolution of working-class needs ; the development of the agencies of thrift.

The growth of democracy. The distribution of political responsibility ; the influence of voluntary action and the rise of voluntary associations ; the scope and displacement of philanthropy ; the rise and social functions of the labour and co-operative movements ; the influence of wars on democratic development.

The development of social policy. The change in social attitudes and its influence on social policy and administration ; the history of the regulation of factories and workshops ; the problems of industrial disease and disability ; the statutory limitation of the hours of labour ; the regulation of the work of women and children ; the development of a system of public education ; the improvement of health and the statutory enforcement of holidays ; the development of the system of national insurance.

Demography

Vital statistics (including biometry), sickness and mortality, reproduction rates and other measures of fertility. Enquiries by census and by sample. Population trends and projections. The history of population growth.

Criminology

Conception of crime. Functions and methods of criminology. Criminal types and causal factors in crime ; physical ; psychological ; social and economic factors. Special problems : juvenile and female delinquency.

Penal philosophy and psychology ; especially meaning and objects of punishment. Penal history. The modern English penal system and the criminal courts. Problems of crime prevention.

SOCIAL ADMINISTRATION

Paper I. Development and content of social services ; their relations to the individual, the family and the community. Services to be studied include social security services ; health and rehabilitation ; housing and town and country planning ; education ; treatment of delinquents.

Paper II. Administration of social services ; organs of administration ; inter-relations between the social services ; statutory and voluntary agencies ; personnel problems.

Note.—Students will be expected to show some knowledge of comparable developments in countries other than Great Britain.

SOCIAL ANTHROPOLOGY

Papers I and II

Scope and methods of social anthropology ; theories of culture and society ; analysis of social structure and organisation in primitive communities ; occupational and other associations ; stratified groups ; kinships organisation and terminology ; types of family structure ; lineage and clan. Marriage and other institutions associated with kinship.

Economic organisation : land tenure and property rights ; conception of wealth and capital ; organisation of labour ; exchange of goods and services.

Political organisation ; legal organisation ; relation of law to custom ; moral rules, ritual and belief in relation to the society.

Paper III. Regional Social Anthropology

The Social Structure of one of the following approved regions :—

(*a*) Eastern Africa.
(*b*) Central Africa.
(*c*) Western Africa.
(*d*) Southern Africa.
(*e*) America North of Mexico (Amerindian and Eskimo cultures).
(*f*) Indian (tribal cultures).
(*g*) South-eastern Asia.
(*h*) Pacific Islands.

Subsidiary Subject

ECONOMICS

Syllabus prescribed for the B.A. (General) Degree (see p. 335), excluding the paper on Social and Economic History.

Spanish

(*a*) History of the Language to the present day with illustrative texts.
(*b*) Mediæval Literature with prescribed and unseen early texts.
(*c*) and (*d*) Modern Literature from 1500.
(*e*) Translation from Spanish into English.
(*f*) Translation from English into Spanish.
(*g*) Essay in Spanish.
(*h*) An oral examination which shall test scholarship as well as command of the spoken language.
(*i*) Subsidiary subject (*see* pp. 351–53).

Tamil

The examination will consist of seven papers as set out below and an examination in a subsidiary subject consisting of the B.A. (General) papers in any Oriental language. Each paper will be of three hours.

1–3. Translation from specified texts, with questions on their language and subject-matter and on grammar and prosody.

4–5. Translation from unspecified texts.

6. Translation from English into Tamil.

7. (*a*) Six questions on Tamil literature and culture and on their historical background.

(*b*) Six questions on the History of the Tamil language and its relation to the other Dravidian languages.

[The candidate will be required to answer not less than two questions in either (*a*) or (*b*) and not more than six questions in all. One of the questions selected from (*a*) must be answered in Tamil]

Turkish

Students proceeding to B.A. Honours in Turkish are required to have passed in Classical Arabic and in Oriental History, section (*a*), Outlines of the History of the Near and Middle East from A.D. 600, at the Intermediate Examination in Arts.

Nine papers will be set, with an additional optional paper.

1–2. Translation from set Ottoman and modern texts, with questions on the language and subject-matter.

3–4. Translation from unspecified Ottoman and modern texts.

5. Translation into modern Turkish.

6. Translation from (*a*) set Arabic, and (*b*) set Persian texts.

7. Turkish literature.

8. *Either* (*a*) Historical development of Islam, *or* (*b*) Historical grammar.

9. Ottoman history and institutions.

10. An additional optional paper in :—

Either (*a*) History of the Turkish peoples ;
or (*b*) Islamic art and archæology.
or (*c*) The theory and history of Islamic law.

A special note will be placed against the names of the successful candidates who have satisfied the Examiners in the optional paper.

Urdu

Syllabus as for Bengali, pp. 362, except that papers 4 and 10 will be :

4. Translation into Urdu prose.

10. Subsidiary subject : Persian *or* Sanskrit.

Yugoslav (Regional Studies)

[*For Examination in* **1951**]

(1) Translation and Composition.

(2) Place of the Southern Slavs (including the Bulgarians) in the Slavonic family.

(3) General history of the countries now included in Yugoslavia.

(4) *One* of the following special periods of Yugoslav history :—

(*a*) Mediæval Serbia and Croatia to 1389.

(*b*) Turkish Era, 1389–1804.

(*c*) The Yugoslav National Renaissance from 1780.

(*d*) Relations of Croatia and Hungary.

(*e*) Bosnia and Dalmatia, with the Republic of Dubrovnik, Ragusa.

(*f*) Montenegro.

(5) General history of Austria-Hungary since 1526.

(6) General history of Europe since the French Revolution, with special reference to national movements. [*Note.*—Other periods of European history may be submitted for approval.]

(7) *Either* (*a*) General history of Yugoslav literature, *or* (*b*) Economic history and geography of Yugoslavia and the Balkan Peninsula.

(8) Essay in English.

(9) An oral examination, partly conducted in Serbo-Croat or Slovene.

Note.—In translation and essay papers the candidate must use either Serbo-Croat *or* Slovene consistently and may use either the Cyrillic script (for Serbian) or the Latin script (for Croat and Slovene) provided that he is consistent.

A knowledge of the German language is essential for this course.

MASTER OF ARTS (M.A.)

The M.A. Degree is conferred in the following Branches :—

Anthropology.
Archæology.
History of Art.
Classics.
Education.
Geography.
History.
Mathematics.
Mediæval and Modern Languages.
Oriental Languages.
Comparative Philology.
Philosophy.
Psychology.
Slavdonic and East European Studies.
Sociology.

[For the M.A. Degree in Architecture, *see* p. 508.]

Except as provided below, every candidate at the M.A. Examination must have taken the B.A. Degree as an Internal Student at least two academic years before the M.A. Examination or have satisfied the requirements of the Regulations for Postgraduate Students proceeding to a higher Degree (*see* p. 101 *et seq.*).

A student who, having passed the External Intermediate Examination, is admitted as an Internal Student to the Final B.A. Examination after pursuing a two years' course of study, and passes that Examination, may submit as his third year's course of study for the B.A. Degree a course for the M.A. Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the B.A. Degree, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.A. Examination after the lapse of one further academic year.

A student who, after attending a three years' course of study as an Internal Student, has *either* passed both the B.A. Honours Examination in Mathematics and the Examination in Advanced Subjects in Mathematics under the old Regulations, *or* obtained First Class Honours or Second Class Honours in the Upper Division at the B.A. Honours Examination in Mathematics under the revised Regulations, may present himself for the M.A. Examination in Mathematics after one further year.

Date of Examination

Except as provided below, the M.A. Examination will take place twice in each year, commencing on the first Monday in December and on the fourth Monday in May*, provided that if that day be Whit Monday the Examination will commence on the following Tuesday. The M.A. Examination in English without thesis and Part I of the M.A. Examination in Education will only be held in May ; Part II will be held in May and December.

No unsuccessful candidate will be permitted to re-enter within one year from the date of his first entry without the permission of the Examiners.

The title proposed for the thesis† must in all cases be approved by the University, for which purpose it must be submitted to the University not later than October 15th for the next ensuing May Examination or not later than April 15th for the next ensuing December Examination.‡ Any title submitted later than the prescribed date must be accompanied by a fee of 10*s.* 6*d.*

The time-table of the Examination will be furnished by the Academic Registrar to each candidate.

Every candidate entering for this Examination must apply to the Academic Registrar for an entry-form, which must be returned duly filled up, together with the proper fee, not later than February 1st for the May Examination and not later than September 15th for the December Examination.

The candidate must furnish, not later than April 1st for the May Examination and not later than October 15th for the December Examination, not less than four typewritten or printed copies of the thesis.

Details of Examination

The M.A. Examination will normally include : (1) a thesis, (2) a written examination, (3) an oral examination especially on the subject of the thesis.

[For Special Regulations in English, Oriental Languages, Geography and Mathematics, *see* under the subjects in question.]

In Mediæval and Modern Languages, the oral examination will in no case be restricted to the subject of the thesis.

The thesis shall be either a record of original work or an ordered and critical exposition of existing data with regard to a particular subject. The thesis must be written in English.

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*In 1951 only, the May Examination will begin on the third Monday in May.

† Candidates for the M.A. Degree in Geography with thesis must submit also the general scheme proposed for the thesis.

‡ Candidates are advised to submit, if possible, the titles of their theses not later than May 1st or December 1st in the year previous to their entry to the M.A. Examination in order to avoid delay in regard to the approval thereof.

Every candidate will be required to forward to the University with his entry-form a short abstract of his thesis (four copies) comprising not more than 300 words.

A candidate will not be permitted to submit as his thesis a thesis for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

An Internal Student submitting a thesis (or dissertation) in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawing and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A thesis which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of book-binders in London, who will bind theses to this specification at a cost of 10*s.* a copy, may be obtained from the Academic Registrar.]

If the Examiners consider that a candidate's thesis (or dissertation) is adequate, but that he has not reached the required standard in the written portion of the Examination, they may, if they think fit, recommend that the candidate be exempted on re-entry from presentation of a thesis (or dissertation). Similarly, if the Examiners consider that the candidate has reached the required standard in the written portion of the Examination, but that his thesis (or dissertation) is not adequate, they may, if they think fit, recommend that he be exempted on re-entry from the written portion of the Examination. In both the above cases the Examiners may, if they so desire, examine the candidate again *viva-voce* when he re-enters for the Examination.

A list of candidates for the M.A. Degree who have satisfied the Examiners, arranged in alphabetical order in the several branches, will be published by the Academic Registrar. A mark of distinction will be placed against the names of those candidates who show exceptional merit.

No candidate will be permitted to publish his thesis as a Thesis approved for the M.A. Degree without the special permission of the University. Applications for such permission must be made after the Degree of Master of Arts has been granted. Any thesis in respect of which such permission has been granted shall contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

A diploma for the M.A. Degree, under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Fee

The fee for each entry to the whole Examination is 12 guineas (in and after 1951, 15 guineas), or 6 guineas for each Part of the M.A. Examination in Education (in and after 1951, 7½ guineas).

The fee payable on re-entry by candidates who have been exempted either from the written portion of the examination or from the presentation of a thesis is 6 guineas (in and after 1951, 7½ guineas).

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Candidates who have taken the M.A. Degree in one branch or in one of the languages included in the branches of Mediæval and Modern Languages and Oriental Languages may enter for the M.A. Degree in another branch or another language at any subsequent M.A. Examination on payment of a fee of 12 guineas (in and after 1951, 15 guineas), provided that they comply with the Regulations in all other respects.

SYLLABUSES

The syllabuses and special regulations are as follows :—

Anthropology

All candidates, before proceeding to the M.A. Examination in a branch of Anthropology, will be required to have passed the B.A. Honours Examination in Anthropology, unless in any special cases the University, on the Report of the Board of Studies in Anthropology, grant exemption from the general rule.

Candidates not exempted, and presenting themselves for the B.A. Honours Examination as a qualifying examination, are not required to take a subsidiary subject.

The written portion of the Examination will consist of one or more papers on subjects cognate to that of the thesis.

Archæology

Candidates for the M.A. Degree in Archæology will be required during their first year of study to pass as a qualifying examination either the Academic Diploma Examination in Archæology, or such examination as may be prescribed by the University, unless exempted therefrom in special cases. A candidate who has taken an archæological subject, or subjects, as part of his course for a Degree in this or another University, or for an approved Diploma in certain approved educational institutions of University rank, and who complies with the Regulations in all other respects, may apply for exemption from the qualifying examination.

Every student desiring to enter for the M.A. Degree in Archæology will be required to pursue an approved course of study, unless he has pursued a course of study in Archæology in this or some other University approved for the purpose. The proposed course of study should be submitted for approval as early as possible in the session in which it is commenced.*

The M.A. Degree will be awarded on a thesis, supplemented by a *viva-voce* examination and by one or more papers on subjects cognate to that of the thesis.

When the candidate has submitted the subject of his thesis for approval in accordance with the General Regulations on p. 419, he will be informed in what subject or subjects cognate to that of his thesis he will be examined by means of one or more papers.

* For fees payable in connexion with late applications, *see* p. 3.

History of Art

All candidates who have not obtained the B.A. Honours Degree in the History of Art are normally required to pass as a qualification for admission to the M.A. Examination the B.A. Honours Examination in the History of Art, but candidates may apply to be exempted from the whole or part of this Examination on the ground of having passed an examination equivalent thereto.

Candidates presenting themselves for the B.A. Honours Examination as a qualifying examination are not required to take a subsidiary subject.

The written portion of the M.A. Examination will consist of one or more papers on a subject or subjects cognate to the thesis. The paper or papers will be prescribed at the time when the subject of the thesis is under consideration.

Classics

A candidate for the M.A. Degree Examination in Classics who has not previously obtained First Class or Second Class Honours in Classics or in Latin or in Greek at the B.A. Honours Examination in this University or in the Classics School of a University approved for the purpose will be required before proceeding to the M.A. Examination to take the paper of translation into Latin (or Greek) prose and two papers of unseen translation from Latin (or Greek) at the B.A. Honours Examination in Classics (pp. 363–66) in which he shall qualify by reaching the standard demanded for a Second Class.

The M.A. Examination in Classics will be divided into five groups or sections ; and a candidate will be examined in one or two (but not more) sections as he prefers. Students may take the various sections in accordance with the above rule consecutively at intervals of not less than a year, but the full fee will be charged for each such fresh entry.

In each section, work of a high quality in a portion of the papers will be allowed to compensate for work of a less high quality in other portions of them.

It is not expected that in this subject the length of the thesis, except in special cases, should exceed twenty thousand words.

Candidates registered under the Regulations for Postgraduate Students proceeding to a higher Degree who produce evidence that they have passed in some other approved University a General Examination in the subject of the section they select (such Examination being in the opinion of the University equivalent in scope and standard to that prescribed for the same section of the M.A. Examination in Classics in this University) may be allowed to take, instead of the prescribed written Examination, two or more papers on subjects cognate to that of their thesis, or on such other subjects as the Senate may prescribe. Applications under this Regulation must be made by candidates when they submit the subjects of their theses for approval.

The following are the sections in the branch of Classics :—

A. Scholarship and Literature.
B. Ancient Philosophy.
C. Ancient History.
D. Classical Archæology.
E. Comparative Philology of Latin and Greek.

Section A.—Scholarship and Literature

The written portion of the Examination will consist of six papers of three hours each, as follows :—

1. Translation into Greek prose or Latin prose at the choice of the candidate.

2. Translation from Greek.

3. Translation from Latin.

4. Questions on the forms, constructions, and metre of Greek, with short passages from Greek authors for interpretation and emendation. Questions on the history of Greek literature.

5. Questions on the forms, constructions, and metre of Latin, with short passages from Latin authors for interpretation and emendation. Questions on the history of Latin literature.

6. Questions on the general principles of textual criticism (including the palæography and history of either Greek or Latin MSS.), with special reference to the text of an author or portion of an author, and on the history of scholarship as applied to the text of that author. Four authors (one Greek poet, one Greek prose writer, one Latin poet, one Latin prose writer) to be prescribed, from which the candidate should select one.

The prescribed authors are :—

Sophocles.

Thucydides.

Juvenal.

Livy : The First Decade *or* The Third Decade.

Section B.—Ancient Philosophy

The written portion of the Examination will consist of six papers of three hours each, as follows :—

1. The *Republic* of Plato.

2. The *Nicomachean Ethics* of Aristotle.

3. Plato and his contemporaries.

4. Aristotle and his contemporaries.

5 and 6. Pre-Platonics and Post-Aristotelians : both subjects will be spread over both papers. In these two papers a candidate may devote all or most of his attention to one of the two groups of Philosophers concerned.

All the papers 3, 4, 5, 6 will contain short passages for translation and comment.

Section C.—Ancient History

The written portion of the Examination will consist of six papers of three hours each as follows :—

1. Greek History to 146 B.C.

2. Roman History to A.D. 280.

3. Ancient Civilisation. This paper will be divided into the following four sections ; candidates will be required to answer questions from at least two :—

(i) Social and economic history.

(ii) Literature.

(iii) Art and architecture.

(iv) Religion and philosophy.

4. The documentary sources (inscriptions and coins) of *either* Greek *or* Roman History, according to the field of the thesis. By special permission a candidate may substitute for this a paper on papyri.

5. A special period to be prescribed as a background for the thesis.

6. The sources of the special period.

Section D—Classical Archæology

The written portion of the Examination will consist of five papers of three hours each, as follows :—

1. Architecture, including the chief buildings of Athens and Rome.

2. Sculpture and Sculptors.

3. Painting, including vases ; coins ; and gems.

4. Religion, including cults and myths ; daily life, including customs and dress.

5. Epigraphy.

Papers 1–4 to include passages from ancient authors for translation and comment.

In papers 3 and 4 a candidate may devote all or most of his attention to one of the subjects included.

In the oral examination, works of art and other antiquities, including inscriptions, will be submitted to the candidate for identification, decipherment, and comment.

Section E—Comparative Philology of Latin and Greek

The written portion of the Examination will consist of five papers of three hours each, as follows :—

1. The general principles and methods of Comparative Philology, including the elements of Phonetics. The history of the Indo-European family of languages, with particular reference to ancient Greek and Latin. The outlines of the development and inter-relations of the various communities speaking Indo-European languages in prehistoric periods.

2 and 3. The history of the sounds, words, and significations of ancient Greek, including the dialects, and of Latin, including popular Latin, and of the other cognate dialects of ancient Italy, in so far as they bear directly upon Latin.

4 and 5. The history of the forms and constructions of ancient Greek, including the dialects, and of Latin, including popular Latin, and of the other cognate dialects of ancient Italy, in so far as they bear directly upon Latin.

Education

[*For Examinations up to May*, **1952**, *inclusive. For Revised Regulations, see p.* 430.]

The M.A. Degree in Education may be obtained in any one of four Sections. The Sections are as follows :—

A. Principles and Practice of Education.

B. Theory and History of Educational Institutions and Administration.

C. Pedagogical Research.

D. Philosophy and History of Education.

The course of study for students admitted under the Regulations for Postgraduate Students extends over at least two years, but the approved course for the Teacher's Diploma or Postgraduate Certificate in Education for Internal Students will be deemed to be one year's course for the M.A. Degree.

A candidate for admission to the M.A. Examination in Education shall be required

(1) to have obtained the Teacher's Diploma or Postgraduate Certificate in Education of this University ;

or (2) to have undergone a course of training for the profession of teacher approved by the University for this purpose, and to have passed an approved professional examination.

or (3) to have obtained the M.A. in Education in some University approved for this purpose and to have had approved teaching experience ;

or (4) to possess qualifications accepted by the University as equivalent to one of the foregoing.

The M.A. Examination in all Sections will include a thesis (the subject of which must be submitted for approval), and a candidate for the M.A. in any Section may submit in support of his candidature any printed contribution or contributions to the advancement of any of the subjects included in any Section of the Examination, which he may have published in his own name either independently or conjointly. The candidate must furnish not less than four copies of the printed contributions referred to.

The Examination will be divided into two parts. Part I of the Examination will consist of :—

The written examination.

Practical Teaching examination (Section A only).

Part II of the Examination will consist of :—

The thesis.

An oral examination which shall be mainly related to the thesis.

A candidate shall not be approved by the Examiners unless he has shown a competent knowledge and proficiency in both Parts of the Examination. A candidate may present himself for the two Parts of the Examination together or separately, but if taken separately Part I must be taken first.

The special Regulations applying to the several Sections are as follows :—

Section A.—PRINCIPLES AND PRACTICE OF EDUCATION

A candidate for the Examination in Section A must submit for approval by the University, not later than March 1st* in the year of the Examination, *either*

(*a*) evidence of having had not less than three years' teaching experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof ;

or (*b*) evidence of having had not less than five years' teaching experience including not less than one year's experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof.

A certificate of such teaching experience signed by some responsible person will normally be required.

* Candidates may apply to the University at an earlier date for information with regard to the approval of their teaching experience.

The foregoing requirements in respect of length of teaching experience will be deemed to be satisfied if evidence is produced that the prescribed term of teaching experience will have been completed before the end of the month of July in the year in which the examination is held.

The University may in special cases admit to the examination a candidate who has had not less than five years of approved teaching experience, has subsequently passed the examination for the Teacher's Diploma or Postgraduate Certificate in Education and has in other respects complied with the requirements under this Section.

Subjects of Examination

Candidates in Section A will be examined in :—

(i) The general principles of Education (two papers).

(ii) The methods and results of experimental Education (one paper).

(iii) One of the following (one paper) :—

(*a*) Advanced Educational Psychology.

or (*b*) Methods of teaching one of the following subjects :—

Language and Literature, with special reference to one or more of the modern or ancient languages ; History ; Geography ; Mathematics ; Science, with special reference to one or more of the sciences taught in secondary schools.

or (*c*) Method in Religious Education.

(iv) Practical teaching and class management.

Every candidate will be required to return to the Academic Registrar, together with his entry-form, a brief statement of his teaching experience setting out the subjects he has taught and distinguishing, if necessary, between his principal subjects and his subsidiary subjects.* Every candidate who. at the time of the examination, will be teaching regularly in a school or college must also return a statement showing the subjects and classes he will be teaching and the hours at which the classes are ordinarily taken.

A candidate who, at the time of the examination, is teaching regularly in a school or college, will, if possible, be examined in practical teaching in that school or college. A candidate who cannot be examined in a school or college in which he is teaching regularly will be examined in some other school or college.

Every candidate will be informed, not less than fourteen days before the examination, (i) of the school or college in which he is to be examined, (ii) of the morning or afternoon when the Examiners will visit the school or college for the purpose of conducting the examination, and (iii) of the subject or subjects which he will be expected to teach in their presence. The candidate will be required to return, not less than seven days before the examination, a statement of the topic or topics, within the subject or subjects prescribed by the Examiners, with which he proposes to deal. The statement must include an indication of the standard of the class, of the work it has already done on the subject and of the ground to be covered in the lesson or lecture to be given in the presence of the Examiners.

The Examiners will be at liberty to apply, without previous notice, any further test they may deem desirable in order to form an opinion of the candidate's competence as a teacher in the subjects which he professes.

* If the candidate selects for section (ii) of the written examination the methods of teaching a particular subject or group of subjects, that subject or group of subjects must constitute or be included in the subject-matter of the candidate's practical examination.

Every candidate must also present a thesis which shall be either (*a*) a record of original work in, or (*b*) a report upon some topic within the scope of the subjects under (i), (ii) or (iii) above, and the thesis must tend to the advancement of educational practice.

A candidate will not be allowed to offer one of the subjects set forth under (iii) above, or to submit a thesis dealing with the methods of teaching in any subject unless he has previously taken Honours at a Final Examination for a First Degree in the subject the methodology of which he selects for examination, provided that he may offer the methods of teaching Geography, or submit a thesis dealing with the methods of teaching Geography, if he has taken Honours in Geography at a Final Examination for a First Degree or if he has taken Honours at the B.Sc. (Economics) Examination with Geography as his selected subject, and further provided that he may offer Method in Religious Education, or submit a thesis dealing with Method in Religious Education, if he has passed the B.D. Honours Examination or the M.Th. Examination, or B.A. (General) Examination with Theology.

A candidate registered under the Regulations for Postgraduate Students proceeding to a higher Degree will not be exempted from the requirement set forth in the preceding paragraph unless he produces evidence of having passed in another University an examination approved by the University as equivalent to the Examination required in other cases.

Section B.—THEORY AND HISTORY OF EDUCATIONAL INSTITUTIONS AND ADMINISTRATION

A candidate for the Examination in Section B must submit, for approval by the University, not later than March 1st* in the year of the Examination, *either*

(*a*) evidence of having had not less than three years' teaching experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof;

or (*b*) evidence of having had not less than five years' teaching experience, including not less than one year's experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof.

Educational administrative experience approved by the University may be regarded as equivalent to part of the 'five years' teaching experience' just mentioned, provided that the whole experience includes not less than one year's teaching in an approved school or schools.

A certificate of such teaching or educational experience signed by some responsible person will normally be required.

The foregoing requirements in respect of length of experience will be deemed to be satisfied if evidence is produced that the prescribed term of experience will have been completed before the end of the month of July in the year in which the Examination is held.

The University may in special cases admit to the examination a candidate who has had not less than five years of approved experience, has subsequently passed the examination for the Teacher's Diploma or Postgraduate Certificate in Education, and has in other respects complied with the requirements under this Section.

* Candidates may apply to the University at an earlier date for information with regard to the approval of their teaching experience.

Subjects of Examination

Candidates in Section B will be examined in :—

(i) The general principles of Education (one paper).

(ii) The general history of Education (one paper).

(iii) The theory, history and present state of Educational Institutions and Administration in the United Kingdom (two papers).

(iv) The educational system of some country, outside the United Kingdom, approved for this purpose by the University (two papers).

Every candidate must also submit a thesis which shall be *either*

(*a*) a report upon existing educational institutions or systems of educational administration in the United Kingdom or abroad.

or (*b*) a contribution to the theory, history, or criticism of educational institutions or administration.

Section C.—PEDAGOGICAL RESEARCH

A candidate in Section C must submit for examination a thesis which shall be either (*a*) a record of original work, or (*b*) an ordered and critical exposition of existing data, with regard to some subject within the purview of the Examination for candidates in Section A or Section B. He will be required also to satisfy the Examiners in a written examination on the general principles of Education (two papers).

Not later than May 15th in the year preceding that in which the student proposes to enter for Examination he shall make an application to the University for registration as a research student. In this application the student must :—

(i) state the subject proposed for his thesis ;

(ii) state the general nature of the research, the results of which he proposes to submit ;

(iii) produce such evidence as he may be able to furnish of his fitness to prosecute the said research.

A candidate for admission to the Examination in Section C must submit, for approval by the University, not later than March 1st* in the year of the Examination, *either*

(*a*) evidence of having had not less than two years' teaching experience subsequent to passing the Examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof ;

(*b*) evidence of having had not less than five years' teaching experience, including not less than one year's experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof.

A certificate of such teaching experience signed by some responsible person will normally be required.

The foregoing requirements in respect of length of teaching experience will be deemed to be satisfied if evidence is produced that the prescribed term of teaching experience will have been completed before the end of the month of July in the year in which the Examination is held.

* Candidates may apply to the University at an earlier date for information with regard to the approval of their teaching experience.

The University may in special cases admit to the Examination a candidate who has had not less than five years' of approved teaching experience, has subsequently passed the examination for the Teacher's Diploma or Postgraduate Certificate in Education, and has in other respects complied with the requirements under this Section.

The student may after he has sent in his application modify the programme of his research or institute a new research provided always that any such change in or addition to his programme shall be submitted to the University in order that it may be considered in the same manner as was the original proposal.

A research student shall for a period of not less than one year carry on his research in a School or Schools of the University or under the supervision of a Teacher or Teachers of the University.

Section D.—THE PHILOSOPHY AND HISTORY OF EDUCATION

A candidate for the Examination in Section D must submit for approval by the University, not later than March 1st,* in the year of the Examination, *either*

(*a*) evidence of having had not less than three years' teaching experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof;

or (*b*) evidence of having had not less than five years' teaching experience including not less than one year's experience subsequent to passing the examination for the Teacher's Diploma, the Postgraduate Certificate in Education, or any other approved examination accepted in lieu thereof.

A certificate of such teaching experience signed by some responsible person will normally be required.

The foregoing requirements in respect of length of teaching experience will be deemed to be satisfied if evidence is produced that the prescribed term of teaching experience will have been completed before the end of the month of July in the year in which the Examination is held.

The University may in special cases admit to the Examination a candidate who has had not less than five years of approved teaching experience, has subsequently passed the examination for the Teacher's Diploma or Postgraduate Certificate in Education, and has in other respects complied with the requirements under this Section.

The Degree of M.A. in Education in Section D will be conferred on candidates who satisfy the Examiners in the following :—

(i) Principles of Education (one paper).

(ii) The general history of Education (two papers).

or

The development of educational theory (two papers).

Every candidate must also submit a thesis falling within the scope of the Philosophy or History of Education, including (i) the development and criticism of the Theory of Education, and (ii) the criticism of Educational Systems and the criticism of the works of great thinkers on Education.

* Candidates may apply to the University at an earlier date for information with regard to the approval of their teaching experience.

Education

[*Revised Regulations for Examinations in and after May*, **1951**]

A candidate for the M.A. Degree in Education will be required to pursue an approved course of study extending over not less than two academic years for full-time students and not less than three academic years for part-time students.

Before entry upon the course of study the student will be required :—

(i) to have obtained the Teacher's Diploma, Postgraduate Certificate in Education or Teacher's Certificate of this University ; *or*

(ii) to have undergone a course of training for the profession of teacher, approved by the University for this purpose, and have passed an approved professional examination ; *or*

(iii) to possess qualifications accepted by the University as equivalent to one of the foregoing.

In addition all candidates shall be required to have obtained the Academic Diploma in Education unless specially exempted therefrom or unless they have been permitted to take that examination as a qualifying examination and have passed that examination at least one year before the conclusion of the M.A. course.

The M.A. Degree will be awarded on a thesis supplemented by a *viva-voce* examination, and, if required, by one or more papers on subjects cognate to that of the thesis.

When the candidate has submitted the subject of his thesis for approval in accordance with general regulations on page 419 he will be informed in what subject or subjects cognate to that of his thesis he may be examined by means of one or more papers.

Geography

Students who have taken the M.Sc. Degree in Geography will not be permitted to proceed to the M.A. Degree in Geography.

Candidates other than those who have obtained the B.A. Honours Degree in Geography or the B.Sc. (Special) Pass or Honours Degree in Geography or the B.Sc. (General) Honours Degree with Geography, or the B.A. (General) Degree with Geography in the First or Second Division in this University will generally be required to pass a qualifying examination consisting of four papers (to be selected by the University in relation to the branch of study to be offered at the M.A. Examination) of the B.A. Honours Examination in Geography and to reach at least 2nd Class Honours standard therein. Candidates who have obtained an equivalent Degree including Geography in another University may be exempted from the whole or part of the qualifying examination.

The M.A. Degree in Geography may be obtained in one of two ways. The candidate may either (1) be examined by written papers and a dissertation, or (2) submit a thesis.

(1) *M.A. in Geography without Thesis*

The M.A. Examination without thesis shall be on some major aspect of Geography or on the regional geography of an area of continental or sub-continental extent.

At least six months before the date of the Examination at which a candidate proposes to present himself he must submit for approval (*a*) the major subject in which he wishes to present himself for examination and (*b*) the section thereof on which he proposes to submit a dissertation, stating the proposed scope and method of treatment. He

shall then be informed whether such subjects are approved by the University for the purposes of the Examination. Any subject submitted later than the prescribed date must be accompanied by a fee of 10*s.* 6*d.*

The dissertation must be an ordered and critical exposition of existing knowledge of some part of the approved subject.

The Examination shall consist of :—

(*a*) The dissertation ;

(*b*) Two written papers on the approved subject ;

(*c*) An oral examination. It is, however, open to the Examiners to reject the candidate without holding an oral examination.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of his subject which he may have published independently or conjointly. Conjoint work must be accompanied by a statement showing clearly the candidate's own share in the work, which statement must be signed by his collaborator.

(2) *M.A. in Geography with Thesis*

The M.A. Examination will include (1) a thesis, (2) a written examination, and (3) an oral examination especially on the subject of the thesis. It is, however, open to the Examiners to reject the candidate without holding an oral examination.

The thesis must be a record of original work or other contribution to knowledge in some branch of Geography. Conjoint work may be submitted as a thesis for the Degree, provided that the student shall furnish a statement showing clearly his share in the conjoint work and further provided that such statement shall be countersigned by his collaborator.

When submitting the title of the thesis for approval candidates must also submit the general scheme proposed for the thesis.

The written portion of the M.A. Examination shall consist of one or more papers on a subject cognate to that of the thesis. The candidate will be informed of the subject in which he will be examined at the same time that the University communicates its decision regarding the approval of the subject proposed for the thesis.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of his subject which he may have published independently or conjointly. Conjoint work must be accompanied by a statement showing clearly the candidate's own share in the work, which statement must be signed by his collaborator.

History

All candidates entering for the M.A. Degree Examination in History who have not previously obtained either a First or Second Class Honours Degree in History at this or some other University in the United Kingdom, or a Degree from a University elsewhere which may be adjudged an equivalent qualification in History, will be required, before proceeding to the M.A. Examination to take not more than 6 papers of the B.A. Honours Examination to be specified in each case by the University and to reach at least Second Class standard therein.

Each candidate in submitting the subject of his thesis, as provided in the General Regulations on p. 419, must furnish a statement of his antecedent course of study or academic record. The candidate will thereupon be informed in what subject or subjects cognate to that of his thesis he will be examined by means of one or more papers.

Mathematics

Candidates, other than those who have taken the B.A. Honours Degree in Mathematics or the B.Sc. (Special) Pass or Honours Degree in Mathematics or the B.Sc. (General) Honours Degree with Pure and Applied Mathematics or the B.A. (General) Degree with Pure and Applied Mathematics in the First or Second Division in this University, will generally be required to pass a qualifying examination before proceeding to the M.A. Degree. In determining the nature of this qualifying examination regard will be paid to the candidate's academic record and to the subjects which he proposes to offer for the M.A., but the examination will normally consist of the papers for the B.A. Honours Examination in Mathematics.

Students who have not taken the B.A. Degree as Internal Students are not eligible as candidates for the M.A. Degree as Internal Students, unless registered under the Regulations for Postgraduate Students proceeding to a higher Degree. Students who have taken the M.Sc. Degree in Mathematics will not be permitted to proceed to the M.A. Degree in Mathematics.

The Examination for the M.A. Degree in Mathematics will be in one or two subjects of advanced mathematics to be approved in each case by the University. If only one subject is offered, a correspondingly higher standard will be required and the course will normally include the study of original memoirs.

A candidate must submit at some time during his course, but not later than six months before the Examination, a statement of the subject or subjects which he proposes to offer for the M.A. Examination, and may, if he so desire, submit a statement as to the line of treatment; and he shall be informed whether the University is prepared to approve such subjects for the purposes of the M.A. Examination. Any statement submitted later than the prescribed date must be accompanied by a fee of 10s. 6d.

A candidate may submit in connexion with his candidature for the M.A. Examination either (1) a dissertation which shall be an ordered and critical exposition of existing knowledge of part or the whole of the subject or subjects submitted by him, or (2) a thesis which shall be a record of original work; but such a dissertation or thesis shall not be required.

The candidate is also invited to submit, in support of his candidature, any printed contribution or contributions to the advancement of Science which he may have published independently or conjointly.

The Examination shall consist of (*a*) written papers, in which subjects may be proposed for essays, (*b*) an oral examination, (*c*) a report on a problem or problems proposed by the Examiners; or such of them as may be determined by the Examiners in each case, provided that the Examination shall not consist of (*c*) alone. In determining the scope and method of examination regard will be paid to the dissertation or thesis (if any) submitted by the candidate, who will be informed generally as to this matter as soon as possible.

Mediæval and Modern Languages

All candidates, before proceeding to the M.A. Examination in a branch of Mediæval and Modern Languages, will be required to pass the B.A. Honours Examination in that branch unless in any special case the University, on the report of the Board of Studies, grant exemption from the general rule.

Candidates not exempted and presenting themselves for the B.A. Honours Examination are not required to take a subsidiary subject.

The following are the subjects any one of which may be offered for the M.A. Examination in Mediæval and Modern Languages :—

Celtic Language and Literature.
Dutch Language and Literature.
English Language and Literature.
French Language and Literature.
German Language and Literature.
Italian Language and Literature.
Portuguese Language and Literature.
Scandinavian Languages and Literatures.
Spanish Language and Literature.

Every candidate will be submitted to an oral examination, which will not be restricted to the subject of the Thesis.

Celtic Language and Literature

The written portion of the Examination in Celtic Language and Literature will consist of four papers as follows :—

Either (but not both) of the following Sections I and II :—

I.—Irish Language and Old and Middle Irish Literature to the close of the Sixteenth Century.

The relations of Irish (1) to Welsh, (2) to Scotch Gaelic and Manx, (3) to the Other Aryan Languages.

[Instead of Old and Middle Irish Literature, candidates may take Modern Irish Literature together with the Literature of the Scotch Gaelic and Manx Languages.]

II.—Welsh Language, and Old and Middle Welsh Literature to the close of the Sixteenth Century.

The relations of Welsh (1) to Irish, (2) to Old Cornish and Breton, (3) to the Other Aryan Languages.

[Instead of Old and Middle Welsh Literature, candidates may take Modern Welsh Literature, together with the Literature of the Cornish and Breton Languages.]

Dutch Language and Literature

[As for Portuguese, p. 438 below]

English Language and Literature

[*For Examinations in* **1951**]

Candidates for the M.A. Degree in English may be examined either (1) by thesis, two written papers and an oral examination, or (2) by eight written papers and an oral examination.

The M.A. Examination in English without thesis will be held only once a year in May, and the M.A. Examination with thesis will be held twice a year in accordance with the General Regulations for the M.A. on p. 419 above.

All candidates before proceeding to the M.A. Examination in English will be required to pass the B.A. Honours Examination in English unless in any special case the Senate, on the report of the Board of Studies, grant exemption from the general rule. Candidates who have passed the B.A. (General) Examination with English in the First or Second Division may apply for exemption in whole or in part from this general rule.

I.—*M.A. in English with Thesis*

The M.A. Examination will include (1) a thesis, (2) a written examination and (3) an oral examination.

The written portion of the Examination will consist of :—

(1) One paper on Translation from Prescribed Old and Middle English Texts with commentary.

(2) One paper on a prescribed subject to be chosen by the candidate from the following :—

(*a*) Old Icelandic Literature with specified texts.

(*b*) Special study of a period of literature, viz., one of the following : Origins to 1100 ; 1100 to 1400 ; any century thereafter.

[For Prescribed Texts *see* Appendix to these Regulations]

II.—*M.A. in English without Thesis*

The written examination will be divided into two Sections, of which candidates must offer one. In both Sections there will be eight papers. In addition there will be an oral examination.

Section A

(1) History of the Language from 1400, with commentary on unspecified Literary texts.

(2) Unspecified Old and Middle English Texts ; translation and commentary.

(3), (4), (5) A period of literature to be selected by the candidate from the following :—Origins to 1100 ; 1100 to 1400 ; any century thereafter. (Three papers :—(*a*) History of literature ; (*b*) The life and thought of the period ; (*c*) A special author of the period, selected by the candidate and approved by the University.)

(6) Another European literature, selected by the candidate and approved by the University, to be studied, from the original texts, in relation to the candidate's selections under 3, 4, 5, 7 and 8.
or The History of Criticism in Europe in relation to the period selected, under 3, 4 and 5.

(7) One kind of English literature to be selected by the candidate from the following :—Epic and Romance ; Drama ; Lyric ; Novel ; History and Biography ; the Sermon.

(8) A special subject to be selected by the candidate from the following :—History of Shakespearean scholarship ; History of Prosody ; Palæography ; Bibliography ; History of the Stage in Europe ; History of Philosophy in England ; History of Religious Thought in England ; American Literature ; Literary and Colloquial English of the Twentieth Century ; Mediæval Latin, *or* Renaissance Latin with prescribed texts ; Old French, with prescribed texts ; Mediæval and Renaissance Italian, with prescribed texts.

Section B

(1) History of English Literature before 1660.

(2) History of English Literature after 1660.

(3), (4) English Philology. (Two papers :—(*a*) History of the Language to 1400 ; (*b*) History of the Language from 1400 to the present day, with commentary upon unspecified texts.)

(5) Unspecified Old English texts (including dialects) ; translation and commentary.

(6) Unspecified Middle English texts (including dialects) ; translation and commentary.

(7) Old Icelandic literature, with prescribed texts.

(8) A Special Subject to be selected by the candidate from the following :—History of Anglo-Saxon Scholarship ; Gothic and Germanic Philology ; Anglo-Saxon Archæology (including Epigraphy) ; the Philology of Names ; History and Methods of Lexicography ; Modern Dialects of the English Language ; Literary and Colloquial English of the Twentieth Century ; Old Saxon and Old High German, with prescribed texts ; Mediæval Latin or Renaissance Latin, with prescribed texts ; Old French and Anglo-Norman, with prescribed texts.

[For Prescribed Texts *see* Appendix to these Regulations]

ENGLISH LANGUAGE AND LITERATURE

[*Revised Regulations for Examinations in and after* **1952**]

Candidates for the M.A. Degree in English may be examined either (1) by thesis, one written paper and an oral examination, or (2) by seven written papers and an oral examination.

The M.A. Examination in English without thesis will be held only once a year in May, and the M.A. Examination with thesis will be held twice a year in accordance with the General Regulations for the M.A. on p. 419 above.

Candidates proceeding to the M.A. Degree Examination in English shall have obtained either a First or Second Class Honours Degree in English of this University, or of some other University of the United Kingdom or elsewhere which may be adjudged an equivalent qualification.

Candidates who do not hold the above qualifications will be required by the University, on the recommendation of the Board of Studies, to take some or all of the prescribed papers of the B.A. Honours Examination in English as a qualifying examination, and to reach at least Second Class standard therein.

Candidates who have passed the B.A. (General) Examination of this University (with English) in the First or Second Division may, in exceptional circumstances, apply for exemption from the qualifying examination.

Candidates for the M.A. Degree Examination who are not graduates of this University will be required, on applying for registration, to produce evidence

(*a*) of an adequate knowledge of Old and Middle English *or*

(*b*) of an appropriate linguistic training*.

I. *M.A. in English with Thesis*

The M.A. Examination will include (1) a thesis, (2) a written examination and (3) an oral examination.

In the written portion of the examination candidates will be examined by *one* of the following papers :—

(*a*) Unspecified Old English texts ; translation and commentary.

(*b*) Unspecified Middle English texts ; translation and commentary.

(*c*) Principles of English Philology.

(*d*) Old Icelandic, with specified texts.

*i.e., a training in a classical language such as Greek, Latin, Sanskrit, Classical Chinese, Classical Arabic or Classical Persian.

(*e*) Palæography and Bibliography.

(*f*) Literary Forms and Varieties of Style; the various literary "kinds", and the style of writing characteristic of different "kinds" and of different periods.

(*g*) Literature, Life and Thought of the period relevant to the thesis.

The candidate's choice of paper should normally be relevant to the subject of his thesis and must be submitted by him to the University for approval at the time when he submits the title of his thesis.

[For Prescribed Texts *see* Appendix to these Regulations]

II. *M.A. in English without Thesis*

The written examination will be divided into two Sections, of which candidates must offer one. In both Sections there will be seven papers. In addition there will be an oral examination.

Section A

(1) History of the Language from 1400, with commentary on unspecified texts; *or*

Unspecified Old and Middle English Texts; translation and commentary.

(2), (3), (4) A period of literature to be selected by the candidate from the following:—Origins to 1100; 1100 to 1400; any century thereafter. (Three papers:—(*a*) History of Literature; (*b*) The life and thought of the period; (*c*) A special author of the period, selected by the candidate and approved by the University.)

(5) A period of another European literature, selected by the candidate in relation to his choice of period under 2, 3 and 4; approved by the University; and to be studied in the original texts; *or*

The History of Criticism in Europe in relation to the period selected under 2, 3 and 4.

(6) One kind of English Literature to be selected by the candidate from the following:—Epic and Romance; Drama; Lyric; Novel; History and Biography; the Sermon.

(7) A special subject to be selected by the candidate from the following:—History of Shakespearean scholarship; History of English Prosody; Palaeography; Bibliography; History of the Stage in Europe; History of Philosophy in England; History of Religious Thought in England; American Literature; Literary and Colloquial English of the Twentieth Century; Mediæval Latin *or* Renaissance Latin with prescribed texts; Old French, with prescribed texts; Mediæval and Renaissance Italian, with prescribed texts.

Section B

(1) History of English Literature before 1660; *or*

History of English Literature after 1660.

(2), (3) English Philology. (Two papers:—(*a*) History of the Language to 1400; (*b*) History of the Language from 1400 to the present day, with commentary upon unspecified texts.)

(4) Unspecified Old English texts (including dialects); translation and commentary.

(5) Unspecified Middle English texts (including dialects); translation and commentary.

(6) Old Icelandic literature, with prescribed texts.

(7) A Special Subject to be selected by the candidate from the following :—History of Anglo-Saxon Scholarship ; Gothic and Germanic Philology ; Anglo-Saxon Archæology (including Epigraphy) ; the Philology of Names ; History and Methods of Lexicography ; Modern Dialects of the English Language ; Literary and Colloquial English of the Twentieth Century ; Old Saxon and Old High German, with prescribed texts ; Mediæval Latin or Renaissance Latin, with prescribed texts ; Old French and Anglo-Norman, with prescribed texts.

[For Prescribed Texts *see* Appendix to these Regulations]

French Language and Literature

The written portion of the Examination in French Language and Literature will consist of two papers :—

(1) An essay in French on a subject bearing on the period or akin to the theme of the candidate's thesis.

(2) Translation (with commentary) : Three passages of French to be set : (i) Old French ; (ii) Renaissance French ; (iii) Modern French.

German Language and Literature

Candidates other than those who have obtained a First or Second Class Honours Degree in German Language and Literature at this or some other British University, or a Degree from a University elsewhere which may be adjudged an equivalent qualification, will be required, unless special exemption be granted, to pass a qualifying examination before proceeding to the M.A. Examination. The qualifying examination will normally consist of the whole or selected papers of the B.A. Honours Examination in German Language and Literature excluding the subsidiary subject.

The written portion of the Examination in German Language and Literature will consist of two papers containing questions on two sections from the following Groups [Candidates will be required to choose one section from each Group] :—

(1) (*a*) Gothic, (*b*) Old Norse, (*c*) Old Saxon, (*d*) Old High German, (*e*) Middle High German. A study of the historical and social background as well as of the literary and linguistic problems will be required. There will be no set books. For further details see below.

(2) (*a*) The Sixteenth Century, (*b*) The Seventeenth Century, (*c*) The Eighteenth Century, (*d*) The Nineteenth Century, (*e*) The Twentieth Century. A study of the historical and social background as well as of the literary and linguistic problems of each period will be required. There will be no set books. Answers in this Group must be written in German.

Group (1)

(*a*) *Gothic.*—Candidates are expected to have read all the extant Gothic literature. They should be acquainted with the provenance of the Gothic alphabet, and an adequate knowledge of Greek is assumed. Some knowledge of the history of the Goths, with special reference to the life and times of Ulfilas, will be expected, and should be based on a study of the sources, either directly or in translation.

(*b*) *Old Norse.*—By Old Norse is understood the period from the earliest remains of the Norse language up to the Reformation, with the main emphasis on the Viking period. Candidates should have studied a representative selection of lays from the Poetic Edda and at least two of the longer classical Icelandic sagas. Skaldic poems will not be set for translation ; but some acquaintance with Skaldic style will be expected. Apart from the History of Old Norse Literature

candidates should study Norse mythology, the Norse attitude to life, and the general historical background, with special reference to the chronology and geographical extent of the Viking expeditions.

(*c*) *Old Saxon.*—Candidates should have read the whole of the Heliand, together with the Genesis fragments and the minor Old Saxon texts. Apart from the history of the literature some knowledge of the historical background and cultural centres and of relations with England will be expected. Candidates should have some knowledge of Old English biblical poetry as a background to Old Saxon.

(*d*) *Old High German.*—By Old High German is understood the period from the earliest remains of the High German language up to about the year 1050. Candidates should read the texts contained in W. Braune: *Althochdeutsches Lesebuch,* supplementing these by the additional texts contained in E. Steinmeyer: *Kleinere Althochdeutsche Sprachdenkmäler.* They should consult Sievers' edition of Tatian, one of the Otfrid editions, the Isidor edition by Hench, and Sehrt's edition of Notker's Boethius translation. Apart from the history of Old High German literature candidates should acquaint themselves with the organisation of the Carolingian Empire, the general history of Germany during the period of the Saxon emperors, and the cultural influence of the Church.

(*e*) *Middle High German.*—Candidates should state on their entry-forms that they have made a special study of *one* of the following branches of the subject:—(i) The Heroic Epic, (ii) the Court Epic, (iii) Lyrical Poetry, (iv) Didactic Poetry.

Candidates offering any of the above sections (*a*)–(*d*) should submit to the University, at the time of entering for the Examination, a list of texts studied.

Italian Language and Literature

The written portion of the Examination in Italian Language and Literature will consist of two papers:—

(1) General questions to be treated in the manner of an essay on—

either (*a*) A special period of literature which has some relation to the thesis offered.

or (*b*) A special period of literature selected from the following:—
- (i) Early literature to the death of Dante.
- (ii) Renaissance literature, 1450 to 1575.
- (iii) Modern literature 1750 to the present day.

(2) Translation, chiefly from Early Italian, with commentary.

Portuguese Language and Literature

The written portion of the Examination will consist of two papers:—

(1) General questions, to be treated in the manner of an Essay. Candidates will not be required to write on more than one theme, and are advised not to attempt more than three.

(2) Translation, chiefly from Mediæval Languages, with commentary.

Scandinavian Languages and Literatures

The written portion of the Examination in Scandinavian Languages and Literatures will consist of two papers as follows:—

(i) Old Norse.

(ii) The study of a period of Literature with its historical and social background. Answers in this paper must be written in the language selected by the candidate for special study. The periods are (*a*) The Eighteenth Century, (*b*) The Nineteenth Century, and (*c*) the Twentieth Century.

SPANISH LANGUAGE AND LITERATURE

The written portion of the Examination in Spanish Language and Literature will consist of two papers :—

(1) General questions to be treated in the manner of an essay on—

either (*a*) A special period of literature which has some relation to the thesis offered.

or (*b*) A special period of literature selected from the following :—

(i) Early literature to La Celestina.

(ii) The literature of the sixteenth and seventeenth centuries.

(iii) Modern literature to the present day.

(2) Translation, chiefly from Early Spanish, with commentary.

Oriental Languages

All candidates, before proceeding to the M.A. Examination in a branch of Oriental Languages, will be required to pass the B.A. Honours Examination in that branch, unless in any special case the University, on the report of the Board of Studies, grant exemption from the general rule. Before proceeding to the M.A. Examination in Old and Middle Iranian candidates will, unless granted exemption, be required to pass the B.A. Honours Examination in *either* Persian *or* Indo-Aryan.

The M.A. Degree in Oriental Languages may be taken in any of the following branches :—

Arabic.	Old and Middle Iranian.
Bengali.	Japanese.
Chinese (Classical).	Persian.
Hebrew and Aramaic.	Sinhalese.
Hindi.	Tamil.
Indo-Aryan.	Urdu.

In each subject the candidate may choose *either* examination with thesis *or* examination without thesis, except in the case of Bengali, Hindi, Tamil, and Urdu where examination shall be with thesis.

(i) *Examination with Thesis*

The Examination will consist of :—

1. A thesis on a subject to be approved by the University not less than one year before entry to the examination.
2. A written examination consisting of two papers dealing with subjects cognate to the subject of the thesis as prescribed by the University. The paper will include translation from unspecified texts.
3. An oral examination.

(ii) *Examination without Thesis*

The details of the written examinations in the several subjects are as follows :—

[For Prescribed Texts *see* Appendix to these Regulations]

ARABIC

The examination will consist of seven papers of three hours each.

1–2. Translation from specified texts with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Translation from English into Arabic.

5. The history, literature, and institutions of the Arabs.

6–7. Special subject—Two papers on one of the following subjects to be chosen by the candidate :—

[Candidates will be required to show a general acquaintance with the principal Arab and European works on the subject selected and a more detailed knowledge of the prescribed books.]

(1) Literature : Poetry to the end of the Ummayad period.
(2) Literature : Abbasid poetry.
(3) Literature : Prose to A.D. 500.
(4) Literature : Arabic literature in Spain.
(5) Literature : Modern Arabic.
(6) Koranic exegesis.
(7) Muslim theology.
(8) Arabic grammarians.

Chinese (Classical)

The examination will consist of seven papers of three hours each, viz., the five papers of any one of the sections A–E below together with the first two papers of any other section, to be selected by the candidate.

Note.—Instead of paper 2 in any section candidates may choose a paper in Japanese, *or* Tibetan, *or* Manchu, *or* Mongolian, *or* Pali, *or* Sanskrit, which will consist of translation from unspecified texts with questions on their language.

A. *Classics*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Chinese classical literature.

5. (*a*) Confucian institutions ; *or*
(*b*) The history of the Chou dynasty.

B. *Buddhism*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Chinese Buddhist literature.

5. The history of Chinese Buddhism.

C. *History*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The sources relating to the period selected under 5 below.

5. The history of *either* (*a*) the Former Han dynasty, *or* (*b*) the T'ang dynasty.

D. *Poetry*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Chinese poetical forms.

5. The history of Chinese poetry.

E. *Prose-Literature*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Chinese prose styles.

5. The history of Chinese prose literature.

HEBREW AND ARAMAIC

The examination will consist of seven papers of three hours each in any ONE of the sections A–E below, to be selected by the candidate.

A. *Biblical Hebrew and Aramaic*

1–2. Translations from (*a*) prose, (*b*) poetical parts of the Old Testament, and (*c*) Prophets; questions on their language and subject-matter. Candidates will be expected to translate an ordinary passage of the Jewish commentators and portions of the Greek and Aramaic versions bearing upon a given Old Testament text.

3. Grammar and composition.

4. History of the Hebrew people to A.D. 70.

5. The history of the religion of the Hebrew people to A.D. 70.

6. The history of the Hebrew text of the Canon and of the Greek and Aramaic versions.

7. Introduction to the books of the Old Testament.

B. *Rabbinic and Talmudic Literature and Languages*

1. Translation from specified and unspecified texts of the Mishna with questions on their grammar and subject-matter.

2. Translation from specified and unspecified texts of the Talmud with questions on their grammar and subject-matter.

3. Translation from and interpretation of the Rabbinic commentaries on the Bible, "commentaries" to be understood in the narrower sense.

4. Translation from and commentary on Midrash Tannaitic, and Amoraic.

5. Liturgy and poetry (to include only the Spanish Hebrew poets) with questions on metre.

6. Translation from and commentary on the works of specified Jewish mediæval philosophical authors.

7. The history of Jewish literature to A.D. 1600.

The following books are recommended for study :—

W. Bacher : *Agader der Tannaiten*, I, II ; *Agada der palæstinischen Amoräer*, I, II, III ; *Agada der babylonischen Amoräer ; Anfänge der hebräischen Grammatik* (from ZDMG, Vol. 49) ; *Die Massora* (from Winter und Wünsche, see below).

J. Winter und A. Wünsche : *Die jüdische Literatur seit Abschluss des Kanons*, I–III, 1894.

M. L. Margolis : *Lehrbuch der aramäischen Sprache.*

C. Levias : *A Grammar of the Aramaic Idiom.*

M. H. Segal : *A Grammar of Mishnaic Hebrew.*

J. Derenbourg : *Essai sur l'histoire et la géographie de la Palestine.*

E. Schürer : *History of the Jewish People in the Time of Jesus Christ.*

M. Mielziner : *Introduction to the Talmud.*

S. Krauss : *Archæologie des Talmuds*, I–III (Berlin).

H. Strack : *Introduction to the Talmud and Midrash.*

L. Zunz : *Die Gottesdienstlichen Vorträge der Juden ; Literaturgeschichte der synagogalen Poesie.*

M. Waxman : *A History of Jewish Literature.*

C. *Early Aramaic Language and History*

1. Translation of Aramaic inscriptions transliterated into Hebrew characters.

2. Transcription into Hebrew characters and translation of Aramaic texts.

3. Comparative grammar of Semitic languages with special reference to North Semitic inscriptions.

4. History of alphabetic writing in the ancient Near East.

5. History of the Aramean peoples from 1500 B.C.–300 B.C. [Knowledge of sources required.]

6. Religion of Syria down to the beginning of the Roman period. [Knowledge of sources required.]

7. Antiquities and art of the period 1000–300 B.C.

The following are recommended for study :—

G. A. Cooke : *Text-book of North Semitic Inscriptions.*

M. Lidzbarski : *Handbuch der nordsemitischen Epigraphik* (with Atlas).

A. E. Cowley : *Aramaic Papyri of the Fifth Century B.C.*

Rosenthal : *Die aramäische Forschung seit Nöldeke's Veröffentlichungen.*

C. Brockelmann : *Vergleichende Grammatik der semitischen Sprachen.*

D. Diringer : *Le Iscrizioni antico-ebraiche palestinesi* (Florence, 1934).

The relevant passages in Diringer : *The Alphabet*, and in G. R. Driver : *Semitic Writing.*

A. T. E. Olmstead : *History of Palestine and Syria to the Macedonian Conquest.*

L. J. Delaporte : *Les Peuples de l'Orient Mediterranéen.* I. *Le Proche-Orient Asiatique* (*Clio*) (Presses Universitaires, 1938).

Cambridge Ancient History, I–II.

D. *Syriac Language, Literature and History*

1–3. Translation from specified and unspecified texts.

4. Comparative grammar of the Semitic languages.

5. Grammar and composition.

6. History of Syriac literature.

7. History of the Byzantine Empire to A.D. 700.

The following are recommended for study :—

Th. Nöldeke : *Compendious Syriac Grammar.*

R. Duval : *Traité de Grammaire syriaque.*

R. Duval : *La littérature syriaque.* (Vol. II of *Anciennes littératures chrétiennes*) (Bibliothèque de l'enseignement de l'histoire ecclésiastique).

W. Wright : *Lectures on the Comparative Grammar of the Semitic Languages.*

C. Brockelmann : *Vergleichende Grammatik der semitischen Sprachen.*

Cambridge Mediæval History, Vol. IV, *Eastern Roman Empire.*

G. B. Bury : *History of the Later Roman Empire, A.D.* 395–800 (2 vols.). (A shorter work covering this period is Norman Baynes : *History of the Byzantine Empire* (1925).

E. *Akkadian*

1–2. Translation from specified and unspecified historical and literary texts.

3–4. Economic and social history (including translation from business documents and letters, and discussion of them).

5. Comparative grammar of the various Semitic dialects written in Cuneiform.

6. History of Akkadian literature.

7. Babylonian religion 900–400 B.C., with special study of the sources.

INDO-ARYAN

The examination will consist of seven papers of three hours each, viz., the five papers of any one of the sections A to G below together with the first two papers of any other section, to be selected by the candidate.

A. *Classical Sanskrit, including the Epics*

1–2. Translation from specified texts (including commentaries therewith printed or quoted in the editions cited), with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Translation from English into Sanskrit: questions on grammar.

5. The history of Sanskrit literature and of philosophy and religion in India.

B. *Pali*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. Translation from English into Pali; questions on grammar.

5. The History of Pali literature and of Buddhism.

C. *Vedic Sanskrit*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4–5. Vedic philology, including phonology, morphology, syntax, accentuation, metre and textual criticism.

D. *Epigraphy and History*

Candidates will be examined *either* in Sanskrit inscriptions with the history of India *or* in Pali and Prakrit inscriptions with Early Sinhalese and Indian history.

1. Translation from specified texts, with questions on their language and subject-matter.

2. Translation from unspecified texts.

3–4. History.

5. Palæography.

E. *Prakrit*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The comparative philology of Prakrit.

5. The history of literature and religion as represented in Prakrit.

F. *Philosophy*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts, with questions on their subject-matter.

4. Questions on a special subject, to be chosen by the candidate from *either* (*a*) one of the six Darśanas, *or* (*b*) Buddhist philosophy, *or* (*c*) Jain philosophy.

5. The history and literature of Indian Philosophy

G. *Language*

1. The general principles of linguistics.

2. The history of the sounds, forms, meanings, and syntax of Sanskrit (including Vedic).

3. The history of the sounds, forms, meanings, and syntax of Pali and Prakrit.

4. The history of the sounds, forms, meanings, and syntax of the modern Indo-Aryan languages, with special reference to *one* to be chosen by the candidate.

5. Passages for translation from Sanskrit, Pali, Prakrit, and the selected language.

Old and Middle Iranian

The examination will consist of seven papers of three hours each in any one of the sections A–D below, to be selected by the candidate.

A. *Old Iranian*

1–2. Translation from specified Avestan and Old Persian texts.

3. Translation from unspecified Avestan and Old Persian texts.

4. (*a*) Grammar, (*b*) the comparative philology of Old Iranian, and (*c*) Avestan prosody and textual criticism.

5. (*a*) Zoroastrian religion, (*b*) the history of Avestan literature, and (*c*) the history of Iran down to 300 B.C.

6–7. Translation from specified and unspecified texts in *either* Western Middle Iranian *or* Sogdian *or* Saka.

B. *Western Middle Iranian*

1–2. Translation from specified texts in Western Middle Iranian.

3. Translation from unspecified texts in Western Middle Iranian.

4. (*a*) Grammar, (*b*) the comparative philology of Western Middle Iranian, and (*c*) the Aramaic parts of Pahlavi.

5. (*a*) The history of literature and religion as represented in Western Middle Iranian, and (*b*) the history of Iran in the Sasanian period.

6–7. Translation from specified and unspecified Avestan and Old Persian texts.

C. *Eastern Middle Iranian*

1–2. Translation from specified Sogdian and Saka texts.

3. Translation from unspecified Sogdian and Saka texts.

4. (*a*) Grammar, (*b*) the comparative philology of Eastern Middle Iranian, and (*c*) the Indo-Aryan elements in Saka.

5. (*a*) The history of literature and religion as represented in Sogdian and Saka, and (*b*) the history of Eastern Iran and Chinese Turkestan down to A.D. 1000.

6–7. Translation from specified and unspecified Avestan texts.

D. *Language*

1. The general principles of linguistics.

2. The history of Indo-Iranian.

3. The history of Old Iranian.

4. The history of Western Middle Iranian.

5. The history of Eastern Middle Iranian.

6. The history of Modern Iranian Languages with special reference to one to be chosen by the candidate.

7. The history of (*a*) Iranian loanwords in neighbouring languages, and (*b*) foreign words borrowed by Iranian languages.

JAPANESE

The examination will consist of seven papers of three hours each, viz.: the five papers in any one of the sections A–E below, together with the first two papers of any other section, to be selected by the candidate.

Note:—Instead of paper 4 in any section the candidate may choose a paper in Chinese, *or* Tibetan, *or* Manchu, *or* Mongolian, *or* Pali, *or* Sanskrit, which will consist of translation from unspecified texts with questions on their language.

A. *Sintoo*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The sources relating to the period selected under 5 below.

5. The Sintoo of *either* (*a*) the Nara period, *or* (*b*) the Kamakura period.

B. *History*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The sources relating to the period selected under 5 below.

5. The history of *one* of the following periods, to be chosen by the candidate:—

(*a*) the Asuka-Nara period,

(*b*) the Kamakura period,

(*c*) the Tokugawa period.

C. *Poetry*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The sources relating to the period selected under 5 below.

5. The poetry of *either* (*a*) the Nara period, *or* (*b*) the Heian period.

D. *Prose Literature*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The sources relating to the period selected under 5 below.

5. The prose literature of *either* (*a*) the Nara period, *or* (*b*) the Heian period, *or* (*c*) the Kamakura period.

E. *Language*

1–2. Translation from specified texts, with questions on their language and subject-matter.

3. Translation from unspecified texts.

4. The sources relating to the period selected under 5 below.

5. The Japanese language of *either* (*a*) the 8th century, *or* (*b*) the 16th and 17th centuries.

PERSIAN

The examination will consist of seven papers of three hours each.

1–2. Translation from specified texts, with questions on their subject-matter.

3. Translation from unspecified texts.

4. Translation from English into Persian.

5. Translation from specified Arabic texts, with questions on their language.

6–7. Special Subjects: Any two of the following, to be chosen by the candidate:—

(*a*) Persian History: Mongol period.

(*b*) Persian History: Timur and the Timurids.

(*c*) Persian History: The Safavids.

(*d*) Persian epics.

(*e*) Persian poetry before A.D. 1200.

(*f*) Persian poetry after A.D. 1200.

(*g*) Sufism.

(*h*) Iranian philology.

SINHALESE

The examination will consist of seven papers of three hours each.

1–2. Translation from specified texts with questions on their language and subject-matter and on grammar and prosody.

3. Translation from unspecified texts.

4. Translation from English into Sinhalese.

5. Literature and religions of Ceylon.

6–7. Any *two* of the following :—

(*a*) Historical grammar of Sinhalese.

(*b*) Sinhalese Epigraphy, Palæography and Numismatics.

(*c*) Architecture, Sculpture and Art in Ceylon.

(*d*) Outline of the History of Ceylon and South India.

(*e*) Early Indian History up to the end of the Gupta period.

(*f*) Inscriptions of Asoka.

(*g*) Buddhism (including the northern schools).

Comparative Philology

Before proceeding to the M.A. Degree in Comparative Philology, candidates who have not passed the B.A. Honours Examination of this or another approved University in a relevant branch will be required to pass a qualifying examination approved by the Board of Studies. In special circumstances the B.A. (General) Degree of this University in relevant subjects may be accepted.

In addition to a thesis and an oral examination including a practical test in Phonetics, there shall be a written examination consisting of two papers of 3 hours each, as follows :—

1. History and Principles of Linguistic and Comparative Philology.

2. *Either* (*a*) Phonetics (General phonetic theory)

or (*b*) General History of a selected group or sub-group of languages, their phonology, morphology, vocabulary and syntax.

Schedule of Groups and Sub-Groups for Paper 2 (b)

I. Indo-European Groups.

A. Indo-Iranian (Sanskrit and Early Iranian dialects).

Sub-Groups : 1. Sanskrit, Pali, and Prakrit literary and epigraphical.

2. Sanskrit and Modern Indo-Aryan vernaculars ;

3. Old Iranian and Middle Iranian ;

4. Old Iranian and the new Iranian dialects.

B. Hellenic (Ancient Greek dialects).

Sub-Group : Classical and Modern Greek.

C. Italic (Ancient Indo-European dialects of Italy).

Sub-Group : Latin and Romance Languages.

D. Celtic.

E. Balto-Slavonic.

Sub-Group : Old and Modern Slavonic Languages.

F. Teutonic.

II. Semitic.

III. Chinese.

IV. Finno-Ugrian.

V. Indonesian.

VI. Bantu.

Comparative Philology (Phonetics)

Before proceeding to the M.A. Degree in Comparative Philology (Phonetics), candidates who have not passed the B.A. Honours Examination of this or another approved University in a relevant branch will be required to pass a qualifying examination approved by the Board of Studies. In special circumstances the B.A. (General) Degree of this University in relevant subjects may be accepted.

In addition to a thesis on a Phonetic subject and an oral examination including a practical test in Phonetics, there shall be a written examination consisting of two papers of 3 hours each, as follows :—

1. History and Principles of Linguistics and Comparative Philology.
2. Phonetics (General phonetic theory).

Philosophy

All candidates except (i) those who have already passed the B.A. Honours Examination in Philosophy, and (ii) those registered under the Regulations for Postgraduate Students proceeding to a Higher Degree and specially exempted by the University on the ground that they have passed an equivalent examination in Philosophy approved by the University, are normally required, before proceeding to the M.A. Examination to pass a qualifying examination of the standard of the B.A. Honours Examination in Philosophy, unless in any special case the University, on the report of the Board of Studies, grant exemption from the general rule. In no case shall candidates who pass this qualifying examination be deemed thereby to have qualified for the B.A. Honours Degree in Philosophy of this University.

The written portion of the M.A. Examination will consist of two papers :—

1. One paper on the field of study to which the thesis belongs (*e.g.* Metaphysics : Epistemology ; Ethics ; etc.).
2. One paper on subjects relevant to the thesis.

Psychology

Students who have taken the M.Sc. Degree in Psychology will not be permitted to proceed to the M.A. Degree in Psychology.

All candidates who have not obtained the B.A. Honours Degree in Psychology are normally required to pass, as a qualification for admission to the M.A. Examination, the B.A. Honours Examination in Psychology, but candidates may apply to be exempted from the whole or part of this Examination on the ground of having passed an Examination equivalent thereto. Candidates presenting themselves for the B.A. Honours Examination as a qualifying examination are not required to take a subsidiary subject.

The written portion of the M.A. Examination will consist of two papers, as follows :—

1. One paper on the whole branch of study to which the thesis belongs.
2. One paper connected still more closely with the thesis.

When the thesis is of an experimental character the Examiners shall be at liberty to test the candidate by means of a practical examination bearing on the subject of the thesis.

Slavonic and East European Studies

The following are the subjects, any one of which may be offered for the M.A. Examination in Slavonic and East European Studies :—

(*a*) Bulgarian Language and Literature.
(*b*) Czech and Slovak Language and Literature.
(*c*) Hungarian Language and Literature.
(*d*) Polish Language and Literature.
(*e*) Roumanian Language and Literature.
(*f*) Russian Language and Literature.
(*g*) Serbo-Croat and Slovene Language and Literature.
(*h*) Bulgarian Regional Studies.
(*i*) Czechoslovak Regional Studies.
(*j*) Hungarian Regional Studies.
(*k*) Yugoslav Regional Studies.
(*l*) Polish Regional Studies.
(*m*) Roumanian Regional Studies.
(*n*) Russian Regional Studies.
(*o*) Modern Greek Literature and History.

All candidates, before proceeding to the M.A. Examination in Bulgarian (*a* or *h*) or Roumanian (*e* or *m*) must have passed in that subject at the B.A. (General) Examination or as a subsidiary subject or, in the case of Bulgarian only, must have obtained the B.A. Honours Degree in Russian Literature, unless in any special case the University on the report of the Board of Studies grant exemption from the general rule.

All candidates before proceeding to the M.A. Examination in Modern Greek Literature and History will be required to pass the B.A. Honours Examination in an approved branch of studies, unless in any special case the University, on the report of a Board of Studies, grant exemption from the general rule.

All candidates before proceeding to the M.A. Examination in one of the other branches of Slavonic and East European Studies will be required to pass the B.A. Honours Examination in that branch unless in any special case the University, on the report of the Board of Studies, grant exemption from the general rule.

Candidates not exempted and presenting themselves for the B.A. Honours Examination are not required to take a subsidiary subject.

The written portion of the M.A. Examination in (*a*)–(*n*) above will consist of three papers as follows :—

(1) In the case of (*a*) to (*g*) an essay in the language concerned. The subjects will have a bearing upon literary themes.

In the case of (*h*) to (*n*), *either* an essay in the language concerned *or* an essay in English and a composition in the language concerned. The subjects will be connected with the history and economic history of the countries concerned.

(2) Questions on a subject or subjects cognate to the subject of the thesis and prescribed by the University at the time of approving the subject of the thesis.

(3) Translation from unspecified texts. In the case of (*a*) to (*g*) the texts will be of a literary kind. In the case of (*h*) to (*n*) the texts will be connected with the history and economic history of the countries concerned.

NOTE.—A candidate offering (*b*) or (*i*) must use *either* Czech *or* Slovak consistently. A candidate offering (*g*) or (*k*) must use *either* Serbo-Croat *or* Slovene consistently.

MODERN GREEK LITERATURE AND HISTORY

The written portion of the M.A. Examination in (*o*) Modern Greek Literature and History will consist of five papers, as follows :—

(1) An essay in Modern Greek, literary, linguistic or historical.

(2) History of Modern Greek literature from 1453 to the present day.

(3) One of the following special subjects :—
- (*a*) Cretan poetry (including plays) up to 1669.
- (*b*) Modern Greek popular poetry.
- (*c*) Greek poetry from 1770 to 1880.
- (*d*) The work of Koraos and its influence.
- (*e*) The work of Psychari and its influence.
- (*f*) The work of Kostes Palamas.

(4) One of the following periods of Modern Greek History :—
- (*a*) Greece under the Turkish Domination.
- (*b*) From 1800 to 1833.
- (*c*) The reign of King Otho.
- (*d*) The reign of King George I.

(5) For candidates taking (4) (*a*) : Greek history from 1800 to the present day.

For candidates taking (4) (*b*), (*c*) or (*d*) :—History of the Near East from 1453 to 1800, with special reference to the Greeks.

Sociology

All candidates before proceeding to the M.A. Examination in Sociology will be required to have passed the B.A. Honours Examination in one of the following subjects, unless in any special case the University, on the report of the Board of Studies, grant exemption from the general rule : Sociology, Anthropology, History, Philosophy (with Sociology as the optional subject).

The written portion of the M.A. Examination will consist of two papers as follows :—

One paper on Social Philosophy and Social Institutions.

One paper on the special branch of Sociology with which the thesis is connected.

DOCTOR OF PHILOSOPHY (Ph.D.)

[Regulations for the Degree of Ph.D. will be found on pp. 106–115]

DOCTOR OF LITERATURE (D.Lit.)

A candidate for the D.Lit. Degree must have previously obtained the M.A. Degree, or the Ph.D. Degree in the Faculty of Arts, as an Internal Student.

Nevertheless a candidate who has obtained the B.A. Degree as an Internal Student may, in exceptional circumstances, be exempted from this requirement on the ground of published work.

A candidate may make application at any time for the Degree and must at the same time submit evidence of his qualifications, such evidence to consist of published papers or books, containing original contributions to the advancement of knowledge. In the event of a candidate submitting any conjoint work in support of his candidature he must state fully his own share in such conjoint work.

The Examiners may at their discretion require the candidate to present himself for an interview.

Every candidate must apply to the Academic Registrar for an entry-form which must be returned accompanied normally by not less than four copies of the work or works, and by the proper fee.

Every candidate for the D.Lit. Degree must at each entry pay a fee of 20 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A diploma for the Degree of D.Lit., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

A candidate who fails to pass the D.Lit. Examination will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

EXAMINATION-PAPERS

The following pamphlets and sets of past papers can be obtained from the University of London (Publications Section), Senate House, W.C.1 :—

*Intermediate Arts	2*s.* 0*d.*	post free.
B.A. General	2*s.* 6*d.*	,,
B.A. Honours :—		
Sets of papers in the different subjects for any one examination, including one subject subsidiary to the principal subject if specified .. .. each subject	1*s.* 3*d.*	,,
M.A. :—		
Sets of papers in the different subjects for any one examination .. each subject	1*s.* 3*d.*	,,
Inquirers should state the subject(s) (also section or branch, if any).		

A complete list of Examination-papers published by the University can be obtained on application.

* Only English, French, German, and Spanish are included among the modern language papers in this pamphlet. Papers in all other modern languages can be obtained price 6*d.* each, post free.

UNIVERSITY OF LONDON

Faculty of Arts

APPENDIX OF SPECIAL SUBJECTS AND SET BOOKS

For Examinations in 1951, 1952 and 1953

In this Appendix are given lists of books and subjects set for the next two years and, provisionally, for the third year. Those making use of the provisional list should obtain the Regulations issued in October next to ascertain whether any alterations have been made.

INTERMEDIATE EXAMINATION IN ARTS

Classical Arabic

1951, 1952 and **1953**

R. A. Nicholson: *Elementary Arabic: Second Reading Book* (Cambridge University Press).

Classical Armenian

1951, 1952 and **1953**

Eliseus: *History*, chapters I–III, pp. 5–165 (Venice, 1893).

Modern Armenian

1951, 1952 and **1953**

F. Macler: *Chrestomathie de l'Arménien Moderne* (Paris, 1932).

Bengali

1951

Intermediate Bengali Selections (Calcutta University Press, 1946), Prose, pp. 1–103, Poetry, pp. 103–168.

Candidates whose mother-tongue is not Bengali may, if they wish, offer only the prose selections of *Intermediate Bengali Selections*, on condition that they submit to an oral test, including dictation, reading a printed text, and conversation.

1952

Saratchandra Chatterji: *Bindur Chele.*

Rabindranath Tagore: *Gītāñjali*, 1–10; *Ciṭhi Patra*, Vol. IV, pp. 214–225.

Intermediate Bengali Selections (Calcutta University Press, 1947): Bankimchandra Chatterji: *Eka;* Girishchandra Ghosh: *Vivekānanda* i R. C. Dutt: *Haldīghāṭār Yuddha* i B. C. Pal: *Baṅgadarśan o Baṅkimcandra.*

344/6/4000/7/50. W. & S. Ltd.

Burmese

1951, 1952 and **1953**

Selections from Jataka Stories (ed. Saya Pwa), Vol. I, items 5–9 inclusive.
Maung Sein Tin and others : *Khitsan Ponbyin,* Vol. I, Part I, items 1, 6, 8–10 ; Part III, item 1 ; Part IV, items 2, 7 ; Part V, item 1.
U Kha : *Chwetagyin,* Part I.

Classical Chinese

1951, 1952 and **1953**

J. J. Brandt : *Introduction to Literary Chinese,* Lessons I–XVI (2nd edition, 1936, pp. 1–128), *excluding* parallel modern texts, illustrative examples and letters.

Or J. J. Brandt : *Introduction to Literary Chinese,* Lessons I–X (2nd edition, 1936, pp. 1–84), *including* parallel modern texts but *excluding* illustrative examples and letters, **and** W. Simon (ed.) : 1,200 *Basic Chinese Characters,* Books 1–2 (London, 2nd edition, 1947).

Ancient Egyptian

1951

A. de Buck : *Egyptian Reading Book* I (Leiden, 1948), pp. 67–72 (The Biography of Khnumhotpe).

1952

A. de Buck : *Egyptian Reading Book* I (Leiden, 1948), pp. 74–78 (Expeditions to Hammamat).

1953

A. de Buck : *Egyptian Reading Book* I (Leiden, 1948), pp. 100–106 (The Story of the Shipwrecked Sailor).

English

1951

Paper 1

Chaucer : *The Knight's Tale.*
Shakespeare : *Macbeth ; The Tempest.*
Milton : *Paradise Lost,* Books I and II.

Paper 2

Marlowe : *Edward II.*
Jonson : *The Alchemist.*
Massinger : *A New Way to Pay Old Debts* (ed. Wheeler).
Earle : *Microcosmographie.*
Pope : *The Rape of the Lock.*
Donne : *Poetry and Prose* (ed. Garrod).
Thomson : *Winter.*
Swift : *Gulliver's Travels,* Books I and II.
Goldsmith : *She Stoops to Conquer.*
Cowper : *Poetry and Prose.*
Wordsworth and Coleridge : *Poems* (ed. Boas).
Jane Austen : *Sense and Sensibility.*

1952

Paper 1

Chaucer : *The Pardoner's Prologue* and *Tale.*
Shakespeare : *Richard II ; The Tempest.*
Spenser : *The Faerie Queene,* Book II.

Paper 2

Marlowe : *Edward II.*
Jonson : *The Alchemist.*
Webster : *The Duchess of Malfi.*
Donne : *Poetry and Prose* (Clarendon series).
Cowley : *Poetry and Prose* (Clarendon series).
Bunyan : *The Pilgrim's Progress,* Part I.
Pope : *Epistle to Dr. Arbuthnot.*
Johnson : *Lives of the Poets* (Life of Savage *only*).
Goldsmith : *She Stoops to Conquer.*
Crabbe : *The Village.*
Keats : *Odes.*
Jane Austen : *Sense and Sensibility.*

1953

Paper 1

Chaucer : General Prologue and Links of the *Canterbury Tales.*
Shakespeare : *Richard II ; King Lear.*
Milton : *Paradise Lost,* Books I and II.

Paper 2

Marlowe : *Dr. Faustus.*
Jonson : *Volpone.*
Webster : *The Duchess of Malfi.*
Cowley : *Poetry and Prose* (Clarendon series).
Bunyan : *The Pilgrim's Progress,* Part I.
Dryden : *Absalom and Achitophel,* Part I.
Pope : *Epistle to Arbuthnot.*
Johnson : *Lives of the Poets* (Life of Savage *only*).
Sheridan : *The Rivals.*
Jane Austen : *Pride and Prejudice.*
Crabbe : *The Village.*
Keats : *Odes.*

Greek

The texts used by the examiners in setting the examination papers will be the Oxford Classical Texts (Clarendon Press) unless some other text is specified.

1951

Homer : *Iliad,* Book I.
Thucydides : Book IV (1–41).

1952

Plato : *Crito.*
Aeschylus : *Prometheus Vinctus.*

1953

Thucydides : Book I, chapters 1–44.
Homer : *Odyssey,* VI and VII.

Gujarati

1951, 1952 and **1953**

(*a*) Premānand : *Okhāharaṇ.*
(*b*) Nandaśaṅkar Tuljaśaṅkar : *Karaṇ Ghelo,* chaps. 7–12.
(*c*) Navalrām Lakṣmirām : *Naval granthāvalī* (1st ed., 1937), Essays I, 1, 5, 8, 27, 31, 32, 35, 36, 37, 39. II, 1, 2, 8. IV, 1, 2 (to verse 14 incl.).
(*d*) Dhūmketu : *Tāṇkhā-maṇḍal,* Part I, pp. 1–54.

Candidates whose mother-tongue is not Gujarati may, if they wish, offer only (*b*) and (*d*) on condition that they submit to an oral test, including dictation, reading a printed text, and conversation.

Classical Hebrew

1951

1 *Kings* I–XXII ; *Psalms* XXX–L.

1952 and **1953**

Judges ; Psalms XXX–L.

Hindi

1951 and **1952**

(*a*) Prem Cand : *Mānsarovar* (Benares, 1936), Vol. I, pp. 1–122.
(*b*) Maithilī Saran Gupta : *Jayadratha Vadha*, Sarg I–IV.
(*c*) Prem Cand : *Pratigyā*.

Candidates whose mother-tongue is not Hindi may, if they wish, offer only (*a*) and (*b*) on condition that they submit to an oral test, including dictation, reading a printed text, and conversation.

1953

Prem Cand : *Mānsarovar* (Benares, 1936), Vol. I, pp. 1–122.
Maithilī Saran Gupta : *Jayadratha Vadha*, Sarg I–IV.

Classical Japanese

1951, 1952 and **1953**

A. Rose-Innes : *Japanese Reading for Beginners*, Vol. IV (Literary Style), pp. 1–100.

Latin

The texts used by the examiners in setting the examination papers will be the Oxford Classical Texts (Clarendon Press) unless some other text is specified.

1951

Horace : *Odes*, Book III.
Tacitus : *Agricola*.

1952

Livy : Book V, chapter 19 to end.
Virgil : *Aeneid*, Book III.

1953

Cicero : *Select Orations* (ed. King), omitting *De Imperio Cn. Pompei*.
Catullus : *Selections* (ed. Kinchin Smith & Melluish).

Malay

1951, 1952 and **1953**

Either *Pĕlayaran Abdullah*, **or** *Pĕlbagai Chĕtera Mĕlayu*, Part II. *Sĕjarah Mĕlayu* (ed. Winstedt), chapters I–X.

Marathi

1951 and **1952**

(*a*) S. V. Peṇḍase : *Rasataraṅgiṇi*, Selections from Nāmdev, Eknāth, Rāmdās, Ṭiḷak, Dāmle, and Gaḍkari.
(*b*) Paṭvardhan and Keḷkar : *Tukārāmāchā Abhangāchi Charchā*, Part I, Nos. 60–120.

(*c*) Hari Nārāyan Āpṭe : *Gaḍ ālā pan siṃha gelā* **or** *Mi* (abridged edition).
(*d*) Ramāḍāi Rānade : *Āmchyā āyushyātil kāṃhi āṭhavaṇi.*
(*e*) K P. Khāḍilkar : *Bhāudandaki.*

Candidates whose mother-tongue is not Marathi may, if they wish, offer only (*a*), (*c*) and (*e*) on condition that they submit to an oral test, including reading printed documents and conversation.

1953

H. M. Lambert : *Marathi Language Course* (Oxford University Press).
N. S. Phaḍke : *Navyā Gujagoshṭi* (Ramakrishna Book Depot, Bombay 4).
D. G. Keḷkar : *Shri Mahārāshṭra Shāradā* : Poems by Ṭiḷak, Keshavasut, Tāmbe and Mādhav Julian (Keśav Bhikājī Ḍhavaḷe, Bombay).

Pali

1951, 1952 and **1953**

Mahāvaṃsa, Chapters 30–32 inclusive.
Dhammapada Commentary on Dhp. verses 334–359 (*Taṇhāvagga*) (P.T.S. ed., Vol. IV, pp. 37–82).

Classical Persian

1951, 1952 and **1953**

Gulistān, Books I and II, without *Muqaddima.*
Ibn al-Balkhī : *Fārs Nāma* (ed. G. Lestrange and R. A. Nicholson, Camb. Univ. Press, 1921), pp. 60–119.

Sanskrit

1951, 1952 and **1953**

Lanman : *Sanskrit Reader* (Harvard Univ. Press), I–XXXIV (Selections from Nala, Hitopadésa, Kathāsaritsāgara, Manu, Ṛgveda).

Sinhalese

1951, 1952 and **1953**

(*a*) *Amāvatura,* Chs. IX–XIV (ed. Richard de Silva, 1922).
(*b*) *Haṃsa-sandēśaya* (ed. Śrī Dharmārāma, 1926).
(*c*) *Lōkōpakāraya* (1921).
(*d*) *Gam Peraḷiya* (ed. Martin Wickramasinghe).
(*e*) *Siyabasmaldama* (B.E. 2468).

Candidates whose mother-tongue is not Sinhalese may, if they wish, offer only (*a*), (*b*) and (*c*), on condition that they submit to an oral test, including dictation, reading a printed text, and conversation.

Tamil

1951, 1952 and **1953**

(*a*) V. G. Sūryanārāyaṇa Sāstri : *History of the Tamil Language* (Naṭarājan, Madura).
(*b*) A. V. Veṅkaṭarāma Aiyar : *Life and Times of Chalukya Vikramāditya VI* (Abhirāma Aiyar, Madras Commercial Press), **or** Sāminatha Aiyar : *Pudiyadum Palaiyadum* (*New and Old,* Twenty Essays) (S. Kalyanasundara Aiyar, Tyagaraja Vilas, Triplicane, Madras).
(*c*) *Naḷaḍiyār,* chs. 11–20.
(*d*) S. R. Subraṃania Kavirāyar : *Villiputtūrar Mahābhāratam-Calliaparuvam* (Tamil Sangam Press, Madura).

Candidates whose mother-tongue is not Tamil may, if they wish, offer only (*a*), (*b*), and (*c*), on condition that they submit to an oral test, including dictation, reading a printed text, and conversation.

Turkish

1951, 1952 and **1953**

P. Wittek: *Turkish* (Lund Humphries Modern Language Readers, London, 1945).

Urdu

1951 and **1952**

(*a*) Naẓīr Aḥmad: *Mirāt al-'Arūs.*

(*b*) Mīr Ḥasan: *Masnavī* (from Aghāz i Dastān).

(*c*) Asadu'llāh Khāṇ " Ghālib ": *Urdū-e Mu'allā* (letters I–L).

1953

Naẓīr Aḥmad: *Mirāt al- 'Arūs.*

Mīr Ḥasan: *Masnavī*, from Aghāzi i Dastān.

Candidates whose mother-tongue is not Urdu may, if they wish, offer only the first half of (*a*) and (*b*) on condition that they submit to an oral test, including dictation, reading a printed text and conversation.

B.A. (GENERAL) EXAMINATION

Afrikaans

1951

Karel ende Elegast, lines 1–1066.

*Hooft: *Nederlandsche Historien VII*, Het beleg van Haarlem (Meulenhoff, Amsterdam, or Wolters, Groningen).

Vondel: *Jeptha* (Thieme, Zutfen, or Wolters, Groningen).

G. S. Preller: *Piet Retief* (Nasionale Pers, Bkp., 1920).

*S. J. du Toit: *Die Koningin van Skeba* (ed. J. J. Smith).

C. L. Leipoldt: *Oom Gert vertel, en ander gedigte* (De Bussy).

J. van Bruggen: *Ampie II. Die meisiekind* (Swets & Zeitlinger, Amsterdam).

L. J. du Plessis: *Totius in sy verse.*

N. van Wyk Louw: *Raka.*

1952

Esmoreit (Tjeenk Willink, Zwolle).

*Bredero: *Bloemlezing* (ed. J. B. Schepers, Meulenhoff), **or** *Luyken: *Bloemlezing* (ed. W. Kramer, Meulenhoff).

Vondel: *Jeptha* (Thieme, Zutfen, **or** Wolters, Groningen).

G. S. Preller: *Piet Retief* (Nasionale Pers, Bpk., 1920).

*S. J. du Toit: *Die Koningin van Skeba* (ed. J. J. Smith).

C. L. Leipoldt: *Oom Gert vertel, en ander gedigte* (De Bussy).

J. Van Bruggen: *Ampie II. Die meisiekind* (Swets & Zeitlinger, Amsterdam).

L. J. du Plessis: *Totius in sy verse.*

N. van Wyk Louw: *Raka.*

1953

Esmoreit (Tjeenk Willink, Zwolle), **or** *Ferguut* (ed. W. van den Ent, Tjeenk Willink).
Vondel : *Lucifer* (Tjeenk Willink **or** Thieme, Zutfen).
*Luyken : *Bloemlezing* (ed. W. Kramer, Meulenhoff).
S. J. du Toit : *Die Koningin van Skeba* (ed. J. J. Smith, Nasionale Pers, Cape Town).
E. Marais : *Gedigte* (ed. G. S. Preller, Nasionale Pers).
C. J. Langenhoven : *Ons Weg deur die Wêreld III* (Nasionale Pers).
L. J. du Plessis : *Totius in sy verse* (Nasionale Pers).
*N. van Wyk Louw : *Raka* (Nasionale Pers).

[*Candidates taking Afrikaans as a subsidiary subject are not required to offer this book.]

Arabic

1951, 1952 and **1953**

Ibn al-Tiqtaqā : *Al-Fakhrī* (from accession of 'Abd al-Malik to end of al-Mutawakkil).
R. A. Nicholson : *Third Reading Book* (Cambridge, 1911).

Armenian

1951, 1952 and **1953**

Eznik : Books I and II.
Moses of Khoren, Book III.
R. Zartarian : *Essays* (*Ardzak, Arjak Ejer ev Hēh' eat' ner*, Paris, 1930).
H. T'umanian : *Anuš.*

Bengali

1951 and **1952**

(*a*) *Kavikaṅkan Caṇḍī*, First part to end of *Kālaketur Prasaṅga.*
(*b*) Rabīndranāth Ṭhākur : *Gītāñjali* (Bengali edition).
(*c*) Dwijendralal Ray : *Shājahān.*
(*d*) Baṅkimcandra Caṭṭopādhyāy : *Devī Caudhurānī.*
(*e*) Saratcandra Caṭṭopādhyāy : *Palli-Somaj.*

Candidates whose mother-tongue is not Bengali may, if they wish, be excused (*a*) on condition that they submit to an oral test, including dictation, reading a text written by hand, and conversation.

1953

To be prescribed.

Burmese

1951, 1952 and **1953**

Maniratanabon, the first nine groups of precedents (Hanthawaddy Press edition, 1901, pp. 5–117 inclusive).
U Kha : *Chwetagyin*, Part II.
U Lu Pe Wiṇ : *U Ponnya Myittaza*, items 4, 5, 8, 9, 11, 22, 23, 27, with Notes and Introduction.
U Lat : *Sabebin Wuttu.*

Classical Chinese

1951, 1952 and **1953**

Ch'un ch'iu, Tso chuan, Duke Chao, Years 1–3, 7–8, 25–32.
T'ang Sung pa (*ta*) *chia wên*, Book I.

Modern Chinese

1952 and **1953**

Horngloumenq (*Hung Lou Mêng*), chapters I–IV.
Hwu Shyh Wentswen (*Hu Shih Wên Ts'un*) (Shanghai, Ya Tung Press), Vol. III, pp 1–10, and Vol. IV, pp. 1–11, 151–164.

Danish

1951

Danske Folkeviser i Udvalg (ed. E. Frandsen).
A. Oehlenschläger: *St. Hansaften-Spil.*
S. S. Blicher: *En Landsbydegns Dagbog.*
*L. Holberg: *Jeppe paa Bjerget.*
*Johannes V. Jensen: *Bræen.*

1952

Danske Folkeviser i Udvalg (ed. E. Frandsen).
*L. Holberg: *Jeppe paa Bjerget.*
A. Oehlenschläger: *St. Hansaften-Spil.*
H. C. Andersen: *Eventyr.*
*H. Pontoppidan: *Muld.*

1953

Danske Folkeviser i Udvalg (ed. E. Frandsen).
*L. Holberg: *Den politiske Kandstøber.*
A. Oehlenschläger: *St. Hansaften-Spil.*
S. S. Blicher: *En Landsbydegns Dagbog.*
*Johannes V. Jensen: *Udvalgte Prosastykker* (ed. Borup og Ilsøe).

[*Candidates taking Danish as a subsidiary subject are not required to offer this book.]

Dutch

1951

Karel ende Elegast, lines 1–1066.
*Hooft: *Nederlandsche Historien VII*, Het beleg van Haarlem (Meulenhoff, Amsterdam, **or** Wolters, Groningen).
Vondel: *Jeptha* (Thieme, Zutfen, **or** Wolters, Groningen).
Potgieter: *Jan, Jannetje en hun jongste kind* (Thieme, Zutfen, **or** Meulenhoff, Amsterdam).
*Gezelle: *Gedichten*, bloemlezing door Prof. F. Baur (N. V. Standaard-Boekhandel, Antwerp).
Gorter: *Mei*, Ie Zang (Versluys, Amsterdam).
Couperus: *Keuze uit het werk* (ed. A. J. Schneiders, Kleine Dietse keur, Servire, The Hague).

1952

Esmoreit (Tjeenk Willink, Zwolle).
*Bredero: *Bloemlezing* (ed. J. B. Schepers, Meulenhoff), **or** *Luyken: *Bloemlezing* (ed. W. Kramer, Meulenhoff).
Vondel: *Jeptha* (Thieme, Zutfen, **or** Wolters, Groningen).
Wolff en Deken: *Sara Burgerhart* (Wereldbibliotheek **or** Meulenhoff).
*Gezelle: *Gedichten*, bloemlezing door Prof. F. Baur (N. V. Standaard-Boekhandel, Antwerp).
Gorter: *Mei*, Ie Zang (Versluys, Amsterdam).
Couperus: *Van Oude Menschen* ("*De grote salamander*," Querido).

1953

Esmoreit (Tjeenk Willink, Zwolle), **or** *Ferguut* (ed. W. van den Ent, Tjeenk Willink).
Vondel : *Lucifer* (Tjeenk Willink **or** Thieme, Zutfen).
*Luyken : *Bloemlezing* (ed. W. Kramer, Meulenhoff).
*Wolff en Deken : *Sara Burgerhart* (Wereldbibliotheek **or** Meulenhoff).
Multatuli : *Max Havelaar* (ed. G. Stuiveling, Van Oorschot, Amsterdam, 1949).
Verwey : *Cola Rienzi* (Versluys, Amsterdam).
Streuvels : *De Oogst* (Veen, Amsterdam).

[*Candidates taking Dutch as a subsidiary subject are not required to offer this book.]

English

1951

(1) Wyatt : *Anglo-Saxon Reader*, Extracts I *The Chronicle*, 755–897 A.D. ; II, 2 and 3 *Ohthere's Voyages* and *Wulfstan's Voyage* ; VII, 4 *Caedmon* ; XII *Sermo Lupi* ; XXIV *The Wanderer* ; XXVI *Beowulf* ; 1 *Of Scyld*, lines 1–52, 2 *Beowulf's Swimming-Match with Breca*, lines 499–606, 3 *The Vengeance of Grendel's Mother*, lines 1251–1309, 4 *Beowulf brings back Grendel's head*, lines 1572–1676 ; XXVIII *Dream of the Rood* ; XXXIV *The Battle of Maldon*.
Chaucer : *The Squire's Tale* ; *Sir Thopas*.
Havelok the Dane, lines 1–1390.

(2) (*a*) Beaumont and Fletcher : *The Knight of the Burning Pestle*.
Milton : *Shorter Poems of John Milton* (ed. B. A. Wright, Macmillan).
Dryden : *All for Love*.
Bunyan : *The Pilgrim's Progress*.
(*b*) Shakespeare : *Antony and Cleopatra* ; *The Tempest*.
Spenser : *The Faerie Queene*, Book I.

(3) Period 1798–1832, with special reference to Scott **or** Hazlitt, and to Coleridge **or** Keats.

1952

(1) Wyatt : *Anglo-Saxon Reader*, extracts I *The Chronicle*, 755–897 A.D. ; II, 2 and 3 *Ohthere's Voyages* and *Wulfstan's Voyage* ; VII, 4 *Caedmon* ; XII *Sermo Lupi* ; XXIV *The Wanderer* ; XXVI *Beowulf* : 1 *Of Scyld*, lines 1–52, 2 *Beowulf's Swimming-Match with Breca*, lines 499–606, 3 *The Vengeance of Grendel's Mother*, lines 1251–1309, 4 *Beowulf brings back Grendel's head*, lines 1572–1676 ; XXVIII *Dream of the Rood* ; XXXIV *The Battle of Maldon*.
Chaucer : *Troilus and Criseyde*, Book III.
Havelok the Dane, lines 1–1390.

(2) (*a*) Baçon : *Essays*.
Jonson : *Volpone*.
Milton : *Areopagitica*.
Dryden : *Absalom and Achitophel*, Part I.
(*b*) Shakespeare : *Henry IV*, Part 2 ; *Othello*.
Spenser : *The Faerie Queene*, Book II.

(3) Period 1798–1832, with special reference to Scott **or** Hazlitt, **and** to Coleridge **or** Keats.

1953

(1) Wyatt : *Anglo-Saxon Reader*, extracts I *The Chronicle*, 755–897 A.D. ; II, 2 and 3 *Ohthere's Voyages and Wulfstan's Voyage* ; VII, 4 *Caedmon* ; XII *Sermo Lupi* ; XXIV *The Wanderer* ; XXVI *Beowulf* : 1 *Of Scyld*, lines 1–52, 2 *Beowulf's Swimming-Match with Breca*, lines 499–606, 3 *The Vengeance of Grendel's Mother*, lines 1251–1309, 4 *Beowulf brings back Grendel's head*, lines 1572–1676 ; XXVIII *Dream of the Rood* ; XXXIV *The Battle of Maldon*.
Chaucer : Links of the *Canterbury Tales*.
Langland : *Piers Plowman*, Prologue and Passus VII.

(2) (*a*) Bacon : *Essays*.
Jonson : *Volpone*.
Milton : *Areopagitica*.
Dryden : *Absalom and Achitophel*, Part I.
(*b*) Shakespeare : *Henry IV*, Part 2 ; *Othello*.
Spenser : *The Faerie Queene*, Book II.

(3) Period 1832–1880.
Special Authors : Tennyson and George Eliot.

Ethics

1951

Greek Ethics, with special reference to Plato : *Meno*, *Gorgias* and *Protagoras*.

1952 and **1953**

The Moral Sense school, with special reference to *British Moralists* (ed. L. A. Selby-Bigge, Oxford University Press), Vol. I, pp. 1–187, containing Shaftesbury : *Inquiry concerning Virtue or Merit*, and Hutcheson : *Inquiry concerning the original of our Ideas of Virtue or Moral Good* ; Appendix, Vol. I, pp. 431–481, containing extracts from Hutcheson : *Essay on the Nature and Conduct of the Passions and Affections* ; *Illustrations upon the Moral Sense* ; *System of Moral Philosophy*.

French

1951

Paper 2

Corneille : *Le Cid*.
Racine : *Mithridate*.
Molière : *Le Misanthrope*.
Mme. de la Fayette : *La Princesse de Clèves*.
La Fontaine : *Fables*, Book VI.
Voltaire : *Lettres Philosophiques* ; *Zadig*.
Beaumarchais : *Le Mariage de Figaro*.

Paper 3

Constant : *Adolphe*.
Mérimée : *Chronique du règne de Charles IX* **or** *Colomba*.
Musset : *Lorenzaccio*.
Leconte de Lisle : *Poèmes* (edition Eggli, Manchester), **or** Baudelaire : *Les Fleurs du Mal*.
Flaubert : *Madame Bovary*.
Fromentin : *Dominique*.

1952

Paper 2

Corneille : *Le Cid.*
Racine : *Mithridate.*
Molière : *Le Misanthrope.*
La Fontaine : *Fables,* Book vi.
Montesquieu : *Lettres persanes.*
Abbé Prévost : *Manon Lescaut.*
Rousseau : *Lettre à M. d'Alembert Sur les Spectacles.*

Paper 3

Constant : *Adolphe.*
Vigny : *Servitude et grandeur militaires.*
Musset : *Lorenzaccio.*
Leconte de Lisle : *Poèmes* (edition Eggli, Manchester).
Flaubert : *Madame Bovary.*
Fromentin : *Dominique.*

1953

Paper 2

Corneille : *Le Menteur.*
Racine : *Mithridate.*
Molière : *Le Misanthrope.*
La Fontaine : *Fables,* Book VI.
Montesquieu : *Lettres persanes.*
Abbé Prévost : *Manon Lescaut.*
Rousseau : *Lettre à M. d'Alembert Sur les Spectacles.*

Paper 3

Constant : *Adolphe.*
Vigny : *Servitude et grandeur militaires.*
Musset : *Lorenzaccio.*
Leconte de Lisle : *Poèmes* (Edition Eggli, Manchester).
Balzac : *Le Père Goriot.*
Fromentin : *Dominique.*

German

1951

Wright : *Middle High German Primer : Nibelungenlied* extract ; Walther von der Vogelweide, Nos. 1, 2, 4, 5, 6, 7, 8, 11, 12, 13, 14, 19, 21, 22.
Lessing : *Nathan der Weise.*
Goethe : *Urfaust.*
Storm : *Gedichte* (Parnass-Bücher, No. 30, Alfred Scherz Verlag, Bern).
Either G. Hauptmann : *Die versunkene Glocke* (ed. F. B. Wahr, Holt & Co., New York), **or** Grillparzer : *Weh' dem, der lügt* (Manchester University Press).
*Heine : *Die Harzreise.*
*Stifter : *Brigitta* (Parnass-Bücher, No. 38, Alfred Scherz Verlag, Bern).

1952

Wright : *Middle High German Primer :* Hartmann von Aue : *Der Arme Heinrich,* lines 1–480 ; Walther von der Vogelweide, Nos. 1, 2, 4, 5, 6, 7, 8, 11, 12, 13, 14, 19, 21, 22.
Lessing : *Nathan der Weise.*
Goethe : *Urfaust.*
Mörike ; *Poems* (Duckworth).
Gottfried Keller : *Romeo und Julia auf dem Dorfe.*
*Heine : *Die Harzreise.*
*Hofmannsthal : *Der Tor und der Tod* (Blackwell).

1953

Wright : *Middle High German Primer :* Hartmann von Aue : *Der Arme Heinrich,* lines 1–480 ; *Parzival,* all extracts.
Lessing : *Emilia Galotti.*
Goethe : *Egmont.*
Mörike : *Poems* (Duckworth).
Keller : *Romeo und Julia auf dem Dorfe.*
*Hoffmann : *Das Fräulein von Scuderi.*
*Hofmannsthal : *Der Tor und der Tod* (Blackwell).

[*Candidates taking German as a subsidiary subject are not required to offer this book.]

Greek

1951

Homer : *Iliad,* Book IX, and *Odyssey,* Book VI.
Plato : *Phaedo* (omitting 95E–106E).
*Aristophanes : *Clouds.*
Euripides : *Bacchae.*
Demosthenes : *De Corona* (omitting paras. 33–125).
*Thucydides, Book VII.

1952

Euripides : *Bacchae.*
*Thucydides : Book VII.
Demosthenes : *De Corona* (omitting 33–125).
Homer : *Iliad,* Books VI and XXII.
*Aristophanes : *Frogs.*
Plato : *Meno.*

1953

Homer : *Iliad,* Books VI and XXII.
*Aristophanes : *Frogs.*
Plato : *Meno.*
Thucydides : Book II (1–65).
Euripides : *Hippolytus.*
*Demosthenes : *Three Private Speeches* (ed. Doherty).

[*Candidates taking Greek as a subsidiary subject are not required to offer this book.]

Note.—The texts used by the Examiners in setting examination-papers will be the Oxford Classical Texts (published by the Clarendon Press), unless some other text is specified.

Gujarati

1951 and **1952**

(*a*) Premānand : *Nalākhyān* Kaḍvā̃ 1–25 (Bṛhat Kāvya Dohan or other approved text).
(*b*) Anjāriyā : *Kavitā Praveśa.*
(*c*) M. C. Bhaṭṭa : *Jūnī Vārttā.*
(*d*) Navalarām Lakṣmīrām : *Naval granthāvalī* (1st ed., 1937), Vol. II, pp. 237–421.
(*e*) *Narma Gadya,* pp. 1–150.
(*f*) K. M. Munshi : *Gujarātno nāth,* chapters 1–14.

Candidates whose mother-tongue is not Gujarati may, if they wish, offer only (*b*), (*c*), and (*f*), on condition that they submit to an oral test, including dictation, reading a text written by hand, and conversation.

1953

To be prescribed.

Hebrew

1951

Exodus ; Deuteronomy ; Isaiah XL–LI ; *Amos ; Proverbs* XXI–XXXI ; *Canticles.*

1952 and **1953**

Numbers ; Deuteronomy ; Isaiah XL–LI ; *Amos ; Proverbs* XXI–XXXI ; *Canticles.*

Hindi

1951 and **1952**

(*a*) Candraprakāś : *Gadya-Kusum-Mālā* (ed. Allahabad, 1936).
(*b*) Tulsī Dās : *Rāmcaritmānas : Araṇya Kāṇḍ.*
(*c*) Hariścandra : *Satyahariścandra.*
(*d*) Mahādevi Varmā : *Nīhār.*
(*e*) Miśr Bandhu : *Hindī Sāhitya kā Sankṣipt Itihās* (Allahabad, 1924).

Candidates whose mother-tongue is not Hindi may, if they wish, offer only (*a*) and (*b*) on condition that they submit to an oral test, including dictation, reading a text written by hand, and conversation.

1953

To be prescribed.

Italian

1951 and **1952**

(2) Dante : *Inferno,* Cantos I–II, 13, 15, 19, 26, 27, 33, 34 (ed. Casini-Barbi, Sansoni, or in Moore : *Opere di Dante Alighieri,* Oxford University Press).
G. Carducci : *Primavera e Fiore della Lirica Italiana* (Sansoni), Vol. I, pp. 73–117, 135–173, 191–210, 255–284.

(3) Leopardi : *Operette Morali* (ed. Della Giovanna, Sansoni) ; *Canti* (ed. Straccali, Sansoni, or ed. Jeffery, Cambridge University Press).
Pascoli : *Selected Poems* (ed. Purkis, Cambridge University Press).
G. Carducci : *Primavera e Fiore della Lirica Italiana* (Sansoni), Vol. II, pp. 583–613, 632–645, 653 to end.

1953

(2) Dante : *Purgatorio,* Cantos I–12, 14, 16, 19, 27–28, 30–33 (ed. Casini-Barbi, Sansoni).
G. Carducci : *Primavera e Fiore della Lirica Italiana* (Sansoni), Vol. I, pp. 73–117, 135–173, 191–210, 255–284.

(3) Manzoni : *I Promessi Sposi* (ed. Scherillo, Hoepli).
Leopardi : *Canti* (ed. Straccali, Sansoni).
G. Carducci : *Primavera e Fiore della Lirica Italiana* (Sansoni), Vol. II, pp. 583–613, 632–645, 653 to end.

Japanese

1951, 1952 and **1953**

F. J. Daniels : *Japanese Prose* (Lund Humphries & Co., London, 1944), pp. 36–48 and 64–96.
S. Elisséeff & E. O. Reischauer : *Selected Japanese Texts for University Students* (Harvard-Yenching Institute, 1944), pp. 24–35, 91–105, 181–184, 213–217, 222–258, 285–291, 294–295 (line 3), 296 (line 11)–297.

Latin

1951

Pliny: *Selected Letters* (ed. G. B. Allen, Oxford University Press).
Virgil: *Aeneid*, Book VIII.
*Livy, Book XXX.
Cicero: *In Caecilium Divinatio* and *In Verrem Actio Prima.*
Horace: *Odes*, I and II (omitting *Odes* I, Nos. 6, 8, 10, 12, 13, 15, 19, 20, 25, 26, 27, 33, 36; *Odes* II, Nos. 5, 8, 11, 20).
*Plautus: *Captivi.*

1952

Cicero: *In Caecilium Divinatio* and *In Verrem Actio Prima.*
Horace: *Odes*, I and II (omitting *Odes* I, Nos. 6, 8, 10, 12, 13, 15, 19, 20, 25, 26, 27, 33, 36; *Odes* II, Nos. 5, 8, 11, 20).
*Plautus: *Captivi.*
Virgil: *Georgics*, Books II and IV.
*Sallust: *Catiline.*
Tacitus: *Histories*, Book I.

1953

Virgil: *Georgics*, Books II and IV.
*Sallust: *Catiline.*
Tacitus: *Histories*, Book I.
Plautus: *Rudens.*
Cicero: *Pro Milone.*
*Juvenal: *Satires* 1, 3, 10, 13.

[*Candidates taking Latin as a subsidiary subject are not required to offer this book.]

Note.—The texts used by the Examiners in setting examination-papers will be the Oxford Classical Texts (published by the Clarendon Press), unless some other text is specified.

Malay

1951, 1952 and 1953

Sějarah Mělayu (ed. Winstedt), *Hikayat Abdullah.*
History of British Malaya, 1786–1876.

Marathi

1951 and 1952

(*a*) V. L. Bhāve: *Mahārāshṭra Sārasvat*, Vol. I, chapters 1–3 and 5–7.
(*b*) *Jnāneśvari*, Chapter III, vv. 1–94 and 159–263.
(*c*) Vamanpandit, Selections in *Navanita*, pp. 109–132.
Raghunāthpandit, Selections in *Navanita*, pp. 381–410.
(*d*) Moropant: *Kekāvali*, vv. 1–50.
(*e*) *Mahārāshṭra Shāradā*, Part I, D. G. Keḷkar (Selections).
(*f*) N. S. Phaḍke: *Daulat* (abridged edition).
(*g*) R. G. Gaḍkari: *Ekacha Pyālā*, or B. V. Varerkar: *Satteche Gulām.*
(*h*) G. S. Sardesāi: *Aitihāsika-patra-bodha*, Nos. 1–30.

[Candidates whose mother-tongue is not Marathi may, if they wish, offer only (*a*), (*b*), (*e*) and (*g*) on condition that they submit to an oral test, including reading printed documents and conversation.]

1953

To be prescribed.

Military Studies

1951

Paper 3 (*a*)

The Desert Campaign from El Alamein to Tunis (10th August, 1942 to 13th May, 1943).

To be studied in the following authorities :—

Field-Marshal Alexander's despatch, *El Alamein to Tunis, from 10th August, 1942 to 13th May, 1943*, Gazette No. 38205 (H.M. Stationery Office).

De Guingand : *Operation Victory.*

Montgomery : *El Alamein to the River Sangro.*

1952

Paper 3 (*a*)

The Campaign in Burma up to the end of 1943.

To be studied in the following Official Despatches :—

No. 38228. *Operations in Burma.*, Gen. Wavell. (15th December, 1941 to 12th May, 1942.) (H.M. Stationery Office, 11th March, 1948.)

No. 37728. *Operations in Eastern Theatre.* Field-Marshal Wavell. (March to December, 1942.) (H.M. Stationery Office, 18th September, 1946.)

No. 38266. *Operations in India Command.* (January to June, 1943.) (H.M. Stationery Office, 28th April, 1948.)

No. 38274. *Operations in India and Burma.* (21st June, 1943 to 15th November, 1943.) (H.M. Stationery Office, 29th April, 1949.)

1953

Paper 3 (*a*)

The Campaign in Burma, 1944–1945.

To be studied in Official Despatches, when published (details to be prescribed).

Old Norse

1951, 1952 and **1953**

E. V. Gordon : *An Introduction to Old Norse.* I. *West Norse.*

**Poetic Edda : Vǫlundarkviða, Baldrs draumar, Atlakviða, Reginsmál, Fáfnismál, Guðrúnarkviða I, Helreið Brynhildar* (ed. Finnur Jónsson, Reykjavík).

[*Candidates taking Old Norse as a subsidiary subject are not required to offer this book.]

Norwegian

1951

H. Ibsen : *Peer Gynt.*

A. O. Vinje : Selections in *Norsk Bokheim, Nynorsk* I, pp. 23–57 (ed. Sørlie og Thesen, Cappelen, Oslo).

Jonas Lie : *Familien paa Gilje.*

*B. Bjørnson : *Arne.*

*Alex. Kielland : *Skipper Worse.*

1952

H. Ibsen : *Peer Gynt.*

Jonas Lie : *Den Fremsynte.*

A. Garborg : *Haugtussa.*

*B. Bjørnson : *Synnøve Solbakken.*

*Alex. Kielland : *Skipper Worse.*

1953

H. Ibsen: *Peer Gynt.*
Jonas Lie: *Den Fremsynte.*
A. Garborg; *Haugtussa.*
*B. Bjørnson: *En glad gutt.*
*Alex. Kielland: *Gift.*

[*Candidates taking Norwegian as a subsidiary subject are not required to offer this book.]

Pali

1951

Majjhima Nikāya, suttas 128–130 (P.T.S. ed., vol. III, pp. 152–187).
Vibhaṅga, chapter 4 (*Sacca-vibhaṅga*), (P.T.S. ed., pp. 99–121) with Commentary *Sammoha-vinodanī* (P.T.S. ed., pp. 83–124).
Dhammapada, vaggas 15–26.

1952 and **1953**

Majjhima Nikāya, suttas 50–56 (P.T.S. ed., Vol. I, pp. 332–387).
Vibhaṅga, chapter 4 (*Sacca-vibhaṅga*) (P.T.S. ed., pp. 99–121), with Commentary *Sammoha-vinodanī* (P.T.S. ed., pp. 83–124).
Dhammapada, vaggas 15–26.

Persian

1951, 1952 and **1953**

(*a*) Sa'dī: *Būstān,* Chapter II.
(*b*) Niẓāmi 'Arūẓī: *Chahār Maqāla,* First Discourse.
(*c*) Narshakhī: *Tārīkhi Bukhārā* (ed. Mudarris Riẓavī, Tehrān).

History of Philosophy

1951

Descartes: *Discourse on Method; Meditations.*

1952 and **1953**

(2) Descartes: *Discourse on Method.*
(3) Berkeley: *Three Dialogues between Hylas and Philonous.*

Portuguese

1951

(2) Francisco Rodrigues Lobo: *Eclogas* (ed. J. P. Tavares).
Gomes de Brito: *Historia Tragico-Maritima.*
Antonio Vieira: *Sermões,* Vol. II (ed. H. Cidade, A.G.C. 1940).
(3) Almeida-Garrett: *Frei Luiz de Sousa.*
Julio Dinis: *A Morgadinha dos Canaviaes* (2 vols., 1911), *or* Eça de Queiroz: *Cartas de Inglaterra* (5th ed., Porto, 1924).
Antonio Nobre: *Só.*

1952 and **1953**

(2) *Oxford Book of Portuguese Verse* (ed. Aubrey Bell, 1925): poems of Garcia de Resende, Gil Vicente, Bernadim Ribeiro, Christovam Falcam, Francisco de Sá de Miranda, Luis de Camões, Francisco Rodrigues Lobo.
Gomes de Brito: *Historia Tragico-Maritima:* shipwrecks of the period 1589–1622 inclusive (*São Thomé, Santo Alberto, São Francisco, Santiago, Conceição, São João Baptista*).
Antonio Vieira: *Cartas* (ed. J. Lucio de Azevedo, Coimbra, 1925–28), Vol. I, pp. 269–592.

(3) *Oxford Book of Portuguese Verse* (ed. Aubrey Bell, 1925) ; poems of Bocage, Almeida-Garrett, Feliciano de Castilho, Herculano e Araujo, João de Deus, Thomaz Ribeiro, Anthero de Quental, Goncalves Crespo, Gomes Leal, Guerra Junqueiro, Afonso Lopes Vieira, Correa de Oliveira, Eduardo Pondal and Rosalía de Castro.

Eça de Queiroz : *A ilustre Casa de Ramires.*

Ferreira de Castro : *A Selva.*

Sanskrit

1951

Rigveda, II, 12 ; IV, 51 ; V, 83 ; VI, 54 ; VII, 49 ; VIII, 29 ; X, 14, 127, 129. (These hymns are contained in Macdonell : *Vedic Reader for Students.*)

Mṛcchakaṭikā, acts 1–3.

Bhagavadgītā, chapters 1–6, 13–18.

1952 and **1953**

Rigveda, II, 12 ; IV, 51 ; V, 83 ; VI, 54 ; VII, 49 ; VIII, 29 ; X, 14, 127, 129 (these hymns are contained in Macdonell : *Vedic Reader for Students*).

Pratijñāyaugandharāyaṇa.

Kumārasambhava, III.

Sinhalese

1951 and **1952**

(*a*) *Jātaka-aṭuvā-gāṭapadaya*, pp. 1–100 (ed. D. B. Jayatilaka, 1943).

(*b*) *Sasadāvata*, with the old Sanne (ed. Dhammapāla, 1934).

(*c*) *Daḥamsaraṇa*, pp. 200–306 (ed. Dhammānanda, 1929).

(*d*) *Girā Sandeśa Vivaraṇaya* (ed. Munidasa Kumaranatunga 2477).

(*e*) *Saddharmaratnāvaliya*, Chap. 1–10.

(*f*) W. A. Silva : *Kälä Haňda.*

Candidates whose mother-tongue is not Sinhalese may, if they wish, offer only (*a*), (*b*) and (*c*), on condition that they submit to an oral test, including dictation, reading a text written by hand, and conversation.

1953

To be prescribed.

Spanish

1951

(2) *Oxford Book of Spanish Verse* (2nd edition, Fitzmaurice-Kelly), Poems of Garcilaso de la Vega, Luis de León, Fernando de Herrera, San Juan de la Cruz, Luis de Góngora, Lope de Vega, Francisco de Quevedo, and *Epístola moral a Fabio.*

R. Menéndez Pidal : *Flor nueva de romances viejos.*

Miguel de Cervantes Saavedra : *El celoso extremeño.*

Lope de Vega : *El caballero de Olmedo.*

Pedro Calderón de la Barca : *El príncipe constante.*

(3) *Oxford Book of Spanish Verse* (Poems of Duque de Rivas, José de Espronceda, José Zorilla, Gustavo Adolfo Bécquer, Rosalía de Castro, Rubén Darío, Antonio Machado, Juan Ramón Jiménez, Federico García Lorca).

Juan Valera : *El comendador Mendoza.*

Benito Pérez Galdos : *Bailén.*

Emilio Pardo Bazán : *Los pazos de Ulloa*, **or** Vicente Blasco Ibáñez : *La barraca.*

Miguel de Unamuno : *Tres novelas ejemplares y un prólogo.*

Azorín : *Doña Inés.*

1952 and **1953**

(2) *Oxford Book of Spanish Verse* (as for 1951).
R. Menéndez Pidal : *Flor Nueva de Romances Viejos.*
Miguel de Cervantes Saavedra : *El celoso extremeño.*
Lope de Vega : *Peribáñez* (Hachette).
Tirso de Molina : *El burlador de Sevilla* (Clásicos castellanos).

(3) *Oxford Book of Spanish Verse* (as for 1951).
L. Fernández de Moratín : *El si de las niñas.*
Juan Valera : *El comendador Mendoza.*
Benito Pérez Galdós : *Bailén.*
R. del Valle-Inclán : *Los cruzados de la causa.*
Azorín : *Doña Inés.*

Swedish

1951

J. L. Runeberg : *Fänrik Ståls sägner.*
A. Strindberg : *Mäster Olof* (prose version).
S. Lagerlöf : *Herr Arnes penningar.*
*E. Tegnér : *Fritiofs saga.*
*V. Rydberg : *Vapensmeden.*

1952

J. L. Runeberg : *Fänrik Ståls sägner.*
A. Strindberg : *Ett drömspel.*
V. von Heidenstam : *Karolinerna* (Part I).
*E. Tegnér : *Fritiofs saga.*
*V. Rydberg : *Vapensmeden.*

1953

E. G. Geijer : *Dikter ; Minnen.*
J. L. Runeberg : *Fänrik Ståls sägner.*
A. Strindberg : *Ett drömspel.*
*V. von Heidenstam : *Karolinerna* (Part I).
*P. Lagerkvist : *Gäst hos verkligheten.*

[*Candidates taking Swedish as a subsidiary subject are not required to offer this book.]

Tamil

1951 and **1952**

(*a*) Sabhāpati Nāvalar : *Drāviḍap-prakāsikai* (Madras, 1937, pp. 137–185).
(*b*) N. Kanakarajiar : *Tamil Pulavar Varalāru, 1* (E. M. Gopālakrishṇa Kōne, Madras).
(*c*) Tiru-vaḷḷuvar : *Kuṛaḷ, Aṛattuppāl,* ch. 1–38.
(*d*) *Tirukkōvai* (ed. Ārumuga Nāvalar).
(*e*) *Padiṛṛuppattu* (ed. V. Svāmināṭha Aiyar, Madras).

Candidates whose mother-tongue is not Tamil may, if they wish, offer only (*a*), (*b*), and (*c*), on condition that they submit to an oral test, including dictation, reading a text written by hand, and conversation.

1953

To be prescribed.

Theology

1951 *St. John : 1 Corinthians.*

1952 *St. John : Romans.*

1953 *Romans : St. Matthew.*

One of the following subjects, in alternate years :—

1951 and **1953** *The Work of Christ*

An examination of the Biblical data for a Doctrine of the Work of Christ. An historical survey of the chief (historical) Soteriological theories. Modern theories of Atonement and Redemption.

1952 *The Person of Christ*

An examination of the Biblical data for a Doctrine of the Person of Christ.

An historical survey of ancient Christologies up to A.D. 451.

Modern Theories of the Person of Christ.

Turkish

1951

A. Tietze and S. Lisie : *Türkisches Lesebuch für Ausländer* (Istanbul, 1943).

Baki Sürha Ediboglu : *Türk şiirinden örnekler* (Ankara, 1944).

'Ali Janīb : *Edebiyyāt* (Istanbul, 1926), pp. 5–7, 37–48, 114–116, 133–137, 160–162, 264–267, 340–366.

I. Kunosh : *Türk halq edebiyyāti* (Istanbul, 1926).

1952 and **1953**

A. Tietze and S. Lisie : *Türkisches Lesebuch für Ausländer* (Istanbul, 1943).

Baki Sürha Ediboglu : *Türk şiirinden örnekler* (Ankara, 1944).

'Ali Janib : *Edebiyyāt* (Istanbul, 1926), pp. 5–7, 31–54, 114–116, 133–137, 160–162, 264–274, 282–306, 340–366.

Neşrî Tarihi, I (Ankara, 1949), pp. 58–146.

Urdu

1951 and **1952**

(*a*) Naẓīr Aḥmad : *Taubatu'n-Naṣūḥ.*

(*b*) Alṭāf Ḥusain Ḥālī : *Muqaddima.*

(*c*) Alṭāf Ḥusain Ḥālī : *Yādgār-i Ghālib* (*Pahyla Ḥiṣṣa*, excluding the Persian poetry).

(*d*) *Rūḥ i Naẓm*, Vol. II, pp. 1–6, line 11 ; 31–43, 3 ; 47, 8–52, 1 ; 57, 16–59, 14 ; 74, 15–77, 16 ; 99, 1–104, 14 ; 118, 18–124, 10 ; 131, 15–145, 16 ; 169–185.

Candidates whose mother-tongue is not Urdu may, if they wish, offer only (*a*), (*b*) and (*d*) on condition that they submit to an oral test, including dictation, reading a text written by hand, and conversation.

1953

To be prescribed.

B.A. HONOURS EXAMINATION

Arabic

1951, 1952 and **1953**

Paper 1

Badī' az-Zamān : *Maqāmāt* (ed. Muhammad 'Abduh), I–X.

Selections from the Sahīh of al-Bukhārī (ed. C. C. Torrey, Semitic Study Series, No. VI. E. J. Brill, Leiden).

Paper 2

Either Th. Nöldeke : *Delectus veterum carminum Arabicorum,*
or Abū Tammām : *Kitāb al-Hamāsa,* chapter I (*Bāb al Hamāsa*).

Paper 3

al-Qur'ān : Sūras 7–20 (with al-Baidāwī's commentary on Sūra 19).

Paper 4

(*a*) *Riwāyāt al-Aghānī* (Catholic Press, Beirut), Vol. I, pp. 1–151.

(*d*) Conti Rossini : *Chrestomathia arabica meridionalis* (Rome, 1931), items 1–65.

Paper 10

(*b*) Hebrew : *Amos, Psalms* 1–8.
Aramaic : *Daniel,* chapters 2–7.

(*c*) Sa'dī : *Gulistān,* Books I and II (without *Muqaddima*). Ibn al-Balkhī : *Fārs Nāma* (ed. G. Le Strange and R. A. Nicholson, London, 1921), pp. 60–113. Nizāmī 'Arūdī : *Chahār Maqāla,* First Discourse (London, 1899).

(*d*) Sulaymam Chelebi : *Mevlid-i nebi* (in Gibb, *History of Ottoman Poetry,* Vol. VI, pp. 21–25). Resat Nuri Guntekin : *Anadolu Notlarī,* I, pp. 9–36.

History of Art

1951, 1952 and **1953**

Vasari : *Lives* (trans. G. du C. de Vere)—the Prefaces, etc. on pages xiii–lix ; the Author's Prefaces to Parts II and III of the Lives ; Part I, Cimabue, Giotto ; Part II, Masaccio, Brunelleschi, Donatello ; Part III, Leonardo, Raphael, Michelangelo.

Condivi : *Life of Michelangelo* (trans. C. Holroyd).

Ghiberti : *Commentaries* (trans. to be obtained from the University).

Ridolfi : *Life of Tintoretto* (trans. to be obtained from the University).

A. Dürer : *Records of Journeys to Venice and the Low Countries* (trans. R. Tombo, ed. R. Fry, or in Conway, M. : *Literary Remains of A. Dürer*).

Bengali

1951

Dāker bacan.

Khanār bacan.

Rāmāi Paṇḍit : *Sunya Purān* (from *Vanga Sāhitya Paricay,* by D. C. Sen, pp. 4–22).

Mukundarām Kavikaṅkaṇ : *Caṇḍī-Maṅgal.*

Kāsīrām Dās : *Mahābhārata* (*Ādiparva* only).

Vaiṣṇava Padāvalī.

Bhāratcandra Rāy : *Annadā-Maṅgal.*

Madhusūdan Datta : *Meghnād-Badh.*

Nabīncandra Sen : *Amitābha.*

Rabīndranath Ṭhākur : *Mānasi.*

Dwijendralāl Rāy : *Sājahān.*

Baṅkimcandra Caṭṭopādhyāy : *Kamalākānter Daptar.*

Saratcandra Caṭṭopādhyāy : *Pallī-Samāj.*
Rabīndranāth Ṭhākur : *Galpa Guccha* (Part 3).

1952 and **1953**

To be prescribed.

Burmese

1951, 1952 and **1953**

Myazedi Inscription (Burmese face only).
Minwaing Kyaung Inscription.
Shin Maharatthasara : *Kogan Pyo* Section I, Hatthipāla Taw Htwet Hkan.
Seinda Kyawthu : *Yadus.*
U Kala : *Mahā Yāzawin gyi,* Vol. I, Sections 4, 5 and 6.
U Hpyan : *Paleiksa Egyin.*
U Shun, Sameikkon-sa : *Ummādantī Pyo.*
U Pok Ni : *Kummāra Pya Zat,* pp. 10–48.
Selections from the Anthology of Burmese Literature (with Notes by Maung Chit Saya, Rangoon, 1926).
Ledi Sayadaw, Agga Mahā Pandita : *Pyinthit Kālakattā Pokhsā Withizzanā Kyan.*

Classical Chinese

1951, 1952 and **1953**

Paper 1 :—*Ch'un Ch'iu, Tso chuan,* Duke Hsiang, Years 28–31, and Duke Chao, Years 1–3, 7–8, 25–32.
Paper 2 :—*T'ang Sung pa* (*ta*) *chia wên,* Books I and XXVII.
Paper 3 :—Mencius, Books I–IV.
Paper 4 (*a*) :—Han Fei Tzŭ, book I, Chapters 1–5, and the first two chapters of book II (chapters 6 and 7) [numbering in accordance with edition by Wang Hsien-shên, followed in translation by W. K. Liao in *The Complete Works of Han Fei Tzŭ,* Vol. 1, London, 1939].
Paper 4 (*b*) :—Murakami Saitaroo : *Zisyuu-zyuken-kanbun-kaisyaku no zyuuten* (*Hoobundoo*), Nos. 1, 3, 7, 24, 33, 34, 38, 44, 71, 72, 111, 160, 248, 258, 280, 321.
Paper 7 :—History of the T'ang Dynasty.
Paper 8 :—Literature of the T'ang Dynasty.

Modern Chinese

1951, 1952 and **1953**

Paper 1 :—*Mencius,* Book I, Pt. I, and Book IV, Pt. I. *Analects,* Books I, II and VII.
Paper 2 :—*Horngloumenq* (*Hung Lou Mêng*) Chapters I–V ; and either *Shishiangjih* (*Hsi Hsiang Chi*), Book I (Prelude and Acts I–IV) ; or *Chuenchiou, Tzuoojuann* (*Ch'un ch'iu, Tso chuan*), Duke Jau (Chao), Years 1–3, 7–8 and 25–32 ; or *Tarng Sonq ba dahjia wen* (*T'ang Sung pa* (*ta*) *chia wên*), Book I.
Paper 3 :—*Hwu Shyh Wentswen* (*Hu Shih Wên Ts'un*) Shanghai Ya Tung Press), Vol. III, pp. 1–10, and Vol. IV, pp. 1–11 and pp. 151–164 ; and either Vol. III, pp. 200–249 or Murakami Saitaroo ; *Zisyuu-zyuken-kanbun-kaisyaku no zyuuten* (Hoobundoo), Nos. 1, 3, 7, 24, 72, 248, 280.

1951

Classics

A. *Latin Books*

(1) Virgil : *Eclogues ; Georgics,* Books I and IV ; *Æneid,* Books IV, VI, VII, VIII, XII.
(2) Horace, omitting *Satires,* Book I.

(3) Lucretius: Books I, III, V; Catullus.
(4) Plautus: *Amphitryo; Captivi; Rudens; Trinummus.*
(5) Cicero: *Philippic* II; *Pro Cluentio; In C. Verrem Actio Prima; Letters* (ed. How), 2–12, 14–17, 19, 21–23, 26–32, 40, 42–44, 46, 48–51, 54–56, 58, 60, 65, 70, 72, 75, 76, 88.
(6) Livy: Books XXVII, XXIX, XXX.
(7) Tacitus: *Annals*, Books XIII–XVI.

B. *Greek Books*

(*a*) Homer: *Iliad*, Books I, III, XXII–XXIV; *Odyssey*, Books X–XIV.
(*b*) Three tragic plays:—
Sophocles: *Electra; Œdipus Tyrannus; Philoctetes**,
or Euripides: *Hippolytus; Iphigeneia in Taurus; Bacchae**.
(*c*) Aristophanes: *Frogs; Clouds; Peace.*
(*d*) Pindar: *Pythians; Olympians.*
(*e*) Theocritus, Bion and Moschus.
(*f*) Thucydides: Books V, VI, VII.
(*g*) Herodotus: Books V–VII.
(*h*) Plato: *Phaedo; Gorgias.*
(*i*) Demosthenes: *De Corona; In Conomen; In Calliclem; Philippic* III.

Roman Historical Subject

The Principates of Augustus and Tiberius, 30 B.C. to A.D. 37, **or** Roman History from 133 to 70 B.C.

Greek Historical Subject

Greek History from 500 to 433 B.C.

Comparative Philology of the Greek and Latin Languages

Greek: C. D. Buck: *Introduction to the Study of the Greek Dialects*, revised edition (Ginn & Co.), Nos. 18–22, 25, 28 (lines 1–24), 33, 38–40, 43 (lines 1–65), 50, 55 (omitting lines 15–32), 56–58, 60, 66 (lines 1–40), 74 (lines 1–54), 75–80, 80², 110 (IV, 25 to V, 9).

Latin: H. Ernout: *Recueil de textes latins archaïques* (Paris, Klinksieck), Part I, omitting Nos. 3, 136, 137, 139–146.

*No textual criticism is required for this book.

1952 and **1953**

A. *Latin Books*

(1) Virgil: *Eclogues; Georgics*, Books I and IV; *Æneid*, Books IV, VI, VII, VIII, XII.
(2) Horace, omitting *Satires*, Book I.
(3) Lucretius: Books I, III, V; Catullus.
(4) Plautus: *Amphitryo; Captivi; Rudens; Trinummus.*
(5) Cicero: *Philippic* II; *Pro Cluentio; In C. Verrem Actio Prima; Letters* (ed. How), 2–12, 14–17, 19, 21–23, 26–32, 40, 42–44, 46, 48–51, 54–56, 58, 60, 65, 70, 72, 75, 76, 88.
(6) Livy: Books XXI, XXII, XXIII, 1–32, 4.
(7) Tacitus: *Annals*, Books XIII–XVI.

B. *Greek Books*

(*a*) Homer: *Iliad*, Books I, III, XXII–XXIV; *Odyssey*, Books X–XIV.
(*b*) Three tragic plays:—
Sophocles: *Œdipus Coloneus; Œdipus Tyrannus; Antigone*,
or Euripides: *Medea; Iphigeneia in Taurus; Bacchae**.

(*c*) Aristophanes: *Frogs; Clouds; Birds.*
(*d*) Pindar: *Pythians; Olympians.*
(*e*) Theocritus, Bion and Moschus.
(*f*) Thucydides: Books V, VI, VII.
(*g*) Herodotus: Books V–VII.
(*h*) Plato: *Phaedo; Gorgias.*
(*i*) Demosthenes: *De Corona; In Conomen; In Calliclem; Philippic* III.

Roman Historical Subject

The Principates of Augustus and Tiberius, 30 B.C. to A.D. 37, **or** Roman History from 133 to 70 B.C.

Greek Historical Subject

Greek History from 500 to 433 B.C.

Comparative Philology of the Greek and Latin Languages

Greek: C. D. Buck: *Introduction to the Study of the Greek Dialects*, revised edition (Ginn & Co.), Nos. 18–22, 25, 28 (lines 1–24), 33, 38–40, 43 (lines 1–65), 50, 55 (omitting lines 15–32), 56–58, 60, 66 (lines 1–40), 74 (lines 1–54), 75–80, 80², 110 (IV, 25 to V, 9).

Latin: H. Ernout: *Recueil de textes latins archaïques* (Paris, Klinksieck), Part I, omitting Nos. 3, 136, 137, 139–146.

*No textual criticism is required for this book.

Dutch

1951

Either Old English:—As prescribed for English Honours under (*b*) Old English texts in 1951,

or Old High German, Old Saxon or Gothic:—As prescribed for German Honours in 1951 under Syllabus I (*a*).

Middle Dutch:—*Karel ende Elegast* (Thieme, Zutfen). *Mariken van Nieumeghen* (ed. A. Saalborn, Torenreeks No. 31–2, In den Toren, Naarden).

Modern Dutch:—Hooft: *Nederlandsche Historien*, Book VII, *Het Beleg van Haarlem* (Meulenhoff, Amsterdam, **or** Wolters, Groningen). Vondel: *Jeptha* (Thieme, Zutfen, **or** Wolters, Groningen). J. F. Oltmans: *De Schaapherder* (Meulenhoff, Amsterdam). G. Gezelle: *Gedichten*, Bloemlezing door Prof. F. Baur, N. V. Standaard-Boekhandel, Antwerp). Multatuli: *Woutertje Pieterse* (Meulenhoff, Amsterdam). Gorter: *Mei* (Versluys, Amsterdam). Vervey: *Het Blank Heelal* (Versluys, Amsterdam). Boutens: *Bloemlezing* (ed. W. Kramer, Meulenhoff, Amsterdam). Van Schendel: **either** *De Waterman* **or** *Een Hollandsch Drama* (Meulenhoff, Amsterdam).

1952

Either Old English:—Sweet: *Anglo-Saxon Reader* (10th edition, 1946), extracts IV, VIII, IX and X; *Beowulf*, lines 1–924, 2200–3182,

or Old High German:—Braune: *Althochdeutsches Lesebuch* (10th edition, 1942, or 11th edition, 1949); XX Tatian; *John* I, 1–5, *Luke* I, 26–38; XXVIII *Hildebrandslied*; XXIX *Wessobrunner Gebet*; XXXII Otfrid (V. 24) *Oratio*; XXXVI *Ludwigslied*. These texts are also to be found in Werner Burkhard: *Kleines Althochdeutsches Lesebuch*, Francke, Bern,

or Old Saxon:—F. Holthausen: *Altsächisches Elementarbuch* (C. Winter, Heidelberg)—all extracts.

Middle Dutch:—Hadewijch: *Gedichten en Proza* (Thieme); *Mariken van Nieumeghen* (Torenreeks No. 31–32, In den Toren Naarden).

Modern Dutch:—Bredero: *Bloemlezing* (ed. Schepers, Meulenhoff). Vondel: *Jeptha* (Thieme **or** Wolters). Wolff en Deken: *Sara Burgerhart* (Wereldbibliotheek **or** Meulenhoff). Potgieter: *Florence* (ed. Duyfhuyzen). Gezelle: *Gedichten*, Bloemlezing door Prof. F. Baur, Standaard-Boekhandel, Antwerp). Gorter: *Mei* (Versluys). Verwey: *Het Blank Heelal* (Versluys). H. Roland Holst: *Keur* (ed. S. Baelde, Brusse). Van Schendel: *De Waterman* (Nijgh & Van Ditmar).

1953

Either Old High German:—Braune: *Althochdeutsches Lesebuch* (10th edition, 1942, or 11th edition, 1949); XX Tatian; *John* I, 1–5, *Luke* I, 26–38; XXVIII *Hildebrandslied*; XXIX *Wessobrunner Gebet*; XXXII Otfrid (V. 24) *Oratio*; XXXVI *Ludwigslied*. These texts are also to be found in Werner Burkhard: *Kleines Althochdeutsches Lesebuch*, Francke, Bern,

or Old Saxon:—F. Holthausen: *Altsächsisches Elementarbuch* (C. Winter, Heidelberg)—all extracts,

or Old English:—Sweet: *Anglo-Saxon Reader* (10th edition, 1946), Extracts IV, VIII, IX and X; *Beowulf:* Lines 1–924, 2200–3182.

Middle Dutch:—Hadewijch: *Gedichten en Proza* (Thieme); Esmoreit (Tjeenk Willink, Zwolle) **or** *Ferguut*, ed. E. van den Ent (Tjeenk Willink).

Modern Dutch:—Vondel: *Lucifer* (Thieme **or** Tjeenk Willink); Luyken: *Bloemlezing*, ed. W. Kramer (Meulenhoff); Wolff en Deken: *Sara Burgerhart* (Wereldbibliotheek **or** Meulenhoff); Potgieter: *Florence*, ed. Duyfhuyzen (Mees, Santpoort); Multatuli: *Max Havelaar*, ed. G. Stuiveling (Van Oorschot, Amsterdam, 1949); Gorter: *Mei* (Versluys); Verwey: *Het Blank Heelal* (Versluys); Streuvels: *De Oogst* (Veen, Amsterdam).

English

1951

(*a*) Sweet: *Anglo-Saxon Reader* (10th edition, Oxford University Press, 1946, or 11th edition, 1948), extract IV, *The Voyages of Ohthere and Wulfstan*; XV, *Aelfric's Life of King Oswald*; XXI, *The Battle of Maldon*; XXVI, *The Wanderer*; XXXII.D, *Mercian Hymns—Canticum de Vit* (from *Deuteronomy* xxxii); XXXIII.B, *Kentish Charters—Abba*, 835.

Sweet: *First Middle English Primer*, pp. 19–41 (*Ancrene Riwle*); pp. 48–58 (*Ormulum*).

The Peterborough Chronicle, 1137–1140 (in Earle & Plummer: *Two Anglo-Saxon Chronicles Parallel* (Oxford University Press), or in several Middle English readers).

Sisam: *Fourteenth Century Verse and Prose*, extract III.

Chaucer: *Troilus and Criseyde*, Book II, lines 1–308.

Chambers & Daunt: *London English*, pp. 18–31.

Shakespeare: *Much Ado about Nothing*, Act IV, Scene 1; *Troilus and Cressida*, Act I, Scene 3.

(*b*) *Beowulf.*

Sweet: *Anglo-Saxon Reader* (10th edition, Oxford University Press, 1946, or 11th edition, 1948), extract II, *On the state of learning in England*; IV, *The Voyages of Ohthere and Wulfstan*; VIII, *Alfred's Wars with the Danes*; X, *Bede's Account of the Poet Caedmon*; XV, *Aelfric's Life of King Oswald*; XVII, *The Martyrdom of Aelfeah*; XVIII, *Eustace at Dover, and the Outlawry of Godwine*; XIX, *Charms*; XXI, *The Battle of Maldon*; XXV, *The Dream of the Rood*; XXVI, *The Wanderer*; XXVIII, *The Seafarer.*

(The above texts are prescribed for translation and subject-matter, interpretation, forms (including metre), expression. The text of *Beowulf* used by the examiners in setting the examination paper will be that of Wyatt & Chambers.)

(*c*) Sweet: *First Middle English Primer*, pp. 19–41 (*Ancrene Riwle*).
Sisam: *Fourteenth Century Verse and Prose*, extracts II, X, XIII.
Chaucer: *Troilus and Criseyde*, Book II, lines 1–1092.
Langland: *Piers Plowman, Passus* II–IV.
Sir Gawain and the Green Knight (ed. Tolkien & Gordon).

(In *Sir Gawain and the Green Knight* passages for translation will be set from Parts I and IV.)

(*g*) *King John; Much Ado about Nothing; Macbeth; Troilus and Cressida; Poems* (including *Sonnets*).

(*h*) Special Subject:—

(ii) Aristotle: *Poetics.*
Sidney: *Apologie for Poetry.*
Pope: *An Essay on Criticism.*
Wordsworth: **either** *Wordsworth's Literary Criticism* (ed. Nowell Smith, Oxford Miscellany), **or** Prefaces and Appendices to *Lyrical Ballads* (as in the Oxford edition of Wordsworth's *Poetical Works*).
Nichol Smith: *Shakespearean Criticism* (World's Classics).

(iii) The plays of Henrik Ibsen.

(iv) (*b*) The work of Meredith, Yeats and Virginia Woolf.

(vii) Old English:—
Sweet: *Second Anglo-Saxon Reader*; Rushworth Gloss on *Matthew* VI; Durham Gloss (Lindisfarne Gospels) on *Matthew* VI.
Bright: *West Saxon Gospels: Matthew* VI.

Gothic:—
Wright: *Grammar of the Gothic Language: St. John; Second Epistle to Timothy; Matthew* VI.

Old Norse:—
E. V. Gordon: *An Introduction to Old Norse*: I, pp. 1–17; II; IV, p. 163, Runic Inscriptions 1 and 2.

Old Saxon:—
F. Holthausen: *Altsächsisches Elementarbuch* (C. Winter, Heidelberg): *Helliand*, pp. 205–215.
Klaeber: *The Later Genesis and other Old English and Old Saxon Texts relating to the Fall of Man:* Old Saxon *Genesis.*

Old High German:—
Braune: *Althochdeutsches Lesebuch*: XVI, Tatian; XXIII (1, 2, 3, 4), Notker; XXXII (1, 2, 3), Otfrid.

(viii) E. V. Gordon: *An Introduction to Old Norse*, extracts I, II, V, VI, VII, VIII, IX, XII, XIII, XIV.
Gunnlaugs saga Ormstungu (ed. L. M. Small).
Poetic Edda: Vegtamskvipa, Atlakviða.

(ix) F. Holthausen: *Altsächsisches Elementarbuch* (C. Winter, Heidelberg), extracts from the *Heliand* and *Genesis* fragments. Braune: *Althochdeutsches Lesebuch: Muspilli; Hildebrandslied; Ludwigslied; Christus und die Samariterin.*

(x) (*i*) The Lyric. **Either** Pindar: *Olympians*, **or** Horace: *Odes*, Book I.

(*ii*) The Drama. **Either** Aristophanes: *Frogs*, **or** Terence: *Adelphi.*

(Passages for translation and comment will be set only from 1, 2, 3, 6, 7, 8 and 13 of the *Olympians*, and from lines 1–737 of the *Frogs*, but may be set from any part of Horace: *Odes*, Book I, and Terence: *Adelphi.*)

(*i*) As for paper (*h*) Special Subject (ii).

(*j*) As for paper (*h*) Special Subject (viii).

1952

(*a*) Sweet: *Anglo-Saxon Reader* (10th edition, Oxford University Press, 1946, or 11th edition 1948), extract IV, *The Voyages of Ohthere and Wulfstan*; XV, *Aelfric's Life of King Oswald*; XXI, *The Battle of Maldon*; XXVI, *The Wanderer*; XXXII.D, *Mercian Hymns—Canticum de Vit* (from *Deuteronomy* xxxii); XXXIII.B, *Kentish Charters—Abba*, 835.

Sweet: *First Middle English Primer*, pp. 19–41 (*Ancrene Riwle*); pp. 48–58 (*Ormulum*).

The Peterborough Chronicle, 1137–1140 (in Earle & Plummer: *Two Anglo-Saxon Chronicles Parallel* (Oxford University Press), or in several Middle English readers).

Sisam: *Fourteenth Century Verse and Prose*, extract III.

Chaucer: *Troilus and Criseyde*, Book II, lines 1–308.

Chambers & Daunt; *London English*, pp. 18–31.

Shakespeare: *Troilus and Cressida*, Act I, scene 3; *King Lear*, Act II, scene 2 (both to be studied in the First Folio text, of which the Oxford facsimile is recommended).

(*b*) *Beowulf.*

Sweet: *Anglo-Saxon Reader* (10th edition, Oxford University Press, 1946, or 11th edition, 1948), extract II, *On the state of learning in England*; IV, *The Voyages of Ohthere and Wulfstan*; VIII, *Alfred's Wars with the Danes*; X, Bede's *Account of the Poet Caedmon*; XV, *Aelfric's Life of King Oswald*; XVI, *Wulfstan's Address to the English*; XVII, *The Martyrdom of Aelfeah*; XXI, *The Battle of Maldon*; XXII, *The Fall of the Angels*; XXIII, *Judith*; XXV, *Dream of the Rood*; XXVI, *The Wanderer.*

(The above texts are prescribed for translation and subject-matter, interpretation, forms (including metre) and expression. The text of *Beowulf* used by the examiners in setting the examination paper will be that of Wyatt & Chambers).

(*c*) Sweet: *First Middle English Primer*, pp. 19–41 (*Ancrene Riwle*).

Sisam: *Fourteenth Century Verse and Prose*, extracts II, X, XIII.

Chaucer: *Troilus and Criseyde*, Book II, lines 1–1092.

Langland: *Piers Plowman, Passus* II–IV.

Sir Gawain and the Green Knight (ed. Tolkien & Gordon).

(In *Sir Gawain and the Green Knight* passages for translation will be set from Parts I and IV.)

(*g*) *King John ; Twelfth Night ; Troilus and Cressida ; King Lear ; Poems* (including *Sonnets*).

(*h*) Special Subject :—

(iii) (*a*) English Poetic Drama ;

(*b*) Galsworthy and Granville-Barker.

(v) Henry James ; Poe ; Whitman.

(vii) Old English :—

Sweet : *Second Anglo-Saxon Reader :* Rushworth Gloss on *Matthew* VI ; Durham Gloss (Lindisfarne Gospels) on *Matthew* VI.

Bright : *West Saxon Gospels : Matthew* VI.

Gothic :—

Wright : *Grammar of the Gothic Language : St. John ; Second Epistle to Timothy ; Matthew* VI.

Old Norse :—

E. V. Gordon : *An Introduction to Old Norse* : I, pp. 1–17 ; II ; IV, p. 163, Runic Inscriptions 1 and 2.

Old Saxon :—

F. Holthausen : *Altsächsisches Elementarbuch* (Heidelberg, 1921) : *Heliand*, pp. 206–215 ; *Genesis*, pp. 215–224.

Old High German :—

Braune : *Althochdeutsches Lesebuch* (Halle, Saale, 1942) : XVI (1, 2, 4, 11, 14, 15), Tatian ; XXIII (1, 2, 3, 4), Notker ; XXXII (5, 8, 10), Otfrid ; XXX, *Muspilli* ; XXXVI, *Das Ludwigslied*.

(viii) E. V. Gordon : *An Introduction to Old Norse*, extracts, I, II, V, VI, VII, VIII, IX, XII, XIII, XIV.
Víga-Glúms Saga (ed. Turville-Petre).
Poetic Edda : Helgakviða Hundingsbana II (in the edition of F. Jonsson named *Volsungakviða hin forna*).

(ix) F. Holthausen : *Altsächsisches Elementarbuch* (Heidelberg, 1921) : pp. 201–224 : *Heliand, Genesis*, and minor pieces.
Braune : *Althochdeutsches Lesebuch* (Halle, Saale, 1942) : Prose : II, *Paternoster und credo ;* XVI (1, 2, 4, 11, 14, 15), Tatian ; XXIII (1–11), Notker ; XXV, *Physiologus ;* XXVII, *Wessobrunner Predigt.* Poetry : VII, *Ambrosianischer Hymnen ;* XXVIII, *Das Hildebrandslied ;* XXX, *Muspilli ;* XXXII (5, 8, 10, 11), Otfrid ; XXXIV, *Christus und die Samariterin ;* XXXVI, *Das Ludwigslied ;* XXXXII, *Memento Mori.*

(x) (*i*) The Pastoral. **Either** Theocritus : *Idylls* I, II, XV, and Moschus : *Lament for Bion*, **or** Virgil : *Eclogues* I, IV, V, VIII, X.

(*ii*) The Drama. **Either** Aristophanes : *Frogs*, **or** Terence : *Adelphi*.

(Passages for translation and comment will be set only from lines 1–737 of the *Frogs*, but may be set from any part of the other texts prescribed.)

(xi) Texts to be prescribed.

(*j*) As for paper (*h*) Special Subject (viii).

1953

(*a*) Sweet: *Anglo-Saxon Reader* (10th edition, Oxford University Press, 1946, or 11th edition 1948), extract IV, *The Voyages of Ohthere and Wulfstan*; XV, *Aelfric's Life of King Oswald*; XXI, *The Battle of Maldon*; XXVI, *The Wanderer*; XXXII.D, *Mercian Hymns—Canticum de Vit* (from *Deuteronomy* xxxii); XXXIII.B, *Kentish Charters—Abba*, 835.

Sweet: *First Middle English Primer*, pp. 19–41 (*Ancrene Riwle*); pp. 48–58 (*Ormulum*).

The Peterborough Chronicle, 1137–1140 (in Earle & Plummer: *Two Anglo-Saxon Chronicles Parallel* (Oxford University Press), or in several Middle English readers).

Sisam: *Fourteenth Century Verse and Prose*, extract III.

Chaucer: *Parlement of Foules*, lines 1–301.

Chambers & Daunt: *London English*, pp. 18–31.

Shakespeare: *King Lear*, Act II, scene 2; *Coriolanus*, Act III, scene 1 (both to be studied in the First Folio text, of which the Oxford facsimile is recommended.)

(*b*) *Beowulf*.

Sweet: *Anglo-Saxon Reader* (10th edition, Oxford University Press, 1946, or 11th edition, 1948), extract II, *On the state of learning in England*; IV, *The Voyages of Ohthere and Wulfstan*; VIII, *Alfred's Wars with the Danes*; X, Bede's *Account of the Poet Caedmon*; XV, *Aelfric's Life of King Oswald*; XVI, *Wulfstan's Address to the English*; XVII, *The Martyrdom of Aelfeah*; XXI, *The Battle of Maldon*; XXII; *The Fall of the Angels*; XXIII, *Judith*; XXV, *Dream of the Rood*; XXVI, *The Wanderer*.

(The above texts are prescribed for translation and subject-matter, interpretation, forms (including metre) and expression. The text of *Beowulf* used by the examiners in setting the examination paper will be that of Wyatt & Chambers).

(*c*) Sweet: *First Middle English Primer*, pp. 19–41 (*Ancrene Riwle*).

Sisam: *Fourteenth Century Verse and Prose*, extracts II, X, XIII.

Chaucer: *Parlement of Foules*.

Langland: *Piers Plowman, Passus* II–IV.

Sir Gawain and the Green Knight (ed. Tolkien & Gordon).

(In *Sir Gawain and the Green Knight* passages for translation will be set from Parts I and IV.)

(*g*) *Richard II; Twelfth Night; Measure for Measure; King Lear; Coriolanus.*

(*h*) Special Subject:—

(iii) (*a*) English Poetic Drama;
(*b*) Galsworthy and Granville-Barker.

(vii) Old English:—

Sweet: *Second Anglo-Saxon Reader*: Rushworth Gloss on *Matthew* VI; Durham Gloss (Lindisfarne Gospels) on *Matthew* VI.

Bright: *West Saxon Gospels: Matthew* VI.

Gothic:—

Wright: *Grammar of the Gothic Language: St. John; Second Epistle to Timothy; Matthew* VI.

Old Norse:—

E. V. Gordon: *An Introduction to Old Norse*: I, pp. 1–17; II; IV, p. 163, Runic Inscriptions 1 and 2.

Old Saxon :—

F. Holthausen : *Altsächsisches Elementarbuch* (Heidelberg, 1921) : *Heliand*, pp. 206–215 ; *Genesis*, pp. 215–224.

Old High German :—

Braune : *Althochdeutsches Lesebuch* (Halle, Saale, 1942) : XVI (1, 2, 4, 11, 14, 15), Tatian ; XXIII (1, 2, 3, 4), Notker ; XXXII (5, 8, 10), Otfrid ; XXX, *Muspilli* ; XXXVI, *Das Ludwigslied*.

(viii) E. V. Gordon : *An Introduction to Old Norse*, extracts, I, II, V, VI, VII, VIII, IX, XII, XIII, XIV.

Víga-Glúms Saga (ed. Turville-Petre).

Poetic Edda : Helgakviða Hundingsbana II (in the edition of F. Jonsson named *Volsungakviða hin forna*).

(ix) F. Holthausen : *Altsächsisches Elementarbuch* (Heidelberg, 1921) : pp. 201–224 : *Heliand*, *Genesis*, and minor pieces. Braune : *Althochdeutsches Lesebuch* (Halle, Saale, 1942) : Prose : II, *Paternoster und credo ;* XVI (1, 2, 4, 11, 14, 15), Tatian ; XXIII (1–11), Notker ; XXV, *Physiologus ;* XXVII, *Wessobrunner Predigt*. Poetry : VII, *Ambrosianischer Hymnen ;* XXVIII, *Das Hildebrandslied ;* XXX, *Muspilli ;* XXXII (5, 8, 10, 11), Otfrid ; XXXIV, *Christus und die Samariterin ;* XXXVI, *Das Ludwigslied ;* XXXXII, *Memento Mori*.

(x) (*i*) The Pastoral. **Either** Theocritus : *Idylls* I, II, XV, and Moschus : *Lament for Bion*, **or** Virgil : *Eclogues* I, IV, V, VIII, X.

(*ii*) The Epic. **Either** Homer : *Odyssey*, Book VI, **or** Virgil : *Aeneid*, Book IV.

(xi) Texts to be prescribed.

(*j*) As for paper (*h*) Special Subject (viii).

French

1951

Aucassin et Nicolette (éd. Mario Roques, C.F.M.A.).

Fouke Fitz Warin (éd. L. Brandin, C.F.M.A.), pp. 1–63.

Rabelais : *Gargantua*, Chapters 22–33, 40–42, 49–55, 57.

Ronsard : *Poèmes* (ed. A. Barbier, Blackwell's French Texts).

One of the following subjects (I–IV), chosen by the candidate :—

I. Corneille : *Théâtre*.

II. Diderot : a general knowledge of his life and literary career, with a special study of *Pensées philosophiques* (Librairie Gallimard) ; *Le Père de Famille ; Diderot's Writings on the Theatre* (ed. F. C. Green, Cambridge University Press) ; *Le Neveu de Rameau* (éd. A. Dupouy, Bibliothèque Larousse) ; *Eloge de Richardson* (in *Œuvres choisies*, éd. A. Dupouy, Bibliothèque Larousse) ; **either** *Lettres à Sophie Volland* (éd. A. Babelon, Librairie Gallimard), **or** *Entretien avec M. D'Alembert* and *Le Rêve de M. D'Alembert*.

III. Balzac, with a special study of *Les Chouans ; La Peau de Chagrin ; Le Père Goriot ; Les Illusions perdues*, Part II (*Un Grand Homme de Province à Paris*) ; *La Cousine Bette*.

IV. Twentieth-Century Authors :

Charles Péguy : *Victor-Marie Comte Hugo ; Œuvres poétiques complètes* (éd. de la Pléiade, N.R.F., Paris).

Romain Rolland : *Charles Péguy.*

Marcel Proust, with special study of *Du Côte de chez Swann.*

Paul Valéry, with special study of *Poésies, Eupalinos* and *Monsieur Teste* (N.R.F., Paris).

Special subject in Medieval Literature :—

Le Cycle de Guillaume d'Orange, with special study of :—

La Chanson de Guillaume (including *Rainouart*).

Le Couronnement Louis.

Le Charroi de Nîmes.

Le Siège de Barbastre.

Special subject in Renaissance Literature :—
Montaigne.

1952

Aucassin et Nicolette (éd. Mario Roques, C.F.M.A.).

Villon : *Le Grand Testament* (éd. Foulet).

Montaigne : *De l'incertitude de notre jugement ; Des Livres ; De l'art de conférer* (ed. Tilley & Boase, Manchester University Press, or ed. P. Villey, Félix Alcan).

Ronsard : *Poèmes* (ed. A. Barbier, Blackwell's French Texts).

One of the following subjects (I–IV), chosen by the candidate :—

I. Molière : *Théâtre.*

II. The Novel in the Eighteenth Century, with special study of Le Sage : *Gil Blas ;* Marivaux : *La vie de Marianne ;* Abbé Prévost : *Manon Lescaut ;* Voltaire : *Zadig, Candide, L'Ingénu, La Princesse de Babylone ;* Rousseau : *La Nouvelle Héloïse ;* Diderot : *Le Neveu de Rameau.*

III. Balzac, with a special study of *Les Chouans ; La Peau de Chagrin ; Le Père Goriot ; Les Illusions perdues,* Part II (*Un Grand Homme de Province à Paris*) ; *La Cousine Bette.*

IV. Twentieth-Century Authors :

Charles Péguy : *Victor-Marie Comte Hugo ; Œuvres poétiques complètes* (éd. de la Pléiade, N.R.F., Paris).

Romain Rolland : *Charles Péguy.*

Marcel Proust, with special study of *Du Côte de chez Swann.*

Paul Valéry, with special study of *Poésies, Eupalinos* and *Monsieur Teste* (N.R.F., Paris).

Special subject in Medieval Literature :—

Le Cycle de Guillaume d'Orange, with special study of :—

La Chanson de Guillaume (including *Rainouart*) (ed. Société des Anciens Textes Français).

Le Couronnement Louis.

Le Charroi de Nîmes.

Le Siège de Barbastre.

Special subject in Renaissance Literature :—
Montaigne.

1953

Le Roman de Renard, Branch I (éd. Mario Roques, C.F.M.A.), lines 1–744 and 940–1600.

Villon : *Le Grand Testament* (éd. Foulet).

Montaigne : *De l'incertitude de notre jugement ; Des Livres ; De l'art de conférer* (ed. Tilley & Boase, Manchester University Press, or ed. P. Villey, Félix Alcan).

Rabelais : *Tiers Livre,* chapters 1–5, 9, 13–15, 29–44, 47–48.

One of the following subjects (I–IV), chosen by the candidate :—

I. Molière : *Théâtre.*

II. The Novel in the Eighteenth Century, with special study of Le Sage : *Gil Blas;* Marivaux : *La vie de Marianne;* Abbé Prévost : *Manon Lescaut;* Voltaire : *Zadig, Candide, L'Ingénu, La Princesse de Babylone ;* Rousseau : *La Nouvelle Héloïse ;* Diderot : *Le Neveu de Rameau.*

III. Stendhal, with special study of *Le Journal ; Le Rouge et le Noir ; La Chartreuse de Parme ; La Vie de Henri Brulard.*

IV. Twentieth-Century Authors :

Charles Péguy : *Victor-Marie Comte Hugo ; Œuvres poétiques complètes* (éd. de la Pléiade, N.R.F., Paris).

Romain Rolland : *Charles Péguy.*

Marcel Proust, with special study of *Du Côte de chez Swann.*

Paul Valéry, with special study of *Poésies, Eupalinos* and *Monsieur Teste* (N.R.F., Paris).

Special subject in Medieval Literature :—

Les Romans d'Aventure, with special study of :—

Galeran de Bretagne.

Jean Renart : *Guillaume de Dôle.*

La Châtelaine de Vergy.

Philippe de Remy : *Jehan et Blonde.*

Jean Maillart : *Le Comte d'Anjou.*

Special subject in Renaissance Literature :—

Montaigne.

German

1951

SYLLABUS I

Old Saxon :—F. Holthausen : *Altsächsisches Elementarbuch* (C. Winter, Heidelberg) : *Heliand,* Extracts 1–3 (*Die Hochzeit zu Kana ; Der Sturm auf dem Meere ; Von der Zerstörung Jerusalems und dem jüngsten Gerichte*) (these texts are also to be found in *Heliand,* ed. M. Szadrowsky, Verlag Francke, Bern).

or Gothic :—*Matthew* VI ; *Mark* II ; *Luke* II (these extracts are to be found in Wright : *Gothic Grammar* or Braune : *Gotische Grammatik*).

Old High German : Braune : *Althochdeutsches Lesebuch* VI, 1 *Exhortatio ad plebem christianam ;* XII *Fränkisches Taufgelöbnis ;* XVI *Tatian, John* I, 1–5, *Luke* I, 26–38 ; XXIII Notker : *Conquestio Boethii de instabilitate fortunae, De Ingressu Philosophiae et eius habitu ;* XXVIII *Hildebrandslied ;* XXIX *Wessobrunner Gebet ;* XXX *Muspilli ;* XXXI.1, *Merseburger Zaubersprüche,* 4, *Pro Nessia ;* XXXII Otfrid V, 24, *Oratio ;* XXXIII *Petruslied ;* XXXVI *Ludwigslied* (all these extracts are also to be found in Werner Burkhard : *Kleines Althochdeutsches Lesebuch,* Francke, Bern).

SYLLABUSES I and II

Middle High German :—*Minnesang* (ed. Max Wehrli, Francke, Bern), extracts from Kürenberg, Dietmar von Aist, Friedrich von Husen; Hartmann von Aue: *Iwein*, lines 1–802; *Der Ackermann aus Böhmen* (ed. Hammerich, Copenhagen).

Early New High German :—Luther: *Ein Sendbrief von Dolmetschen* (Duckworth).

New High German :—

Herder: *Von deutscher Art und Kunst* (O.U.P.).

Goethe: *Wilhelm Meisters Theatralische Sendung*; *Faust* I.

Grillparzer: *Des Meeres und der Liebe Wellen.*

Hebbel: *Maria Magdalena* (Blackwell).

Fontane: *Der Stechlin.*

Rilke: *Das Stunden-Buch.*

The *Märchen* in Germany, 1790–1832.

SYLLABUS II

Special Periods of Literature :—

(*a*) Medieval Period, 1170–1230, *or* (*b*) The Sixteenth Century, *or* (*c*) The Seventeenth Century, *or* (*d*) the *Sturm und Drang* period 1767–1787, *or* (*e*) Modern Period, 1880–1926.

1952

(*a*) Old High German :—

Braune: *Althochdeutsches Lesebuch* (10th edition, 1942, or 11th edition, 1949); XX *Tatian*; *John* I, 1–5, *Luke* I, 26–38; XXVIII *Hildebrandslied*; XXIX *Wessobrunner Gebet*; XXXII Otfrid (V. 24) *Oratio*; XXXVI *Ludwigslied.*

(These texts are also to be found in Werner Burkhard: *Kleines Althochdeutsches Lesebuch*, Francke, Bern.)

(*b*) Middle High German :—

Minnesang (ed. Max Wehrli, Francke, Bern), extracts from Kürenberg, Dietmar von Aist, Friedrich von Husen; Wolfram von Eschenbach: *Parzifal* I; *Meier Helmbrecht.*

(*d*) Prescribed Modern Texts :—

Schiller: *Über Anmut und Würde.*

Goethe: *Wilhelm Meisters Theatralische Sendung*; *Faust* I.

Grillparzer: *Des Meeres und der Liebe Wellen.*

Kleist: *Penthesilea* **or** *Der Prinz von Homburg.*

Keller: *Das Sinngedicht*; *Sieben Legenden* (Birkhäuser Klassiker, Basel).

Rilke: *Das Stunden-Buch.*

Optional Subjects :—

(ii) (*a*) Old Saxon :—F. Holthausen: *Altsächsisches Elementarbuch* (C. Winter, Heidelberg)—all extracts.

Old High German :—*Althochdeutsches Lesebuch* :—V *Gespräche*; VI *St. Galler Paternoster und Credo*; VII *Aus der Interlinearversion der Benedictinerregel*; VIII *Aus Isidors Schrift Contra Judeos*; IX *Aus den Monsee-Wiener Fragmenten*; X *Exhortatio ad Plebem Christianam*; XII *Freisinger Paternoster*; XIII *Weissenburger Katechismus*; XIV *Fraenkisches Gebet*; XVI *Das Fraenkische Taufgelöbnis*; XX *Aus dem Tatian*; XXI *Die Strassburger Eide*; XXII *Beichten*;

XXIII Notker : *Aus Boethius*, I (*Item prologus teutonice*); *Aus dem Martianus Capella*, 10 (*Item de eius habitu et forma* and *Luna*), 11 (*Pluto et Neptunus, Stix et Proserpina, Mars et Liber* and *Hercules*) ; *Aus der Psalmenübersetzung*, 13 (*Psalm* 136, 6–9 *aus dem alten Baseler Bruchstück*), 14 (*Psalm* 1 *aus der St. Galler Handschrift*) ; XXIV *Aus Williram* ; XXV *Aus dem älteren Physiologus* ; XXVI *Othlohs Gebet* ; XXVII *Wessobrunner Predigt* ; XXVIII *Das Hildebrandslied* ; XXIX *Das Wessobrunner Gebet* ; XXX *Muspilli* ; XXXI *Segensformeln* ; XXXII *Aus Otfrids Evangelienbuch* : 7 (I, 5) *Missus est Gabrihel angelus*, 8 (I, 6) *Exurgens autem Maria abiit in montana*, 14 (II, 14) *Iesus fatigatus ex itinere* ; XXXIII *Petruslied* ; XXXIV *Christus und die Samariterin* ; XXXV *Lied vom heiligen Georg* ; XXXVI *Das Ludwigslied* ; XXXVII *Gebete* ; XXXIX *De Heinrico* ; XL *Verse aus Notkers Rhetorik* ; XLI *Merigarto* ; XLII *Memento Mori* ; XLIII *Ezzos Gesang*.

(ii) (*b*) Old Norse :—E. V. Gordon : *An Introduction to Old Norse* : Extracts I, II, VII, VIII, IX, X, XV.

Eddic Poems : *Reginsmál, Fáfnismál, Sigurðarkviða hin meiri, Helreið Brynhildar, Atlakviða.*

Gunnlaugs Saga.

(ii) (*c*) Middle Low German :—*Das Redentiner Osterspiel* (W. Stammler edition).

P. Jørgensen : *Middelnedertyske Tekster til Universitetsbrug* (Gad, Copenhagen, 1946).

(ii) (*d*) Middle Dutch : *Historie van Troyen*, lines 3069–3219. (Segher's *Dits tprieel van Troyen*, second passage). *Karel ende Elegast*, lines 1182–1414.

Van den vos Reinaerde, lines 1–47.

Hadewych : *Lied* V, *Lied* XXIV, *Brief* X.

Jan van Ruusbroec : *Die Chierheit der geesteliker brulocht* :—Three passages from *Twede boec, Die derde wise* from C.C. de Bruin : *Middelnederlands geestelijk proza.*

Jacob van Maerlant : *Vanden lande van oversee.*

(iv) Stylistic analysis and interpretation of texts : *Lessing's plays.*

1953

(*a*) Old High German :—

Braune : *Althochdeutsches Lesebuch* (10th edition, 1942, or 11th edition, 1949); XX *Tatian*; *John* I, 1–5, *Luke* I, 26–38; XXVIII *Hildebrandslied* ; XXIX *Wessobrunner Gebet* ; XXXII Otfrid (V. 24) *Oratio* ; XXXVI *Ludwigslied.*

(These texts are also to be found in Werner Burkhard : *Kleines Althochdeutsches Lesebuch*, Francke, Bern.)

(*b*) Middle High German :—

Nibelungenlied, VI, XVI, XVII, XXXVIII, XXXIX.

Wolfram von Eschenbach : *Parzival*, I.

Meier Helmbrecht.

(*d*) Prescribed Modern Texts :—

Hans Sachs : *Selections* (Blackwell).

Schiller : *Über Anmut und Würde.*

Goethe : *Faust* I ; *Werther.*

Grillparzer: *Ein Bruderzwist in Hapsburg.*

Kleist: *Penthesilea* **or** *Der Prinz von Homburg.*

Keller: *Das Sinngedicht; Sieben Legenden* (Birkhäuser Klassiker, Basel).

Hebbel: *Gedichte.*

Optional Subjects:—

(ii) (*a*) Old Saxon:—F. Holthausen: *Altsächsisches Elementarbuch* (C. Winter, Heidelberg)—all extracts.

Old High German:—*Althochdeutsches Lesebuch*:—V *Gespräche*; VI *St. Galler Paternoster und Credo*; VII *Aus der Interlinearversion der Benedictinerregel*; VIII *Aus Isidors Schrift Contra Judeos*; IX *Aus den Monsee-Wiener Fragmenten*; X *Exhortatio ad Plebem Christianam*; XII *Freisinger Paternoster*; XIII *Weissenburger Katechismus*; XIV *Fraenkisches Gebet*; XVI *Das Fraenkische Taufgelöbnis*; XX *Aus dem Tatian*; XXI *Die Strassburger Eide*; XXII *Beichten*; XXIII Notker: *Aus Boethius*, 1 (*Item prologus teutonice*); *Aus dem Martianus Capella*, 10 (*Item de eius habitu et forma* and *Luna*), 11 (*Pluto et Neptunus, Stix et Proserpina, Mars et Liber* and *Hercules*); *Aus der Psalmenübersetzung*, 13 (*Psalm* 136, 6–9 *aus dem alten Baseler Bruchstück*), 14 (*Psalm* 1 *aus der St. Galler Handschrift*); XXIV *Aus Williram*; XXV *Aus dem älteren Physiologus*; XXVI *Othlohs Gebet*; XXVII *Wessobrunner Predigt*; XXVIII *Das Hildebrandslied*; XXIX *Das Wessobrunner Gebet*; XXX *Muspilli*; XXXI *Segensformeln*; XXXII *Aus Otfrids Evangelienbuch*: 7 (I, 5) *Missus est Gabrihel angelus*, 8 (I, 6) *Exurgens autem Maria abiit in montana*, 14 (II, 14) *Iesus fatigatus ex itinere*; XXXIII *Petruslied*; XXXIV *Christus und die Samariterin*; XXXV *Lied vom heiligen Georg*; XXXVI *Das Ludwigslied*; XXXVII *Gebete*; XXXIX *De Heinrico*; XL *Verse aus Notkers Rhetorik*; XLI *Merigarto*; XLII *Memento Mori*; XLIII *Ezzos Gesang.*

(ii) (*b*) Old Norse:—E. V. Gordon: *An Introduction to Old Norse*: Extracts I, II, VII, VIII, IX, X, XV.

Eddic Poems: *Reginsmál, Fáfnismál, Sigurðarkvida hin meiri, Helreið Brynhildar, Atlakviða.*

Gunnlaugs Saga.

(ii) (*c*) Middle Low German:—*Das Redentiner Osterspiel* (W. Stammler edition).

P. Jørgensen: *Middelnedertyske Tekster til Universitetzbrug* (Gad, Copenhagen, 1946).

(ii) (*d*) Middle Dutch: *Historie van Troyen*, lines 3069–3219. (Segher's *Dits tprieel van Troyen*, second passage). *Karel ende Elegast*, lines 1182–1414.

Hadewych: *Lied* V, *Lied* XXIV, *Brief* XI or X.

Jan van Ruusbroec: *Die Chierheit der geesteliker brulocht*:—Three passages from *Twede boec, Die derde wise* from C.C. de Bruin: *Middelnederlands geestelijk proza.*

Jacob van Maerlant: *Vanden lande van oversee.*

(iv) Stylistic analysis and interpretation of texts: *Lessing's plays.*

Greek

The texts used by the examiners in setting the examination papers will be the Oxford Classical Texts (Clarendon Press) unless some other text is specified.

1951

Group A

(*a*) Homer: *Iliad*, Books I, III, XXII–XXIV ; *Odyssey*, Books X–XIV.
(*b*) Three tragic plays :—
Sophocles : *Electra ; Œdipus Tyrannus ; Philoctetes**,
or Euripides : *Hippolytus ; Iphigeneia in Tauris ; Bacchae.**
(*c*) Aristophanes : *Frogs* ; *Clouds* ; *Peace.*
(*d*) Pindar : *Pythians ; Olympians.*
(*e*) Theocritus, Bion and Moschus.

Group B

(*f*) Thucydides : Books V, VI, VII.
(*g*) Herodotus : Books V–VII.
(*h*) Plato : *Phaedo ; Gorgias.*
(*i*) Demosthenes : *De Corona ; In Cononem ; In Calliclem ; Philippic III.*

Roman Historical Subject

The Principates of Augustus and Tiberius, 30 B.C. to A.D. 37,
or Roman History from 133 to 70 B.C.

Greek Historical Subject

Greek History from 500 to 433 B.C.

Comparative Philology of the Greek and Latin Languages.

Greek : C. D. Buck : *An Introduction to the Study of the Greek Dialects*, revised edition (Ginn & Co.), Nos. 18–22, 25, 28 (lines 1–24), 33, 38–40, 43 (lines 1–65), 50, 55 (omitting lines 15–32), 56–58, 60, 66 (lines 1–40), 74 (lines 1–54), 75–80, 80², 110 (IV. 25 to V. 9).

Latin : H. Ernout :—*Recueil de textes latins archaïques* (Paris, Klincksieck), Part I, omitting Nos. 3, 136, 137, 139–146.

*No textual criticism is required.

1952 and **1953**

Group A

(*a*) Homer: *Iliad*, Books I, III, XXII–XXIV ; *Odyssey*, Books X–XIV.
(*b*) Three tragic plays :—
Sophocles : *Œdipus Coloneus ; Œdipus Tyrannus ; Antigone,*
or Euripides : *Medea ; Iphigeneia in Tauris ; Bacchae.**
(*c*) Aristophanes : *Frogs* ; *Clouds* ; *Birds.*
(*d*) Pindar : *Pythians ; Olympians.*
(*e*) Theocritus, Bion and Moschus.

Group B

(*f*) Thucydides : Books V, VI, VII.
(*g*) Herodotus : Books V–VII.
(*h*) Plato : *Phaedo ; Gorgias.*
(*i*) Demosthenes : *De Corona ; In Cononem ; In Calliclem ; Philippic III.*

Roman Historical Subject

The Principates of Augustus and Tiberius, 30 B.C. to A.D. 37,
or Roman History from 133 to 70 B.C.

Greek Historical Subject

Greek History from 500 to 433 B.C.

Comparative Philology of the Greek and Latin Languages.

Greek: C. D. Buck: *An Introduction to the Study of the Greek Dialects*, revised edition (Ginn & Co.), Nos. 18–22, 25, 28 (lines 1–24), 33, 38–40, 43 (lines 1–65), 50, 55 (omitting lines 15–32), 56–58, 60, 66 (lines 1–40), 74 (lines 1–54), 75–80, 80², 110 (IV. 25 to V. 9).

Latin: H. Ernout:—*Recueil de textes latins archaïques* (Paris, Klincksieck), Part I, omitting Nos. 3, 136, 137, 139–146.

*No textual criticism is required.

Gujarati

1951

Prāchina Gurjara Kāvya, Gaekwad's Oriental series XIII, pp. 41–46 and 86–107.

S. D. Bharucha: *Collected Sanskrit Writings of Parsis*, Pt. V. *Ardā Gvīrā*, pp. 29–35 inc. paragraph 10.

Padmanābha: *Kānhaḍa de Prabandha* (pp. 326–355 in I. J. S. Taraporevala's collections of Gujarati poetry), Vol. I.

S. H. Hodivala: *Studies in Parsi History*, pp. 198, 205–6, 237–8, 241, 250–1.

Premānanda Bhaṭṭa: *Nalākhyāna* (any critical text).

Dayārāma: *Poems* (Taraporevala, Vol. III, pp. 456–509).

G. M. Tripāṭhi: *Sarasvatīcandra*, Vol. I.

K. M. Munshi: *Gujarātano Nātha.*

Navalarāma: *Bhaṭanuṃ Bhopāluṃ.*

N. B. Divatia: *Hṛdaya Vīnā; Smaraṇa Saṃhitā.*

Navalagranthāvali (ed. N. D. Parikh).

1952 and **1953**

To be prescribed.

Hebrew

I. Hebrew with Aramaic (including Syriac)

Hebrew

1951 and **1952**

Proverbs; Hosea; Amos; Nahum.

Psalms I–XXIX.

Midrash Leviticus Rabbah I–XXXII, **or**

Midrash Leviticus Rabbah I–XIII, and Babylonian Talmud, *Baba Bathra*, chapter III.

1953

Job; Hosea; Amos; Nahum.

Psalms I–XXIX.

Midrash Leviticus Rabbah I–XXXII, **or**

Midrash Leviticus Rabbah I–XIII, and Babylonian Talmud, *Baba Bathra*, chapter III.

Aramaic

1951, 1952 and **1953**

Aramaic portions of *Daniel* and *Ezra*.
Targum Pseudo-Jonathan on *Exodus* XVIII–XXVIII.
Targum on *Micah* and *Zephaniah*.

Syriac

1951

The Gospel of Matthew in Syriac (Peshitta).
The Homilies of Isaac of Antioch (ed. Bedjan), Hymns 30–34, pp. 381–420.

1952 and **1953**

John of Ephesus (Bryll edition).
Julian the Apostate (Semitic Study Series).
Gospel of St. Matthew, chapters I–XV in the Peshitta and Old Syriac versions (Burkitt edition).

North Semitic Epigraphy

1951, 1952 and **1953**

G. A. Cooke : *A Text-book of North Semitic Inscriptions.*
A. E. Cowley : *Aramaic Papyri of the Fifth Century B.C.*
Lachish Letters 2, 4 and 6 (in H. Torczyner, L. Harding, A. Lewis & A. Starkey : *Lachish I*, Oxford University Press, 1938).

Hebrew, Syriac and Aramaic Literary History

1951, 1952 and **1953**

Old Testament.

The following books are recommended for study :—

W. O. E. Oesterley and Th. H. Robinson : *An Introduction to the Books of the Old Testament.*
W. O. E. Oesterley : *An Introduction to the Books of the Apocrypha.*

Hellenistic Literature from 150 B.C. to A.D. 50.

The following books are recommended for study :—

E. Schürer : *Geschichte des Jüdischen Volkes*, Vol. III (4th edition).
Susemihl : *Geschichte der Griechischen Literatur in der Alexandrinerzeit*, 2 vols.
Zeller : *History of Greek Philosophy.*
Wright : *A Short History of Syriac Literature.*
R. Duval : *La Littérature Syriaque* (Vol. II of *Anciennes Littératures Chrétiennes.*).

Optional Elementary Arabic

1951, 1952 and **1953**

Nallino : *Chrestomathia Qorani Arabica*, pp. 32–50.
R. A. Nicholson : *Elementary Arabic; Second Reading Booking* (Cambridge University Press), pp. 1–20.

II Hebrew (Ancient and Mediaeval) with Aramaic

1951 and **1952**

Hebrew ; Aramaic ; North Semitic Epigraphy

[As in Section (1).]

Medieval Hebrew

Joseph ibn Zabara : *Sefer Shaa'shu'im* (ed. Davidson), pp. 1–147. The Poems of Solomon ibn Gabirol, Moses ibn Ezra, and Yehudah ha-Levi (Brody : *Anthologia Hebraica*). Abraham ibn Ḥisdai : *Ben ha-Melek weha-Nazir.*

Literary History

The Biblical and Hellenistic Literature [as in Section (1)]. Period of Medieval Literary History : A.D. 1200–1500. Book recommended :—M. Waxman : *A History of Jewish Literature.*

1953

To be prescribed.

III Hebrew with Arabic

1951 and **1952**

Hebrew

[As in Section (1).]

Arabic

Riwāyāt al-Aghāni, vol. I, to p. 151. Badī' az-Zamān : *Maqāmāt* (ed. Muḥammad 'Abduh) I–X. Selections from the Ṣaḥīḥ of al-Bukhāri (ed. Torrey).

1953

To be prescribed.

IV Hebrew with Assyrian

1951 and **1952**

Hebrew

[As in Section (1).]

Assyrian

D. D. Luckenbill : *Inscriptions of Sennacherib.* R. Campbell Thompson : *Gilgamesh Epic.*

1953

To be prescribed.

Hindi

1951

Cand Bardāī : *Prithī Rāj Rāso*—Canto I, stanzas 16–41 (ed. Nāgarī Prachārini Granthmālā).

Kabīr : *Sākhīs* (20 selected).

M. M. Jāyasī : *Padumāvatī*, Canto I, lines 1–200.

Bihārī Lāl : *Sat Saī*, Dohās 1–25 (ed. Grierson).

Maithilī Saran Gupta : *Jayadratha-vadha.*

Jaya Śankar Prasād : *Kāmāyānī.*

Prem Cand : *Sevāsadan.*

Sudarśan : *Sudarśan Sudhā* (5 selected stories).

Śyām Sundar Dās : *Sāhityālocana.*

Satya Nārāyan Kavi Ratn : *Mālati Mādhav.*

Udai Sankar Bhaṭṭ : *Matsyaganadhā.*

1952 and **1953**

To be prescribed.

History

Special Subjects

1951, 1952 and **1953**

Note.—An asterisk against the name of a book indicates that it will be available for use in the Examination-room.

(1) **A period in the History of Ancient Egypt**

The period and original authorities must be selected by the responsible teacher after consultation with the candidate, and submitted for approval to the University one year before the candidate enters for the Examination.

(2) **Greek History, 500-433 B.C.**

To be studied in the following authorities :—

Herodotus, Books V–IX.
Thucydides (ed. Stuart Jones, Clarendon Press) : Book I, chapters 89–138.
Aristotle : *Constitution of Athens*, chapters 22–28 (ed. Blass, Teubner).
Plutarch : *Lives of Themistocles, Aristeides, Cimon, Pericles* (ed. Sintenis, Teubner).
M. Tod : *Historical Greek Inscriptions*, vol. I (2nd ed., 1946).

(3) **Philip II and Alexander of Macedon, 356-323 B.C.**

To be studied in the following authorities :—

Demosthenes : *Orations* I–VI, IX, XVII–XIX.
Aeschines : *Orations* II–III.
Isocrates : *Oration* V ; *Letters* 2–3.
Diodorus : Book XVI.
Plutarch : *Lives of Demosthenes and Alexander.*
Arrian : *Anabasis.*
Q. Curtius : *Historia Alexandri Magni.*
E. L. Hicks & G. F. Hill : *Greek Historical Inscriptions*, Nos. 125–165.

(4) **Roman History, 133-70 B.C.**

To be studied in the following authorities :—

Appian : *Bella Civilia*, Book I.
Plutarch : *Lives of the Gracchi, Marius* and *Sulla.*
Sallust : *Bellum Iugurthinum.*
A. H. J. Greenidge & A. M. Clay : *Sources for Roman History B.C.* 133–70 (Clarendon Press, 1903).

(5) **The Principates of Augustus and Tiberius, 30 B.C.-A.D. 37.**

To be studied in the following authorities :—

Suetonius : *Divus Augustus, Tiberius.*
Tacitus : *Annals*, Books I–VI.
V. Ehrenberg & A. H. M. Jones : *Documents illustrating the Reigns of Augustus and Tiberius* (Clarendon Press, 1949).
Velleius Paterculus : Book II, chapters 85 to end.

(6) **The History and Archaeology of Roman Britain** (to be studied from literary, epigraphic and archaeological sources).

To be studied in the following authorities :—

R. W. Moore : *The Romans in Britain, a selection of Latin texts* (Methuen, 1938) and, in addition, the following texts cited in that book :—
Strabo, IV, v. 1–3 (Loeb).
Cassius Dio, lx, 19–22 ; lxii, 2–7 ; lxxi, 16 ; lxxii, 8 ; lxxvi, 12–13 Loeb).
Herodian, III, 8, 14–15 (Teubner).

Zosimus, I, 66 ; IV, 35–6 ; V, 5, 10, 27, 43 (ed. Mendelssohn).

Procopius, *Bellum Vandalicum*, I, 2 (Loeb).

Notitia Dignatatum, Occ. i, iii, vii, xxiii, xxviii, xxix, xl (Seeck).

Greek authorities may be read in translation. Candidates will be expected to have sufficient knowledge of the general principles of Latin epigraphy to be able to translate and interpret inscriptions of standard types found in Britain. A selection of Latin inscriptions bearing upon Roman Britain will be found in A. R. Burn : *The Romans in Britain* (Blackwell, 1932).

(7) **The History and Archaeology of Britain in the Anglo-Saxon Period from A.D. 400 to 735.** (*For Examination in* **1951** *only.*)

To be studied in the following authority :—

Bede : *Historia Ecclesiastica*, I–III (ed. C. Plummer, *Baedae Opera Historica*).

The following book is also recommended :—

R. H. Hodgkin : *A History of the Anglo-Saxons* (2 vols., Oxford University Press, 1935).

For Examinations in and after **1952** this Special Subject will be as follows :—

The Conversion and the Age of Bede, 597-735

To be studied in the following authorities :—

Bede : *Historia Ecclesiastica* (ed. Plummer), Preface, Book I. Chapters xxiii–xxxiv, Books II, III, IV and V.

Eddius : *Vita Wilfridi* (ed. Colgrave).

Bede's *Historia Abbatum* (ed. Plummer).

Vita Ceolfridi, otherwise known as *Historia Abbatum auctore Anonymo* (ed. Plummer).

Anonymous Life of St. Cuthbert and Bede's Prose Life of St. Cuthbert (*Two Lives of St. Cuthbert*, ed. Colgrave).

Laws of Ethelbert, Hlothere and Eadric, Wihtred, and Ine. (In translation.)

Anglo-Saxon Chronicle, annals 596–734. (In translation.)

Clapham : *English Romanesque Architecture before the Norman Conquest.* (For illustrations of architecture, sculpture, etc., of the period before *c.* 735).

Masai, F. ; *Essai sur les origines de la miniature dite irlandaise* (Publications de Scriptorium, vol. i, Brussels, 1947).

Note.—The papers will include questions on English architecture, sculpture and decorated manuscripts of this period.

(8) **The Byzantine Empire from the Accession of Basil II to the First Crusade with special reference to its relations with the Papacy and the Holy Roman Empire**

To be studied in the following authorities :—

Liutprand of Cremona : *Antipodosis* and *Relatio* (ed. J. Becker, 3rd ed., Hanover and Leipzig, 1915, *Scriptores rerum germanicarum in usum scholarum*).

Leo IX : *Epistolae*, 100–103 (Patrologia Latina, Vol. 143, or ed. C. Will, *Acta et scripta quae de controversiis ecclesiae graecae et latinae saeculo undecimo composita extant*, Leipzig and Marburg, 1861).

Cardinal Humbert : *Commemoratio* and *Excommunicatio* (Patrologia Latina, Vol. 143, or ed. C. Will, *op cit.*).

Michael Cerularius : *Edictum Synodale* (Patrologia Graeca, Vol. 120, or ed. C. Will, *op cit.*, in Latin).

Michaelis Cerularii cp. patriarchae Dominici Gradensis et Petri Antiocheni episcoporum epistolae mutuae (Patrologia Graeca, Vol. 120, or ed. C. Will, *op cit.*, in Latin).

Symeon the Young : *Oratio* 25 (Patrologia Graeca, Vol. 120, in Latin).

Nicetas Stethatus : *Vita Symeonis Junioris* (ed. I. Hausherr & G. Horn, Orientalia Christiana, Vol. 12, No. 45, Rome 1928, in French).

John Mauropous, Archbishop of Euchaita : *Vita Sancti Dorothei* (Patrologia Graeca, Vol. 120, in Latin).

Michael Psellos : *Chromographia*, ed. and trans. E. Renauld (Collection byzantine . . . Budé, 2 vols., Paris, 1926–8, in French).

Anna Comnena : *Alexias*, trans. A. E. S. Dawes (London, 1928).

(9) England in the Reign of Henry II, 1154-1189

To be studied in the following authorities :—

Gesta Regis Henrici Secundi Benedicti Abbatis (Benedict of Peterborough), ed. W. Stubbs. Rolls Series, No. 49, 2 vols., 1867, Vol. I and Vol. II to page 71.

William of Newburgh : *Historia Rerum Anglicarum* (Chronicles of Stephen, Henry II, and Richard I), ed. R. Howlett. Rolls Series, No. 82, Vol. I, 1884, Books II and III.

Ralph de Diceto : *Opera Historica : Ymagines Historiarum* to 1189, ed. W. Stubbs. Rolls Series, No. 68, 1876. Parts of Vol. I and Vol. II.

(10) Florence and the Renaissance, 1464-1530

To be studied in the following authorities :—

Guicciardini : *Storie fiorentine dal* 1378 *al* 1509 (Palmarocchi) ; *Dialogo del reggimento di Firenze* (Palmarocchi).

Macchiavelli : *I Discorsi ; Il Principe* (ed. Burd).

Benvenuto Cellini : *Autobiography*, Book I.

The following books are also recommended :—

Jacopo Nardi : *Istorie della città di Firenze* (Books I–IX).

Savonarola : *Trattati circa il reggimento della città di Firenze.*

(11) The Economic and Social History of Tudor England

To be studied in the following authority :—

R. H. Tawney & Eileen Power : *Select documents illustrating the Economic and Social History of Tudor England* (3 vols., Longmans).

(12) The Diplomatic History of the War of the Spanish Succession, 1705-1714

To be studied in the following authorities :—

G. M. Trevelyan : *Select Documents for Queen Anne's Reign*, 1702–7 (Cambridge University Press, 1929).

British Diplomatic Instructions, 1689–1789, Vol. II ; *France*, 1689–1721 (ed. for Royal Historical Society by L. G. Wickham Legg, 1925), pp. 8–79.

Journal inédit de J. B. Colbert, Marquis de Torcy, 1709–11 (ed. F. Masson, Albin Michel, 1903, or Plon, 1884).

Hist. MSS. Comm., *Portland MSS. :* Vol. IX, 1923 (Strafford's letters pp. 289–402).

Bolingbroke's Defence of the Treaty of Utrecht, being letters vi–viii of *The Study and Use of History :* with an Introduction by G. M. Trevelyan (Cambridge University Press, 1932).

MSS. of the Earl of Buckinghamshire and others : Hist. MSS. Comm., No. 38, 14th Report, Appendix, Part IX (1895), *c.* 7882.

William Coxe : *Memoirs of the Duke of Marlborough* (letters on diplomatic negotiations).

Jonathan Swift : *The Conduct of the Allies* (ed. C. B. Wheeler, Oxford, 1916).

The following books are also recommended :—

Recueil des instructions pour les Ambassadeurs de France : Hollande, Vol. II, 1924, pp. 113–321 : *Missions pendant la guerre de la succession d'Espagne.*

R. Geikie & I. Montgomery : *The Dutch Barrier,* 1705–19 (Cambridge University Press, 1930).

(13) The French Revolution, 1787-1795

To be studied in the following authorities :—

A. Bayet et F. Albert : *Les écrivains politiques du XVIII^e siècle* (Paris, Armand Colin).

Sieyès : *Qu'est-ce que le Tiers Etat ?*

Arthur Young : *Travels in France.*

J. M. Thompson : *French Revolution Documents,* 1789–94 (Oxford, Basil Blackwell).

Burke : *Reflections on the revolution in France.*

Robespierre : Selected speeches (2 and 11 Jan., 5 Nov., 3 Dec., 1792 ; 24 April, 5 Dec., 1793 ; 31 March, 7 May, 26 July, 1794). (These speeches may be read in Robespierre : *Discours et Rapports,* ed. C. Vellay ; H. Morse Stephens : *Orators of the French Revolution ;* Buchez et Roux : *Histoire parlementaire de la révolution française ; l'ancien Moniteur* ; and other editions.)

Camille Desmoulins : *Le Vieux Cordelier* (ed. A. Mathiez et H. Calvet, Paris, Armand Colin).

(14) The Emancipation of Latin-America, 1808-1826

To be studied in the following authorities :—

D. F. O'Leary : *Bolivar y la Emancipación de Sur-América. Memorias del General O'Leary,* 1783–1826 (2 vols., Biblioteca Ayacucho, Editorial América, Madrid, 1915).

C. K. Webster : *Britain and the Independence of Latin America,* Vol. I, pp. 83–368 (Oxford University Press, 1938).

R. A. Humphreys : *British Consular Reports on the Trade and Politics of Latin America,* 1824–1826, pp. 1–342 (Camden Third Series, vol. lxii, Royal Historical Society, 1940).

Mariano Moreno : *Representación, en nombre de los labradores y hacendados, de la campañas del Rio de la Plata,* 1809 (in any edition of Moreno's writings, e.g., *Escritos de Mariano Moreno,* ed. Norberto Pinero, Buenos Aires, 1896, pp. 88–224 ; or *Escritos Políticos y Económicos,* Buenos Aires, 1915, pp. 111–179).

Ernesto de la Cruz, J. M. Goenaga, B. Mitre, Carlos A. Villanueva : *La Entrevista de Guayaquil* (Biblioteca de la juventud hispano-americana, Editorial América, Madrid, 1917).

The following books are also recommended :—

W. R. Manning : *Diplomatic Correspondence of the United States concerning the independence of the Latin-American Nations* (3 vols., Carnegie Endowment for International Peace, O.U.P., 1925).

Sir Woodbine Parish : *Buenos Aires and the Provinces of the Rio de la Plata* (2nd edition, London, 1852).

(15) **The Reconstruction of Europe and the European Alliance, 1813-1822**

To be studied in the following authorities :—

C. K. Webster : *British Diplomacy*, 1813–1815 (George Bell & Sons).

Metternich : *Mémoires*, III, pp. 123–176, 359–527 (Plon, Paris).

Dépêches inédites du Chevalier de Gentz, Vol. II, pp. 1–135 (éd. Comte Prokesch-Osten, Plon, Paris).

Chateaubriand : *Le Congrès de Vérone* (*Œuvres complètes*, éd. Sainte-Beuve, Vol. XII, Garnier Frères, Paris).

The following book is also recommended :—

Mémoires du Prince Talleyrand (éd. Duc de Broglie, Vol. II, pp. 214–560, Calmann Levy, Paris).

(16) **The Eastern Question, 1856-1878.** (For candidates taking Branch IV only.)

To be studied in the following authorities :—

*K. Strupp : *Ausgewählte Diplomatische Aktenstücke zur orientalischen Frage* (the relevant documents) (Perthes, Gotha, 1916).

W. G. East : *The Union of Moldavia and Wallachia*, 1859 (Cambridge University Press, 1929).

G. E. Buckle : *Life of Benjamin Disraeli, Earl of Beaconsfield*, Vol. VI (the documents printed in chapters 1–9) (John Murray, London, 1916).

**Russo-British Relations* 1876–8 (ed. R. W. Seton-Watson, iv–vii. Reprint from *Slavonic Review*, School of Slavonic Studies).

Selections from the Memoirs of Count Ignatyev (ed. A. Onou. Reprint from *Slavonic Review*, School of Slavonic Studies).

**Documents Diplomatiques Français* (1871–1914), Première série, Tome II (Documents 1–327). (Paris, 1930.)

Lady G. Cecil : *Life of Robert Marquis of Salisbury*, Vol. II (documents in chapters iv–viii). (Hodder & Stoughton, London, 1921).

The following books are also recommended :—

Hon. Robert Curzon : *Visits to the Monasteries in the Levant* (any edition).

A. P. Irby & G. M. M. Mackenzie : *Travels in the Slavonic Provinces of Turkey-in-Europe* (London, 1875).

Louis Thouvenel : *Trois années de la question d'Orient d'après les papiers inédits de M. Thouvenel* (Paris, 1897).

Sir Henry George Elliot : *Some Revolutions and Other Diplomatic Experiences* (ed. Gertrude Elliot, John Murray, London, 1922) (the relevant portions).

Die Grosse Politik der Europäischen Kabinette, 1871–1914, Vol. III : *Der Berliner Kongress und seine Vorgeschichte* (Berlin, 1925). (In the original or in an English translation.)

Letters of Queen Victoria, 2nd series, Vol. II (the relevant letters).

(17) **Constitutional Development in British India, 1858-1917**

To be studied in the following authorities :—

Sir C. P. Ilbert : *The Government of India* (3rd ed., 1915–16).

*D. Mukherji : *Indian Constitutional Documents*, Vol. I (Thacker Spink, Calcutta, 1918).

Viscount Morley : *Recollections*, Vol. 2, pp. 149–343.

The following books are also recommended :—

Report on Indian Constitutional Reforms (1918).

The Sedition Committee Report (1918).

Mary, Countess of Minto: *India: Minto and Morley.*

Sir S. Banerjea: *A Nation in Making.*

Lord Ronaldshay: *The Life of Lord Curzon*, Vol. 2.

(18) **The Growth of the British Commonwealth, 1880-1932, with special reference to the development of Dominion status and Imperial co-operation and the evolution of British colonial administration in the Tropical Dependencies**

To be studied in the following authorities:—

A. B. Keith: *Selected Speeches and Documents of British Colonial Policy*, 1763–1917, Vol. I, pp. 337–81, Vol. II (the whole); *Select Documents on the British Dominions*, 1918–1931.

Report by the Hon. E. F. L. Wood on his visit to the West Indies and British Guiana (Cmd. 1679, 1922).

West India Royal Commission Report (Cmd. 6607, 1945).

Report of the Special Commission on the Constitution of Ceylon (Cmd. 3131, 1928).

Ceylon, Report of the Commission on Constitutional Reform (Cmd. 6677, 1945).

League of Nations: *British Mandate for East Africa (Tanganyika Territory)* (1922).

Report by the Hon. W. G. Ormsby-Gore on his visit to West Africa (Cmd. 2744, 1926).

Report of the Royal Commission on closer union of the dependencies in Eastern and Central Africa (Cmd. 3234, 1929).

The following books are also recommended:—

Sir H. Jenkyns: *British Rule and Jurisdiction beyond the Seas* (Clarendon Press, 1902).

L. Curtis: *The Problem of the Commonwealth* (Macmillan, 1916).

Sir F. D. (Baron) Lugard: *The Dual Mandate in British Tropical Africa* (Blackwood, 1922).

M. F. Perham: *Native Administration in Nigeria* (Longmans, 1937).

(19) **The Closing of the Frontier in the United States, 1885-1896**

To be studied in the following authorities:—

H. T. Peck: *Twenty Years of the Republic*, 1885–1905, chaps. i-ix (Dodd, Mead, New York, 1905; reprinted 1932).

Letters of Grover Cleveland, 1850–1908 (ed. A. Nevins), pp. 1–470 (Houghton Mifflin Co., Boston and New York, 1933).

Wabash, St. Louis and Pacific Railway Company *v.* Illinois, 1886; Stone *et al. v.* Farmers' Loan and Trust Company, 1886; Chicago, Milwaukee and St. Paul Railway Company *v.* Minnesota, 1889; Reagan *v.* Farmers' Loan and Trust Company, 1894. (To be studied in J. B. Thayer: *Cases on Constitutional Law*, 2 vols., Cambridge, Mass., 1895, pp. 2045–56, 1733–8, 660–72, 1745–53).

Report of investigation of trusts, relating especially to the sugar and Standard Oil trusts, with testimony. 50 Cong., 1 Sess., H.R. 3112 (2606), pp. 1–210 (Govt. Printing Office, Washington, D.C., 1888).

Report of International American Conference as to reciprocity treaties between the United States and other American republics. 51 Cong., 1 Sess., S. Ex. Doc. 158 (Govt. Printing Office, Washington, D.C., 1890).

Report on the Chicago Strike of June–July, 1894 . . . *with appendices containing testimonies, proceedings, and recommendations.* 10 Dec., 1894. 53 Cong., 3 Sess., S. Ex. Doc. 7 (3276) (Govt. Printing Office, Washington, D.C., 1895).

In re Debs, 1895. (To be studied in E. Wambaugh : *A Selection of Cases on Constitutional Law*, Cambridge, Mass., 1915, pp. 1030–4).

W. H. Harvey : *Coin's Financial School* (Coin Publishing Company, Chicago, 1894).

The following books are also recommended :—

Statistical Abstract of the United States, 1896. *Nineteenth Number.* Treasury Dept. doc. 1917 (Govt. Printing Office, Washington, D.C., 1897).

J. Bryce : *The American Commonwealth* (3 vols., Macmillan, 1888, or later edition).

(20) The Anglo-French Entente, 1898-1912

To be studied in the following authorities :—

G. P. Gooch & H. Temperley : *British Documents on the Origins of the War*, Vol. II : *The Japanese Alliance and the Anglo-French Entente* (430 pp.) ; Vol. III : *The Testing of the Entente :* 1904–6 (187 pp.) ; Vol. VII : *The Agadir Crisis.*

Documents Diplomatiques Français (1871–1914), 2e série, Tome VI.

The following books are also recommended :—

Viscount Grey of Fallodon : *Twenty-five Years*, 2 vols.

R. Poincaré : *Au service de la France*, Tome I : *Le Lendemain d'Agadir.*

M. Paléologue : *Un grand tournant de la politique mondiale*, 1904–6.

A. F. Pribram : *Secret Treaties of Austria-Hungary* (English edition by A. C. Coolidge), 2 vols.

B. Siebert : *Diplomatische Aktenstücke zur Geschichte der Etentepolitik der Vorkriegsjahre.*

(21) Ahmad ibn Tūlun and his time (835-884)

To be studied in the following authorities :—

Roorda, Taco : *Abul Abbasi Amedis Tulonidarum primi vita et res gestae* (Leiden, 1825).

Ibn Sa'īd (ed. Vollers) : *Fragmente aus dem Mugrib* (Berlin, 1894).

Tabari : Ta'rīkh. III, pp. 1670–1697 ; 1929–1932 ; 2008–2104.

Ya'qūbī (ed. Houtsma), II, pp. 615–625.

Maqrīzī Khitat (Bulaq edition), I, pp. 313–321.

Repertoire d'Epigraphie Arabe, Vols. I (1931) and II (1932). Tūlūnid inscriptions.

al-Balawī : *Sīrat Ahmad ibn Tūlūn* (ed. Kurd 'Ali, Damascus, 1358/1939).

Recommended Reading :

Zaky Moh. Hassan : *Les Tulunides* (Paris, 1933).

C. H. Becker : *Beitrgde zur Geschichte Agyptens*, II (Strasbourg, 1903), pp. 149–198.

K. A. C. Creswell : *Early Muslim Architecture*, II, pp. 327–360.

Ibn Taghribirdī : *al-Nunum al-Zahirā* (Cairo, 1932), III, pp. 1–65.

(22) **The Conciliar Movement, 1378-1450 A.D.** (*For Examination in* **1951** *only.*)

For Examinations in and after **1952** this Special Subject will be amended as follows:—

The Conciliar Movement (1378-1450) with special reference to heresy

To be studied in the following authorities:—

1. Johannes Gerson: *De modis uniendi ac reformandi ecclesiam,* in H. von der Hardt, *Magnum oecumenicum concilium Constantiense,* Helmstedt, 1700 ff. Tom I, pars. v, pp. 68–142.
2. H. von der Hardt: *Magnum oecumenicum concilium Constantiense,* Helmstedt, 1700 ff. Tom I coll. 1056–1068; 1079–83; Tom IV; coll. 150–157; 235–253; 281–285; 748–773; 1367–1377; 1432–1444; 1450–1456; 1479–1491; 1533–1541; 1567–1579; Tom V pars. iii, coll. 57–74; 77–191.
3. *M. Jana Husi Korespondence a dokumenty,* ed. V. Novotný, Prague, 1920: the documents numbered 93, 96, 124, 133, 139, 141, 143, 160, 163, 165. (The same documents may be read in *Documenta Mag. Joannis Hus,* ed. F. Palacký, Prague, 1869, numbers 39, 40, 63, pp. 233–4, numbers 78, 80, 84, 62, 64, 65.)
4. *Petri de Mladoňovic Relatio,* ed. F. Palacký, *Documenta Mag. Joannis Hus,* Prague, 1869, pp. 273–323 only.
5. Poggius Bracciolini: *De Hieronymi Pragensis obitu et suppliciis epistula,* in Palacký, *Documenta* as above, pp. 624–629.
6. *Monumenta conciliorum generalium saeculi XV. Concilium Basiliense, Scriptores.* Vienna, 1857–96. Vol. I, pp. 289–357; 484–504.

Also recommended for study:—

Ulrich von Reichental: *Chronik des Konstanzer Konzils.* Ed. M. R. Buck, Tübingen, 1882.

(23) **The Age of Peter the Great**

To be studied in the following authorities:—

Pososhkov: *Kniga o Skudosti i Bogatstve* (ed. Kafengauz, Moscow, 1937), Chapters II, III, IV and VII.

Voskresensky: *Zakonodatel 'nye Akty Petra I,* Vol. I (Moscow-Leningrad, 1945).

1. The Senate—pp. 197, 199, 201, 204 and Procurator General—308–310.
2. Colleges—pp. 216–217, 218, Synod—81 (83), (121) and Procurator 109–110.
3. Justice, Code of Laws—pp. 40–41, 107 (30), 132–133.
4. Law of Succession (Conflict with Alexis): 163–169/170, 174–176/177, (113–114).
5. Coronation of Catherine: 179–180.
6. Instructions concerning Gentry: 351/352, 353/354–355.
7. Miscellaneous Orders: (against the selling of single peasants) 92, (against abuse of torture) 101, (against forced marriages) 103.
8. Education, Schools: 33–34, 241–242, Books, Translations: 34–35, 44, 47–48, 110–111, 112–114, 119, 128–129, 143–144, 148.
9. Letters: 180–182.
10. Historical Notes concerning his reign: 115–117, 150.

Martens: *Recueil des Traités,* Tome IX (x), Nos. 379, 380, 381; XIII, No. 471.

(24) The Age of the Guptas c. A.D. 320 to c. A.D. 550

To be studied in the following authorities :—

J. F. Fleet : *Corpus Inscriptionum Indicarum*, Vol. III (Calcutta, 1888).

R. G. Basak : *The Five Damodarpur Copper-Plate Inscriptions of the Gupta Period* (*Epigraphia Indica*, XV, Calcutta, 1925, pp. 113–145).

S. Beal : *Si-yu-ki. Buddhist Records of the Western World.* Trans. from the Chinese of Hiuen Tsang, Vol. I (London, 1884), pp. xxiii–cviii.

J. Allan : *Catalogue of the Coins of the Gupta Dynasties* (London, 1914), pp. xiv–cvi.

D. C. Sircar : *Select Inscriptions*, Vol. I (Calcutta, 1943), pp. 253–432.

(25) The English Pioneers in South-East Asia, 1587-1623

To be studied in the following authorities :—

(*a*) Selected narratives from *Purchas, His Pilgrimes* (references are to Maclehose edition) :—

1. Ralph Fitch : X, 165–204.
2. William Keeling : II, 502–549.
3. David Middleton : III, 51–60.
4. Nathaniel Courthope : V, 86–125.
5. Thomas Spurway : IV, 508–535.

(*b*) Hakluyt Society volumes :—

1. *The Voyages of Sir James Lancaster* (ed. Sir W. Foster, 1940), pp. 1–148, Journals ; 149–167, Collateral documents (from the East India Company's Records).
2. *The Voyage of Sir Henry Middleton to the Moluccas*, 1604–6 (ed. Sir W. Foster, 1943), pp. 1–176, Narratives and Journals ; 177–200, Collateral documents.
3. *Peter Floris, His Voyage to the East Indies in the Globe*, 1611–15 (ed. W. H. Moreland, 1934), pp. 1–148, Journal.
4. *The Voyage of Thomas Best to the East Indies*, 1612–14 (ed. Sir W. Foster, 1934), pp. 1–228, Narratives and Journals ; 229–61, Collateral documents ; 262–304, Extracts from the Court Minutes of the East India Company.
5. *The Journal of John Jourdain* (ed. Sir W. Foster, 1905), pp. 230–348, Journal.

(*c*) *Calendar of State Papers Colonial*, Vol. III, 1622–24 ; No. 460, I, pp. 283–6, Dutch version of Amboyna Massacre, No. 499, I, pp. 303–20, English version of Amboyna Massacre.

Italian

1951 and **1952**

(*a*) For linguistic study :—

C. Dionisotti & C. Grayson : *Early Italian Texts* (Blackwell, Oxford) : Nos. II, VII, IX, XI, XII, XVI, XVII, XIX.

A. F. Doni : *La Zucca* (*Le Baie : Introduzione* (*Lettera a Cristoforo Muelichi*) ; *Baia* 1[a]).

Dante : *Inferno* (ed. Casini-Barbi, Sansoni), Canto 10.

Galileo : *Scritti letterari* (ed. A. Chiari, Le Monnier, 1943), pp. 47–54.

(*b*), (*c*) and (*d*) Early and Modern Literature :—

Dante : *Purgatorio* (ed. Casini-Barbi, Sansoni) ; *Le Rime* (ed. Contini).

Boccaccio : *Decamerone :* Introduction ; I, 1, 8 ; II, 4, 5, ; IV, 4, 9 ; V, 8, 9 ; VI, 1, 2, 4, 5, 9, 10 ; VIII, 3, 5 ; IX, 4, 8 ; X, 2, 10.

Poliziano: *Stanze per la Giostra* (ed. Bontempelli, Sansoni).
Ariosto: *Orlando Furioso.*
Tasso: *L'Aminta.*
Alfieri: *Tragedie* (ed. Scherillo, Hoepli): *Filippo, Virginia, Agamennone, Oreste, Merope, Saul, Mirra.*
Foscolo: *Odi, Sonetti, Sepolcri* (ed. Marinoni, Hoepli).
Leopardi: *Canti* (ed. Scherillo, Hoepli, or ed. Straccali, Sansoni, or ed. Jeffery, Cambridge University Press).
Manzoni: *I Promessi Sposi* (ed. Scherillo, Hoepli).
D'Annunzio: *La Figlia di Iorio.*
Carducci: *Odi Barbare* (ed. Zanichelli).
G. Carducci: *Primavera e Fiore della Lirica Italiana* (Sansoni).

(*e*) Special Subject:—

One of the following subjects, chosen by the candidate:—

(1) The Italian poems of Petrarch.
(2) Goldoni: his life, work and times.

1953

(*a*) For linguistic study:—

C. Dionisotti & C. Grayson: *Early Italian Texts* (Blackwell, Oxford): Nos. II, VII, IX, XI, XII, XVI, XVII, XIX.
Machiavelli: *Il Principe* (ed. G. Lisio, Sansoni), first and last chapter.
Dante: *Inferno* (ed. Casini-Barbi, Sansoni), Canto 10.
Galileo: *Scritti letterari* (ed. A. Chiari, Le Monnier, 1943), pp. 47–54.

(*b*), (*c*) and (*d*) Early and Modern Literature:—

Dante: *Inferno* (ed. Casini-Barbi, Sansoni); *Le Rime* (ed. Contini).
Petrarca: *Canzoniere* (ed. Carducci-Ferrari, Sansoni).
L. B. Alberti: *I primi tre libri della Famiglia* (ed. Pellegrini, Sansoni).
Ariosto: *Orlando Furioso.*
Tasso: *L'Aminta.*
Parini: *Il Giorno* (ed. G. Albini, Sansoni).
Foscolo: *Odi, Sonetti, Sepolcri* (ed. Marinoni, Hoepli).
Leopardi: *Canti* (ed. Scherillo, Hoepli, or ed. Straccali, Sansoni, or ed. Jeffery, Cambridge University Press).
Manzoni: *Liriche e Tragedie* (ed. L. Russo, Sansoni).
D'Annunzio: *La Figlia di Iorio.*
Carducci: *Rime Nuove* (ed. Zanichelli).
G. Carducci: *Primavera e Fiore della Lirica Italiana* (Sansoni).

(*e*) Special Subject:—

One of the following subjects, chosen by the candidate:—

(1) The *De Vulgari Eloquentia* of Dante.
(2) Baretti: his life and works.

Japanese

1951, 1952 and **1953**

Papers 1–4

Meizi Syoin: *Kokubunsen*, Vol. 5 (1933), chapters 1, 4, 6, 8–15, 17; Vol. 7 (1933), chapters 4–6, 8, 10–13, 17, 18.
Koohuukan: *Tyuugaku-kokubun-kyookasyo*, Vol. 6 (1934), chapters 4, 8–10, 13, 16, 18, 19, 22, 23.

Paper 7

Chinese texts: J. J. Brandt: *Introduction to Literary Chinese* (2nd ed., Vetch, Peking, 1936), pp. 1–68, excluding parallel modern texts and illustrative examples.

Paper 8

A.D. 800–1200

Japanese (Modern)

1951

F. J. Daniels: *Japanese Prose* (Lund Humphries & Co., London, 1944), pp. 36–48 and 64–96.

S. Elisséeff & E. O. Reischauer: *Selected Japanese Texts for University Students* (Harvard-Yenching Institute, 1944), Vol. I, pp. 24–35, 51–77, 91–105, 111–135, 140–144, 159–162, 168–171, 181–193, 213–217, 222–258, 285–298.

S. Elisséeff & E. O. Reischauer: *Selected Japanese Texts for University Students* (Harvard-Yenching Institute, 1947), Vol. III, Literature and History, pp. 9–10, 26–30, 118–123.

A. L. Sadler: *Selections from Modern Japanese Writers* (Australasian Medical Publishing Co., Sydney, 1942), pp. 1–9, 24–26, 84–106

1952 and **1953**

F. J. Daniels: *Japanese Prose* (Lund Humphries & Co., London, 1944), pp. 36–48 and 64–96.

S. Elisséeff & E. O. Reischauer: *Selected Japanese Texts for University Students* (Harvard-Yenching Institute, 1944), Vol. I, pp. 24–35, 51–77, 91–105, 111–135, 140–144, 159–162, 168–171, 181–193, 213–217, 222–258, 285–298.

S. Elisséeff & E. O. Reischauer: *Selected Japanese Texts for University Students* (Harvard-Yenching Institute, 1947), Vol. III, Literature and History, pp. 9–10, 26–30, 118–123, 171–190, 208–209.

A. L. Sadler: *Selections from Modern Japanese Writers* (Australasian Medical Publishing Co., Sydney, 1942), pp. 84–106.

Latin

The texts used by the examiners in setting the examination papers will be the Oxford Classical Texts (Clarendon Press) unless some other text is specified.

1951

Group A

(1) Virgil: *Eclogues; Georgics*, Books I and IV; *Aeneid*, Books IV, VI, VII, VIII, XII.

(2) Horace, omitting *Satires*, Book I.

(3) Lucretius: Books I, III, V; Catullus.

(4) Plautus: *Amphitryo; Captivi; Rudens; Trinummus.*

Group B

(5) Cicero: *Philippic* II; *Pro Cluentio; In C. Verrem Actio Prima; Letters* (ed. How), 2–12, 14–17, 19, 21–23, 26–32, 40, 42–44, 46, 48–51, 54–56, 58, 60, 65, 70, 72, 75, 76, 88.

(6) Livy: Books XXVII, XXIX, XXX.

(7) Tacitus: *Annals*, Books XIII–XVI.

Roman Historical Subject

The Principates of Augustus and Tiberius, 30 B.C. to A.D. 37, **or** Roman History from 133 to 70 B.C.

Greek Historical Subject

Greek History from 500 to 433 B.C.

Comparative Philology of the Greek and Latin Languages

Greek: C. D. Buck: *Introduction to the Study of the Greek Dialects*, revised edition (Ginn & Co.), Nos. 18–22, 25, 28 (lines 1–24), 33, 38–40, 43 (lines 1–65), 50, 55 (omitting lines 15–32), 56–58, 60, 66 (lines 1–40), 74 (lines 1–54), 75–80, 80², 110 (IV. 25 to V. 9).

Latin: H. Ernout: *Recueil de textes latins archaïques* (Paris, Klincksieck), Part I, omitting Nos. 3, 136, 137, 139–146.

1952 and **1953**

Group A

(1) Virgil: *Eclogues; Georgics*, Books I and IV; *Aeneid*, Books IV, VI, VII, VIII, XII.

(2) Horace, omitting *Satires*, Book I.

(3) Lucretius: Books I, III, V; Catullus.

(4) Plautus: *Amphitryo; Captivi; Rudens; Trinummus.*

Group B

(5) Cicero: *Philippic* II; *Pro Cluentio; In C. Verrem Actio Prima; Letters* (ed. How), 2–12, 14–17, 19, 21–23, 26–32, 40, 42–44, 46, 48–51, 54–56, 58, 60, 65, 70, 72, 75, 76, 88.

(6) Livy: Books XXI, XXII, XXIII, 1–32, 4.

(7) Tacitus: *Annals*, Books XIII–XVI.

Roman Historical Subject

The Principates of Augustus and Tiberius, 30 B.C. to A.D. 37, **or**
Roman History from 133 to 70 B.C.

Greek Historical Subject

Greek History from 500 to 433 B.C.

Comparative Philology of the Greek and Latin Languages

Greek: C. D. Buck: *Introduction to the Study of the Greek Dialects*, revised edition (Ginn & Co.), Nos. 18–22, 25, 28 (lines 1–24), 33, 38–40, 43 (lines 1–65), 50, 55 (omitting lines 15–32), 56–58, 60, 66 (lines 1–40), 74 (lines 1–54), 75–80, 80², 110 (IV. 25 to V. 9).

Latin: H. Ernout: *Recueil de textes latins archaïques* (Paris, Klincksieck) Part I, omitting Nos. 3, 136, 137, 139–146.

Malay

1951, 1952 and **1953**

Hikayat Raja-Raja Pasai.

Sějarah Mělayu (ed. Winstedt).

Hikayat Iskandar Dzu'l-Karnain (extracts in P. J. van Leeuwen: *De Maleische Alexanderroman*, Meppel, 1937).

Hikayat Sěri Rama (ed. Shellabear).

Hikayat Sěri Rama (Maxwell's folk version).

Hikayat Bayan Budiman (ed. Winstedt).

Hikayat Pělandok (ed. Dussek).

Hikayat Awang Sulong (ed. Winstedt).

Hikayat Hang Tuah (ed. Shellabear).

Risalat Hoekoem Kanoen (ed. van Ronkel, Leiden, 1919).

Hikayat 'Abdullah.

Pantun Mělayu (ed. Wilkinson & Winstedt).

Sha'er Ken Tambohan.

Marathi

1951

V. L. Bhāve : *Mahārāshṭra Sārasvāt*, chapters 1–7.

Jnāneshvari, Chapters III and XI, vv. 194–241, 333–409, 444–508, 597–629.

Vāmanpaṇḍit, selections in *Navanīta*, pp. 109–132.

Moropant : *Kekāvali* (verses 1–50) and selections in *Navanīta*, pp. 306–329.

Raghunāthpaṇḍit : Selections in *Navanīta*, pp. 381–410.

D. G. Keḷkar : *Mahārāshṭra, Shāradā*, part I (selections).

G. S. Sardesāi : *Aitihāsika-patra-bodha.*

R. G. Gaḍkari : *Ekacha Pyālā.*

B. V. Varerkar : *Satteche Gulām.*

Kesaritil Nivaḍak Nibandh (Selections).

N. S. Phaḍke : *Daulat* (abridged edition).

1952 and **1953**

To be prescribed.

Pali (with Sanskrit)

1951

Pali :—

Dīgha Nikāya, sutta 2 (Sāmaññaphala).

Itivuttaka.

Dīgha-Nikāya, suttas 26–27 (Cakkavatti and Aggañña) (P.T.S. ed., Vol. III, pp. 58–98) with Commentary (Sumangalavilāsinī, P.T.S. ed., Vol. III, pp. 845–872).

Suttanipāta, Pārāyaṇavagga, with Commentary *Paramatthajotikā*, P.T.S. ed., Vol. II, pp. 575–607).

Thūpavaṃsa P.T.S. ed., pp. 1–42 (four chaps. up to and including the *Caturasītisahassadhātukathā*).

Sanskrit :—

Sāvitryupākhyāna (*Mahābhārata, Vanaparvan*).

Manusmṛti, Book 9.

Kālidāsa ; *Kumārasambhava*, iii.

Ārya Śūra ; *Jātakamālā*, i–ix.

1952 and **1953**

Pali :—

Dīgha Nikāya, sutta 2, Sāmaññaphala (P.T.S. ed., Vol. I, pp. 47–86).

Itivuttaka (P.T.S. ed.)

Dīgha Nikāya, suttas 26 and 27, Cakkavatti and Aggañña (P.T.S. ed., Vol. III, pp. 58–98), with Commentary Sumangalavilāsinī (P.T.S. ed., Vol. III, pp. 845–872).

Suttanipāta, Pārāyaṇavagga (P.T.S. ed., pp. 190–223), with Commentary *Paramatthajotikā* (P.T.S. ed., Vol. II, pp. 575–607).

Visuddhimagga, chapter IX, *Brahmavihāraniddesa* (P.T.S. ed., pp. 295–325).

Sanskrit :—

Sāvitryupākhyāna (*Mahābhārata, Vanaparvan*).

Manusmṛti, Book 9.

Kālidāsa, Kumārasambhava, iii.

Ārya Śūra, Jātakamālā, i–ix.

Persian

1951, 1952 and **1953**

Persian :—

Niẓāmī 'Arūẓī : *Chahār Maqāla.*
Niẓām ul-Mulk : *Siyāsat-nāma.*
50 *Odes of Hāfiz* (ed. A. J. Arberry, C.U.P.).
Firdausī : *Shāhnāma,* Episodes as in Pizzi's *Antologia Firdusiana.*
Niẓāmī : *Makhzan al-Asrār,* maq. i–x.
Mujmal al-Tawārīkh wa'l Qiṣaṣ (ed. Malik ush-Shu'arā Bahār, Tehrān, pp. 315–86).

Arabic :—

Ibn al-Ṭiqṭaqa : *al-Fakhrī* (the Reigns of Hārūn ar-Rashīd, Amīn and Ma'mūn).
Nicholsən : *Second Arabic Reading Book.*
Qur'an, *Surat al-baqarah* and *Surat al-mā'idah.*

Old Persian :—

Inscription of Bisitun.

Middle Persian :—

Book of Zarer (Pahlavi Texts, pp. 1–16).
Mitteliranische Manichaica i.

Philosophy

1951, 1952 and **1953**

Paper 7

John Locke : *An Essay Concerning Human Understanding* (either ed. A. C. Fraser (O.U.P.) or Routledge).
A Letter concerning Toleration.
Second Treatise of Civil Government.

(The last two may be obtained in one volume, ed. J. W. Gough, Blackwell, Oxford, 1946.)

Portuguese

1951

Textos Arcaicos (3rd ed., J. Leite de Vasconcelos).
Cantigas de Amigo (ed. J. J. Nunes, Coimbra, 1926).
Fernão Lopes : *Chronica de Dom João I, Primeira Parte* (ed. Melo Azevedo, Vol. VII, Bibl. Classicos Port., 3rd edition, 1915).
João de Barros : *Panegyricos* (ed. Classicos Sá da Costa).
Gil Vicente : *Auto da Alma* (ed. A. Bell, 1920, or Ouguella, Lisbon, 1912).
Diogo do Couto : *Vida de Dom Paulo de Lima* (Bibl. Classicos Port., Vol XV.)
Luis de Camões : *Os Lusiadas,* Cantos 9 and 10.
Antonio Vieira : *Cartas,* Vol. III (ed. J. Lucio de Azevedo, 1928), **or** *Sermões,* Vol. 3 (ed. Hernani Cidade, A.G.C., 1940)
Almeida-Garrett : *Viagens na minha terra,*
or Alexandre Herculano : *O Monge de Cister.*
Oliveira Martins : *Inglaterra de hoje,*
or Ramalho Ortigão : *A Holanda.*
Raul Brandão : *Os Pescadores* (Lisboa, 1924).
or Ferreira de Castro *A Selva* (Porto, 1929).

1952 and **1953**

Textos Arcaicos (3rd ed., J. Leite de Vasconcelos).
Cantigas de Amigo (ed. J. J. Nunes, Coimbra, 1926).
Fernão Lopes : *Chronica de Dom João I, Primeira Parte* (ed Melo Azevedo, Vol. VII, Bibl. Classicos Port., 3rd edition, 1915).
João de Barros : *Panegyricos* (ed. Classicos Sá da Costa).

Gil Vicente : *Auto da Alma* (ed. A. Bell, 1920, or Ouguella, Lisbon, 1912).
Diogo do Couto : *Vida de Dom Paulo de Lima* (Bibl. Classicos Port., Vol. XV).
Luis de Camões : *Os Lusiadas*, Cantos 9 and 10.
Antonio Vieira : *Cartas*, Vol. III (ed. J. Lucio de Azevedo, 1928).
Alexandre Herculano : *O Monge de Cister*.
Oliveira Martins : *Os Filhos de Dom João I*.
Ferreira de Castro : *Emigrantes*.

Russian Language and Literature

1951, 1952 and **1953**

Paper 5

1. Extracts from the following in

Н. К. Гудзий, *Хрестоматия по древней русской литературе XI–XVII веков*. (Москва 1947.)

Митрополит Иларион. «О законе и благодати» (57–60).

Владимир Мономах, «Поученье» (62–66).

«Слово о полку Игореве» (108–120).

«Моление Даниила Заточника» (138–145).

Епифаний Премудрый, «Житие Стефана Пермского» (183–191).

Афанасий Никитин, «Хожение за три моря» (197–202).

Кн. Андрей Курбский и царь Иван Грозный, «Переписка» (249–262).

Протопоп Аввакум, «Житие» (454–65).

The above are available in photostat copies for the use of students ; and application may be made to the library of the School of Slavonic and East European studies, or to the University of London library for permission to see them.

2. The following 18th century works :—

кн. Антиох Кантемир, «Сатира I.»

М. В. Ломоносов, «Утреннее размышление о Божьем величестве» ; «На взятие Хотина» ; «На день восшествия на Всероссийский престол императрицы Елисаветы Петровны» (1747).

Г. Р. Державин, «На смерть кн. Мещерского» ; «Фелица» ; «Бог» ; «Водопад» ; «Соловей».

Д. И. Фонвизин, «Недоросль».

А. Н. Радищев, «Путешествие из Петербурга в Москву» (главы «Новгород», «Бронницы», «Хотилов», и «Завидово»).

Papers 7 and 8 (*a*)

1. *A. Pushkin and N. Gogol.* A general knowledge of their lives and literary careers, with special study of

А. С. Пушкин, Лирика ; «Борис Годунов» ; «Повести Белкина»

and

Н. В. Гоголь, «Ревизор» ; «Мёртвые Души».

2. *L. Tolstoy.* A general knowledge of his life and literary career with a special study of

«Севастополь» ; «Анна Каренина» ; «Власть тьмы» ; «Что такое искусство ?» ; «Смерть Ивана Ильича».

3. *M. Gorky.* A general knowledge of his life and literary career with a special study of :—

Рассказы («Макар Чудра», «О чиже который лгал, и о дятле-любителе истины», «Челкаш», «Дело с засмежками», «Супруги Орловы», «Варенька Олесова») ; «На дне» ; «Мать» ; «Дело Артамоновых» ; «Речь на открытии Первого всесоюзного с'езда советских писателей 17 августа 1934г.»

Sanskrit

1951, 1952 and **1953**

Papers 1 and 2

For detailed study :—

Ṛgveda, I, 41, 42, 143 ; II, 27 ; III, 33 ; IV, 19, 33 ; V, 84 ; VI, 50, 74 ; VII, 46, 54, 76, 83 ; X, 108, 117, 146, 185.
Pāṇini, I. 4, 23–55, with the Kāśikā commentary.
Uttararāmacarita.
Meghadūta, I, with Mallinātha's commentary.

For general study (passages from the following books may be set for translation, together with *general* questions on their subject-matter) :—

Selections, in Böhtlingk's *Sanskrit Chrestomathie* (3rd edition), from *Aitareya-* and *Śatapatha-brāhmaṇas*,
Manusmṛti, Book 9.
Sāvitryupākhyāna (*Mahābhārata, Vanaparvan*).
Bhagavadgītā.
Kālidāsa : *Kumārasambhava*, canto iii.
Ārya Śūra ; *Jātakamālā*, i–ix.
Kathāsaritsāgara : Selections in Böhtlingk's *Sanskrit Chrestomathie*, 3rd edition.

Paper 4

Pali :—Andersen : *Pali Reader*, pp. 1–71.
Prakrit :—Jacobi : *Ausgewählte Erzählungen in Māhārāstrī*, pp. 1–55.
Avestan :—Reichelt : *Avesta Reader*, pp. 1–17, 81–86.

Special Subjects

(*d*) Indian Philosophy—Texts to be prescribed.

(*g*) Sanskrit Buddhist Literature :—

Avadāna-śataka (ed. Speyer), Nos. 1–10.
Divyāvadāna (ed. Cowell & Neil), xxvi–xxix (pp. 348–434).
Mahāvastu (ed. Senart), Vol. i, pp. 290–366.
Suvarṇabhāsottamasūtra (ed. Nobel), xix (*Vyāghrīparivarta*).

(*h*) Sanskrit Drama :—

Pratijñāyaugandharāyaṇa.
Mālavikāgnimitra.
Mudrārākṣasa.

(*i*) Sanskrit Poetics :—

Daṇḍin : *Kāvyādarśa*, i and ii.
Ānandavardhana : *Dhvanyāloka*, i and ii.
Viśvanātha : *Sāhityadarpaṇa*, i, ii and x.

Scandinavian Languages

1951

(*a*) E. V. Gordon : *An Introduction to Old Norse*, extracts I, III, V, VI, VII, VIII, X, XI, XIII, XVI (A–H), and Runic inscriptions.
Eddic Poems : *Völundarkviða, Baldrs draumar, Helreið Brynhildar, Gunnlaugs saga*.

(*b*) For candidates specialising in Danish :—Henrik Bertelsen : *Dansk sproghistorisk Læsebog*, extracts : Skaanske lov, Jydske lov, Den gammeldanske lægebog, Lucidarius.
For candidates specialising in Norwegian :—*Udvalgte Afsnit af Konungs Skuggsjá* (ed. J. Helgason, Schultz, Copenhagen).
For candidates specialising in Swedish :—E. Noreen : *Fornsvensk läsebok*, extracts I, II, VII, XII, XV, XVIII, XXIII, XXXI, XXXIII.

(*d*) Selected authors and texts : **one** of the following groups :—

Danish

Danske Folkeviser i Udvalg (ed. E. Frandsen).
Holberg : *Jeppe paa Bjerget.*
Johannes Ewald : *Levnet og Meninger.*
A. Oehlenschläger : *Nordens Guder.*
J. L. Heiberg : *En Sjæl efter Døden.*
H. C. Andersen : *Eventyr.*
S. Kierkegaard : *Enten-Eller.*
J. P. Jacobsen : *Niels Lyhne.*
Johannes V. Jensen : *Himmerlandshistorier.*
Danish poems in the *Oxford Book of Scandinavian Verse.*

Norwegian

Liestøl og Moe : *Norske folkeviser fra middelalderen.*
Petter Dass : *Nordlands Trompet* (ed. Seip).
Holberg : *Erasmus Montanus.*
Welhaven : *Digte* (ed. Hertzberg).
Asbjørnsen og Moe : *Folke- og Huldreeventyr.*
Bjørnson : *En Fallit* (ed. Hertzberg).
Ibsen : *Kongsemnerne ; Peer Gynt.*
Gabriel Scott : *Kilden.*
Norsk Bokheim, Nynorsk I and II (ed. Sørlie og Thesen, Cappelen, Oslo).

Swedish

Stiernhielm : *Herkules.*
Dalin : *Den svenska Argus,* selections (ed. Hesselman).
Bellman : *Fredmans epistlar* (ed. Risberg).
Tegnér : *Dikter ; Brev* (ed. Böök).
Atterbom : *Fågel blå.*
Almquist : *Det går an.*
Runeberg : *Ålgskytterna.*
Rydberg : *Vapensmeden.*
Karlfeldt : *Hösthorn.*

1952

(*a*) E. V. Gordon : *An Introduction to Old Norse,* extracts I, III, V, VI, VII, VIII, X, XI, XIII, XVI (A–H), and Runic inscriptions.
Eddic Poems : *Völundarkviða, Baldrs draumar, Helreið Brynhildar, Gunnlaugs saga.*

(*b*) For candidates specialising in Danish :—Henrik Bertelsen : *Dansk sproghistorisk Læsebog,* extracts : Skaanske lov, Jydske lov, Den gammeldanske lægebog, Lucidarius.
For candidates specialising in Norwegian :—*Udvalgte Afsnit af Konungs Skuggsjá* (ed. J. Helgason, Schultz, Copenhagen).
For candidates specialising in Swedish :—E. Noreen : *Fornsvensk läsebok,* extracts I, II, VII, XII, XV, XVIII, XXIII, XXXI, XXXIII.

(*d*) Selected authors and texts : **one** of the following groups :—

Danish

Danske Folkeviser i Udvalg (ed. E. Frandsen).
Holberg : *Jeppe paa Bjerget.*
Johannes Ewald : *Fiskerne.*
A. Oehlenschläger : *Helge* (including *Yrsa*).
J. L. Heiberg : *Elverhøj.*
H. C. Andersen : *Eventyr.*
S. Kierkegaard : *Enten-Eller.*
J. P. Jacobsen : *Niels Lyhne.*
Johannes V. Jensen : *Himmerlandshistorier.*
Et hundrede danske Digte (ed. F. J. Billeskov-Jansen).

Norwegian

Liestøl og Moe : *Norske folkeviser fra middelalderen.*
Petter Dass : *Nordlands Trompet* (ed. Seip).
Holberg : *Erasmus Montanus.*
Welhaven : *Digte* (ed. Hertzberg).
Asbjørnsen og Moe : *Folke- og Huldreeventyr.*
Bjørnson : *En Fallit* (ed. Hertzberg).
Ibsen : *Peer Gynt ; Vildanden.*
K. Hamsun : *Pan.*
Norsk Bokheim, Nynorsk I and II (ed. Sørlie og Thesen, Cappelen, Oslo).

Swedish

Ek och Blomberg : *Svenska folkvisor i urval.*
Dalin : *Den svenska Argus,* selections (ed. Hesselman).
Stiernhielm : *Herkules.*
Bellman : *Fredmans epistlar* (ed. Risberg).
Tegnér : *Dikter ; Brev* (ed. Böök).
Almquist : *Det går an.*
Runeberg : *Kung Fjalar.*
Rydberg : *Vapensmeden.*
Karlfeldt : *Hösthorn.*

1953

(*a*) E. V. Gordon : *An Introduction to Old Norse,* extracts I, III, V, VI, VII, VIII, X, XI, XIII, XVI (A–H), and Runic inscriptions.
Eddic Poems : *Völundarkviða, Baldrs draumar, Helreið Brynhildar, Gunnlaugs saga.*

(*b*) For candidates specialising in Danish :—Henrik Bertelsen : *Dansk sproghistorisk Læsebog,* extracts : Skaanske lov, Jydske lov, Den gammeldanske lægebog, Lucidarius.
For candidates specialising in Norwegian :—*Udvalgte Afsnit af Konungs Skuggsjá* (ed. J. Helgason, Schultz, Copenhagen).
For candidates specialising in Swedish :—E. Noreen : *Fornsvensk läsebok,* extracts I, II, VII, XII, XV, XVIII, XXIII, XXXI, XXXIII.

(*d*) Selected authors and texts : **one** of the following groups :—

Danish

Danske Folkeviser i Udvalg (ed. E. Frandsen).
Holberg : *Den politiske Kandstøber.*
Johannes Ewald : *Fiskerne.*
A. Oehlenschläger : *Helge* (including *Yrsa*).
J. L. Heiberg : *En Sjæl efter Døden.*
H. C. Andersen : *Eventyr og Historier.* Udvalg ved J. Nørvig.
S. S. Blicher : *Brudstykker af en Landsbydegns Dagbog* (ed. J. Nørvig).
J. P. Jacobsen : *Marie Grubbe.*
Johannes V. Jensen : *Udvalgte Prosastykker* (ed. Borup & Ilsøe).
Et hundrede danske Digte (ed. F. J. Billeskov-Jansen).

Norwegian

Liestøl og Moe : *Norske folkeviser fra middelalderen.*
Petter Dass : *Nordlands Trompet* (ed. Seip).
Holberg : *Erasmus Montanus.*
Wergeland : Dikt (ed. E. Høigård).
Asbjørnsen og Moe : *Folke- og Huldreeventyr* (ed. T. Knudsen).
Bjørnson : *Over Evne I.*
Ibsen : *Peer Gynt ; Vildanden.*
Nils Kjær : *Det lykkelige valg* (ed. M. Sandvei).
Norsk Bokheim, Nynorsk I and II (ed. Sørlie og Thesen).

Swedish

Ek och Blomberg : *Svenska folkvisor i urval.*
Dalin : *Sagan om hästen.*
Stiernhielm : *Herkules.*
Bellman : *Fredmans epistlar* (ed. Risberg).
Tegnér : *Frithiofs saga.*
Runeberg : *Kung Fjalar.*
Strindberg : *Hemsöborna.*
Fröding : *Stänk och flikar.*
Hj. Bergman : *Markurells i Wadköping.*
Poems by Geijer and Tegnér in *Vår litteratur och dess historia*, 3. delen. (ed. R. Hillman and others).

Sinhalese

1951 and **1952**

Paper 1

Epigraphia Zeylanica. Vol III, No. 17, *i.e.*, Tōnigala Rock Inscription ; Vol. IV, No. 37, *i.e.*, Nilagama Rock Inscription of Dalamugalan ; Vol. I, No. 4, *i.e.*, Anurādhapura Slab Inscription of Kassapa V.
Sikhavalanda (ed. D. B. Jayatilaka, 1934).
Dhampiyā-atuvā-gāṭapadaya, pp. 201–290 (ed. D. B. Jayatilaka, 1933).
Siyabaslakara, vv. 156–258, *i.e.*, from Dīpaka-alaṃkāra to the end of Hetu-alaṃkāra (ed. H. Jayatilaka, 1901).

Paper 2

Dharmapradīpikā, pp. 1–102, *i.e.*, comments 1–13 (ed. Dharmārāma, 1915).
Pūjāvaliya, Chaps. 12–16 (ed. D. E. Hettiaratchi, 1948).
Kavsiḷumiṇa, cantos i–v (ed. Maḍugallē Śrī Siddhārtha, 1926).
Sidatsaṅgarā, Chaps. I–X.
Tisara-sandēśaya (ed. D. B. Jayatilaka, 1935).
Kāvyaśēkharaya, cantos, vii–xv (ed. Dharmārāma, 1915).

Paper 3

Kuvēṇi-asna (1927).
Buduguṇālaṅkāraya, vv. 78–329 (ed. Valāṇē Dhammānanda, 1930).
Rājāvaliya (ed. Vatuvatte Pēmānanda, 1926).
Vayantimālaya (1925).
Āhaḷēpoḷa-varṇanāva (ed. M. E. Fernando).
John de Silva : *Śri Wickrama Rājasinha* (Lankābhinava Viśruta Press, Colombo, 2469–1925).

1953

To be prescribed.

Slavonic and East European Regional Studies

1952 and **1953**

Russian Regional Studies

Paper 3

1. Слово о полку Игорева, 1–14. (Буслаев, *Хрестоматия*, 1888, 86–90.)
2. Поучение Владимира Мономаха, 10–18. (Буслаев, 75–78.)
3. Сборник Святослава 1076. (Обнорский, *Хрестоматия*, 1938, 22–23.)
4. Договорная грамота Смоленского князя Мстислава Давидовича с Ригою и Готским берегом 1229г. (Обнорский, 29–32.)
5. Договорная грамота Новгорода с великим князем Ярославом Ярославичем 1264-5гг. (Обнорский, 38–39.)
6. Русская Правда (Обнорский, 42–43.)

7. Грамота Полоцкого епископа Иакова к Рижанам около 1300г. (Обнорский, 49.)
8. Договорная торговая грамота Полоцка с Ригой около 1330г. (Обнорский, 67–68.)
9. Новгородская летопись по Синодальному списку XIII–XIVвв. (Обнорский, 57–60.)
10. Духовная грамота Московского князя Дмитрия Ивановича до 1378г. (Обнорский, 71.)
11. Грамота галицкого старосты Бенка 1398г. (Обнорский, 112.)
12. Продажная Хоньки Васковой на Калеников монастырь 1378г. (Обнорский, 107–109.)
13. Повесть временных лет по Лаврентиевскому списку 1377. (изд. Арх. Ком. 1910, 53–58 ; 106–109 ; 129–134.)
14. Летопись по Ипатьевскому списку около 1425. (Обнорский, 121–123.)
15. Путешествие Афанасия Никитина в Индию 1466–1472г. (Гудкий, 197–200.)
16. Грамота Псковского князя Ивана Александровича 1463–1465гг. (Обнорский, 131–132.)
17. Псковская судная грамота. (Обнорский, 152–154.)
18. Повесть о Дракуле. (Буслаев, 211–215.)
19. Задонщина. (Гудзий, 167–170.)
20. О житий и о преставлений великого князя Дмитрия Ивановича 1448г. (Гудзий, 174–177.)
21. Стоглав. (Обнорский, 164–166.)
22. Домострой. (Обнорский, 160–162.)
23. Из переписки кн. Андрея Курбьского. (Обнорский, 174–178.)
24. Котошихин «О России в царствование Алексея Михайловича.» (Обнорский, 220–221.)
25. Протопоп Аввакум, «Житие.» (Обнорский, 224–227.)

All the above are available in photostat copies for the use of students ; and application may be made to the library of the School of Slavonic and East European Studies, or to the University of London Library, for permission to use them.

Papers 9 and 10

(*a*) The Reign of Ivan IV.

To be studied in the following authorities :—

Sigismund von Herberstein. "*Notes upon Russia.*" (The Hakluyt Society.) London, 1852. Vol. I, pp. 102–116. Vol. II, pp. 112–142.

Ivan Peresvetov. (*a*) Pervaya chelobitnaya, pp. 59–69.

(*b*) Skazanie o Magmete-saltane, pp. 71–78, *from* Chteniya v imperatorskom obshchestve Istorii i Drevnostei Rossiiskikh 1908, Vol. I. Moskva.

Hrestomatiya po istorii SSSR. Vol. I. Moskva, 1937. pp. 214–15, 222–3, 229–30.

Sudebnik Tsarya i Velikogo Knyazya Ioanna Vasil'evicha. (1550), *from Akty istoricheskie* Vol. I, pp. 219–251. Izadany Arkheograficheskoi Kommissieyu SPB, *para.* 1, 4, 5, 26, 28, 32, 49, 52, 53, 62, 68, 70, 71, 72, 78, 80, 81, 86, 87, 88, 90, 91, 98.

Stoglav (1551), chapters 51, 60, 75, 76, 85, 93, 94. Izdanie D. E. Kozhanchikova. 1863, SPB.

Perepiska Knyazya Kurbskago s tsarem Ioannom Groznom, *from* Hrestomatiya po drevnei russkoi literature, pp. 195–205, (sost. Gudzy N. K.), Moskva 1936.

Domostroi, chapters 1, 7, 9, 15, 17–21, 29, 30, 34, 37, 40, 42, 56, 62, *from* Izdanie Obschestva Istorii i Drevnostei Rossiiskikh. Moskva, 1908. In Proceedings, Vol. II, and separately. Or French ed. *Le Domostroi* translated by M. E. Duchesne, Paris, 1910.

A copie of the privileges graunted by the Emperour of Russia unto the right worshipful felowship of English marchants in 1569. *Early Travels to Russia and Persia;* (Hakluyt Soc.), 1856. Vol. II, pp. 265–277.

A message unto the quenes excellent Maiestie from th' Emperour his highnes of Moscovia to be done in secret, Nov. 1567. *From ibid.*

Elizabeth to Ivan, 18 *May* 1570. *The Coppie of the Queens Maiesties Letter to the Emperour of Russia Maii* 1570, *from ibid.*

The following are also recommended :—

"The Voyage of Richard Chancellor, 1553," *from The Principal Navigations. Voyages, Traffiques and Discoveries of the English Nation.* (Richard Hakluyt.) Vol. II, pp. 224–238. (Glasgow, 1903.)

The first privileges graunted by the Emperour of Russia to the English Merchants, from ibid. Vol. II, pp. 297–304.

First Voyage made by Master Anthony Jenkinson toward the land of Russia, 1557, *from Early Voyages and Travels to Russia and Persia.* (Hakluyt Society, 1856.) Vol. I, pp. 11–40.

Privileges graunted by the Emperour of Russia to the English merchants, from ibid. Vol. II, pp. 288–336.

Of the Russe Commonwealth. Giles Fletcher. (The Hakluyt Society.) London, 1856.

(*b*) The Reign of Peter I.

To be studied in the following authorities :—

I. Pososhkov: *Kniga o Skudosti i Bogaststve.* Ed. Kafengauz; Moscow, 1937. Chapters II, III, IV and VII.

II. Voskresensky: *Zakonodatel'nye Akty Petra I*, Vol. I, Moscow-Leningrad, 1945.

1. The Senate—pp. 197, 199, 201, 204, and Procurator General—308–310.

2. Colleges—pp. 216–217, 218. Synod—81 (83), (121) and Procurator 109–110.

3. Justice, Code of Laws—pp. 40–41, 107, (30), 132–133.

4. Law of Succession (Conflict with Alexis); 163–169, 170, 174–176, 177, (113–114).

5. Coronation of Catherine, 179–180.

6. Instructions concerning Gentry: 351–352, 353–354–355.

7. Miscellaneous Orders: (against the selling of single peasants) 92, (against abuse of torture) 101, (against forced marriages) 103.

8. Education, Schools: 33–34, 241–242. Books, Translations: 34–35, 44, 47–48, 110–111, 112–114, 119, 128–129, 143–144, 148.

9. Letters: 180–182.

10. Historical Notes concerning his reign, 115–117, 150.

Central European Regional Studies

Papers 9 and 10

(*a*) The Reform Movement in Bohemia, 1346–1415.

To be studied in the following authorities :—

Matthiae de Janow. *Regulae Veteris et Novi Testamenti.* Ed. Kybal, V., Prague, 1908–13. Vol. I, pp. 1–50; Vol. IV, pp. 1–63; Vol. III, pp. 358–67. (Narratio de Milicio; Milicii Libellus de Antichristo.)

M. Jana Husi *Korespondence a Dokumenty.* Nos. 124–6 ; 129–32 ; 139–41 ; 164–5. Ed. Novotny, V. Prague, 1920.

Mladoňovic. *Relatio Magistri Johannis Hus,* in *Documenta Magistri Johannis Hus.* Ed. Palacky, F., pp. 273–323.*

Processus Iudiciarius contra Jeronimum de Praga, habitus Viennae a. 1410–12. Ed. Klicman, L. Prague, 1898.

Poggius Bracciolini : *De Hieronymi Pragensis obitu et supplicio epistola.* In Palacky, F. : *Documenta Mag. Johannis Hus**.

(*c*) Poland, 1733–1795.

To be studied in the following authorities :—

Konarski, Stanislaw : *O skutecznym rad sposobie* in the edition by Konopszynski, Wladyslaw : *Wybom pism.*

Klotz, Justine : *La diète de quatre ans* (the documents on pp. 501–48).

Kitowidcz, Jędzrej : *Opis obuczajòw za panowania Augusta III.* Chapters 4, 5, 12, 13, 18.

The following books are also recommended :—

Kutrzeba, Stanislaw : *Historia ustroju polskiego.* Vol. I., pp. 259–322.

Balzer, Oswald : *Konstytucja Trzeciego Maja.*

Klotz, Justine : *La diète de quatre ans,* IIème partie.

Lord, R. H. : *The Second partition of Poland.* Introduction, and chapters 1 and 9.

Rose, W. J. : *Stanislaw Konarski.*

* Copies of these documents (photostat) may be consulted in the library of the School of Slavonic and East European Studies.

Spanish

1951

Poema de mío Cid, Cantar II.
Juan Ruiz : *Libro de buen amor.*
Juan Manuel : *El conde Lucanor.*
Fernando de Rojas : *La Celestina.*
R. Menéndez Pidal : *Flor Nueva de Romances Viejos.*

One of the following groups :—

I. Garcilaso de la Vega : *Obras completas.*
Jorge de Montemayor : *La Diana.*
Fray Luis de León : *Poesías originales ; La perfecta casada.*
Santa Teresa : *Las Moradas.*
Lope de Rueda : *Pasos.*

II. Miguel de Cervantes : *Don Quijote ; El celoso extremeño.*
Lope de Vega : *Peribáñez y el comendador de Ocaña.*
Tirso de Molina : *El condenado por desconfiado.*
Luis de Góngora : *Las soledades.*
Francisco de Quevedo : *Los sueños.*
Pedro Calderón de la Barca : *La vida es sueño.*
Baltasar Gracián : *El discreto.*

III. Juan Pablo Forner : *Exequias de la lengua castellana.*
Juan Meléndez Valdés : *Poesías* (Clásicos castellanos).
Leandro Fernández de Moratín : *La comedia nueva ; El sí de las niñas.*
Mariano José de Larra : *Artículos de costumbres.*
A. García Gutiérrez : *El Trovador.*
José de Espronceda : *El diablo mundo.*
José Zorilla : *Don Juan Tenorio.*

IV. Gustavo Adolfo Bécquer : *Rimas.*
Juan Valera : *El comendador Mendoza.*
José María de Pereda : *Sotileza.*
Benito Pérez Galdós : *El abuelo* (novela).
Miguel de Unamuno : *La tía Tula.*
Rubén Darío : *Prosas profanas ; Cantos de vida y esperanza.*
Azorín : *Castilla.*
Antonio Machado : *Poesías.*

1952

Poema de mío Cid, Cantar III.
Juan Ruiz : *Libro de buen amor.*
Juan Manuel : *El conde Lucanor.*
Fernando de Rojas : *La Celestina.*
R. Menéndez Pidal : *Flor Nueva de Romances Viejos.*

One of the following groups :—

I. Garcilaso de la Vega : *Obras completas.*
Jorge de Montemayor : *La Diana.*
Fray Luis de León : *Poesías originales ; La perfecta casada.*
Santa Teresa : *Las Moradas.*
Lope de Rueda : *Pasos.*

II. Miguel de Cervantes : *Don Quijote ; El celoso extremeño.*
Lope de Vega : *Peribáñez y el comendador de Ocaña.*
Tirso de Molina : *El condenado por desconfiado.*
Luis de Góngora : *Las soledades.*
Francisco de Quevedo : *Los sueños.*
Pedro Calderón de la Barca : *La vida es sueño.*
Baltasar Gracián : *El discreto.*

III. Juan Pablo Forner : *Exequias de la lengua castellana.*
Juan Meléndez Valdés : *Poesías* (Clásicos castellanos).
Leandro Fernández de Moratín : *La comedia nueva ; El sí de las niñas.*
Mariano José de Larra : *Artículos de costumbres.*
A. García Gutiérrez : *El Trovador.*
José de Espronceda : *El diablo mundo.*
José Zorilla : *Don Juan Tenorio.*

IV. Gustavo Adolfo Bécquer : *Rimas.*
Juan Valera : *El comendador Mendoza.*
José María de Pereda : *Sotileza.*
Benito Pérez Galdós : *El abuelo* (novela).
Ramón Perez de Ayala : *Tigre Juan.*
Rubén Dario : *Prosas profanas ; Cantos de vida y esperanza.*
Azorín : *Castilla.*
Antonio Machado : *Poesías.*

1953

Poema de mío Cid, Cantar I.
Juan Ruiz : *Libro de buen amor.*
Juan Manuel : *El conde Lucanor.*
Fernando de Rojas : *La Celestina.*
R. Menéndez Pidal : *Flor Nueva de Romances Viejos.*

One of the following groups :—

I. Garcilaso de la Vega : *Obras completas.*
Jorge de Montemayor : *La Diana.*
Fray Luis de León : *Poesías originales ; La perfecta casada.*
Santa Teresa : *Las Moradas.*
Lope de Rueda : *Pasos.*

II. Miguel de Cervantes : *Don Quijote ; El celoso extremeño.*
Lope de Vega : *Peribáñez y el comendador de Ocaña.*
Tirso de Molina : *El burlador de Sevilla.*
Luis de Góngora : *Las soledades.*
Francisco de Quevedo : *Los sueños.*
Pedro Calderón de la Barca : *La vida es sueño.*
Baltasar Gracián : *El criticón (primera parte).*

III. Juan Pablo Forner : *Exequias de la lengua castellana.*
Juan Meléndez Valdés : *Poesías* (Clásicos castellanos).
Leandro Fernández de Moratín : *La comedia nueva ; El sí de las niñas.*
Mariano José de Larra : *Artículos de costumbres.*
A. García Gutiérrez : *El Trovador.*
José de Espronceda : *El diablo mundo.*
José Zorilla : *Don Juan Tenorio.*

IV. Gustavo Adolfo Bécquer : *Rimas.*
Juan Valera : *El comendador Mendoza.*
José Maria de Pereda : *Sotileza.*
Benito Pérez Galdós : *El abuelo* (novela).
Ramón Perez de Ayala : *Tigre Juan.*
Rubén Darío : *Prosas profanas ; Cantos de vida y esperanza.*
Azorín : *Castilla.*
Antonio Machado : *Poesías.*

Tamil

1951 and **1952**

A. *Medieval and Modern.*
Tēvāram, 6th Tirumuṟai.
Tiruvāymoli, Patikams 1–10.
Periyapurāṇam, Tirunāvakkaraśu Nāyanār Purāṇam.
Kamparāmayaṇam, Ayōttiyākāṇṭam, Paṭalams 1–4.
Sakuntalai Nāṭakam, by Maṟaimalai Aṭikaḷ.
Tamilppulavar Carittiram, by C. A. Kumaraswami Pulavar.
South Indian Inscriptions (Government Press, Madras, 1899), Vol. 3, pp. 1–39.

B. *Early.*
Kalittokai, Pālaikkali, with commentary by Naccinārkkiniyar.
Puṟanāṉūṟu, Sts. 1–100.
Pattippāṭṭu, Paṭṭiṉappālai.
Tirukkuṟaḷ, Sts. 1–380.
Silappatikāram, Pukārkkāṇṭam.

C. *Grammatical.*
Tolkāppiyam, Eḻuttatikāram with commentary by Naccinārkkiniyar.
,, *Sollatikāram* with commentary by Iḷampūraṇar.
,, *Poruḷatikaram, Akattiṇai* and *Puṟattiṇai* with commentary by Naccinārkkiniyar.

1953

To be prescribed.

Turkish

1951

A. Tietze and S. Lisie : *Türkisches Lesebuch für Ausländer* (Istanbul, 1943).

Baki Süha Ediboğlu : *Türk siirinden örnekler* (Ankara, 1944).

Refik Halit Karay : *Memleket hikâyeleri.*

Ya'qūb Qadrī : *Nūr Baba.*

'Alī Jānib : *Edebiyyāt* (Istanbul, 1926).

Pechevī : *Tarīkh I,* pp. 1–225.

Arabic Texts :—

Ibn al- Tiqtaqā' : *al- Fakhrī* (the Reigns of Hārūn ar-Rashīd, Amīn and Ma'mūn).

Qur'ān, sūrat al-baqarah and *sūrat al-mā'idah.*

Persian texts :—

Gulistān, Books I and II, without *Muqaddima.*

1952 and **1953**

A. Tietze and S. Lisie : *Türkisches Lesebuch für Ausländer* (Istanbul, 1943).

Baki Süha Ediboğlu : *Türk siirinden örnekler* (Ankara, 1944).

Refik Halit Karay : *Memleket hikâyeleri.*

Ya'qūb Qadrī : *Nūr Baba.*

'Alī Jānib : *Edebiyyāt* (Istanbul, 1926).

Pechevī : *Tarīkh* II, pp. 163–290 (the Reign of Mehmed III).

Neşrî Tarihi, I (Ankara, 1949), pp. 1–190.

Arabic texts :—

Ibn al- Tiqtaqā' : *al-Fakhrī* (the Reigns of Hārūn ar-Rashīd, Amīn and Ma'mūn).

Qur'an sūrat al-baqarah and *sūrat al-mā'idah.*

Persian texts :—

Gulistān, Books I and II, without *Muqaddima.*

Urdu

1951

Muḥammad Ḥusain Āzād : Āb-i Ḥayāt, pp. 86–170 (Lahore, 1913).

Naẓm-i Muntakhab : Mūmin, Ẕauq, Ġhālib, Anīs, Akbar (Baptist Mission Press, Calcutta, 1909).

Mīr Amman : *Bāgh o Bahār.*

Naẓīr Aḥmad : *Taubat un-Naṣūḥ.*

Ratn Nāth Sarśār : *Fasāna-i Āzād* (Selections, Vol. I).

Alṭāf Ḥusain Ḥālī : *Shi'r o Shā'irī.*

Hādī Ḥasan Rusvā : *Lailā o Majnūn.*

1952 and **1953**

To be prescribed.

M.A. EXAMINATION

Medieval and Modern Languages

ENGLISH LANGUAGE AND LITERATURE.

1951

Old and Middle English

Waldhere (ed. Norman, Methuen).
Deor (ed. Malone, Methuen).
Two Saxon Chronicles Parallel (annals 901 to death of Cnut, with special reference to the Parker and Laud MSS.).
Selected Homilies of Ælfric (ed. Sweet, Clarendon Press).

Pearl.
St. Marharete (ed. Mack, E.E.T.S.), p. 14, line 7 to p. 30, line 4.
Langland : *Piers Plowman*, Prologue and Passus I–IV, B text.
Chaucer : *Troilus and Criseyde.*

Old Icelandic

Laxdœla Saga (ed. E. O. Sveinsson, Levin and Munksgaard).
Hrafnkels saga Freysgodo (ed. Crawley).

Medieval Latin

Oxford Book of Medieval Latin Verse (ed. S. Gaselee, Oxford, 1928).
Carmina Burana (ed. A. Hilka & O. Schumann, Heidelberg, 1930).
John of Salisbury : *Policraticus* (ed. C. C. J. Webb, Oxford, 1909).

Renaissance Latin

Francisci Petrarcae Epistolae Selectae (ed. A. F. Johnson, Oxford, 1923).
Selections from Erasmus (ed. P. S. Allen, Oxford, 1918).
Pontano : *I Dialoghi* (ed. C. Previtera, Sansoni, Florence, 1943).

Old French

La Chanson de Roland (ed. Whitehead, Blackwell), lines 703–2395.
La Châtelaine de Vergy (ed. Whitehead, Manchester U.P.).
Colin Muset : *Chansons* (éd. Bédier, Classiques français du moyen âge).

Medieval and Renaissance Italian

Dante : *Purgatorio* (ed. Casini-Barbi, Sansoni), cantos I–XI.
Petrarca : *Rime* (ed. Carducci-Ferrari, Sansoni), Canzoni 28, 37, 50, 53, 72, 119, 126, 128, 129, 206, 323, 331, 360, 366 ; Sonetti 35, 62, 90, 92, 159, 248, 285, 302.
Castiglione : *Il Cortegiano* (ed. V. Cian, Sansoni).

Old Saxon and Old High German

Old Saxon :—*Heliand*, lines 1–779 and 4296 to end, and Genesis (in *Heliand*, ed. E. Sievers, Halle, Saale, Berlin 1935, or *Heliand und Genesis*, ed. O. Behagel, Halle, Saale, 1933). Braune : *Althochdeutsches Lesebuch* (Halle, Saale, 1928) : XXXXI, Segensformeln ; XXXXVI, Taufgelöbnis ; XXXXVII, Beichte. F. Holthausen : *Altsächsisches Elementarbuch* (Heidelberg, 1921), Nos. 3, 5, 6, 7, 8.

Old High German :—Braune : *Althochdeutsches Lesebuch* (Halle, Saale, 1928) : Prose : I, Alte Glossen ; IV, Isidor ; XVI, Tatian ;

XVII, Die Strassburger Eide; XXIII (Boethius), Notker; XXVII, Wessobrunner Predigt. Poetry: XXVIII, Das Hildebrandslied; XXX, Muspilli; XXXI (1 and 2), Segensformeln; XXXII (7), Otfrid; XXXIII, Petruslied; XXXIV, Christus und die Samariterin; XXXVI, Das Ludwigslied; XXXIX, De Heinrico; XXXXII, Memento Mori.

Old French and Anglo-Norman

La Chanson de Roland (ed. Whitehead, Blackwell), lines 703–2395.
Fouke Fitz Warin (éd. Brandin, Classiques français du moyen âge).
Colin Muset: *Chansons* (éd. Bédier, Classiques français du moyen âge).

1952 and **1953**

Examination with Thesis

Old Icelandic Texts

(*d*) Selections from *Sturlunga Saga* (ed. Guðri Jónsson, Islendingasagnaútgáfan, Reykjavík, 1948), viz. *Þorgils saga ok Hafliða, Sturlusaga, Guðmundarsaga dýra.*
Hávamál, tr. 138–end.
Vafþrúðnismál.
Helreið Brynhildar.
Guðrúnarkviða I.

Examination without Thesis

A.7

Medieval Latin

Oxford Book of Medieval Latin Verse (ed. S. Gaselee, Oxford, 1928).
Carmina Burana (ed. A. Hilka & O. Schumann, Heidelberg, 1930).
John of Salisbury: *Policraticus* (ed. C. C. J. Webb, Oxford, 1909).

Renaissance Latin

Francisci Petrarcae Epistolae Selectae (ed. A. F. Johnson, Oxford, 1923).
Selections from Erasmus (ed. P. S. Allen, Oxford, 1918).
Pontano: *I Dialoghi* (ed. C. Previtera, Sansoni, Florence, 1943).

Old French

La Chanson de Roland (ed. Whitehead, Blackwell), lines 703–2395.
La Châtelaine de Vergy (ed. Whitehead, Manchester U.P.).
Colin Muset: *Chansons* (éd. Bédier, Classiques français du moyen âge).

Medieval and Renaissance Italian

Dante: *Purgatorio* (ed. Casini-Barbi, Sansoni), cantos I–XI.
Petrarca: *Rime* (ed. Carducci-Ferrari, Sansoni), Canzoni 28, 37, 50, 53, 72, 119, 126, 128, 129, 206, 323, 331, 360, 366; Sonetti 35, 62, 90, 92, 159, 248, 285, 302.
Castiglione: *Il Cortegiano* (ed. V. Cian, Sansoni).

B.6

Old Icelandic Literature

Laxdæla Saga (ed. E. O. Sveinsson, Levin & Munksgaard).
Víga-Glúms Saga (ed. Turville-Petre).

B.7

Old Saxon and Old High German

Old Saxon:—*Heliand*, lines 1–779 and 4269 to end, and *Genesis* (in *Heliand*, ed. E. Sievers, Halle, Saale, Berlin 1935, or *Heliand und Genesis*, ed. O. Behagel, Halle, Saale, 1933). Braune: *Althochdeutsches Lesebuch* (Halle, Saale, 1928): XXXXV, *Segensformeln*; XXXXVI, *Taufgelöbnis*; XXXXVII, Beichte. F. Holthausen: *Altsächsisches Elementarbuch* (Heidelberg, 1921), Nos. 3, 5, 6, 7, 8.

Old High German:—Braune: *Althochdeutsches Lesebuch* (Halle, Saale, 1928): Prose: I, *Alte Glossen*; IV, Isidor; XVI, Tatian; XVII, *Die Strassburger Eide*; XXIII (Boethius), Notker; XXVII, *Wessobrunner Predigt*. Poetry: XXVIII, *Das Hildebrandslied*; XXX, *Muspilli*; XXXI (1 and 2), *Segensformeln*; XXXII (7), Otfrid; XXXIII, *Petruslied*; XXXIV, *Christus und die Samariterin*; XXXVI, *Das Ludwigslied*; XXXIX, *De Heinrico*; XXXXII, *Memento Mori*.

Medieval Latin

As for A.7

Renaissance Latin

As for A.7

Old French and Anglo-Norman

La Chanson de Roland (ed. Whitehead, Blackwell), lines 703–2395.
Fouke Fitz Warin (éd. Brandin, Classiques français du moyen âge).
Colin Muset: *Chansons* (éd. Bédier, Classiques français du moyen âge).

Oriental Languages

ARABIC

1951, 1952 and **1953**

General

Prose: *Koran*; Ibn Khaldūn: *Muḳaddima*; Al-Jāḥiẓ: *Al-Bayān wal-Tabyīn*, Vol. 1 (ed. al-Sandubi).

Poetry: C. J. Lyall: *Commentary on Ten Ancient Arabic Poems* (Calcutta, Bibliotheca Indica, 1894). Abu Tammām: *Ḥamāsa*.

For Special Subjects

(1) Al-Mubarrad: *al-Kāmil* (to beginning of the chapter on the Khawārij). Jarīr: *Dīwān*.

(2) Ibn Rashīḳ: *al-'Umda*. Al-Mutanabbi: *Dīwān*.

(3) Ibn 'Abd Rabbihi: *Al-'Ikd al-Farīd* (*Kitāb al-Yāūḳta*, *Kitāb al-Jawhara*). Al-Ḥarīri: *Maḳāmāt*.

(4) Al-Maḳḳari: *Nafḥ al-Ṭīb*, chap. 7. Muḥammad b. Hāni: *Dīwān*.

(5) Al-'Aḳḳād: *Works*. Al-Shawḳi: *Works*.

(6) Al-Suyūtī: *al-Itḳān* **or** al-Baiḍāwī: *Anwār al-tanzīl*.

(7) Al-Shahrastāni: *al-Milal wa'l-niḥal* (ed. Cureton, 1842–46, reprinted Harrassowitz, Leipzig, 1923), pp. 1-200; al-Naubakhti: *al-Firaq* (ed. H. Ritter).

(8) Sibawaihi: *al-Kitāb*.

CHINESE (CLASSICAL)

A. *Classics*

1951, 1952 and **1953**

Ch'un ch'iu :—Paper I : Duke Hsi with the commentaries of Tso, Ku-liang and Kung-yang ; Paper II : Duke Hsiang with the commentaries of Tso, Ku-liang and Kung-yang.

B. *Buddhism*

1951, 1952 and **1953**

Miao fa lien hua ching :—Paper 1, Chaps. I–IV ; Paper 2, Chaps. V–IX.

C. *History*

1951, 1952 and **1953**

Hsin T'ang shu :—Paper 1, Biographies of Han Yü and Yao Ch'ung ; Paper 2, Biographies of Sung Ching and Kuo Tzŭ-i.

D. *Poetry*

1951, 1952 and **1953**

The *Shih ching* :—Paper 1, *Kuo fêng* section ; Paper 2, *Hsiao ya* section.

E. *Prose—Literature*

1951, 1952 and **1953**

T'ang Sung pa (ta) chia wên :—Paper 1, Book II ; Paper 2, Book III.

HEBREW AND ARAMAIC

B. *Rabbinic and Talmudic Literature and Language*

1. *The Mishna*

1951

The Orders of Nashim and Nezikin.

1952 and **1953**

The Orders of Nezikin and Kodashim.

2. *The Talmud*

1951

Hullin and Kiddushin.

1952 and **1953**

Hullin and Sanhedrin.

6. *Jewish Medieval Philosophical authors*

1951

Jehuda ha-Levi, Joseph Ibn-Zaddik and Joseph Albo.

1952 and **1953**

Ibn Gabirol : *Mekor Hayyim* (*Fons Vitae*).
Joseph Ibn-Zaddik and Joseph Albo.

D. *Syriac Language, Literature and History*

1951, 1952 and **1953**

P. Bedjan (ed.), *Bazaar* of Heraclides (*Le Livre d'Héraclide de Damas*, 1910).

W. Wright : *The Chronicle of Joshua the Stylite* (Cambridge, 1882).

P. Bedjan : *Acta Martyrum et Sanctorum* Vol. I (Paris & Leipzig, 1890).

A. A. Bevan : *The Hymn of the Soul contained in the Syriac Acts of St. Thomas* (Texts and Studies, Vol. 5, No. 3, 1897).

E. *Akkadian*

1951, 1952 and 1953

Assyrian Historical Texts :—Cuneiform sources as quoted in D. D. Luckenbill : *Ancient Records of Assyria and Babylonia.*

The Creation Epic :—Cuneiform sources quoted in R. Labat : *Le poème babylonien de la création* (*Enuma Elish*) (Paris, 1935).

Assyrian Laws :—Cuneiform sources quoted in Miles and Driver : *Assyrian Laws.*

R. F. Harper : *The Code of Hammurabi* (Chicago Univ. Press).

F. Thureau-Dangin : *Rituels Accadiens* (Paris, 1921).

Cuneiform Texts from Babylonian Tablets in the British Museum, Parts XVI and XVII.

INDO-ARYAN

A. *Classical Sanskrit, including the Epics*

1951, 1952 and 1953

Mahābhārata, Virāṭa parvan, adhyāyas 1–24 (Bhandarkar Institute ed., Poona). *Sāṁkhyakārikās,* with Gauḍapāda's commentary on Nos. 1 to 5. *Vedāntasāra* (ed. Col. Jacob). *Aṣṭādhyāyī* II 3 (*i.e.,* the 3rd pāda of the 2nd adhyāya) together with the *Kāśikā* commentary thereon. *Harṣacarita,* Ucchvāsa 1 (Nirṇayasāgara Press, Bombay). *Buddhacarita,* V–XIII (ed. E. H. Johnston). *Kāvyādarśa,* Books I and II. *Mahāvīracarita* (ed. Todar Mall, Punjab Univ. Oriental Publications, 1928).

B. *Pali*

1951, 1952 and 1953

Sutta-nipāta, Uragavagga (Pali Text Society edition) ; *Anguttara-nikāya, Catuttha-paṇṇāsaka,* P.T.S. edition, vol. III, pp. 174–246. *Cariyā-piṭaka* and *Udāna* (P.T.S. editions). *Visuddhimagga,* Chapter 14 (*Khandha-niddesa*), P.T.S. edition, pp. 436–480.

C. *Vedic Sanskrit*

1951, 1952 and 1953

Rgveda, Maṇḍalas II–III. *Aitareyabrāhmaṇa,* Book I (Bibliotheca Indica, Calcutta, 1895). *Śatapathabrāhmaṇa,* Book I. *Chāndogyopaniṣad.*

D. *Epigraphy and History*

1951, 1952 and 1953

Sanskrit inscriptions : *Epigraphica Indica,* Vols. I–VIII, all Sanskrit inscriptions. Pali and Prakrit inscriptions : Hultzsch, *Inscriptions of Aśoka. Epigraphia Indica,* Vols. I–XV, all Prakrit inscriptions.

E. *Prakrit*

1951, 1952 and 1953

Āyāraṅgasutta, ed. H. Jacobi. *Kalpasūtra,* ed. W. Schubring. *Karpūramañjarī,* ed. S. Konow. *Vasudevahiṇḍi* (Ātmānanda—Jainagrantharatnamālā No. 80 Bhāvnagar), Vol. I, pp. 126–156 (*Gandhavvadattālambho*). *Bhavasattakahā* (ed. H. Jacobi), I.

F. *Philosophy*

1951, 1952 and **1953**

Rgveda X 121, 125, 129. *Upaniṣads : Śvetāśvatara ; Bṛhadāraṇyaka* II, 1 and 4, IV, 3–5, VI, 2. *Chāndogya* IV, 1–15, VI, 1–16, VIII, 1–4. *Tattvakaumudī* commentary on *Sāṁkhyakārikās*. Śaṅkara's introduction to his commentary on Brahmasūtra. Rāmāṇuja's introduction to his commentary on Brahmasūtra. Vasubandhu's *Vijñaptimātratāsiddhi : Triṁśikā*, with Sthiramati's commentary (ed. S. Lévi, Bibl. de l'Ecole des Hautes Etudes, fasc. 245, Paris 1925, translated into French with notes by L. de la V. Poussin in *Buddhica*, Première Série, Mémoires : Tome 1, 8 parts, Paris 1928–29).

Old and Middle Iranian

A. *Old Iranian*

1951, 1952 and **1953**

Old Iranian : The *Gāthās* (any edition) ; Hans Reichelt : *Avesta Reader ;* H. C. Tolman : *Ancient Persian Lexicon and Texts ;* R. G. Kent : *The Recently Published Old Persian inscriptions.*

Western Middle Iranian : H. S. Nyberg : *Hilfsbuch des Pehlevi*, I, pp. 31–39 ; Andreas-Henning : *Mitteliranische Manichaica aus Chinesisch-Turkestan*, II.

Sogdian : Vessantara Jātaka, 1–765 ; F. W. K. Müller : *Soghdische Texte*, I.

Saka : Manuscript *E*, xxiii–xxv (ed. E. Leumann) ; *Vajracchedikā*, in Hoernle : *Manuscript Remains of Buddhist Literature found in Eastern Turkistan.*

B. *Western Middle Iranian*

1951, 1952 and **1953**

Western Middle Iranian : *Bundahisn*, chaps. i–xiii (pp. 1–100, ed. Anklesaria) ; Jamasp-Asana : *Pahlavi Texts*, i–ii ; *Shkand-gumānīkvičār*, chaps. i–x ; Andreas-Henning : *Mitteliranische Manichaica*, i–iii.

Old Iranian : Hans Reichelt : *Avesta Reader*, pp. 13–28, 44–53 ; H. C. Tolman : *Ancient Persian Lexicon and Texts.*

C. *Eastern Middle Iranian*

1951, 1952 and **1953**

Sogdian : H. Reichelt : *Soghdische Handschriftenreste des Britischen Museums*, i–ii ; Müller-Lentz : *Soghdische Texte* i–ii ; Sogdian texts in Henning : *Manichäisches Bet- und Beichtbuch*, pp. 32–51.

Saka : Manuscript *E*, ed. E. Leumann : *Suvarṇabhāsasūtra*, ed. S. Konow ; *Saṃghāṭasūtra*, in S. Konow : *Saka Studies.*
Avestan : Hans Reichelt : *Avesta Reader*, pp. 13–28, 44–53, 81–86.

Japanese

A. *Sintoo*

1951, 1952 and 1953

The Norito text contained in *Norito Sinkoo* (Meizi-syoin, 1929) by U. Tugita.

B. *History*

1951, 1952 and **1953**

The Nihongi text contained in Vol. IV (Kinmei Tennooki—Suiko Tennooki Zoku, pp. 2682–3050) of *Nihonsyoki Tuusyaku* (Daitookaku, 1927), by T. Iida.

C. *Poetry*

1951, 1952 and **1953**

The Manyoo text contained in Vol. I of *Manyoosyuu Sinsyaku* (Hosinosyoten, 1931) by H. Omodaka.

D. *Prose Literature*

1951, 1952 and **1953**

The Makura-no-Soosi text contained in Vol. I of *Makura-no-Soosi Hyoosyaku* (Meizi-syoin, 1925), by M. Kaneko.

E. *Language*

1951, 1952 and **1953**

Either The Koziki text contained in Book II (Tyuukan) of *Koziki Sinkoo* (*Sooteiban ;* Meizi-syoin, 1935) by U. Tugita ;

or The Kyoogen text contained in Vol. I (pp. 1–121 and 257–388) of *Kyoogenki* (Yuuhoodoo-bunko, 1926).

PERSIAN

1951, 1952 and **1953**

Tā'rīkhi Jahān-Gushā, Vol. III. Khāqānī (ed. Lucknow, 1908), Vol. I, pp. 1–151. Rūmī : *Mathnawī* (Gibb Memorial Series), Books I and II. Sa'dī : *Ṭayyibāt. Qābūs-nāma* (ed. S. Nafīsī, Tehrān, 1932). Nāṣir-i-Khusrau : *Dīvān* (Tehrān, 1930). Niẓāmī : *Makhzan al-Asrār*, Maqalās 11–20.

Arabic texts : Qur'an, Suras VII and VIII, with Baiḍāwi's *Commentary* (any edition).

Ibn Jubayr : *Riḥla* (Gibb Memorial Series, pp. 45–189).

SINHALESE

1951 and **1952**

Prose

Epigraphia Zeylanica, Vol. III, Nos. 4, 6, 15, 19 ; Vol. IV, Nos. 13, 14, 20, 27. [The following inscriptions :—Badulla pillar insc., Thūpārāma slab insc. of Gajabāhu I. Two rock inscs. at Vihāragala, Gāraṇḍigala rock insc. of Kassapa III. Anurādhapura slab insc. of Khuddha-pārinda, Nāgarikanda rock insc. of Kumāradāsa. Three rock inscs. at Rāssahela, Vessagiriya rock insc. of Sirināga II.] *Katikāvatsangarā* (ed. D. B. Jayatilaka, 1922). *Mahābodihvamśagranthipadavivaraṇaya*, pp. 1–62 (ed. Dharmārāma, 1910). *Viśuddhimārga-sannaya, niddesas* I–II (ed. Paravāhāra Vajirañāṇa, 1927). *Srī-saddharmāvavāda-samgrahaya*, pp. 337–591, *i.e.*, chapter VI to the end of the book (1930).

Verse

Siyabaslakara (ed. H. Jayatilaka, 1901). *Kavsiḷumina*, Cantos VIII–XV (ed. Maḍugallē Srī Siddhārtha, 1926). *Mayūrd-saṅdēśa* (ed. Vālipatanvila Dīpaṅkara). *Rajasihasirita*, parts 1 and 2 (ed. Charles Karuṇatilaka, 1916, 1918). *Kavmiṇikoṇḍola* (ed. Vālipaṭanvila Dipankara, 1905). *Savsatdam Vādaya.*

1953

To be prescribed.

UNIVERSITY OF LONDON

Faculty of Arts

ARCHITECTURE

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the Degrees of Bachelor of Arts (Architecture) and Master of Arts (Architecture)—B.A. (Arch.) and M.A. (Arch.)

In order to be admitted to the Degree of B.A. (Arch.) as an Internal Student a candidate must :—

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Architecture, unless exempted therefrom.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the course for the Intermediate and Final Examinations is normally not less than five years, but for Advanced Students the period may be reduced.

(4) Pass the Final Examination in Architecture, Parts I, II and III.

INTERMEDIATE EXAMINATION

COURSE OF STUDY

The Intermediate course normally extends over not less than one academic year.

The subjects of the Intermediate Course are as follows :—

(1) Pure and Applied Mathematics.

(2) History of Ancient Architecture, with special study of History of Greek and Roman Architecture.

(3) Architectural Drawings—Greek and Roman Orders and Ornament.

(4) Any *two* of the following languages, provided that Latin or Greek shall be one :—Latin, Greek, French, German, Italian, Spanish, Classical Arabic, Classical Chinese.

[*Note.*—A candidate who is a native of Asia or of Africa and is not of European or American parentage may apply to the Academic Registrar for permission to substitute for Latin or Greek either Classical Arabic or Classical Chinese. Applications should be made within one month of the beginning of the session.]

During their first year students are also required to attend for studio instruction in the following subjects :—

Draughtsmanship.

Sciagraphy.

Freehand Drawing.

Preparation of Prescribed Drawings.

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Exemptions

Exemptions will be granted as follows:—

Students who have passed as Internal or as External Students the Intermediate Examination in Arts with Latin, Greek, French, German, or Italian, will be exempted from the courses and examination in the subject or subjects in which they have so passed.

Students who have passed as Internal or as External Students the Intermediate Examination in Arts or Science with Pure and Applied Mathematics will be exempted from the course and examination in that subject.

Higher School Certificates

(i) Students who are matriculated students of the University and have passed a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools, may apply for admission as Internal Students and for permission to proceed to a first Degree in the University without having previously satisfied the Examiners at an Intermediate Examination.

(ii) Applications must be submitted by the authorities of the School or Institution of the University at which the student proposes to follow his course of study.

(iii) Applications for exemption at the Intermediate Examination in Architecture will be considered in respect of students who have obtained Higher School Certificates and have passed on the main subject syllabus in any of the subjects required for the Intermediate Examination in Architecture. A student who has not been exempted from the whole of the Intermediate Examination will be required to take the remaining subject or subjects at the Intermediate Examination in Architecture for Internal Students.

(iv) Students who are granted exemption must pay a fee of six guineas, this fee to include a first entry for examination in the remaining subject or subjects at the Intermediate Examination in Architecture.

(v) A student who is required to take two or more subjects at the Intermediate Examination must satisfy the Examiners in both or all such subjects on the same occasion.

Date of Examination

The Intermediate Examination in Architecture for Internal Students will take place once in each academic year in June.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than March 15th, which must be returned duly filled up and attested in accordance with the General Regulations for Approved Courses of Study (pp. 6–9), together with the proper fee, not later than May 22nd.

The time-table of the Examinations will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and oral examinations.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination and 2 guineas for re-examination in one subject. Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper or practical examination up to a maximum of 6 guineas. Other candidates exempted from part of the Examination on the ground of having passed Examinations in this University are required to pay a fee of 2 guineas for each subject offered up to a maximum of 6 guineas.

No fee is payable in respect of a first entry for examination in the languages. At each subsequent entry for examination in one or both languages a fee of 10*s.* 6*d.* is payable.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Intermediate Examination are as follows :—

(1) Pure and Applied Mathematics (one paper).

(2) History of Ancient Architecture (one paper).

(3) Drawing test.

(4) Inspection of the Architectural drawings executed by the student during his course.

Candidates shall not be approved unless they have shown a competent knowledge in each of the four subjects. A candidate who is not exempted from any part of the Examination but enters for the whole Examination at one and the same time may be permitted, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the subjects in which he has passed is of sufficient merit, to present himself on one or more occasions for re-examination in that subject alone. [*See* General Regulations for Intermediate Examinations, p. 10.]

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of successful candidates in alphabetical order will be published at 2 o'clock on Wednesday in the second week following that in which the Examination closes.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

Examination in Languages

Before proceeding to Part I of the Final Examination every student will also be required to satisfy the Examiners in the two languages selected by him. The examination in languages will not form part of the Intermediate Examination but may be taken at the same time, or at the end of the second year's course, or at the end of the third year's course. The examination will consist of one paper in each language, together with an oral examination in the case of all modern foreign languages.

Candidates who fail to satisfy the Examiners in either language will be permitted to enter for re-examination in the language in which they fail.

SYLLABUSES.

The following syllabuses of the Intermediate Course are intended to indicate the general scope and character of the instruction-courses without being exhaustive of all parts of the subjects :—

Pure and Applied Mathematics

Arithmetic : Contracted methods and miscellaneous problems.

Algebra : Factors, fractions, solution of equations, graphs, etc., with applications to practical problems.

Geometry : Properties of triangles, circles and other simple figures. The elements of solid geometry. Mensuration of areas and volumes and applications to practice.

Logarithms : Use of logarithms and mathematical tables. Applications.

Trigonometry : Trigonometrical functions and solutions of triangles. Measurement of heights and distances.

Mechanics : Equilibrium of forces. Couples. Principle of moments. Method of sections. Machines. Link and vector polygons, line of pressure and stress diagrams. Moments of inertia and radii of gyration. Applications to practice.

Languages

Translation and Composition. Questions on Grammar.

B.A. (ARCHITECTURE) EXAMINATION

COURSE OF STUDY

The Approved Instruction-courses for the Final Examination may be taken in four years or more, but no candidate will be admitted to Part I of the Final Examination unless he has been a student in a School of the University or under Recognised Teachers for at least three years (unless specially admitted under the Regulations for Advanced Students proceeding to a Bachelor's Degree) and has satisfied in other respects the General Regulations as to Approved Courses of Study (pp. 6–9).

The course of study for the Final Examination is as follows :—

Vacation Work

A special course of study devoted to sketching and measuring historical buildings and museum specimens is arranged for students during each Long Vacation.

Second Year

Studio

Solid Geometry.
Perspective Drawing.
Drawing from the Antique.
Exercises in the Classic Orders—Greek and Roman.
Studies in the composition of classic elements.
Elementary Construction : drawing and study of models.

Lectures

History of Architecture—Mediæval and Renaissance in Italy, France, and England.
Elementary Building Construction.
Building Demonstrations.
Visits to Buildings in course of construction.

Third Year

Studio

Archæological Studies in Greek, Roman, Mediæval and Renaissance Architecture.
Drawing from Life (Slade School).
Combined construction and design.

Lectures

Theory of Design—General Principles.
Building Construction.
Structural Engineering—Strength of Materials and Structural Design.
Sanitation and Hygiene : Lighting (natural and artificial).
Building Demonstrations.
Visits to Buildings in course of construction.

Fourth Year

Studio

Design of Modern Buildings.
Combined construction and design, including one complete set of working drawings.
Drawing from Life (Slade School).
Evening Design Class.

Lectures

Theory of Design, Composition, Planning, Applied Ornament and Colour-Study of Subsidiary Arts.
Advanced Construction—reinforced concrete.
Heating and Ventilating.
Professional Practice.
Land Surveying.

Fifth Year

For the fifth year candidates must enter the office of an approved practising architect, work in the University of London atelier and attend evening lectures in the Department of Town Planning.

EXAMINATION

The B.A. Examination in Architecture is divided into three parts. Part I will be taken at the end of the fourth year's course, and Parts II and III will normally be taken at the end of the fifth year's course. In no circumstances may Parts I, II and III be taken in the same year, but a candidate who has been referred in one subject in Part I will be permitted to take that subject again in the same year as that in which he takes Parts II and III.

Part I.—The Examination in Part I will begin on the third Monday prior to the first Monday in July. The subjects of the Examination in Part I are as follows :—

(i) The History of Architecture. Two papers will be set on general Architectural History—Ancient, Mediæval and Renaissance.

(ii) The Construction of Buildings (one paper).

(iii) The Theory of Building, including Strength of Materials and Reinforced Concrete (one paper).

(iv) Sanitation, including Heating, Ventilation and Lighting (one paper).

(v) A thesis, to be submitted *not later than the first Monday in June*, on a special period or subject connected with Architectural History, selected by the candidate from :—

(*a*) Greek, (*b*) Roman, (*c*) Byzantine, (*d*) Romanesque, (*e*) Mediæval in France or England, (*f*) Renaissance in Italy, France, or England, or (*g*) on any other subject of architectural research approved by the University.

The subject proposed for the thesis must be submitted *not later than* 15 *October preceding the Examination*, for approval by the University.

There may also be an oral examination on the thesis and on the papers set at the Examination.

A student who fails in one subject only may, with the consent of the Examiners, take that subject alone at the next Examination.

Part II.—Every candidate is required—

(1) to submit to the Examiners not fewer than six drawings in each of the following groups :—

(i) From the Cast or from Life—Studies of Architectural features or of the human form from the Antique, or from Life. One example of Architectural Modelling in relief or two sheets of Sketches from actual buildings may be substituted for two of these studies.

(ii) Details and Theory of Construction.

(iii) Drawings of an architectural subject or subjects of which not less than three sheets shall be of work measured and drawn by the candidate.

(2) to submit a design for a building from a subject set by the Examiners. The subject of the design will be prescribed by the Examiners, before the end of the first term, and will be communicated to candidates on application to the Academic Registrar.

Drawings under (1) and (2) must be sent so as to reach the Chairman of the Board of Examiners in Architecture, Bartlett School of Architecture, University College, *not later than four clear days before the end of the Second Term.*

Candidates must forward their drawings flat in a portfolio by the prescribed date, the drawings required in each of the subsections (i), (ii) and (iii) of (1) and in section (2) respectively, to be in separate paper covers.

A candidate who fails in Part II will be so informed before the commencement of Part III of the Examination, and will not be permitted to proceed to Part III in the same year, but will be required, if he re-presents himself in a subsequent year (i) to submit a new design for the subject set for that year by the Examiners under (2) above, (ii) to re-submit under (1) either the same, or other, or additional drawings in any of the subsections as the Examiners may require.

A candidate who satisfies the Examiners in Part II and fails in Part III will be required to forward his drawings when he enters in another year for Part III for reference if required.

Part III.—The Examination in Part III will begin on the second Monday prior to the first Monday in July. The subjects of the Examination in Part III are as follows :—

(i) Architectural Design (two tests of not less than 8 hours each).

(ii) Town Planning (two papers).

Candidates will not be admitted to Part III unless they have passed both Part I and Part II of the Final Examination.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Every student entering for Part I, or Part II, or Part III of the B.A. (Architecture) Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and oral examinations.

Fees

The fees payable by each candidate are as follows :—

For each entry to the whole of Part I, 6 guineas. For re-examination in one subject of Part I, 3 guineas.

For each entry to Part II, 6 guineas, such fee to cover a first entry to Part III.

For re-examination in Part III, 6 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Lists of successful candidates at Parts I and II of the Examination will be published in alphabetical order.

Successful candidates at Part III will be awarded 1st or 2nd Class Honours or a Pass Degree. The names will be in alphabetical order in each of these categories.

A diploma for the Degree of B.A. (Architecture), under the Seal of the University, will be delivered to each candidate who has passed Part III of the Examination, after the Report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.A. (Architecture) Examination who have already passed Parts I and II and have completed more than half of Part III, are eligible to apply for an Aegrotat Degree. They may be required to attend an oral examination.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same Examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

M.A. (ARCHITECTURE)

Every candidate for the M.A. Degree in Architecture must either (*a*) have taken the B.A. Degree in Architecture as an Internal Student or (*b*) have taken the B.A. Degree in Architecture in some other University and have satisfied the requirements of the Regulations for Postgraduate Students proceeding to a higher Degree.

Details of Examination

The Examination will consist of two Parts which may be taken either separately or together.

Part I

A thesis (written in English) on a subject falling within any *one* of the four following definitions :

(i) An enquiry into some aspect of historical building, showing original research and making some contribution to knowledge.

(ii) An enquiry into present-day materials and methods of construction or the application of scientific principles of construction to building.

(iii) An enquiry into the decoration and furnishing of buildings, or of a particular type of modern building.

(iv) An enquiry into the principles of architectural town-planning and their application to a particular area.

The title proposed for the thesis must in all cases be approved by the University, for which purpose it must be submitted to the University not later than October 15th in the year preceding that in which the candidate proposes to enter.

In certain circumstances (see below) an architectural design carried out under supervision will be submitted with the thesis.

Part II

A design for a building of distinction, prepared for a definite site, but not necessarily carried out ; the design to be shown by complete working drawings and rendered elevations, together with sufficient perspective sketches to explain its main features if the design is unexecuted, or photographs if it has been erected. Full constructive details are to be shown, accompanied by a written report stating briefly the materials used or proposed to be used in the several parts and outlining the system of sanitation, heating, and lighting.

A candidate may either,

(*a*) (i) in a School of the University pursue an approved course of study extending over one year, at the end of which he shall complete Part I of the Examination, and shall submit with his thesis an architectural design carried out under supervision ;

(ii) not less than two years later, complete Part II of the Examination by submitting his design for a building ;

or,

(*b*) not less than four years after obtaining the B.A. Degree in Architecture, submit for the two Parts of the Examination both his thesis and his design for a building. The Examiners may, if they think fit, require him to submit to a test in design under supervision and to produce evidence of work carried out.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Every student entering for either Part of the M.A. (Architecture) Examination must apply to the Academic Registrar for an entry-form, which must be returned duly filled up, together with the proper fee, not later than March 1st.

Theses and designs to be submitted under the foregoing Regulations must be forwarded to the Academic Registrar not later than the end of the third week in June for submission to the Examiners.

A candidate who fails in any portion of the Examination may, with the consent of the Examiners, present himself for re-examination in that portion in a subsequent year.

Lists of successful candidates at Parts I and II of the Examination, in alphabetical order, will be published by the Academic Registrar.

A diploma for the Degree of M.A. (Architecture), under the Seal of the University, will be delivered to each candidate who has passed the whole of the Examination, after the report of the Examiners shall have been approved by the Senate.

Fees

The fees payable by each candidate are as follows :—

For each entry to Part I, 15 guineas, fee to cover a first entry to Part II.

For re-examination in Part I or in Part II, 7½ guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed, " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

UNIVERSITY OF LONDON

Faculty of Laws

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following Degrees in the Faculty of Laws :—

Bachelor of Laws (LL.B.),
Master of Laws (LL.M.),
Doctor of Philosophy (Ph.D.),
Doctor of Laws (LL.D.).

In order to be admitted to the Degree of LL.B. as an Internal Student, a candidate must :—

(1) Matriculate in one of the ways provided in the Regulations.

[Students are recommended to take Latin and English History at the Matriculation Examination, or, in and after 1951, to offer English History as one of their subjects at the Examination for a General Certificate of Education awarded by one of the approved University Examining Bodies.]

(2) Pass the Intermediate Examination in Laws, unless exempted therefrom under the Regulations for Advanced Students proceeding to Bachelor's Degree.

(3) Follow an approved course at one or more Schools of the University. The total length of the course for the Intermediate and Final Examinations is normally three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Laws.

Bachelors of Laws of the University of London, who enter upon Articles of Clerkship to a Solicitor after graduation, are admissible as Solicitors after 3 (instead of 5) years' service.

INTERMEDIATE EXAMINATION IN LAWS

COURSE OF STUDY

The course of study for the Intermediate Examination in Laws normally extends over one academic year.

The subjects of the course are as follows :—

(1) History and Outlines of Roman Private Law.
(2) Constitutional Law.
(3) The English Legal System.
(4) Elements of the Law of Contract.

300/3/1700/7/50. W. & S. Ltd.

Exemption

Students who have passed the B.A. (General) Examination with Laws, Section 3 (General Principles of English Law), are exempted from Elements of Law of Contract at the Intermediate Examination in Laws.

Date of Examination

[*Note.*—A Special Intermediate Examination in the Faculty of Laws is held for Students of University College, King's College, and the London School of Economics.]

The General Intermediate Examination in Laws will take place once in each year, commencing on the third Monday in September.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study not earlier than May 25th, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than August 25th.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination, and 2 guineas for re-examination in one subject. Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper taken, up to a maximum of 6 guineas. Other students exempted from one subject are required to pay the full fee of 6 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Intermediate Examination are as follows:—

(1) History and Outlines of Roman Private Law (Two papers).

(2) Constitutional Law (Two papers).

(3) The English Legal System (One paper).

(4) Elements of the Law of Contract (One paper).

The Examiners shall be at liberty to test any candidate by means of oral questions.

The Examination will be a Pass Examination only, and the list of successful candidates will present the names in alphabetical order without division into classes.

Candidates shall not be approved unless they have shown a competent knowledge in each of the four subjects selected. A candidate who enters for the whole Examination at one and the same time may, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the remaining subjects is of sufficient merit, be credited with the three subjects in which he has satisfied the Examiners and permitted to present himself on one or more occasions for re-examination in the fourth subject alone at a subsequent Intermediate Examination (see General Regulations for Intermediate Examinations, p. 10).

Candidates who have been referred or have failed at a Special Intermediate Examination in Laws in July in any year are permitted to present themselves for re-examination at the Intermediate Examination in Laws held jointly for Internal and External Students in the following September.

A provisional list of successful candidates will be published in alphabetical order by the Academic Registrar at 2 o'clock on October 26th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SUPPLEMENTARY SUBJECT.—A candidate who has passed the Intermediate Examination in Laws under the Old Regulations, *i.e.*, with Criminal Law instead of Elements of the Law of Contract, may offer Elements of the Law of Contract as a supplementary subject after having attended an approved course of study in that subject.

SYLLABUSES

Note.—The editions recommended are the latest available at the date of publication of these Regulations. Students are advised in all cases to use only the latest edition available.

The History and Outlines of Roman Private Law

The outline of Roman Legal History to the end of the reign of Justinian and the elementary principles of Roman Law. To include :—

(*a*) Sources.

(*b*) The Law of Persons. (Details of the law of manumission and the different types of *Latini* will not be required.)

(*c*) Ownership, Possession and *Jura in re aliena.*

(*d*) The Law of Obligations.

(*e*) The Law of Succession at Death. (The rules of succession to freed persons will not be required.)

(*f*) The Law of Actions. Students will be expected to know the functions of the different *leges actiones*, to understand thoroughly the principles of the formulary system and to appreciate the change involved in the introduction of *cognitio extraordinaria.*

No passages for translation from the Latin will be set, but Latin technical terms will be used.

Books Recommended :—

Lee, R. W. : *The Elements of Roman Law, with a translation of the Institutes of Justinian* (1944). *Note.*—The translation of Justinian's text in Book I, Titles 3–26 (Law of Persons), Book II, Titles 10–25, and Book III, Titles 1–10 (Law of Succession), and Book IV, Titles 6–18 (Law of Actions) may be omitted.

or Buckland, W. W. : *Manual of Roman Private Law* (2nd ed. 1939).

Students are also recommended to refer to :—

Jolowicz, H. F. : *Historical Introduction to Roman Law* (reprinted with corrections, 1939), especially pp. 1–6 (Periods), 83–111 (Sources), 179–233 (Procedure), 363–417 (Sources and Procedure), 457–470 (Procedure), and 471–516 (Sources).

For further reference :—

Moyle, J. B. : *Imperatoris Justiniani Institutionum*, Libri IV, with Introduction commentary and excursus.

Buckland, W. W. : *Textbook of Roman Law from Augustus to Justinian* (2nd edition, 1932).

de Zulueta, F. : *The Institutes of Gaius*, Part I, Text and Critical Notes and Translation (1946).

Constitutional Law

The nature of constitutional law ; sources and characteristics of British Constitutional Law ; constitutional conventions.

The Crown ; title and succession to the throne ; royal prerogative ; the Privy Council ; the Civil Service ; allegiance and British nationality.

Parliament, its composition, functions and powers ; legislative sovereignty ; Parliamentary privilege and procedure ; control of national finance.

Cabinet government ; the position of the Prime Minister.

Statutory powers and emergency powers (general principles) ; the Crown in litigation ; the liberties of the subject ; remedies against public authorities ; administrative law in England.

The constitutional position of the Judges.

The British Empire and the British Commonwealth of Nations ; distinction between Dominions, colonies, protectorates and mandated territories ; Dominion status ; appeals to the Judicial Committee of the Privy Council.

Books Recommended :—

Dicey : *Law of the Constitution* (9th edition, Wade).
Chalmers and Hood Phillips : *Constitutional Law* (6th edition).
Wade and Godfrey Phillips : *Constitutional Law* (3rd edition).
Jennings : *Law and the Constitution* (3rd edition).
Keir and Lawson : *Cases in Constitutional Law* (3rd edition).

For further reference :—

Anson : *Law and Custom of the Constitution* (Part I, 5th edition, Gwyer ; Part II, 4th edition, Keith).
Keith : *Constitutional Law* (7th edition, Bridges).
Jennings : *Cabinet Government.*
Jennings : *Parliament.*
Hood Phillips : *English Law and the Constitution.*

English Legal System

The present organisation of the Courts with an outline of their historical development showing their influence upon the evolution of the English Legal System.

The nature of equitable principles and their relation to the Common Law before and after 1875.

The general nature and effect of the forms of action ; as illustrated by the history of trespass, assumpsit, defamation and deceit.

The nature of crimes, contracts, torts and property rights.

The sources of English Law ; custom ; judicial precedent and law reporting ; statutes, with a general reference to the method of their interpretation.

Books Recommended :—

Geldart : *Elements of English Law* (ed. Holdsworth).
Hanbury : *English Courts of Law.*
Maitland : *Forms of Action at Common Law* (particularly Lecture 5).
Potter : *Historical Introduction to English Law* (2nd edition).

For further reading :—

Fifoot : *English Law and its Background.*
Holdsworth : *History of English Law* (Vol. I).
Jenks : *Book of English Law* (4th edition).
Plucknett : *Concise History of the Common Law* (3rd edition).

Elements of the Law of Contract

The nature of contract. The formation of contracts. Form and consideration. Capacity of parties. Reality of consent. Legality of object. The limits of contractual operation. Discharge of contracts. Remedies for breach.

Books Recommended :—

Text-books :—

Sutton and Shannon : *Contracts* (3rd edition).
Anson : *Law of Contract* (18th edition, Brierly).
Salmond and Williams : *Law of Contracts* (2nd edition).

Further Reading :—

Miles and Brierly : *Cases on Contracts* (2nd edition).
Pollock : *Principles of Contract* (13th edition).
Chitty : *Contracts* (19th edition).

LL.B. DEGREE

Course of Study

The course of study for the Final Examination normally extends over two academic years.

Date of Examination

The LL.B. Examination will take place once in each year, commencing on the third Monday prior to the first Monday in July.

[In 1951 the Examination will begin four days earlier, *i.e.*, on Thursday, June 7th.]

Every student entering for either Part of this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 1st.

Fees

The fee for each student is 3 guineas for each entry to either Part of the Examination. The fee for re-examination in one subject is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination is divided into two Parts and normally candidates must pass Part I before they enter for Part II. In exceptional circumstances a candidate may be permitted to enter for both Parts of the Examination on the same occasion.

A candidate who has been referred in one subject at the Special Intermediate Examination in Laws may take his referred subject concurrently with Part I of the Final Examination. If he again fails in his referred subject, but passes the whole of Part I of the Final Examination, he may enter for re-examination in his referred subject at the General Intermediate Examination in Laws in the following September, and if he then satisfies the Examiners in his referred subject he will be credited with Part I of the Final Examination. If he fails in his referred subject in September, he will be required to take Part I of the Final Examination again, either concurrently with, or subsequent to, his entry for re-examination in his referred subject at the Intermediate Examination.

Part I

Four of the following (one 3-hour paper in each subject taken) :—

(1) Criminal Law *or* Indian Criminal Law.
(2) Law of Tort.
(3) Law of Trusts.
(4) One of the following :—
  (*a*) English Land Law.
  (*b*) Principles of the Law of Evidence.
  (*c*) Constitutional Laws of the British Empire. (For Examination in 1951 only.)
  (*d*) English Administrative Law.
  (*e*) Muhammadan Law.
  (*f*) Hindu Law.

Part II

(5) Jurisprudence and Legal Theory (one 3-hour paper).

Three of the following (one 3-hour paper in each subject taken) :—

(6) English Land Law (if not taken at Part I).
(7) Principles of the Law of Evidence (if not taken at Part I).
(8) Constitutional Laws of the British Empire (if not taken at Part I). (For Examination in 1951 only).
(9) English Administrative Law (if not taken at Part I).
(10) Muhammadan Law (if not taken at Part I).
(11) Hindu Law (if not taken at Part I).
(12) Roman Law.
(13) History of English Law.
(14) Public International Law.
(15) Conflict of Laws.
(16) Conveyancing.
(17) Succession, Testate and Intestate.
(18) Mercantile Law.
(19) Industrial Law.
(20) Law of Palestine. (For Examination in 1951 only.)
(21) Law of Domestic Relations. (For Examinations in and after 1952.)

The Examination shall be conducted by means of printed papers ; in cases of doubt the Examiners may in addition examine any candidate orally.

In each subject a reasonable choice of questions shall be allowed.

The marks obtained in Part I of the Examination will be combined with those obtained in Part II for the purpose of the classification for Honours.

A candidate at Part I of the Examination who fails to reach the minimum standard in any one subject only may be referred, *i.e.*, he may be permitted on the recommendation of the Examiners to present himself on one occasion only in that subject, with Part II of the Examination, at one of the next two Final Examinations.

The Examiners will recommend that the candidate be referred only if his failure in the subject is not serious, and if his performance in the remaining subjects is reasonably good.

A candidate who passes in his referred subject but fails in Part II will be credited with Part I of the Examination.

A candidate who fails in his referred subject will have no report made on Part II of the Examination and will be required on re-entering to offer the whole of Part I of the Examination again.

The Examination is common to Honours and Pass candidates. Successful candidates will be awarded First or Second Class Honours or a Pass Degree.

The Examiners shall be at liberty to test any candidate by means of oral questions.

The Academic Registrar will publish, on August 13th, a provisional list of the successful candidates at the Examination, arranged in alphabetical order in each of the three categories, First Class Honours, Second Class Honours, and Pass. The Second Class Honours List will be sub-divided into an Upper and Lower Division.

A diploma for the Degree of LL.B., under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Studentship

A Studentship (£250 for one year) is offered annually at the LL.B. Examination for Internal and External Students. [For detailed Regulations, see p. 13.]

Scholarship

(1) A Scholarship of the value of £50 a year tenable for two years, will be offered annually to candidates at Part II of the LL.B. Examination for Internal and External Students.

(2) Application for the Scholarship must be made on the candidate's entry-form for Part II of the LL.B. Examination.

(3) The names of two persons to whom reference can be made must be given. Where possible, one of the referees should be the Head of the Laws School, if any, in which the student is working.

(4) The award will be made by the Scholarships Committee on the recommendation of the Board of Examiners in Laws for the LL.B. Examination who may invite the assistance of one or more experts as assessors in subjects otherwise not represented on the Board. The Board shall not be precluded from recommending a candidate who has not applied.

(5) Selected candidates may be required to attend for interview with the Board. Expenses incurred in attending the interview will not be refunded by the University.

(6) The selected student must satisfy the University of his intention to pursue a part-time course of advanced study or research and will be required to present during the tenure of the Scholarship such reports upon the progress of his studies as the University may from time to time determine.

(7) The holder of the Scholarship will normally be required to carry out his postgraduate studies in a School or Institution of the University. The Scholarship will be tenable from the beginning of the University Session following the award.

(8) If for any reason a Scholarship is not awarded in any year, an additional Scholarship may, at the discretion of the Committee, be awarded in a subsequent year.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the LL.B. Examination who have completed more than half of the Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same Examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Students are advised to read articles on topics within their courses of study which appear in recent issues of *The Law Quarterly Review*, *The Modern Law Review*, and *The Cambridge Law Journal*.

1(*a*). Criminal Law

The classification of crimes and the different modes of procedure. A description of the Courts of Criminal Jurisdiction. The general nature of a crime. The general principles of responsibility and of exemptions from responsibility. The degrees of participation in crime. Inchoate crimes.

Offences against the Person.—Murder, manslaughter, infanticide, child destruction, suicide. Wounding with intent, unlawful wounding, assaults.

Offences against Property.—Legal theories of ownership, possession, and custody. Burglary, housebreaking, sacrilege, larceny, robbery, embezzlement, conversion, obtaining credit by fraud, false pretences, receiving, demanding with menaces, forgery, falsification, cheating, restitution of property. Arson, malicious damage.

Offences against the King and Government, Public Justice, Public Peace and Morals, and Trade.—Treason, sedition, riot, rout, unlawful assemblies, perjury, libel, bigamy, conspiracy and industrial disputes, public mischief.

Recommended Books :—

Kenny : *Outlines of Criminal Law* (15th edition, Godfrey Phillips, omitting the parts regarding Procedure).

Harris and Wilshere : *Principles and Practice of Criminal Law* (18th edition, omitting the parts regarding Procedure).

Wilshere : *Leading Cases illustrating the Criminal Law* (4th edition).

Further Reading :—

H. and H. Stephen : *Digest of Criminal Law* (8th edition).
W. O. Russell : *Crime* (9th edition).

1(*b*). Indian Criminal Law

The examination will be confined to general principles and to the following portions of the Indian Penal Code, from which, however, all sections which merely prescribe penalties without affecting the definitions of offences may be omitted :—

Sections 2, 3, 4, 6–52, 76–120–B, 141–159, 191, 192, 295–464 and 511.

In order to meet the needs of students who are studying the English concurrently with the Indian law, stress will be laid on questions involving a comparison of the two laws and the general theories of criminal laws, such as :—

The general nature of a crime.

The general principles of responsibility and of exemptions from responsibility.

The degrees of participation in a crime.

Inchoate crimes.

Legal theories of ownership, possession and custody.

The official text of the Penal Code, published by Government, is to be used as a text-book. The Student's Edition of the *Indian Code* by Ratanlal and Dhirajlal Thakore may also be used, and the larger edition by the same authors and Mayne's *Criminal Law of India* are valuable for comparative and theoretical study.

2. Law of Tort

Nature of Tort. Forms of action and the law of tort. General principles of liability including general defences to an action of tort. Parties to a tort (excluding the State). Effect of death in relation to tort. Joint tort feasors. Remedies (damages, injunctions and specific restitution). Injuries to the person, including trespass, assault and battery, false imprisonment and intentional physical harm. Defamation, slander of title and malicious words. Trespass to land and

cognate torts. Nuisance (Public and private) and cognate torts, including injuries to reversioners but excluding injuries to servitudes. Trespass to goods, detinue and conversion. Rule in *Rylands* v. *Fletcher* and liability for animals. Liability for dangerous operations, chattels and premises. Negligence and liability under statutory powers and duties. Inducement of breach of contract, intimidation and conspiracy.

Books Recommended :—

Salmond : *Torts* (10th edition, in press).
Winfield : *Text-book of the Law of Tort* (4th edition).
Winfield : *Cases on the Law of Tort* (4th edition).
Pollock : *Torts* (14th edition).
Blackburn and George : *Law of Torts.*
Potter : *Principles of Liability in Tort* (Sweet and Maxwell, 1948.)

Further Reading :—

Clerk and Lindsell : *Torts* (9th edition).
Winfield : *Province of the Law of Tort.*
Digest of English Civil Law (3rd edition).

3. Law of Trusts

The general nature of equitable principles and remedies. The doctrines of conversion and reconversion. Election, satisfaction, performance and ademption, equitable and legal assignments and priorities.

The general principles of the Law of Trusts, including implied, resulting and constructive trusts, and charitable trusts.

Powers and duties of trustees. The administration of a trust. Breach of trust, and remedies therefor.

Books Recommended :—

Text-books :—

Keeton : *An Introduction to Equity.*
Keeton : *The Law of Trusts* (3rd edition).

Further Reading :—

Hanbury : *Modern Equity* (2nd edition).
Hanbury : *Essays in Equity.*
Ashburner : *Equity* (2nd edition).
Maitland : *Equity* (ed. Brunyate).
White and Tudor : *Leading Cases in Equity* (9th ed.), 2 vols.
Nathan : *Equity through Cases.*

4(*a*). English Land Law

The general principles of English Land Law under the systems of registered and unregistered titles, including the following matters :—

Legal estates and interests, including the powers of disposition of estate owners, but including the Law of landlord and tenant in outline only. The general law of covenants running with the land at Law or in equity. The nature of equitable interests generally and interests capable of subsisting under Settlements and dispositions on trust for sale. Interests in possession and in expectancy and powers. Concurrent interests in land. The nature of mortgages and charges and the rules governing priority of incumbrances, and the provisions for protecting or realising the security in outline only.

The nature and extent of interests capable of registration and of overriding interests, and the nature of minor interests and the character of indefeasibility of title under the Land Registration Act, 1925. Comparison between the position of estates and interests under the systems of registered and unregistered titles.

Candidates will be expected to be familiar with the principles in force under the system of unregistered titles prior to 1926.

General Outline of the restrictions on land use under the Town and Country Planning Act, 1947, and the Agriculture Act, 1947, and of development charge and supervision and, dispossession Orders.

Books Recommended :—

Text-books :—

Cheshire : *Modern Law of Real Property* (5th edition).

Goodeve and Potter : *Real Property.*

Potter : *Principles of Land Law under the Land Registration Act,* 1925.

Further Reading :—

Williams : *Real Property* (23rd edition).

Challis : *Real Property* (3rd edition).

Rivington : *Law of Property in Land* (2nd edition).

Wolstenholme and Cherry : *Conveyancing Statutes* (12th edition).

Hood and Challis : *Property Acts* (8th edition).

Note.—The text-books dealing with the unregistered system contain a great deal that is not within this syllabus and can be omitted on reading.

Students are reminded that notes and articles of interest to the student appear in the *Conveyancer* and the *Law Quarterly Review.*

4(*b*). Principles of the Law of Evidence

General :—Nature and classification of judicial evidence. Basic principles of evidence. Development of rules of evidence.

Admissibility of Evidence. Its relation to relevance. Res gestae. Relevant facts. Similar facts. Character and convictions. Opinion. Privilege. Estoppel. Hearsay, and its exceptions.

Means of Proof :—Oral evidence—scope ; attendance of witnesses ; competence and compellability ; oaths and their substitutes ; examination in court and elsewhere. Documentary evidence—nature of public judicial and private documents ; proof of contents of public and judicial documents ; production and proof of private documents ; primary and secondary evidence ; extrinsic evidence ; stamping. Real evidence—scope ; inspection out of court. Other means of establishing facts.

Assessment of Evidence :—Functions of Judge and jury. Burden of proof—meaning and incidence ; standards of proof. Presumptions—nature, classification and effect. Cogency. Corroboration.

(A knowledge of statutory provisions on minor points is not required nor are candidates required to be familiar with the Indian Evidence Acts.)

Text Books :—

Wills : *On the Law of Evidence* (3rd edition).

Phipson : *Manual of the Law of Evidence* (7th edition).

Cockle : *Cases and Statutes on the Law of Evidence* (7th edition).

Stephen : *Digest of the Law of Evidence* (12th edition).

For Reference :—

Best : *Principles of the Law of Evidence* (12th edition).

Powell : *Principles and Practice of the Law of Evidence* (10th edition).

Stephen : *Introduction to the Indian Evidence Act* (various editions).

Phipson : *Law of Evidence* (8th edition).

Wills : *Principles of Circumstantial Evidence* (7th edition).

Thayer : *Preliminary Treatise on Evidence.*

Wigmore : *Treatise on the Anglo-American System of Evidence* (3rd edition).

Articles in recent volumes of the *Law Quarterly Review*, the *Cambridge Law Journal* and the *Modern Law Review.*

4(*c*). Constitutional Laws of the British Empire

[*For Examination in* **1951** *only*]

The legal and constitutional distinctions between mandated territories, protectorates, Crown colonies and Dominions. The " common law " of the colonies and Dominions ; effect of distinction between (*a*) settled and (*b*) conquered or ceded colonies. Nationality and naturalisation within the Empire. Legislative powers of Dominion and colonial legislatures in general ; disallowance, reservation, and extra-territorial limitation. Relations between the Government of the United Kingdom and the governments of Dominions and colonies ; legal and constitutional position of the Governor or Governor-General. Appeals to the Judicial Committee of the Privy Council. The Imperial Conference, the Dominions and Colonial Offices and the High Commissioners. The Dominions and foreign relations. The comparative study of the Constitutions of the Dominion of Canada, the Commonwealth of Australia, and the Union of South Africa, and the general principles applied in their interpretation. The general principles of the Constitution of Eire and of the federal system of India.

Text-books :—

Jennings and Young : *The Constitutional Laws of the British Empire.*

Keith : *The Dominions as Sovereign States.*

K. C. Wheare : *The Statute of Westminster and Dominion Status* (2nd edition).

Further Reading :—

Kennedy : *The Constitution of Canada* (2nd edition).

Clement : *The Canadian Constitution* (3rd edition).

Wynes : *Legislative and Executive Powers in Australia.*

Kennedy and Schlosberg : *Law and Custom of the South African Union.*

Keith : *Notes on Imperial Constitutional Law* (*Journal of Comparative Legislation*, twice yearly).

For Reference :—

Jenkyns : *British Rule and Jurisdiction beyond the Seas.*

Keith : *Responsible Government in the Dominions* (2nd edition).

4(*d*). English Administrative Law

The nature of administrative law. The separation of powers. Comparison with *droit administratif*.

The powers of the administration (central and local). (*a*) Legislative powers. Parliamentary Bills. Delegated legislation. Prerogative. The use of royal commissions. (*b*) Judicial powers of ministers and administrative tribunals. (*c*) Executive powers.

The control over administration. (*a*) Parliamentary control, including debates and questions. Direct and indirect influence. Select Committees. (*b*) Judicial review. Writs. The doctrine of *ultra vires*. Appeals from tribunals. Administrative discretion. Liability of the Crown, administrative authorities and officials. (*c*) Advisory Committees.

Cabinet government. Cabinet Committees. The Cabinet Secretariat. The position of the Treasury.

Government departments. Their internal organisation. A general view of the distribution of functions. Relation between departments. The civil service.

Local government. Its structure. The internal organisation of local authorities, with special reference to the committee system. Powers. Joint action. Local government officers.

The relationship between central and local government. Grants in aid. Loans. Default powers. Audit. Other forms of central control.

Independent bodies of an *ad hoc* character (public utilities). Commissions and boards. Public corporations.

BOOKS RECOMMENDED

1. General Principles

(*a*) *Text-books* :—

Robson : *Justice and Administrative Law* (2nd edition).
Carr : *Concerning English Administrative Law*.
Carr : *Delegated Legislation*.
Allen : *Law and Orders*.
Jennings : *Parliament* (Chapters VII–X, XII–XIV).
Jennings : *Cabinet Government* (Chapters III, IV, XIV).
Jennings : *The British Constitution* (2nd edition).

(*b*) *Government Publications* :—

Report of the Committee on Ministers' Powers (1932, Cmd. 4060).
Reports of Select Committee on Statutory Instruments (from 1943 to 1944).
Reports of National Insurance Advisory Committee (from 1947 to 1948).
Government and Industry (1948).

(*c*) *Statutes* :—

National Insurance (Industrial Injuries) Act, 1946 ; National Insurance Act, 1946 ; National Health Service Act, 1946 ; Transport Act 1947 ; Town and Country Planning Act 1947 ; National Assistance Act, 1948 (only those sections of the foregoing Acts relating to administrative tribunals and judicial functions of administrative bodies) ; Statutory Instruments Act, 1946 ; Statutory Orders (Special Procedure) Act, 1946 ; Acquisition of Land (Authorisation Procedure) Act, 1946.

2. Central and Local Government

(*a*) *Text-books :—*

Jennings : *Principles of Local Government Law.*

Mustoe : *Law and Organisation of the British Civil Service.*

Hart : *Introduction to the Law of Local Government and Administration.*

G. L. Williams : *Crown Proceedings.*

Emden : *The Civil Servant in the Law and the Constitution.*

(*b*) *Reference Books :—*

Robinson : *Public Authorities and Legal Liability.*

Robson : *Development of Local Government.*

Hill : *The Local Government Officer.*

Laski, Jennings, Robson (eds.) : *A Century of Municipal Progress.*

The Whitehall Series (especially Troup) : *The Home Office.*

Jennings : *Cabinet Government* (Chapters IV–VII, IX).

Port : *Administrative Law.*

Treves : *Administrative Discretion and Judicial Control* (10 Mod. L. Rev. 276).

(*c*) *Government Publications :—*

Report of Local Government Boundary Commission (H.C. 86 of 1947).

3. Public Corporations

(*a*) *Text-books :—*

Gordon : *The Public Corporation in Great Britain.*

G. L. Williams : *Crown Proceedings* (pp. 6–8, 21–28, 31–37, 85, 108–9).

Friedmann : *The New Public Corporations and the Law* (10 Mod. L. Rev. 233, 377).

Wade : *The Constitutional Aspect of the Public Corporation* (*Current Legal Problems*, vol. II, 1949).

(*b*) *Reference Books :—*

Street : *The Public Corporation in British Experience.*

Robson (ed.) : *Public Enterprise.*

Self : *The Public Accountability of the Corporation* (Public Administration No. 3, 1947).

(*c*) *Statutes :—*

Coal Industry Nationalisation Act 1946 ; New Towns Act 1946 ; Civil Aviation Act 1946 ; National Health Service Act 1946 ; Agriculture Act 1947 ; Transport Act 1947 ; Electricity Act 1947 ; Town and Country Planning Act 1947 ; Gas Act 1948.

4(*e*). Muhammadan Law

Muhammadan Jurisprudence. The origin, history and development of the law and of its different schools and the present-day distribution of the schools throughout the world. The law relating to marriage, including dower, *iddat*, and divorce. The doctrine of acknowledgment and its various applications. Guardianship. Maintenance. Succession, including (*a*) administration, (*b*) legacies, and (*c*) inheritance. The doctrine of death sickness. Gifts, waqf and pre-emption.

The examination will be mainly on the law as enforced in India—that is to say, a knowledge of Hanafi and Shia Law and of Indian judicial and statutory modifications will be principally required. But opportunities will also be given for candidates to show a knowledge of the law on the subjects above-mentioned, in force elsewhere in the British Empire, its dependencies and mandated territories as well as Egypt and Iraq, including the law of other schools prevalent therein.

In the law of inheritance candidates will be required to show a grasp of the principles involved, but problems to illustrate those principles will be chosen from cases which might readily occur in everyday life, and, so far as possible, arithmetical complexities will be avoided.

Books Recommended :—

Mulla : *Mahomedan Law* (11th edition by Sir Geo. Rankin, or later edition).

FitzGerald : *Muhammadan Law.*

Fyzee : *Outlines of Muhammadan Law* (O.U.P.).

General Introductory Reading :—

Macdonald : *Muslim Theology* (first 117 pages).

Arnold : *The Islamic Faith.*

Snouck Hurgronje : *Muhammadanism.*

Wilson : *Historical Introduction to Anglo-Muhammadan Law.*

Further Reading :—

Wilson : *Digest of Anglo-Muhammadan Law* (6th edition).

Saksena : *Muslim Law in British India* (1937).

Ameer Ali : *Mahommedan Law* (4th or later edition).

Hamilton : *Hedaya.*

Baillie : *Digest* (Haneefeeya) and *Code* (Imameeya).

Useful articles and notes occasionally appear in the *Journal of Comparative Legislation.*

4(*f*). Hindu Law

The persons to whom, and the cases in which, the Hindu Law is applicable. Statutory limitations on its application. Sources. History and development. Custom and its relation with the literary law. Changes of personal law. Jurisdiction of the Courts in matters of caste. The different schools of Hindu law and their rules concerning marriage ; adoption ; the joint family and the rights and duties of its members ; maintenance ; partition ; guardianship and minority ; inheritance and survivorship ; wills ; the estate taken by female heirs ; stridhan ; Hindu idols and endowments ; impartible estates.

Of the law of stridhan candidates will only be required to know general principles, and not detail. They will not be required to know the law of dam dupat. Of the law of inheritance to males they will be required to know the principles in outline, but problems set will be simple in character and such as might easily arise in everyday life. The order of precedence of the various heirs as printed in Trevelyan, Mulla and other writers may be omitted.

The Hindu Law Code at present before the Legislature will not be a compulsory subject of examination until a sufficient time has passed from the date on which it becomes law to enable students to study it thoroughly ; but meanwhile, credit will be given for a knowledge of its provisions.

Books recommended :—

Textbooks :—

Raghavachariar : *Hindu Law, Principles and Precedents* (3rd edition, 1947, M.L.J. Office, Mylapore, Madras).

Vaidya : *Elements of Hindu Law.*

Further Reading :—

Mayne : *Hindu Law and Usage* (10th or 11th edition). Higginbotham's *Madras,* obtainable from Cartwright, Wallace and Co., Waterloo Place.

Colebrooke's, *Initakshara and Dayabhaja.*

Any of the big practitioners' books by Mulla, Gupta, Gour, Trevelyan and others may be useful for reference, but in general they are too detailed for students.

Useful articles and notes occasionally appear in the journal of *Comparative Legislation* and in the *Indian Law Review.*

5. Jurisprudence and Legal Theory

I. *Legal Theory :*—Outlines of the history of thought concerning the nature of the state and of Law, including the history of the Law of Nature, and a general knowledge of the main trends in modern thought.

II. *Sources of Law :*—General theories concerning the sources of Law, including in particular, Custom, Precedent, Equity and Legislation, together with the English rules for the application and interpretation.

III. *Analysis of Concepts :*—Analysis of the main conceptions used in law, including in particular Right in its various senses : Duty ; Personality (Including Corporate Personality) ; Property ; and Possession.

Books Recommended :—

Text-books :—

Salmond : *Jurisprudence* (10th edition).
Jethro Brown : *The Austinian Theory of Law, Part I.*
Allen : *Law in the Making* (3rd edition).
Friedmann : *Legal Theory* (1947).
Pollock : *History of the Science of Politics.*

Further Reading :—

Pollock : *First Book of Jurisprudence.*
Cardozo : *Nature of the Judicial Process.*
Maine : *Ancient Law.*
Holmes : *The Common Law.*
Maitland : *Selected Essays.*
Bryce : *Studies in History and Jurisprudence, Vol. II.*
Goodhart : *Essays in Jurisprudence and the Common Law.*
Allen : *Legal Duties.*
Pound : *Interpretations of Legal History.*
Modern Theories of Law (ed. Jennings).
Jones : *Historical Introduction to the Theory of Law.*
Bodenheimer : *Jurisprudence.*
Sabine : *History of Political Thought.*
Gray : *Nature and Sources of Law.*
Hohfeld : *Fundamental Legal Conceptions.*
Seagle : *The Quest for Law.*
Keeton : *Elementary Principles of Jurisprudence.*

6. English Land Law

Syllabus as for Subject 4(*a*) on Page 610 above.

7. Principles of the Law of Evidence

Syllabus as for Subject 4(*b*) on Page 611 above.

8. Constitutional Laws of the British Empire

[*For Examination in* **1951** *only.*]

Syllabus as for Subject 4(*c*) on Page 612 above.

9. English Administrative Law

Syllabus as for Subject 4(*d*) on Page 613 above.

10. Muhammadan Law

Syllabus as for Subject 4(*e*) on Page 614 above.

11. Hindu Law

Syllabus as for Subject 4(*f*) on Page 615 above.

12. Roman Law

Questions (including passages for translation and comment from the special portion of the Digest) will be set on the special subject prescribed, but candidates will be expected to show a sufficient elementary knowledge of the general principles of Roman private law where matters falling outside the special subject are involved.

Questions may also be set relating to the history and composition of the Digest.

Special Subject for **1951, 1952** and **1953.**

Damage to Property and Digest, Book IX, Title 2.

Books Recommended :—

For elementary principles of Roman private law :—

W. W. Buckland : *Manual of Roman Private Law.*

For history and composition of the Digest :—

W. W. Buckland : *Text-book of Roman Law* (2nd edition, 1932), pp. 39–47.

H. F. Jolowicz : *Historical Introduction to the Study of Roman Law,* Chapter XXVIII, especially pp. 486–498.

For Damage to Property and Digest, Book IX, Title 2 :—

C. H. Monro : *Digest IX 2. Lex Aquilia.*

E. Grueber : *The Roman Law of Damage to Property.*

F. P. Van den Heaver : *Aquilian Damages in South African Law,* Volume I.

James B. Thayer : *Lex Aquilia.*

W. W. Buckland : *Textbook of Roman Law* 2nd Ed. 1932, pp. 585-589.

R. Monier : *Manuel Elémentaire de Droit Romain* (4th Ed., 1948), Vol. II pp. 55-62.

13. History of English Law

The principal sources of English legal history, their characteristics and significance (Anglo-Saxon laws, charters, public records, year books, reports, abridgements, treatises).

Legal institutions (communal, seignorial, mercantile and royal courts, courts of prerogative and equity, their development and jurisdiction).

Factors in the development of English law (legislation and its treatment by the courts, the growth of the principle of precedent, the influence of Roman and Canon law, the history of the legal profession and of the judiciary, the influence of great lawyers—*e.g.*, Coke, Bacon, Nottingham, Holt, Mansfield).

Procedure (in the Anglo-Saxon period, the original writ, scope and development of the principal forms of action, the modes of proof, the history of the jury, witnesses, modes of execution, the review of verdicts and judgments).

Criminal law (appeals, indictments, informations, benefit of clergy, sanctuary, the felonies, the separation of misdemeanours and tort).

Real property (feudalism and tenures, the rise of the entail, estates for life, dower, courtesy, terms of years, the rise of uses and trusts, future interests, mortgages, the origin and effect of conveyances in outline only, excluding the history of the law of wills).

Personal property (ownership, possession, bailment).

Contract (real, formal and consensual ; assumpsit ; consideration).

Tort (relation to crime, liability, the nature of trespass and case, conversion, deceit, defamation).

Equity (history and nature of the jurisdiction, its relation to common law).

Note.—The examination will not require the history of constitutional law, legislative procedure, international, ecclesiastical or mercantile law, but will place emphasis upon a sound understanding of the general development of the topics comprised in the above syllabus. Questions will not be set on the legal history of the period after 1832.

Reading Recommended :—

Text-books :—

Plucknett : *Concise History of the Common Law* (3rd edition) ; Maitland : *Forms of Action* ; Potter : *Historical Introduction to English Law and its Institutions* (2nd edition) ; and Fifoot : *History and Sources of the Common Law—Contract and Tort* are text-books which cover most of the syllabus. Sources are treated in Holdsworth : *Sources and Literature of English Law.*

Further Reading :—

Winfield : *Chief Sources of English Legal History* ; Holdsworth : *History of English Law* (3rd edition, a large-scale work to which occasional reference may be made especially for foreign influences, general development of the law, the profession and the judges). Pollock and Maitland : *History of English Law* (2nd edition, a classic work the more general portions of which should be read by students who seek high honours) ; so, too, the relevant portions of Ames : *Lectures in Legal History.* Thayer : *Preliminary Treatise on Evidence*, first five chapters only.

All students should study Maitland : *Forms of Action*, and remember that recent volumes of the *Law Quarterly Review* often contain articles on legal history of a general character which bear upon the matters contained in the syllabus.

14. Public International Law

A. *General Principles*

1. *The Foundations of International Law* :—International Law and Society. The Sources of International Law. International and Municipal Law. The Dominion of International Law. Development and Science of International Law.

2. *International Personality* :—The Subjects of International Law. The Principles of Sovereignty and State Equality. Recognition. Representation of States. International Persons other than States. Continuity of States and State Succession.

3. *State Jurisdiction* :—General principles. Territorial Jurisdiction. Limitation of Territorial Jurisdiction under International Customary and Conventional Law. Personal Jurisdiction.

4. *Objects of International Law* :—Territory. Land Frontiers. Maritime Frontiers. The High Sea. Individuals. Business Enterprises and Ships.

5. *International Transactions* :—International Treaties. Unilateral Acts and Quasi-Contractual Obligations. International Torts.

6. *War and Neutrality*.—Measures Short of War. State and Effects of War. Warfare on Land. Military Occupation of Enemy Territory. Maritime Warfare. Warfare in the Air. Penalties for the Violation of Rules of Warfare. Neutrality. Civil War and Belligerency. Termination of War.

And either

B. *The Law of International Institutions* :—Judicial International Institutions, with special reference to the History of International Arbitration, to the Permanent Court of International Justice, and to the International Court of Justice. Administrative International Institutions (*e.g.*, the Universal Postal Union, Unesco or the International Bank for Reconstruction and Development). Quasi-Legislative Institutions, with special reference to the International Labour Organisation. General Purposes Institutions (with special reference to the United Nations and Institutions within the framework of the United Nations).

Or

C. *International Economic Law* :—Basic Standards, with special reference to the Standards of National and Most-Favoured-Nation Treatment. Protection of Property Abroad. Commercial Treaties, Monetary Agreements, State Loans and other State Contracts. The Calvo Clause, Methods of International Financial Control, and the Porter Convention. The Law relating to Trading with the Enemy, the International Economic and Financial Law of Military Occupation, the Protection of Neutral Property, and the Law of Reparations. The Law of International Economic and Financial Institutions (*e.g.*, The International Bank for Reconstruction and Development and the International Monetary Fund).

Books Recommended :—

A. *General Principles*

Students are advised to commence their studies with reading either Brierly's *Law of Nations* (3rd edition) or Part One of Schwarzenberger's *Manual of International Law* (2nd edition).

Text-books :—

Oppenheim : *International Law* (7th edition, ed. by Lauterpacht—2 vols.).

Schwarzenberger : *International Law as Applied by International Courts and Tribunals* (2nd edition).

Case Books :—

Briggs : *The Law of Nations.*

Scott-Jager : *Cases on International Law* (2nd edition).

Periodicals :—

American Journal of International Law.

British Year Book of International Law.

International Organisation.

Year Book of World Affairs.

Further Reading—(Special Subjects)

B.—The Law of International Institutions

Eagleton : *International Government* (2nd edition).

Goodrich-Hambro : *The Charter of the United Nations* (2nd edition).

Hudson : *International Tribunals.*

Kelsen : *The Law of the United Nations.*

Schwarzenberger : *The League of Nations and World Order.*

C.—International Economic Law

Foreign Office : Handbook of Commercial Treaties.

McNair : *Legal Effects of War* (3rd edition).

Schwarzenberger : *The Province and Standards of International Economic Law* (2 International Law Quarterly, 1948).

Smith : *The Economic Use of International Rivers.*

15. Conflict of Laws

The nature of Private International Law.

Fundamental conceptions : classification : *renvoi :* domicil : public policy.

The rules relating to the jurisdiction of English Courts in cases involving a foreign element.

The principles of English Private International Law relating to the following matters :—

(1) Persons : status and capacity ; corporations.
The family : validity and effects of marriage ; divorce ; legitimacy ; adoption ; guardianship ; lunacy.

(2) Contracts : form, interpretation, illegality, discharge.

(3) Torts.

(4) Property : movables and immovables ; transfer of legal and equitable property. Succession : intestacy ; wills ; administration of estates.

(5) Procedure and Evidence : proof of foreign law ; recognition and enforcement of foreign judgments and decrees.

Text-book :—

Graveson : *Conflict of Laws.*
or Cheshire : *Private International Law* (3rd edition).

Further Reading :—

Dicey : *Conflict of Laws* (6th edition, Keith).
Westlake : *Private International Law* (7th edition, Bentwich).
Foote : *Private International Law* (5th edition, Bellot).
Wolff : *Private International Law* (1945).

16. Conveyancing

The general principles relating to estates and interests in land, both at law and in equity, under the systems of registered and unregistered titles, excluding title on death or by involuntary alienation.

General principles governing the interpretation of deeds. Form and contents of a conveyance of the legal estate and of a transfer of a registered title, including parties, recitals, consideration and receipt, covenants for title, parcels, habendum and the law of covenants generally, and the production of deeds and documents. The rules governing the settlement of the legal estate under the Settled Land Act and by way of trust for sale.

The interest under a settlement, including annuities and rentcharges. Portions charges, life interests, entailed interests, powers of appointment and after acquired property together with clauses for maintenance and advancement. The protection and enforcement of beneficial interests under the trust instrument against the trust property. Relation between trusts and settlements. Capacity of estate owners who are beneficial owners, estate owners under the Settled Land Act or personal representatives. Incapacity of infants, corporations and charities.

Note.—Candidates will be expected to be familiar with the rules of real property governing the interests created by way of settlement.

Books Recommended :—

Text-books :—

Odgers : *Construction of Deeds,* Part I.
Potter : *Principles of Land Law under the Land Registration Act.*
Gibson : *Conveyancing* (1st ed.) (omitting the Parts not within the syllabus).

Further Reading :—

Strahan : *Construction of Settlements and Wills.*
Potter : *Registered Land Conveyancing* (or Key and Elphinstone, 14th edition, vol. 3).
Norton : *Deeds* (2nd edition).
Williams : *Vendor and Purchaser* (4th edition).
Wolstenholme and Cherry: *Conveyancing Statutes* (12th edition).
Hood and Challis : *Property Acts* (8th edition).
Potter : *Settlement of the Legal Estate* (2nd edition, Sweet and Maxwell, 1948).

Students are reminded that notes and articles of interest to the student appear in the *Conveyancer* and the *Law Quarterly Review.*

17. Succession, Testate and Intestate

Wills :—Outline of the history of Wills and powers of testamentary disposition; nature of Wills and Codicils; capacity to make Wills; making and revocation of Wills; appointment of executors; probate (in outline only); construction of Wills.

Intestate Succession :—Outline of the history of the rules of inheritance and succession on intestacy; modern rules of succession; rules as to grant of administration (in outline only).

Devolution of Property on Executors and Administrators :—Powers of personal representatives. Administration of assets of solvent and insolvent estates.

[*Note*.—While students must show acquaintance with such practical matters as the making of Wills, the elements of probate practice and of the practice governing the grant of letters of administration, emphasis will be laid, in the examination, on the general principles of law governing the subject.]

Text-books :—

Parry : *The Law of Succession*.
Bailey : *The Law of Wills* (2nd edition).

Reference Books :—

Sanger : *Wills and Intestacies* (2nd edition).
Williams : *Executors* (12th edition).
Wolstenholme and Cherry : *Conveyancing Statutes* (12th edition).

18. Mercantile Law

Special Subjects for **1951** :—*Either* Agency and Partnership *or* Company Law.

AGENCY AND PARTNERSHIP

(a) *Agency*. History. Formation of the relationship including agency by estoppel, ratification and the matters arising therefrom.

Authority of agent—breach of warranty of authority. Rights and duties of the agent (i) towards the principal; (ii) towards third parties. Position between principal and third parties. Termination of relationship. Consideration of position of special types of agent, such as factors, brokers, auctioneers, del credere agents, married women.

(b) *Partnership*. History. Character of the relationship—who is a partner? Formation of relationship. Rights and duties of partners (i) *inter se*, (ii) towards third parties. Termination of relationships, various modes of dissolution of partnerships, rights to assets including especially goodwill, insolvency. Limited partnerships.

Books Recommended :—

Agency :—

The chapters on Agency in Anson : *English Law of Contract* (18th edition, Brierly) or Salmond and Williams : *Law of Contracts* (2nd edition, Williams) or Cheshire and Fifoot : *Law of Contract*, together with either Wilshere : *Law of Agency* or Powell : *Law of Agency*, may be used for introductory study, with Bowstead : *Digest of the Law of Agency* (10th edition) for further study and reference.

Partnership :—

Elman's *Partners and the Law* (Stevens 1948) may be used as a first introduction followed by Underhill's *Law of Partnership* (5th edition, Holland) and Strahan's *Law of Partnership* (6th edition, Hanbury) in conjunction with Pollock's *Digest of the Law of Partnership* (14th edition, Turner). Lindley on *Partnership* may be used for reference. The Partnership Act 1890 should be in constant use.

COMPANY LAW

[NOTE :—A Student who offers Company Law at the LL.B. examination will not be permitted to offer that subject at the LL.M. examination under the revised Regulations.]

History, Nature and characteristics of a corporation. Joint Stock Companies. The conception of limited liability. Differences between companies formed under the Companies Acts and other types of commercial associations.

The formation of a company under the Companies Act, 1948. Kinds of Company. Companies limited by shares or by guarantee and unlimited companies. Public companies and private companies. Exempt private companies. The promoters, their functions and responsibilities. The company's name. The memorandum of association. The doctrine of *ultra vires*. The articles of association and Table A. Alterations to the memorandum and articles. Registration and the requirements therefor.

Share and Loan Capital.—The nature of Shares, Stock, Debentures and Debenture Stock. Public issues. Prospectus or statement in lieu of prospectus. Stock exchange quotations. Underwriters. Types of shares. Allotment. The principle of the conservation of capital. Increase, reduction and alteration of capital. Transfer and transmission of shares. Calls, liens, forfeiture. Dividends.

Management and administration.—Members. Share certificates and registers. Directors and other officers. Qualification, appointment and termination, powers and duties of directors. The Secretary. Meetings and Resolutions. Rights of majorities and minorities and of classes. Borrowing powers. Registration of charges. Accounts and Audit inspections. The Seal. Arrangements and reconstructions.

Winding Up.—Voluntary, compulsory and under supervision. Powers and duties of liquidators.

Books Recommended :—

As Introduction :—

Topham : *Company Law* (11th edition, Butterworth).

Charlesworth : *Principles of Company Law* (5th edition in preparation, Stevens).

As Main text-book :—

Palmer : *Company Law* (19th edition, Stevens).

For reference and advanced study :—

Formoy : *Historical Foundation of Company Law* (Sweet and Maxwell).

Buckley : *Company Law* (Stevens).

Gore-Brown : *Joint Stock Companies* (Jordans).

Constant reference should be made to the Companies Act, 1948.

Special Subject for Examinations in and after **1952** :—Agency and Sales and Other Dispositions of Goods.

(*a*) *Agency.* The nature and creation of the principal and agency relationship and the scope of the Agent's authority. The position of the Principal and Agent vis-á-vis third parties ; contracts and torts ; passing of property by Agents and the Factor's Act 1889. Rights and duties of Principal and Agent *inter se.* Agent's lien. Agent's commission. Termination of Agency. The Agency of married women.

(*b*) *Sales and Other Dispositions of Goods.* Nature of goods, property possession and delivery. Special rules relating to the Sale of Goods under the Sale of Goods Act 1893. C.I.F., F.O.B., and other special forms of international sales. Gifts *inter vivos* and *donationes mortis causa.* Bills of Sale. Bailments. Hire Purchase Agreements. Pledges. Effect of Bankruptcy and Liquidation. Doctrine of relation back and reputed ownership.

19. Industrial Law

The subject-matter is the law governing the relations between employers and employed in all their aspects, whether considered as single individuals or as members of groups or organisations, and including the legal effect of such relationship upon third parties.

The common law of master and servant. Restrictive covenants in contracts of employment. Employer's liability for the wrongful acts of his employee. Employer's liability at common law and under statute for injuries to the servant. Common employment. Workmen's compensation.

[*Note.*—The student will be expected to understand the effect on Workmen's Compensation of the new system of compensation for industrial injury when that legislation has been passed.]

Statutory conditions affecting hours, wages, health, welfare, safety and other conditions of employment. The principles of the legislation relating to employment in factories, shops, mines, road transport, agriculture, public utilities and other occupations. Wages Boards and similar bodies.

The law of associations. Voluntary societies. The doctrine of restraint of trade and its effect on trade unions. The legal status of trade unions, their powers, rights, duties, liabilities and political activities. Amalgamation and dissolution. Collective bargaining. The Fair Wages Clause. Strikes and lockouts. Picketing and intimidation. Price-fixing associations. Civil conspiracy.

National Insurance, with particular reference to those provisions which specially concern employers and employed as such (*e.g.*, Unemployment Insurance).

Arbitration and conciliation. The Industrial Court.

The central and local authorities responsible for inspection, administration and enforcement of industrial law. Their powers and procedure. The International Labour Office.

Books Recommended :—

Text-books :—

Richardson : *Industrial Relations in Great Britain.*
Diamond *or* Batt : *Law of Master and Servant.*
Tillyard : *The Worker and the State* (2nd edition).

Tillyard : *Industrial Law.*

Slesser and Baker : *The Law of Trade Unions.*

Henderson : *Trade Unions and the Law.*

Redgrave : *The Factories Act.*

Wilkinson : *The Shops Act.*

Emmerson and Lascelles : *Guide to the Unemployment Insurance Acts.*

Gare : *Restraint of Trade.*

T. K. Djang : *Factory Inspection in Great Britain.*

Further Reading :—

Hutchins and Harrison : *History of the Factory Acts.*

Milne-Bailey : *Trade Unions and the State.*

Haslam : *Law Relating to Trade Combinations.*

Robson : "Industrial Law (1885–1935)," *Law Quarterly Review,* Jan. 1935.

Collective Bargaining (I.L.O.).

Amulree : *Industrial Arbitration.*

Webb : *Industrial Democracy.*

Reference Books :—

Milne-Bailey : *Trade Union Documents.*

Annual Survey of English Law. Industrial Law Section.

Annual Report of the Chief Inspector of Factories.

Annual Report of the Ministry of Labour.

MacSwinney : *Law of Mines, Quarries and Minerals.*

Report on Collective Agreements (H.M.S.O.).

Legislative Series : *International Labour Office.*

Willis : *Law of Workmen's Compensation.*

Butterworth : *Digest of Workmen's Compensation Cases.*

20. Law of Palestine

[*For Examination in* **1951** *only.*]

Examination in this subject will be confined to :—

(*a*) Those portions of the law administered in the Civil Courts in Palestine which are founded in Muhammadan Law.

(*b*) The problems of international and inter-religious private law peculiar to Palestine. These arise from the existence and jurisdiction of communal courts administering separate systems of personal law, from the status of foreigners and from the legal situation of the mandated territory.

(*c*) The rudiments of Muhammadan jurisprudence and of the history of Muhammadan law from its earliest beginnings to the fall of the Ottoman caliphate.

In (*a*) candidates will be required to know :—

(i) The Mejelle so far as it has not been abrogated by subsequent legislation. Where the effect of such subsequent legislation has been to modify the law without entirely abrogating the provisions of the Mejelle, candidates will be required to know the existing law. Articles 1329–1403, 1685, 1686, 1700–1735 and 1784–1851 will be omitted.

(ii) The system of title, transfer, and rights in land as it exists at the present day, including the law of Waqf as applied to immovables, but excluding purely fiscal questions. A knowledge of obsolete provisions of the Land Law, 1858, will only be required so far as they are essential to the understanding of rights still in existence; but the later Turkish enactments, especially the Provisional Laws of Inheritance, Disposal, Mortgage, and Partition, will be included.

A knowledge will be required of the Palestine Orders in Council 1922–1935 and of such other Orders in Council and Ordinances of the Government of Palestine as affect the spheres of law above outlined. Where, however, as in the case of the Partnership Ordinance, 1930, the effect has been to substitute law founded on English models for the earlier law, the details of such later enactment will not be regarded as falling within the scope of this subject.

Text-books :—

Hooper : *Civil Law of Palestine and Iraq*, vols. 1 and 2.

There are also good commentaries in Turkish, Arabic and Hebrew on the Mejelle which students knowing those languages may use if they wish. Students must know the principle Arabic technical terms.

Goadby and Doukhan : *Land Law of Palestine.* Introduction and Chapters 1–14, 16, 18, 21, 22 and appendices 1 to 4.

For Further Reading :—

Goadby : *International and Inter-religious Private Law in Palestine.*

Omar Hilmi : *Gift to Posterity on the Laws of Waqf* (Translated by Tyser and Demetriades).

Useful articles and notes occasionally appear in the *Journal of Comparative Legislation.*

21. Law of Domestic Relations

[*For Examinations in and after* **1952**.]

(*a*) *Marriage.*

Background of ecclesiastical law. Nature of marriage relationship.

Requirements of a valid marriage; form (in outline only); capacity and consent of parties and third parties; consanguinity; the distinction between void and voidable marriages; classes of void marriages; the distinction between decrees of nullity and dissolution of marriage; grounds of nullity and for divorce; defences to petitions for nullity and divorce (including absolute and discretionary bars).

The changing legal position of the married woman and the obligations of husband and wife inter se during marriage including validity of mutual contracts and mutual liability in tort, maintenance, residence, and name. Liability to third parties in contract and in tort.

Separation by agreement. Ground for separation by order or decree.

(*b*) *Parent and Child.*

Background of common law and equity and growth of statutory regulation. Circumstances giving rise to relation of parent and child. Rights and obligations of parents with special reference to custody, residence, maintenance, and education. General principles relating to exercise of powers of the Courts, and of local authorities under the Children's Act.

General principles relating to incorporation into parental authority by adoption and legitimation. Guardianship.

[Candidates will not be required to display any knowledge of the rules of Conflict of Laws or of the details of either court procedure or of the Court's powers in respect of alimony, maintenance and settlements.]

Books recommended :—

Preliminary Reading :—

Grant : *Marriage, Separation and Divorce* (2nd Edition).

Winter : *Children and Young Persons.*

Snell : *Equity.* 23rd Ed. Chs. 14 and 15.

Text-Books :—

Warmington : *Law and Practice in Divorce* *or* Tolstoy : *Law and Practice of Divorce and Matrimonial Causes* (2nd edition). { Excluding the chapters on practice.

Clarke Hall & Morrison : *Children and Young Persons* (3rd edition).

Reference Books :—

Eversley : *Law of Domestic Relations* (5th Edition).

Latey & Rees : *Law of Divorce* (13th Edition).

Lush : *Husband and Wife* (4th Edition and Supplement).

Lushington : *Summary Jurisdiction* (Separation and Maintenance) Acts, 3rd Edition.

Report of the Committee on the Care of Children (The Curtis Committee—Cmd. 6922).

MASTER OF LAWS (LL.M.)

REVISED REGULATIONS FOR LL.M. DEGREE.

[*For Examinations in and after* **1951.**]

[*Note* :—Students who have prepared for the LL.M. Degree Examination under the old Regulations, but who did not complete the examination in September 1950, may be permitted, under certain circumstances, to proceed to the Degree under those Regulations in 1951. Details of the old Regulations will be found in the 1949–50 edition of the Regulations for Internal Students. Special subjects for examination in 1951 will be those prescribed for 1950.]

Except as provided below, no person shall be admitted to the examination for the Degree of LL.M. as an Internal Student until after the expiration of two calendar years from the time of his taking the LL.B. Degree in this University as an Internal Student, nor in the case of a student registered under the Regulations for Postgraduate Students proceeding to a higher Degree until he has completed a course of higher study in accordance with those Regulations.

A student who, having passed the External Intermediate Examination, is admitted as an Internal Student to the Final LL.B. Examination after pursuing a two years' course of study and passes that Examination, may submit as his third year's course of study for the LL.B. Degree a course for the LL.M. Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the LL.B. Degree, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the LL.M. Examination after the lapse of one year from the date of his obtaining the LL.B. Degree.

Date of Examination

The LL.M. Examination will take place once in each year, beginning on the third Monday in September.

Every candidate entering for this Examination must apply to the Academic Registrar for an entry-form, which must be returned duly filled up, together with the proper fee, not later than June 1st.

A candidate submitting a dissertation must forward to the University with his entry-form not less than four typewritten or printed copies of his dissertation and a short abstract (4 copies) of his dissertation comprising not more than 300 words.

An Internal Student submitting a dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his dissertation bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawing and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Book-binders in London, who will bind dissertations to this specification at a cost of 10*s*. a copy, may be obtained from the Academic Registrar.]

Fees

The fee for each entry to the whole Examination is 15 guineas.

The fee payable on re-entry by candidates who have been exempted either from the written portion of the Examination or from the presentation of a dissertation is 7½ guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

A candidate may obtain the LL.M. Degree *either*

(*a*) by passing at one and the same Examination in any five of the fourteen subjects enumerated below ; *or*

(*b*) *in special cases*, by passing at one and the same Examination in any three of the fourteen subjects enumerated below, and in addition submitting a dissertation not earlier than the expiration of two calendar years from the time of his taking the LL.B. Degree.

A mark of distinction will be placed against the names of those candidates who show exceptional merit.

I. *Examination without Dissertation.*

Candidates shall be examined in any five of the following fourteen subjects. In each subject the Examination shall consist of one three-hour paper.

(1) Jurisprudence and Legal Theory.

(2) Company Law and the General Principles of the Law of Unincorporated Associations.

(3) Constitutional Laws of Canada, Australia, and *either* India *or* Pakistan.

(4)*International Economic Law.

(5)*Law of International Institutions.

*Candidates may only offer one of these two subjects. If the candidate has taken one of them at the LL.B. Examination, he can only offer the other of them at the LL.M. Examination.

(6) Legal History.

(7) Mercantile Law.

(8) Comparative Law of Contract in Roman and English Law.

(9)†Conflict of Laws.

†A candidate will only be allowed to take this subject as one of the subjects for his LL.M. Examination if he did not take the subject at the LL.B. Examination.

(10) Muhammadan Law.

(11) Hindu Law.

(12) Land Law *either* (*a*) Law of Landlord and Tenant.
or (*b*) Planning Law.

(13) Administrative Law and Local Government Law.

(14) Criminology.

The Examiners may, in addition, if they see fit, examine any candidate orally.

II. *Examination with Dissertation.*

(1) The candidate must submit a dissertation which must be written in English‡ and be a record of original work or other contribution to knowledge in some branch of Law. The subject of the dissertation

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‡LL.M. Dissertations should, in all appropriate cases, contain :—

(i) An alphabetical table of cases

(ii) A chronological table of statutes.

(iii) A bibliography, covering books and articles.

and each page should be numbered.

must be submitted for the approval of the University not later than April 15th for the next ensuing Examination. Any subject submitted at a later date must be accompanied by a fee of 10*s*. 6*d*.

(2) The written portion of the Examination shall consist of three papers in any three of the fourteen subjects enumerated above. The Notes to subjects (4), (5) and (9) will apply also in this case. A candidate may be allowed to take the three papers after the expiration of one calendar year from the time of his taking the LL.B. Degree or after pursuing one year's course of study for the LL.M. Examination. No candidate will be allowed to submit his dissertation until he has satisfied the Examiners in the written portion of the Examination.

The Examiners may, in addition, examine the candidate orally on any part of his work, or they may set a three-hour paper on the wider aspects of the Dissertation.

A diploma for the LL.M. Degree, under the Seal of the University, will be delivered to each candidate who has passed all necessary examinations, after the Report of the Examiners shall have been approved by the Senate.

SYLLABUSES

GENERAL NOTE.—Students are advised to read articles on topics within their course of study, which appear in recent issues of *The Law Quarterly Review, The Modern Law Review, The Cambridge Law Journal, The Conveyancer and Property Lawyer, The Harvard Law Review, The Yale Law Journal, The Journal of Comparative Legislation, The Journal of Planning Law,* and *Current Legal Problems.*

(1) Jurisprudence and Legal Theory

A. The history of Legal Theory and modern schools of thought concerning the nature, origin and development of law and the State.

B. Analysis of the leading conceptions used in law, together with an elementary comparison of Roman, Anglo-American and Continental development of these conceptions.

The conceptions to be considered shall include in particular the following:—Personality, Right, Duty, Liability, Tort, Delict, Crime, Contract, Quasi-contract, Intention, Negligence, Property, Possession, Act-in-the-Law.

The paper will be set so that it is possible for a candidate to obtain full marks by answering questions from either section of the paper, but it is open to the candidate to choose questions from both Sections indiscriminately.

Books Recommended.

For Section A : Candidates are advised to make their own choice of classical authors, and the following works are suggested:—

Hobbes: *Leviathan.*
Locke: *Of Civil Government.*
Rousseau: *Social Contract.*
Bentham: *Theory of Legislation.*

Attention is also called to the following easily accessible works of modern authors :—

Roscoe Pound : *Introduction to the Philosophy of Law.*
Duguit : *The Law and the State* (Harvard Law Review Vol. 31).
Kelsen : *The Pure Theory of Law* (L.Q.R. Vols. 50 and 51).

General Works :

Julius Stone : *Province and Function of Law.*
Hall : *Readings in Jurisprudence.*
Maine : *Ancient Law.*
Maine : *Early History of Institutions.*
Vinogradoff : *Historical Jurisprudence,* Vol. I.
Malinowski : *Crime and Custom in Savage Society.*
Hogbin : *Law and Order in Polynesia.*
Hobhouse : *Morals in Evolution.*
Wundt : *Ethics,* Vol. I (The facts of the Moral Life).
Robson : *Civilisation and the Growth of Law.*
Diamond : *Primitive Law.*
Jones : *Historical Introduction to the Theory of Law.*
Friedmann : *Legal Theory* (1949).

For Section B : Relevant chapters of Textbooks of Jurisprudence, e.g., Austin " Lectures on Jurisprudence "; Salmond " Jurisprudence "; Holland " Jurisprudence "; Paton " Jurisprudence "; Keeton " Elementary Principles of Jurisprudence "; Stone " Province and Function of Law "; Hohfeld " Fundamental Legal Conceptions "; Terry " Leading Principles of Anglo-American Law "; and relevant essays in such collections as Allen's " Legal Duties " and Goodhart's Essays in Jurisprudence and the Common Law ".

Buckland and McNair : *Roman Law and Common Law.*

The following articles in the L.Q.R. :—

Allen : Legal Morality and the Jus Abutendi, XL 164.
Status and Capacity, XLVI 277 (both also in Legal Duties).

Buckland : The Duty to Take Care, LIV 494.

Gutteridge : The Comparative Law of Privacy I (Germany and Switzerland), XLVI 293.

Hanbury : A Menace to Equitable Principles, XLIV 468.

Lawson : Error in Substantia, LII 79.

Radbruch : Anglo-American Jurisprudence Through Continental Eyes, LII 530.

Walton : The Comparative Law of Privacy II (France), XLVII 219.

Winfield : The Myth of Absolute Liability, XLII 37.
Some Aspects of Offer and Acceptance, LV 499.

Wiren : The Plea of *ius tertii* in Ejectment, XLI 139.

Wolff : On the Nature of Legal Persons, LIV 494.

From Cambridge L.J. :
Gutteridge : Abuse of Rights.

(2) Company Law and General Principles of Unincorporated Associations

Meaning of Corporate Personality and distinction between incorporated and unincorporated associations.

Unincorporated Associations.—Legal basis and types of unincorporated association. Creation and constitution. Membership and expulsion. Contracts, torts and property. Dissolution. Proceedings by and against associations.

Commercial Associations.—Partnerships, Joint Stock Companies, Unit Trusts, and Industrial and Provident Societies. Partnerships under the Partnership Act, 1890, and the Limited Partnership Act, 1907 (both in outline only). The firm name and property. Goodwill.

Company Law.—Formation of Companies under the Companies Act, 1948. Types of companies. Limited Liability. The nature and contents of the memorandum and articles of association. Flotation of Companies, Promoters and Prospectuses. Capital. Shares and dividends. Debentures. Meetings and resolutions. Directors and other officers. Annual Return, Accounts and Audit. Reconstruction and Amalgamation. Inspection. Winding Up (in outline only).

Books Recommended.

Lloyd : *Law of Unincorporated Associations.*

Underhill : *Principles of the Law of Partnership* or Strahan : *The Law of Partnership.*

Charlesworth : *Principles of Company Law.*

Palmer : *Company Law.*

For Reference :—

Holdsworth : *History of English Law* (especially Volume 8).

Formoy : *Historical Foundations of Modern Company Law.*

Buckley : *Company Law.*

Gore-Brown : *Handbook of Joint Stock Companies.*

Lindley : *Law of Partnership.*

H. Samuels : *The Law of Trade Unions.*

Milne-Bailey : *Trade Unions and the State.*

Fuller : *Law Relating to Friendly Societies and Industrial and Provident Societies.*

Candidates will be supplied in the examination-room with King's Printer Copies of the Companies Act, 1948.

(3) Constitutional Laws of Canada, Australia and either India or Pakistan

CANADA AND AUSTRALIA.

The development of responsible government in Canada and Australia (in outline). The growth of constitutional conventions. Prerogative powers and privileges of the Governor-General, Lieutenant-Governor or Governor. Restrictions upon legislative competence at common law, and the effect of the Statute of Westminster, 1931.

Problems of federalism illustrated by reference to Canada and Australia. Procedure for amending the constitution. The distribution of and restrictions upon legislative power. Parliamentary privilege. The second chamber and provisions for conflicts between the Houses. The structure of the executive. The judicial system and appeals to the Privy Council.

The treaty-making power and the power to implement treaties.

British nationality and local citizenship.

Co-operation between federation and states (Provinces).

Questions will not be set on the electoral system, parliamentary procedure, the party system, delegated legislation and administrative tribunals (otherwise than on the constitutionality of delegation), public corporations, the civil service, government liability, or local government.

INDIA.

The history (in outline) of British Government in India, and of the relations between the Government in England, the Central Government in India, and the local Governments and protected states. Centralisation and decentralisation. The growth of (i) a representative element in the legislatures, and (ii) responsible government. Constitutional Conventions. Communal Problems.

Legislative, executive and emergency powers and privileges of the President and Provincial Governors.

Problems of federalism (illustrated by reference to other federations). Procedure for amending the constitution. The different types of states and provincial administrations : federations of former protected states. The distribution of and restrictions upon legislative power. Parliamentary privilege. Second chambers and provisions for conflict between the Chambers. The structure of the executive. The judicial system. Supreme Court, High Courts, other Courts. Public Finance.

Commonwealth Nationality and Indian citizenship.

The treaty-making power and the power to implement treaties.

Co-operation between the Centre and the Units.

Questions will not be set on the electoral system, parliamentary procedure, the party system, delegated legislation and administrative tribunals (otherwise than on the constitutionality of delegation), public corporations, the civil service, government liability, local government, or nationality.

PAKISTAN

The history (in outline) of British Government in India, and of the relations between the Government in England, the central Government in India and the local Governments and protected states. Centralisation and decentralisation. Effect of the Statute of Westminster, 1931. The growth of (i) a representative element in the legislatures, and (ii) responsible government. Constitutional Conventions. Communal Problems.

Legislative, executive, and emergency powers and privileges of the Governor-General and Provincial Governors.

Problems of federalism (illustrated by reference to other federations). Procedure for amending the constitution. The different types of states and provincial administrations : federations of former protected states. The distribution of and restrictions upon legislative power. Parliamentary privilege. Second chambers and provisions for conflict between the Chambers. The structure of the executive. The judicial system. The Privy Council, the Federal Court, High Courts, other Courts. Public Finance.

Commonwealth Nationality and Pakistan citizenship.

The treaty-making power and the power to implement treaties.

Co-operation between the Centre and the Units.

NOTE.—Candidates will be required to know such constitutional enactments as obtain the force of law not less than six months before their Examination.

Questions will not be set on the electoral system, parliamentary procedure, the party system, delegated legislation and administrative tribunals (otherwise than on the constitutionality of delegation), public corporations, the civil service, government liability, local government, or nationality.

Books Recommended

General

Text-books :—

Jennings and Young : *The Constitutional Laws of the British Empire* (1938) (relevant portions).

Latham : *The Law and the Commonwealth* (1949) ; being a reprint of the supplementary chapter in Hancock : *Survey of British Commonwealth Affairs*, Vol. 1, Problems of Nationality (1937).

Wheare : *The Statute of Westminster and Dominion Status*, 4th ed. (1949) ; *Federal Government* (1946).

Further Reading and Reference :—

Keith : *Responsible Government in the Dominions*, 2 vols. (2nd ed. 1928) ; *The Dominions as Sovereign States* (1938).

Evatt : *The King and his Dominion Governors* (1936).

Royal Institute of International Affairs : *The British Empire* (2nd ed. 1938).

Journal of the Society of Comparative Legislation.

For Canada

Dawson : *The Government of Canada* (2nd printing with corrections, 1948).

Further Reading and Reference :—

Dawson : *Constitutional Issues in Canada* (1933).
The Development of Dominion Status (1937).

Kennedy : *The Constitution of Canada* (2nd ed., 1938).
Essays in Constitutional Law (1934).
Statutes, Treaties and Documents of the Canadian Constitution (2nd ed., 1930).

Lefroy : *Canada's Federal System* (1913).

The following articles should also be consulted :—MacDonald in (1936) 1 Univ. of Toronto L.J. 260 ; Jennings in (1937) 51 Harvard L. Rev. 1 ; symposium in (1937) 15 Canadian Bar Rev. 393 ff. ; Willis in (1939) 53 Harvard L. Rev. 251 ; Tuck in (1941) 4 Univ. of Toronto L.J. 33 ; note (1941) 19 Canadian Bar Rev. 45 ; Clokie in (1942) 20 Canadian Bar Rev. 395 ; Kennedy in (1943) 8 Cambridge L.J. 146 ; Willis in (1943) 21 Canadian Bar Rev. 257 ; note (1946) 24 Canadian Bar Rev. 223 ; Laskin in (1947) 25 Canadian Bar Rev. 1054.

For Australia

Sawer : *Australian Constitutional Cases* (1948).
Wynes : *Legislative and Executive Powers in Australia* (1936).

Further Reading and Reference :—

The following articles should also be consulted :—

Bailey : Australian Treaties, in (1935) Australian and New Zealand Journal of International Law ; Australian Treaties in (1937) British Year Book of International Law.

Evatt : Constitutional Interpretation in Australia, in (1939) 3 Univ. of Toronto Law Journal, 1.

Fry : Australian Contributions to the Evolution of Parliamentary Government in (1947) 1 University of Queensland Papers 1 ; Australian Constitutional Law, in (1947) 1 University of Queensland Papers, 52.

Garran : The Development of the Australian Constitution (1924) 40 L.Q.R. 202.

Greenwood : Future of Australian Federalism (1946).

Holman : Constitutional Relations in Australia (1930) 46 L.Q.R. 502.

Kerr : Law of the Australian Constitution (1925).

For India. (The following list is not intended to be exclusive of other reading.)

The Montague Chelmsford Report.

The Government of India Act, 1935.

Cowell : *History and Constitution of the Courts and Legislative Authorities in India* (2nd ed., 1936).

Mukherji, P. : *Indian Constitutional Documents*, 1773–1915.

G. B. Joshi : *The New Constitution of India.*

Manyam, K. V. R. : *The Indian Constitution.*

Indian Independence Act, 1947.

The Constitution of India, 1949.

Murty and Padmanavhan : *The Constitution of India*, 1949.

For Pakistan. (The following list is not intended to be exclusive of other reading.)

The Montague Chelmsford Report.

The Government of India Act, 1935.

Cowell : *History and Constitution of the Courts and Legislative Authorities in India* (2nd ed., 1936).

Mukherji, P. : *The Indian Constitution*, 1915.

G. B. Joshi : *The New Constitution of India.*

Coupland, R. : *The Future of India* (Oxford, 1948).

Manyam, K. V. R. ; *The Indian Constitution.*

Indian Independence Act, 1947.

The Government of India Act, 1935, as amended by the Pakistan (Provisional Constitution) Order, 1947.

(4) International Economic Law

Definition. History. Sources. General Principles.

Principles of International Economic Law: Economic State Sovereignty. Economic and Financial Aspects of Exterritoriality. Freedom of Commerce. Freedom of Communications. Freedom of Navigation. Freedom of the Seas.

Standards of International Economic Law: Functions. Minimum Standards. The Standard of Reciprocity. The Most-Favoured-Nation Standard. The National Standard. The Standard of the Open Door. The Standard of Preferential Treatment. The Standard of Economic Good Neighbourliness. The Interplay of the Standards. Circumvention and Infraction of the Standards.

International Economic Transactions: Treaties of Commerce. Agreements on Production, Conservation of Resources, Transport and Communications. Barter Agreements, Inter-State Loans, Monetary and Payment Agreements, and Foreign Aid Conventions. Double Taxation Conventions. The International Economic Law of Tort, with special reference to the Protection of Private Property abroad and State Contracts. Legal Aspects of International Economic and Financial Control.

The Law of Economic Warfare: Economic Reprisals. The Law relating to Trading with the Enemy. The International Economic Law of Military Occupation. Economic War Crimes. The Protection of Neutral Property. War Claims. The Law of Restitution and of Reparations.

International Economic Institutions: Representation of Economic Interests Abroad. Economic and Financial Unions, with special reference to Customs Unions. The Economic and Social Council of the United Nations. The International Bank for Reconstruction and Development and the International Monetary Fund. The International Trade Organisation. Regional Economic Organisations, with special reference to the Organisation for European Economic Co-operation. International Economic Sanctions.

Books Recommended

In addition to the literature recommended in the syllabus in Public International Law for the LL.B. (pp. 619–20), the following books and articles are recommended:—

Text-books:—

Oppenheim: *International Law* (7th ed., ed. by Lauterpacht—with special reference to Vol. 1 §§ 578–581: *Commercial Treaties*).

Schwarzenberger: *International Law as Applied by International Courts and Tribunals*, 2nd ed. (with special reference to Part Three: *State Jurisdiction*).

Further Reading:—

Feilchenfeld: *Public Debts and State Succession.*

Handbook of Commercial Treaties (Foreign Office).

Intergovernmental Commodity Control Agreements (International Labour Office).

McNair: *Legal Effects of War* (3rd ed.).

Schwarzenberger: *The Province and Standards of International Economic Law* (2 International Law Quarterly, 1948).

Schwarzenberger: *The Most-Favoured-Nation Standard in British State Practice* (22 British Year Book of International Law, 1945).

Smith: *The Economic Use of International Rivers.*

(5) Law of International Institutions

General Aspects of International Institutional Law : Definition. Development. Sources. Functions and Types of International Institutions. General Principles of International Institutional Law.

Judicial International Institutions : Functions. Organisation. Jurisdiction. Procedure. Award, Judgment, Advisory Opinions.

Administrative International Institutions : Functions. Membership. Organisation. Jurisdiction.

Quasi-Legislative International Institutions : Functions. Membership. Organisation. Jurisdiction.

Comprehensive International Institutions : Functions. Membership. Organisation. Jurisdiction.

Books Recommended

In addition to the literature recommended in the syllabus in Public International Law for the LL.B. (pp. 619–20), the following books and articles are recommended :—

Text-books :—

Oppenheim : *International Law* (7th ed., ed. by Lauterpacht—with special reference to Vol. I, Chapter IV : *The Legal Organisation of the International Community*, amd to Vol. II, Part I : *Settlement of State Differences*).

Schwarzenberger : *International Law as Applied by International Courts and Tribunals*, 2nd ed. (with special reference to Part Seven : *The Law of International Institutions*).

Further Reading :—

Eagleton : *International Government* (2nd ed.).

Goodrich-Hambro : *The Charter of the United Nations* (2nd ed.).

Hudson : *International Tribunals.*

Hudson : *The Permanent Court of International Justice* (3rd ed.).

Jenks, C. W. : *Some Constitutional Problems of International Organisation* (22 British Year Book of International Law, 1945).

Kelsen : *The Law of the United Nations.*

Schwarzenberger : *The League of Nations and World Order.*

The United Nations Conference on International Organisation (*Selected Documents*) (United States, Department of State).

Periodicals :—

American Journal of International Law.

British Year Book of International Law (Documentary Section).

International Organisation.

Year Book of the United Nations.

Year Book of World Affairs.

(6) Legal History

English legal history generally (as in the LL.B. Examination) with special reference to its bearing upon the following topics in the prescribed period.

The period prescribed for **1951** and until further notice is 1216–1327.

The main movements of legal thought. Characteristics of mediæval law. Influence of civil, canon and mercantile law. Legislation. Case law, local customs. Principal sources of legal history (records, year books, treatises).

The courts of law (including parliament). Local courts. Justices of the peace. The judiciary and the legal profession.

The forms of action and the outlines of procedure and pleading. Battle. Wager of law. The jury.

Real property. Common law estates. Conveyances and their effects. Feudalism. Seisin. Inheritance.

Personal property. Ownership and possession.

Contract at common law and in law merchant. Ecclesiastical competition.

Tort. Trespass. Defamation and its relation to ecclesiastical jurisdiction.

Criminal law (treason, felonies, misdemeanours). Appeals, indictments, pardons. Forfeiture and escheat.

Law merchant (its sources, nature and the institutions administering it).

Books Recommended :—

Plucknett : *Concise History of the Common Law* (4th edition) is a general introduction, but is not sufficiently detailed for the special period.

Pollock and Maitland : *History of English Law* should be used as a text book supplemented by Holdsworth : *History of English Law* (3rd edition) where relevant.

The following works on special topics can be consulted with advantages :—

Ames : *Lectures on Legal History.*

Thayer : *Treatise on Evidence.*

Pollock and Wright : *Possession in the Common Law.*

Fletcher : *Carrier's Liability.*

Jouon des Longrais : *La Conception Anglaise de la Saisine.*

Lambert : *Les Year Books.*

Winfield : *Chief Sources of English Legal History.*

H. Kantorowicz : *Bractonian Problems.*

Plucknett : *Legislation of Edward I* (in the press).

The publications of the Selden Society and the Ames Foundation are in most law libraries, and the " Rolls Series " of year books is available in many municipal reference libraries. These publications frequently contain introductions of great value and those falling within the special period should be studied. Articles and reviews in the *Law Quarterly Review* and the *English Historical Review* should be consulted.

(7) Mercantile Law

(a) *Negotiable Instruments.* Concept of negotiability. What instruments are negotiable. Analysis of definition of bill of exchange. Bearer and order bills, dated and demand bills. Fictitious payees. Acceptance. Capacity and authority. Signatures by and on behalf of partnerships and limited companies. Consideration. Indorsement and negotiation. Rights and powers of the holder, the holder for value, the holder in due course. Blank acceptances. Forgeries of signatures. Alterations of material parts. Liabilities of the parties—on the bill and independently thereof. Formalities to be observed : presentation for acceptance, and for payment, noting and protest, notice of dishonour. Discharge. Cheques, the two aspects of a cheque : (1) as a mandate to the banker ; the customer's duty of care, the banker's liability in case of unjustified dishonour ; (2) as a negotiable instrument ; crossings and their legal effect. Special protection of paying and collecting banker. Importance of banking practice. Promissory notes—how they differ from bills of exchange. Banker's commercial credits.

(b) *Carriage by Sea.* The form of the contract. Charterparties and bills of lading. Rights and duties of shipowner at Common Law. Carriage of Goods by Sea Act, 1924. Protection of shipowner and limitation of his liability under the Merchant Shipping Acts. The bill of lading as a document of title and its function in relation to overseas trade. Bills of Lading Act, 1855. Contracts for the sale of goods on C.I.F. and F.O.B. terms. Loading and discharging. Freight and demurrage, general average, and the York–Antwerp rules (all in outline only). The shipowner's lien. Stoppage in transit. Measure of damages for breach of the contract. Comparison with rules relating to carriage of Goods by Air ; The Carriage by Air Act, 1932 ; Air consignment notes (all in outline only).

(c) *Insurance.* General Principles of the law of insurance. Insurable interest. Duty of disclosure. Principle of indemnity. Formation of the contract. Premium—its retention and return. Conditions and warranties, and their interpretation. Assignment. Reinsurance. These topics to be considered particularly in relation to marine insurance.

Books Recommended

Negotiable Instruments :—B. Jacobs : *A short Treatise of the Law of Bills of Exchange and Cheques ;* M. D. E. S. Chalmers : *Bills of Exchange Act.* For reference : J. B. Byles : *A Treatise on Law of Bills of Exchange ;* Lord Chorley : *Law of Banking.*

Carriage by Sea :—W. Payne : *Carriage of Goods by Sea ;* Lord Chorley and O. C. Giles : *Shipping Law,* Part II. For reference : Scrutton : *Charterparties and Bills of Lading.*

Insurance :—M. P. Picard : *Elements of Insurance Law ;* Lord Chorley and O. C. Giles : *Shipping Law,* Part III. For reference : MacGillivray : *Law of Insurance.*

General reference may be made to Smith's *Mercantile Law* (ed. Guttridge) and to Schmitthoff : *The Export Trade.*

NOTE.—Students should take care to consult, wherever possible, the latest editions of the recommended books.

Candidates will be supplied in the examination-room with King's Printer Copies of the Bills of Exchange Act, 1882, the Marine Insurance Act, 1906, and the Carriage of Goods by Sea Act, 1924.

(8) Comparative Law of Contract in Roman and English Law

The historical development of the Law of Contract in both systems.

General principles of the law in both systems :—

Classification of contracts. Constitution of legal relations.
Consent and circumstances affecting reality of consent.
Capacity.
Validity of conditions. Modalities.
Causa and Consideration.
Form. The comparative importance of writing.
Discharge, including effect of frustration and delay.
Remedies for breach.
Transfer of contractual rights and obligations. Acquisition of contractual rights and obligations for third parties. Agency.
Quasi-Contract.

The influence of Roman Law on the English Law of Contract and Quasi-Contract.

Books Recommended

de Zulueta : *Institutes of Gaius*, III 88–181, IV 69–74.

Moyle : *Institutes of Justinian*, III 13–29, IV 7.

Buckland : *Text-book of Roman Law*, CXLIII–CXCV.

Buckland : *Main Institutions of Roman Law*, chapters XIII–XVII.

Buckland and McNair : *Roman Law and Common Law*, chapters VI–IX.

Jolowicz : *Historical Introduction to Roman Law*, relevant parts of chapters XI, XVII and XXIX.

Holdsworth : *History of English Law*, II, 82–87, 275–277 ; III 412–454 ; VIII 1–98.

Cheshire and Fifoot : *Law of Contracts*.

Pollock : *Principles of Contract*.

(9) Conflict of Laws

1. *English Conflict of Laws*

(*a*) The nature and basis of the conflict of laws. The questions of choice of law and of jurisdiction. Renvoi and classification. The scope of public policy. Proof of foreign law.

(*b*) Domicil, status, marriage, legitimacy and legitimation, guardianship and curatorship. Domicil and residence of corporations. The capacity of natural persons and corporations.

(*c*) Contracts : validity, interpretation and effect of contracts, including sale of goods and of land, carriage by sea and by air, agency. Torts.

Movable and immovable property. Conveyance, transfer and assignment *inter vivos*. Marriage contracts and settlements and the effect of marriage on property in general.

Succession on death, on intestacy and under wills.

Powers of appointment.

(*d*) The jurisdiction of English Courts. Ordinary jurisdiction. Assumed jurisdiction. Jurisdiction in matrimonial causes, administration of estates, bankruptcy.

Procedure : The delimitation of substance and procedure. Evidence, remedies, priorities, limitation of actions.

(*e*) The jurisdiction of foreign Courts according to English law. Judgments *in rem* and *in personam*. The recognition and enforcement of foreign judgments and arbitration awards at common law and under statutes. Defences to enforcement. *Lis alibi pendens*.

2. *Comparative Conflict of Laws*

The relation between public and private international law and between the sovereignty concept and the conflict of laws. The difference between international, inter-local and inter-personal conflicts.

The following theories of the conflict of laws : territorial, including vested rights, internationalist, local law and administration of justice. The influence of Bartolus, Huber, Savigny, Story and Dicey on the conflict of laws.

Public policy and *ordre public*.

The general problems of the basis of the personal law. Domicil in U.S.A. and on the Continent. The problem of the wife's dependent domicil. The treatment of marriage, parental power, and the status of legitimacy in foreign conflicts systems.

The principle of *locus regit actum*.

The Law governing corporations. The conflict between the law of incorporation and the law of the administrative centre.

The doctrine of the proper law and *autonomie de la volonté*, particularly in the law of contracts.

The doctrines of reciprocity and obligation in the recognition and enforcement of foreign judgments.

The place of treaties in the conflict of laws. Attempts at unification with special reference to the Hague Conventions, and the American Law Institute's Restatement of the Conflict of Laws.

NOTE.—Candidates are not expected to know the details of the various systems of Private International Law, but are expected to know the main differences in broad principle between the English and foreign systems. Although it is possible to take this subject without knowing any foreign language, a knowledge of French or German is an advantage.

Books Recommended

1. *English Conflict of Laws*

Text-books :—

Cheshire : *Private International Law* (3rd ed.).

Graveson : *Conflict of Laws*.

Graveson : *Cases on the Conflict of Laws*.

Works of Reference :—

Dicey : *Conflict of Laws* (6th ed.).
Westlake : *Private International Law* (7th ed.).
Schmitthoff : *English Conflict of Laws* (2nd ed.).
Falconbridge : *Essays in the Conflict of Laws.*

2. *Comparative Law*

Text-books :—

Wolff : *Private International Law.*
Kuhn : *Comparative Commentaries on the Conflict of Laws.*

Works of Reference :—

(*a*) General.

Rabel : *Conflict of Laws.*
Lorenzen : *Selected Articles on the Conflict of Laws.*

(*b*) Canada.

Falconbridge : *Essays in the Conflict of Laws.*
Johnson : *The Conflict of Laws with special reference to the law of the Province of Quebec.*

(*c*) United States.

Restatement of the Conflict of Laws (American Law Institute).
Beale : *Conflict of Laws.*
Beale : *Cases on the Conflict of Laws.*
Cook : *The Logical and Legal Bases of the Conflict of Laws.*

(*d*) Continental Countries.

Niboyet : *Traité de Droit International Privé Français.*
Battifol : *Traité Elémentaire de Droit International Privé.*
Arminjon : *Précis de Droit International Privé.*
Schnitzer : *Handbuch des Internationalen Privatrechts* (2nd ed.).
Nussbaum : *Deutsches Internationales Privatrecht.*
Raape : *Deutsches Internationales Privatrecht* (2nd ed.).

NOTE.—On both parts 1 and 2 of the syllabus candidates are advised to read relevant articles in The British Yearbook of International Law, the leading English and American Law reviews and, for surveys of the leading Continental systems, the Recueil des Cours de l'Académie de Droit International à la Haye.

(10) Muhammadan Law

The law of succession at death including Inheritance, Legacies, and Administration.

Candidates will be required to know the law according to at least two of the following schools : Hanafi, Maliki, Shafi'i, Ithna Ashari ; but are not precluded, alternatively, from offering other schools provided the sanction of their supervisor is obtained.

They should also be conversant with modern legislative and judicial developments of the law in force in Pakistan and will also be given opportunity to show a knowledge of similar developments elsewhere. They should know the original Arabic authorities so far as these have been translated into English. Knowledge of Arabic is not essential but opportunity will be given for a candidate to obtain credit for such knowledge.

Books Recommended

Text-books :—

Mulla : *Principles of Mahomedan Law* (11th ed.).

FitzGerald : *Muhammadan Law.*

Wilson : *Digest of Anglo-Muhammadan Law* (6th ed.).

Tyabji : *Principles of Muhammadan Law* (3rd ed., 1940).

Saksena : *Muslim Law as administered in British India.*

Ameer Ali : *Mohammedan Law* (4th ed., 2 vols., 1912 and 1918).

Russell and Suhrawardy : *First Footsteps in Muslim Jurisprudence.*

Code of Mohammadan Hanifite Personal Law, Kadri Pasha (trans. Sterry and Abcarius).

Reference Books :—

(a) *Original authorities*

Those texts of the Qoran which deal specifically with law. These may be found collected, e.g., in Wilson's Digest, above cited.

Hamilton : *Hedaya.*

Baillie : *Digest* (Haneefeea) and *Code* (Imameea).

Baillie : *Moohummudan Law of Inheritance.*

Jones's translation of the Sirajiyya, preferably in Rumsey's edition.

Brij Mohan Doyal : *Durr ul Mukhtar.*

Howard : *Minhaj et Talibin.*

(b) *Other Works for Reference*

The volumes in the Tagore Law Lectures Series dealing with topics of Muhammadan Law. These are recommended to be consulted for the personal views of their authors, not for the latest developments which may be more conveniently found in text-books. Accordingly the latest edition published in the author's own lifetime will suffice.

Nawab Abdur Rahman : *Institutes of Muhammadan Law.*

Aghnides : *Mohammedan Theories of Finance.*

(11) Hindu Law

The joint Family and Partition. The subject will include both Mitakshara and Dayabhaga systems : the constitution and property of the joint family and the coparcenary ; rights and duties of the members ; maintenance ; debts and " the pious duty " ; rights, powers and liabilities of the manager, ancestral, or family business, partition. Modern case law and statutory modifications of Hindu law within the special subject.

Candidates will be required to know the original Sanskrit authorities so far as available in translations. Knowledge of Sanskrit is not essential but opportunity will be given for candidates to obtain credit for such knowledge.

Books Recommended

Text-books :—

Raghavachariar : *Hindu Law, Principles and Precedents* (3rd ed., 1947, M.L.J. Office, Mylapore, Madras).

Mulla : *Principles of Hindu Law* (7th or later ed.).

Mayne : *Hindu Law and Usage* (10th ed., Srinivasa Iyenga or later).

Report and proposals of the Committee on Codification of Hindu Law.

Reference Books :—

(a) *Original authorities*

Manu (any edition of Jones's translation or that in the S.B.E. or Burnell).

Yajnavalkya (in Mandlik, cited below).

Minor Law Books (in the S.B.E.).

Stokes : *Hindu Law Books.*

Setlur : *Treatises on the Hindu Law of Inheritance* (or the separately published treatises).

Gharpure : *Mitakshara* (complete).

Vyavahara Mayukha (any of the four translations).

Katyayana Smriti (Kane's translation).

(b) *Other works for reference*

The volumes in the Tagore Law Lectures Series dealing with topics of Hindu Law. These are recommended to be consulted for the personal views of their authors, not for the latest developments which may be more conveniently found in text-books. Accordingly, the latest edition published in the author's own life-time will suffice.

J. N. Bhattacharya : *Commentaries on the Hindu Law.*

Golap Chandra Sarkar Sastri : *Hindu Law.*

J. C. Ghose : *Hindu Law.*

Rao Bahadur V. S. Mandlik, C.S.I. : *Yajnavalkya and Vyavahara Mayukha.*

West and Buhler : *Digest of Hindu Law.*

P. V. Kane : *History of Dharmasastra.*

(12) (*a*) Law of Landlord and Tenant

Historical introduction.

Creation, assignment and determination of leases and tenancies.

Rights and duties of the parties under leases and tenancies.

Special statutory obligations affecting leases and tenancies.

General principles of the law affecting Rent Restrictions.

The Agricultural Holdings Act, 1948.

Books Recommended

Text-books :—

Megarry : *Rent Restrictions.*

Muir Watt : *The Agricultural Holdings Act,* 1948.

Foa : *General Law of Landlord and Tenant* (7th ed.).

Further reading :—

Articles and notes in *Law Quarterly Review, Modern Law Review,* and *Conveyancer and Property Lawyer.*

Woodfall : *Landlord and Tenant* (24th ed.).

(12) (*b*) Planning Law

The historical development of town and country planning and control of agricultural land.

Machinery of planning and control. The Central Land Board, Agricultural Land Commission, County Agricultural Executive Committees, and Agricultural Land Tribunals, their functions and powers. Local planning authorities and joint planning boards, and their powers. Delegation of functions and powers. Judicial intervention.

Method of planning control. The preparation and revision of Development Plans by local planning authorities, and the powers and duties of the Minister of Town & Country Planning in relation thereto.

Control of development and advertisements. Applications for planning permission ; applications to determine whether planning permission required, appeals to Minister of Town & Country Planning. Rights of owner if planning permission is refused, revoked or modified. Default powers of the Minister of Town & Country Planning. Orders for preservation of trees, woodlands, and buildings of special architectural or historic interest. Development Orders.

Development charge. Nature, incidence, determination and security.

Enforcement of planning control. Enforcement notices and appeals ; penal development charges.

Depreciation of Land Values. Nature of rights arising from claims for loss of development value, including assignment.

Control of agricultural land. Supervision Orders, directions, and dispossession. Ministerial powers of management.

Compulsory acquisition. Compulsory acquisition of land by Ministers, local authorities, statutory undertakers, and Central Land Board for the purposes of planning control.

Candidates will be expected to be acquainted with the main provisions of the New Towns Act, 1946, the Town and Country Planning Act, 1947, and the Agriculture Act, 1947, and with the statutory instruments made under or by virtue of such Acts.

Books Recommended

Preliminary reading :—

Report of the Royal Commission on the Distribution of the Industrial Population (Barlow Report)—Cmd. 6153.

Report of the Committee on Land Utilisation in Rural Areas (Scott Report)—Cmd. 6378.

Final Report of the Expert Committee on Compensation and Betterment (Uthwatt Report)—Cmd. 6386.

Text-books :—

Charlesworth : *The Principles of Planning Law* (2nd ed.).

Heap : *Outline of The New Planning Law.*

Howard Roberts : *The Law of Town & Country Planning.*

Phillips : *The Agriculture Act*, 1947.

Further reading :—

Doble : *Town Planning Contraventions*, The Conveyancer and Property Lawyer (1947), Vol. 11, p. 190.

FitzGerald : *General Aspects of the Town & Country Planning Act*, 1947 : The Solicitor (1948), Vol. 15, p. 124 ; Development, *ibid.*, pp. 147, 171 and 196 ; Claims for Depreciation of Land Values, *ibid.*, p. 220 ; Development Charges, *ibid.*, p. 244, and (1949) Vol. 16, pp. 3 and 27 ; Bureaucratic Interference, *ibid.*, Vol. 15, p. 267 ; Conveyancing Points, *ibid.*, Vol. 16, pp. 51, 75, 99 and 125 ; and Registered Land, *ibid.*, p. 148. *Planning and Development under the Town & Country Planning Act*, 1947 (Modern Law Review, 1948), Vol. II, p. 401.

Graper : *Development Procedure under the Town & Country Planning Act*, 1947.

Potter : *New Land Law under the Town & Country Planning Bill :* The Conveyancer and Property Lawyer (1947), Vol. 11, p. 147 ; Twilight of Landowning, *ibid.* (1948), Vol. 12, p. 3 ; Caveat Emptor or Conveyancing under the Planning Acts, *ibid.* (1949), Vol. 13, p. 36.

Journal of Planning Law.

NOTE.—Candidates will be supplied in the examination-room with King's Printer copies of the New Towns Act, 1946, Town and Country Planning Act, 1947, and the Agriculture Act, 1947.

(13) Administrative Law and Local Government Law

The administrative, legislative and judicial powers of central and local government authorities in relation to (*a*) medical and welfare services, and (*b*) housing.

The administration of national insurance and national assistance.

The administration of (*a*) the production and supply of coal, gas and electricity, and (*b*) road, rail and water transport.

The control of administrative tribunals and administrative legislation in England, United States of America and France.

Books Recommended

The following books, which should be regarded as *additional* to those recommended in the syllabus in English Administrative Law for the LL.B. examination (pp. 613–14) :—

1. *General Principles*

Willis : *Parliamentary Powers of English Government Departments.*

Graham-Harrison : *Notes on Delegated Legislation.*

Dickinson : *Administrative Justice and the Supremacy of Law in the United States.*

Vernon and Mansergh : *Advisory Bodies.*

Pound : *Administrative Law.*

Blachly and Oatman : *Administrative Legislation and Adjudication.*

Hauriou : *Précis de Droit Administratif.*

Federal Administrative Procedure Act, 1946.

Minutes of Evidence and Third Report of Select Committee on Procedure (H.C. 189 of 1945–6).

Report of Haldane Committee on Machinery of Government (1918 Cmd. 9230). Minutes of Evidence and Report of Select Committee on Procedure in Public Business (H.C. 161 of 1931, H.C. 129 of 1932).

Schwartz : *The American Administrative Procedure Act*, 1946 (63 L.Q.R. 43).

2. *Central and Local Government*

Simon : *A City Council from Within.*

Dale : *The Higher Civil Service.*

Greaves : *The Civil Service in the Changing State.*

Robson : *Law of Local Government Audit.*

3. *Public Corporations*

Cushman : *The Independent Regulatory Commissions.*

NOTE.—Candidates will be supplied in the examination-room with King's Printer copies of the Housing Act, 1936; Statutory Orders (Special Procedure) Act, 1945; Statutory Instruments Act, 1946; Coal Industry Nationalisation Act, 1946; National Health Service Act, 1946; National Insurance Act, 1946; National Insurance (Industrial Injuries) Acts, 1946 and 1948; Electricity Act, 1947; Transport Act, 1947; Gas Act, 1948; and National Assistance Act, 1948.

(14) Criminology

I. *Introduction.* The legal and the criminological conception of crime. Relation between Criminology and Criminal Law. Adult Criminal Courts, Juvenile Courts, and some specific problems of Criminal Procedure.

II. *Criminology.* Methods of Study. Physical, psychological and sociological factors in criminal behaviour. Legal principles relating to insanity, mental deficiency and other forms of mental abnormality. Juvenile and female delinquency. Prostitution.

III. *Penology.* Philosophical, psychological and historical aspects of Punishment. The present penal system. Prison. Borstals. Institutions for young offenders. Probation. Problems of Prevention.

Books Recommended

I. *Text-books :—*

Cyril Burt : *The Young Delinquent.*

Rupert Cross and P. Asterley Jones : *An Introduction to the Criminal Law.*

A. E. Jones : *Juvenile Delinquency and the Law* (Pelican Book).

C. S. Kenny : *An Outline of the Criminal Law.*

H. Mannheim : *Criminal Justice and Social Reconstruction ; The Dilemma of Penal Reform.*

W. Reckless : *Criminal Behaviour.*
E. H. Sutherland : *Principles of Criminology.*
Donald Taft : *Criminology.*
H. E. Barnes and N. K. Teeters : *New Horizons in Criminology.*
} *One* of these four.

Home Office, Prisons and Borstals (H.M. Stat. Off., 1945).

II. *Further Reading and Reference :—*

A. Aichhorn : *Wayward Youth.*

Mark Benney : *Low Company ; Gaol Delivery.*

John Bowlby : *Forty-Four Juvenile Thieves.*

A. M. Carr-Saunders, H. Mannheim, E. C. Rhodes : *Young Offenders.*

W. Norwood East : *Introduction to Forensic Psychiatry ; Society and the Criminal.*

A. C. Ewing : *The Morality of Punishment.*

L. W. Fox : *The Modern English Prison.*

K. Friedlander : *The Psychoanalytical Approach to Juvenile Delinquency.*

Sheldon and Eleanor Glueck : *After-Conduct of Discharged Offenders* (English Studies in Criminal Science, Vol. V).

M. Grünhut : *Penal Reform.*

W. Healy and A. Bronner : *New Light on Delinquency.*

W. Healy and B. Alper : *Criminal Youth and the Borstal System.*

D. K. Henderson : *Psychopathic States.*

H. H. Lou : *Juvenile Courts in the U.S.A.*

H. Mannheim : *Social Aspects of Crime in England between the Wars ; Juvenile Delinquency in an English Middletown.*

Claud Mullins : *Crime and Psychology ; Why Crime ?*

Leo Page : *The Sentence of the Court.*

L. Radzinowicz and J. W. C. Turner (ed.) : *Mental Abnormality and Crime ; The Modern Approach to Criminal Law ; Penal Reform in England.*

L. Radzinowicz : *A History of English Criminal Law,* Vol. I.

Edward Robinson : *Just Murder.*

G. Rusche and O. Kirchheimer : *Punishment and Social Structure.*

Russell : *Crime, a Treatise on Felonies and Misdemeanours* (10th ed.).

John A. F. Watson : *The Child and the Magistrate.*

Lawless Youth ; published by the Howard League for Penal Reform.

Annual Reports of the Prison Commission for 1947 and 1948 (Home Office).

The Probation Service (Home Office).

Capital Punishment (Home Office, Cmd. 7419, 1948).

DOCTOR OF PHILOSOPHY (Ph.D.)

[Regulations for the Degree of Ph.D. will be found on pp. 106–115. Copies can be obtained from the Academic Registrar.]

DOCTOR OF LAWS (LL.D.)

(a) General Regulations

A candidate for the LL.D. Degree must have previously obtained the LL.M. Degree, or the Ph.D. Degree in the Faculty of Laws, as an Internal Student.

Nevertheless a candidate who has obtained the LL.B. Degree as an Internal Student may, in exceptional circumstances, be exempted from this requirement on the ground of published work.

A candidate may make application at any time for the Degree. He must apply to the Academic Registrar for an entry-form, which must be returned accompanied by published work or works or by a dissertation or thesis, and by the proper fee.

Every candidate for the LL.D. Degree must pay at each entry a fee of 20 guineas, except those candidates who have been credited with the fee of 6 guineas when taking the LL.B. Examination as a qualification for the LL.D. Degree under Regulations in force before 1930.

All cheques should be made payable to the University of London or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The candidate must furnish not less than four copies of the published work or dissertation or thesis submitted to the Examiners.

The Examiners may at their discretion require the candidate to present himself for an interview.

A diploma for the Degree of LL.D., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

A candidate who fails to pass the LL.D. Examination will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

(b) Applications in respect of published work

Together with his entry-form the candidate must submit evidence of his qualifications, such evidence to consist of published papers or books containing original contributions to the advancement of legal knowledge. In the event of a candidate submitting any conjoint work in support of his candidature he must state fully his own share in such conjoint work. The Degree will not be conferred in respect of conjoint work only.

(c) Applications in respect of unpublished work

Every candidate for the Degree of LL.D. shall upon the above-mentioned entry-form, state in writing the special subject within the purview of the Faculty of Laws upon a knowledge of which he rests his qualification for the Doctorate. Together with the entry-form he shall transmit his dissertation or thesis, printed or typewritten, dealing with some special portion of the subject mentioned on the entry-form.

The candidate must state how far the dissertation or thesis embodies the result of his own research, whether it has been conducted independently, or in co-operation with others.

Any dissertation or thesis submitted for the LL.D. Degree must be written in English and must constitute an original contribution to the advancement of legal knowledge, must be satisfactory as regards literary presentation, as well as in other respects, and must be submitted in a form suitable for publication.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of the study of Law which he may have published independently or conjointly.

A candidate will not be permitted to submit as his dissertation or thesis work for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or any other University in a dissertation or thesis covering a wider field, provided that he shall indicate clearly any work which has been so incorporated.

A candidate for the Degree who has been approved by the Examiners shall be required to publish his thesis or dissertation as a whole, and the Degree shall not be conferred on him until four copies of the published work as approved by the Examiners have been received by the Senate.

Work approved for the Degree of LL.D. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

EXAMINATION-PAPERS

The following pamphlets or sets of past examination-papers can be obtained from the University of London (Publications Section), Senate House, W.C.1.

	s.	*d.*	
Intermediate Laws	1	6	post free.
LL.B.	2	0	,,
*LL.M.	1	3	,,

A complete list of examination-papers published by the University can be obtained on application.

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* Enquirers should state subjects.

UNIVERSITY OF LONDON

Faculty of Music

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following Degrees in the Faculty of Music :—

Bachelor of Music (B.Mus.).
Doctor of Philosophy (Ph.D.).
Doctor of Music (D.Mus.).

In order to be admitted to the Degree of Bachelor of Music (B.Mus.) as an Internal Student, a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Music unless exempted therefrom.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the course for the Intermediate and Final Examinations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Music.

INTERMEDIATE EXAMINATION IN MUSIC

Course of Study

The course of study for the Intermediate Examination in Music extends over not less than one academic year.

The subjects of the course are as follows :—

History of Music
Form and Analysis
Harmony and Counterpoint.

Exemptions

A candidate who has passed the B.A. General Examination of this University with Music as one of his subjects, or who has passed in Music as a subsidiary subject for B.A. Honours Degree is not, thereby, necessarily exempted from the Intermediate Examination in Music. He may, however, apply at the time of registration for exemption from the Intermediate Examination in Music ; each case will be considered on its merits.

355/3/1000/8/50. W. & S. Ltd.

Date of Examination

The Intermediate Examination in Music will take place twice in each academic year, commencing on a date towards the end of June, and on the second Tuesday in December.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than May 1st for the June Examination or November 5th for the December Examination.

Every student will further be required to send in a certificate of having passed the test examinations in force in the institution or institutions at which he has studied.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and oral examinations.

Fee

The fee for each student is 6 guineas for each entry to the whole Examination and 2 guineas for re-examination in one subject.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Intermediate Examination are as follows:—

History of Music and *Form and Analysis*—one paper.

Harmony—one paper.

Counterpoint—one paper.

There will also be an oral examination in general musical knowledge, including elementary Acoustics as affecting musical instruments.

Candidates shall not be approved unless they have shown a competent knowledge in each of the three subjects of the Examination. A candidate who enters for the whole Examination at one and the same time may be permitted, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the subjects in which he has passed is of sufficient merit, to present himself on one or more occasions for re-examination in that subject alone (see General Regulations for Intermediate Examinations, p. 10).

A provisional list of successful candidates in alphabetical order will be published by the Academic Registrar at 2 o'clock on January 3rd.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SYLLABUSES

History of Music

General Outlines of Musical History.

Form and Analysis

Principles of design as illustrated in both vocal and instrumenta compositions.

Harmony and Counterpoint

Harmony and Counterpoint in not more than four parts, vocal and instrumental.

B.MUS. DEGREE

[*These Regulations are in force for Examinations in* **1950** *and* **1951** *only.*]

COURSE OF STUDY

The Course for the Final Examination normally extends over two academic years.

The subjects for the first year of the Final Course are as follows :—

Harmony and Composition.
Fugue.
Counterpoint and Canon.
History of Music.
Musical Analysis.

The subjects for the second year of the Final Course are as follows :—

Study of Composition.
Preparation of a Musical Exercise.

DETAILS OF EXAMINATION

The Examination for the Degree of Bachelor of Music is divided into two parts, Part I consisting of a written and an oral examination, and Part II of a musical exercise. Part I may be taken at the end of the first year of the Final Course and Part II at the end of the second year of the Final Course.

No candidate will be admitted to Part II unless he has passed Part I

PART I

Part I of the Examination for the Degree of Bachelor of Music will be held once in each year, commencing on the second Tuesday in December.

Every student entering for Part I of the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee not later than November 5th.

The student will further be required to send in a certificate of having passed the test examinations in force in the institution or institutions at which he has studied.

The time-table showing both the time and place of the written and oral examinations will be furnished by the Academic Registrar to each candidate.

The fee for each student is 2 guineas for each entry to Part I of the examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The subjects of Part I of the Examination are as follows :—

Harmony and Composition—one paper.

Fugue—one paper.

Counterpoint and Canon—one paper.

History of Music—one paper.

Musical Analysis—an oral examination on the two prescribed works and on any other musical points at the discretion of the Examiners.

No use of any musical instrument will be allowed during the Examination unless specially directed by the Examiners.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the foregoing subjects.

A provisional list of successful candidates at Part I, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on January 3rd.

*PART II**

Every candidate must submit, at Part II of the Examination, a Musical Exercise, which must be clearly and legibly written in the proper clefs, paginated and securely bound and lettered up the back with the short title of the work, the degree and year of entry. The candidate's name must not appear on the Exercise. The Exercise must be of such a length as to occupy from 20 to 40 minutes in performance, and fulfil the following conditions :—

The exercise must be *either*

(*a*) The following *Group* :—

(1) First movement of either a String Quartet or a Pianoforte Trio.

(2) A Vocal work (Part-song, Madrigal, Anthem, or Motet) with or without accompaniment.

(3) A pianoforte piece in definite form, excluding Sonata Form.

(4) A song with pianoforte accompaniment.

or (*b*) A String Quartet in four movements as follows :—

(1) In Sonata Form.

(2) A Slow Movement in either simple Ternary, Abridged Sonata, or old Rondo Form ; or a set of Variations.

(3) A Minuet or Scherzo and Trio.

(4) In Sonata Rondo Form.

The candidate may reverse the order of (2) and (3) if desired.

The work must reveal a competent knowledge of design and of the development of thematic material, facility in harmony, and counterpoint. No exercise will be regarded as sufficient solely on the ground that it is free from technical errors.

The candidate will be required to make a solemn declaration that the exercise is entirely his own unaided composition.

Musical Exercises submitted for Part II of the Examination will be examined twice a year, in March and October. Every student entering for Part II must apply to the Academic Registrar for an entry-form and certificate of course of study which must be returned, duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, a musical exercise and the solemn declaration prescribed above, not later than March 1st or October 1st.

The fee for each student is 4 guineas for each entry to Part II of the examination.

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* Although the examination for Part I of the B.Mus. Degree under the existing Regulations will be held for the last time in 1951, candidates who have passed Part I are permitted to enter for Part II at any subsequent date.

A candidate whose exercise has been rejected shall not be permitted on re-entry to submit the rejected exercise in an amended form unless the Examiners have so recommended. An unsuccessful candidate will be required on re-entry to state whether the exercise which he submits has been previously submitted or not.

The musical exercise of each candidate who has passed will be deposited in the Library of the University.

A diploma for the Degree of B.Mus., under the Seal of the University, will be delivered to each candidate who has passed both parts of the Examination, after the Report of the Examiners shall have been approved by the Senate.

SYLLABUSES

Harmony and Composition

Harmony and Composition in not more than five parts, vocal and instrumental.

Fugue

Fugue up to four parts, vocal or instrumental.

Counterpoint and Canon

Counterpoint up to five parts (instrumental and vocal) including knowledge of the 16th Century style. Double Counterpoint. Canon 2 in 1, with or without the addition of a free part or parts.

History of Music

General History of Music (including detailed criticism of a special prescribed period), criticism, and form.

1950. The Polyphonic Period (Oxford History of Music, Vol. II, ed. Buck).

1951. The Age of Bach and Handel (Oxford History of Music, Vol. IV).

Musical Analysis

The critical analysis of two important works representing two different periods or phases in Art, such as opera and an independent overture, or a symphony and a cantata.

1950. Elgar: *Symphony* No. 2.

Byrd: *Mass* in five parts.

1951. Mozart: *The Marriage of Figaro* (vocal score).

Vaughan Williams: *Symphony* No. 5 in D (Oxford University Press).

B.MUS. DEGREE

REVISED REGULATIONS

[*For Examinations in and after* **1951**]

COURSE OF STUDY

The course for the Final Examination normally extends over two academic years.

The subjects for the final examination are as follows :—

1. Harmony and Counterpoint.
2. Fugue, including canonic writing.
3. Orchestration.
4. History of Music.
5. Two Special Subjects selected by the candidate from the list of Special Subjects enumerated in the paragraph " Details of Examination " below :—
6. An Oral Examination.
7. A Practical Test.

A candidate who has passed Part I only of the B.Mus. Examination under former Regulations may enter for the B.Mus. Examination under these Regulations, but will not be exempted from any part of the Examination.

DATE OF EXAMINATION

The Examination for the B.Mus. Degree will take place once in each year, beginning on the second Tuesday in December.

Every student entering for the B.Mus. examination must apply to the Academic Registrar for an entry form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than November 5th.

The candidate will further be required to send in a certificate of having passed the test examinations in force in the institution or institutions at which he has studied.

The time-table showing both the time and place of the written and oral examinations and of the practical test will be furnished by the Academic Registrar to each candidate.

FEE

The fee for each student is 6 guineas for each entry to the B.Mus. Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

DETAILS OF EXAMINATION

The examination will consist of 5 papers, an oral examination and a practical test, as follows :—

(1) Harmony and Counterpoint—one paper.

(2) Fugue, including canonic writing—one paper.

(3) Orchestration—one paper. Candidates will be expected to show some knowledge of the instruments normally found in a modern symphony orchestra, of their chief characteristics and their employment in scoring ; and to arrange a given piece of music for a specified small orchestra.

(4) History of Music—one paper on a prescribed special period.

(5) Special Subjects—An intensive study of any *two* of the following chosen by the candidate (one paper) :—

(i) The relation of the growth of instrumental technique to, and the development of (*a*) orchestral music *or* (*b*) keyboard music *or* (*c*) string music.

(ii) (*a*) The Bach Cantata *or* (*b*) The Bach Choral Prelude *or* (*c*) Passion music and its history.

(iii) (*a*) 19th century development of the *Lied or* (*b*) The Tudor madrigalists and the Lutenist songwriters.

(iv) (*a*) Wagner's operatic theory and practice *or* (*b*) Italian opera from Rossini to Puccini.

(v) Ballet music.

(vi) The development of the Concerto.

(6) Oral examination on two prescribed works.

(7) Practical test of ability to play on the piano from an orchestral score previously studied for 20 minutes ; to transpose (not more than a tone up or down) a chorus and supply suitable harmonic support ; to play at sight a vocal score with G and F clefs or a simple movement of a string quartet.

Except in the practical test no use of any musical instrument will be allowed during the Examination unless specially directed by the Examiners.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the foregoing subjects.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar at 2 o'clock on January 3rd. Successful candidates will be awarded First Class Honours, or Second Class Honours, or a Pass Degree. The names will be in alphabetical order in each division.

A diploma for the Degree of B.Mus., under the Seal of the University will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for the B.Mus. Degree under the revised Regulations may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates who have completed papers 1, 2 and 3 are eligible to apply for an Aegrotat Degree, but they will be required to attend on a date to be decided, for (i) the practical test, in which they must satisfy the Examiners, and (ii) an oral examination on the subject-matter of the remaining papers.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or Higher Degree on complying with the Regulations for such Degree.

SPECIAL PRESCRIBED PERIODS AND RECOMMENDED WORKS

The books recommended for reading are merely suggestions, and candidates should not confine their attention to them alone. Questions are set on each period, and not on any particular book concerning that period.

1951. Paper 4, History of Music: The Age of Bach and Handel. Recommended work: *The Oxford History of Music*, Vol. IV.

Oral Examination: Mozart: *The Marriage of Figaro* (vocal score); Vaughan Williams: *Symphony No. 5 in* D (Oxford University Press).

1952. Paper 4, History of Music: Symphony and Drama, 1850–1900. Recommended work: *The Oxford History of Music*, Vol. VII.

Oral Examination: Holst: *The Hymn of Jesus*; Brahms: *Symphony No. 2 in D.*

1953. Paper 4, History of Music: The Polyphonic Period. Recommended Work: *The Oxford History of Music*, Vol. II.

Oral Examination: Brahms: *Violin Concerto*; Vaughan Williams: *Sea Symphony.*

DOCTOR OF PHILOSOPHY (Ph.D.)

[Regulations for the Degree of Ph.D. will be found on pp. 106–115.]

DOCTOR OF MUSIC (D.Mus.)

The Examination for the Degree of Doctor of Music shall consist of a written and an oral examination, and of a musical exercise.

The written examination for the Degree of Doctor of Music will be held once in each year, commencing on the second Tuesday in December.

No person shall be admitted as a candidate to this Examination until after the expiration of two academic years from the time of his passing Part II of the B.Mus. Examination in this University under the old Regulations, but in exceptional circumstances this interval may be reduced.

Every candidate for this Examination must apply to the Academic Registrar for an entry-form not earlier than September 22nd, which must be returned not later than November 5th, accompanied by the candidate's fee.

The written examination will include one paper in Harmony and Composition, one in Fugue, one in Counterpoint and Canon, one in Orchestration, one in the History of Music.

After the written examination, the candidate shall be required to present himself at such a place in the University as the Examiners direct, upon such day or days as may be notified to him, to be further tested orally with reference to his knowledge of standard works.

No use of any musical instrument will be allowed during the Examination unless specially directed by the Examiners.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the foregoing subjects.

If the Examiners consider that the candidate has reached the required standard at the oral examination but that he has not reached the required standard at the written examination, they may recommend that the candidate be exempt, on re-entry, from a further oral examination.

Candidates who have obtained the Ph.D. Degree in the Faculty of Music are not on that ground exempted from any of the requirements for the D.Mus. Degree.

The syllabuses of the subjects are as follows :—

Harmony and Composition

Harmony and Composition up to eight parts, vocal and instrumental.

Counterpoint and Canon

Counterpoint up to eight parts (free). Double and Triple Counterpoint and other contrapuntal devices. Canon up to four parts with or without accompaniment.

Fugue

The composition of a Fugue in not more than five parts on a given subject, vocal or instrumental.

Orchestration

The scoring of given or original passages for full orchestra or for special combinations of instruments.

History of Music

A general knowledge of the History of Music, and especially of the most important forms of the art. A critical knowledge in some detail of the great standard compositions.

Musical Exercise

A candidate who has passed the written examination may submit a musical exercise. Musical exercises will be examined twice a year, in March and October, and must be submitted not later than March 1st or October 1st.

Such Musical Exercises must be clearly and legibly written in the proper clefs,* paginated and securely bound and lettered up the back with the short title of the work, the degree and year of entry The candidate's name must not appear on the Exercise.

The Exercise must be of such length as to occupy at least 40 minutes in performance. It must be either :—

(i) a work for Chorus and Full Orchestra, with or without Solo voices ;

or (ii) a Symphony for Full Orchestra in the usual four movements.

The exercise will be judged solely on the grounds of artistic value.

The candidate will be required to make a solemn declaration that the exercise is entirely his own unaided composition.

* Candidates are requested, in sending in their exercises, to write on each page all the key signatures of the several instruments, to state the keys of Clarinets, Horns and Trumpets in the usual way, and to bracket their groups as a help to the eye.

A candidate will not be permitted to submit as his musical exercise a musical exercise for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a musical exercise covering a wider field, provided that he shall indicate on his entry-form and also on his musical exercise any work which has been so incorporated.

Any candidate whose exercise has been rejected by the Examiners, may send in another exercise.

A candidate whose exercise has been rejected shall not be permitted on re-entry to submit the rejected exercise in an amended form unless the Examiners have so recommended. An unsuccessful candidate will be required on re-entry to state whether the exercise which he submits has been previously submitted or not.

Every candidate for the D.Mus. Degree must at the first entry pay a fee of 20 guineas, which shall include a first entry to the written examination and a first presentation of a musical exercise, and every candidate rejected at the written examination must on a subsequent entry therefor pay a fee of 10 guineas, and every candidate rejected on his exercise must on a subsequent presentation of a musical exercise pay a fee of 10 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The Examiners shall report to the Senate upon each case separately, and after the Report of the Examiners shall have been approved by the Senate, the Academic Registrar shall publish a list of the candidates who have passed.

The musical exercise of each candidate who has passed will be deposited in the Library of the University.

A diploma for the Degree of D.Mus., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

A candidate who fails to pass the D.Mus. Examination will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

EXAMINATION-PAPERS

Pamphlets of past papers for the Intermediate, B.Mus., and D.Mus. Examinations can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 2s. 3d., post free.

A complete list of examination-papers published by the University can be obtained on application.

UNIVERSITY OF LONDON

Faculty of Medicine

REGULATIONS FOR INTERNAL STUDENTS
Session 1950-51

The University confers the following Degrees in the Faculty of Medicine :—

Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.).
Doctor of Medicine (M.D.).
Master of Surgery (M.S.).
Doctor of Philosophy (Ph.D.), in non-clinical subjects only.
Bachelor of Dental Surgery (B.D.S.).
Bachelor of Pharmacy (B.Pharm.).

For Regulations for the Ph.D. Degree *see* pp. 106–115, and for the B.D.S. Degree *see* pp. 843–852.

For information regarding the B.Pharm. Degree reference should be made to the separate Regulations (pp. 901–907).

In order to be admitted to the M.B., B.S. Degrees a student must normally, after Matriculation, or registration as exempt therefrom, and after registration as an Internal Student, have—

(1) attended prescribed courses of study for five and a half years in one or more Schools of the University ;

(2) passed the following Examinations :—

(*a*) First Examination for Medical Degrees (Inorganic Chemistry, Physics (including Mechanics), and General Biology), not less than nine months after Matriculation.*

(*b*) Second Examination for Medical Degrees (Human Anatomy, Physiology, and Pharmacology) not less than 18 months after completing the First Examination.

(*c*) Third Examination for Medical Degrees or M.B., B.S. Examination, Parts II and III of which must be taken not less than three years after passing the Second Examination, and not less than five years and a half after Matriculation.†

EXEMPTIONS‡

Exemptions from the normal course of study and Examinations may be granted as follows :—

1. In respect of *Matriculation* (*see* General Regulations).

* Internal Students who matriculate in January will be permitted to enter for the First Examination for Medical Degrees in the following June, provided that they have attended the prescribed course of study for such Examination throughout the session, and provided that they receive the approval therefor of the Governing Body of the School to which they belong, or, in the case of students at an Institution other than a School of the University, of the Recognised Teachers under whom they have studied.

† But *see under* Exemptions, 4, below.

‡ Certain exemptions which apply only to a small number of candidates who began their medical course under Regulations which have been for some time obsolete are not published with current Regulations ; but information with regard to such exemptions is obtainable on application to the Academic Registrar.

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2. In respect of the Course for the *First Examination for Medical Degrees*, and in respect of that Examination :—

(i) Exemption from courses of study for the First Examination for Medical Degrees and for the Second Examination for Medical Degrees, in whole or in part, may be granted to students of other Universities. All applications will be considered on their merits.

(ii) Exemption from the First Examination for Medical Degrees, in whole or in part, may be granted to students who have passed all the examinations for a Science Degree of another University and to other applicants in exceptional circumstances only. All applications will be considered on their merits.

(iii) Students who have passed the Intermediate Examination in Arts, Science or Agriculture of this University, with Chemistry, or Physics, or Botany *and* Zoology, or (in and after 1949) with Biology, will be exempted at the First Examination for Medical Degrees from examination in the subjects in which they have passed.

(iv) Students who have passed the B.Sc. Examination with Physics, or Chemistry, or Botany *and* Zoology, will be exempted at the First Examination for Medical Degrees from examination in the subjects in which they have passed.

(v) Students who have presented themselves for the Internal Intermediate Examination in Science or Agriculture in the following four subjects taken at the same time, viz., Chemistry, Physics, Botany and Zoology, and have been referred in one subject, will be exempted at the First Examination for Medical Degrees from examination in the subjects in which they have passed ; provided that a student referred in Botany or Zoology shall not be exempted in Biology.

(vi) Students who have passed the Intermediate Examination in Household and Social Science will be exempted from the First Examination for Medical Degrees.

(vii) Students who enter a Medical School in October (or January) but are unsuccessful at the First Examination for Medical Degrees for External Students in the following December (or June) will, subject to the approval of the authorities of their Medical School, be admitted to the First Examination for Medical Degrees as Internal Students in June (or December) provided they have attended the full course of study in all the subjects of the Examination throughout the preceding three terms and have complied with the Regulations in other respects.

(viii) *Higher School Certificates*

Students who are matriculated students of the University and have passed a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools may apply for complete or partial exemption from the First Examination for Medical Degrees.

Applications must be submitted by the authorities of the School or Institution of the University at which the student proposes to follow his course of study.

Applications for exemption from the First Medical Examination will be considered only in respect of students who have obtained Higher School Certificates and have passed in any of the subjects, as main subjects, corresponding to those required for the First

Medical Examination. A student who has been exempted from one or two subjects of the First Examination for Medical Degrees will be required to take the remaining subject or subjects at the First Examination for Medical Degrees for Internal Students. If he is exempted from one subject only he must satisfy the Examiners in both the remaining subjects on the same occasion.

[In order to be exempted from General Biology the candidate must have passed in General Biology (or Biology in and after 1943) at the London Higher School Certificate Examination or in Botany and Zoology as main subjects at any of the approved Certificate Examinations.]

Students who are granted exemption from the whole Examination must pay a fee of 6 guineas. Students who are granted partial exemption must pay a fee of 6 guineas at their first entry for examination in the remaining subject or subjects of the First Examination for Medical Degrees.

3. In respect of the Course for the *Second Examination for Medical Degrees* and in respect of that Examination :—

(i) *See* para. 2 (i) above.

(ii) Students who have passed the B.Sc. (Special) Examination in Chemistry, or the B.Sc. (Special) Examination in Physiology with Chemistry as their Subsidiary Subject in or after 1934, or the B.Sc. (General) Examination with both Chemistry and Physiology, or the B.Sc. (Household and Social Science) Examination, and have obtained first or second class marks in Chemistry at any of the above Examinations will be exempted from the course of study and examination in the Organic Chemistry portion of the Second Examination for Medical Degrees.

(iii) External Students who have passed the First Examination for Medical Degrees may be admitted to the Second Examination for Medical Degrees as Internal Students if, subsequently to having passed the First Examination for Medical Degrees, they become Students at a School or Schools of the University for the remainder of their course, provided that they attend an Approved Course of Study therein, extending over 18 months subsequent to passing the First Examination for Medical Degrees, and comprising all the subjects of the Second Examination for Medical Degrees.

(iv) Registered Medical Practitioners who shall have passed the First Examination for Medical Degrees either as Internal or External Students or who have been exempted from that Examination may proceed to the Second Examination for Medical Degrees, and the M.B., B.S. Examination as Internal Students, without observing the intervals prescribed by the Regulations, on producing certificates that they have attended the prescribed courses of study for both Examinations at a School of the University, provided that no student shall be permitted to enter for Parts II and III of the M.B., B.S. Examination under this Regulation unless (*a*) he has attended the required course of study extending over at least 36 months, part or the whole of which may, however, have been followed prior to passing the Second Examination for Medical Degrees, and (*b*) at least three sessions of the course were attended subsequently to matriculation in the University.

(v) Students who have passed the B.Sc. (Special) Examination in Physiology, or the B.Sc. (Special) Examination with Physiology as their Subsidiary Subject, or the B.Sc. (General) Examination with Physiology, and have obtained first or second class marks in

Physiology at any of the above Examinations will be exempted from the course of study and examination in Physiology, but will be required to attend the prescribed course in Organic Chemistry and will be examined in that subject unless exempted under (ii).

4. In respect of the Course for the *Third Examination for Medical Degrees* :—

(i) External Students who have passed the Second Examination for Medical Degrees may be admitted to the Third Examination for Medical Degrees as Internal Students if, subsequently to having passed the Second Examination for Medical Degrees, they become students at a School or Schools of the University for the remainder of their course, provided that they attend an approved course of study therein, extending over three years subsequent to Matriculation, and comprising all the subjects of the Third Examination for Medical Degrees.

(ii) *See* under 3 (iv) above.

FIRST EXAMINATION FOR MEDICAL DEGREES

This Examination must be taken, as a rule, not less than nine months after Matriculation. Internal Students, however, who matriculate in January will be permitted to enter for the First Examination for Medical Degrees in the following June, provided that they have attended the prescribed course of study for such Examination throughout the session, and provided that they receive the approval therefor of the Governing Body of the School to which they belong, or, in the case of students at an Institution other than a School of the University, of the Recognised Teachers under whom they have studied.

Course of Study

The Course of Study extends over one academic year and consists of lectures and practical work in Inorganic Chemistry, Physics, and General Biology (*see* below).

Date of Examination

The First Examination for Medical Degrees will take place twice in each year, commencing on the last Monday in June and on the first Monday following December 5th.

The Examination in December is open normally only to the following candidates :—

(1) Candidates who have been " referred " in one subject at a previous Examination.

(2) Candidates exempted from one or two subjects of the Examination.

(3) Candidates who produce a medical certificate that they were prevented by ill-health from sitting for the Examination in the previous June.

Every student entering for this Examination must apply to the University, on or before April 23rd for the June Examination *or* November 1st for the December Examination, for an entry-form and a certificate of course of study which must be returned duly filled up and signed by or on behalf of the appropriate teachers, accompanied by the proper fee, not later than April 30th for the June Examination, *or* November 8th for the December Examination.

The time-table of the Examination, showing both the time and place of the written, practical and oral examinations, will be furnished to each candidate.

Fee*

The fee is 6 guineas for each entry to the whole Examination. For re-examination in one subject (*see* below) the fee is 2 guineas. Students exempted from presenting themselves in one or more of the three subjects of the Examination (except students exempted from part of the Examination on the ground of a Higher School Certificate) must pay a fee of 2 guineas in respect of each subject for which they are required to enter.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination will include two papers in Inorganic Chemistry, two in Physics (including Mechanics) and two in General Biology, three hours being allowed for each paper in each subject.

There will also be a Practical examination not exceeding three hours in each of the following :—Inorganic Chemistry, and Physics (including Mechanics) ; and a Practical examination not exceeding six hours in General Biology.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates must at their first entry present themselves in all three subjects and shall not be approved by the Examiners unless they have shown a competent knowledge in each subject.

A candidate who is not exempted from any part of the Examination, but enters for the whole Examination at one and the same time may, if he fails to reach the minimum standard in one subject only, be " referred," *i.e.*, he may be permitted, with the consent of the Examiners, to present himself on one or more occasions for re-examination in that subject alone.

A list of successful candidates in alphabetical order will be published at 2 o'clock on August 14th and January 7th.

Certificates of having passed the First Examination for Medical Degrees as Internal Students will be issued only to those successful students who apply for them.

SYLLABUSES

Inorganic Chemistry

The curriculum in Inorganic Chemistry consists of not less than 60 lectures, and 120 hours' practical work in the course of an academic year.

The whole subject is to be treated in an elementary manner and with regard to the subsequent work of the student.

The syllabus includes the subjects of the Matriculation Examination with the addition of the following :—

Lectures

Physical Chemistry

Atomic theory. Avogadro's law. Equivalent, atomic and molecular weights and their determination. Valency. Formulæ. Equations.

* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

Classification of the elements.

Solution and such properties of liquids as diffusion, osmotic pressure, freezing and boiling points, electrical conductivity.

Electrolysis. Ionisation. Hydrogen ion concentration. Relative strengths of acids and bases.

Speed and reaction and the law of mass action. Hydrolysis in aqueous solution. Thermal dissociation.

Catalysis. The colloidal state. Combustion. Heat of combustion and of formation. Heat of solution.

Simple calculations based on the foregoing.

Descriptive Chemistry

The preparation and physical and chemical properties of the following :—

Hydrogen and Oxygen : Ozone. Water. Hydrogen peroxide. Oxides.

Chlorine, Bromine, and Iodine ; their hydrogen acids and their salts. Hypochlorous acid and hypochlorites. Chlorates. Iodates.

Sulphur and its compounds with hydrogen and oxygen. Sulphides. Sulphurous and sulphuric acids and their salts. Sodium thiosulphate.

Nitrogen. Ammonia and the ammonium salts. The oxides of nitrogen. Nitrous and nitric acids and their salts. The composition of air.

Phosphorus, its hydride, chlorides, tri- and pentoxides. Hypophosphites, phosphorous acid. Phosphoric acid and its salts.

Arsenic, its hydride, chloride, oxides, and sulphide ; arsenites and arsenates.

Carbon. Methane. Oxides of carbon. Carbonic acid and its salts. Carbon disulphide. Coal gas.

Silicic acid. Boric acid. Borax.

Chromic oxide and chromium trioxide : the chromates and dichromates.

Manganese dioxide : Potassium permanganate.

The following metals and their more important compounds :—

Sodium ; potassium ; copper ; silver ; magnesium ; calcium ; zinc ; barium ; mercury ; iron ; aluminium ; lead ; antimony ; bismuth.

A knowledge of metallurgical processes will not be required.

Practical Work

The preparation of common inorganic compounds.

The determination of : Vapour density by Meyer's method ; molecular weight by the freezing-point and boiling-point methods ; the solubility of a solid and of a gas ; partition coefficient ; *p*H of a solution by indicators.

Quantitative analyses.

Gravimetric estimation of a sulphate and a phosphate.

Direct and indirect estimations by means of a standard acid or alkali.

Estimation of iron, oxalates, and hydrogen peroxide by potassium permanganate.

Estimation of a chloride by silver nitrate and potassium chromate and by Volhard's thiocyanate method.

Estimations by means of iodine and sodium thiosulphate, namely free halogens, sulphur dioxide, hypochlorites, and permanganates.

Estimation of oxygen, carbon dioxide, and nitrogen in a mixture of these gases.

Qualitative analyses.

Identification of a single element or of a single compound selected from the following :—Oxides, hydroxides, sulphides, sulphites, sulphates, thiosulphates, chlorides, bromides, iodides, nitrites, nitrates, arsenites, phosphates, borates, carbonates, chromates of the above metals or of ammonium hydrogen, arsenic.

Candidates are permitted to bring for use in the practical examination any book or books they desire, including their own Laboratory note-books.

Candidates will be required to write out a clear account of their practical work, accurately describing the nature of the processes employed, and where possible representing by equations the chemical changes involved. They will be further required to bring to the practical examination note-books containing a record of their previous practical work. These note-books must be certified by the teachers of the candidates as being the actual working notes made by them in the laboratory.

Physics (including Mechanics)

The curriculum in Physics including Mechanics consists of not less than 60 lectures and 60 hours' practical work in the course of an academic year.

The whole subject is to be treated in an elementary manner, the mathematical development in no case extending beyond a knowledge of quadratic equations and elementary trigonometry.

Lectures

General Physics including Mechanics.—Measurement of length, area volume and mass in the British and metric systems. Velocity, acceleration, momentum, force, work, energy, power. Conservation of energy. Friction. Simple machines. Laws of pressure in liquids. Characteristic properties of the solid, liquid and gaseous states of matter. Elasticity. Surface tension. Viscosity of liquids. Diffusion in liquids and gases. Osmosis.

Sound.—Production and transmission of sound. Noises and musical notes. Velocity of sound in air and effect of change of temperature. Loudness, pitch, and quality of musical notes, and the physical characters of the waves that determine them. Vibration of stretched strings and air columns. Beats. Resonance.

Light.—Rectilinear propagation of light. Laws of reflection and refraction. Formation of images by plane and spherical surfaces, and by thin lenses. The eye as an optical instrument. Elementary theory of vision. Long and short sight and astigmatism and their correction by spectacles. Action of prisms upon light. Spectroscope. Emission and absorption spectra. Infra-red and ultra-violet radiation. Achromatic combinations of prisms and lenses. Instruments: *e.g.*, the telescope, microscope and simple ophthalmoscope. Photometry. Elementary outline of the wave theory of light. Polarisation.

Heat.—Temperature and its measurement. Thermal expansion. Quantity of heat. Specific heat. Change of state. Determination of

melting-points and boiling-points. Latent heat. Vapour pressure. Hygrometry. Conduction, convection, and radiation. Ventilation. Relation between heat and work. Refrigeration.

Magnetism and Electricity.—Elementary properties of magnets. Lines of magnetic force. Simple phenomena of static electricity. The electrophorus and Wimshurst machine. Electric potential and capacity. Condensers. Electric currents. Electrolysis. Primary and secondary cells. Magnetic field of a current. Galvanometers. Ohm's law. Definition and measurement of current strength and of electromotive force. Absolute and practical electrical units. Resistance and its measurement. Heating effects of currents. Electrical power. Board of Trade unit of energy. Thermo-electric couples. Electromagnetic induction. The telephone and microphone. The induction coil. Elementary treatment of the production, properties and measurement of alternating currents. Ionisation of gases. Electric discharge in rarefied gases. Cathode rays and X-rays. Thermionic emission in reference to rectifiers and amplifiers. Electrical oscillations. Radioactivity and the nature of radioactive change. Properties of α, β and γ rays.

Practical Work

[The following scheme is not exhaustive, and is intended merely to show the general nature of the exercises at the practical examination. The examiners are not precluded from setting other exercises and practical problems illustrative of the principles set forth in the syllabus.]

Use of vernier, linear and angular. Determination of areas and volumes by measurement of linear dimensions. Measurement of a period of oscillation. Use of the balance weighing to one milligramme. Determination of volumes by weighing in air and water. Densities of solids, powders and liquids. Use of the common hydrometer. Verification of Boyle's law. Reading the barometer.

Comparison of frequencies of tuning forks by smoked-glass method. Determination of velocity of sound by resonance. Use of sonometer.

Use of simple photometer. Verification of laws of reflection and refraction, tracing paths of rays. Focal lengths of spherical mirrors and thin lenses. Arrangement of two lenses to make simple forms of telescope, microscope, and projection lantern. Arrangement of a slit, lenses and prism to produce a spectrum. Use of spectroscope. Determination of refractive indices of solids and liquids.

Use of thermometers, and testing fixed points. Air thermometers. Determination of melting-points and boiling-points. Simple methods of determining specific heat and latent heat. Measurement of pressure of saturated vapours. Hygrometry.

Investigation of the magnetic field in the neighbourhood of a magnet and of an electric current. Gold-leaf electroscope and its use to detect ionising radiations. Use of galvanometers, ammeters and voltmeters. Measurement of resistance by substitution and by Wheatstone's bridge. Use of simple potentiometer. Internal resistance of a voltaic cell. Measurement of conductivity of electrolytes. Measurement of rate of heat development by a current. Simple experiments on induced currents.

Candidates will be required to bring to the practical examination note-books containing a record of their previous practical work for inspection by the Examiners if desired. These note-books must be certified by the teachers of the candidates as being the actual working notes made by them in the laboratory.

General Biology

The curriculum in General Biology consists of not less than 60 lectures and 120 hours' practical work in the course of an academic year.

The whole course is intended as a general introduction to the science of life, with special reference to the later work of the student of Medicine.

Lectures

Nature of living organisms.

The elements of the gross organisation, physiology, and life history of the frog. Metabolism, respiration, secretion, excretion, regulation.

[A knowledge of the musculature and of the *details* of the skull of the frog will not be required.]

Protoplasm ; its physical and chemical characters, irritability, movements and growth. Cellular structure. Cell division. The elements of the histology of the Vertebrata.

The structure, physiology, and life-history of :—*Chlamydomonas, Pleurococcus ; Pandorina, Endorina, Volvox ; Pythium* (or *Peronospora*), *Mucor, Saccharomyces ; Bacteria. Amœba, Monocystis, Paramecium.*

Holozoic, holophytic, and saprophytic methods of nutrition, the energy changes connected with them, and the parts played by organisms in the economy of nature. Parasitism. The differences between animals and plants.

The elements of the structure, physiology, and life-history of *Spirogyra, Fucus, Dryopteris,* and the flowering plant. The structure of a flower (*e.g.* :—*Lilium, Pisum, Ranunculus*), and the functions of its organs ; pollination. Fertilisation and the formation of embryo, seed and fruit. Germination and the conditions under which it occurs. Reserve materials, and their storage by flowering plants.

The elements of the morphology, physiology, and life-history of *Hydra,* the tape worm, the earthworm, the cockroach, the dogfish and the rabbit, considered comparatively. [The skull of the dog to be substituted for that of the rabbit.]

Soma and germ cells. Sexual and asexual reproduction. Differentiation of gametes. Parthenogenesis. Maturation. Fertilization.

The elements of the embryology of Chordata, including :—(*a*) The modes of cleavage and of the origin of the germ layers in *Amphioxus,* the fowl and rabbit ; (*b*) the formation of the embryonic membranes in the fowl and rabbit ; (*c*) the outlines of organogeny (as revealed by a study of the fowl up to the end of the third day of incubation, or of the frog up to a morphologically corresponding stage) ; (*d*) the modes of nutrition during development.

The principal facts of heredity, including a knowledge of simple Mendelian experiments, and of variation. The evidence for evolution, and an outline of the principal theories of the mode in which it takes place.

Practical Work

The above syllabus is to form the basis of the laboratory work by students and of the practical examination.

Candidates will be required to bring to the practical examination note-books containing a record of their previous practical work for inspection by the Examiners if desired. These note-books must be certified by the teachers of the candidates as being the actual working notes made by them in the laboratory.

SECOND EXAMINATION FOR MEDICAL DEGREES*

No candidate will be admitted to this Examination unless he has completed the course of study set out below and has passed the First Examination for Medical Degrees at least 18 months previously either as an Internal or as an External Student.

A candidate who is referred in one subject only at the First Examination for Medical Degrees and subsequently passes in that subject will, subject to the approval of the authorities of his Medical School, be admitted to the Second Examination for Medical Degrees after completing the course of study for the Second Examination provided he has attended at least three terms of that course subsequently to passing in his referred subject at the First Examination.

Course of Study

The Course of Study for the Second Examination for Medical Degrees extends over one and a half academic years, which should be spent at one of the medical schools or institutions recognised by the University (*see* pp. 820–21), and includes Human Anatomy, Physiology and Pharmacology as set out below.

Date of Examination

The Second Examination for Medical Degrees will take place twice in each year, commencing on the third Monday in March and on the first Monday in July.

Every student entering for this Examination must apply to the University for an entry-form and a certificate of course of study on or before February 8th for the March Examination *or* on or before May 8th for the July Examination. These must be returned duly filled up, signed by or on behalf of the appropriate teachers, and accompanied by the proper fee, not later than February 15th for the March Examination *or* May 15th for the July Examination.

An additional Examination in Pharmacology only, for candidates who have been referred in that subject, will be held in September until further order. The Examination will begin on the Thursday following the third Monday in September and entries must be received not later than 18th August.

The time-table of the Examination, showing both the time and place of the written, practical, and oral examinations, will be furnished to each candidate.

Fee†

The fee is 12 guineas for each entry to the whole Examination.

The fee for re-examination in Pharmacology is 4 guineas. The fee for re-examination in Anatomy and Physiology is 8 guineas.

The entry fee payable by students who have passed in Organic Chemistry at Part I under the old Regulations is 9 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

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* For particulars of the Sir William Dunn Scholarship awarded in connexion with this Examination, *see* p. 842.

† For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

Details of Examination

Candidates will be examined in Anatomy, Physiology, and Pharmacology.

The examination in *Anatomy* will consist of :—

Two papers of three hours each.

A practical and oral examination consisting of :—

(*a*) An examination on regional anatomy, including dissected parts.

(*b*) Radiological and surface anatomy.

(*c*) Microscopical Anatomy, Neurological Anatomy, and Embryology.

The examination in *Physiology* will consist of :—

Two papers of three hours each on Physiology and Histology.

One paper of three hours on Organic Chemistry and Biochemistry.

A practical examination of six hours in Experimental Physiology and Histology.

A practical examination of six hours in Organic Chemistry and Biochemistry.

The examination in *Pharmacology* will consist of :—

One paper of two hours.

An oral examination.

Candidates are required to satisfy the Examiners in each of the written papers and in each of the practical examinations.

Candidates are required to pass in Anatomy and Physiology at one and the same Examination. A candidate who passes in Pharmacology and fails in Anatomy or Physiology, or in both subjects, may, with the approval of the Examiners, be credited with success in Pharmacology alone and in that case will not be required to present that subject again. A candidate who passes in Anatomy and Physiology and fails in Pharmacology may, with the approval of the Examiners, present himself for re-examination in Pharmacology only.

Candidates are required to bring to the practical examinations in Physiology their original laboratory note-books, certified by their teachers as being the actual working notes made by the candidates in the laboratory, for the inspection of the Examiners should they so desire.

Candidates may use their own practical note-books (but not text-books) at the practical examination in Organic Chemistry and Biochemistry.

The Examiners shall be at liberty to test any candidate by means of oral questions.

At the practical and oral examinations reference may be made by the Examiners to the candidates' class records.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the subjects of the Examination.

A list of successful candidates, in alphabetical order, will be published at 2 o'clock on April 21st and August 7th.

Certificates of having passed the Second Examination for Medical Degrees as Internal Students will be issued only to those successful students who apply for them.

Students who have failed at the Second Examination for Medical Degrees for Internal Students are not allowed to re-enter for that Examination without the approval of the heads of the Departments of Anatomy, Physiology and Pharmacology in a recognised Medical School.

SYLLABUSES

Human Anatomy

(including Embryology, Neurological Anatomy, Microscopical Anatomy, and the Anatomy of the living subject).

The course of instruction in Human Anatomy (including Embryology, Neurological Anatomy, Microscopical Anatomy and the Anatomy of the living subject) shall extend over five terms, and shall include the following :—

(1) A course of lectures and demonstrations, not less than 100 in all. Stress will be laid on those aspects of the subject which have special bearing on the subsequent work of the student.

(2) A course of Dissections extending over not less than twelve months (*i.e.*, four regular terms of University work). In this course the student must have dissected the whole body at least once to the satisfaction of his Teacher.

(3) Practical instruction in Embryology, Radiological Anatomy and Microscopical Anatomy.

Physiology

(with Histology, Organic Chemistry and Biochemistry).

The course of instruction in the composite subject of Physiology with Histology, Organic Chemistry and Biochemistry shall extend over five terms. As a general guide, the following shall be the minimum number of hours' lecturing to be given in each of the branches of the composite subject :—

Physiology with Histology, 120 hours ; Organic Chemistry, 35 hours ; Biochemistry, 35 hours. Total 190 hours. The lectures are to be supplemented by appropriate practical courses, augmented when necessary by demonstrations in each of the branches.

The range covered by each of the branches shall be :—

Physiology. A course of theoretical and practical physiology.

Histology. A course of theoretical and practical histology.

Organic Chemistry. A theoretical and practical course on the principles of organic chemistry, leading to an adequate knowledge of the nature, reactions and, as far as possible, the constitution of those organic compounds which are of physiological importance.

Biochemistry. A knowledge of the chemical changes taking place in the animal body and their significance in physiological processes.

Pharmacology

A short course (minimum 20 hours lectures) on theoretical and practical Pharmacology, introducing the general principles of the subject. Emphasis will be laid on drugs the action of which elucidates physiological mechanisms and which illustrate the principle of biological assay, and on those drugs which have important pharmacological actions on the normal mammal or on those few disease processes which are commonly described in Physiology courses for the Second Medical Examination.

THIRD EXAMINATION FOR MEDICAL DEGREES OR M.B., B.S. EXAMINATION

Course of Study

The course of study shall extend over three years, which shall be spent at a hospital or hospitals recognised by the University and include Medicine, Surgery, Obstetrics and Gynæcology, and Pathology, as well as the special subjects mentioned in the curriculum.

The M.B., B.S. Examination is divided into three parts as follows :—

Part I (1) Pathology.
(2) Hygiene and Forensic Medicine.

Part II (1) Medicine.
(2) Applied Pharmacology and Therapeutics.

Part III (1) Surgery.
(2) Obstetrics and Gynæcology.

The course of study for Part I extends over 30 months* and shall normally† be attended subsequently to passing the Second Examination for Medical Degrees.

The course of study for Parts II and III extends over 36 months* and shall normally† be attended subsequently to passing the Second Examination for Medical Degrees.

Candidates who are permitted to present themselves for re-examination in Pharmacology only are allowed to begin the course of study for the M.B., B.S. Examination at any time subsequently to passing in Anatomy and Physiology at the Second Examination for Medical Degrees.

Candidates for Part I must have completed the prescribed courses of study for that Part and, in view of the fact that questions may be set in the following subjects, should also have completed the courses of instruction in Fevers, Venereal Diseases, Mental Diseases, and Vaccination, and attendance at ante-natal and post-natal clinics (see (10) under Medicine and (20*a*) under Obstetrics below).

Candidates for Parts II and III must have completed the prescribed courses of study in all the subjects of Parts II and III.

Students who passed part of the M.B., B.S. Examination under the Regulations in force until October 1941 are permitted, if they so desire, to complete the Examination under the present Regulations as follows :—

Students who have passed Group I may take Part III only.

Students who have passed Group II may take Parts I and II only.

Students who passed in Pathology and/or in Forensic Medicine and Hygiene at Group I in or after November 1938 may be credited with the corresponding subject or subjects at Part I.

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* As a temporary measure the length of the clinical course for the Final M.B., B.S. Examination was reduced from 36 months to 30 months, *i.e.*, 24 months for Part I and 30 months for Parts II and III. Candidates who passed in Anatomy and Physiology at the Second Examination for Medical Degrees in or after March 1945 are required to attend the normal course extending over 36 months.

† *See* para. 3 (iv) under Exemptions, p. 803.

Date of Examination

The three Parts of the M.B., B.S. Examination will be held twice in each year, Part I commencing on the second Monday in October and the third Monday in April, Part II on the following Tuesdays and Part III on the following Wednesdays.*

Every candidate entering for any Part of the Examination must apply to the University for an entry-form and a certificate of course of study on or before August 24th or February 18th, which must be returned duly filled up and signed by or on behalf of the appropriate teachers, and accompanied by the proper fee, not later than August 31st for the October Examination or February 25th for the April Examination.

The time-table of the Examination, showing both the time and place of the written, practical, and oral examinations, will be furnished to each candidate.

Fees†

Except as provided below, the fee payable on entry to any Part of the Examination is 5 guineas for each Part. The fee for re-examination in one subject of Part I is 2½ guineas.

Candidates who have passed Group I under the old Regulations and take Part III under the new Regulations shall pay £6 6*s.* for the first entry and £5 5*s.* for subsequent entries for Part III.

Candidates who have passed Group II under the old Regulations and take Parts I and II under the new Regulations shall pay £4 14*s.* 6*d.* for the first entry and £5 5*s.* for subsequent entries for each of Parts I and II.

Candidates who passed in Pathology *or* Forensic Medicine and Hygiene at Group I under the old Regulations in or after Nov. 1938 and are credited with that subject shall pay £5 5*s.* for each of Parts II and III under the new Regulations and £2 12*s.* 6*d.* for the Examination in Forensic Medicine and Hygiene or Pathology, as the case may be, at Part I.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

Candidates may take Part I after completing 30 months' approved clinical course. A candidate who satisfies the Examiners in Pathology only or in Hygiene and Forensic Medicine only at Part I will be credited with that subject and may present himself for re-examination in the other subject of Part I together with Parts II and III of the Examination.

On completion of the whole clinical course (36 months) the candidate must take Parts II and III together, and also either or both of the subjects of Part I in which he has not already satisfied the Examiners. A candidate who satisfies the Examiners in Part II only or in Part III only will be credited with that Part. At any subsequent entry the candidate must take all those parts of the Examination in which he has not already passed.

A candidate shall not be approved by the Examiners in any one Part unless he has attended all the written, practical, clinical and oral examinations in all the Parts of the Examination for which he has entered.

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* In October, 1951, the examinations will start one week later.

† For regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

A candidate prevented by illness or other cause beyond his control from attending part of the Examination may apply to be credited with the Part or Parts in which he has satisfied the Examiners provided that he submits to the University satisfactory documentary evidence explaining his absence.

Part I

(1) Pathology :—
- (*a*) One paper of three hours' duration.
- (*b*) A practical examination of three hours' duration.
- (*c*) An oral examination.

(2) Hygiene and Forensic Medicine :—
- (*a*) One paper of three hours' duration.
- (*b*) An oral examination in Hygiene (Public Health and State Medicine).
- (*c*) An oral examination in Forensic Medicine (and Toxicology).

Part II

(1) Medicine :—
- (*a*) Two papers, each of three hours' duration.
- (*b*) A clinical examination in Medicine consisting of :—
  - (i) An examination of a patient, and a written report thereon, three-quarters of an hour being allowed for the former and one hour for the latter.
  - (ii) An oral examination on a case or cases.
- (*c*) An oral examination.

No candidate will be approved in Medicine who does not satisfy the Examiners in the clinical examination (*b*).

(2) Applied Pharmacology and Therapeutics :—
- (*a*) One paper of three hours' duration.
- (*b*) An oral examination.

Part III

(1) Surgery :—
- (*a*) One paper, of three hours' duration.
- (*b*) A clinical examination in Surgery.
- (*c*) An oral examination in Surgical Pathology.
- (*d*) An oral examination on Surgical Anatomy and appliances.

No candidate will be approved in Surgery who does not satisfy the Examiners in the clinical and oral examinations (*b*), (*c*) and (*d*).

(2) Obstetrics and Gynæcology :—
- (*a*) One paper of three hours' duration.
- (*b*) A clinical examination in Obstetrics and Gynæcology.
- (*c*) An oral examination including questions on specimens and appliances.

No candidate will be approved in Obstetrics and Gynæcology who does not satisfy the Examiners in the clinical examination (*b*).

Candidates will not be approved by the Examiners in Part II or Part III unless they have shown a competent knowledge in both the subjects of the Part.

A candidate (other than a registered medical practitioner) who has failed in Pathology at Part I will be required on re-entry to produce evidence of having attended for a further period of three months in the Department of Pathology of a recognised hospital.

A candidate (other than a registered medical practitioner) who has failed at Part II will be required on re-entry for that Part to produce evidence of having attended for a further period of three months the medical practice of a recognised hospital. Similarly, a candidate (other than a registered medical practitioner) who has failed at Part III will be required on re-entry for that Part to produce evidence of having attended for a further period of three months the surgical and obstetric practice of a recognised hospital.

Registered medical practitioners may enter for re-examination at any subsequent Examination on payment of the proper fee.

There will be no separate Examination held for Honours.

Provisional lists of candidates, in alphabetical order, who have passed Parts I, II or III will be published at 2 o'clock on November 16th and May 24th.

The pass list for the whole M.B., B.S. Examination will be in two divisions, *i.e.*, Honours and Pass. In the Honours List the subject or subjects in which the successful candidates have distinguished themselves will be shown.

In order to be eligible for the award of Honours in any subject a candidate must either have passed Parts I, II and III on the same occasion or have passed in both subjects of Part I on the same occasion and Parts II and III at the next Examination for which they are eligible to enter after passing Part I. A candidate who has failed at any time in any part of the Final Examination is not eligible for the award of Honours.

The Examiners are empowered to recommend the award of a University Medal, of the value of £5, to the candidate in the Honours List who has most distinguished himself in the whole Examination.

[*Note.*—If the candidate so desire, he may receive, instead of the Medal, books or instruments to the value of £5, selected by him and approved by the University, or he may receive a replica of the Medal in bronze, and books or instruments to the value of the balance of the £5, selected by him and approved by the University.]

A diploma for the Degrees of Bachelor of Medicine and Bachelor of Surgery, under the Seal of the University, will be delivered to each candidate who has passed all Parts of the Examination, after the Reports of the Examiners shall have been approved by the Senate.

CURRICULUM

At the commencement of the three years' clinical period every student shall attend an introductory course of instruction in :—

(1) Pathology.

(2) Clinical Medicine.

(3) Clinical Surgery.

The curriculum of the clinical period shall be as follows :—

Pathology

(4) Instruction in General Pathology, Morbid Anatomy, Bacteriology and Chemical Pathology, including practical work in the last-named three subjects.

(5) Attendance in the Post-mortem Room, including the performance of the duties of Post-mortem Clerk, for not less than three months, and practical experience in making post-mortem examinations.

(6) Attendance in a Clinical Laboratory of a recognised institution during a period of at least three months.

Hygiene and Forensic Medicine

(7) A course of instruction in Hygiene (Public Health and State Medicine), including demonstrations.

The course of instruction in Hygiene *should be designed to meet the needs of general medical practitioners*, and include the following:—

The relation of the medical profession to the State. The National Health Service.

Local health authorities, their chief medical powers and duties, their relationship to the general medical practitioner; county and municipal hospital arrangements; public assistance.

The organised health services:—Maternity and child welfare; care of the school child; the tuberculosis service; the venereal disease service; the care of mentally defective persons.

Infectious disease—what the health authority can do to help the general medical practitioner and what the practitioner can do to assist in prevention and control.

The importance of the general medical practitioner in the collection of vital statistics; explanation of the simpler rates (birth, death, infant and maternal mortality).

National nutrition; control of milk supplies; diseases conveyed by food; procedure in outbreaks of food poisoning.

Effects of environment on health:—Housing, ventilation, water supplies, defective sanitation.

Effects of occupation on health; duties of examining surgeons under the Factories Act; welfare work in industry.

(8) A course of instruction in Forensic Medicine (and Toxicology), including demonstrations. The course in Forensic Medicine *should be designed to meet the needs of general medical practitioners.*

Medicine

(9) Instruction in the principles and practice of Medicine including clinical pathology and laboratory methods, the application of Physiology and Anatomy to the investigation of disease, and the methods of prevention of disease.

(10) (*a*) An appointment for six months as Clinical Clerk in the Medical wards of a recognised Hospital.

(*b*) An appointment for three months as Clinical Clerk in the Medical out-patient department of a recognised Hospital. This appointment may run concurrently with (*a*) above.

(11) Instruction in:—

(*a*) Children's diseases, including one month's appointment as Clinical Clerk in the Children's Ward of a recognised Hospital.

(*b*) Dermatology.

(*c*) Fevers. This course must be taken at a recognised Fever Hospital.*

(*d*) Mental diseases. This course must be taken at a recognised Mental Hospital.*

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* For lists of Recognised Fever Hospitals and Mental Hospitals, *see* pp. 821-2.

(*e*) Physio-Therapy.

(*f*) Psychology in relation to Medicine.

(*g*) Radiology in its application to Medicine.

(*h*) Vaccination.

(*i*) Venereal diseases.

In all the above subjects clinical or practical instruction shall, if possible, be given in preference to systematic lectures.

Questions on the subjects under (11) above may be included in the examination in Medicine, but separate examinations in those subjects will not be held.

Applied Pharmacology and Therapeutics

(12) Instruction in Applied Pharmacology and Therapeutics during the clinical period and including the rational basis of medical treatment of diseases, the use of drugs, immunological products, hormones, diet and physical methods, the principles of nursing, dispensing, and the writing of prescriptions.

Surgery

(13) Instruction in the principles and practice of Surgery, including clinical pathology and laboratory methods, the application of Physiology and Anatomy to the investigation of disease, and the methods of prevention of disease.

(14) (*a*) An appointment for six months as Surgical Dresser in the wards of a recognised Hospital.

(*b*) An appointment for three months as Surgical Dresser in the out-patient department of a recognised Hospital. This appointment may run concurrently with (*a*) above.

Instruction in :—

(15) Ophthalmology, mainly directed to special methods of investigation, the use of special instruments, and demonstrations on clinical cases.

(16) Oto-Rhino-Laryngology, mainly directed to special methods of investigation, the use of special instruments and demonstrations on clinical cases.

(17) (*a*) Administration of Anæsthetics.

(*b*) Applied Anatomy.

(*c*) Dental Surgery.

(*d*) Operative Surgery.

(*e*) Orthopædic Surgery.

(*f*) Physio-Therapy.

(*g*) Radiology in its application to Surgery.

In all the above subjects clinical or practical instruction shall, if possible, be given in preference to systematic lectures.

Questions on the subjects under (15), (16) and (17) above may be included in the examination in Surgery, but separate examinations in these subjects will not be held.

Obstetrics and Gynæcology

(18) Instruction in the principles and practice of Obstetrics and Gynæcology, including the Applied Anatomy and Physiology of pregnancy and labour, and the methods of prevention of disease.

(19) The minimum period of study devoted to clinical Obstetrics and Gynæcology shall be six months subsequent to the Medical Clerkship and Surgical Dressership under (10) and (14) above. During this period the hours of instruction shall be so allotted that at least two-thirds are given to Obstetrics, including ante-natal care and the hygiene of infants. The course shall include :—

(*a*) Two months' attendance in a maternity hospital or the maternity wards of a general hospital. During this period the student should wherever practicable be resident in the Hospital or in a hostel attached thereto.

(*b*) The personal conduct of 20 labours under supervision, at least five of which must be in the hospital.§

(*c*) Clinical clerking in the gynæcological wards and out-patient department of a recognised hospital for at least two months.

(20) Throughout the six months the student should receive practical instruction in the wards and out-patient department of the maternity hospital in the principles of :—

(*a*) Ante-natal and post-natal care.

(*b*) The management of the puerperium.

(*c*) The care of the new born infant.

INSTITUTIONS RECOGNISED FOR PURPOSES OF M.B., B.S. DEGREES

I

The University accepts certificates for the complete course of Medical Education for Internal Students, including Clinical Medicine and Surgery, preparatory to the M.B., B.S. Degrees (except as hereinafter provided in special cases) from the following Institutions :—

‡Charing Cross Hospital Medical School
Guy's Hospital Medical School
*King's College Hospital Medical School
†London Hospital Medical College
Middlesex Hospital Medical School
Royal Free Hospital School of Medicine
St. Bartholomew's Hospital Medical College
*St. George's Hospital Medical School
St. Mary's Hospital Medical School
St. Thomas's Hospital Medical School
*University College Hospital Medical School
*Westminster Medical School

* The students of this Hospital receive instruction for the First and Second Examinations for Medical Degrees at University College or King's College.

† The students of this Hospital receive instruction for the First Examination for Medical Degrees at Queen Mary College.

‡ This Hospital provides instruction for the Second Examination, but no provision is made for the First Examination for Medical Degrees.

§ Certificates with regard to the conduct of labours will be received from the Dean of a Recognised Medical School or authorised member of the Staff of a Recognised Hospital.

For certificates in the subjects of the First and Second Examinations for Medical Degrees and for the course in Hygiene :—

University of London : University College
University of London : King's College

For certificates in Physiology only (Second Examination for Medical Degrees) :—

Bedford College for Women

For certificates in Pharmacy and Materia Medica only (M.B., B.S.) :—

School of Pharmacy

For certificates in respect of part of the experience as Clinical Clerk and of part of the experience as Dresser for the M.B., B.S. Examination (*see* Section (10), p. 818, and Section (14), p. 819) :—

Hospital for Sick Children
Moorfields, Westminster and Central Eye Hospital
National Hospital for Nervous Diseases
Royal Cancer Hospital
Royal Eye Hospital
Western Ophthalmic Hospital, Marylebone Road

For certificates in respect of the three months' experience as Clinical Clerk in the Gynæcological Wards or Out-Patient Department for the M.B., B.S. Examination (*see* Section (19) *c*, p. 820) :—

Elizabeth Garrett Anderson Hospital.
South London Hospital for Women and Children

II

FEVER HOSPITALS

The following Fever Hospitals are recognised as Institutions at which students may take the course of instruction prescribed in the curriculum in Medicine (No. (11)*c*, p. 818), preparatory to the M.B., B.S. Degrees :—

Brook Hospital, Shooters Hill, Woolwich, S.E.18
Eastern Hospital, Homerton Grove, E.9
Grove Hospital, Tooting Grove, Tooting Graveney, S.W.17
North-Eastern Hospital, St. Ann's Road, South Tottenham, N.15
North-Western Hospital, Lawn Road, Hampstead, N.W.3
Park Hospital, Hither Green, S.E.13
Plaistow Hospital, E.13
Royal Free Hospital, Liverpool Road Branch, N.1
South-Eastern Hospital, Avonley Road, New Cross, S.E.14
South Middlesex Fever Hospital, Isleworth
South-Western Hospital, Landor Road, Stockwell, S.W.9
Western Hospital, Seagrave Road, Fulham, S.W.6
Willesden Municipal Hospital, Brentfield Road, N.W.10

III

MENTAL HOSPITALS

The following Mental Hospitals are recognised as institutions at which students may take the course on Mental Diseases prescribed in the curriculum in Medicine (No. (11)*d*, p. 818), preparatory to the M.B., B.S. Degrees :—

Banstead Hospital, Sutton, Surrey
Belmont Hospital, Sutton, Surrey

The Bethlem Royal and The Maudsley Hospital, Monk's Orchard, Eden Park, Beckenham; and Denmark Hill, S.E.5
The Bexley Hospital, Bexley
Camberwell House, 33 Peckham Road, S.E.5
Cane Hill Hospital, Coulsdon
City of London Mental Hospital, Stone, Dartford
Claybury Mental Hospital, Woodford Bridge
Essex County Mental Hospital, Brentwood
The Friern Hospital, New Southgate, N.11
Hill End Hospital and Clinic, St. Albans
Holloway Sanatorium, St. Ann's Heath, Virginia Water
Horton Hospital, Epsom
Long Grove Hospital, Epsom
Netherne Hospital, Coulsdon, Surrey
Peckham House, 112 Peckham Road, S.E.15
St. Bernard's Hospital, Southall
St. Ebba's Hospital, Epsom
Shenley Hospital, near St. Albans
Springfield Mental Hospital, Upper Tooting, S.W.17
Surrey County Mental Hospital, Brookwood
Three Counties Hospital, Arlesey, Hitchin
Tooting Bec Hospital, Tooting Bec Road, S.W.17
West Ham Mental Hospital, Goodmayes, Ilford
West Park Hospital, Epsom

DOCTOR OF MEDICINE (M.D.)

[*For Examinations held up to December,* **1952.** *For revised Regulations for Examinations in and after* **1953** *see page* 829, *below*].

Every candidate for the Degree of Doctor of Medicine must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery in this University as an Internal Student not less than two years previously, except as provided below.

Candidates who have passed, or presented themselves for, the M.D. Examination in one Branch may present themselves for examination in another Branch at a subsequent Examination.

Date of Examination

The Examination for the Degree of Doctor of Medicine will be held twice in each year, commencing on the second Monday in December and on the first Monday in July.

Candidates for the July Examination must apply to the University for an entry-form on or before May 8th, which must be returned not later than May 15th; and candidates for the December Examination (other than those who present a thesis) must apply for an entry-form on or before October 20th, which must be returned not later than November 1st. The corresponding dates for application for, and return of entry-forms for a candidate for the December Examination who presents a thesis are September 20th and October 1st. Entry-forms must be returned duly filled up, accompanied by the proper fee, and certificates, as enumerated below, for the Branch concerned.

Fee*

Candidates for the M.D. Degree must pay a fee of 20 guineas for the first entry in any one of the six Branches of that Examination, but the fee payable by a candidate entering for examination in a second Branch after obtaining the Degree of M.D. of this University is 10 guineas.

The fee payable by a candidate who, having previously entered for examination in one Branch and failed, enters for examination in a second Branch, is 20 guineas.

The fee for re-examination in the same Branch is 10 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

Candidates may present themselves for examination in one of the following Branches (I) *Medicine*, (II) *Pathology*, (III) *Psychological Medicine*, (IV) *Midwifery and Diseases of Women*, (V) *Hygiene*, (VI) *Tropical Medicine*.

In the Essay paper forming part of the Examination in the several Branches, the candidate will be expected to set forth his ideas in a clear and orderly manner, and to examine critically the various views and suggestions that have been put forward with regard to the subject selected. Account will be taken, not only of knowledge of detail, but also of the power to construct a lucid and well co-ordinated essay.

In each Branch the Examiners may submit any candidate to an oral examination.

A candidate who has obtained the M.D. Degree in Branch I, II, IV or VI and presents himself for the M.D. Examination in a further Branch will be exempted from one of the two papers in Medicine if he presents himself for Branch I or from the paper in Medicine if he presents himself for Branch II, or IV, or VI.

A provisional list of successful candidates in alphabetical order will be published at 2 o'clock on January 16th and August 9th.

If, in the opinion of the Examiners, sufficient merit be evinced, a University Medal, of the value of £20, will be awarded in each of the Branches I to VI to the candidate, whether Internal or External, who shall have passed with the greatest distinction. In the Pass List a mark of distinction will also be placed against the names of all candidates who, in the opinion of the Examiners, have qualified for the award of a University Medal, irrespective of whether a medal is awarded to them or not.

[*Note*.—If the candidate so desire, he may receive, instead of the Medal, books or instruments to the value of £20, selected by him and approved by the University, or he may receive a replica of the Medal in bronze, and books or instruments to the value of the balance of the £20, selected by him and approved by the University.]

Candidates who have already taken the M.D. Degree in one Branch and who are exempted on this account from a paper in Medicine will be at no disadvantage in respect of the award of the University Medal for the Branch for which they present themselves.

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* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

If a candidate whose thesis has been examined is prevented by illness or other approved reason from taking any written or practical examination which he may be required to take, his entry-fee less 5 guineas will be returned to him.

A diploma for the Degree of M.D., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Branches I–IV

Candidates presenting themselves for the M.D. Examination in Branches I–IV must have taken the M.B., B.S. Degrees not less than two years previously, unless specially exempted under Clause A below.

Together with their entry-form they must send a certificate

either (i) of having been engaged in professional practice for not less than five years;

[The certificate must be signed by some person other than the candidate, being a registered medical practitioner, or other person whom the University may approve for the purpose, and the person signing the certificate must certify that to his personal knowledge the candidate has been engaged in professional practice for not less than five years.]

or (ii) of having held an approved appointment as set forth below :—

In the case of Branch I, of having held for at least six months an approved appointment* at a hospital recognised for the purpose, subsequently to having obtained a registrable qualification to practise medicine.

In the case of Branch II, of having held for at least six months an approved Pathological appointment* at an institution recognised for the purpose, subsequently to having obtained a registrable qualification to practise medicine.

In the case of Branch III, of having had the clinical experience and attendance specified under headings (1) and (2) below :—

(1) The candidate shall *either* (*a*) have held for not less than 6 months a resident or whole-time appointment at an Institution (or Institutions) for Mental Disorders or Mental Deficiency recognised for the purpose, *or* (*b*) shall have attended daily for a complete morning or afternoon, for a period of 12 months, the practice of such Institution (or Institutions), or such other practice as may be approved by the University.†

(2) *In addition*, the candidate shall have attended for not less than 26 full mornings or afternoons the practice of approved institutions, hospitals, clinics or other establishments in each of the following subjects (a total of 104 attendances), namely :—

(*a*) *Mental Disorders* (in the case of a candidate whose experience under (1) has been in an institution for Mental Defectives).

(*b*) *Mental Deficiency* (in the case of a candidate whose experience under (1) has been in an institution for Mental Disorders).

(*c*) *Neurology.*

(*d*) *Psycho-neuroses and early Psychoses.*

(*e*) *Mental Retardation and Delinquency.*

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* A list of these appointments may be obtained on application to the Academic Registrar.

† A list of approved institutions in Mental Diseases and Mental Deficiency may be obtained from the University. No list is published of approved institutions in connection with the subjects (*c*) Neurology, (*d*) Psycho-neuroses and early Psychoses, and (*e*) Mental Retardation and Delinquency, but prospective candidates should forward to the University details of the practice which they propose to attend in these subjects in order that they may ascertain whether their proposals will satisfy the requirements.

In the case of Branch IV, of having held for at least six months an approved appointment* in Obstetrics alone, or in Obstetrics and Gynæcology combined, at a hospital recognised for the purpose, subsequently to having obtained a registrable qualification to practise medicine.

Clause A

Candidates who have *either*

(i) taken the M.B., B.S. Degrees with Honours in the Branch in which they present themselves for the M.D. Examination ;

or (ii) subsequently to taking the M.B., B.S. Degrees conducted a piece of original work approved for the purpose by the University† ;

or (iii) subsequently to taking the M.B., B.S. Degrees had such exceptional experience in the Branch in which they present themselves as may be approved by the University† ;

may present themselves for the M.D. Examination after an interval of one year only from the time of taking the M.B., B.S. Degrees, provided that they comply in other respects with the conditions stated in the preceding paragraphs.

The Examination in Branches I–IV will consist of :—

Branch I Medicine

Two papers in Medicine (one of which may be a case for commentary).

One paper in Pathology.

An essay on one of two subjects in Medicine including the History of Medicine.

A clinical examination.

An oral examination at the bedside.

Branch II Pathology

A paper in Medicine.

A general paper in all branches of Pathology.

An essay on a choice of subjects in Pathology.

A paper in a special branch of Pathology.

A laboratory examination.

Candidates will be required to nominate Morbid Anatomy and Histology, Bacteriology, or Chemical Pathology as their special subject for the last three parts of the Examination.

Branch III Psychological Medicine‡

Two papers in Mental Diseases and Mental Deficiency.

One paper in Psychology.

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* A list of these appointments may be obtained on application to the Academic Registrar.

† Applications under this section must reach the University not later than two months before the last day of entry to the Examination.

‡ In view of the similarity in the subjects of the Examination for the M.D. Degree in Branch III and the subjects of the Examination for the Diploma in Psychological Medicine, candidates are warned that the standard of the Examination for the M.D. Degree in Psychological Medicine is distinctly higher than that of the Examination for the Diploma in Psychological Medicine.

One paper in Neurology, which shall include the anatomy and physiology of the nervous system.

An essay on one of two subjects in Mental Diseases *or* a case for commentary in Mental Diseases.

A clinical examination in both Mental Diseases and Mental Deficiency.

A clinical examination in Neurology.

A general knowledge of medicine will be expected of the candidate, and questions in general medicine may be set.

Branch IV Midwifery and Diseases of Women

Two papers in Midwifery and Diseases of Women (one of which may be a case for commentary).

One paper in Medicine.

An essay on one of two subjects in Midwifery and Diseases of Women.

A practical and clinical examination, including reports (either written, or verbal, or both) on clinical cases, pathological and other specimens, and other material suitable for an examination of a practical character.

Branch V—Hygiene

The Degree of M.D. Branch V (Hygiene) is not a diploma in Sanitary Science, Public Health or State Medicine within the meaning of Section 21 of the Medical Act, 1886.

Candidates presenting themselves for the M.D. Degree in Hygiene must have taken the M.B., B.S. Degrees not less than two years previously unless specially exempted under Clause A below. Together with their entry-form they must send a certificate *either*

(1) of having been engaged in professional practice for not less than five years ; *or*

(2) of having been engaged whole-time for not less than one year in the duties of Medical Officer of Health, Sanitary Officer or Medical Officer in the Public Health or Sanitary Service at home or abroad ; *or*

(3) of having, subsequently to taking the M.B., B.S. Degrees, attended a course of whole-time study in one or more of the branches of Public Health, extending over not less than one academic year, at an institution approved by the University for that purpose, to the satisfaction of the authorities of that institution.*

Clause A

Candidates who have *either*

(i) Taken the M.B., B.S. Degrees with Honours in Medicine, Pathology or Forensic Medicine and Hygiene ; *or*

(ii) Subsequently to taking the M.B., B.S. Degrees conducted a piece of original work approved for the purpose by the University† ;

or

(iii) Subsequently to taking the M.B., B.S. Degrees had such exceptional experience in the Branch in which they present themselves as may be approved by the University† ;

may present themselves for the M.D. Examination after an interval of one year only from the time of taking the M.B., B.S. Degrees, provided that they comply in other respects with the conditions stated in the preceding paragraphs.

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* *See* p. 839.

† Applications under this section must reach the University not later than two months before the last day of entry to the Examination.

The Examination in Branch V will consist of :—

Three papers in Hygiene—including sanitation, the history and administration of the public medical and sanitary services, sanitary law, infectious disease, epidemiology and vital statistics; together with bacteriology, immunology, parasitology, chemistry and physiology in their relation to public health.

An essay on one of two subjects in hygiene.

A practical examination in hospital administration and in infectious disease.

Branch VI—Tropical Medicine

Candidates presenting themselves for the M.D. Examination in Tropical Medicine must have taken the M.B., B.S. Degrees not less than two years previously unless specially exempted under Clause A below.

Together with their entry-form they must send a certificate *either*

(1) of having, subsequently to taking the M.B., B.S. Degrees, attended a complete Course, theoretical and practical, in Tropical Medicine, extending over not less than one academic year, at an approved School of Tropical Medicine, to the satisfaction of the authorities of that School* ; *or*

(2) of having been engaged, subsequently to taking the M.B., B.S. Degrees, for not less than two years in hospital, official or private practice in regions where Tropical Diseases prevail.

Clause A

Candidates who have *either*

(i) subsequently to taking the M.B., B.S. Degrees, conducted a piece of original work, approved for the purpose by the University† ; *or*

(ii) subsequently to taking the M.B., B.S. Degrees, had such exceptional experience as may be approved by the University,†

may present themselves for the M.D. Examination after an interval of one year only from the time of taking the M.B., B.S. Degrees, provided that they comply in other respects with the conditions stated in the preceding paragraph.

The Examination in Branch VI will consist of :—

One paper in Medicine.

One paper in Tropical Medicine (including general and operative treatment).

One paper in the Pathology of Tropical Diseases and in Tropical Hygiene.

An essay on one of two subjects in Tropical Medicine (including Pathology and Hygiene).

A clinical examination.

A laboratory examination.

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* For list of approved Schools, *see* p. 839.

† Applications under this section must reach the University not later than two months before the last day of entry to the Examination.

Thesis

Any candidate for the M.D. Degree may transmit, together with his entry-form* and the certificate referred to above, a thesis† (written in English) embodying the result of his own independent research and having definite relation to the Branch of Medicine in which he is a candidate. The candidate must indicate in what respects his thesis appears to him to advance medical knowledge or practice. A candidate submitting a thesis is also invited to submit in support of his candidature as supplementary documents any printed contributions to the advancement of Medical or Surgical Science which he may have published independently or conjointly.

An Internal Student submitting a thesis in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A thesis which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, who will bind theses to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

In Branches I (Medicine), III (Psychological Medicine), IV (Midwifery and Diseases of Women), V (Hygiene) and VI (Tropical Medicine), if the thesis be judged of sufficient merit by the Examiners the candidate may be exempted from a part or the whole of the written examination ; in Branch II (Pathology) if the thesis be judged of sufficient merit by the Examiners he may be exempted from a part or the whole of the written and practical examinations.

Any exemption granted to a candidate under the foregoing paragraph will hold good only at the M.D. Examination immediately following the acceptance of his thesis. At any subsequent entry for the M.D. Examination he must either take the whole Examination or submit the same or another thesis for consideration in connexion with such subsequent entry.

A candidate will not be permitted to submit as his thesis a thesis for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

If the thesis be approved by the Examiners the candidate may, at the discretion of the Examiners, be required to present himself at the University upon such day or days as may be notified to him, and shall be further tested either orally or practically or by both of these methods with reference both to the special subject selected by him and to the thesis. A candidate for the M.D. Degree in Branch II (Pathology) who presents a thesis may be required by the Examiners to submit within a given period a reasoned Report on a subject prescribed by them.

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* For date of entry, *see* p. 822 above.

† A thesis may consist of a single paper or of a series of papers on the same subject published or unpublished, of which not less than four copies must be furnished.

Any thesis submitted for the M.D. Degree must be satisfactory as regards literary presentation, as well as in other respects, and must be submitted in a form suitable for publication.

Work approved for the Degree of M.D. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

DOCTOR OF MEDICINE (M.D.) UNDER REVISED REGULATIONS

[*The following revised Regulations for the M.D. Degree have now been introduced and the examination for Part I will be held for the first time in July,* **1953.** *Candidates exempted from Part I of the M.D. Examination under revised Regulations will be permitted to enter for the first time for Part II in July,* **1953.**]

The Examination for the Degree of Doctor of Medicine (M.D.) is in two parts, of which Part I may be taken not less than two calendar years and Part II not less than five calendar years after the candidate has obtained the M.B., B.S. Degrees of this University as an Internal Student.

A candidate who has held appointments in a recognised Institution for not less than two years may apply for exemption from Part I. Each application will be considered on its merits by the Board of the Faculty of Medicine. A list of recognised Institutions is given on page 841, below.

A candidate must satisfy the Examiners at Part I of the Examination or be exempted therefrom before he will be permitted to enter for Part II.

Date of Examination

Part I of the Examination will be held twice a year, beginning on the second Monday in December and on the first Monday in July. Candidates for the July Examination must apply to the University for an entry-form which must be returned not later than 1 May, and candidates for the December Examination must apply for an entry-form which must be returned not later than 1 October. Entry-forms must be returned duly filled up and accompanied by the proper fee.

Candidates for Part II may make application at any time for an entry-form which must be returned duly completed with the proper fee and four copies of a thesis.†

Fee*

Candidates for the M.D. Degree must pay a fee of 10 guineas for the first entry for Part I and 10 guineas for the first entry for Part II. The fee for re-examination in either Part is 10 guineas and for exemption from Part I 10 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

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† A thesis may consist of a single paper or of a series of papers on the same subject published or unpublished, of which not less than four copies must be furnished.

* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an examination, see p. 5.

Details of Examination

Part I of the M.D. Examination will consist of :—

Two papers in Medicine.

One paper in Pathology.

An Essay on one of a choice of subjects in General Medicine including the History of Medicine.

A clinical examination of patients.

An oral examination.

Part II will consist of a thesis dealing with General Medicine or with some special branch of Medicine and an oral examination on General Medicine and on the special subject dealt with in the thesis. After the Examiners have read the thesis they may, however, if they think fit and without further test, recommend that the candidate be accepted or rejected.

If in the opinion of the Examiners the thesis is found to be inadequate but nevertheless seems to them to be of sufficient merit to justify such action, the Examiners may recommend the Senate to permit the candidate to re-present his thesis in a revised form within 18 months from the decision of the Senate with regard thereto.

The thesis must be written in English and the candidate must indicate in what respects his thesis appears to him to advance medical knowledge or practice. It must be satisfactory as regards literary presentation and if not already published must be submitted in a form suitable for publication. In addition to his thesis the candidate is also invited to submit in support of his candidature any printed contributions to the advancement of medical science which he may have published independently or conjointly. In the event of any candidate submitting conjoint work, he will be required to state fully his own share in this work.

An Internal Student submitting a thesis in typescript will be required to supply, before the Degree is conferred upon him, one of the four copies of his thesis bound in accordance with the following general specification :—

> Size of paper, quarto approximately 10 inches by 8 inches, except for drawings on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼-inch to ½-inch letters), DEGREE, DATE, NAME, short title written or printed neatly and legibly on the front cover.

A thesis which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, which will bind theses to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

A candidate will not be permitted to submit as his thesis one for which a Degree has been conferred on him in this or any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

Work approved for the Degree of M.D. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

Copies of all successful theses, together with any subsidiary contributions submitted, will be deposited for reference in the University Library.

A Diploma for the Degree of M.D., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

MASTER OF SURGERY (M.S.)

[*For examinations held up to December,* **1952.** *For revised Regulations for Examinations in and after* **1953** *see page* 836, *below.*]

The Master of Surgery Degree is conferred in the following Branches: —Surgery (*Branch I*), Dental Surgery (*Branch II*), Ophthalmology (*Branch III*), and Laryngology, Otology, and Rhinology (*Branch IV*)

Every candidate for the Degree of Master of Surgery must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery in this University as an Internal Student.

A candidate who has passed or presented himself for the M.S. Examination in one Branch may present himself for examination in another Branch at a subsequent Examination.

A candidate who has passed the M.S. Examination, Branch I, will be exempted from the paper on the Principles of Surgery if he presents himself in Branches III or IV.

Date of Examination

The Examination for the Degree of Master of Surgery will be held twice in each year, commencing on the second Monday in December and on the first Monday in July.

Every candidate for the July Examination in Branch I must apply to the University for an entry-form on or before May 8th, which must be returned not later than May 15th. The corresponding dates for the December Examination in Branch I are: (*a*) for a candidate who does not present a thesis, October 20th and November 1st; (*b*) for a candidate who presents a thesis, August 20th and September 1st.

Every candidate in Branches II, III and IV must apply to the University for an entry-form on or before August 20th for the December Examination, *or* February 20th for the July Examination, which must be returned not later than September 1st for the December Examination *or* March 1st for the July Examination.

Entry-forms must be returned duly filled up, accompanied by the proper fee and certificates, as enumerated below, for the Branch concerned.

Fee*

Every candidate for the M.S. Degree must pay a fee of 20 guineas for the first entry in any Branch of the Examination. The fee for re-examination is 10 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

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* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

If a candidate whose thesis has been examined is prevented by illness or other approved reason from taking any written or practical examination which he may be required to take, his entry-fee less 5 guineas will be returned to him.

Branch I—Surgery

Every candidate for the Degree of Master of Surgery, Branch I, must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery in this University.

Every candidate must forward together with his entry-form :—

(i) A certificate of having held for at least two years an approved surgical appointment or appointments at a hospital with an associated medical school recognised for this purpose. In special cases the University is prepared to approve one year's whole-time appointment in a special surgical clinic at a non-teaching hospital as one of the two years' experience referred to above.

(ii) A record of operations performed by him, signed by the surgeon or surgeons under whom he has worked.

Details of Examination

The Examination will consist of :—

Two papers in Surgery (one of which may be a case for commentary).

An essay on one of two subjects which may be selected from any branch of Surgery. The essay must be satisfactory as regards literary presentation as well as in other respects.

One paper in Surgical Pathology.

One paper in Surgical Anatomy and Applied Physiology.

A clinical examination.

An examination in methods of surgical approach and the conduct of operations.

An oral examination.

Branch II—Dental Surgery

Every candidate must forward, together with his entry-form, the following certificates :—

(i) A certificate of having spent at least three years in the study and practice of Dental Surgery at a teaching school or schools approved by the University, of which one year at least must have been subsequent to obtaining the M.B., B.S. Degrees in this University.

(ii) A certificate of having held for at least six months an approved appointment* at a dental hospital recognised for the purpose, subsequently to having obtained a registrable qualification to practise medicine.

Details of Examination

The Examination will consist of :—

One paper and an oral examination in Oral Anatomy and Physiology and in Comparative Dental Anatomy.

One paper and an oral examination in Oral Surgery and Therapeutics.

An essay on one of two subjects in Oral Surgery and Pathology. The essay must be satisfactory as regards literary presentation as well as in other respects.

* A list of these appointments may be obtained on application to the Academic Registrar.

One practical examination in Normal and Pathological Dental Histology.

One practical examination in Bacteriology.

A clinical and practical examination in Oral Surgery (including operative and prosthetic Dental Surgery).

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the subjects of the Examination.

Branch III—Ophthalmology

Every candidate for the Degree of Master of Surgery (Branch III) must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery in this University not less than two years previously, except as provided below.

Candidates who have *either*

(i) taken the M.B., B.S. Degrees with Honours in Surgery ;

or (ii) subsequently to taking the M.B., B.S. Degrees, conducted a piece of original work approved by the University* ;

or (iii) subsequently to taking the M.B., B.S. Degrees, had such exceptional experience as may be approved for this purpose by the University,*

may present themselves after an interval of one year only from the time of taking the M.B., B.S. Degrees, provided that they comply in other respects with the conditions stated in the following paragraphs.

Every candidate must forward together with his entry-form the following certificates :—

(i) A certificate of having spent a total period of at least two years in the study and practice of Ophthalmology at a teaching school or schools approved by the University,† of which one year at least must have been subsequent to obtaining the M.B., B.S. Degrees in this University.

(ii) A certificate that, in the course of this period of two years, he had held for at least six months an approved appointment‡ in the Ophthalmic department of a general hospital recognised by the University for the purpose, or at an Ophthalmic hospital recognised by the University, without ceasing to attend, for the purposes of the study and practice of Ophthalmology, a teaching school or schools approved by the University.

Details of Examination

The Examination will consist of :—

Two papers in Ophthalmology (in one of which there may be included a case for commentary).

One paper in the Principles of Surgery.

A clinical examination.

One paper in the Anatomy and Physiology of the Eye and other parts concerned in Ophthalmology (including Physiological Optics).

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* Applications under this section must reach the University not later than two months before the last day of entry to the Examination.

† For list of approved Schools, *see* pp. 839–40.

‡ A list of these appointments may be obtained on application to the Academic Registrar.

One paper in the Pathology of the Eye and other parts concerned in Ophthalmology.

An oral examination.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the subjects of the Examination.

Branch IV—Laryngology, Otology, and Rhinology

Every candidate for the Degree of Master of Surgery (Branch IV) must have taken the Degrees of Bachelor of Medicine and Bachelor of Surgery in this University not less than two years previously, except as provided below.

Candidates who have *either*

(i) taken the M.B., B.S. Degrees with Honours in Surgery;

or (ii) subsequently to taking the M.B., B.S. Degrees, conducted a piece of original work approved by the University*;

or (iii) subsequently to taking the M.B., B.S. Degrees, had such exceptional experience as may be approved for this purpose by the University,*

may present themselves after an interval of one year only from the time of taking the M.B., B.S. Degrees, provided that they comply in other respects with the conditions stated in the following paragraphs.

Every candidate must forward together with his entry-form the following certificates:—

(i) A certificate of having spent a total period of at least two years in the study and practice of diseases of the nose, throat and ear at a teaching school or schools approved by the University,† of which one year at least must have been subsequent to obtaining the M.B., B.S. Degrees in this University.

(ii) A certificate that, in the course of this period of two years, he has held for at least six months, an approved appointment or approved appointments‡ in the department or departments of Laryngology, Otology and Rhinology of general hospitals recognised by the University for the purpose, or at one or more hospitals recognised in respect of these subjects by the University, without ceasing to attend, for the purpose of the study and practice of diseases of the nose, throat and ear, a teaching school or schools approved by the University.

Details of Examination

The Examination will consist of:—

Two papers in Laryngology, Otology and Rhinology (in one of which there may be included a case for commentary).

One paper in the Principles of Surgery.

An essay on one of two subjects which may be selected from any branch of Surgery. The essay must be satisfactory as regards literary presentation as well as in other respects.

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* Applications under this section must reach the University not later than two months before the last day of entry to the Examination.

† For list of approved Schools, *see* p. 840.

‡ A list of these appointments may be obtained on application to the Academic Registrar.

One paper in the Anatomy and Physiology of the ear, nose and throat, and of other parts concerned in Laryngology, Otology and Rhinology.

A clinical examination.

An oral examination, including pathology as related to the regions concerned.

Thesis

Any candidate for the M.S. Degree may transmit, together with his entry-form* and the certificate referred to above, a thesis† (written in English) embodying the result of his own independent research, and having definite relation to Surgery (Branch I), Dental Surgery (Branch II), Ophthalmology (Branch III), or Laryngology, Otology, and Rhinology (Branch IV). The candidate must indicate in what respects his thesis appears to him to advance surgical knowledge or practice. A candidate submitting a thesis is also invited to submit in support of his candidature as supplementary documents any printed contributions to the advancement of Surgical or Medical Science which he may have published independently or conjointly.

An Internal Student submitting a thesis in typescript will be required to supply, before the Degree is conferred on him, one of the two copies of his thesis bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A thesis which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, who will bind theses to this specification, at a cost of 10*s.* a copy, may be obtained from the Academic Registrar.]

If the thesis be judged of sufficient excellence by the Examiners, the candidate (if in Branches I or II) may be exempted from a part or from the whole of the written examination ; and (if in Branches III or IV) may be exempted from a part of the written examination in the special subject ; but in all cases he shall be submitted to the clinical, practical and oral examinations referred to above.

Any exemption granted to a candidate under the foregoing paragraph will hold good only at the M.S. Examination immediately following the acceptance of his thesis. At any subsequent entry for the M.S. Examination he must either take the whole examination or submit the same or another thesis for consideration in connexion with such subsequent entry.

A candidate will not be permitted to submit as his thesis a thesis for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

* For date of entry, *see* p. 831 above.

† A thesis may consist of a single paper or of a series of papers on the same subject published or unpublished, of which not less than four copies must be furnished.

If the thesis be approved by the Examiners, the candidate may at the discretion of the Examiners, be required to present himself at the University upon such day or days as may be notified to him, and shall be further tested either orally or practically, or by both of these methods with reference both to the special subject selected by him and to the thesis.

Any thesis submitted for the M.S. Degree must be satisfactory as regards literary presentation, as well as in other respects, and must be submitted in a form suitable for publication.

Work approved for the Degree of M.S. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

A provisional list of successful candidates, arranged in alphabetical order, will be published at 2 o'clock on January 3rd and July 26th.

If in the opinion of the Examiners sufficient merit be evinced, a University Medal, of the value of £20, will be awarded to each of the candidates, whether Internal or External, in Branches I, II, III and IV respectively, who shall have passed with the greatest distinction. In the Pass List a mark of distinction will also be placed against the names of all candidates who, in the opinion of the Examiners, have qualified for the award of a University Medal, irrespective of whether a medal is awarded to them or not.

[*Note.*—If the candidate so desire, he may receive, instead of the Medal, books or instruments to the value of £20, selected by him and approved by the University, or he may receive a replica of the Medal in bronze, and books or instruments to the value of the balance of the £20, selected by him and approved by the University.]

A diploma for the Degree of M.S., under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

MASTER OF SURGERY (M.S.) UNDER REVISED REGULATIONS

[*The following revised Regulations for the M.S. Degree have now been introduced and the examination for Part I will be held for the first time in July,* **1953.** *Candidates exempted from Part I of the M.S. Examination under the revised Regulations will be permitted to enter for the first time for Part II in July,* **1953.**]

The examination for the Degree of Master of Surgery (M.S.) is in two Parts, of which Part I may be taken not less than two calendar years and Part II not less than five calendar years after the candidate has obtained the M.B., B.S. Degrees of this University as an Internal Student.

A candidate who has held appointments in a recognised Institution for not less than two years may apply for exemption from Part I. Each application will be considered on its merits by the Board of the Faculty of Medicine. A list of recognised Institutions is given on page 841, below.

A candidate must satisfy the Examiners at Part I of the examination or be exempted therefrom before he will be permitted to enter for Part II.

Date of Examination

Part I of the Examination will be held twice a year, beginning on the second Monday in December and on the first Monday in July. Candidates for the July Examination must apply to the University for an entry-form which must be returned not later than 1 May, and candidates for the December Examination must apply for an entry-form which must be returned not later than 1 October. Entry-forms must be returned duly filled up and accompanied by the proper fee.

Candidates for Part II may make application at any time for an entry-form which must be returned duly completed with the proper fee and four copies of a thesis.†

Fee*

Candidates for the M.S. Degree must pay a fee of 10 guineas for the first entry for Part I and 10 guineas for the first entry for Part II. The fee for re-examination in either Part is 10 guineas and for exemption from Part I 10 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

Part I will consist of:—

Two papers in Surgery, including Surgical Pathology.

One paper in Surgical Anatomy and Applied Physiology.

An essay on one of a choice of subjects in General Surgery.

A clinical examination.

An examination in methods of surgical approach and the conduct of operations.

An oral examination.

Part II will consist of a thesis dealing with General Surgery or with some special branch of surgery and an oral examination on General Surgery and on the special subject dealt with in the thesis. Every candidate for the M.S. Degree is also required to submit a record of his surgical experience signed by the surgeon or surgeons under whom he has worked, or by some other person whom the University may approve for the purpose. After the Examiners have read the thesis they may, however, if they think fit and without further test, recommend that the candidate be accepted or rejected.

If in the opinion of the Examiners the thesis is found to be inadequate but nevertheless seems to them to be of sufficient merit to justify such action the Examiners may recommend the Senate to permit the candidate to re-present his thesis in a revised form within 18 months from the decision of the Senate with regard thereto.

The thesis must be written in English and the candidate must indicate in what respects his thesis appears to him to advance surgical knowledge or practice. It must be satisfactory as regards literary presentation and if not already published must be submitted in a form

† A thesis may consist of a single paper or of a series of papers on the same subject published or unpublished, of which not less than four copies must be furnished.

* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an examination, see p. 5.

suitable for publication. In addition to his thesis the candidate is also invited to submit in support of his candidature any printed contributions to the advancement of surgical science which he may have published independently or conjointly. In the event of any candidate submitting conjoint work, he will be required to state fully his own share of this work.

An Internal Student submitting a thesis in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis bound in accordance with the following general specification :—

> Size of paper, quarto approximately 10 inches by 8 inches, except for drawings on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼-inch to ½-inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A thesis which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, which will bind theses to this specification at a cost of 10*s.* a copy, may be obtained from the Academic Registrar.]

A candidate will not be permitted to submit as his thesis one for which a Degree has been conferred on him in this or in any other University but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

Work approved for the Degree of M.S. and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

Copies of all successful theses, together with any subsidiary contributions submitted, will be deposited for reference in the University Library.

A Diploma for the Degree of M.S. under the Seal of the University shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

INSTITUTIONS RECOGNISED FOR PURPOSES OF M.D. AND M.S. DEGREES UNDER PRESENT REGULATIONS

A. For the **M.D. Degree in Branches I, II, and IV,** and for the **M.S. Degree,** certificates can only be accepted in respect of certain approved appointments (a list of which can be obtained on application to the Academic Registrar) in the case of students who have taken the M.B., B.S. Degrees as Internal Students. Certificates must be signed (1) by the Secretary or other chief administrative officer of the Hospital concerned, and (2) by the Medical or Surgical Officer under whose immediate direction the appointment has been held.

B. For the **M.D. Degree in Branch III (Psychological Medicine)** the University accepts certificates of hospital appointments (which may be held only by a registered medical practitioner) in the case of students who have taken the M.B., B.S. Degrees as Internal Students

(i) from the Mental Hospitals enumerated on pages 821–22, above.

(ii) from further approved Mental Hospitals (a list of which can be obtained from the Academic Registrar).

C. For the **M.D. Degree in Branch V (Hygiene)** the University accepts certificates, in the case of students who have taken the M.B., B.S. Degrees as Internal Students, from the following institution :—

The London School of Hygiene and Tropical Medicine

D. For the **M.D. Degree in Branch VI (Tropical Medicine)** the University accepts certificates, in the case of students who have taken the M.B., B.S. Degrees as Internal Students, from the following institutions :—

London : The London School of Hygiene and Tropical Medicine

Liverpool : The Liverpool School of Tropical Medicine

Cairo : School of Medicine (Kasr El-Ainy Hospital)

E. For the **M.S. Degree in Branch III (Ophthalmology)** the University accepts, in the case of students who have taken the M.B., B.S. Degrees as Internal Students, certificates of having spent at least two years in the study and practice of Ophthalmology from the following :—

Guy's Hospital
King's College Hospital
London Hospital
Middlesex Hospital
Moorfields, Westminster and Central Eye Hospital
Royal Eye Hospital, St. George's Circus, S.E.1
St. Bartholomew's Hospital
St. George's Hospital
St. Mary's Hospital
St. Thomas's Hospital
University College Hospital
Western Ophthalmic Hospital, Marylebone Road, N.W.1

Oxford : Eye Hospital

Cambridge : Addenbrooke's Hospital

Bristol : Eye Hospital

Leeds : General Infirmary

Liverpool : Eye, Ear and Throat Infirmary, Myrtle Street ; St. Paul's Eye Hospital, Old Hall Street

Manchester : Royal Eye Hospital

Newcastle-on-Tyne : Royal Victoria Infirmary ; Eye Hospital

Sheffield : Royal Infirmary ; Royal Hospital

Sunderland : Durham County and Sunderland Eye Infirmary

Aberdeen : Royal Infirmary

Edinburgh : Royal Infirmary

Glasgow : Western Infirmary ; Royal Infirmary ; Victoria Infirmary ; Glasgow Eye Infirmary, Berkeley Street, C.3

Dundee : Royal Infirmary

Cardiff : Royal Infirmary

F. For the **M.S. Degree in Branch IV (Laryngology, Otology and Rhinology)** the University, accepts in the case of students who have taken the M.B., B.S. Degrees as Internal Students, certificates of having spent at least two years in the study and practice of Diseases of the Ear, Nose and Throat from the following :—

London :

Guy's Hospital
King's College Hospital
London Hospital
Middlesex Hospital
Royal National Throat, Nose and Ear Hospital, Gray's Inn Road
St. Bartholomew's Hospital
St. Thomas's Hospital
University College Hospital

Oxford : Radcliffe Infirmary

Cambridge : Addenbrooke's Hospital

Birmingham : General Hospital ; Queen's Hospital

Bristol : Royal Infirmary ; General Hospital

Leeds : General Infirmary

Liverpool : Royal Infirmary ; Royal Southern Hospital ; Eye, Ear and Throat Infirmary, Myrtle Street

Manchester : Royal Infirmary ; Ear Hospital

Newcastle-on-Tyne : Royal Victoria Infirmary

Sheffield : Royal Infirmary ; Royal Hospital

Aberdeen : Royal Infirmary

Edinburgh : Royal Infirmary

Glasgow : Western Infirmary ; Royal Infirmary ; Victoria Infirmary ; Ear, Nose and Throat Hospital

Dundee : Royal Infirmary

Cardiff : Royal Infirmary ; Llandough Hospital

INSTITUTIONS RECOGNISED FOR PURPOSES OF M.D. AND M.S. DEGREES UNDER REVISED REGULATIONS

Charing Cross Hospital and Medical School
Guy's Hospital and Medical School
King's College Hospital and Medical School
London Hospital and Medical College
Middlesex Hospital and Medical School
Royal Dental Hospital of London and School of Dental Surgery
Royal Free Hospital and School of Medicine
St. Bartholomew's Hospital and Medical College
St. George's Hospital and Medical School
St. Mary's Hospital and Medical School
St. Thomas's Hospital and Medical School
University College Hospital and Medical School
Westminster Hospital and Medical School
Hammersmith Hospital and the Postgraduate Medical School of London

SCHOLARSHIPS, STUDENTSHIPS, RESEARCH FUNDS, ETC.

Sir William Dunn Scholarship

1. A Scholarship of the value of £100 and known as " The Sir William Dunn Scholarship " will be awarded annually until further notice.

2. The Scholarship will be awarded on the results of the Second Examination for Medical Degrees held in March and shall be open to both Internal and External Students.

3. The Scholarship will be tenable from the May of the year of award until the end of the following session, and the holder must undertake to read for the B.Sc. (Special) Degree in Anatomy or Physiology of this University at one of the Institutions approved for the purpose.

4. Candidates must, at the time of their entry to the Second Examination for Medical Degrees, state whether, if offered the Scholarship, they would be in a position to accept the award.

5. The Internal, and visiting External, Examiners at the respective Schools shall classify candidates who have intimated their ability to accept the Scholarship in accordance with the marking in the Examination, taking into account also the practical performances and School records, and shall select those candidates whom they consider suitable nominees for the Scholarship.

6. The award will be made by the Scholarships Committee on the recommendation of the relevant Senior External External Examiners at the Second Examination for Medical Degrees.

7. Payment of the emoluments of the Scholarship will be made in five equal instalments, the first being paid in advance (in May or June). Later instalments will be paid as soon as possible after October 10th, January 10th, April 10th and July 10th, on receipt by the University of evidence that the holder of the Scholarship is satisfactorily pursuing his studies.

Information in regard to the following Scholarships, Studentships, Research Funds, etc., will be found in the Scholarships Pamphlet obtainable from the Academic Registrar :—

University Postgraduate Studentships (£250 and £275).

Laura de Saliceto Studentship for Cancer Research (£150).

Geoffrey E. Duveen Studentship in Oto-Rhino-Laryngology (£650).

Mary Scharlieb Research Studentship (£250).

William Julius Mickle Fellowship (£200).

Rogers Prize (£100); Paul Philip Reitlinger Prize (£30); Sanderson Wells Prizes (£20 and £10).

Graham Scholarship in Pathology (£400).

Charles Graham Medical Research Fund.

Thomas Smythe Hughes Medical Research Fund.

Central Research Fund from which grants may be made to members of the University for the provision of materials and apparatus for specific projects of research.

DIPLOMAS

Academic Postgraduate Diplomas in Bacteriology, Clinical Pathology, Dietetics, Medical Radiology, Psychological Medicine, Public Health and Tropical Medicine and Hygiene are awarded. The Regulations may be obtained from the Academic Registrar.

BACHELOR OF DENTAL SURGERY

REGULATIONS FOR INTERNAL STUDENTS

[*Important.*—It should be clearly understood that the Bachelor's Degree in Dental Surgery (B.D.S.) is *not* a qualification for admission to the Examination for the Degree of Master of Surgery (M.S.) in Dental Surgery. In order to be admitted to the M.S. Examination, a candidate must first have obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery (M.B., B.S.) and otherwise have complied with the Regulations relating to the Degree of Master of Surgery.]

In order to be admitted to the Bachelor's Degree in Dental Surgery a student must, after Matriculation or registration as exempt therefrom, and after registration as an Internal Student, have attended prescribed courses of study for five and a half years at one or more Schools of the University, and passed the following examinations :—

(*a*) First Examination for Medical Degrees* (*see* p. 804).

(*b*) Second Examination in Dental Surgery :

Part I (General Anatomy, Physiology, and Special Anatomy and Histology) not less than twelve months after passing the First Examination for Medical Degrees.

Part II (Prosthetic Dentistry) not less than twelve months after passing the Second Examination in Dental Surgery, Part I.

(*c*) Third Examination in Dental Surgery :

Part I (Medicine, Surgery, Pathology and Bacteriology, Pharmacology and Materia Medica) not less than 24 months after passing the Second Examination in Dental Surgery, Part II.

Part II (Operative Dental Surgery and Orthodontics) at the next following Examination.

EXEMPTIONS

Exemptions from the normal course of study and Examinations may be granted as follows :—

(1) In respect of Matriculation (*see* p. 1).

(2) In respect of the First Examination for Medical Degrees (*see* p. 802).

(3) In respect of the course for the Second Examination in Dental Surgery, Parts I and II, and in respect of those Examinations :—

(i) The Senate may permit, in special cases, modification of, or exemption from, the course of study for the Second Examination, provided that an equivalent course has been taken in the University or in a recognised institution elsewhere.

(ii) Students who have passed in Anatomy and Physiology at the Second Examination for Medical Degrees will be exempt from Anatomy (Section (i)) and Physiology at the Second Examination in Dental Surgery, Part I.

(iii) Registered Dental Practitioners who shall have passed the First Examination for Medical Degrees either as Internal or External

* Internal Students who matriculate in January will be permitted to enter for the First Examination for Medical Degrees in the following June, provided that they have attended the prescribed course of study for such Examination throughout the session, and provided that they receive the approval therefor of the Governing Body of the School to which they belong, or in the case of students at an Institution other than a School of the University, of the Recognised Teachers under whom they have studied.

Students or who have been exempted from that Examination may proceed to the Second Examination in Dental Surgery, Parts I and II, and the Third Examination in Dental Surgery as Internal Students, without observing the intervals prescribed by the Regulations, on producing certificates that they have attended the prescribed courses of study for both Examinations at a School of the University, provided that no student shall be permitted to enter for the Third Examination in Dental Surgery under this Regulation unless (*a*) he has attended the required course of study extending over at least two years, part or the whole of which may, however, have been followed prior to passing the Second Examination in Dental Surgery, Part I, and (*b*) at least three sessions of the course were attended subsequently to Matriculation in the University.

(4) In respect of the course of the Third Examination in Dental Surgery, and in respect of that Examination :—

(i) Students who have passed in Pharmacology at the Second Examination for Medical Degrees will be exempt from Pharmacology and Materia Medica at the Third Examination in Dental Surgery.

(ii) Students who have passed the Third Examination for Medical Degrees will be exempt from Pathology and Bacteriology, Medicine, and Surgery at the Third Examination in Dental Surgery.

SECOND EXAMINATION IN DENTAL SURGERY (PART I)

No candidate will be admitted to this Examination unless he has completed the prescribed course of study and has passed the First Examination for Medical Degrees.

Candidates who are referred in one subject at the First Examination for Medical Degrees in June or December and pass in that subject at the next following First Examination for Medical Degrees will be permitted to proceed to the Second Examination in Dental Surgery, Part I, as though they had completed the First Examination for Medical Degrees in June or December respectively, provided they have completed the prescribed course of study.

Course of Study

The course for the Second Examination in Dental Surgery, Part I, should occupy the second year of study and comprises the following subjects : Anatomy (General and Special) and Physiology.

Date of Examination

The Second Examination in Dental Surgery, Part I, will take place twice in each year, commencing on the second Monday in July and on the first Monday in December.

Every candidate entering for this Examination must apply to the University for an entry-form and a certificate of course of study on or before May 8th for the July Examination *or* on or before October 20th for the December Examination. These must be returned duly filled up, signed by or on behalf of the appropriate teachers, and accompanied by the proper fee, not later than May 15th for the July Examination *or* November 1st for the December Examination.

The time-table of the Examination showing both the time and place of the written and oral examinations, will be furnished to each candidate.

Fees*

The fee is six guineas for each entry to the whole Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination will consist of :—

Anatomy : Section (i) General—One paper of three hours' duration and an oral examination.

Section (ii) Special—One paper of two hours' duration and an oral examination.

Physiology : One paper of three hours' duration and an oral examination.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the subjects of the Examination.

Students who have failed at Part I of the Examination are not allowed to re-enter for that Examination without the approval of the Heads of the Departments of Anatomy and Physiology in a recognised Medical School.

A list of successful candidates, in alphabetical order, will be published at 2 o'clock on August 7th and January 1st.

SYLLABUSES

Anatomy

Section (i) *General*

Not less than 80 lectures and demonstrations, including dissections extending over three terms, and covering the following syllabus :—

The topographical anatomy and dissection of the human head and neck. The topographical anatomy of the central nervous system and the sense organs. The development of the jaws, face and buccal cavity.

Dissection of the human body with a view to obtaining a general knowledge of the pericardial, pleural and peritoneal cavities ; the circulatory (blood and lymph), respiratory, alimentary and genito-urinary systems ; the ductless glands.

The elementary anatomy of the skeleton, articulations, muscles, vessels and nerves.

The macroscopical and microscopical appearance of the tissues of the body.

Correlation between structure and function is emphasized.

The standard of knowledge expected of a candidate of the topographical anatomy of the head and neck is not less than that expected of candidates for the Second Examination for Medical Degrees.

Section (ii) *Special.*

A course of not less than 20 lectures and demonstrations, extending over two terms ; and a three months' course of not less than 10 classes in Histology.

* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

The following shall be the syllabus :—

Knowledge of the evolution of the human teeth and jaws with special reference to those of Primates and Prehistoric man.

Adaptive modification illustrated by the relationship between forms of teeth and temporo-mandibular joint in mammals.

The development and growth of the jaws and teeth.

The anatomy, histology, and functions of dental tissues, gums and alveolar processes.

Physiology

A theoretical and practical course of not less than 60 hours,* extending over three terms, and covering the following syllabus :—

An elementary knowledge of the working of the human body as a whole, special reference being made to the applications of Physiology in dentistry.

A practical course in elementary Chemical Physiology, simple tests for proteins, fats and carbohydrates. Foods, digestion, blood, bile, and urine.

Demonstrations in elementary Experimental Physiology.

SECOND EXAMINATION IN DENTAL SURGERY (PART II)

No candidate will be admitted to this Examination unless he has completed the prescribed course of study, and has passed the Second Examination in Dental Surgery, Part I, at least twelve months previously to his entry for the Second Examination in Dental Surgery, Part II.

Course of Study

The Course of Study for the Second Examination in Dental Surgery, Part II normally extends over the third year of study, and comprises Prosthetic Dentistry.

Date of Examination

The Second Examination in Dental Surgery, Part II, will take place twice in each year, commencing on the second Monday in July and on the first Monday in December.

Every candidate entering for this Examination must apply to the University for an entry-form and a certificate of course of study on or before May 8th for the July Examination, *or* on or before October 20th for the December Examination. These must be returned duly filled up, signed by or on behalf of the appropriate teachers, and accompanied by the proper fee, not later than May 15th, for the July Examination, *or* November 1st for the December Examination.

The time-table for the Examination, showing both the time and place of the written and practical Examinations, will be furnished to each candidate.

Fees†

The fee for each entry to the Examination is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1., University of London Account."

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* In cases where Histology is taught in the Physiological Department, this period should be lengthened by 20 hours, which time should be allotted to the teaching of Histology.

† For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

Details of Examination

The Examination in Prosthetic Dentistry including the Properties of Dental Materials, consists of one paper of 2 hours and a practical examination (both clinical and mechanical) of 6 hours.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in the subject of the Examination.

Students who have failed at Part II of the Examination are not allowed to re-enter for that Examination without the approval of the Head of the Department of Prosthetic Dentistry in a recognised Medical School.

A list of successful candidates, in alphabetical order, will be published at 2 o'clock on August 7th and January 1st.

A special mark will be placed against the name of any candidate who distinguishes himself in the Examination.

A certificate will be issued to each candidate who has completed the Second Examination in Dental Surgery, Parts I and II, after the Report of the Examiners shall have been approved by the Senate.

SYLLABUS

Prosthetic Dentistry, including Properties of Dental Materials

A course of instruction of not less than 1,200 hours. The syllabus in Properties of Dental Materials is as follows:

The physical, mechanical and chemical properties of aluminium, copper, gold, lead, mercury, platinum, silver, tin, zinc, and other metals employed in dentistry: tenacity, ductility, malleability, fusibility, specific gravity, specific heat, brittleness, hardness, conductivity for heat and electricity, expansion by heat, and change of volume on solidification.

Effect of exposure in the mouth of metals, their alloys and amalgams.

Preparation of alloys, including those suitable for dies and counter-dies. Preparation of fusible alloys and determination of their melting-points.

Theory of blowpipes. Use of fluxes. Description and use of furnaces and muffles.

The principles of gilding, electro-plating and chromium-plating.

Preparation of materials employed in dental cements and their properties.

Preparation of gold, silver and platinum alloys of required fineness, and recovery of these metals from scrap and sweep.

Differences between cast-iron, wrought iron, and steel, including stainless steel. Hardening, tempering and annealing.

Preparation of dental amalgams, and examination of them for changes of volume and permanence.

THIRD (B.D.S.) EXAMINATION IN DENTAL SURGERY

[*These Regulations will apply to candidates who begin the course of study for the Third Examination in Dental Surgery in and after October, 1949.*]

No candidate will be admitted to this Examination unless he has completed the prescribed course of study, and has passed the Second Examination in Dental Surgery, Parts I and II.

Course of Study

The Course of Study for the Third Examination normally extends over the fourth, fifth and part of the sixth year of study, and includes Medicine, Surgery, Pharmacology and Materia Medica, Pathology and Bacteriology, Dental Surgery (including Special Pathology), Operative Dental Surgery and Orthodontics.

Date of Examination

The Third Examination in Dental Surgery will take place twice in each year, commencing on the second Monday in July and on the first Monday in December.

Every candidate entering for this Examination must apply to the University for an entry-form and a certificate of course of study on or before May 8th for the July Examination, *or* on or before October 20th for the December Examination. These must be returned duly filled up, signed by or on behalf of the appropriate teachers, and accompanied by the proper fee, not later than May 15th for the July Examination, *or* November 1st for the December Examination.

The time-table of the Examination, showing both the time and place of the written, practical, and oral examinations, will be furnished to each candidate.

Fees*

The fee is 12 guineas for each entry to the whole Examination. For examination or re-examination in one Group the fee is 6 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

Candidates will be examined in the following subjects :—

Medicine, Surgery, Pharmacology, Pathology and Bacteriology, Dental Surgery (including Special Pathology), Operative Dental Surgery and Orthodontics.

Group I will normally be taken not less than 24 months after the candidate has passed the Second Examination in Dental Surgery, Part II, and Group II not less than five months subsequently. The two Groups may be taken together provided that the candidate has completed the prescribed course of study, but a candidate who takes Groups I and II together and fails in Group I will not be informed of the result of his candidature in Group II.

A candidate (other than a registered Dental Practitioner) who has failed in Group I will be required on re-entry for that Group to produce evidence of having attended for a further period of three months the medical and surgical practice of a recognised Hospital.

Similarly, a candidate (other than a registered Dental Practitioner) who has failed in Group II will be required on re-entry for that Group to produce evidence of having attended for a further period of three months the dental practice of a recognised Hospital.

Registered Dental Practitioners who fail in either Group can be re-examined in that Group at any subsequent Examination on payment of the appropriate fee.

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* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

Group I

The Examination will consist of :—

Medicine : One paper of two hours' duration and an oral examination.

Surgery : One paper of two hours' duration and an oral examination.

Pharmacology and Materia Medica : One paper of three hours' duration and an oral examination.

Pathology and Bacteriology : One paper of three hours' duration and an oral examination.

Group II

The Examination will consist of :—

Dental Surgery (including Special Pathology) : One paper of three hours' duration.

Operative Dental Surgery : A practical examination of three hours' duration.

Orthodontics : One paper of two hours' duration.

Clinical Dental Surgery and Orthodontics : A practical examination.

The Examiner shall be at liberty to test any candidate by means of oral questions.

Candidates shall not be approved by the Examiners in either Group of subjects unless they have shown a competent knowledge in all the subjects of the Group.

There will be no separate examination held for Honours.

A provisional list of candidates who have passed in both Groups will be published at 2 o'clock on August 7th and January 1st. The list will be published in alphabetical order in two parts, as follows :—

1. An Honours List. 2. A Pass List.

In order to be eligible for the award of Honours the candidate must have passed Groups I and II on the same occasion, or have passed Group II at the next Examination following that at which he passed Group I. Honours may be awarded to a candidate who is exempted from any subject or subjects on the ground of his having passed therein at the Second Examination for Medical Degrees or at the M.B., B.S., Examination. A candidate who has failed at any time in any part of the Final Examination is not eligible for the award of Honours.

In the Honours List the subject or subjects in which the successful candidates have distinguished themselves will be shown.

A diploma for the Degree of Bachelor of Dental Surgery, under the Seal of the University, will be delivered, after the Report of the Examiners shall have been approved by the Senate, to each candidate who has passed the Examination.

SYLLABUSES

Medicine

Not less than 20 lectures and demonstrations in General Medicine with special reference to medical diseases and disorders most commonly associated with oral infection ; a three-months' course of Practical Medicine in the wards or the Medical Out-patients' Department of a recognised Hospital,* and a practical course in Anæsthetics extending over one month with a minimum of 20 administrations. The syllabus is as follows :—

Chief medical affections of the mouth, tongue, lips, gums, tonsils and palate.

Central Nervous System : Syphilis ; fits ; hysteria ; cerebral hæmorrhage ; cerebral thrombosis ; and the main conditions affecting the cranial nerves.

* For list of approved Hospitals, *see* p. 852.

Cardio-vascular System : Manifestations of cardiac failure ; ætiology of cardiac disease ; infective endocarditis ; hypertension ; angina pectoris ; coronary thrombosis ; and disorders of cardiac rhythm.

Respiratory System : Bronchitis ; pneumonia ; foreign bodies in air passages ; lung abscess ; tuberculosis ; emphysema ; asthma ; and massive collapse of the lung.

Gastro-intestinal Tract : Dysphagia ; gastritis ; peptic ulcer ; and carcinoma of the stomach.

Urinary System : Significance of uræmia ; testing for the presence of albumin and sugar in urine.

Hæmo-poietic System : Anæmias ; leukæmias ; hæmorrhagic diseases ; and agranulocytosis.

Lymphatic Glands : Conditions affecting the cervical glands.

Endocrine Glands : Thyrotoxicosis ; myxœdema ; Addison's Disease ; acromegaly ; osteitis fibrosa ; and diabetes mellitus.

Deficiency Diseases : Rickets and scurvy.

Infectious Diseases : The signs which affect the face and mouth.

Granulomata : Tuberculosis ; syphilis ; actinomycosis.

Miscellaneous : Focal sepsis ; jaundice ; alcoholism ; drug addiction ; œdema of face ; chronic arthritis.

Surgery

A course of at least 30 lectures and demonstrations extending over two terms, and a clinical appointment held for at least three months in the Surgical Out-patients' Department of a recognised Hospital.* The syllabus is as follows :—

The general principles of Surgery and Surgical Pathology :—

Inflammation : Causes—vascular and structural changes ; clinical manifestations—treatment ; terminations.

Micro-organisms : A knowledge of the chief pathogenic micro-organisms and their relations to disease.

Infections : Acute and chronic abscess ; furuncle ; carbuncle ; cellutis ; erysipelas ; septicæmia ; pyæmia ; toxæmia ; cancrum oris ; tuberculosis ; syphilis ; actinomycosis ; anthrax ; tetanus.

Wounds : Varieties ; complications ; treatment ; repair ; principles of asepsis and antisepsis and their application.

Blood Vessels : Injuries, hæmorrhage and its arrest ; hæmophilia ; nævus ; aneurism ; arterio-sclerosis ; atheroma ; calcification ; thrombosis ; embolism ; varicosities.

Lymph Vessels and Glands : Lymphadenitis, its causes and terminations, including tubercular and syphilitic infections ; lymphangitis ; lymphadenoma ; secondary infections ; neoplasms, primary and secondary.

Bones : Injuries ; fractures of bones of face ; inflammations, including caries, necrosis ; neoplasms ; leontiasis ossia.

Joints : Injuries, sprains ; injuries of, diseases of, and limitation in movement of the temporo-mandibular joint.

Nervous System : Injuries to nerves ; causes of paralysis ; inflammations, neuritis and neuralgia ; main affections of cranial nerves.

Mouth, Tongue, Lips, Tonsils, Gums, Palate : Chief Surgical affections, including injuries and malformations.

Nose : Naso-pharynx and accessory sinuses, chief surgical affections.

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* For list of approved Hospitals, *see* p. 852.

Salivary Glands : Injuries and diseases.

Submaxillary Cellulitis.

Anæsthetics : The main varieties and their applications in Dental Surgery.

Artificial respiration : Tracheotomy.

Pharmacology and Materia Medica

A course of lectures and demonstrations extending over at least three months, including :—antiseptics, drugs exercising a corrosive action on tissues, anæsthetics, local anæsthetics, drugs acting on the heart and circulation ; the application of Pharmacology to practical questions with which dentistry is specially concerned.

Pathology and Bacteriology

A course extending over two terms and comprising

(i) not less than 20 lectures and demonstrations in Morbid Anatomy and Histology.

(ii) not less than 20 lectures and demonstrations in Bacteriology.

The syllabus is as follows :—

General Pathology.—Process of inflammation. Processes of infection and immunity. Fever and pyrexia. Repair of soft structures and of hard (bone and teeth). Disorders of the blood and circulation. Disorders of nutrition. Auto-intoxication. Degenerations and retrogressive changes. Biology of neoplasms.

[The several courses of instruction shall include a practical acquaintance with the various subjects set out in the syllabus.]

Bacteriology and Protozoology.—The Morphology and Biology of micro-organisms with reference to the following :—Staphylococcus, Streptococcus, Pneumococcus, B. Coli, B. Typhosus, B. Diphtheriæ, B. Tetani, B. Tuberculosis, Actinomyces, Spirochæta pallida. The special Bacteriology and Protozoology of the mouth. The application of Bacteriology to the diagnosis and treatment of diseases of the mouth and parts relative to Dental Surgery.

Dental Surgery (including Special Pathology)

At least twelve months' course of instruction dealing with all branches of the subject.

Special Pathology.—The Pathology, and malformations of the teeth and jaws (including the temporo-mandibular articulation), and of other parts related to Dental Surgery :—

Rickets.
Syphilis.
Tuberculosis.
Scurvy.
Hæmophilia.
Diseases of salivary and lymph glands.
Cretinism.
Acromegaly.
Actinomycosis.

Operative Dental Surgery

At least eighteen months' practical work covering all branches of the subject.

Orthodontics

At least six months' course of instruction, dealing with all branches of the subject.

INSTITUTIONS RECOGNISED FOR PURPOSES OF B.D.S. DEGREE

Courses in preparation for the Second and subsequent Examinations in Dental Surgery are available at the under-mentioned Schools of the University :—

Guy's Hospital Medical School
King's College Hospital Medical School
London Hospital Medical College
*Middlesex Hospital Medical School
Royal Dental Hospital of London School of Dental Surgery
*Royal Free Hospital School of Medicine
*St. Mary's Hospital Medical School
University College Hospital Medical School

HOSPITALS APPROVED FOR COURSE IN PRACTICAL MEDICINE AND CLINICAL APPOINTMENT IN SURGERY

The following Hospitals have been approved for the purpose of the course in Practical Medicine (*see* p. 849) and the clinical appointment in Surgery (*see* p. 850) :—

Charing Cross Hospital
Guy's Hospital
King's College Hospital
London Hospital
Middlesex Hospital
Royal Free Hospital
St. Bartholomew's Hospital
St. George's Hospital
St. Mary's Hospital
St. Thomas's Hospital
University College Hospital
Westminster Hospital

EXAMINATION-PAPERS

The following pamphlets of past examination-papers can be obtained from the University of London (Publications Section), Senate House, W.C.1 :—

First Medical	1*s.* 9*d.*, post free	
Second Medical	1*s.* 9*d.*, ,,	
M.B., B.S. (Oct.)	1*s.* 6*d.*, ,,	
M.B., B.S. (April)	1*s.* 6*d.*, ,,	
M.D. and M.S. (July)	1*s.* 9*d.*, ,,	Prior to 1946 July and December papers were published together.
M.D. and M.S. (December)	1*s.* 9*d.*, ,,	
Dental Surgery	1*s.* 6*d.*, ,,	

A complete list of examination-papers published by the University can be obtained on application.

* Courses in medical subjects only are available ; students must pursue courses in dental subjects at other Schools of the University.

UNIVERSITY OF LONDON

Faculty of Medicine

BACHELOR OF PHARMACY

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the Degree of Bachelor of Pharmacy (B.Pharm.).

The Ph.D. Degree is also awarded in the Faculty of Medicine (in non-clinical subjects only). For Regulations, *see* pp. 106–115.

B.PHARM. DEGREE

REVISED REGULATIONS

[*For Examinations in and after* **1951**.]

The following Regulations will apply to all Internal Students registering from October 1947 *or subsequently.*

Course of Study

Before admission to the course a student must Matriculate and must also either possess a Higher School Certificate with passes at an approved standard in Chemistry, Physics, and one of the following :— Biology, Botany, General Physiology or Zoology; *or* pass a Preliminary Examination in any of these subjects in which he has not so qualified. If Biology is offered as a subject for admission to the course, it must have been passed at main subject standard on a Higher School Certificate granted by any of the approved examining bodies.

Nevertheless, a student who possesses a Higher School Certificate with passes at an approved standard in at least two of the three prescribed subjects may complete his qualification by passing a Preliminary Examination in the remaining subject not later than one year before his entry for Part I of the Final Examination.

The approved standard at the Higher School Certificate Examination shall for the present be main subject standard.

A student must pursue an approved course of study extending over not less than 3 years at one or more Schools of the University or under Recognised Teachers of the University. During the first two years the course will be in Pharmaceutics, Pharmaceutical Chemistry, Pharmacognosy and Pharmacology. In addition, the student must

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attend a course in Mathematics to the satisfaction of his teachers unless he has passed in Pure Mathematics or in Mathematics, Pure and Applied, at main subject standard at a Higher School Certificate Examination or an approved equivalent Examination.

In the third year the student may pursue a course in two subjects taken from the following :—Pharmaceutical Chemistry, Pharmacognosy, Pharmacology, Pharmaceutical Engineering, General Pharmaceutics.

Nevertheless, a student who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all.

A candidate for admission to the Degree will not be required to pass an Intermediate Examination.

In order to qualify for admission to the Degree a student must satisfy the Examiners at the following examinations :—

(i) Part I of the Final Examination to be taken normally at the end of the second year of the course.

(ii) Part II of the Final Examination to be taken not less than one year after the student has satisfied the Examiners in Part I or in all subjects of Part I except one.

A person holding the Degree of B.Pharm. taken under the old Regulations may be permitted to enter for the Degree of B.Pharm. (with Honours) under the revised Regulations provided he applies for and gains exemption from Part I of the Examination and subsequently completes an approved course of study extending over not less than one year at one or more Schools of the University or under Recognised Teachers of the University. The candidate will be required to take Part II of the Examination and may be submitted to an oral test which may cover the scope of Part I and Part II of the Examination. In assessing the result of the Examination the Examiners will take into consideration the candidate's performance in the B.Pharm. Examination under the old Regulations, in Part II of the Examination, and in the oral examination, if imposed.

Date of Examination

The B.Pharm. Examination will take place once in each year, Part I beginning on the third Monday prior to the first Monday in July and Part II on the first Monday in July.

[Note.—In 1951 Part I will begin four days earlier, *i.e.* on Thursday, June 7th.]

Every student entering for either Part of the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study not earlier than January 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

Fee

The fee for each student is 5 guineas for each entry to each Part of the Examination. The fee for re-examination in one subject at Part I is 2 guineas. All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

EXAMINATIONS

Part I of the Final Examination consists of the following :—

Pharmaceutics (3 papers and a practical examination of 6 hours).
Pharmaceutical Chemistry (2 papers and a practical examination of 6 hours).
Pharmacognosy (1 paper and a practical examination of 4 hours).
Pharmacology (1 paper and a practical examination of 4 hours).

Part II of the Final Examination consists of any two of the following subjects :—

Pharmaceutical Chemistry Pharmacognosy Pharmacology Pharmaceutical Engineering General Pharmaceutics	Two 3-hour papers and two 6-hour practical examinations in each of the selected subjects.

Consideration will be given to the practical records of the candidates.

A candidate who fails in not more than one subject at Part I of the Final Examination may be referred in that subject and permitted to re-enter for it on any subsequent occasion.

The list of successful candidates at Part II of the Final Examination will be divided into (i) First Class Honours, (ii) Second Class Honours, and (iii) Pass. The class will be determined with regard to the candidate's performance in both parts of the Final Examination. No class or honours will be awarded on Part I of the Final Examination only.

The name of a candidate shall not be included in the list until he has passed or been exempted from all the examinations specified above.

A diploma for the Degree of B.Pharm., under the Seal of the University, will be delivered to each candidate who has qualified for admission to the Degree after the report of the Examiners shall have been approved by the Senate.

SYLLABUSES

PART I

Pharmaceutics

1. The historical development of Pharmaceutics from A.D. 1600.

2. The principles involved in pharmaceutical manufacturing operations.

3. The principles underlying the preparation, standardisation and storage of vaccines, sera and bacterial derivatives.

4. Disinfectants, antibiotics, preservatives.

5. The Posology of drugs. The compounding and dispensing of medicaments. The preparation of galenicals.

6. The principles of sterilisation and their application to pharmaceutical operations and preparations.

7. Surgical dressings, ligatures and sutures.

8. The law relating to the practice of pharmacy.

Practical

A general course illustrative of the theoretical section of this syllabus.

Pharmaceutical Chemistry

1. The general principles of physical chemistry including the modern conceptions of structure ; valency ; reactivity.

2. The general character of the elements and their compounds as indicated by their position in the periodic table and the electronic structure of their atoms. The preparation and properties of the elements and compounds of pharmaceutical importance, or used in organic syntheses and degradations.

3. The occurrence of impurities in medicinal chemicals and preparations used in pharmacy ; the principles underlying qualitative and quantitative analysis ; the principles underlying tests for purity.

4. A general consideration of mechanism of organic reactions. The methods of formation and preparation and the general chemical properties of substances containing the chief functional groups illustrated by reference to compounds used in pharmacy. The chemistry of (*a*) naturally occurring compounds of pharmaceutical importance ; (*b*) the main groups of substances which exhibit therapeutic activity ; (*c*) those which combat invading organisms.

Practical

A general course of Pharmaceutical Chemistry illustrative of the theoretical section of this syllabus including exercises in qualitative and quantitative analysis, inorganic and organic preparations.

Pharmacognosy

General. Structural characters of the taxonomic groups of plants and animals in relation to crude drugs.

The examination of crude drugs by gross morphology and by microscopical methods.

Description of crude drugs ; groups of constituents and evaluation by ash-values, foreign organic matter and yields to solvents.

Special. The diagnostic macroscopical and sensory characters, the biological and geographical sources and the constituents of important crude drugs.

The biological and geographical sources, the preparation, the macroscopical and sensory characters and the constituents of important unorganised drugs.

The cultivation, preparation, commercial varieties, adulterants and substitutes, the qualitative chemical tests, the deterioration and storage and the microscopical structure of certain more important crude drugs.

Filtering agents and fibres used for surgical dressings. Biology and cultivation of yeast.

Practical

A general course illustrative of the theoretical section of this syllabus.

Pharmacology

The general principles of the functions and structure of the body as they apply to drugs, hormones, foods and vitamins, grouped under the following headings : Muscle, Nervous System, Special Senses, Circulation, Blood, Respiration, Digestion, Food, including Vitamins, Metabolism, Skin, Regulation of Temperature, Kidney, Ductless Glands, Reproduction.

The consideration in some detail of the action and use of appropriate drugs and hormones in each section and a general outline of methods used in biological standardisation.

Practical

A general course in the microscopical recognition of specimens of tissue, experiments on nerve-muscle and heart preparations, blood counts and blood grouping. The recognised tests for protein carbohydrate and fat; the chemical analysis of body fluids.

At the practical examination in Pharmacology the candidate may consult his own practical note-books, provided these contain no reference to Histology.

PART II

Pharmaceutical Chemistry

General

The use of emission, adsorption and X-ray spectra in the determination of structure. The mass spectrograph. Isotopes and the use of isotopic indicators. Natural and induced radio activity. Molecular and ionic nature of crystalline solids. Thermodynamic concepts. 1st and 2nd Laws. Reversibility, irreversibility and equilibrium.

The theory underlying those physical instruments used in quantitative chemical analysis and in the automatic recording and control of chemical processes.

The idea of activation, activity co-efficients. Interatomic distances. Interionic attraction theory; complex ions.

Organic

The chemistry of cyclic systems not covered in Part I, derivatives of which are used in pharmacy. An extension of the survey of the chemistry of (*a*) naturally occurring compounds of pharmaceutical importance; (*b*) the main groups of substances which exhibit therapeutic activity; (*c*) those which combat invading organisms.

An elementary consideration of enzymes, fermentation and *in vitro* bio-synthesis.

A consideration of conjugated systems; polymerisation and polycondensation; strainless ring systems; free radicals.

Practical

Advanced pharmaceutical analysis including the use of the spectrophotometer and other physical instruments used in quantitative estimations; measurement of fluorescence.

Experiments illustrative of the physical chemistry of Part I and Part II of this syllabus.

Organic preparations involving several stages.

Pharmacognosy

A wide general knowledge of crude drugs, including a study of the origins of *materia medica* in folk-lore, classical systems of medicine and herbals. The effect of travel and exploration and the future of crude drugs in relation to modern pharmaceutical developments.

A general view of commerce, cultivation and collection of crude drugs ; the isolation of important constituents ; the evaluation of crude drugs, including microscopical methods and the use of ultra-violet light. The preparation of systematic descriptions.

Identification of indigenous medicinal and poisonous plants by the use of a " flora."

The presentation of a critical digest of the literature relating to some one common drug, with illustrations, drawn to scale or photographs or both.

Practical

A general course illustrative of the theoretical section of the syllabus.

Pharmacology

A more detailed consideration of drugs, their absorption, methods of administration and the measurements of their potency in animals. Biological standardisation of drugs including a short consideration of animal variation and the statistical methods used. A general consideration of drugs used in chemotherapy, their action and use.

Practical

The recognition of the effects of the more important drugs in animals and man. Biological standardisation. Estimation of the concentration of chemotherapeutic substances in blood and urine.

At the practical examination in Pharmacology the candidate may consult his own practical note-books provided these contain no reference to Histology.

Pharmaceutical Engineering

1. The principles underlying pharmaceutical manufacturing processes, including conveyance and storage of materials, the production and conservation of heat, heat transmission, refrigeration. The treatment of materials.

2. A knowledge of manufacturing plant. The packaging and conveyance of manufactured material. Flow sheets.

3. Pharmaceutical plant construction.

4. Factory design and construction.

5. The general principles of factory organisation and management.

Practical

A general course illustrative of the theoretical section of this syllabus.

General Pharmaceutics

Recent developments in pharmaceutics.

The application of statistical methods to problems in pharmaceutics.

A critical consideration of the design, equipment and maintenance of a pharmaceutical department of a hospital.

A more detailed knowledge of the following :—

The evaluation of disinfectants, antibiotics and preservatives.

The evaluation of methods of sterilisation.

Large-scale sterilisation processes including the sterilisation of surgical dressings.

The preparation of blood plasma and serum for parenteral injection.

The formulation and preparation of compressed tablets.

Practical

A general course illustrative of the theoretical section of this syllabus.

EXAMINATION-PAPERS

Pamphlets of past examination-papers for the B.Pharm. can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 1*s.* 6*d.* post free.

A complete list of examination-papers published by the University can be obtained on application.

UNIVERSITY OF LONDON

Faculty of Science

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following degrees in the Faculty of Science :—

Bachelor of Science	(B.Sc.).
Master of Science	(M.Sc.).
Doctor of Philosophy	(Ph.D.).
Doctor of Science	(D.Sc.).

[For Regulations for Degrees in Agriculture, *see* p. 1201 ; Horticulture, *see* p. 1217 ; Household and Social Science, *see* p. 1301 ; and in Veterinary Science, *see* p. 1401.]

1. In order to be admitted to the Degree of Bachelor of Science (B.Sc.) as an Internal Student, a candidate must

(i) Satisfy the minimum University entrance requirements in one of the ways provided in the Regulations ;

(ii) satisfy the additional requirement for admission to the Faculty of Science* ;

(iii) *either* satisfy the preliminary requirements prescribed for particular courses if proceeding under the revised Regulations,
or pass or obtain exemption from the Intermediate Examination in Science if proceeding under the old Regulations ;

(iv) follow thereafter at one or more Schools of the University or under Recognised Teachers of the University an approved course of study for not less than three academic years (or, if the candidate has passed the Intermediate Examination as an Internal Student and is proceeding to a degree under the old Regulations, not less than two academic years), except where otherwise provided by the Regulations†.

(v) pass the Final Examination in Science, either B.Sc. (General) or B.Sc. (Special), and such ancillary, subsidiary or other examinations as may be prescribed.

An Advanced Student, however, is not required to satisfy the additional requirement for admission to the Faculty of Science, and his course of study may be of not less than two years' duration.

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* A candidate who has passed the Second M.B. Examination as an Internal Student and is proceeding to a B.Sc. (Special) Degree in Anatomy or Physiology is exempt from this additional requirement.

† See pp. 1036-7, 1088.

2. The additional requirement referred to in 1 (ii) above for admission to the Faculty of Science is :—

either (*a*) a pass in Pure Mathematics or Mathematics (Pure and Applied) at the Ordinary or Advanced Level in a General Certificate of Education* ;

or (*b*) a pass in Elementary Mathematics at one of the following examinations :—

(i) the Matriculation Examination or any examination conducted by the University in lieu thereof ;

(ii) an examination accepted by the University as exempting from the Matriculation Examination ;

(iii) a General School Examination ;

provided that the standard attained in that subject is the equivalent of at least Ordinary level in the General Certificate of Education ;

or (*c*) a pass in Pure Mathematics or Pure and Applied Mathematics at main or subsidiary standard at a Higher School Certificate Examination;*

or (*d*) a pass in Pure Mathematics or Mathematics (Pure and Applied) at the External Intermediate Examination in Science or at the Internal or External Intermediate Examination in Engineering.

3. The following students may, however, be admitted to the Faculty of Science in 1950 without having satisfied the additional requirement 1 (ii) above :—

(i) A student who has satisfied the Examiners in the " lower alternative " papers in Elementary Mathematics at the Matriculation Examination, or has attained only the pass standard or the " lower standard " in Elementary Mathematics at the General School Examination, or has passed one of the examinations referred to above without taking Elementary Mathematics,

provided that he passes in ordinary Elementary Mathematics at a Matriculation Examination (or at an examination accepted in lieu thereof or at a General School Examination at an equivalent standard) not later than four months after commencing the course, or, if he has already passed the External Intermediate Examination in Science without taking Pure Mathematics or Mathematics (Pure and Applied) at a Matriculation Examination (or an examination accepted in lieu thereof) not later than one academic year after commencing the course ;

(ii) a student offering Pure Mathematics or Mathematics (Pure and Applied) at the Internal Preliminary (Intermediate) Examination in Science,

provided that he satisfies the Examiners in the relevant subject at that Examination not later than one academic year after commencing the course.

* In Regulations in the Faculty of Science a General Certificate of Education and Higher School Certificate mean respectively a General Certificate of Education and a Higher School Certificate awarded by one of the approved University Examining Bodies.

PRELIMINARY (INTERMEDIATE) EXAMINATION IN SCIENCE*

[*The examination may be taken by students in the following categories :*

Category A—Students proceeding to the B.Sc. (Special), B.Sc. (Eng.) and B.Pharm. Degrees under revised Regulations, whose qualifications do not entitle them to proceed directly on the degree courses.

Category B—Students proceeding to the B.Sc. (Special) Degree under the old Regulations or to the B.Sc. (General) Degree.]

Qualifications for Admission

1. To be admitted to the examination candidates must *either*

(*a*) Have registered as Internal Students and have completed an approved course of study extending over not less than one academic year in the subject or subjects offered, *or*

(*b*) have been accepted by a College or Institution for a degree course under revised Regulations on condition that they first complete their preliminary qualifications, and have obtained permission from the University to enter for this examination.†

Scheme of Examination

2. The examination is a Pass examination only.

3. The subjects of the examination are as follows :—

Subject	*Written Papers*	*Practical Examination*
Pure Mathematics	Two 3-hour	—
Applied Mathematics	Two 3-hour	—
Mathematics (Pure and Applied)	Three 3-hour	—
Physics	Two 3-hour	One 3-hour
Chemistry	Two 3-hour	One 3-hour
Biology	Two 3-hour	Two 3-hour
Botany	Two 3-hour	One 3-hour
Geography	Three 3-hour (including one in map work)	—
Geology	Two 3-hour	One 3-hour
General Physiology	Two 3-hour	One 3-hour
Psychology	Two 3-hour	One 3-hour
Zoology	Two 3-hour	One 3-hour

4. Biology must not be taken with either Botany or Zoology.

5. Mathematics (Pure and Applied) must not be taken with Applied Mathematics or Pure Mathematics.

6. The Examiners shall be at liberty to test any candidate by means of oral questions.

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* There are Special Regulations applying to Students of Imperial College.

† Such permission will not be granted unless the candidate is precluded by Regulation from entering the Intermediate Examination in Science for External Students in order to obtain the necessary preliminary qualifications.

7. Candidates in experimental subjects must bring to the practical examinations their note-books, certified by their teachers as being the record of the work carried out by the candidate in the laboratory, so that the Examiners may inspect them if they so desire. These note-books must be taken away by the candidates at the close of the examination.

8. *For Students in Category A :*

(1) In order to obtain or complete the preliminary qualifications for admission to the degree course, candidates shall be required to satisfy the Examiners in accordance with the following provisions :—

(*a*) The subject or subjects to be offered shall be selected in accordance with the requirements of each degree course.

(*b*) The selected subjects need not be offered on one and the same occasion.

(2) Candidates will be credited with any subject or subjects in which they have satisfied the Examiners.

(3) Candidates who have satisfied the Examiners at one of the following examinations in one or more of the subjects shown below will be credited with the corresponding subject or subjects at the Preliminary Examination :

Intermediate Examination in Agriculture—Botany ; Chemistry ; Geology ; Pure Mathematics ; Applied Mathematics ; Physics ; Zoology.

Intermediate Examination in Horticulture—Botany ; Chemistry.

Intermediate Examination in Household and Social Science—Physics.

Intermediate Examination in Engineering—Pure Mathematics ; Applied Mathematics ; Heat, Electricity and Magnetism with Sound and Optics (for exemption from Physics).

Intermediate Examination in Pharmacy—Biology ; Botany ; Chemistry ; Physics ; Zoology.

Intermediate Examination in Arts—Biology ; Botany ; Chemistry ; Geography ; Geology ; Pure Mathematics ; Applied Mathematics ; Mathematics (Pure and Applied) ; Physics ; Zoology.

9. *For Students in Category B :*

(1) In order to complete the examination candidates must satisfy the Examiners *on one and the same occasion* in each subject offered in accordance with the following provisions :—

(*a*) The combination of subjects in which a student qualifies must

(i) include at least one of the subjects Pure Mathematics, Applied Mathematics, Mathematics (Pure and Applied), Physics, Chemistry and

(ii) include Chemistry if General Physiology is offered.

(*b*) The number of subjects which must be offered

(i) by candidates who have obtained either a Higher School Certificate with two approved subjects passed at main standard on one and the same occasion, or a General Certificate of Education with two approved subjects passed at advanced level on one and the same occasion, is such as to bring the total number of subjects to four.

(ii) by other candidates (except as provided for Advanced Students), is three.

(2) Candidates will be permitted to offer one subject additional to those in which they are required to pass. If they pass in this additional subject, they will be credited with it.

(3) Exemptions are granted from the whole of the examination as follows :—

(*a*) To students who have passed the Intermediate Examination in Engineering, Agriculture, Horticulture, Household and Social Science or Pharmacy of this University.

(*b*) To students who have passed the Second Examination for Medical Degrees as Internal Students and are proceeding to the B.Sc. (Special) Examination in Physiology or Anatomy under the old Regulations.

(*c*) To students who have obtained the B.Sc. (Eng.) Degree in this University as Internal or External Students.

(*d*) To Matriculated students who have obtained either a Higher School Certificate or a General Certificate of Education, provided that they have passed on one and the same occasion at main standard or at advanced level in a combination of three subjects complying with paragraphs 3—5 and 9 (1) (*a*) above*.

(*e*) To students who at an Intermediate Examination in Science for Internal or External Students conducted under the Regulations previously in force have satisfied the Examiners in not less than three appropriate subjects.

[Higher School Certificate or General Certificate of Education Biology of this University or any other approved University Examining Body is not, in general, regarded as adequate for preparing a candidate to take a special degree in Botany or Zoology.]

Entry to Examination

10. Every candidate entering for this examination must apply not earlier than February 1st to the Academic Registrar for an entry-form which must be completed and returned, together with the proper fee, not later than April 17th. The entry-form of every candidate, other than those referred to in paragraph 1 (*b*) must be attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6—9).

The Examination may be held (*a*) at the following Colleges and Schools of the University for candidates attending appropriate courses thereat :

Bedford College, Birkbeck College, King's College, Queen Mary College, Royal Holloway College, University College ;

(*b*) at the University Examination Halls for other candidates.

There are special Regulations applying to students of Imperial College.

The Examinations are held annually : those under (*a*) at dates to be announced, and those under (*b*) on the first Monday in July.

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* Applications must be submitted through the authorities of the Schools or Institutions of the University at which the students propose to follow their courses of study.

Fees

11. Fees per student are as follows :—

Students in Category A :

For each subject	£2 2s. od. up to a maximum of £6 6s. od. per examination
For each supplementary subject...	£2 2s. od.
For each paper or practical taken by a Registered Advanced Student	£1 1s. od. up to a maximum of £6 6s. od. per examination

Students in Category B :

For each entry to the whole examination	£6 6s. od.
For first entry to complete the examination by students who are permitted to enter in two subjects by virtue of a Higher School Certificate or General Certificate of Education ...	£6 6s. od.
For each subsequent entry by such students	£2 2s. od. per subject
For each supplementary subject...	£2 2s. od.
For each paper or practical taken by a Registered Advanced Student	£1 1s. od. up to a maximum of £6 6s. od. per examination
For complete exemption from the examination	£6 6s. od.

All cheques should be made payable to the University of London or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Notification of Results

12. A provisional list of candidates arranged in alphabetical order showing the subjects in which they have satisfied the Examiners will be published by the Academic Registrar at 2 o'clock on August 20th.

Issue of Certificates

13. Certificates of having passed the examination in three approved subjects at one and the same examination will be issued to students who have qualified therefor, if they make special application.

Supplementary Subjects

14. Candidates who have on the results of this examination or by exemption therefrom qualified to proceed to a B.Sc. Degree Course under the old or revised Regulations, may enter for examination in one or more supplementary subjects after having attended an approved course of study in such subject or subjects.

SYLLABUSES

15. The syllabuses for the subjects of this examination are as follows. They are intended to indicate the general scope and character of the courses without being exhaustive of all parts of the subject :—

Biology

[*Note.*—This syllabus is not regarded as adequate for preparing a candidate to take a Special Degree in Botany or Zoology.]

1. The general structure, physiology and life-history of :—*Amœba, Paramecium, Hydra,* earthworm, cockroach, dogfish, frog, and rabbit ; *Chlamydomonas, Pleurococcus, Spirogyra, Fucus, Dryopteris* and of the flowering plant, as illustrating various grades in animal and plant organisation. The salient distinctions between sedentary and motile organisms.

2. The nature of protoplasm. The structure and physiology of the cell ; cell-division ; gamete-formation and its relation to the mechanism of heredity. Cell-differentiation and tissue-formation, including an elementary knowledge of the histology and functions of :—epithelia, blood, connective, skeletal, muscular and nervous tissues of animals and of the epidermis, parenchyma, collenchyma, sclerenchyma, xylem, phloem, and the primary and secondary meristems (including cork formation) in plants. The structure and functions of the more important organs of a flowering plant and of the mammalian body.

3. Sexual and non-sexual reproduction ; parthenogenesis.

4. The embryology of the flowering plant. The elements of vertebrate embryology with special reference to (*a*) cleavage and origin of germ layers in *Amphioxus,* the frog, the fowl and the rabbit ; (*b*) the formation of the embryonic membranes in the fowl and the rabbit ; (*c*) the outlines of organogeny as illustrated by the study of the fowl as far as the end of the third day of incubation ; (*d*) the modes of nutrition during development.

5. An elementary knowledge of carbohydrates, fats and proteins and their recognition by simple chemical tests.

6. Nutrition in plants and animals. Photosynthesis. The commonly cultivated food plants and their nutritional significance. An elementary knowledge of the soil as it affects plant life, and the importance of nitrates, sulphates and phosphates to the plant.

7. Digestion, absorption and assimilation in animals. An elementary knowledge of vitamins. The nature of enzyme action and the transport and storage of food material in animals and plants.

8. Respiration and the energy changes involved. Excretion. The water relations of plants and animals. Growth. Stimulus and response in plants and animals. An elementary knowledge of the endocrine system in animals.

9. The parasitic and saprophytic modes of life as exemplified by *Pythium, Mucor,* the yeast plant, the bacteria and *Cuscuta ; Monocystis,* the malarial parasite, the tape-worm and a nematode parasite of plants. (A knowledge of the structure and life-history of these organisms only so far as it is of importance in relation to the special mode of life. Insects as pests (e.g., Cabbage white butterfly), as pollinators (e.g., Bee) and as vectors of disease (e.g., *Anopheles, Aphis.*)

10. The principal facts of heredity, including a knowledge of simple Mendelian experiments, the evidence for evolution, and an outline of the principal theories of the mode in which it takes place.

Practical Work

The practical work will be based on the above syllabus and should include :—

1. Dissection or microscopical examination of the animal and plant types cited.

2. In addition to the general external and internal anatomical features of the earthworm, cockroach, dogfish, frog and rabbit, the student is expected to have made the following special dissections :—

Cockroach (*a*) Preparation of salivary glands and of mouth parts.

Dogfish (*b*) Heart, afferent and efferent branchial systems.

(*c*) Brain and cranial nerves.

Frog (*d*) Heart and principal vessels of the arterial and venous systems.

(*e*) Spinal and sympathetic nerves ; removal of brain and spinal cord.

(*f*) Urinogenital system.

Rabbit (*g*) Heart and principal vessels of arterial and venous systems. (The heart of a sheep should be examined.)

(*h*) Removal and gross anatomy of brain.

(*i*) Urinogenital system.

(*j*) The eye of an ox.

3. In the study of the mammalian skeleton the skull of the dog will be substituted for that of the rabbit.

4. Microscopical preparation and examination of suitable animal and plant tissues.

5. Simple experiments in plant physiology, and detection of food stores by simple chemical tests.

6. A study of the external changes during development of the frog from fertilisation to the end of metamorphosis. The examination of whole mounts and representative sections illustrating the development of the frog to the beginning of germ-layer formation and of the chick during the first, second and third days. The external features of a fairly advanced mammalian embryo attached to the wall of the uterus by the umbilical cord (museum specimen).

Botany

Morphology.—The structure and properties of the cell. The plant body : its structure, development and modifications. Nuclear and cell division.

Special Morphology, Reproduction and Taxonomy.—The general characters of the following group :—

Bacteria.

Fungi, especially *Mucor, Penicillium, Saccharomyces,* any common gill-bearing fungus, and a plant pathogen.

Algæ, especially *Chlamydomonas, Spirogyra, Vaucheria* and *Fucus.*

Bryophyta, especially *Pellia,* and *Funaria,* the latter with special reference to its life history, and without detailed treatment of the sporophyte.

Pteridophyta, especially *Dryopteris,* and the special features of *Selaginella.*

Gymnosperms, especially *Pinus*.

Angiosperms, a study of the morphology and biology of the flower, with some training in the use of a flora. Family characters not to be emphasised.

Elements of Physiology.—The mineral nutrition and water relations of plants. Outlines of metabolic changes in the plant, especially respiration and photosynthesis. Growth. Geotropism and phototropism. An elementary knowledge of the soil in relation to the plant.

Elements of genetics and their cytological basis. Evolution.

Practical Work

The practical work will include the dissection and examination of plants or parts of plants, and the reference to the systematic position of the plants or parts of plants comprised in the foregoing syllabus. Simple experiments in practical physiology may be set.

Candidates may bring their own stains to the practical examination, but double staining is not desired. Candidates will be permitted to provide for themselves and use hand-microtomes if they desire.

Chemistry

The following outline is not to be regarded as a rigid syllabus of instruction, but is given in continuation of the Matriculation or General School Examination syllabus for the general guidance of candidates as indicating the range of the written part (I) and the experimental part (II) of the examination in Chemistry.

The whole syllabus is to be treated in an elementary manner and as far as possible experimentally. More importance will be attached to a sound understanding of fundamental principles and standard experimental methods than to an acquaintance with advanced theoretical ideas.

I

The laws of chemical combination. History of the discovery of the composition of air and water. The atomic and molecular theories. Equivalent, atomic, and molecular weights and methods for determining them. Valency. Atomic structure in so far as it is necessary to explain simply (*a*) the different types of valency and (*b*) the periodicity in the properties of the elements of atomic number 1 to 18.

The periodic classification of elements, as illustrated by the chemistry of: H, He, Ne, A, Li, Na, K, Cu, Ag, Be, Mg, Ca, Sr, Ba, Zn, Cd, Hg, B, Al, C, Si, Sn, Pb, N, P, As, Sb, Bi, O, S, Cr, F, Cl, Br, I, Mn, Fe, Co, Ni. The treatment of the descriptive chemistry should be extended to include the preparation and properties of the more important compounds of: H, B, C, N, P, As, O, S, Cl, Br, I, Na, K, Cu, Ag, Mg, Ca, Ba, Zn, Hg, Al, Sn, Pb, Cr, Mn, Fe.

[*Note*.—For the purposes of this syllabus, " important compounds " means (*a*) compounds in common laboratory use for work up to Intermediate standard, or (*b*) compounds which have well-known uses.]

Sources and common processes for the manufacture or production of : H, He, Ne, A, O, N, Cl, Br, I, C, P, S ; Na, Cu, Ag, Mg, Zn, Hg, Al, Sn, Pb, Cr, Mn, Fe, Ni. [*Note.*—A knowledge of metallurgical and other manufacturing operations will not be required except in broad outline.] Common processes for the manufacture of the following materials : Na_2CO_3, $NaHCO_3$, NaOH, CaO, SO_2, H_2SO_4, NH_3, HNO_3, HCl, hypochlorites, chlorates, bleaching powder, CO_2 and the fuel gases.

The chemistry involved in inorganic qualitative and volumetric analysis (*see* Part II).

The chemistry involved in the detection of C, H, N, Cl, Br, I, and S, in organic compounds. Calculation of empirical and molecular formulæ from experimental data.

Elementary principles of Organic Chemistry including the following :—

The quadrivalence of carbon and its power of forming stable bonds with non-metals and especially with itself. Relationship of structural formulæ (excluding, except as mentioned below, the stereochemical aspect) of saturated open-chain hydrocarbons containing not more than 4 carbon atoms. Homology, Isomerism. Candidates should be able to give examples of structural isomerism, and should know why plane formulæ are not universally acceptable, but they are not expected to be familiar with the formulæ or behaviour of specific mirror-image or geometrical isomerides.

Typical properties conferred by substituents, emphasis being laid on the behaviour of groups rather than on the technique of preparation or recognition of individual substances. Nevertheless certain simple substances (mentioned below in parenthesis) should be included among those selected as types ; candidates will be expected to be familiar with the usual origin or method of preparation and characteristics of these compounds. Substitution in saturated open-chain hydrocarbons (methane) by chlorine. The radicals C_nH_{2n+1}. Reactions of compounds C_nH_{2n+1}. 1 Cl. (Br or I) with alkali and ammonia. Alcohols of the general formula $R{\cdot}CH_2{\cdot}OH$ (methyl and ethyl alcohols), $R_2CH{\cdot}OH$, $R_3C{\cdot}OH$, and their behaviour towards sodium, phosphorus halides (or phosphorus together with halogens), hydrogen halides, oxidising agents, and dehydrating agents, including sulphuric acid. Formation of ethers (diethyl ether). Unsaturated hydrocarbons, C_nH_{2n} (ethylene). Addition of H_2, Cl_2, Br_2, and HBr to olefins. Action of alkali on the products formed from olefins by addition of Cl_2 or Br_2 (acetylene). The carbonyl group in aldehydes, $R{\cdot}CHO$, and ketones, R_2CO (formaldehyde, acetaldehyde, acetone). The action of reducing and oxidising agents on these substances, and the addition of HCN to them. Monobasic carboxylic acids, $R{\cdot}CO_2H$ (formic and acetic acid). Reaction of acids with PCl_5 (acetyl chloride) and the behaviour of acid chlorides with water, alcohol, and ammonia. Esterification of acids (ethyl acetate) and the behaviour of esters towards acids, alkalis, and ammonia. Acid anhydrides (acetic anhydride), amides (acetamide) and their hydrolysis. Amines, RNH_2, R_2NH and R_3N (methylamine, dimethylamine, trimethylamine).

Modifications of group function as illustrated by the following :—

Difference in the properties dependent on the group OH in alcohols and in acids. Differences exhibited by the group C = O in aldehydes and ketones on the one hand, and in acids, esters, etc., on the other. Differences in the properties of the NH_2 group in amines and amides.

The elementary principles of Physical Chemistry, which will find illustration throughout the subject matter of the syllabus. The following topics should be included among those studied :—

The properties of gases ; the laws of Boyle, Charles, Avogadro, Gay Lussac, and Graham, and the law of partial pressures. Difference of specific heats of gases at constant pressure and at constant volume. Ratio of the specific heats and its connection with atomicity treated empirically. Determination of molecular weights of gases and vapours. Thermal dissociation. The properties of solutions : Distribution law. Henry's law. Osmotic pressure. Proportionality of lowering of vapour pressure, raising of boiling point, and lowering of freezing point to molar concentration. Determination of molecular weights in solution. The essential differences between colloidal and true solutions. Electrolysis and electrolytic dissociation. Chemical equilibrium and simple applications of the law of mass action. Le Chatelier's principle. Solubility product. Simple treatment of the strength of acids and bases, indicators, and the hydrolysis of salts. Effect of concentration, temperature, and catalysts on rate of reaction. Exothermic and endothermic reactions. Hess's law.

II

Practical Examination

Candidates are permitted to bring for use in the practical examination any book or books they desire, including their own laboratory note-books.

Qualitative analysis of simple mixtures of not more than four inorganic radicals. (Phosphate separations will not be required.)

Preparation and use of volumetric solutions of :—

Acids and alkalis, potassium permanganate, potassium dichromate, sodium thiosulphate, iodine, arsenious oxide, silver nitrate, and potassium thiocyanate.

Candidates may also be required to examine the action of heat and reagents on substances supplied and to identify well-known products including gases, produced in the reactions. The practical exercises may also include the preparation and purification of substances by methods involving solution, precipitation, crystallisation, distillation, and sublimation.

Candidates are required to bring to the practical examination their *original* laboratory note-books for inspection by the examiners should they so desire. These note-books must be taken away by the candidates at the close of the examination.

Candidates' practical note-books must contain a certificate by their teachers that the work is the student's original experimental work carried out in the laboratory.

Geography

1. *General Geography* (one paper).—General principles as exemplified in the world considered as a whole.

The Earth's Crust :—Nature of the earth's crust. The internal and external forces modifying the crust in so far as they determine :—(*a*) General structure and leading relief features of the continental masses and ocean basins ; (*b*) Types and distributions of rocks, minerals and soils.

Climate :—Broad seasonal distribution of insolation, temperature, pressure, winds and rainfall, leading to a recognition of chief climate types and their associated weather conditions. (The physical conditions and movements of the oceans should be considered only in so far as they affect climate.)

Vegetation :—General distribution of forest, woodland, scrub and grassland in relation to climate, soil and relief.

Major Geographical Regions :—The division of the world into major geographical regions.

Human Geography :—The influence of the foregoing physical factors upon the distribution of man and upon the production of food and raw materials, and the consequent development of the geographical regions.

2. *Regional Geography* (one paper).

(*a*) Europe with special reference to the British Isles, France, Germany, Italy, Switzerland and Scandinavia.

(*b*) North America with special reference to the north-eastern industrial areas, and the United States east of the Mississippi.

(*c*) The Monsoon lands with special reference to the Indian Sub-continent.

3. *Map Work* (one paper).

The map work should be carried on in connection with the general and regional geography and should include :—The study of topographic maps (including section drawing) as exemplified by one-inch and six-inch Ordnance Survey maps of the British Isles ; the use and study of atlas maps, including the advantages and disadvantages of the principal projections employed, climate and weather maps ; cartographical and diagrammatic representation of geographical data.

Geology

I. *Physical Geology*

(*a*) The earth as a planet ; origin and general characters of its chief surface features.

(*b*) The physical condition of the earth's crust and interior ; evidences of internal activity such as volcanic, seismic, and diastrophic phenomena.

(*c*) General characters and inter-relationships of rocks.

(*d*) The work of geological agents ; the circulation of rock material, including the processes of denudation, transport, deposition, and deformation.

II. *Mineralogy and Petrology*

(*a*) Elements of crystallography and crystallographic projection and notation.

(*b*) The common rock-forming and vein-forming minerals ; their physical characters, chemical composition, and modes of origin and occurrence.

(*c*) The simpler optical properties of the common rock-forming minerals and the physical principles on which these properties depend.

(*d*) The general characters and relationships of the chief types of sedimentary, igneous, and metamorphic rocks.

III. *Historical Geology*

The disposition of rocks and its representation on maps ; evidences of relative ages of rocks ; fossils, their preservation and distribution in rocks of different ages ; the geological systems, their broad characters and distribution in Great Britain.

Practical Work

Interpretation of simple geological maps in terms of rock-structure and its relation to topography ; expression of this interpretation by means of sections ; graphic methods of finding thickness, dip and strike of beds, of completing outcrops, and of tracing the underground extension of strata.

Identification and description of common minerals and typical rocks, with and without the microscope ; exercises in projection of crystals ; identification and description of crystal forms of common minerals, both on models and on actual crystals.

Reference of fossils to their broad biological groups and geological periods.

Applied Mathematics

Equilibrium of one or more bodies under the action of uniplanar forces, or of parallel forces. Smoothly jointed frameworks including graphical solutions. Properties of mass centres, and their determination in simple cases. Determination of second moments of solid figures. The laws of friction.

Relative velocity and acceleration, their resolution and composition. Graphical representation of relations between displacement, velocity, acceleration, and time. Mass, momentum, force, impulse, work, energy, and power. Simple cases of direct and oblique impact. Motion under the action of a constant force. Rectilinear motion of two connected particles. Simple problems on the motion of projectiles. Uniform circular motion. The conical pendulum. Simple harmonic motion. Motion in a vertical circle under gravity. Motion of a rigid body about a fixed axis. Dimensions. Change of units.

Pressure of a fluid at a point. Magnitude and direction of resultant thrust of liquids on plane and spherical surfaces. Centres of pressure in simple cases. Resultant force of buoyancy on bodies partially or wholly immersed.

Elementary ideas of statistics. Frequency diagram. Calculation of the mean. Standard deviation. Standard deviation of the mean.

Pure Mathematics

The theory of quadratic equations. The convergence of the geometric series. Permutation and combinations, including simple applications to probability. The binomial theorem for positive integral indices. The theory of indices. The nature and use of logarithms.

The geometry of similar rectilinear figures. Mensuration of plane rectilinear figures. The angles made by planes and straight lines with one another. Mensuration of simple solid figures, including the tetrahedron, cylinder, cone and sphere (the methods of the calculus may be used where suitable). Rectangular cartesian coordinates applied to the straight line, circle, parabola, ellipse, and hyperbola.

Plane trigonometry up to and including the solution of triangles. Trigonometric, exponential, and logarithmic functions, and their graphs.

The definition of a derivative. Differentiation of x^n (n an integer, positive or negative), sin x, cos x, tan x, e^x, and log x. Differentiations of a sum, a product, a quotient, and in simple cases of a function of a function. Definite and indefinite integration of the above functions and of simple functions of them. Areas and volumes. Representation of equations by curves, with easy applications. Simple example on maxima and minima.

Mathematics (Pure and Applied)

The theory of quadratic equations. The convergence of the geometric series. The binomial theorem for positive integral indices. The theory of indices. The nature and use of logarithms.

The geometry of similar rectilinear figures. Mensuration of plane rectilinear figures. The angles made by planes and straight lines with one another. Mensuration of simple solid figures, including the tetra-

hedron, cylinder, cone and sphere (the methods of the calculus may be used where suitable). Rectangular cartesian co-ordinates applied to easy exercises on straight line, the circle and the parabola.

Plane trigonometry up to and including the solution of triangles.

Exponential and logarithmic functions, and their graphs.

The definition of a derivative.

Differentiation of x^n (n an integer, positive or negative), sin x, cos x, tan x, e^x, and log x. Differentiation of a sum, a product, a quotient, and in simple cases of a function of a function. Definite and indefinite integration of the above functions and simple functions of them. Areas and volumes. Representation of equations by curves, with easy applications. Simple examples on maxima and minima.

Equilibrium of one or more bodies under the action of uniplanar forces, or of parallel forces. Smoothly jointed frameworks including graphical solutions. Properties of mass centres, and their determination in simple cases. Determination of second moments of simple figures. The laws of friction.

Relative velocity and acceleration, their resolution and composition. Graphical representation of relations between displacement, velocity, acceleration, and time. Mass, momentum, force, impulse, work, energy and power. Simple cases of direct and oblique impact. Motion under the action of a constant force. Rectilinear motion of two connected particles. Simple problems on the motion of projectiles. Uniform circular motion. The conical pendulum. Simple harmonic motion. Motion in a vertical circle under gravity. Motion of a rigid body about a fixed axis. Dimensions. Change of units.

Physics

[Candidates will be expected to show an acquaintance with the fundamental principles of mechanics up to the standard of the Matriculation Examination, and to acquire a general knowledge of the apparatus by which the elementary principles of Physics are illustrated and applied.]

General Properties of Solids, Liquids, and Gases

Relation between volume and pressure in gases. Friction and viscosity. Surface tension. Diffusion. Osmosis. Stretching of wires.

Heat

Temperature. Instruments for the measurement of temperature. Expansion of solids, liquids, and gases with rise of temperature, isothermal and adiabatic expansion. Quantity of heat. Specific heat. Change of state. Latent heat. Vapour pressure. Boiling point. Dew-point. Formation of cloud, fog, and dew. Conduction. Definition of thermal conductivity. Convection. Radiation. Newton's law of cooling. The mechanical equivalent of heat and modes of determination. The conservation of energy.

Sound

The production and propagation of sound. Nature of wave-motion. Amplitude. Wave-length. Frequency. Experimental determination of the velocity of sound in air. Effect of change of temperature on the velocity. Reflexion. Determination of frequency by simple methods. Experimental investigation of the modes of vibration of strings by means of the sonometer. Experimental investigations of the vibrations of air in pipes by resonance to tuning-forks. Organ pipes. Position of nodes and antinodes.

Light

Propagation of light. Laws of reflexion and refraction. Photometry. Reflexion at plane and spherical surfaces and the formation of images. Refraction at plane surfaces and by prisms. Minimum

deviation. Chromatic dispersion. The general laws of radiation; visible, ultra-violet, infra-red. Emission and absorption. Heating effects of radiation. Phosphorescence and fluorescence. The formation of images by single lenses. Long and short sight and their correction by lenses. The combination of two lenses to form a simple telescope or microscope. Measurement of velocity of light. Simple properties of polarised light.

Magnetism and Electricity

Properties of magnets. Simple phenomena of magnetisation. The magnetic field : lines of force. The law of magnetic force. Magnetic moment. Intensity of magnetisation. The earth as a magnet. The magnetic properties of iron and the elementary laws of the magnetic circuit. The simpler phenomena of electrified bodies. Conduction and insulation. Electrification by friction and by induction (influence). Distribution of electrification on conductors. Electric field : strength of field. The law of electric force. Potential. Capacity. Energy of charge. Electroscope and electrometers. Electric current. Magnetic field of current. Magnetic measurement of current. Galvanometers. Work done by an electric current. Electromotive force. Difference of potential. Resistance. Ohm's Law. Wheatstone's bridge. Potentiometer. Resistance of cells. Volt. Ohm. Ampere. Ammeters. Voltmeters. Heating effects of currents. Elementary phenomena of electrolysis : Faraday's Law. Voltameters. Primary and secondary batteries. Action on current circuits in a magnetic field. Electro-magnetic induction : Faraday's Law ; Lenz's Law ; Induction coil. A thermo-electric couple. Simple phenomena of discharge in gases.

Practical Work

[The following scheme is not exhaustive, and is intended merely to show the general nature of the exercises at the practical examination. The Examiners are not precluded from setting other exercises and practical problems illustrative of the principles set forth in the syllabus.]

Measurements of length, mass, and time, involving eye-estimation of tenths of a division, use of Vernier, use of the balance (weighing to one centigramme), use of a seconds-hand watch. Determination of volumes. Specific gravities of solids, powders, and liquids. Use of the hydrometer. Verification of Boyle's Law. Determination of the centre of gravity of a plate. Determination of g by simple pendulum. Determination of velocity of sound in a tube by resonance with a fork. Use of sonometer. Use of thermometers and determination of fixed points. Simple methods of determining specific heat and latent heat of fusion and of evaporation. Determination of dew-point. Use of simple photometers. Focal lengths of mirrors. Focal lengths of lenses. Arrangement of two lenses to make simple forms of telescope, microscope, and projection lantern. Simple use of spectrometer. Tracing the path of a ray of light through a block of glass and deduction of refractive index. Refractive index by method of apparent thickness. Tracing the lines of force in the neighbourhood of a magnet. Comparison of magnetic moments and fields. Measurement of resistance of wires and cells. Comparison of electromotive forces with potentiometer. Measurement of electro-chemical equivalent.

General Physiology

The curriculum shall consist of a course of not less than 60 lectures and 120 hours practical work. The following outline is not to be regarded as a rigid syllabus, but is given for the guidance of candidates as indicating the range of the theoretical and the practical part of the examination.

The fundamental phenomena of life.

The cell. Differentiation of structure and function of cells. Cell division.

Elementary biophysics including surface tension, diffusion, osmosis, cell permeability and the colloidal state.

Elementary chemistry of proteins, carbohydrates and fats; their origin, fate and significance in living matter.

Source and transformation of energy in living organisms. The relation between mechanical, chemical and thermal changes.

Enzyme action.

An elementary knowledge of mammalian physiology along the following lines :—

(*a*) The properties of muscle.

(*b*) Chief constituents of blood and their functions.

(*c*) General arrangement of the circulatory system. The heart and blood vessels and their control.

(*d*) Mechanism of respiration, the control of pulmonary ventilation and gaseous interchange.

(*e*) Secretion, digestion and absorption.

(*f*) Principles of nutrition and metabolism.

(*g*) Excretion. The formation and composition of urine.

(*h*) Reproduction.

(*i*) Chemical co-ordination and internal secretion.

(*j*) Nervous co-ordination. General arrangement of the nervous system and a brief survey of the functions of its different parts. Reflex action.

(*k*) The general principles of sensation.

Practical Work

Elementary experiments illustrating the phenomena and laws dealt with in the theoretical course.

The properties of skeletal muscle.

Factors influencing the heart beat, *e.g.*, temperature, ions, electrical stimulation, exercise. Experiments on blood pressure in man.

Factors influencing pulmonary ventilation in man. Oxygen capacity and hæmoglobin content of blood.

Simple experiments on hydrogen ion concentration and " buffering."

Experiments on the chemical properties and the digestion of the foodstuffs.

Detection of the chief constituents of urine. Estimation of urea.

Experiments on the field of vision, the " blind spot " and accommodation of the eye.

Staining and mounting of paraffin sections and the fixing and staining of fresh tissues. The recognition of the chief tissues and organs of the mammalian body.

Psychology

Definition, Scope and Methods of Psychology. Conscious and unconscious processes. The cognitive, affective and conative aspects of mental activity. The relations of stimulus and response at reflex and higher levels. An elementary knowledge of the central and autonomic nervous system, muscle, sense organs and endocrine glands as far as they are concerned in mental processes.

Cognitive Psychology. Sensation and perception, retentivity, imagery, associative and reproductive processes, memory and habit-formation, attention, higher thought processes.

Affective and Conative Psychology. The dynamic characteristics of mental life. Instinct and emotions. Pleasure and unpleasure. Sentiments and complexes.

Practical Work

An elementary acquaintance with the chief psychophysical and statistical methods. Methods of investigating sensory acuity, sensory discrimination and manifestations of emotion.

Simple experiments in reaction times, muscular and mental work, imagery, memory and habit-formation.

Verbal and non-verbal tests of intelligence.

Zoology

1. A study of the structure and of the elementary physiology of the rabbit.

2. The structure, mode of life and life-history of the following animals, to illustrate the general characteristics of animal organisation :— Amœba, Euglena, Paramecium, Hydra, Obelia, the earthworm, the crayfish, amphioxus, the dog-fish, frog and rabbit.

3. Elementary physiology ; metabolism ; nutrition (digestion, assimilation and food storage) ; respiration ; excretion ; movement, response to stimuli and reflex action ; growth and reproduction. The differences between plants and animals.

4. The modifications of structure, habit and life-history associated with parasitism (including the mode of transmission from host to host) as exemplified by Monocystis, Trypanosoma, the malarial parasite, the liver-fluke and the tape-worm.

Symbiosis.

5. The principles of classification and nomenclature. A discussion of the systematic position of the animals mentioned in paras. 2 and 4, and of their place in their respective phyla, and of these phyla in the animal kingdom.

6. The structure of a cell. Cell division. The multicellular organism illustrating morphological differentiation and the division of labour. The essential characteristics of the following :—epithelial tissues ; connective and supporting tissues (including the process of ossification) ; blood and lymph ; muscular tissues ; nervous tissues.

7. Sexual and asexual reproduction. The chief types of ova. Gametogenesis. Fertilisation and cleavage. The germ layers and their formation in amphioxus, frog and chick. The development and metamorphosis of the frog. The development of the chick up to the end of the third day of incubation. The development and functions of the fœtal membranes of the chick and mammal.

8. Variation and heredity, including a simple treatment of the facts of genetics and nuclear cytology.

9. The evidence bearing on the occurrence of organic evolution. The theories of Lamarck and Darwin as to the method of evolution.

Practical Work

Observations on living animals should be made wherever possible. Candidates are expected to make adequate labelled drawings of all the preparations they examine and of all the dissections they make.

A. The dissection, or microscopical examination of whole mounts and sections, of the animals mentioned in paras. 2 and 4 (except the malarial parasite and Trypanosoma).

B. The examination of the skeleton of the vertebrate types mentioned in para. 2, together with the skull of the dog.

C. The examination of preparations representing the chief varieties of the tissues mentioned in para. 6.

D The examination of prepared sections of the following vertebrate organs :— skin, stomach, intestine, liver, kidney, ovary, testis and spinal cord.

E. The preparation of stained permanent mounts of suitable whole animals, parts of animals and tissues.

F. A study of the external changes during the development of the frog from fertilisation to the end of metamorphosis.

G. The examination of the whole mounts and representative sections through :

(*a*) The early stages of frog development to the time of the first appearance of the external gills.

(*b*) Stages illustrating the development of the chick during the first, second and third days.

B.SC. DEGREES

The B.Sc. Degree may be obtained in two ways, *viz.*, by passing (1) the examinations specified for the B.Sc. (General) Degree, or (2) the examinations specified for a B.Sc. (Special) Degree in a selected principal subject.

A student who has obtained a Pass or an Honours Degree at the B.Sc. (Special) Examination either as an Internal or as an External Student is not permitted to re-enter for the examination unless he offers another principal subject. A student who has obtained a Pass or an Honours Degree at the B.Sc. (General) Examination either as an Internal or as an External Student will in no circumstances be allowed to re-enter for the B.Sc. (General) Examination.

AEGROTAT DEGREE

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) The following candidates are eligible to apply for an Aegrotat Degree :—

(*a*) Candidates at the B.Sc. (General) Examination who have satisfied the Examiners in two subjects and have completed part of the examination in the third subject.

(*b*) Candidates at the B.Sc. (Special) Examination under the old Regulations.

(i) who have entered for examination in both principal and subsidiary subjects and have completed more than half of the Examination.

(ii) who, having already passed in, or been exempted from, the subsidiary subject, have entered for examination in the principal subject only and have completed more than half of the examination in the principal subject.

(iii) who, having been previously credited with 1st or 2nd class Honours in the principal subject, have entered for re-examination in the subsidiary subject only and have completed half of the examination in such subsidiary subject.

(*c*) Candidates at the B.Sc. (Special) Examination under the revised Regulations, who at the end of their course complete a substantial part of the final portion of the examination in the principal subject, provided that they have satisfied all the other conditions, including the preparation of reports prescribed for the award of the B.Sc. (Special) Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same Examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

B.SC. (GENERAL) DEGREE

Course of Study

This course normally extends over not less than two years, but students who have passed the B.Sc. (Special) Examination as Internal Students will be required to follow a course extending over one year only.

A student who, subsequently to passing the Intermediate Examination in Science as an Internal or External Student or being exempted therefrom under the Regulations for Advanced Students, has completed the course of study for the Second Examination for Medical Degrees as an Internal Student may enter for the B.Sc. (General) Examination, in Chemistry, Physiology, and Anatomy, provided he has attended a further course of study for the B.Sc. (General) Examination extending over not less than one term and has complied with the Regulations in all other respects.

The subjects are as follows :—

Anatomy.
Anthropology.
Astronomy.
Botany.
Chemistry.
Geography.
Geology.
Applied Mathematics.
Pure Mathematics.
Military Studies.
Physics.
Physiology.
Psychology—General and Experimental.
Statistics.
Zoology.

Students must select three of the above subjects and are advised to consult their teachers regarding the selection. Students offering Statistics will be required to take Pure Mathematics as one of their other subjects.

Candidates who offer Astronomy will be required to have attended approved instruction-courses in at least one of the subjects—Pure Mathematics, Applied Mathematics, Physics.

No student will be permitted to offer the subject of Military Studies unless, in the opinion of the University, he is suitably qualified to attend the course in that subject.

A candidate for the B.Sc. (General) Examination who has passed the B.A. (General) Examination with one or more subjects which are common to the B.A. and B.Sc. (General) Examinations will be allowed to offer as one of his subjects (and one only) a subject in which he has already passed at the B.A. (General) Examination.

A candidate who has passed the B.A. Honours or B.Sc. (Special) Examination in a subject which is a subject of the B.Sc. (General) Examination will be exempted from examination in that subject at the B.Sc. (General) Examination. A candidate who has passed the B.A. Honours or B.Sc. (Special) Examination in Mathematics will be exempted from *either* Pure Mathematics *or* Applied Mathematics (but not both) and will be required to offer two subjects neither of which shall be Pure Mathematics or Applied Mathematics.

Date of Examination

The B.Sc. (General) Examination will take place once in each year, commencing on the Thursday after June 5th.*

Every student entering for the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

* For date of practical examination in Astronomy, see p. 1023.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written, practical, and oral examinations.

A candidate for this Examination who fails to send his entry-form and fee to the Academic Registrar on or before March 7th can only be admitted provided there is accommodation and that arrangements have already been made for holding the Examination in the subject or subjects in which the candidate desires to be examined. All such applications received after March 7th must be accompanied by an extra fee of 2 guineas, which extra fee will be returned if it is found impossible to make the necessary arrangements for the examination of the candidate. Such late entry cannot be accepted if received after April 7th.

Fee

The fee for each student is 6 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the B.Sc. (General) Examination are as follows :—

*Pure Mathematics (three papers).
Applied Mathematics (three papers).
Physics (two papers and a practical examination).
Chemistry (two papers and a practical examination).
Anthropology (three papers).
Astronomy (two papers and a practical examination).
Botany (two papers and a practical examination).
Geography (two papers and a practical test of not more than six hours).
Geology (two papers and a practical examination).
Anatomy (two papers and a practical and oral examination of three hours).
Military Studies (three papers)
Physiology (two papers and a practical examination of three hours in Histology and a practical examination of six hours in Chemical and Experimental Physiology).
Psychology—General and Experimental (two papers, a practical and an oral examination).
Statistics (two papers and a practical examination).
Zoology (two papers and a practical examination).

Candidates will be expected to be able to express their knowledge in clear, concise and scholarly fashion, and their powers of composition will be taken into consideration in determining the result of the Examination. Essay subjects may be set at the discretion of the Examiners.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the three subjects which they have selected.

Candidates in experimental subjects must produce note-books of their laboratory work and may produce published or connected manuscript accounts of any research work in which they have participated. These must in each case be duly certified by the teacher, and may be taken into account in estimating their qualifications; provided only that the research work be not allowed to take the place

* Candidates taking Section D must bring to the examination set squares, compasses, dividers, protractor, decimal scales (centimetre and inch), drawing pins, and pencils. They may also bring slide rules.

of a sound general theoretical knowledge and manipulative skill in practical work.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar at 2 o'clock on August 14th. Successful candidates will be awarded a 1st or 2nd class Honours B.Sc. (General) Degree or a Pass B.Sc. (General) Degree, and their names arranged in alphabetical order in these three divisions.

A diploma for the Degree of B.Sc., under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

AEGROTAT DEGREE

[*See* p. 1019]

SYLLABUSES

The syllabuses are as follows :—

Anatomy

The course of study in Anatomy shall extend over six terms and shall include the following :—

(1) A course of lectures and demonstrations, not less than 100 in all.

(2) A course of dissections extending over not less than twelve months (*i.e.* four regular terms of University work). In this course the student must have dissected the whole body at least once to the satisfaction of his teacher.

(3) Courses with practical work in :—

(*a*) Radiological Anatomy.
(*b*) Vertebrate Embryology.
(*c*) Histology.
(*d*) Neurology.

Emphasis to be laid on the correlation of structure to function.

(4) The consideration of human anatomy in the light of vertebrate evolution and genetics.

(5) A practical introduction to methods of research, related to anatomical problems.

The examination in Anatomy will consist of :—

Two papers of three hours each.

A practical and oral examination of three hours consisting of :—

(*a*) Regional anatomy, including dissected parts and Radiological Anatomy.
(*b*) Embryology, Histology and Neurology.
(*c*) Essential technical methods.

Candidates are required to bring to the practical examination their *original* laboratory note-books, for inspection should the Examiners so desire. These note-books must be taken away by the candidates at the close of the examination.

Anthropology

A. *Physical and Psychological Anthropology* :—

(i) *Zoological.*—Man's place in nature as evidenced by the study of comparative anatomy and physiology; special attention being paid to the group of anthropomorpha.

(ii) *Palæontological.*—The antiquity of man as evidenced by fossil and semi-fossilised remains.

(iii) *Psychological.*—Analytical and comparative study of mind, especially in reference to innate and environmental factors.

(iv) *Ethnological.*—A comparative study of the physical characters which distinguish the various races and sub-races of man. Classification of the human race in accordance with physical characters. Geographical distribution of races, etc., and the influence of environment on physique.

B. *Cultural Anthropology :—*

(i) *Archæological.*—The antiquity of man as revealed by the earliest remains of his handiwork. The prehistoric periods, their characteristics, sequence, and duration. The survival of early conditions of culture in later times.

(ii) *Technological.*—The comparative study of arts and industries, their origin, development, and geographical distribution.

(iii) *Sociological.*—Comparative study of social phenomena and organisation. Birth, education, marriage, and death customs and systems. Tribal and other associations. Government and laws. Moral ideas and codes. Magical and religious practices.

(iv) *Linguistic.*—Elementary comparative study of language.

(v) *Ethnological.*—Comparative study and classification of peoples based upon cultural conditions and characteristics. Influence of environment upon culture.

[The three papers in Anthropology will be as follows :—

(1) Social Anthropology.

(2) Human Biology with *either* Archæology (including Technology) *or* Linguistics.

(3) *Either* Physical Anthropology (including Human Palæontology) *or* the Ethnography of a special region (including Technology).

At the examination in Anthropology questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *one* of these languages a candidate cannot make up the full number of questions to be answered.]

Astronomy

[Candidates who offer Astronomy will be required to have attended approved instruction-courses in at least one of the subjects—Pure Mathematics, Applied Mathematics, Physics.]

Spherical trigonometry. Geometrical optics, as far as is required for a general knowledge of the chief astronomical instruments. Descriptive and spherical astronomy. An account of the chief celestial phenomena without the use of advanced analysis.

The elementary theory of elliptic motion (a knowledge of the calculus not being necessarily assumed, but its use being allowed). Elementary theory and use of Astronomical Instruments ; determination and correction of instrumental errors. The chief stages in the history of astronomy.

Practical Work

Measurement of angular space and of time. The use of the Nautical Almanac. Use of transit circle, altazimuth, equatorial, filar micrometer, position circle, theodolite and sextant. Practical instruction in the methods used for determining position at sea and on land, and for the establishment of temporary observatories.

The practical examination in Astronomy will be held at the end of March or at the beginning of April preceding the written examination.

Botany

The morphology and anatomy of plants.

A general introduction to plant physiology and biochemistry.

Plant ecology, and elementary soil science.

Elementary cytology and genetics, and the problems of evolution.

The features of special importance of the following groups, including some fossil forms: Algæ, Bryophyta, Pteridophyta, Spermophyta; Fungi, including Bacteria.

An elementary knowledge of the British Flora, including the problem of its origin.

Practical Work

The practical examination will include :—

(1) The description and examination, microscopical or otherwise, of any plants or parts of plants.

(2) The reference to their appropriate systematic positions of plants or parts of plants, including the use of a " Flora " for the identification of British flowering plants.

(3) Simple practical exercises in plant physiology.

Candidates are permitted to bring to the practical examination a copy of a " British Flora," without illustrations, for use at the discretion of the Examiners.

Chemistry

Students will be required to have a general acquaintance with the five main divisions of the subject, viz. :—

(1) General Theoretical Chemistry.
(2) Inorganic Chemistry.
(3) Organic Chemistry.
(4) Physical Chemistry.
(5) History of Chemistry since the time of Boyle.

Students will also be required to gain a practical familiarity with the common methods of experiment.

It is desirable that candidates should be able to translate memoirs on chemical subjects in French and German into English. Full marks will not be awarded if a knowledge of these languages is not shown.

Candidates are permitted to bring for use at the practical examination any book or books they wish.

For the practical examinations in Chemistry candidates must provide themselves with platinum wire and foil and candidates at Final Examinations in Chemistry are advised to bring into the examination-room, for use in the examination, prepared crucibles with a note of their approximate weight. No other chemical apparatus may be introduced into the examination-room.

Geography

Regional Geography. The relief and land-forms in relation to the structure and climate. The distribution of soils and minerals. The river systems. Climate and weather conditions. The neighbouring seas and oceans, and their influence on the lands and their inhabitants. The distribution of natural vegetation, cultivated products, and animals. The sources of mechanical power. The distribution of industries as related to the foregoing physical factors. Trade centres and trade routes; the character of the trade. The distribution of population; the chief racial, religious and linguistic characteristics of the people. A synthetic study of geographical regions. States and the interrelations of political, economic, and physical conditions.

General Physical Geography. A broad knowledge of the physical geography of the world to serve as a basis for the study of regional geography.

The earth as a planet; its movements and relation to the sun; the consequent distribution and seasonal variation of insolation over the earth's surface.

The atmosphere. Distribution and periodic variation of the pressure and temperature of the air, of air movements and wind systems, of humidity and precipitation; climate types and regions.

The oceans. Form of sea and ocean beds. Temperature and salinity of oceans and seas; wave and tidal movements and their effects; ocean circulation, its origin and effects.

The lands. General classification of the materials of the earth's crust—sedimentary, igneous, and metamorphic rocks; crustal movements—the normal cycle of erosion and its principal interruptions; processes of denudation and deposition; chief effects of glaciation; development of river systems.

Practical Work

I. Representation and interpretation by maps and diagrams: (*a*) land forms; (*b*) their development; (*c*) their relation to structure; (*d*) their influence on human geography. Candidates will be expected to have done field work on these subjects and to be familiar with maps of the Ordnance Survey, Geological Survey and the International 1 to 1 million map.

II. Principles of Surveying, including an elementary knowledge of the following instruments: prismatic compass, plane-table, clinometer, aneroid barometer, chain, theodolite.

The principles of the following map projections:—Conical with one or two standard parallels, Bonne, polyconic, international, sinusoidal, Mollweide, Mercator, zenithal equidistant, zenithal equal area, and zenithal orthomorphic or stereographic. Candidates are expected to know the principle underlying each projection, its defects, and its suitability for particular purposes or areas.

Construction and interpretation of weather and climate maps. The cartographic and diagrammatic representation of geographical data.

The examination will consist of two written papers, of a written examination of not more than six hours on practical work, and of inspection by the Examiners of the note-books and any other evidence of his practical work in the field that the candidate may desire to submit.

Paper 1. Europe (including British Isles) and the Mediterranean lands of Africa and Asia.

Paper 2. (*a*) *One* of the following areas, selected by the candidate:—

(i) Asia, excluding the Mediterranean lands.
(ii) North America.
(iii) Africa, south of the Mediterranean lands.
(iv) South America.
(v) Australia, New Zealand, and the Pacific Islands.

(*b*) General Physical Geography.

Practical examination on the sections I and II above.

No candidate will be allowed to pass who fails to satisfy the Examiners in the practical part as well as in the written part of the examination, nor unless the original note-books or other evidence of practical work in the field reach an adequate standard.

Geology

The syllabus for the Intermediate Examination (pp. 1012-1013) treated more fully, and in addition the following :—

Mineralogy.—The properties, diagnostic characters, relationships, modes of occurrence and origin of the chief rock-forming and vein-forming minerals.

Petrology.—Methods of petrological study. Classification and description of rocks ; their modes of origin ; the changes which they have undergone. The relations of rocks to one another.

Palæontology.—Characters of the principal types of fossils (chiefly Invertebrata), and the distribution of life in past geological times.

Stratigraphical Geology (chiefly the British Isles), and the fossils characteristic of successive periods.

Practical Work

Reading and interpretation of geological and other maps, and the drawing of sections across them.

Identification and description of common minerals, rocks and fossils in hand-specimens ; and of the more important rocks and their constituents under the miscroscope.

Satisfactory evidence must be given of adequate instruction having been received by the students in the field.

Applied Mathematics

The Applied Mathematics of the Intermediate Course (*see* p. 1013), treated more fully, a knowledge of Elementary Differential and Integral Calculus being assumed, together with :

Simple parts of uniplanar kinematics.

General dynamical notions.

Motion of a particle under a constant force. Motion of a particle under a central force varying inversely as the square of the distance or as the distance.

Rotation of a rigid body about a fixed axis, and simple cases of uniplanar motion of a rigid body.

Elementary theory of potential.

Common catenary and suspension bridge.

Pressures of liquids on plane areas, pressure of liquids on solid bodies wholly or partially immersed, and conditions of equilibrium of such bodies, specific gravities and densities of substances, solid and liquid, and methods of determining them. Meta-centre in simple cases.

The elementary methods of graphical statics.

Pure Mathematics

Pure Mathematics of the Intermediate Course (*see* p. 1013) together with :—

SECTION A.—Determinants of the second and third order. Partial fractions. Summation of easy series. Use of the binomial, exponential, logarithmic sine and cosine series, absolute convergence and the d'Alembert's ratio test as applied to these series. Hyperbolic functions. Exponential values of sines and cosines. Complex numbers with their representation in a plane. Demoivre's theorem and easy applications.

SECTION B.—The simpler properties of plane figures involving straight lines and conic sections treated by the methods of co-ordinate geometry (excluding the use of homogeneous co-ordinates).

SECTION C.—Simple differentiation and integration of functions of one variable. Maxima and minima of functions of one independent variable. Use of Taylor's and Maclaurin's theorems. The principle of supposition of small errors. Tangents, normals, and curvature of plane curves. Plane areas. Lengths of plane curves. Areas of surfaces of revolution. Volumes of solids of revolution.

SECTION D.—The simple properties of plane figures involving straight lines and conic sections treated by Euclidean methods. The straight line, the plane, the sphere, the ellipsoid referred to its principal axes. Ordinary differential equations of the first order. Linear equations of the first and second orders with constant co-efficients. Partial differentiation and simple applications.

Paper I will consist of Algebra and Trigonometry and Analytical Geometry; Paper II of Analytical Geometry and Calculus; Paper III of Section D of the syllabus.

Military Studies

Paper 1. *General Principles of War*

To be studied in the following authorities :—

Maurice : *British Strategy* (Constable).

Pargiter and Eady : *The Army and Sea Power* (Benn).

Cole : *Imperial Military Geography* (Sifton Praed).

Slessor : *Air Power and Armies* (Oxford Univ. Press).

Either Squadron Leader : *Basic Principles of Air Warfare* (Gale and Polden), **or** Sir Arthur Tedder : *Air, Land and Sea Warfare* (R.U.S.I. Journal, February, 1946).

Grant & Temperley : *Europe in the 19th and 20th Centuries* (Longmans).

Trevelyan : *History of England*, Books V and VI (Longmans).

Harding Newman : *Modern Military Administration, Organisation and Transportation* (Gale and Polden).

Bird : *Director of War* (Cambridge Press).

Mahan : *Influence of Sea Power on History* (Sampson Low).

Hearnshaw : *Sea Power and Empire* (Harrap).

Thuillier : *Gas in the next War* (Geoffrey Bles).

Paper 2. *Economic Problems of War*

The Control and use of Manpower, Raw Materials, Shipping. The Planning and Procurement of War Supplies. The Supply and Distribution of Food and Civilian Supplies. War Finance, Prices and Wages Policy. Economic Problems of Occupation.

To be studied mainly in the following authorities :—

A. C. Pigou : *Political Economy of War* (Macmillan).

Lionel Robbins : *The Economic Problem in Peace and War* (Macmillan).

W. K. Hancock (Editor) : *History of the Second World War.* United Kingdom Civil Series (H.M.S.O.).

In particular W. K. Hancock and M. M. Gowing : *British War Economy;* and (when published) M. M. Postan : *British War Production.*

J. M. Keynes : *How to Pay for the War* (Macmillan).

University of Oxford Institute of Statistics: *Studies in War Economics* (Blackwell).

A. J. Brown: *Applied Economics*, Chs. 1—3 (Allen & Unwin).

Paper 3. *Either* (*a*), (*b*) *or* (*c*).

(*a*) Paper 3 (*a*) will relate mainly to the study of a Campaign :—

1951.

The Desert Campaign from El Alamein to Tunis (August 10th, 1942, to May 13th, 1943) to be studied in the following authorities :—

Field Marshal Alexander's Despatch: *El Alamein to Tunis, from August 10th, 1942, to May 13th, 1943*, Gazette No. 38205 (H.M. Stationery Office).

De Guingand: *Operation Victory*.

Montgomery: *El Alamein to the River Sangro*.

1952.

The Campaign in Burma up to the end of 1943.

To be studied in the following Official Despatches :—

No. 38228. *Operations in Burma*. Gen. Wavell. 15.12.41—12.5.42. (H.M. Stationery Office, 11.3.48.)

No. 37728. *Operations in Eastern Theatre*. F/M. Wavell. March–December, 1942. (H.M. Stationery Office, 18.9.46.)

No. 38266. *Operations in India Command*. January–June, 1943. (H.M. Stationery Office, 28.4.48.)

No. 38274. *Operations in India and Burma*. 21.6.43–15.11.43. (H.M. Stationery Office, 29.4.49.)

1953.

The Campaign in Burma, 1944–1945.

To be studied in the following Official Despatches when published :—

[Details to be prescribed.]

(*b*) Paper 3 (*b*) will relate mainly to the influence of Air Power on Modern Warfare.

To be studied in the following authorities :—

Spaight: *The Beginnings of Organised Air Power* (Longmans).

Jones: *The War in the Air*, Vol. VI (O.U.P.).

Golovine: *Air Strategy* (Gale and Polden).

(*c*) Paper 3 (*c*) will relate to the applications of Science to Warfare.

The paper will be divided into 4 sections as below, the candidate to answer questions from 2 sections only.

1. *Chemistry*.—Employment of Gas. Defence against Gas. Smoke Screens. Explosives and Ammunition.—To be studied mainly in the following :—

Prentiss: *Chemicals in War* (McGraw-Hill, 45s.).

Sartori (trans. Morrison): *The War Gases* (Churchill).

Farmer: *The Manufacture and Uses of Explosives* (Pitman, 2s. 6d.).

Thorpe: *Dictionary of Applied Chemistry*. 4th Edition, Vol. IV—Article on Explosives (Longmans).

de Barry Barnett: *Explosives* (Baillière, 12s. 6d.).

Yarsley and Couzins: *Plastics*, (Lane—Penguin series).

2. *Physics.*—Theory and Use of Optical Instruments (*e.g.*, Director and Dial Sight, Range Finder). Sound Ranging and Sound Detection. Methods of Location by Observation and Flashes. Visual Signalling. Terrestial Magnetism. Elementary Meteorology. Line and Wireless Telegraphy and Telephony.—To be studied mainly in the following :—

Saunders : *Physics for College Students* (Bell).

3. *Mechanics.*—Ballistics : applications of the gyrostat. Reaction of fluid and moving bodies. Elementary strength of materials. Framework.—To be studied mainly in the following :—

Low : *Engineering Mechanics.*

Charnock : *Mechanical Technology* (Constable, 15s.).

Encyclopaedia Britannica : Article on Ballistics.

Text Book of Mechanical Engineering, 1940 (Stationery Office).

4. *Biology.*—Physiology of Diet and Exertion. Elementary Bacteriology. Hygiene.—To be studied mainly in the following :—

Whillis : *Elementary Anatomy and Physiology* (Churchill).

Plimmer : *Food, Health, Vitamins* (Longmans, 3s. 6d.).

Best and Taylor : *The Living Body* (Holt, New York).

H.M.S.O. : *Army Sanitation.*

Eastwood : *Hygiene for Students and Teachers* (Arnold 6s.).

Physics

The subjects for the Intermediate Course (*see* pp. 1014-15) with the addition of the following ; the whole being treated theoretically as well as experimentally.

General Physics.—Fundamental notions of mass and force. Energy and work. Simple periodic motion. Combinations of simple periodic motions. The elements of planetary motion. Moment of inertia. Kinetic energy of a rotating body. Rolling bodies. Compound pendulum. Gravitation. Gravitational constant and its determination. Elasticity, plasticity, and elastic constants. Friction. Viscosity of liquids and gases. Surface phenomena including surface energy and surface tension. Diffusion. Osmotic pressure.

Sound.—Wave motion. Pressure and particle-velocity in sound waves. Velocity of sound. Reflexion ; refraction, diffraction. Stationary waves. Forced and free vibrations ; resonance. Simple cases of interference of sound. Beats. Doppler effect. Vibrations of strings and air columns. Longitudinal vibrations of rods. Determination of frequency. Quality of sound. Intensity of sound and its measurement. Elementary ultrasonics.

Heat.—Temperature and its measurement. The methods used to determine the most important thermal quantities and the chief results which have been obtained. Volume, pressure and temperature relations of substances. Critical state. Law of corresponding states. Fusion, vaporisation and latent heats. Liquefaction of gases. Simple kinetic theory. Isothermal and adiabatic changes. Reversibility. Fundamental laws of thermodynamics. Carnot's cycle. Efficiency of reversible engines. Principles of refrigeration. Thermodynamical scale of temperature. Entropy. Temperature radiation ; Kirchhoff's Law. Full radiation and its spectrum. Radiation pyrometry.

Light.—The eye as an optical instrument. The cardinal points of a single thick lens and of combinations of two thin separated lenses.

Elementary treatment of the aberrations of mirrors and lenses. Dispersion and achromatic combinations. The optical principles of microscopes, telescopes, and spectrometers. The wave theory. Simple cases of interference and diffraction. Resolving power. Double refraction. Polarisation. Nicol's prism. Crystalline plates between polariser and analyser. Rotation of the plane of polarisation. Scattering of light. Sources of light. Colour. Spectroscopy, including the infra-red and ultra-violet.

Magnetism and Electricity.—Fields of force. Potential. Gauss' theorem. Terrestrial magnetism. Ferromagnetism, paramagnetism and diamagnetism; the effects of temperature. Electrical condensers. Dielectric constant. Electrometers.

Accurate measurement of current, resistance, and electromotive force. Absolute measurements. The relation between electrostatic and electromagnetic units. Mechanical interactions of currents and magnetic fields. Capacity. Self and mutual induction. Ballistic galvanometers. Simple alternating currents. Impedance; reactance; power. Electrical oscillations and waves. Thermo-electricity.

Voltaic cells. Electrical conduction in liquids and gases. Simple properties of electrons and positive rays; determination of the ratio of charge to mass and of the electronic charge. Photoelectricity. X-rays and their wave-lengths. Thermionic emission and simple thermionic valves. Radio-activity. Structure of atoms.

Practical Work

Experiments illustrative of the principles set forth in the syllabus.

At the examination in Physics questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *both* these languages a candidate cannot make up the full number of questions to be answered.

Physiology

The *curriculum* in Physiology consists of:—

(1) A complete course of not less than 60 lectures on Physiology.

(2) A practical course of Histology extending over not less than three months and occupying not less than 60 hours.

(3) A practical course of Chemical Physiology extending over not less than 40 hours.

(4) A course of Experimental Physiology (including demonstrations and practical exercises) extending over not less than six months and occupying not less than 120 hours.

In this course the student is expected to acquaint himself with the methods employed for the demonstration of the fundamental physiological processes as laid down in the following syllabus, and to carry out such chemical manipulations or simple experiments as are comprised therein.

Syllabus

Application of physico-chemical laws to physiological processes. Surface tension and surface phenomena. Diffusion. Osmosis. Properties and functions of cell membrane. Cell permeability. The properties of colloidal solutions. The Donnan equilibrium.

Chemical constitution and properties of proteins, lipides and carbohydrates. Composition of tissues and body fluids.

Catalysis in biological processes. Enzymes : classification, composition and characteristic features.

Sources and transformation of energy in living organisms. Relation between chemical, mechanical and thermal changes. Work and efficiency.

Blood ; structure, composition, formation and destruction ; respiratory functions and buffer mechanisms. Immunity. Blood grouping. Lymph, tissue fluid and cerebro-spinal fluid.

Anatomy of the heart and general arrangement of the circulatory system. The properties of cardiac muscle. Origin, transmission and control of the heart beat. Pressure changes and time relations in the cardiac cycle. Blood pressure and blood flow throughout the vascular system, and their nervous and chemical control.

Mechanics of respiration. Gaseous interchange. Control of pulmonary ventilation. Effects of depth and altitude. Circulatory and respiratory changes in exercise.

Mechanism and control of the secretion of digestive juices. Composition of juices. Digestion and absorption of foodstuffs. Movements of the alimentary tract.

Metabolism. Exchanges of matter and energy. Nitrogenous equilibrium. Intermediate metabolism of protein, fat and carbohydrate.

Regulation of body temperature. Functions of the skin.

Nutrition. Dietary requirements at different ages and under different conditions. Mineral metabolism. Vitamins : origin, properties and functions. Tissue oxidation.

Endocrine organs : functions and inter-relationships. Chemical constitution of hormones.

Excretory organs. Functions of the kidney. Composition and formation of urine. Micturition.

Reproduction. Development and functions of sex organs. Ovulation and spermatogenesis. Fertilisation. Formation and functions of the placenta. Development of mammary glands. Parturition and lactation.

The physiology of striated muscle, smooth muscle and nerve. Excitation. The nerve impulse and its transmission centrally and peripherally.

General anatomy and functions of the nervous system in man : origins, destinations and functions of the fibre tracts of the cerebro-spinal axis. Reflex action. Maintenance of tone and posture. Special functions of the brain stem, cerebellum and basal ganglia. Cerebral cortex, including functional localisation and conditioned reflexes.

Sense organs : structure and function.

The autonomic nervous system.

Practical Work

Histology, including the staining and mounting of paraffin sections of the different organs of the body to show general structure and the various tissues of which they are composed. The preparation from fresh material of suitably stained permanent specimens of the elementary tissues including blood, lymph and marrow, nerve cells and nerve fibres. The staining of specimens of the spinal cord and medulla to show nerve fibres and nerve cells.

Animal experiments. Experiments on the frog muscle-nerve preparation which illustrate the physiological properties of muscle and nerve. The properties of cardiac muscle, and the initiation and control of cardiac rhythm in the frog. Study of the mammalian heart by perfusion of the coronary circulation. The properties of smooth muscle as shown by the intestine and uterus. Suitable experiments to illustrate the action of hormones.

Experiments on the human subject. Blood counts and colour index. Blood-grouping. The adaptability of the circulatory and respiratory systems of changed conditions, including experiments on circulation in the skin. Metabolism, metabolic rate, work. Factors influencing the flow and composition of urine. Reflex time. Experiments on eye : visual acuity, accommodation, measurement of blind spot, field of vision, binocular vision, colour vision, etc. Experiments on hearing and equilibration.

Chemical physiology. Qualitative tests which illustrate the properties of carbohydrates, lipides and proteins in food and animal tissues. Separation and estimation of fats, carbohydrates and proteins in foods and tissues. Experiments to illustrate the action and properties of enzymes. Quantitative work on enzymes. Digestion : test meals, qualitative and quantitative experiments on digestive juices. Urine chemistry ; qualitative tests for and estimation of the main constituents. Experiments on tissue oxidation.

Blood : coagulation, spectroscopic analysis, preparation of derivatives of hæmoglobin. Estimation of hæmoglobin, oxygen capacity, percentage oxygen saturation and carbon dioxide content. Estimation of (blood constituents such as) sugar, urea.

Psychology—General and Experimental

(i) *General and Comparative Psychology* :—

(*a*) Scope and methods of psychology. The relation of analytical psychology to physiological, pathological, and comparative psychology.

(*b*) The relation of psychical states to physiological processes. Subconsciousness. Unconsciousness.

(*c*) Analysis and classification of mental states.

(*d*) Fundamental processes of mental development ; attention, discrimination, assimilation, association, apperception.

(*e*) Sensation and perception. Illusions.

(*f*) Images. Association of ideas and suggestion. Memory. Memory-types. Disturbances of memory. Apprehension of time. Dreams. Hallucinations and hypnotic states.

(*g*) Productive imagination. Early forms of imagination in individual and in race. Exceptional forms of imagination.

(*h*) Abstraction and generalisation. Conception. Judgment and reasoning. Thought and language. Aphasia.

(*i*) Idea of self and its variations, normal and abnormal.

(*j*) Belief. Primitive forms of belief.

(*k*) Pleasure and pain. Bodily concomitants of feeling. Emotion and its expression. Classification of emotions.

(*l*) Instinct, imitation, voluntary movement and habit. Appetite and desire. Higher forms of volition. Normal and abnormal types of volition.

Note.—Students are expected to acquire some knowledge of mental phenomena as displayed in primitive races and the animal kingdom.

(ii) *Experimental Psychology* :—

(*a*) Qualities of sensation. Theory of specific nervous energy. Touch ; temperature ; sense ; pain, tastes, and smells. Simple and complex tones ; noises and their analysis ; partial tones ; beats, combination tones. Light and colour sense. Movements. Effort, muscular fatigue, sense of weight. Equilibrium and orientation.

(*b*) Intensities of sensation ; liminal sensations ; threshold of difference. Weber's law. Fechner's laws. The psycho-physical methods.

(*c*) Analysis of perception ; localisation and projection of impressions. Tactile space ; spatial perception of the blind. Visual space ; binocular vision. Eye movements and accommodation. Perception of form, distance and size. Visual perception of movement. Binaural audition. Localisation of sound. Consonance, harmony, tact, rhythm. Illusions. Preperceptions.

(*d*) Reaction-time, experiments and methods. Simple and complex reaction-times. Subjective estimation of time length and time order.

(*e*) Experimental investigation of recognition, memory, association of ideas, span of apprehension.

(*f*) Fatigue and practice in mental work. Action of drugs on mental processes. The physiological accompaniments of pleasure, pain, the emotions, attention, etc.

(iii) *Experimental Psychology* :—

Practical Work

(*a*) Examination on apparatus and technical methods generally.

(*b*) Examination of an individual on acuity of senses ; colour vision, tone discrimination ; estimation of spatial and temporal magnitudes ; reaction-times ; association of ideas, etc.

(*c*) Examination on the psycho-physical methods and on the treatment of statistics.

(*d*) Examination on the method of carrying out an experimental investigation submitted to the candidate.

Candidates will be allowed to take into the examination room, and to consult during the practical examination, note-books containing mathematical formulæ only.

Normally the note-books to be brought to the practical examination (*see* paragraph on pp. 1021-22) must show that the candidates have regularly taken part in courses of work in Experimental Psychology extending over at least one year.

Statistics

Elements of the mathematical theory of probability. Independent and dependent probability, general ideas as to association, contingency, and correlation. Discrete and continuous variates. Simple interpolation, extrapolation, and graduation. Elementary treatment of frequency curves ; the normal curve of error and the probability-integral table. Method of least squares, method of moments, theory and practice of curve fitting and tests of goodness of fit. Probable errors of statistical constants. Theory and practice of sampling. Tests of significance of differences in populations. Theory of grades and ranks. General theory of correlation of two and three variables, including the nature and use of coefficients of partial correlation.

Preparation and discussion of data, schedules of inquiry for various forms of statistical investigations, tabulation, and handling of records. Classification by measurement and by broad categories. Graphic representation of statistical data in the case of one of two variates.

Application of statistical methods to scientific problems, such as suggested in the following list :—

Biology.—Measurements on lower animals and plants, to illustrate and test theories of selection, evolution, and heredity.

Anthropology.—Craniometry, measurements of school children, general anthropometry.

Sociology.—Official vital statistics ; birth, death, and marriage rates, and their standardisation ; estimates of intercensal and post censal populations ; principles of construction of life, morbidity and invalidity tables ; Eugenics ; differential fertility ; health and disease ; housing and environment.

Psychology.—Variability of mental characters, and their correlation with each other, with physical characters, and with environment ; personal equation ; correlation of judgments.

Economics.—Index numbers ; frequency curves of incomes and of wages ; correlation of economic phenomena.

Practical Work

The practical examination will involve tabulation, the use of the customary statistical tables, exercises in practical calculation and the use of the commoner calculating machines ; the determination and plotting against observation of the simpler frequency distributions and of regression lines. Measurement of material may be required, and note-books of practical work will be examined.

At the examination in Statistics questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Candidates are required to answer the questions set in *one* of these languages.

Zoology

The main facts and principles of Zoology as exemplified by :—

(*a*) An elementary study of the comparative anatomy of the phyla named below in (*b*) together with the classification which is founded on it.

(*b*) A detailed study of the anatomy, habits and life history of ***each*** of the named types (***or equivalent substitutes***) together with a consideration of the functions of their various organs (observations to be made on living animals wherever possible) :—

PROTOZOA : Amœba, Polystomella, Actinosphærium, Sphærozoum, Euglena, Ceratium, Trypanosoma, Paramecium, Opalina, Vorticella, Ephelota, Monocystis, Eimeria, and malarial parasite.

POROFERA : Grantia.

CŒLENTERATA : Tubularia, Obelia, Aurelia, Physophora, Alcyonium, an actinian, Hormophora.

PLATYHELMIA : Leptoplana, Fasciola, Tænia.

NEMERTINE : A nemertine.

NEMATHELMIA : Ascaris.

CHÆTOGNATHA : Sagitta.
ROTIFERA : A rotifer.
PHORONIDEA : Phoronis.
SIPUNCULOIDEA : Sipunculus.
POLYZOA : Bugula, Pedicellina.
BRACHIOPODA : Lingula.
ANNELIDA : Nereis, Tubifex, Hirudo.
ECHINODERMATA : Asterias.
MOLLUSCA : Buccinum, Aplysia, Helix, Anodonta, Sepia.
ARTHROPODA : Daphnia, Lepas, Astacus, Carcinus, scorpion, spider, Peripatus, cockroach.
HEMICHORDATA : Balanoglossus.
UROCHORDATA : Ciona.
CEPHALOCHORDATA : Amphioxus.
CYCLOSTOMATA : Petromyzon.
PISCES : Raia, Gadus.
AMPHIBIA : Salamandra, Rana.
REPTILIA : Lacerta, Tropidonotus.
AVES : Pigeon.
MAMMALIA : Cavia.

(*c*) The elements of cytology and histology.

(*d*) Asexual and sexual reproduction and parthenogenesis. The various types of segmentation, gastrulation and germ layer formation. The development of the characteristic embryos and larvæ of the different phyla, and the elements of experimental embryology, the later development of the organs of a vertebrate.

(*e*) An elementary study of genetics.

(*f*) Variation, principles of classification, evolutionary evidence and theories of evolution.

(*g*) Ecological and other factors which influence the distribution of animals.

B.SC. (SPECIAL) DEGREES

GENERAL INFORMATION

1. The B.Sc. (Special) Degree may be taken in any of the following branches :—

Anatomy.	†*Geography.	*Psychology.
*Antnropology.	*Geology.	*Statistics.
Astronomy.	†*Mathematics.	Zoology.
*Botany.	*Physics.	
*Chemistry.	*Physiology.	

2. Special Regulations have been approved by the Senate for Internal Students at the Imperial College of Science and Technology. Copies can be obtained on application to the Academic Registrar.

3. Revised Regulations for the B.Sc. (Special) Degrees in Anthropology, Botany, Chemistry, Geology, Physics, Physiology, Psychology and Statistics are now in force as alternatives to the old Regulations (*see* pp. 1049–96).

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* For revised Regulations in these subjects see pp. 1049–96 below.
† Examinations in these subjects are held only under revised Regulations.

The Examinations in these subjects will be held under the *old* Regulations (pp. 1036-46) for the last time in the following years :—

Anthropology	:—	1953.
Botany	:—	1953.
Chemistry	:—	1951 for full-time students.
Geology	:—	1952 for part-time students.
Physics	:—	1952.
Physiology	:—	1952.
Psychology	:—	1953.
Statistics	:—	1951.

4. Revised Regulations for the B.Sc. (Special) Degrees in Geography and Mathematics are set out on pp. 1068–75 and pp. 1081–84. There are no examinations under the old Regulations in these Subjects.

STUDENTSHIPS AND PRIZE

The following Studentships (£250 for one year) and Prize are awarded at the B.Sc. (Special) Examination :—

Neil Arnott Studentship in Chemistry.

Granville Studentship in Physics.

Sherbrooke Studentship in Mathematics and Sir John William Lubbock Memorial Prize (£30).

Two Studentships for Botany *or* Zoology.

Two Studentships for Geography.

One Studentship for each of the following :—Anatomy ; Anthropology ; Chemistry ; Geology ; Mathematics ; Physics ; Physiology; Psychology.

[For detailed Regulations see p. 13 of the General Regulations.]

B.SC. (SPECIAL) DEGREE

OLD REGULATIONS

COURSE OF STUDY

This course normally extends over not less than two years, but in the case of (1) students who have passed the Second Examination for Medical Degrees as Internal Students and are proceeding to the B.Sc. (Special) Degree in Chemistry or Physiology or Anatomy, and (2) students who have passed the B.Sc. (General) Examination as Internal Students, it will extend over one year only.

Bachelors of Science in Household and Social Science or in Veterinary Science will be permitted to enter for the B.Sc. (Special) Examination in Physiology not less than one year after obtaining the B.Sc. Degree in Household and Social Science, or in Veterinary Science ; and such candidates will be excused the subsidiary subject.

Bachelors of Science in Veterinary Science will be permitted to enter for the B.Sc. (Special) Examination in Chemistry not less than one year after obtaining the B.Sc. Degree in Veterinary Science ; and such candidates will be excused the subsidiary subject.

A student who has obtained the B.Sc. Pass Degree or the B.Sc. (General) Degree as an External Student may present himself for the B.Sc. (Special) Examination in any one branch after having attended an approved course of study therefor extending over not less than two years.

A student who has obtained the B.Sc. (Special) Degree in any one branch as an External Student may present himself for the B.Sc. (Special) Examination in another branch after having attended an approved course of stud therefor extending over not less than two years.

A student who has obtained the B.Sc. (Special) Degree as an External Student may present himself for the B.Sc. (General) Examination after having attended an approved course of study extending over not less than two years.

The course consists of the specialised study of one principal subject, and, except in certain cases, specified below, of a subsidiary subject.

No candidate will be allowed to take more than one principal subject at one and the same time, but he may take a second principal subject after a further approved course of study extending over at least one year.

Students who have taken the B.A. Honours Degree in Anthropology or Psychology will not be permitted to proceed to the B.Sc. (Special) Degree in the same subject.

A student who has graduated B.Sc. with Honours in Mathematics at the B.Sc. (Special) Examination may be admitted to the B.Sc. (Special) Examination in Physics after pursuing an approved course of study, extending over one year, provided that he gives the whole of his time and attention to the study of Physics during the year.

No course of study will be satisfactory that is conceived in a narrow spirit, and that does not include work in at least one branch of Science related to the subject in which the student proposes to present himself.

Regulations with Regard to Subsidiary Subjects

All students will be required to follow a course in a subsidiary subject extending normally over not less than one year and to be examined therein, as specified below, except :—

(*a*) Students who have taken the B.Sc. Pass Degree, or the B.Sc. (General) Degree, or the B.Sc. Honours or B.Sc. (Special) Degree in another branch, or the B.Sc. (Eng.) Degree, or the B.A. Degree (Pass or Honours) with some subject which is included in the list of subsidiary subjects for the B.Sc. (Special) Examination, either as Internal or as External Students ;

(*b*) Students who, having passed the Second Examination for Medical Degrees, have been admitted to proceed to a course of study for the B.Sc. (Special) Degree in Botany or Chemistry or Physiology or Psychology or Zoology ;

(*c*) Students proceeding to the B.Sc. (Special) Degree in Anatomy or Statistics ;

(*d*) Students proceeding to the B.Sc. (Special) Degree in Botany who have obtained the B.Pharm. or B.Sc. (Agric.) or B.Sc. (Hort.) Degree as Internal or External Students ;

(*e*) Students proceeding to the B.Sc. (Special) Degree in Chemistry who have obtained the B.Pharm., B.Sc. (Agric.), B.Sc. (Household and Social Science) or B.Sc. (Vet. Sci.) Degree as Internal or External Students ;

(*f*) Students proceeding to the B.Sc. (Special) Degree in Physiology who have obtained the B.Pharm., B.Sc. (Household and Social Science) or B.Sc. (Vet. Sci.) Degree as Internal or External Students ;

(*g*) Students who have obtained the Academic Diploma in Geography are exempted from the course of study (but not from the examination) in Geography as a subsidiary subject.

A student who has passed in a subsidiary subject at an External Examination may be exempted from further examination in that subsidiary subject provided the authorities of his College or Institution so recommend and provided he complies with the Regulations relating to Approved Courses of Study.

Students who have taken the B.Sc. (General) Examination or the B.A. (General) Examination as Internal or External Students, and have satisfied the Examiners in two subjects, may apply for exemption from one of those subjects as a subsidiary subject for a B.Sc. (Special) Examination provided that it is included in the list of subsidiary subjects for that Examination.

A student may if he so desires follow courses in more than one subsidiary subject.

The subsidiary subject or subjects must be chosen by the candidate, after consultation with his teacher, not less than a year before he proposes to take the examination.

A candidate will be permitted to offer himself for examination in his subsidiary subject either on the same occasion as he enters for examination in his principal subject, or subsequently to his passing the Intermediate Examination in Science and before entering for his principal subject.

Nevertheless a candidate who has been referred in one subject at the Intermediate Examination may enter for re-examination in that subject at the Intermediate Examination and for examination in his subsidiary subject at the Final Examination in the year before the commencement of the calendar year in which he will enter for examination in his principal subject, but he will not be informed of the result of his candidature in the subsidiary subject unless he has satisfied the Examiners in his referred subject.

The examination in the subsidiary subject will, where possible, be the same as that for the B.Sc. (General) Examination in that subject, but candidates will not be required to answer questions involving a knowledge of French or German. In cases where the examination timetable does not permit candidates to take the relevant papers of the B.Sc. (General) Examination alternative papers on the syllabus of the B.Sc. (General) Examination will be set.

List of Subsidiary Subjects

The following is a list of subjects which may be taken as subsidiary subjects :—

Anthropology.
Astronomy.
Botany.
Chemistry.
Geography.
Geology.
Anatomy.
Mathematics (Applied).
Mathematics (Pure).
Physics.
Physiology.
Psychology.
Statistics.
Zoology.

The subsidiary subject must be chosen by the student in consultation with his teacher or teachers in the principal subject.

Date of Examination

The B.Sc. (Special) Examination will take place once in each year, commencing on the Thursday after June 5th.*

A candidate must enter for examination in his subsidiary subject either on the same occasion as he enters for examination in the principal subject or at any other B.Sc. Examination held subsequently to his passing the Intermediate Examination in Science, and before the commencement of the calendar year in which his examination in the principal subject takes place. A candidate may not enter for examination in the principal subject separately from the subsidiary subject unless he has already passed the examination in the subsidiary subject or is exempted therefrom.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.†

A candidate for this Examination who fails to send his entry-form and fee to the Academic Registrar on or before March 7th can only be admitted provided there is accommodation and that arrangements have already been made for holding the Examination in the subject or subjects in which the candidate desires to be examined. All such applications received after March 7th must be accompanied by an extra fee of 2 guineas, which extra fee will be returned if it is found impossible to make the necessary arrangements for the examination of the candidate. Such late entry cannot be accepted if received after April 7th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written, practical and oral examinations.

Fees

The fee for each student is 7 guineas for each entry to the whole Examination.

The fee for examination or re-examination in the principal subject only is 5 guineas, but a candidate who has been exempted from the subsidiary subject is required to pay the full fee of 7 guineas at his first entry and a fee of 5 guineas at any subsequent entry for the examination in his principal subject.

A candidate who enters for examination or re-examination in his subsidiary subject only will be required to pay a fee of 2 guineas.

The fee for the qualifying examination in Physiology (pp. 1044-45) is 2 guineas.

Students who are required to take part or the whole of the B.Sc. (Special) Examination in order to qualify for entry to the M.Sc. Examination will be required on each entry to the B.Sc. (Special) Examination to pay a fee of 1 guinea per paper or practical examination taken, up to a maximum of 7 guineas. In no case will the names of such students appear on the B.Sc. list of the year.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

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* For date of practical examination in Astronomy, see p. 1042.

† Candidates are required to submit entry-forms whether entering for examination in principal and subsidiary subjects taken together or in principal or subsidiary subjects taken separately.

Details of Examination

The number of papers in any subject will be not less than six and not greater than nine, and the number of days' practical examination in experimental subjects not less than two and not greater than three.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates will be expected to be able to express their knowledge in clear, concise and scholarly fashion, and their powers of composition will be taken into consideration in determining the result of the Examination. Essay subjects may be set at the discretion of the Examiners.

Candidates in experimental subjects must produce note-books of their laboratory work and may produce published or connected manuscript accounts of any research work in which they have participated. These must in each case be duly certified by the teacher, and may be taken into account in estimating their qualifications; provided only that the research work be not allowed to take the place of a sound general theoretical knowledge and manipulative skill in practical work.

A candidate who satisfies the Examiners in his subsidiary subject will not be required to enter again for examination in the subsidiary subject.

A candidate who enters for examination in the principal and subsidiary subjects on the same occasion and fails in the subsidiary subject will, if the Examiners have recommended him for First or Second Class Honours in the principal subject, be credited provisionally with such Honours and allowed to enter for re-examination in the subsidiary subject only on one subsequent occasion. A candidate who is recommended for a pass and fails in the subsidiary subject will not be credited with any part of the examination.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar. Successful candidates will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) a Pass, B.Sc. (Special) Degree. The class assigned to candidates will depend solely on the examination in the principal subject.

A diploma for the Degree of B.Sc., under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

[*See* p. 1019]

SYLLABUSES OF PRINCIPAL SUBJECTS

The following are syllabuses of the principal subjects in which the B.Sc. (Special) Degree may be taken.

Anatomy

No course in this subject will be allowed to run concurrently with a course for the Final M.B., B.S. Examination. Candidates will not be required to present any subsidiary subject. The Degree is open to the classes of candidate enumerated under A and B below :—

A. Candidates who have passed the Second Examination for Medical Degrees as Internal Students.

B. Candidates who have passed the Intermediate Examination in Science and who have taken the subject of Zoology at that Examination. Before proceeding to the Special course in Anatomy candidates are required to attend the following approved course of study extending over not less than one academic year :—

1. A course of Human Anatomy, Neurology and Embryology.

2. Practical Human Anatomy including the dissection of the whole body.

3. A course of lectures in Physiology.

4. A course of elementary practical Physiology.

5. A course of Histology including practical Histology.

Candidates in Class B are required to pass an examination consisting of 2 papers and a practical and oral examination as described in Second Medical Regulations (pp. 811–12) and of approximately the same standard, before beginning the course for the Special Degree.

The approved course for the B.Sc. (Special) Degree to be taken by candidates in either Class A or Class B shall extend over one academic year and shall include :—

1. Practical training in methods of research, *e.g.*, experimental, radiological, biometrical, comparative—as related to anatomical problems.

2. Advanced courses with practical work in :—

(*a*) Vertebrate Embryology.

(*b*) Histology.

(*c*) Neurology.

Emphasis to be laid on the correlation of structure to function.

3. The consideration of human anatomy in the light of vertebrate evolution and genetics.

The examination shall consist of :—

Six papers of three hours each, dealing with the several branches of the subject. In one of these papers an essay will be set, selected from a list of at least three subjects.

Candidates will be required to translate and comment in English on the subject-matter of short passages in French and German. Dictionaries will be provided for the use of candidates at this examination.

The number of days practical examination shall be not less than two and not more than three.

Candidates are required to bring to the practical examination their *original* laboratory note-books, for inspection should the Examiners so desire. These note-books must be taken away by the candidates at the close of the examination.

Anthropology

[*Syllabus under old Regulations ; for revised Regulations see pp.* 1049–53]

For syllabus, *see* B.Sc. (General) Degree pp. 1022-23.

The following papers will be set :—

(1) Physical Anthropology.

(2) Prehistoric Archaeology of Europe and the Near East.

(3) Technology and Linguistics.

(4) Social Organisation.
(5) Religion and Magic.
(6) Ethnography of a selected region.
(7) Essay

At the examination in Anthropology questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *both* these languages a candidate cannot make up the full number of questions to be answered.

Astronomy

The subjects of the curriculum for the B.Sc. (General) Examination (p. 1023), carried to a more advanced stage, involving the use of more difficult mathematical methods and including the following :—

The theory of optics, so far as is necessary to understand the working of astronomical instruments, including spectroscopes. Map projections and planispheres. Measurement and reduction of celestial photographs. Elementary theory of the figure of the earth. Elementary dynamical theory of precession and mutation, and of variation of latitude. General theory of celestial motions : the elements of an orbit ; general explanation of perturbations ; the different classes of inequalities. Theory of the reduction of mean to apparent place for a star. Method of least squares and treatment of observations. The classification of stars according to spectral types. Determination of line of sight velocities by means of the spectroscope. Determination of the solar motion. Distribution and motion of the stars in space. Determination of orbits of visual and spectroscopic binaries. The measurement of magnitude. Characteristics of variable stars. Information given by the spectroscope concerning the physical condition of celestial bodies.

Practical Work

The subjects of the curriculum for the B.Sc. (General) Examination (*see* p. 1023), carried to a more advanced stage, together with two of the following :—

1. Photometry.
2. Celestial Photography.
3. Celestial Spectroscopy (visual and photographic).

The practical examination in Astronomy will be held at the end of March or the beginning of April preceding the written examination.

Botany

[*Syllabus under old Regulations ; for revised Regulations see pp.* 1053-61]

The following outline indicates the range of the examination for the general guidance of students and teachers :—

Botany in all its branches, including :—

1. The morphology, anatomy, and histology of the plant body, including a detailed knowledge of cell-structure.
2. The physiology of plants.

3. Evolution and genetics.
4. The ecology of plants.
5. The taxonomy and phylogeny of plants, recent and fossil.
6. The geographical distribution of plants.
7. The history of Botany.

Candidates are permitted to bring to the practical examination a copy of a British Flora without illustrations for use, at the discretion of the Examiners.

Chemistry

[*Syllabus under old Regulations; for revised Regulations, see pp.* 1061–68]

Students will be required to show a general acquaintance with the five main divisions of the subject, viz. :—

(1) General Theoretical Chemistry.
(2) Inorganic Chemistry.
(3) Organic Chemistry.
(4) Physical Chemistry.
(5) History of Chemistry since the time of Boyle.

Also to be practically familiar with the common methods of experiment.

It is desirable that candidates should be able to translate memoirs on chemical subjects in French and German into English. Full marks will not be awarded if a knowledge of these languages is not shown.

Candidates are permitted to bring for use at the practical examination any book or books they wish.

For the practical examinations in Chemistry candidates must provide themselves with platinum wire and foil and candidates at Final Examinations in Chemistry are advised to bring into the examination-room, for use in the examination, prepared crucibles with a note of their approximate weight. No other chemical apparatus may be introduced into the examination-room.

Geology

[*Syllabus under old Regulations; for revised Regulations, see pp.* 1075–81.]

A candidate taking Geology must satisfy the Examiners (1) in the subject as set out above for the B.Sc. (General) Examination in Geology (*see* p. 1026), (2) in Section *A*, and (3) in either *B* or *C*, as set out below.

Section A.—Physical and Stratigraphical Geology

General physical features of land areas : the relations of these features to geological structure, and their origin.

Forms of seas and ocean basins. Their origin. Nature and distribution of their deposits.

The nature, history and distribution of the stratified rocks and their fossils in the British Isles compared with those in other parts of Europe and in the better known extra-European areas. Relations of igneous and metamorphic rocks to these stratified rocks.

The practical applications of Geology, especially water supply, coal, and rocks used as building stones.

Candidates will be expected to be familiar with the general history of the development of geological science.

Section B.—Mineralogy and Petrology

The optical and other properties of the rock-forming minerals.

Structures found in rocks and their significance. Mineralogical constitution, chemical composition, and other characters of the principal varieties of rocks. Petrogenesis.

Relations of the chief types of rocks to one another.

Petrological methods. The isolation, by various means, of the minerals which form rocks; and the principles of their determination by micro-chemical and other tests.

The more important minerals of economic value, and their modes of occurrence.

Section C.—Palæontology

General distribution of existing faunas and floras, and their relation to those of former geological periods.

Morphological characters of the more important genera and larger groups of fossils:—(1) plants, (2) invertebrates, (3) vertebrates. The conditions which determine their distribution in present and past times.

Characteristic fossils of successive geological deposits. Zonal value of fossils. Palæontological Methods.

Practical Work

Satisfactory evidence must be given of adequate instruction having been received by the students in the field.

Reading and interpretation of geological and other maps, and the drawings of sections across them.

Description and identification or minerals, rocks, and fossils in hand specimens, and under the microscope.

[*Note.*—The specimens will be selected from a wider range of rocks and minerals for candidates taking Section *B*, and of fossils for candidates taking Section *C*, respectively.]

Physics

[*Syllabus under old Regulations; for revised Regulations, see pp.* 1084-86]

The principles, Methods, and Theories of Physics treated mathematically and experimentally.

At the examination in Physics questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *both* these languages a candidate cannot make up the full number of questions to be answered.

Candidates will be required to submit their course work for inspection by the Examiners on each and every occasion on which they present themselves for the B.Sc. (Special) Examination in Physics.

Physiology

[*Syllabus under old Regulations; for revised Regulations see pp.* 1086-89]

No course in this subject will be allowed to run concurrently with a course for the Final M.B., B.S. Examination.

The Degree is open to the classes of candidates enumerated under A and B below.

A. Students who have passed the Second Examination for Medical Degrees as Internal Students.

Such students must, subsequently to passing the Second Examination for Medical Degrees, pursue an approved course of study for the Degree in Physiology extending over at least one academic year, involving not less than 16 hours' laboratory work per week, as well as attendance at two at least of the courses of the Special Lectures in Physiology of the year previous to the examination, approved for the purpose by the University.

B. Students who have passed the Intermediate Examination in Science.

Such students must attend the courses in Physiology prescribed for the B.Sc. (General) Degree, and must, in addition, after completion of these courses have pursued a further course of study extending over at least one academic year, and involving not less than 16 hours' laboratory work per week, as well as attendance at two at least of the courses of Special Lectures in Physiology of the year previous to the examination, approved for the purpose by the University.

Candidates entering for the B.Sc. (Special) Examination in Physiology in and after 1949 will be required, unless they have passed the Second Examination for Medical Degrees, or the B.Sc. (Veterinary Science) Examination, or in Physiology at the B.Sc. (General) Examination of this University, or the B. Pharm. Examination under the Revised Regulations with Pharmacology at Part II, to have passed a qualifying Examination consisting of the papers in Physiology of the B.Sc. (General). No other exemptions from this qualifying Examination will be allowed. The qualifying Examination can only be held in June, but a candidate may enter for it on the same occasion as he enters for his subsidiary subject.

At the examination in Physiology questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *both* these languages a candidate cannot make up the full number of questions to be answered. Dictionaries will be provided for the use of candidates at this examination.

Candidates are permitted to bring for use at the practical examination any book or books they wish.

Psychology

[*Syllabus under old Regulations; for revised Regulations see pp.* 1089-93.]

The subjects of the B.Sc. (General) Examination (pp. 1032-33), carried to a higher stage, with a knowledge of current controversies.

Candidates will be allowed to take into the examination room and to consult, during the practical examination, note-books containing mathematical formulæ only.

The Examination in Psychology will consist of :—

Two papers on General Psychology.

One paper on History of Modern Philosophy (Descartes to Kant).

One paper on Comparative and Abnormal Psychology.

One paper on the Physiology of the Nervous System and Sense Organs.

One paper on Experimental Psychology.

Two days' Practical Examination.

Normally the note-books to be brought to the practical examination (*see* paragraph on pp. 1021-22) must show that the candidates have regularly taken part in courses of work in Experimental Psychology extending over not less than two years.

At the examination in Psychology questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *one* of these languages a candidate cannot make up the full number of questions to be answered.

Statistics

[*Syllabus under old Regulations; for revised Regulations see pp.* 1093-96.]

SECTION A

The subjects of the B.Sc. (General) Examination in Statistics (*see* pp. 1033-34) carried to a more advanced stage, dealing in particular with the following :—

The fuller mathematical theory of probability and the ideas underlying the processes of statistical inference. The development of systems of frequency distribution. The theory associated with tests of significance of differences, particularly in sampling from normal populations. Multiple regression and the more advanced theory of correlation. The elementary treatment of time series including the theory of periodicity.

SECTION B

The subjects of the B.Sc. (General) Examination in Pure Mathematics (*see* pp. 1026-27) with Option D, excluding Euclidean methods, together with an elementary treatment of determinants of any order. Taylor's expansion for functions of several variables and maxima and minima of such functions. Jacobeans and their applications to multiple integrals ; finite differences with applications to interpolation, summation and integration ; gamma, beta, and hypergeometric functions. Stirling's expansion.

The examination in Statistics will consist of :—

Six papers on Section A.

Two papers on Section B.

Two days' practical examination on Section A.

At the examination in Statistics questions will be set involving (*a*) translation of passages in French and German and (*b*) answers in regard to the subject-matter thereof. Without answering the questions set in *both* these languages a candidate cannot make up the full number of questions to be answered.

Note-books of actual laboratory work on biological, anthropological sociological, psychological or economic problems will be examined, and experimental work in observing and recording as well as in reduction will be demanded.

Candidates are permitted to bring for use at the practical examination any book or note-books they wish.

Zoology

A candidate taking Zoology must satisfy the Examiners—

(1) in the subject as set out for the B.Sc. (General) Degree (pp. 1034-35) with more detailed treatment of sections (*b*) to (*g*) of that syllabus ;

(2) in one of the sections A to G below :—

(A) General and Comparative Physiology :—Elementary Physics and Chemistry as applied to biological systems. General physiology of the cell. Action of physical and chemical influences on the cell. Comparative physiology of digestion, respiration, excretion, circulation of body fluids. Animal behaviour—sense organs, effectors, nervous and endocrine co-ordination.

(B) General Entomology :—A general study of the external and internal anatomy, post-embryonic development and biology of insects ; Natural orders ; origin and phylogeny of insects ; origin and development of the wings in insects ; aquatic life in insects ; social life in insects ; insect nutrition ; physiology of respiration in insects.

(C) Parasitology :—Symbiosis and Parasitism. Effect of parasitism on structure and life history of the parasite and host. A detailed study of parasitism as exhibited by (*a*) Protozoa, (*b*) Platyhelminthes and Nemathelminthes.

(D) General Embryology :—Germ cells ; their origin, structure and maturation ; fertilisation ; cleavage ; gastrulation, formation of germinal layers and the factors which control them. Formation and growth of embryo. Outlines of organogenesis in the Vertebrate embryo. Development of the fœtal membranes in the Amniota. Placentation.

(E) Genetics :—Nature and nurture as influencing variation. Mendelian inheritance, sex-linked inheritance. Chromosomes and genetics. Comparative genetics of different animal groups. Genetics of population. Elementary statistical theory. Species crosses. Practical work in genetics of the mouse or Drosophila.

(F) Marine Ecology :—The life of the seas. The work of the great oceanographical expeditions. The physical and chemical environment and its seasonal changes. Littoral communities, and the Benthon, Necton and Plankton. Methods of plankton research. The basis of the food supplies of the sea. Putter's theory. The place of the plankton in the economy of marine life : the principal types of plankton, their distribution, seasonal changes, vertical migrations and patchiness. The relation of animal and plant planktons. Adaptions of animals to pelagic and deep-sea life, including bio-luminescence. Studies from original papers of the natural history of the herring, the plaice and the rorquals. Practical work on the ecology of the marine plankton, involving a consideration of physical and chemical factors and accompanied by a grounding in taxonomy.

(G) Limnology :—Peculiarities and origin of freshwater faunas. Barriers and means of dispersal. Migrations between fresh waters and the sea. Relict faunas. Physical and chemical factors in the environment. Inter-relations of animals and of flora and fauna. Plankton. Lakes, ponds, rivers, estuaries, waters which dry up periodically, underground, thermal and saline waters. Respiratory physiology. Osmoregulation. Animal behaviour in relation to mode of life. Studies of aquatic environments. Economic applications.

B.Sc. (SPECIAL) DEGREE

REVISED REGULATIONS

Revised Regulations for the B.Sc. (Special) Degree in Anthropology, Botany, Chemistry, Geography, Geology, Mathematics, Physics, Physiology, Psychology, and Statistics are set out below.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates taking the examination in their two-year ancillary subject at the end of their course (or later) for the B.Sc. (Special) Degree under the revised Regulations, who, by reason of illness, are unable to complete the examination in that ancillary subject, may be permitted to complete the examination in that ancillary subject on one subsequent occasion.

DATES OF EXAMINATIONS

The examinations in ancillary subjects will be held once a year, at approximately the same time as the Special Intermediate Examinations in Science at the various Colleges.

The Translation Tests in connection with the Degrees in Chemistry, Physics, Psychology and Statistics will be held on the Friday before the first Saturday in May.

The Final Examinations will also be held once a year, beginning on the Thursday after June 5th.

Entry-forms for the examinations in ancillary subjects or for either Part of the Final Examination must be returned to the Academic Registrar not later than 7th March.

FEES

The fees payable under the revised Regulations for the B.Sc. (Special) Degrees in Anthropology, Botany, Chemistry, Geography, Geology, Mathematics, Physics, Physiology, Psychology and Statistics are as follows :—

Preliminary Examination—2 guineas for each subject taken up to a maximum of 6 guineas. The latest date for the receipt of entries is 17th April.

Language Test—10*s.* 6*d.* for each entry.

Ancillary subjects—2 guineas each.

Final Examination in Botany, Chemistry, Geology, Physics, Physiology, Psychology or Statistics :—Part I—4 guineas ; Part II—4 guineas.

Final Examination in Geography—8 guineas.

Final Examination in Mathematics :—Whole Examination or first 6 papers—8 guineas ; remaining 2 papers taken at a subsequent Examination—3 guineas.

The fee for the Final Examination in Anthropology will be announced later.

Candidates who are exempt from Ancillary or Part I examinations will be required, at their first entry for an Ancillary or Part of the examination, to pay the normal entry fees prescribed for those examinations from which they are exempt in addition to the entry fee for the examination for which they are entering.

Anthropology

The following Revised Regulations for the B.Sc. (Special) Degree in Anthropology for Internal Students are in force as an alternative to the present Regulations. The first Examination under these Regulations will be held in **1953** *:—*

1. Before admission to the course, a student must :—

either (i) have obtained a General Certificate of Education with passes at Advanced Level or a Higher School Certificate with passes at Main Standard in (*a*) three Science subjects or (*b*) two Science subjects (not including *both* Pure Mathematics *and* Applied Mathematics) and either Economics or an approved Modern Language,

or (ii) have passed the Preliminary Examination or an approved equivalent examination in any of the required subjects in which he has not so qualified.

2. (i) A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. In addition to Anthropology the course will include ancillary courses in two of the following subjects, not more than one of which may be a modern language :—

Anatomy, Economics, Geography, Geology, Physiology, Psychology, Sociology, Statistics, Zoology, French, German, Italian, Spanish.*

One ancillary course will be pursued over not less than one year and the other over not less than two years. Nevertheless, a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years and may be excused in whole or in part from the courses in the Ancillary subjects and the corresponding examinations.

(ii) A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree a student must satisfy the examiners at the following examinations :—

(i) Except as provided in paragraph 2 (ii) above, the examination in the one-year ancillary subject to be taken not less than one year after entering the course. There will be one or two papers in each subject and a one-day's practical examination or its equivalent in experimental subjects.

(ii) Except as provided in paragraph 2 (ii) above, the examination in the two-year ancillary subject to be taken not less than two years after entering the course. There will be two papers in each subject with a one-day's practical examination or its equivalent in experimental subjects.

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* Approval may be sought for a modern language other than those specified.

(iii) The Final Examination in Anthropology to be taken not earlier than the end of the third year. There will be eight written papers :—

General Principles of Cultural Anthropology.
Economic and Political Systems.
Moral and Ritual Systems.
Ethnography of a special area.
The Evolution of Man.
Racial Variation among Living Peoples.
Archæological Study of the Development of Culture.

ONE of the following options :—

General Linguistics, Technology, the Prehistoric.
Archæology of a special area, Race Relations.

There will also be a practical examination with reference to the papers on the Evolution of Man, Racial Variation among Living Peoples and the Archæological Study of the Development of Culture and also that on Technology if taken as an option.

4. A student who fails at the examination in the one-year ancillary subject will be permitted to re-enter for that subject at a one-year ancillary examination not later than one year before taking the Final Examination. A student who fails at the examination in the two-year ancillary subject may be referred and be permitted to re-enter for that subject on any subsequent occasion.

5. The list of successful candidates at the Final Examination will be divided into :—

(*a*) First Class Honours.

(*b*) Second Class Honours.

(*c*) Pass.

The name of the candidate will not be included in the list until he has passed or been exempted from all the examinations specified in Paragraph 3.

6. A Diploma for the Degree of B.Sc. under the Seal of the University will be delivered to each candidate who has qualified for admission to the Degree after the report of the examiners has been approved by the Senate.

7. The syllabuses in the principal subject are as follows :—

1. General Principles

The scope of Cultural and Social Anthropology ; problems of method and technique.

Theories of culture and society ; adaptive aspects of culture ; the role of biological, psychological and environmental factors ; inter-relations of culture and social structure ; cultural development and change.

Social structure ; analysis of groups and institutions. Locality, sex, age and kinship as factors in social grouping. Types of family structure. Lineage, clan and community. Occupational and other associations. Rank and status, prestige and authority. Stratified groups ; class and caste structures. Marriage and other institutions associated with kinship.

2. Economic and Political Systems

Organisations of economic activities in primitive and peasant societies ; land tenure and property rights ; conception of wealth and capital organisation of labour ; principles of exchange of goods and services. Allocation of the products of industry.

Political organisation ; authority in states and in stateless societies ; role of public opinion ; chieftainship, councils and executive organisations.

Legal rules and procedures ; the concept of sanctions ; civil and criminal law in primitive societies ; the relation of law to custom and to morality.

3. Moral and Ritual Systems

Social control and social values. Culture patterns. Religion, belief, dogma and ritual. The concepts of spirits. Religion and society. Relation between religion and magic ; types of magic ; fertility cults and totemism ; mythology. The role of art in primitive culture.

4. Ethnography of a Special Area

The applications of the principles, problems and methods of the preceding sections to the more detailed study of a special region. Regions approved for selection are :—

(*a*) Eastern Africa.
(*b*) Central Africa.
(*c*) Western Africa.
(*d*) Southern Africa.
(*e*) America North of Mexico—Amerindian and Eskimo cultures.
(*f*) India (tribal cultures).
(*g*) South-eastern Asia.
(*h*) Pacific Islands (Melanesia, Polynesia and Micronesia).
(*i*) Australia and New Guinea.

5. The Evolution of Man

The evidence for organic evolution ; the mammalian and primate characteristics of man ; the varieties of living primates ; the evolution of the human body as deduced from comparactive anatomy and fossil remains. (Human Palæontology and the Comparative Anatomy of Primates and early hominoids are to be dealt with in sufficient detail to illustrate the major features of human evolution and the methods used in such studies.)

6. Racial Variation among Living Peoples

The zoological concept of race considered with reference to the bases of linguistic, political and other classifications of living man.

Racial classifications and the chief physical characters used in constructing them. Methods of Anthropometry. The statistical examination of anthropometric data by simple methods.

An outline of human genetics with particular reference to serological characters and their application in Anthropology.

7. Archæological Study of Culture

Archæological study of the development of culture with particular reference to the prehistory and protohistory of Europe and the Orient.

Principles and methods of archæological classifications. The traditional "Three Ages" cultural phases and sequences. Man as a tool maker; archæological evidence for the antiquity of man. Early art and ritual. Cults; fertility cults and cults of the dead.

Development of techniques during the Pleistocene period, with special reference to adjustment to environment, productivity of labour in the food quest, density of population, and social organisation.

Food gathering and food producing in post-pleistocene time as conditioned by environment and technology. Methods of farming; extra-subsistence production; division of labour; beginnings of trade. The metallurgy of copper and bronze; the development of full-time specialisation and regular trade.

Early growth of complex civilisations. Irrigation agriculture with special reference to the Nile and Tigris-Euphrates valleys; the growth of urban agglomerations. Temples and Pyramids. The development of writing and numeral notation; standardisation of weights and measures, calendar and geometry.

8. Options

General Linguistics

An outline of the principles and methods of descriptive linguistics with reference to:—Phonetic notation and phonological systems; grammatical categories; dictionary methods and the presentation of language material in texts; the sociology of language (the relations of linguistic categories and forms to social and cultural conditions).

Technology

Relation between material and social aspects of culture. Concepts of technique and technical knowledge, skill and efficiency and their evaluation. Techniques in non-industrial communities. Relation of techniques to physical environment. Relation of changes in techniques to changes in population density, settlement and social organisations. Types and uses of materials. Discovery, invention, evolution and diffusion.

Simple systems of counting, measurement and time reckoning and their contexts.

Artifacts; tools; categories; classification of materials; manufacture and use. Implements of war, means of transport, ceremonial objects and ornaments.

Harnessing of energy, *e.g.*, fire and water, forms of power.

Principles of simple machinery, *e.g.*, wheels, pulleys, and levers, compressors, projectile implements.

Modes of production. Hunting and collecting; fishing; pastoralism; agriculture in simple and in more developed forms.

Specific crafts, considered with reference both to techniques (*e.g.*, wood working, pottery, weaving, metal work,) and major products, (*e.g.*, houses, clothes and baskets.)

The Prehistoric Archæology of a Special Area

The more detailed archæological study of Prehistoric Britain, including the Iron Age cultures prior to the Roman conquest.

(Approval may be given for the selection of other special areas.)

Race Relations

The significance of " race " and " culture " in contemporary problems of society; racial antagonism in relation to other forms of intergroup hostility.

The rise of modern racial antagonisms; the colour bar and other methods of regulating the relations of racial groups; " race consciousness " and ethnic nationalism; the role of the " mixed blood " in racial and cultural contacts.

Studies of racial conflict and co-operation in selected areas, such as the United States, Brazil, the Far East, Africa and the United Kingdom.

8. The syllabuses in Ancillary Subjects are as follows :—

GEOGRAPHY (ONE-YEAR) ANCILLARY TO ANTHROPOLOGY

1. Introduction to regional method with special attention to climate, soils and vegetation, with specific regional examples.

2. Regional geography of the British Isles or another approved region. Map interpretation in relation to the regional geography of the British Isles or other approved region.

[*Note.*—Ability to read maps is required in connection with each of the above sections.]

PHYSIOLOGY (FIRST YEAR) ANCILLARY TO ANTHROPOLOGY

As for Physiology (first-year) ancillary to Botany, pp. 1059–60.

PHYSIOLOGY (SECOND YEAR) ANCILLARY TO ANTHROPOLOGY

As for Physiology (second year) ancillary to Botany, p. 1060.

[*Syllabuses in other Ancillary Subjects will be prescribed later.*]

Botany

The following Revised Regulations for the B.Sc. (Special) Degree in Botany for Internal Students are in force as an alternative to the present Regulations :—

1. Before admission to the course a student must :—

either (i) have obtained a General Certificate of Education with passes at advanced level or a Higher School Certificate with passes at main standard in three science subjects;

or (ii) have passed the Preliminary Examination or an approved equivalent examination to complete the number of science subjects required.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. In addition to Botany the course will include courses extending over not less than one year in two of the ancillary subjects, Chemistry, Geology, Physics, Physiology, Statistics and Zoology. In addition the student must pursue a further course extending over not less than one year in one of the selected ancillary subjects. Nevertheless a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all and may be excused from the courses in ancillary subjects and the corresponding examinations in whole or in part.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year

ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at the following Examinations or obtain exemption therefrom :—

(i) *First Examination in Ancillary Subjects.* The Examination in the ancillary subject studied for one year will be taken not less than one year after entering on the ancillary course in that subject.

There will be one or two papers in each subject and a practical examination in each subject except Statistics.

(ii) *Second Examination in Ancillary Subjects.* The Examination in the ancillary subject studied for two years will be taken not less than two years after entering on the ancillary course in that subject. A student will not be permitted to pass this Examination unless he has passed the First Examination in Ancillary Subjects previously or passes it at the same time.

There will be two papers in each subject and a practical examination in each subject except Statistics.

(iii) *Part I of Final Examination in Botany* will be taken not less than two years after entering on the course.

(iv) *Part II of Final Examination in Botany* will be taken not less than one year after the student has (*a*) satisfied the Examiners in Part I, (*b*) passed the First Year Examination in Ancillary Subjects, and (*c*) passed or been referred at the Second Year Examination in Ancillary Subjects.

EXEMPTIONS

A student who has obtained a B.Sc. (General) Degree will be exempted from the courses and examinations in those ancillary subjects in which he has passed at the General Degree Examination and from the courses and examinations for Part I if he has passed in Botany at the General Degree Examination.

A student who has obtained the B.Sc. (Special) Degree in Chemistry, Geology, Physics, Physiology, Statistics or Zoology will be exempted, as far as that subject is concerned, from the two year course in ancillary subjects and from the Second Examination in Ancillary Subjects. If he has taken another subject from the above list as a Subsidiary or Ancillary Subject he will also be exempted from the course and examination in the First Examination in Ancillary Subjects.

A student who has obtained the B.Sc. (Special) Degree in any other subject with one of the above subjects as a subsidiary or ancillary subject may apply for exemption from the First or Second Examination in Ancillary Subjects.

A student who has obtained the B.Sc. (Special) Degree under the old Regulations with Botany as a Subsidiary Subject may apply for exemption from Part I of the Final Examination.

4. A student who fails in the Second Examination in Ancillary Subjects may be referred and permitted to re-enter for it on any subsequent occasion.

5. The list of successful candidates at Part II of the Final Special Examination will be divided into (1) First Class Honours, (2) Second Class Honours, and (3) Pass. The Second Class will be divided into two divisions. The class will be determined with regard to the candidate's performance in Part II of the Final Examination. No class or honours will be awarded on Part I of the Final Examination. The name of a candidate shall not be included in the list until he has passed, or been exempted from, all the examinations specified in paragraph 3.

6. The Final Examinations in Botany are as follows :—

Part I

There will be two theory and two practical papers, each of three hours, equivalent in standard and scope to the papers in Botany at the present B.Sc. (General) Examination.

In the theory papers there will be a reasonable but not extensive choice of questions, and the latter will be so distributed as to require an adequate all-round theoretical knowledge of the subject.

The practical papers will be designed to test all-round practical knowledge of the subject. Candidates must satisfy the Examiners in the practical examination.

Part II

The Part II examination shall consist of five written papers. Not more than two of these may be replaced by alternative papers submitted by individual colleges or schools. The practical examination for Part II shall consist of three papers.

Candidates shall, in addition, submit a report not exceeding 5,000 words as evidence of personal study of living plants, and dealing with a subject in general biology, ecology, pathology, physiology or taxonomy. The examiners shall be at liberty to test any candidate by means of oral questions.

Account will be taken of the laboratory and field work records of candidates in determining their class.

7. The syllabuses in Ancillary Subjects are as follows :—

CHEMISTRY (FIRST YEAR) ANCILLARY TO BOTANY

General Chemistry

Faraday's laws of electrolysis, Helmholtz's views on the nature of electricity and experiments on discharges in gases, leading to discovery of the electron. Mass and charge of the electron. Radioactivity. The nuclear atom. Radioactive displacement law and van den Broeck's hypothesis. Isotopes. Artificial radioactivity. Uses of isotopic indicators. Stable electron groups in atoms, ions and molecules. Electrovalency and covalency. Valency and the periodic classification.

Elementary kinetic theory of ideal gases. The gas equation. Distribution of kinetic and potential energy (without proof). Real gases. Molecular nature of gases Intermolecular energy. Liquid-gas equilibrium from the kinetic standpoint. Molecular and ionic nature of crystalline solids. Crystallinity in artificial and natural materials of high molecular weight.

Adsorption on surfaces. Main general properties of colloids with particular reference to lyophillic colloids and including colloidal electrolytes. Ultrafiltration. Sedimentation. Semi-permeable membranes: osmotic pressure (phenomenological treatment). Electrokinetic phenomena.

Chemical equilibrium and the law of mass action (empirical treatment).

Electrolytic conduction. Faraday's laws. Specific, molar and equivalent conductance. Mobilities. Ionic conductance. Degree of dissociation. Ostwald's law and departures therefrom. Strong and weak electrolytes. Transport phenomena.

Electromotive force of cells and electrode potentials (empirical treatment). Hydrogen electrode: pH and its determination. Indicators. Buffers. Oxidation-reduction cells, potentials, and equilibria.

Organic Chemistry

Optical isomerism as illustrated by lactic and tartaric acids. Geometrical isomerism as illustrated by maleic and fumaric acids.

Tautomerism illustrated especially by ethyl acetoacetate.

Aliphatic monohydric alcohols, aldehydes, ketones, mono-carboxylic acids (esters and amides), polyhydric alcohols, hydroxyaldehydes, hydroxy-ketones including carbo-hydrates treated in outline, hydroxy-acids, aldehydic and ketonic acids, polybasic acids, amines, amino-acids, peptides, and simple olefinic hydro-carbons, alcohols and acids, with inclusion as far as possible of substances of biological importance: their sources or modes of preparation, their properties and reactions, especially general reactions, and their detection and estimation in selected examples.

Practical Work

Volumetric analysis. Standardisation of apparatus and weights. Acidimetry, alkalimetry and iodemetry applied specially to determination of saponification values, iodine numbers, acetyl groups and nitrogen by Kjeldahl. Determination of Ca by permanganate.

Gravimetric analysis applied to determination of sulphate and chloride.

Simple organic chemical manipulation involving crystallisation, distillation and extraction, as shown for example in the preparation of ethyl acetate, methyl iodide, acetone semi-carbazone or dinitrophenyl-hydrazone, acetamide, carbamide, caffeine glucosazone, aniline, acetanilide, benzyl alcohol and benzoic acid. Use of the polarimeter and refractometer.

CHEMISTRY (SECOND YEAR) ANCILLARY TO BOTANY

General Chemistry

Thermodynamic concepts. H and U as functions of state. First Law. Thermochemistry. Hess's Law.

Second Law. Reversibility, irreversibility and equilibrium. Carnot's cycle. S, A and G defined: dS, dA and dG in reversible and irreversible changes. Criteria of equilibrium.

Phase equilibria in one component system.

Ideal solutions. Raoult's law phenomena. Molecular weights from vapour pressure depression, freezing point depression and boiling point elevation. Osmotic pressure phenomena (not the mechanism of osmosis): molecular weights of large molecules by osmotic pressure.

Systems of many components. Chemical potential. Equilibrium and chemical potential. Homogeneous gas equilibria. Homogeneous equilibria, including ionic equilibria, in solution. Heterogeneous equilibria.

Kinetic order of a homogeneous chemical reaction ; distinction from molecularity. The rate constant : its dependence on temperature. The idea of activation. Homogeneous catalysis and illustrations of the modes of action of catalysts. Heterogeneous catalysis (descriptive). Elementary photochemistry. Absorption spectra.

Organic Chemistry

Classification, structure, optical isomerism, reactions, methods of detection and estimation of more important carbo-hydrates.

Determination of configuration of pentoses and hexoses.

A more extended treatment of unsaturation including diolefins such as butadiene and isoprene and consideration of the conjugated systems. $-C=C-C=C-$ and $-C=C-C=O$.

Polymerisation and polycondensation. Properties of macro-molecules linear and cross linked.

Benzene and its monosubstitution products containing the groups $-CH_3$, $-Cl$, $-NO_2$, $-NH_2$, $-N_2Cl$, $-NH{\cdot}NH_2$, $-OH$, $-OMe$, $-CN$, $-CH_2Cl$, $-CH_2OH$, $-CHO$, $-COOH$, $-COCH_3$, $-CH{:}CH{\cdot}CO_2H$, their preparation properties and general reactions.

Laws of substitution (experimental facts only). Disubstitution compounds, *m*-dinitrobenzene, nitranilines, diamines, dihydric phenols, quinones hydroxy acids. Pyridine, methyl, hydroxy, and amino pyridines, nicotinic acid, piperidine. Pyrrole Purine and its relation to uric acid, xanthine, guenine and adenine.

Practical Work

Identification of elements and groups in organic compounds. Identification of simple alcohols, aldehydes, ketones, acids, primary amines, phenols, carbamide, glucose, sucrose, maltose, lactose and starch.

Simple experiments in physical chemistry such as the determination of molecular weights, determination of pH, titration curves, determination of simple reaction velocities.

Measurement of surface pressure with the Adam trough. Determination of iso-electric point.

Geology (One Year) Ancillary to Botany

1. Physical Geology

The earth as a planet and member of the Solar System.

Its chief surface features—oceans, seas, continents, mountains, plains, deserts.

The earth's crust and interior. Evidence of the earth's internal nature and structure. Seismic, igneous and diastrophic phenomena. The work of geological agencies, *e.g.*, atmospheric, fluvial, marine, æolian, and glacial, on the crust.

The processes of denudation, transport, deposition, and deformation of rock-material.

II. Mineralogy

The common rock-forming and vein-forming minerals ; their physical characters, chemical composition, and modes of origin and occurrence. The elements of crystallography ; crystallographic notation and representation.

The simple optical characters of the more common rock-forming minerals and the principles upon which such characters are determined.

III. Petrology

The chief characters, modes of origin, and occurrence of typical igneous, sedimentary, and metamorphic rocks.

IV. Palæontology

Fossils, their preservation, and distribution in rocks of different ages.

The elements of palæontology as shown by the more commonly-occurring fossils.

V. Historical Geology

The disposition of rocks and its representation on maps.

Criteria of the relative ages of rocks.

The geological systems ; their broad characters and distribution in Great Britain.

Practical Work

Interpretation of simple geological maps in terms of rock-structure and its relation to topography ; expression of this interpretation by means of sections ; graphic methods of finding thickness, dip and strike of beds, of completing outcrops, and of tracing the underground extension of strata.

Identification and description of common minerals and rocks with and without the microscope.

Identification, description, and representation of crystal forms of common minerals, as shown by models and actual crystals.

Identification and description of common fossils.

Reference of fossils to their chief biological groups and their geological periods.

GEOLOGY (TWO YEAR) ANCILLARY TO BOTANY

As for B.Sc. (Gen.) *see* p. 1026

PHYSICS (ONE YEAR) ANCILLARY TO BOTANY

General Physics and Heat

Atomic and molecular structure of matter : the states of matter, the colloidal state. Fundamental notions of mass and force, energy and work. Simple harmonic motion : wave motion. Elements of hydrostatics. Elementary gas-kinetic theory. The gas laws. Viscosity. Surface tension and surface energy. Diffusion in liquids and gases : osmosis, laws of osmotic pressure and its measurement, dissociation. Saturated and unsaturated vapour, the measurement of vapour pressure. Thermometry. The calorie and the mechanical equivalent of heat. Specific heat and its measurement. Changes of state, melting and boiling points. Latent heats and their measurement. Heat transfer, radiation, Kirchhoff's and Stefan's laws, methods of detecting and measuring radiation. First law of thermodynamics.

Light

Elements of the wave theory ; simple treatment of interference and diffraction ; the scattering of light, the ultra-microscope. Elementary treatment of reflection, refraction and dispersion. Magnifying power of lens systems. Resolving power. The complete spectrum of white light, the spectroscope. Absorption and absorption coefficients ; selective absorption and omission. Polarisation, double refraction ; rotatory polarisation, the polarimeter. Fluorescence. Photometry. Colorimetry.

Electricity and Magnetism

Elements of electrostatics. Electrostatic instruments. Magnetic fields and their measurement. Magnetism as a general property of matter. The electric current, its magnetic, thermal and chemical effects ; detecting and measuring instruments. Ohm's law, the potentiometer, measurement of resistance. Conductivity in electrolytes, Faraday's laws of electrolysis, ionic mobilities. Electromagnetic induction and its practical applications. Alternating current ; transformers ; instruments for the measurement and control of alternating current. An outline of the history of the discovery of X-rays and of the negative and positive electron, the proton and the neutron ; natural and artificial radio-activity, the transformation of the elements.

Physics (Two Year) Ancillary to Botany

The subject-matter of the one year ancillary course treated more fully and precisely with some discussion of the following topics :—

General Physics and Heat : Elasticity and plasticity. Colloid physics. Surface phenomena. Van der Waals' and other equations of state. The second law of thermodynamics ; entropy. Irreversible processes. Free and total energy.

Electricity and Atomic Physics : Thermoelectricity. Dipole theory. Thermionic valves. Photoelectricity. Elementary quantum physics. X-ray spectra. The use of X-rays in the analysis of structure. Radio-activity. Isotopes. Simple examples of nuclear reactions.

In both courses, emphasis should be laid on such physical topics, methods and apparatus as bear most closely on biological problems and their investigation.

Physiology (First Year) Ancillary to Botany

(The headings of Section I of this Syllabus are intended to be covered in a quite elementary way in order to provide a general physiological background. This part of the course is to be supplemented by the presentation in a more advanced fashion of some specialised aspects of physiology, as outlined in Section II, in order to furnish samples of the scientific method applied in the physiological field. It is intended that only two of the subjects listed in this section should be treated in any one course, the subjects being selected by the Teacher in charge of the course at his discretion, after consultation with his colleagues in the Principal Subject.)

Section I

The characteristics of life. The form and structure of the living cell. The inorganic and organic constituents of living cells and tissues. The properties of living membranes and their physiological consequences.

Motor activities of cells and tissues and their electrical properties.

Nerve impulse. An outline of the structure and reflex activities of the central nervous system. The eye. The autonomic nervous system.

An outline of the structure and function of the cardio-vascular system, and of the respiratory system. Blood, its composition and respiratory function. General metabolism and temperature regulation.

Foodstuffs, including proteins, fats, carbohydrates, inorganic substances, and vitamins—their sources and some of their chemical properties of nutritional importance. Excretion. Water balance. The gross structure of the alimentary system and movements of the digestive tract. The secretion of digestive juices and the properties of their constituents. Absorption in the digestive tract.

Hormones and the principles of chemical co-ordination.

Reproduction.

Section II

1. An example of a physiological application of physical chemistry, *e.g.*, to the study of buffer systems in blood and tissue, properties of membranes, or enzyme action.

2. An example of a physiological application of organic chemistry, *e.g.*, to the study of metabolism or digestion.

3. An example of a physiological application of physics, *e.g.*, to the study of the excitability of nerve, the mechanical efficiency of muscular exercise, or the thermal equilibrium of body.

4. An example of the analysis of physiological function in terms of physical and chemical mechanism, *e.g.*, aerobic and anaerobic contraction of striated muscle.

5. An example of the relation between chemical constitution and physiological action, *e.g.*, the actions of sympathetico-mimetic amines.

6. The principles of biological assay as illustrated by, *e.g.*, the assay of insulin.

PHYSIOLOGY (SECOND YEAR) ANCILLARY TO BOTANY

Section I.—A more advanced course of lectures and practicals covering substantially the same fields as Section I of the first year's syllabus, with emphasis laid on the following :—

Biological control systems, *e.g.*, the regulation of blood pressure, of temperature or of ventilation rate.
Energy exchanges in biological reactions.
Kinetics of enzyme action.
Relation of living cells to their environment.
Cellular oxidation—anaerobiosis.

Section II.—The study of two further options from Section II of the first year's syllabus.

STATISTICS (FIRST YEAR) ANCILLARY TO BOTANY

1. Elementary mathematical theory of the binomial, Poisson, normal, and x^2 distribution.

2. The theory of sampling. Standard errors of estimates. Tests of significance.

3. The biometrical description of populations.

4. Regression and correlation.

5. The statistics of population showing Mendelian inheritance, with special reference to selection and inbreeding.

6. Mathematical treatment of growth. Allometry.

7. The simpler methods of the analysis of variance, applied to the planning and analysis of experiments.

The student will be expected to perform actual measurements and stress will be laid on speed and accuracy of computation.

STATISTICS (SECOND YEAR) ANCILLARY TO BOTANY

[To be published later]

ZOOLOGY (ONE YEAR) ANCILLARY TO BOTANY

1. An account of the organization of a mammal, with reference throughout to the structure and functions of the several organs and systems.

2. The structure and mode of life of a series of selected animals, with some review of their variety and the gradual evolution of the complex from the simple.

Protozoa. Amœbæ. Ciliates (excluding details of conjugation). The protozoan way of life and the effects of small size.

Cœlenterata. A sea-anemone. Sessile and aquatic life. Radial symmetry. Diploblastic architecture.

Platyhelminthes. Leptoplana or any other suitable turbellarian. Mesoderm, bilateral symmetry, a " head," and the possibilities these features offer.

Annelida. Nereis and *Lumbricus.* The cœlom. Metamerism and appendages. Errant and burrowing ways of life, with associated features in life-history as well as structure.

Arthropoda. Astacus (or *Nephrops*), *Lithobius*, a bee and a butterfly. The jointed limb : exoskeleton : evolution to land life, and the solution of respiratory and other problems associated therewith.

Chordata. A fish, a frog (or preferably a newt), a lizard, a bird. Vertebrate architecture and its possibilities (especially skeletae and nervous) for conquest of the land and of the air by large animals.

A very brief account of the other phyla will be included.

3. More general topics, *e.g.* :—

(*a*) The reproduction of animals and the nutrition of developmental stages. Cleavage, gastrulation, and metamorphosis in the frog.
(*b*) Parasitism.
(*c*) Animal behaviour.
(*d*) The principles of taxonomy.
(*e*) Ecology. Some region accessible for field-work should be studied.
(*f*) Cytology and Genetics.
(*g*) Evolutionary Theory.

ZOOLOGY (TWO YEAR) ANCILLARY TO BOTANY

As for B.Sc. (Gen.), pp. 1034-35 above.

Chemistry

The following revised Regulations for the B.Sc. (Special) Degree in Chemistry for Internal Students are in force as an alternative to the present Regulations :—

1. (*a*) Before admission to the course a student must

either (i) have obtained a General Certificate of Education with passes at advanced level in Chemistry, Physics and either Pure Mathematics or the combined subject Mathematics (Pure and Applied) ;

or (ii) have obtained a Higher School Certificate with passes at main standard in Chemistry, Physics and either Pure Mathematics or the combined subject Pure and Applied Mathematics

or (iii) have passed the Preliminary Examination or an approved equivalent examination in any of these subjects in which he has not so qualified.

(*b*) In exceptional circumstances, however, a student may be admitted to the course if he has

either (i) obtained a General Certificate of Education with passes at advanced level in (*a*) Chemistry, (*b*) Physics or Pure Mathematics or the combined subject Mathematics (Pure and Applied) and (*c*) Biology or Botany or Geology or Zoology;

or (ii) obtained a Higher School Certificate with passes at main standard in (*a*) Chemistry, (*b*) Physics or Pure Mathematics or the combined subject Pure and Applied Mathematics, and (*c*) Biology or Botany or Geology or Zoology.

or (iii) passed in this combination of subjects at an approved equivalent examination.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. In addition to Chemistry the Course will include ancillary courses extending over not less than two years in Physics, and extending over not less than one year in Mathematics and either Biology or Geology or Physiology. In not more than one of the subjects Mathematics, Biology, Geology and Physiology a student may, with the concurrence of his teachers, take a more advanced course extending over a further year.

A student admitted to the course under the provisions of paragraph 1 (*b*) above will normally be required to pursue a propædeutic course in whichever of the subjects Physics or Pure Mathematics or the combined subject Mathematics (Pure and Applied) he has not already obtained the appropriate qualification.

Nevertheless, a student who is already a graduate of the University who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all and may be excused in whole or in part from the courses in ancillary subjects and the corresponding examinations.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at the following Examinations:—

(i) A written test on translation into English of scientific texts in German. The test may be taken at any time at which an examination is held. The use of dictionaries will be allowed.

(ii) The examination in ancillary Physics, to be taken not less than two years after entering on the ancillary course in that subject.

The examination in ancillary Mathematics, and the examination in ancillary Biology or Geology or Physiology to be taken not less than one year after entering on the ancillary course in that subject.

There will be one or two papers in each subject and a practical examination in each subject except Mathematics in which there will be two papers.

(iii) Part I of the Final Special Examination in Chemistry, to be taken not less than two years after admission to the course. There will be three papers, one each in Inorganic Chemistry, Physical Chemistry and Organic Chemistry. There will be no Practical Examination, but account will be taken of the laboratory records of candidates.

(iv) Part II of the Final Special Examination in Chemistry, to be taken not less than one year after the student has satisfied the Examiners in Part I.

There will be three papers, one each on General Chemistry, Physical Chemistry and Organic Chemistry, and a practical examination. Account will also be taken of the laboratory records of candidates.

4. A student who fails at an examination in ancillary Mathematics may re-enter at any subsequent examination in this subject held not later than the term in which he takes Part I of the examination. A student who fails at an examination in ancillary Physics may re-enter at any subsequent examination in this subject held not later than the term in which he takes Part II of the Examination. Nevertheless a student entering under regulation 1 (b) who fails on the first occasion on which he enters for the examination in ancillary Physics in which he had not passed at the Higher School Certificate Examination or at an approved Preliminary Examination may be referred and permitted to re-enter on one subsequent occasion not later than one year after passing Part II. A student who fails at an examination in ancillary Biology or Geology or Physiology may be referred and permitted to re-enter at a subsequent examination in these subjects not later than one year after passing Part II.

5. The list of successful candidates at Part II of the Final Special Examination will be divided into (1) First Class Honours (2) Second Class Honours, and (3) Pass. The class will be determined on the basis of the candidate's performance in both parts of the Final Examination, having regard also to the candidate's performance in the ancillary subjects. No class or honours will be awarded on Part I of the Final Examination only. The name of a candidate shall not be included in the list until he has passed, or been exempted from, all the examinations specified in paragraph 3.

6. The syllabuses in Ancillary Subjects are as follows :—

BIOLOGY (ONE YEAR) ANCILLARY TO CHEMISTRY

1. Introduction. The characteristics of life. The general physiological background of living organisms. Nutrition, respiration, growth, irritability, movement and reproduction, broadly treated.

2. General properties of aqueous solutions of crystalloids and colloids in relation to biological phenomena. Biological membranes. Secretion and excretion.

3. The organisation of the cell. Cytological detailed study of the nucleus in the process of mitosis and meiosis. Genetics.

4. The comparative morphology and anatomy of selected unicellular and multicellular animals and plants, treated to illustrate increasing elaboration and complexity in relation to fundamental biological and physiological processes. Evolutionary implications. In

selecting types the importance of moulds and bacteria in modern chemical processes should be borne in mind.

5. A more detailed study of fundamental physiological phenomena :—

(*a*) The characteristics and broad classification of the more conspicuous enzymes associated with metabolic processes.

(*b*) Modes of feeding by animals and plants. Digestion. Absorption of nutrients. Synthesis of complex carbon and nitrogen compounds. Distribution, storage and fate of carbohydrates, fats and proteins. Protoplasm.

(*c*) Respiration : aerobic and anaerobic modes of life. Alcoholic fermentation. Gaseous exchange and transport mechanisms. Respiratory pigments.

(*d*) Food chains. The carbon and nitrogen cycles.

(*e*) Stimulus and response. Fundamental aspects of movement in animals and plants. Receptors, adjustment mechanisms and effectors in animals.

(*f*) The essentials of growth, development, and reproduction.

BIOLOGY (TWO YEAR) ANCILLARY TO CHEMISTRY

As for One Year, treated in greater detail

GEOLOGY (ONE YEAR) ANCILLARY TO CHEMISTRY

As on pp. 1057-58 above

GEOLOGY (TWO YEAR) ANCILLARY TO CHEMISTRY

As for B.Sc. (Gen.), p. 1026

MATHEMATICS (FIRST YEAR) ANCILLARY TO CHEMISTRY

The following syllabus is to be read as delineating a working knowledge of those mathematical concepts, principles and methods which are needed in the formation of chemical theory. Thus rigorous general proofs of all the mathematical theorems are not expected : descriptive accounts of proofs together with some specific illustrations will usually suffice. The ability to use standard tables of integrals and tables of the properties of the principal mathematical functions is expected. The examination will assume study by these methods and will be considerably influenced by the circumstances that their character will enable many topics in the syllabus to be treated much more briefly than they could be if Mathematics were a principal subject for the Degree.

The first year examination should consist of two papers, on the following syllabus :—

Algebra.—Determinants. Vectors.

Calculus.—Simple functions of one variable. Maxima and minima. Tangents, normals and curvature of plane curves.

Series.—Taylor's series. Use of binomial, exponential, logarithmic, sine, and cosine series. Elementary Fourier series. Power series. Concept of Convergence.

Plane Geometry.—Elementary properties of circle, parabola, ellipse, hyperbola. Methods of curve plotting, with applications to simple well-known curves.

Solid Geometry.—Elementary properties of sphere and quadrics.

Differential Calculus.—Simple functions of two variables. Perfect differentials. Maxima and minima. Tangent planes and normals of surfaces. Indicatrix.

Integral Calculus.—Reduction to standard forms. Use of standard tables of integrals. Lengths of arcs of plane curves. Plane areas. Areas and volumes of surfaces of revolution. Centroids. Moments and product of inertia. Probability integrals. Simple multiple integrals, including change of variables. First variation of an integral.

Complex Variable.—Argand diagram. Exponential values of the sine and cosine. Demoivre's theorem. Hyperbolic functions.

Differential Equations.—Linear equations of first order with variable coefficients. Linear equations with constant coefficients. Partial differential equation of a vibrating string.

Numerical Methods.—Newton's method of approximating to roots of an equation. Simpson's rule for quadrature.

Dynamics.—Motion of a particle, including damped harmonic motion. Orbits under central forces, conservation of energy and angular momentum. Principles of Rigid Dynamics. Introduction to normal modes of vibration.

Mathematics (Second Year) Ancillary to Chemistry

The second year course should consist of subjects selected from the following list :—

Ordinary differential equations of first order.

Partial differential equations of heat conduction.

Operational and numerical methods of solution of differential equations.

A descriptive account of the principal functions used in theoretical physics (including Legendre, Bessel and Whittaker functions).

Curvature of surfaces. Wave surface.

General theory of vibrations, including forced vibrations, coupled pendulums, weak coupling as perturbation. Normal co-ordinates for small vibrations in a conservative system. Plane, cylindrical and spherical waves.

Physics (Two Year) Ancillary to Chemistry

The following syllabus is to be read as delineating a knowledge of those physical phenomena which enter essentially into the study of Chemistry, and of those practical methods and tools of Physics which are employed in the treatment of chemical problems.

It is recognised that, whilst there can be no sharp boundary between Physics and Chemistry, the courses in Physics ancillary to Chemistry and in Chemistry will be arranged to be essentially complementary.

Properties of Matter

Elementary theory of Elasticity. Meaning and measurement of the different moduli of elasticity and the relations between them. Simple treatment of bending of beams. Elastic limit and elastic after-effect

Elementary theory of flow. Steam-line motion. Vortex motion. Turbulent motion. Newtonian viscosity. Measurement of viscosity. Reynolds' number : dimensions of physical units. Non-Newtonian viscosity.

Surface Tension. Methods of measuring surface tension and angle of contact. Variation of surface tension with temperature. Surface tension and surface energy. Surface films : monomolecular layer.

Kinetic Theory. Pressure : deduction of velocity of mean square. Maxwell-Boltzmann distribution of energy and velocity. Specific heats of gases. Equipartition of energy. Brownian motion. Viscosity and thermal conductivity. Elementary quantum theory and its relation to specific heats of gases. Properties of gases at very low pressures. Production of very low pressures ; rotary pumps, diffusion pumps, cooled charcoal, getters. Measurement of very low pressure : McLeod, Pirani, Knudsen, and other types of gauge.

The production and measurement of high pressure.

Simple Theory of Vibrations and Waves.

Simple harmonic vibration : relation between period and restoring force, potential and kinetic energy.

Damped harmonic vibrations : effect of damping on period and amplitude. Critical damping.

Forced harmonic vibration : effect of damping on response and phase relationship. Resonance.

Simple consideration of coupled vibrations.

General Wave Theory. The simple plane wave mathematically treated : velocity determined by density and restoring force. Reflexion, refraction, interference, diffraction, illustrated by ripples. Dispersion. Wave velocity and group velocity.

Sound Waves. The properties of waves as illustrated by sound. Measurement of velocity in air and other gases : in liquids : in solids. Fourier analysis and synthesis as exemplified by sound waves, simply treated. Vibrations of strings, rods, plates. Source of sound. Doppler effect. Analysis of sound. Supersonic waves.

Electromagnetic Waves. General review of wave properties of light and wireless waves as preparation for more detailed treatment later. Heat.

Mechanical equivalent of heat measured in different ways. Principles of thermometry : mercury thermometer.

The properties of real fluids. Van der Waals' equation and equations of state. The theory of corresponding states. The Joule-Thomson effect. The liquefaction of gases and the production of very low temperatures. Low temperature phenomena.

Specific Heats. Measurement of specific heats and latent heats at all temperatures. Variation of specific heat with temperature : the quantum theory of specific heat in outline.

Measurement of thermal conductivity. Wiedemann-Franz law.

Thermal radiation. Black body radiation : Kirchhoff's law. Stefan's law. Radiation pyrometry. The distribution of black body radiation. Wein's law. Planck's law. Optical pyrometers.

Light

Geometrical optics. The properties of thick lenses. The simple optical instruments : telescope, microscope, refractometer, photometer, Prism spectrometer.

Wave properties of light. Conditions for interference : interference phenomena : biprism, Newton's rings. Common types of interferometers.

Diffraction : slit and circular aperture. Resolving power. Diffraction grating : diffraction spectroscope.

Polarisation. Polarisation by reflexion. Simple treatment of crystaloptics. Nicol prism. Polaroid. Behaviour of uniaxial crystal in parallel light. Circularly polarised light. Artificial double refraction : photoelasticity. Rotatory polarisation.

Infra-red and ultra-violet, their generation, detection, and measurement. Absorption.

Generation of different types of spectra. Spectrometry in ultra-violet, visible, and infra-red.

Electricity and Magnetism

Static electricity. Electric intensity, potential, and induction : Gauss' theorem. Energy of field. Dielectric polarisation. The condenser. The dielectric constant and its measurement. Electrometers.

Magnetism. The static magnetic field and its measurement. Magnetic intensity, potential, and induction. Magnetic induction. Permeability and susceptibility. Ferro-, para-, and dia-magnetism. Electromagnets.

The steady current. Kirchhoff's laws. Electric resistance, and its measurement. Platinum resistance thermometer. The potentiometer. Galvanometers of all types including ammeters. Electrolysis and Faraday's laws. Units. Determination of absolute units.

Electromagnetics. The magnetic force due to a current : Ampère's circuital relation. Force on a current in a magnetic field. Electromagnetic induction : Faraday's circuital relation. Ballistic galvanometer. D.C. motors.

Thermo-electricity. Seebeck, Peltier, and Thomson effects. Measurement of thermo-electric power. Peltier and Thomson coefficients. Thermo-electric diagram. Thermocouples : their construction and use.

Alternating electric current. Elementary theory of the circuit with resistance, capacity, and induction : impedance and reactance. Power factor. Simple A.C. bridges, with applications to measurement of resistance of electrolytes. A.C. meters and motors. Dynamos. Transformers. Rectifying devices.

The tuned circuit. Simple valve oscillators and amplifiers. Simple circuit measurements.

Electromagnetic Waves. Displacement current. Reconsideration of Faraday and Ampère circuital relation. Deduction of Maxwell's equations.

The plane electromagnetic wave. Deduction of velocity in empty space from Maxwell's equations. The interaction of electromagnetic waves with a material non-conducting medium. The simple theory of dispersion : relation between frequency and velocity. The relation between refractive index and dielectric constant.

The electromagnetic spectrum. The reasons for the different behaviour shown by X-rays, ultra-violet, visible light, infra-red, and electromagnetic waves of greater frequency.

Atomic Structure

**The elementary nuclear theory.* The general structure of the atom. Size of the nucleus. Atomic weight and atomic number : isotopes. The disruption of the nucleus by alpha particles and by artificial high-speed particles. Radioactivity, natural and artificial.

**The Extra-nuclear structure.* The simple theory of line spectra. General elementary sketch of the wave-mechanical theory.

**The instruments of atomic investigation :* Wilson cloud chamber ; counters : high voltage installations : cyclotron.

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* These topics will also be treated in the Chemistry courses.

Electronic Physics

The general properties of the electron. Conduction in gases: cathode rays. Determination of e/m and of e. Reference to variation of mass with velocity.

Photo-electric effect. Establishment of the effect. Variation with wave length of light. Work function. Photo-electric cells.

Thermionic effect. Establishment of effect. Work function. Application of effect in hot cathode rectifiers and valves.

Mass rays. Canal rays. Anode rays. Determination of e/m by parabola method. Aston's mass spectrograph. Mass number. Packing effect.

Electronic instruments. Cathode ray oscillograph: mercury rectifier: thyratron: elementary properties of valves and valve circuits.

X-rays. Generation of X-rays. General properties of X-rays. X-ray series, in comparison with optical spectra. Diffraction of X-rays by crystals. Bragg's law. Spectroscopy of X-rays. Elements of crystal structure analysis.

Wave properties of electron. Establishment of wave properties. Electron diffraction apparatus. Electron microscope.

PHYSIOLOGY (FIRST AND SECOND YEAR) ANCILLARY TO CHEMISTRY

As on pp. 1059-60

Geography

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level or a Higher School Certificate with passes at main standard in three science subjects of which Geography need not be one;

or (2) have passed the Preliminary Examination or an approved equivalent examination in any of these subjects in which he has not so qualified.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. In addition to Geography the course will include ancillary courses in Geology and in one other ancillary subject chosen from Anthropology, Biology, Botany, Economics, History, Mathematics, Physics, Statistics. One ancillary course will extend to one year and one to two years.

Nevertheless, a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all and may be excused in whole or in part from the courses in ancillary subjects and the corresponding examinations.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at the following examinations :—

(i) The First Year Examination in the Ancillary Subject studied for one year.

There will be one or two papers in each subject and a one day's practical examination in the subjects Geology, Botany and Physics.

(ii) The Second Year Examination in the Ancillary Subject studied for two years.

There will be two papers in each subject and a one day's practical examination in the subjects Geology, Botany and Physics.

(iii) Final Special Examination in Geography to be taken not earlier than the end of the third year. There will be nine papers :—

1. Physical Basis of Geography.
2. Elements of Cartography and Map Interpretation.
3. Elements of Comparative Regional Geography.
4. The British Isles.
5. Advanced Regional Geography (two papers).
6. Problems of Modern Geography, and
7. *One* optional subject (two papers), chosen from the following :—

(i) Mathematical Geography and Surveying ;
(ii) Geomorphology ;
(iii) Meteorology and Climatology ;
(iv) Plant Geography ;
(v) Economic Geography ;
(vi) Historical Geography ;
(vii) History of Geographical Ideas and Discovery ;
(viii) Political Geography.

Satisfactory evidence must be given of adequate instruction having been received in the field.

4. A student who fails at the First Year Examination in the ancillary subject will be permitted to re-enter for that subject at a First Year Examination in Ancillary Subjects not later than one year before taking the Final Examination. A student who fails in the 2nd year examination in the Ancillary Subject may be referred in that subject and permitted to re-enter for it on any subsequent occasion.

5. The list of successful candidates at the Final Special Examination will be divided into :—

(i) First Class Honours ;
(ii) Second Class Honours ; and
(iii) Pass.

The class will be determined with regard to the candidate's performance in the Final Examination. The name of the candidate shall not be included in the list until he has passed or been exempted from all the examinations specified in paragraph 3.

6. The syllabus for the Final Examination is as follows :—

1. Physical Basis of Geography

Outline survey of the physical geography of Land, Air and Ocean and of major biological distributions as constituents of the human environment.

(i) *The Land.* Nature and effects of tectonic and erosional processes in the evolution of landscape. Water supply, soils and metallogenesis (nature and emplacement of ore bodies).

(ii) *The Air.* Elementary descriptive and synoptic meteorology. Data and methods of climatology, and the elements of micro-climatology.

(iii) *The Ocean.* The history of oceanographic discovery. Salinity, temperature, density and structure of water masses. The circulation of the oceans. The oceanography of enclosed seas. The tides.

(iv) *Biogeography.* Vegetation. Principles of transpiration, respiration, growth and reproduction. Food requirements. Photosynthesis and the nitrogen cycle. Fertility under conditions of cropping and grazing. Principles of plant succession and classification of plant communities. Certain aspects of animal ecology ; marine life and fisheries. Insects and insect-borne diseases.

Knowledge of (*a*) such general Geology as is relevant to the study of Geography, and (*b*) maps appropriate to this syllabus, will be regarded as an integral part of the work in this subject. The examination may include questions involving map interpretation.

2. Elements of Cartography and Map Interpretation

A. (i) The cartographic characteristics of the major topographical and other survey maps of Europe and North America.

(ii) The broad outlines of the history of map-making, with special reference to the development of Ordnance Survey maps.

(iii) Cartographic and diagrammatic methods of expressing data relating to weather, climate, economic and population conditions. Candidates will be expected to be familiar with : (*a*) The more important sources of statistical information ; (*b*) The use and general significance of simple statistical methods ; (*c*) The technique of drawing maps and diagrams ; (*d*) The interpretation of (including measurements from) such maps and diagrams.

B. (i) General principles of topographic survey, including the use of instruments in the field.

(ii) The principles and properties of the following map projections : Zenithal (gnomonic, stereographic, orthographic, equal area, equidistant). Simple conical with one and two standard parallels. Bonne, Polyconic, International ; Sinusoidal, Mollweide, Cassini and Mercator. Candidates will be expected to construct these projections by simple graphical methods where possible, or from simple tables.

N.B.—The necessary knowledge of very elementary plane trigonometry is assumed.

C. Map Interpretation.

3. Elements of Comparative Regional Geography

(i) Elements of human geography. Consideration of the facts and concepts of the geography of society ; types of settlements population densities, economy and political organisation.

(ii) The forms and inter-relations between the main land and water masses of the Earth in their bearing upon world relations in human geography and the geographical orientation of regions.

(iii) A reasoned and critical comparative study of the nature and diversity of human settlement and economy in regions generally homologous in climate and physiography.

The ground covered in this syllabus is intended to constitute a general survey of the principles of human geography, pursued throughout by reference to specific regional examples.

4. The British Isles

(i) The present conditions, the inter-relations and the evolution of the various physical, biological and human elements in the geography of the British Isles. A study of regions, including an evaluation of the relative importance of their component elements.

(ii) Historical geography ; the study of the past as an aid to the interpretation of the present with special reference to distributions of human significance.

(iii) Candidates will be expected to use and interpret the published maps of the Ordnance Survey, Geological Survey and Land Utilisation Survey, and to show a more detailed knowledge of areas which they have studied in the field.

5. Advanced Regional Geography

The two papers under this heading will include special reference to the British Isles and Western and Central Europe and another approved Region (*e.g.*, North America *or* Monsoon Asia).

6. Problems of Modern Geography

The scope and method of modern Geography.

The critical appreciation of the place of the chief types of region, physical and cultural, in human geography.

Topics concerned with the subject matter of the syllabus as a whole, excluding only the specialist aspects of the Optional Subjects.

7. Optional Subjects

(i) *Mathematical Geography and Surveying*

The principal methods of Topographical Surveying : Air Survey ; Elements of Field Astronomy. The principles of Geodesy. An advanced study of Map Projections including those studied in Section 2 of the syllabus, above.

An elementary knowledge of plane and spherical trigonometry will be assumed.

(ii) *Geomorphology*

i. The Earth, its nature, constitution and physical condition. Continents and ocean basins, their nature, significance and the theories of their origin. Mountain-building : Theories of orogenesis and of the related fields of tectonic geology and geo-physics. Vulcanicity.

ii. A critical study of the processes and results of land sculpture and the contributions of rock character thereto, under different climatic conditions. The concept of the cycle of erosion in its various applications. Drainage development and the principles employed in reconstructing the physical history or denudation chronology of a landscape.

(iii) *Meteorology and Climatology*

The more advanced study of the subject matter of the relevant sections of the syllabus in "Physical Basis of Geography" with particular reference to the following:—

i. The construction and use of the chief meteorological instruments. The physical processes of the atmosphere. Radiation and heat-balance. Condensation and Precipitation. Stability and Instability.

ii. The origin, characteristics and transformations of air masses, considered in relation to the general circulation of the atmosphere and to weather forecasting.

iii. The application of the general principles of elementary physical, dynamical and synoptic meteorology to the study and classification of climates.

iv. The evidence for climatic changes during geological and historical times and the theories of causation of such changes.

(iv) *Plant Geography*

i. A systematic study of characteristic economic plants (in the widest sense) and of their biological attributes, including factors in distribution.

ii. Plant ecology with special reference to the operation of habitat factors.

iii. Distribution of vegetation in Britain and the factors controlling it.

iv. General regional plant geography.

A knowledge of Botany to Intermediate or Higher School standard is assumed. Section ii will involve work in the field.

(v) *Economic Geography*

The geography of production in a modern economy, with particular reference to the selection and utilisation in production of the physical conditions in the light of the economic conditions. Geographical application of distinctive economic principles such as equi-marginal utility and comparative cost; evaluation of geographical margins of production.

i. Geography of primary production—Agriculture, Forestry, Mining, Fisheries.

ii. Geography of Manufacturing Industry.

iii. Geography of Trade and Transport.

A knowledge of Economics to Intermediate or Higher School standard will be assumed.

(vi) *Historical Geography*

i. A general study of the inter-relation between man and his physical environment in historical time, to be illustrated by specific instances.

ii. A more detailed study of the historical geography as thus defined of the first and one other of the following regions :—

The British Isles.
The Mediterranean Region.
Western and Central Europe.
North America.
Latin America.

(vii) *History of Geographical Ideas and Discovery*

Candidates will be required to show an outline knowledge of the subject and will be examined also in a special study of the geographical ideas and the discoveries of *one* of the following periods :—

i. Ancient time to A.D. 500.
ii. Medieval times up to the early 15th century.
iii. The 15th and 16th centuries.
iv. The 17th and 18th centuries.
v. The 19th century.

Candidates will be expected to show some first-hand acquaintance with original sources of their chosen period.

(viii) *Political Geography*

I. A general study of the inter-relations of the geography (physical and human) and the State since the early nineteenth century.
II. Specialised study from the politico-geographical standpoint of *two* of the following subjects, one chosen from Section A, the other from Section B.

A. Specific aspects :—
(i) Imperial expansion—in relation to particular examples.
(ii) Frontiers and boundaries.
(iii) Internal administrative divisions.
(iv) Strategic geography.
(v) Demographic geography (including migration and population trends).
(vi) The changing political map of Europe since 1815.

B. Specific areas :—
(i) The Far East.
(ii) The U.S.S.R.
(iii) The Muhammadan World.
(iv) The Americas.
(v) Western Europe.
(vi) Central Europe.
(vii) Eastern Europe.
(viii) The Mediterranean Lands.
(ix) The Pacific Basin.

In respect of the chosen sections of A and B above, candidates will be expected to show an adequate knowledge of the relevant political and economic history.

7. The syllabuses in the Ancillary Subjects are as follows :—

ANTHROPOLOGY (ONE YEAR) ANCILLARY TO GEOGRAPHY

One paper to be selected from the following :—Social Anthropology, Racial Evolution, Cultural Evolution in Prehistoric Europe and the Near East.

ANTHROPOLOGY (TWO YEAR) ANCILLARY TO GEOGRAPHY

Two papers to be selected from the following :—Social Anthropology, Racial Evolution, Cultural Evolution in Prehistoric Europe and the Near East, Primitive Technology, Ethnography of a Special Area.

Botany (One Year) Ancillary to Geography

As on pp. 1078-79

Botany (Two Year) Ancillary to Geography

As for B.Sc. (Gen.), p. 1024

Economics (One Year) Ancillary to Geography

Economics, analytical and descriptive, with special reference to the United Kingdom.

To include :—Meaning of the principal economic terms ; causes of differences in productive power ; forms of social institutions and economic activity ; *e.g.*, economic aspects of the family, property, and contract ; alternative forms of business ; markets ; demand and supply in relation to price ; production and costs, the problems of the business unit ; competition and monopoly ; the distribution of income between individuals and classes ; causes of variation in wages, profits, interest and rent ; the economic activities of the State ; the nature and function of money and banks ; outline of the structure of the English capital market ; general variations of prices and output ; the foreign exchanges ; elements of international trade. The whole to be studied with reference to present conditions of the United Kingdom.

[It should be noted that knowledge of the history of economic thought is not required ; nor are any but the simplest analytical methods. In general, while elementary diagrammatic treatment is relevant, the syllabus does not involve knowledge of advanced geometrical or algebraic methods. The analysis involved is such that at every stage it can be illustrated by reference to the general knowledge of contemporary economic movements and structure in the United Kingdom.]

Economics (Two Year) Ancillary to Geography

As for Economics (*a*, *b* and *c*) at B.Sc. (Econ.) Examination, p. 1605.

Geology (One Year) Ancillary to Geography

A general course in Geology including the following :—Elementary structural geology ; stratigraphical geology, including the nature, use and significance of fossils ; the nature and formation of the commoner rocks, rock-forming minerals, ores and other minerals of economic importance. Practical work involving the study of rocks, minerals and fossils and the interpretation of geological maps.

Geology (Two Year) Ancillary to Geography

As for B.Sc. (Gen.), p. 1026

History (Two Year) Ancillary to Geography

One of the following :—

English Economic History (two papers).

British Colonial History (two papers).

American History (two papers).

Latin American History (two papers).

Mediæval European History from the middle of the 4th to the end of the 15th century (one paper) ***and*** Modern European History from the beginning of the 16th century (one paper).

History of Greece to 146 B.C. (one paper) ***and*** History of Rome to A.D. 337 (one paper).

MATHEMATICS (ONE YEAR) ANCILLARY TO GEOGRAPHY

Either Sections A, B and C of B.Sc. (Gen.) syllabus in Pure Mathematics, pp. 1026-27, *or* as for Mathematics (first year) ancillary to Chemistry, pp. 1064-65.

MATHEMATICS (TWO YEAR) ANCILLARY TO GEOGRAPHY

As for Pure Mathematics at B.Sc. (Gen.), pp. 1026-27

PHYSICS (ONE YEAR) ANCILLARY TO GEOGRAPHY

As for Intermediate Examination in Science, pp. 1014-15

PHYSICS (TWO YEAR) ANCILLARY TO GEOGRAPHY

As for B.Sc. (Gen.), pp. 1029-30

STATISTICS (ONE YEAR) ANCILLARY TO GEOGRAPHY

1. Collection of data and tabulation. Statistical groups. Arithmetic average, mode, median, geometric mean, mean and quartile deviation. Statistical series in time. Trend and fluctuation. Weighted averages. Index numbers. Simple methods of measuring correlation.

2. Principal sources of statistics in the U.K. relating to population, production, consumption, commerce, prices, wages, income, employment.

3. (*a*) More Advanced Statistical Methods, involving mathematics of the standard required for the paper in Mathematics at the Intermediate Examination in Economics. Elementary mathematical treatment of variation and error (especially in their application to averages), sampling, description of groups and series, and correlation, in relation to economic and social investigations. Methods of interpolation.

(*b*) Further sources of economic, social, administrative, financial, and transport statistics in the U.K. ; *e.g.*, statistics published by central and local government organisations, public corporations, marketing boards, trade associations, trade unions, banks, transport undertakings, commercial and industrial concerns, journals, etc.

[A knowledge will be expected of all three parts, which carry equal value in the Examination, but in part 3 candidates may confine themselves to either (*a*) or (*b*). In 3 (*b*) a choice of questions will be given.]

NOTE.—Logarithm tables will be provided by the University and slide-rules may be brought to the examination in this subject.

STATISTICS (TWO YEAR) ANCILLARY TO GEOGRAPHY

[*To be published later.*]

[*Syllabuses in Biology Ancillary to Geography will be published later.*]

Geology

The following Revised Regulations for the B.Sc. (Special) Degree in Geology for Internal Students are in force as an alternative to the present Regulations :—

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level or a Higher School Certificate with passes at main standard in three science subjects, of which Geology need not be one ;

or (2) have passed the Preliminary Examination or an approved equivalent examination in any of the subjects in which he has not so qualified.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University.

In addition to Geology the course will include ancillary courses extending over not less than one year in two subjects selected from the following:—Physics, Chemistry, Biology, Botany, Zoology, Mathematics, Geography. At least one subject must be selected from the first five of these. Biology may not be taken with Botany nor with Zoology. In addition, the student must pursue a further course extending over not less than one year in one of the ancillary subjects he has taken in the first year. Nevertheless, a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all, and may be excused from the courses in ancilliary subjects and the corresponding examinations in whole or in part.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same year he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at the following examinations:—

(i) The First Year Examination in the ancillary subject studied for one year.

There will be one or two papers in each subject and not more than one day's practical examination in each subject except Mathematics and Geography in which there will be two papers.

(ii) The Second Year Examination in the ancillary subject studied for two years. There will be two papers in each subject and not more than one day's practical examination in each subject except Mathematics. In Geography there will be an inspection by the Examiners of the notebooks and any other evidence of his practical work in the field which the candidate may desire to submit.

(iii) Part I of the Final Special Examination in Geology, to be taken normally at the end of the second year of the course. There will be four papers, one each on Physical Geology, Historical Geology, Mineralogy and Petrology, Palæontology, together with not more than one day's practical examination.

(iv) Part II of the Final Special Examination in Geology to be taken not less than one year after the student has

(*a*) satisfied the Examiners in Part I,

(*b*) passed the first year examination in an ancillary subject and

(*c*) passed or been referred at the second year examination in the ancillary subject.

At the Final Examination in Geology Part II, the candidate must take Section A and either Section B or Section C.

In Section A there will be two papers on Advanced Geology and not more than one day's practical examination.

In Section B there will be two papers on Mineralogy and Petrology and not more than one day's practical examination.

In Section C there will be two papers on Palæontology and not more than one day's practical examination.

4. A student who fails at the First Year Examination in the ancillary subject will be permitted to re-enter for that subject at a First Year Examination in Ancillary Subjects held not later than the term in which he takes the Second Year Examination in an ancillary subject.

5. A student who fails in the ancillary subject at the Second Year Examination in Ancillary Subjects may be referred in that subject and permitted to enter for re-examination at the end of his third year or the following year.

6. The list of successful candidates at Part II of the Final Special Examination will be divided into (1) First Class Honours, (2) Second Class Honours, and (3) Pass. The Second Class will be divided into an Upper and a Lower Division. The Class will be determined by the student's performance in both parts of the Final Examination. No class or honours will be awarded on Part I of the Final Examination only. The name of a candidate shall not be included in the list until he has passed or been exempted from all the examinations specified in paragraph 3.

7. The syllabus for the Final Examination is as follows :—

A candidate taking Geology must satisfy the Examiners (1) in the subject as set out above for the B.Sc. (General) Examination in Geology (*see* p. 1026), (2) in Section *A*, and (3) in either *B* or *C*, as set out below.

Section A.—Physical and Stratigraphical Geology

General physical features of land areas : the relations of these features to geological structure, and their origin.

Forms of seas and ocean basins. Their origin. Nature and distribution of their deposits.

The nature, history and distribution of the stratified rocks and their fossils in the British Isles compared with those in other parts of Europe and in the better known extra-European areas. Relations of igneous and metamorphic rocks to these stratified rocks.

The practical applications of Geology, especially water supply, coal, and rocks used as building stones.

Candidates will be expected to be familiar with the general history of the development of geological science.

Section B.—Mineralogy and Petrology

The optical and other properties of the rock-forming minerals.

Structures found in rocks and their significance. Mineralogical constitution, chemical composition, and other characters of the principal varieties of rocks. Petrogenesis.

Relations of the chief types of rocks to one another.

Petrological methods. The isolation, by various means, of the minerals which form rocks ; and the principles of their determination by micro-chemical and other tests.

The more important minerals of economic value, and their modes of occurrence.

Section C.—Palæontology

General distribution of existing faunas and floras, and their relation to those of former geological periods.

Morphological characters of the more important genera and larger groups of fossils :—(1) plants, (2) invertebrates, (3) vertebrates. The conditions which determine their distribution in present and past times.

Characteristic fossils of successive geological deposits. Zonal value of fossils. Palæontological Methods.

Practical Work

Satisfactory evidence must be given of adequate instruction having been received by the students in the field.

Reading and interpretation of geological and other maps, and the drawings of sections across them.

Description and identification of minerals, rocks, and fossils in hand specimens, and under the microscope.

[*Note.*– The specimens will be selected from a wider range of rocks and minerals for candidates taking Section *B*, and of fossils for candidates taking Section *C*, respectively.]

8. The syllabuses in Ancillary Subjects are as follows :—

BIOLOGY (ONE YEAR) ANCILLARY TO GEOLOGY

As on pp. 1063-64

BIOLOGY (TWO YEAR) ANCILLARY TO GEOLOGY

As for One Year, treated in greater detail.

BOTANY (ONE YEAR) ANCILLARY TO GEOLOGY

(1) The vegetative morphology, anatomy and physiology of a flowering plant, with special reference to the relation between structure and function. Meristematic, assimilatory, conducting and mechanical tissues. Absorption, conduction, transpiration, photosynthesis, respiration, growth, movements, germination. The herbaceous and arboreal habits. The outlines of secondary thickening and cork-formation. The aim should be to bring out the salient facts of the organisation and functioning of higher plants.

(2) The characteristics of different groups of the Vegetable Kingdom to offer some review of the variety of plants.

The following outline is suggested :—

Algæ. Chlamydomonas, Ulothrix, Cladophora, Vaucheria, Fucus (external features, reproduction), Nostoc, a diatom. The types studied should be used to illustrate progressive increase in complexity and the general nature of the reproductive processes in simple plants.

Fungi. Pythium or Phytophthora, Penicillium (conidial stage only), Psalliota, a lichen, the broad facts of structure and reproduction as illustrating specialised modes of life.

Bacteria. General characteristics and importance in nature.

Bryophyta (external characters and outline of reproduction only). A thalloid and a leafy liverwort, a moss.

Pteridophyta (external structure, life-history). A fern, Selaginella.

Gymnospermæ. Pinus (external features and outlines of reproduction).

Angiospermæ. Outline of life-history.

(3) More general topics.

The broad differences in floral structure and their use in the classification of the Angiosperms. A number of families should be studied and some training in the use of a flora given.

Pollination, with special reference to the rôle of insects. Dispersal (fruit-morphology to be treated only on the broadest lines).

The general characters of soils. The water-relations of plants. Xarophytes, mesophytes and hydrophytes.

The relation of plants to their environment, based on a study of any two plant communities (*e.g.*, heath, woodland, pond, etc.).

The outlines of plant-evolution.

Botany (Two Year) Ancillary to Geology

As for B.Sc. (Gen.), p. 1024

Chemistry (First Year) Ancillary to Geology

It is assumed that the student has taken Chemistry at a university entrance examination at about the level of the Higher School Certificate.

Physical Chemistry

Faraday's laws of electrolysis, Helmholtz's views on the nature of electricity and experiments on discharges in gases, leading to discovery of the electron. Mass and charge of the electron. Radio-activity. The nuclear atom. Radioactive displacement law and van den Broeck's hypothesis. Isotopes. Artificial radioactivity. Uses of isotopic indicators. Stable electron groups in atoms, ions and molecules. Electrovalency and covalency. Valency and the periodic classification.

Elementary kinetic theory of ideal gases. The gas equation. Distribution of kinetic and potential energy (without proof). Real gases. Molecular nature of gases. Intermolecular energy. Liquid-gas equilibrium from the kinetic standpoint. Molecular and ionic nature of crystalline solids. Crystallinity in artificial and natural materials of high molecular weight.

Adsorption on surfaces. Main general properties of colloids with particular reference to lyophillic colloids and including colloidal electrolytes. Ultrafiltration. Sedimentation. Semipermeable membranes: osmotic pressure (phenomenological treatment). Electro-kinetic phenomena.

Chemical equilibrium and the law of mass action (empirical treatment).

Electrolytic conduction. Faraday's laws. Specific, molar and equivalent conductance. Mobilities. Ionic conductance. Degree of dissociation. Ostwald's law and departures therefrom. Strong and weak electrolytes. Transport phenomena.

Electromotive force of cells and electrode potentials (empirical treatment). Hydrogen electrode: pH and its determination. Indicators. Buffers. Oxidation-reduction cells, potentials, and equilibria.

Inorganic Chemistry

The atmosphere—determination of carbon dioxide and water vapour—detection of ozone—separation of the inert gases—the occurrence of helium in minerals and natural gases—changes brought about in minerals by the atmosphere.

General properties of oxides, hydroxides, sulphides, halides, carbonates and sulphates of the common elements, based on the periodic classification.

Chemistry (Second Year) Ancillary to Geology

Physical Chemistry

Thermodynamic concepts. H and U as functions of state. First Law. Thermochemistry. Hess's law.

Second Law. Reversibility, irreversibility and equilibrium. Carnot's cycle. S, A and G defined: dS, dA and dG in reversible or irreversible changes. Criteria of equilibrium.

Phase equilibria in one component systems.

Ideal solutions. Raoult's law phenomena: molecular weights from vapour pressure depression, freezing point depression and boiling point elevation. Osmotic pressure phenomena (not the mechanism of osmosis), molecular weights of large molecules by osmotic pressure.

Systems of many components. Chemical potential. Equilibrium and chemical potential. Homogeneous gas equilibria. Homogeneous equilibria, including ionic equilibria, in solution. Heterogeneous equilibria.

Kinetic order of homogeneous chemical reaction; distinction from molecularity. The rate constant: its dependence on temperature. The idea of activation. Homogeneous catalysis and illustrations of the mode of action of catalysts. Heterogeneous catalysis (descriptive).

Inorganic Chemistry

The naturally occurring hydrocarbons, water gas, producer gas and coal gas.

General principles of the methods used in the extraction of the metals from oxides and sulphide ores.

Free energy charges in such processes.

Effect of pressure on chemical equilibria and reactions.

Purification of metals. Corrosion of metals (Fe and Cu).

The Stassfurt and Dead Sea salt deposits treated from the point of view of the Phase Rule.

Crystallographic structure of alkali halides, graphite, oxides and sulphides. The structure of the silicates.

General account of the structure of metals—the metallic bond.

General chemistry of some of the less common elements—*e.g.*, beryllium, titanium, vanadium, tungsten, molybdenum, gold and platinum.

The rare earths.

Practical Work

(*Note:* Considerable freedom to be allowed in the distribution of the work over the two years.)

Volumetric analysis—Standardisation of apparatus and weights. Acidimetry. Iodimetry and oxidation reduction processes. Determination volumetrically of iron, tin, calcium, copper.

Gravimetric analysis—Determination of SO_4, Cl, Pb, Zn, Al, SiO_2. Dry assay of tin (Au and Ag).

Qualitative analysis of appropriate simple mixtures.

Preparations—A few typical compounds should be prepared.

It is desirable that a few physical exercises should be undertaken, *e.g.*, determination of PH, Phase Rule, study of a binary system PbSn), Transition points.

GEOGRAPHY (ONE YEAR) ANCILLARY TO GEOLOGY

1. Introduction to regional method with special attention to climate, soils and vegetation, with specific regional examples.

2. Regional geography of the British Isles. Map interpretation in relation to the regional geography of the British Isles.

[*Note.*—Ability to read maps is required in connection with each of the above sections.]

GEOGRAPHY (TWO YEAR) ANCILLARY TO GEOLOGY

As for Geography at the B.Sc. (General) Examination—see pp. 1024-25.

MATHEMATICS (FIRST YEAR) ANCILLARY TO GEOLOGY

As on pp. 1064-65.

MATHEMATICS (SECOND YEAR) ANCILLARY TO GEOLOGY

As for Pure Mathematics at the B.Sc. (General) Examination—see pp. 1026-27.

PHYSICS (ONE YEAR) ANCILLARY TO GEOLOGY

As for Intermediate Examination in Science, pp. 1014-15.

PHYSICS (TWO YEAR) ANCILLARY TO GEOLOGY

As for B.Sc. (Gen.), pp. 1029-30.

ZOOLOGY (ONE YEAR) ANCILLARY TO GEOLOGY

As on p. 1061.

ZOOLOGY (TWO YEAR) ANCILLARY TO GEOLOGY

As for B.Sc. (Gen.), pp. 1034-35.

Mathematics

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level in three science subjects which must include either (i) Pure Mathematics and Applied Mathematics, or (ii) Pure Mathematics and Physics;

or (2) have obtained a Higher School Certificate with passes at main standard in three science subjects which must include either (i) Pure Mathematics and Applied Mathematics, or (ii) Pure Mathematics and Physics, or (iii) the combined subject Pure and Applied Mathematics provided that in this case the standard attained by the student should be the equivalent of " Very Good ";

or (3) have passed the Preliminary Examination or an approved equivalent examination in any of the required subjects in which he has not so qualified.

2. A student must follow an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. Nevertheless a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all. The course will consist of Pure and Applied Mathematics. There will be no ancillary subjects, but certain topics of general interest, not suitable for examination, will be dealt with in courses of intercollegiate lectures, attendance at which will be regarded as an integral part of the course. Every student must attend at least three such courses, each extending over one term.

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at an examination consisting of eight papers of which the first six will be on the syllabus printed below, and (as at present for "Advanced Subjects") alternative papers may be submitted by individual Colleges, Schools, or Institutions in respect of the last two papers, the syllabuses on which these papers are set being approved by the University. The Examination will be taken not earlier than the end of the third year, but candidates may take the first six papers not earlier than the end of the second year.

If a candidate takes the first six papers separately he will be informed if he has passed or failed in this part of the Examination. If he passed in this part of the Examination he may not take it again and may complete the Examination by taking the remaining two papers at the end of the third year or any subsequent occasion. If he fails in the first six papers he may take them again either separately from or together with the two remaining papers. A candidate will not be given any credit for the last two papers unless he has satisfied the Examiners in the first six papers on the same or a previous occasion.

4. A provisional list of candidates who have been successful at the Examination will be published by the Academic Registrar. Successful candidates will be awarded (1) First Class Honours, (2) Second Class Honours, (3) Pass. The Second Class will be sub-divided into an Upper and a Lower Division. The class will be determined with regard to the candidate's performances in the whole Examination. The name of a candidate shall not be included in the list until he has taken all eight papers.

5. Of the first six papers three will be on Pure Mathematics and three on Applied Mathematics in accordance with the following syllabus :—

Pure Mathematics

Algebra

Properties of polynomials in one variable. Theory of equations. Determinants and matrices; applications. Concept of a group.

Real Variable

Definition and properties of real numbers. General theory of limits. Continuous functions, differentiable functions, functions of bounded variation. Riemann integration. Convergence and uniform convergence of sequences, series, products, and integrals; properties of functions defined as limits. Double series.

Properties of functions of several variables and of implicit functions. Use of Jacobians and Lagrange multipliers. Double integrals and line integrals.

Simple properties of sets of points in one and two dimensions.

Complex Variable

Elementary single valued and many valued functions of a complex variable. Differentiable functions. Elementary conformal transformations. Simple cases of factorisation. Cauchy's theorem for simple contours. Theorems of Taylor, Laurent, Liouville. Residues.

Differential Equations

Existence theorem for the equation $\frac{dy}{dx} = f(x, y)$. Elementary theory of ordinary differential equations. Solution in series. Total differential equations. Simple partial differential equations. Boundary conditions.

Geometry

Elementary pure and analytical geometry of two and three dimensions. Inversion.

Foundations of pure and analytical projective geometry in the plane and in space. General theory of homographic correspondences. Projective geometry of conics and systems of conics, with metrical examples. The relation of apolarity. Theory and applications of symmetrical (2, 2) correspondences.

Plane collineations, correlations, and the standard quadratic transformation.

Projective geometry of quadrics, systems of quadrics, and of the twisted cubic curve; simple metrical applications. Simple space collineations.

Differential geometry of plane curves. The Frenet-Serret formulæ for a space curve. Elementary differential geometry of surfaces. Geodesics.

Applied Mathematics

Vector Algebra—Elementary operations, localised vectors. Kinematics of points, reference frames, and rigid bodies.

Mechanics—General Principles of Newtonian mechanics :—Newton's Laws, D'Alembert's Principle, linear and angular momentum power, work and energy, constants of inertia. Statics, particle dynamics. Rigid dynamics in two and three dimensions. Analytical dynamics—Lagrange's equations.

Theory of vibrations and waves.

Theory of vector fields with application to gravitation.

Hydrodynamics of perfect fluids—fundamental equations with application to steady flow.

Electromagnetic Theory :—Electrostatics—simple two- and three-dimensional fields in the presence of conductors and dielectrics. Magnetostatics. Steady current flow in linear circuits and in two- and three-dimensional media. Magnetic fields of currents—self and mutual inductance. Mechanical actions between electric currents and magnetic material. Electromagnetic induction. Displacement currents and Maxwell's equations.

Statistics :—Frequency distribution. Correlation. Method of least squares. Simple tests of significance.

6. Subjects for the last two papers may be chosen from the following list or other subjects may be submitted for approval. The syllabus in any subjects chosen must be submitted for the approval of the University by the authorities of the School concerned not later than 31st December preceding the Examination.

Pure Mathematics

Projective Geometry. Algebraic Geometry. Differential Geometry. Functions of a Real Variable. Functions of a Complex Variable. Differential Equations, Theory of Numbers. Group Theory. Modern Algebra. Infinite Matrices. Special Functions occurring in Mathematical Physics. Mathematical Theory of Statistics. Calculus of Finite Differences.

Applied Mathematics

Dynamics. Potential theory. Hydromechanics. Elasticity. Mathematical Astronomy. Geometrical optics. Physical optics. Electromagnetic theory. Thermodynamics. Quantum theory. Kinetic theory of gases. Statistical mechanics. Theory of Relativity.

Physics

The following revised Regulations for B.Sc. (Special) Degree in Physics for Internal Students are in force as an alternative to the present Regulations :—

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level in Physics, Chemistry, and the combined subject Mathematics (Pure and Applied) or with passes at advanced level in Physics, Chemistry and Pure Mathematics together with a pass at ordinary level in Applied Mathematics ;

or (2) have obtained a Higher School Certificate with passes at main standard in Physics, Chemistry and either (i) the combined subject Pure and Applied Mathematics or (ii) the separate subjects Pure Mathematics and Applied Mathematics, provided that in this latter case Applied Mathematics may have been passed on the subsidiary subject syllabus or on the main subject syllabus at subsidiary standard ;

or (3) have passed the Preliminary Examination or an approved equivalent examination in any of the required subjects in which he has not so qualified.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or elsewhere under Recognised Teachers of the University. In addition to Physics the course will include a course in Mathematics extending over not less than one year. Nevertheless a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all and may be excused from the course and examination in Mathematics.

A student may be permitted to take the one-year ancillary course and examination in Mathematics before admission to the course in Physics provided that he is not offering at the Preliminary Examination, either Pure Mathematics, Applied Mathematics or Mathematics (Pure and Applied) in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree, a student must satisfy the Examiners at the following examinations :

(i) ***A test on translation*** into English of scientific texts in two languages to be selected by the student from the following list :— French, German, Italian, Russian, Spanish. The test may be taken at any time at which an examination is held and the tests in the two languages need not be taken on the same occasion. The use of a dictionary is permitted.

(ii) The examination in Mathematics normally taken at the end of the first year.

(iii) Part I of the Final Examination in Physics normally to be taken at the end of the second year of the course.

There will be not less than 4, nor more than 6, written papers and a two-day practical examination, and account will be taken of the laboratory records of the candidate.

(iv) Part II of the Final Examination in Physics to be taken not less than one year after the student has satisfied the Examiners in Part I and in the examination in Mathematics.

There will be (*a*) not less than 2, nor more than 4, papers based on syllabuses proposed by individual Colleges (or on syllabuses prepared for students at Colleges and Institutions not offering special syllabuses) and approved by the Board of Studies, (*b*) a one-day practical examination, account being taken of the laboratory records of the candidate, including the records of any research that may have been performed.

In this Part of the Examination it shall be within the powers of the individual Colleges to arrange that credit shall be given for work done in subjects other than Physics approved by the Board of Studies.

4. The list of successful candidates at Part II of the Final Examination will be divided into (1) First Class Honours, (2) Second Class Honours, and (3) Pass. In determining the class, consideration will be given to the candidate's performance in both parts of the Final Examination and in the examination in Mathematics. No class or honours will be awarded on Part I of the Final Examination only. The name of the candidate shall not be included in the list until he has passed, or been exempted from, all the examinations specified in paragraph 3.

5. A diploma for the Degree of B.Sc., under the Seal of the University, will be delivered to each candidate who has qualified for admission to the Degree after the report of the Examiners shall have been approved by the Senate.

6. The syllabus in Mathematics as an ancillary subject is as follows:—

MATHEMATICS (FIRST YEAR) ANCILLARY TO PHYSICS

Algebra—Linear equations. Determinants. Linear transformations. Quardrics. Transformation to principal axes. Vector algebra.

Calculus—Simple functions of one variable. Maxima and minima. Tangents, normals and curvature of plane curves.

Series—Taylor's series. Use of binomial, exponential, logarithmic, sine and cosine series. Elementary Fourier series. Power series. Concept of convergence.

Plane Geometry—Elementary properties of circle, parabola, ellipse, hyperbola. Methods of curve plotting with applications to simple well-known curves.

Solid Geometry—Elementary properties of sphere and quadrics.

Differential Calculus—Simple functions of two or more variables. Perfect differentials. Maxima and minima. Tangent planes and normals of surfaces. Indicatrix.

Integral Calculus—Reduction to standard forms. Use of standard tables of integrals. Lengths of arcs of plane curves. Plane areas. Areas and volumes of surfaces of revolution. Centroids. Moments and products of inertia. Probability Integrals. Simple multiple integrals, including change of variables.

Complex Variable—Argand diagram. Exponential values of sine and cosine. Demoivre's theorem. Hyperbolic functions.

Differential Equations—Linear equations of the first order with variable coefficients. Linear equations with constant coefficients. Linear partial differential equations with constant coefficients and two independent variables.

Numerical and Graphical Methods—Approximate solution of equations. Approximate quadrature.

Dynamics—Motion of a particle, including damped harmonic motion. Orbits under central forces. Conservation of energy and angular momentum. Principles of rigid dynamics. Introduction to normal modes of vibration.

MATHEMATICS (SECOND YEAR) ANCILLARY TO PHYSICS

Subjects selected from the following list :—

Analytic functions of a complex variable. Cauchy's theorem, residues. Conformal representation. Descriptive account of the principal functions used in theoretical physics including Gamma, Legendre, Bessel and Whittaker functions. Ordinary differential equations of the first order. Operational and numerical methods of solution of differential equations.

Vector algebra and vector analysis. Green's theorem. Stokes' theorem. Representation in Cartesian, cylindrical, and spherical polar co-ordinates. Curvature of surfaces. Wave surface. Applications to potential theory, hydrodynamics, and electro-magnetic theory.

Cartesian tensors and elementary theory of matrices. Probability and theory of errors. General theory of vibrations, including forced vibrations, coupled pendulums, weak coupling as a perturbation. Normal co-ordinates for small vibrations in a conservative system. Plane, cylindrical, and spherical waves.

Rigid dynamics. Plane hydrodynamics, including Bernoulli's theorem. Stream functions. Potential flow. Vorticity. Effects of compressibility.

Physiology

The following revised Regulations for the B.Sc. (Special) Degree in Physiology for Internal Students are in force as an alternative to the present Regulations :—

The Degree is open to two classes of student :—

(i) Those who pursue their studies entirely within the Faculty of Science.

(ii) Those who have passed the Second Examination for Medical Degrees as Internal Students and subsequently pursue an approved course of study extending over at least one academic year.

No course for the B.Sc. (Special) Degree in Physiology will be allowed to run concurrently with a course for the final M.B., B.S. Examination.

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level in (i) Chemistry, (ii) Physics, or Pure Mathematics or the combined subject Mathematics (Pure and Applied) and (iii) Biology or Botany or Zoology.

or (2) have obtained a Higher School Certificate with passes at main standard in (i) Chemistry, (ii) Physics or Pure Mathematics or the combined subject Pure and Applied Mathematics, and (iii) Biology or Botany or Zoology.

or (3) have passed the Preliminary Examination or an approved equivalent examination in any of the required subjects in which he has not so qualified.

2. Regulations for students taking the course entirely within the Faculty of Science :—

A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or elsewhere under Recognised Teachers of the University. Nevertheless, a student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all and may be exempted from the course and examination in ancillary subjects. A student who has passed the B.Sc. (General) with Physiology and Chemistry will be exempted from Part I of the B.Sc. (Special) in Physiology and from the course and examination in Chemistry as a two-year ancillary subject.

Two ancillary subjects are studied in the first year and one in the second. The ancillary subject taken in the second year may be a continuation of one taken in the first year, *i.e.*, a two-year ancillary.

In the first year there shall be courses in Physiology, a compulsory course in ancillary Chemistry (Physical and Organic) together with a course in one other subject selected from the following :—Anatomy, Anthropology, Biology, Botany, Mathematics, Physics, Psychology, Zoology. A candidate who has not obtained the appropriate preliminary qualification in either Biology or Zoology must take one of these subjects in the first year.

In the second year of study there shall be courses in Physiology and one of the ancillary subjects listed above or in Pharmacology. This subject may be a second-year course in Chemistry or the other ancillary subject studied in the first year and then constitute a two-year ancillary or a new one-year ancillary. A candidate who takes ancillary Biology in either the first or second year cannot offer either Zoology or Botany.

The third year of study shall be devoted to Physiology and allow of a certain amount of specialisation within that subject.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

In order to qualify for admission to the Degree a student must satisfy the Examiners at the following Examinations :—

(i) *Ancillary Subjects.*—At the end of the first year there shall be an examination in the compulsory ancillary Chemistry unless this subject is continued into the second year and in the other ancillary subject if it is studied in the first year only.

At the end of the second year there shall be an examination in the remaining ancillary subject studied in the second year. If this subject has been taken for two years the examination will be on the two-year course.

If a candidate fails in an ancillary subject at the end of the first year he may repeat the examination before or together with Part I of the Final Special Examination.

(ii) *Special Subject Physiology.*—Part I of the Final Special Examination in Physiology will be taken at the end of the second year of the course. Part II of the Final Special Examination in Physiology will be taken not less than one year after the student has satisfied the Examiners in Part I and in all subjects at both First and Second-Year Examinations in Ancillary Subjects.

Part I of the Final Examination shall consist of two written papers and three half-day practicals. Part II of the Final Examination shall consist of six written papers and three whole-day practicals, but alternatives, limited to two written papers and a practical examination, shall be available to candidates from Schools of the University. The titles of the alternative papers selected by Schools for their candidates must be submitted to the University for approval at the beginning of each academic year.

3. Regulations for students who have passed the Second Examination or Medical Degrees as Internal Students :—

Students who fall within this class are exempt from the requirements under Regulation 1 above and from the courses and examinations in ancillary subjects and Part I of the Final Special Examination in Physiology, but are required to pursue the approved course for the third year of study and to take Part II of the Final Examination as detailed above for students who take the full three-year course entirely within the Faculty of Science.

4. The list of successful candidates at Part II of the Final Special Examination will be divided into (1) First Class Honours, (2) Second Class Honours, and (3) Pass. The Second Class will be divided into two divisions. No class or honours will be awarded on Part I of the Final Special Examination only. The name of the candidate shall not be included in the list until he has passed, or been exempted from, all the examinations specified in paragraph 2.

5. The syllabuses in Ancillary Subjects are as follows :—

ANTHROPOLOGY (ONE YEAR) ANCILLARY TO PHYSIOLOGY
As on p. 1073

ANTHROPOLOGY (TWO YEAR) ANCILLARY TO PHYSIOLOGY
As on p. 1073

CHEMISTRY (FIRST YEAR) ANCILLARY TO PHYSIOLOGY
As on pp. 1055-56

CHEMISTRY (SECOND YEAR) ANCILLARY TO PHYSIOLOGY
As on pp. 1056-57

PHARMACOLOGY (ONE YEAR) ANCILLARY TO PHYSIOLOGY

General Principles of Drug Action.—Modes of action of drugs. Absorption, distribution, metabolism, detoxication, excretion. Cumulation, tolerance, drug addiction, individual variation in response to drugs, toxicity. Routes of administration. Chemical constitution and drug action. Biological standardisation. Statistical methods used in Pharmacology.

These principles should be illustrated by the action of drugs on the various body systems :—Central Nervous System. Autonomic Nervous System. Respiratory System. Cardiovascular System. Blood and blood-forming organs. Alimentary Tract. Urinary Tract. Uterus.

[*Syllabuses in the remaining Ancillary Subjects will be published later.*]

Psychology

The following revised Regulations for the B.Sc. (Special) Degree in Psychology for Internal Students are in force as an alternative to the present Regulations :—

COURSE OF STUDY

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level or a Higher School Certificate with passes at main standard in three science subjects ;

or (2) have passed the Preliminary Examination or an approved equivalent examination in any of the subjects in which he has not so qualified.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. In addition to Psychology the course will include ancillary courses in two of the following subjects :—Anthropology, Biology, Chemistry, Economics, Mathematics, Physics, Physiology, Sociology, Statistics and Zoology. One of these courses must extend over not less than two years, the other extend over not less than one year. Biology may not be taken with Physiology or with Zoology.

A student who is already a graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all, and may be excused in whole or in part from the courses in ancillary subjects, and the corresponding examinations.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in a two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

Examination

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at the following examinations :—

(i) A written test on translation into English of scientific texts in two of the following languages : French, German, Italian, Russian.

Of these, one of the selected languages must be either French or German. The test may be taken at any time at which an examination is held and the tests in the two languages need not be taken on the same occasion. The use of dictionaries will be allowed.

(ii) The Examination in the ancillary subject, the course for which extends over one year, to be taken not less than one year after entering on the course in that ancillary. There will be one or two papers in each subject and a practical examination of not more than six hours in experimental subjects.

(iii) The examination in the ancillary subject, the course for which has extended over two years, to be taken not less than two years after entering on the course in that ancillary. There will be two papers in the subject and a practical examination of not more than six hours in experimental subjects.

(iv) Part I of the Final Special Examination in Psychology to be taken not less than two years after entering on the course. There will be four papers and one practical examination of not more than six hours. Account will also be taken of the laboratory records of the candidates.

(v) Part II of the Final Special Examination in Psychology to be taken not less than one year after the student has satisfied the Examiners in Part I and in all ancillary subjects or in all such subjects except the ancillary subject, studied for two years, in which he has been referred. There will be four papers and a practical Examination of not more than six hours. Account will also be taken of the laboratory records of the candidates.

4. A student who fails the Examination in an ancillary subject studied for two years may be referred in that subject and permitted to re-enter for it on any subsequent occasion.

5. The list of successful candidates at Part II of the Final Special Examination will be divided into (i) First Class Honours, (ii) Second Class Honours and (iii) Pass. The Second Class will be divided into two divisions. The Class will be determined with regard to the candidate's performance in both parts of the Final Examination. No Class or Honours will be awarded on Part I of the Examination only. The name of a candidate shall not be included in the list until he has passed or been exempted from all the examinations specified in paragraph 3.

6. The syllabus for the Final Examination is as follows :—

Part I

[*For Examinations in and after* **1951**]

Part I of the Examination will consist of four written papers and a practical examination. The written papers will be : General Psychology I, Experimental Psychology I, Comparative Psychology I and History of Psychology.

The General paper will contain questions on any topic within the scope of a comprehensive general course in psychology, including the relevant experimental work. The paper on Experimental Psychology I will deal with those matters usually dealt with in standard textbooks on the subject, including a study of work on conditioned reflexes and its bearing on general psychology. Comparative Psychology I will consist of two parts (*a*) Animal Psychology and (*b*) Psychology of Childhood. Both parts will presuppose acquaintance with such parts of the sciences of biology, physiology and statistics as may be relevant to the topics included in the paper. The paper on History of Psychology will consist of two or more parts. The first part, which will be compulsory, will presuppose general acquaintance with the main stages in the history of

psychology from the period of ancient Greek thought to the end of the nineteenth century. The other parts, from which option may be made, will require more specialised knowledge of some period or movement in the history of psychological thought or in the development of scientific method in psychology.

The practical examination may include questions on any topic forming part of a general laboratory course in psychology. The candidate may be examined orally or in other ways.

Part II

[*For Examinations in and after* **1952**]

Part II of the Examination will consist of four written papers and a practical examination. The written papers will be: General Psychology II, Experimental Psychology II, Comparative Psychology II and an Essay paper.

The papers on General and Experimental Psychology II will carry the work of Part I to a more advanced stage. Comparative Psychology II will consist of two parts, (*a*) Abnormal Psychology, and (*b*) Social Psychology and the Psychology of Primitive Peoples. The section on Abnormal Psychology will presuppose knowledge not only of the functional disorders in mental processes, but also of those disturbances in function for the organic basis of which there is physiological and anatomical evidence. The section on Social Psychology and the Psychology of Primitive Peoples will presuppose knowledge of the statistical and experimental methods of Social Psychology and of the principles of Anthropology. The Essay paper will require either one or two essays on subjects to be selected from any part of the syllabus for the whole examination.

The Practical examination in Part II will consist of questions which require more advanced experimental and statistical methods than those in Part I, and the candidate may be required to plan and in part carry out an investigation of a research character requiring the adaptation of laboratory methods to problems not usually included in a laboratory course. He may also be examined orally or in other ways.

7. The syllabuses in Ancillary Subjects are as follows :—

ANTHROPOLOGY (ONE-YEAR) ANCILLARY TO PSYCHOLOGY

One paper to be selected from the following :—Social Anthropology, Racial Evolution, Cultural Evolution in Prehistoric Europe and the Near East.

ANTHROPOLOGY (TWO-YEAR) ANCILLARY TO PSYCHOLOGY

Two papers to be selected from the following :—Social Anthropology, Racial Evolution, Cultural Evolution in Prehistoric Europe and the Near East, Primitive Technology, Ethnography of Special Area.

BIOLOGY (ONE-YEAR) ANCILLARY TO PSYCHOLOGY

As on pp. 1063-64, the syllabus for Biology (One-Year) Ancillary to Chemistry.

BIOLOGY (TWO-YEAR) ANCILLARY TO PSYCHOLOGY.

As on p. 1064, the syllabus for Biology (Two-Year) Ancillary to Chemistry.

MATHEMATICS (ONE-YEAR) ANCILLARY TO PSYCHOLOGY

As on pp. 1026-27, Sections A, B, and C of the syllabus for Pure Mathematics at the B.Sc. (General) Examination.

MATHEMATICS (TWO-YEAR) ANCILLARY TO PSYCHOLOGY

As on pp. 1026-27, the syllabus for Pure Mathematics at the B.Sc. (General) Examination.

Physics (First Year) Ancillary to Psychology

General Physics and Heat

Atomic and molecular structure of matter: the states of matter, the colloidal state. Fundamental notions of mass and force, energy and work. Simple harmonic motion: wave motion. Elements of hydrostatics. Elementary gas-kinetic theory. The gas laws. Viscosity. Surface tension and surface energy. Diffusion in liquids and gases: osmosis, laws of osmotic pressure and its measurement, dissociation. Saturated and unsaturated vapour, the measurement of vapour pressure. Thermometry. The calorie and the mechanical equivalent of heat. Specific heat and its measurement. Changes of state, melting and boiling points. Latent heats and their measurement. Heat transfer, radiation, Kirchhoff's and Stefan's laws, methods of detecting and measuring radiation. First law of thermodynamics.

Light

Elements of wave theory; simple treatment of interference and diffraction; the scattering of light, the ultra-microscope. Elementary treatment of reflection, refraction and dispersion. Magnifying power of lens systems. Resolving power. The complete spectrum of white light, the spectroscope. Absorption and absorption coefficients; selective absorption and omission. Polarisation, double refraction; rotatory polarisation, the polarimeter. Fluorescence. Photometry. Colorimetry. Optical system of eye. Stereoscopic vision. Colour vision.

Sound

Vibrations. Sound waves. Strings. Air columns. Determination of frequency. Intensity of sound and its measurement. Noise. Sound spectra. Subjective aspects of sound. Elementary ultrasonics.

Electricity and Magnetism

Elements of electrostatics. Electrostatic instruments. Magnetic fields and their measurement. Magnetism as a general property of matter. The electric current, its magnetic, thermal and chemical effects; detecting and measuring instruments. Ohm's law, the potentiometer, measurement of resistance. Conductivity in electrolytes, Faraday's laws of electrolysis, ionic mobilities. Electromagnetic induction and its practical applications. Alternating current transformers; instruments for the measurement and control of alternating current. An outline of the history of the discovery of X-rays and of the negative and positive electron, the proton and the neutron; natural and artificial radio-activity, the transformation of the elements.

Physics (Second Year) Ancillary to Psychology

The subject-matter of the first-year ancillary course treated more fully and precisely with some discussion of the following topics:—

General Physics, Heat and Sound: Elasticity. Colloid physics. Surface phenomena. The second law of thermodynamics; entropy. Irreversible processes. Free and total energy.

Electricity and Atomic Physics: Thermoelectricity. Thermionic valves. Cathode ray oscillograph. Photoelectricity. Ionisation and ionising particles. Elementary quantum physics. X-ray spectra. Radioactivity. Simple examples of nuclear reactions.

Physiology (First Year) Ancillary to Psychology

As on pp. 1059–60, the syllabus for Physiology (First Year) Ancillary to Botany.

PHYSIOLOGY (SECOND YEAR) ANCILLARY TO PSYCHOLOGY

As on p. 1060, the syllabus for Physiology (Second Year) Ancillary to Botany.

ZOOLOGY (ONE-YEAR) ANCILLARY TO PSYCHOLOGY

As on p. 1061, the syllabus for Zoology (One-Year) Ancillary to Botany.

ZOOLOGY (TWO-YEAR) ANCILLARY TO PSYCHOLOGY

As on p. 1061, the syllabus for Zoology (Two-Year) Ancillary to Botany.

[*Syllabuses in other Ancillary Subjects will be prescribed later.*]

Statistics

The following revised Regulations for the B.Sc. (Special) Degree in Statistics for Internal Students are in force as an alternative to the present Regulations :—

1. Before admission to the course a student must

either (1) have obtained a General Certificate of Education with passes at advanced level in three science subjects which must include Pure Mathematics or the combined subject Mathematics (Pure and Applied) ;

or (2) have obtained a Higher School Certificate with passes at main standard in three science subjects which must include Pure Mathematics or the combined subject Pure and Applied Mathematics ;

or (3) have passed the Preliminary Examination or an approved equivalent examination in any of the required subjects in which he has not so qualified.

2. A student must pursue an approved course of study extending over not less than three years at one or more Schools of the University or under Recognised Teachers of the University. In addition to Statistics the course will include ancillary courses extending over not less than two years in Mathematics, and extending over not less than one year in any one of the following subjects : Physics, Chemistry, Biology, Zoology, or Psychology. Nevertheless a student who is already a Graduate of the University or who is admitted under the Regulations for Advanced Students may be permitted to pursue a course extending over not less than two years in all and may be excused in whole or in part from the courses in ancillary subjects and the corresponding examinations.

A student may be permitted to take the course and examination in a one-year ancillary subject or to commence the course in the two-year ancillary subject before admission to the course in the principal subject provided that such ancillary subject does not correspond to a subject being offered by the student at the Preliminary Examination in order to satisfy the requirements for admission to the degree course.

A student to whom such permission is granted will not be credited with attendance at the session's course or with success at the examination in the ancillary subject unless by the end of the same session he completes his preliminary qualifications.

3. In order to qualify for admission to the Degree a student must satisfy the Examiners at the following examinations :—

(i) A written test on translation into English of scientific texts in French *or* German. The test may be taken at any time at which an examination is held. The use of dictionaries will be allowed.

(ii) An examination in Ancillary Mathematics, to be taken not less than two years after the beginning of the course. There will be two papers in the subject.

(iii) An examination in the selected Ancillary Subject studied for one year. This examination will normally be taken one year after admission to the Degree course and will consist of one or two papers and a practical examination.

(iv) Part I of the Final Special Examination in Statistics, to be taken not less than two years after admission to the course. There will be four papers together with two days' practical examination.

(v) Part II of the Final Special Examination in Statistics, to be taken not less than one year after the student has (1) satisfied the Examiners in Part I, (2) passed the Examination in an Ancillary Subject studied for one year and (3) passed or been referred at the Examination in Ancillary Mathematics.

The Part II Examination shall consist of :—

(*a*) Three theoretical papers, one each in the Sections A, B and C specified in the syllabus ;

(*b*) A practical test occupying two days ;

(*c*) Candidates will, in addition, submit evidence of having acquired during the preceding year's study a thorough acquaintance with the literature of a selected branch of statistical theory other than the subjects specifically covered for examination in Part II, Section B. This evidence will consist of a report, giving a résumé of the theory together with fresh numerical illustrations by the student of its application to original statistical data.

The Examiners shall be at liberty to test any candidates by means of oral questions, or by examination of essays and practical class work undertaken during the course.

4. A candidate who fails in the Examination in the Ancillary Subject studied for one year, may re-enter at any subsequent examination in this subject held not later than the term in which he takes Part I of the Examination in Statistics. A candidate who fails or is referred in the Examination in Ancillary Mathematics may re-enter at any subsequent examination in this subject held not later than the term in which he takes Part II of the Examination in Statistics.

5. The list of successful candidates in Part II of the Final Special Examination will be divided into (1) First Class Honours, (2) Second Class Honours, and (3) Pass. The class will be determined by paying special regard to the candidate's performance in Part II of the Final Examination. No class or honours will be awarded on Part I alone of the Final Examination. The name of a candidate shall not be included in the list until he has passed, or been exempted from, all the examinations specified in paragraph 3.

6. The syllabus for the Final Examination is as follows :—

Part I

[*For Examination in and after* **1951**]

(Four theoretical and two practical papers)

Preparation and discussion of statistical data, schedules of inquiry, tabulation and handling of records. Graphic representation in the case of one or two variates. Measurements and their errors.

Frequency distributions. Discrete and continuous variates; measures of location, dispersion, skewness and kurtosis; moments and cumulants. Normal, binomial, Poisson, multinomial and hypergeometric distributions. Heterogeneity and generalised Poisson distributions.

Correlation, regression, association and contingency. Grade and rank correlation. The bivariate normal distribution.

Derivation of standard errors and sampling distributions. The χ^2 distribution and its applications. Tests of significance.

The analysis of variance applied to single, double and multiple classifications and to simple regression. Analysis of covariance. The randomised block and Latin square. Randomisation theory. Elementary design of experiments. Probit analysis. Elements of factorial design.

Least squares, the fitting of curvilinear regressions; orthogonal polynomials.

Pearson curves and Gram-Charlier series.

Inequalities for moments. Laws of large numbers. Characteristic functions. Central limit theorems.

The elementary principles involved in the theories of estimation and testing statistical hypotheses. The concepts of efficiency, sufficiency and likelihood. Interval estimation. The Markoff theorem. The power function of a statistical test. Linear hypotheses.

The elements of quality control and sequential analysis. Sampling of stratified populations.

Interpolation, quadrature and finite differences. Methods of statistical computation. Use of mechanical aids in large scale statistical work.

Practical Work.—A training in the application to numerical data of the statistical techniques outlined above must be regarded as an essential part of the course. The competence of the students in the analysis of data and in the interpretation of results will be tested in the Practical Examinations.

Part II

[*For Examinations in and after* **1952**]

Section A (one paper, to be taken by all candidates)

The treatment of split plots and confounding. The general linear hypothesis. Missing plot technique. Multivariate analysis. Discriminant functions. Effects of departure from normality on statistical tests.

Section B (one paper)

Candidates to select two out of the following subjects or from other subjects which may be submitted for approval.

(*a*) Autoregression and correlogram analysis.
(*b*) Special problems in the design of experiments.
(*c*) Combinatory analysis.
(*d*) Stochastic processes.
(*e*) New developments in probability theory.
(*f*) Theory of ranking.

Section C (one paper to be taken by all candidates)

Problems of Applied Statistics. Candidates will not be expected to be familiar with all the subjects listed below and a wide choice of questions will be given.

The sources of official statistics, their use and interpretation. Vital Statistics. Problems in Eugenics, Biometry and Psychology. Applications in manufacturing industry.

7. The syllabuses in the Ancillary Subjects are as follows :—

BIOLOGY (ONE YEAR) ANCILLARY TO STATISTICS

As for Biology one-year ancillary to Chemistry (see pp. 1063-64) with paragraph(*f*)amended to read as follows :—(*f*) The essentials of growth, development and reproduction, with special reference to growth and variability in populations and individuals.

MATHEMATICS ANCILLARY TO STATISTICS

First Year

The pure mathematical subjects in the syllabus for the first year of the course in Mathematics ancillary to Chemistry.

Second Year

Algebra.—Elementary properties of determinants of any finite order. Multiplication of determinants. Matrices and elementary matrix algebra. Rank of a matrix. Latent roots of a matrix. Reduction to canonical form in the non-degenerate case. Solution of linear equations.

Calculus.—Functions of several variables. Taylor's series for such functions. Superposition of small errors. Stationary values of such functions and discrimination between maxima and minima. Lagrange's method of undetermined multipliers. Jacobians and their application to partial derivatives.

Multiple integrals. Change of variables in a multiple integral. Dirichlet's integrals and extensions. Use of orthogonal curvilinear co-ordinates.

Line and surface integrals. Green's theorem for two and three dimensions.

Differential equations.—Ordinary equations of the first order. One-parameter families of curves. Ordinary linear second order equations and method of solution of series. Hypergeometric equation. Simple linear partial differential equations of the first and second orders.

Special functions.—Beta and gamma functions. Hypergeometric function. Stirling's expansion of the gamma function.

Finite differences.—Applications to interpolation, summation and integration. Linear difference equations with constant coefficients.

Complex variable.—Conformal transformation. Complex integration.

PHYSICS (ONE YEAR) ANCILLARY TO STATISTICS

As for Intermediate Examination in Science, pp. 1014-15

ZOOLOGY (ONE YEAR) ANCILLARY TO STATISTICS

As for Zoology (One Year) ancillary to Botany, p. 1061

[*Syllabuses in the remaining Ancillary Subjects will be published later.*]

MASTER OF SCIENCE (M.Sc.)

M.Sc. in subjects other than Crystallography, Geography, Mathematics, Psychology, and History and Philosophy of Science

[For M.Sc. in Crystallography, Geography, Mathematics, Psychology, and History and Philosophy of Science, *see* pp. 1102-1111.]

Students who have obtained *Honours* at the B.Sc. (General) or B.Sc. (Special) or B.Sc. (Household and Social Science) Examination as Internal Students will on complying otherwise with the Regulations be admitted to the M.Sc. Examination after the expiration of *one year* from the time of passing the B.Sc. Examination. Candidates who have obtained a *Pass* at the B.Sc. (General) or B.Sc. (Special) or B.Sc. (Household and Social Science) Examination, or who have passed the B.Sc. (Agriculture) or B.Sc. (Horticulture) or B.Sc. (Veterinary Science) Examination as Internal Students, will not be admitted to the M.Sc. Examination before the expiration of *two years* from the date of their passing the B.Sc. Examination. Candidates registered under the Regulations for Postgraduate Students proceeding to a higher Degree must in all cases pursue a course of study extending over not less than *two academic years.*

A student who, having passed the External Intermediate Examination, is admitted as an Internal Student to the Final B.Sc. Examination after pursuing a two years' course of study and passes that Examination may submit as his third year's course of study for the B.Sc. Degree a course for the M.Sc. Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the B.Sc. Degree (General or Special) with Honours, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.Sc. Examination, but the Degree of M.Sc. will not be conferred on him until after the lapse of one year from the date of his obtaining the B.Sc. Degree.

A student who, after obtaining a Pass at the B.Sc. Examination (General or Special), has attended an M.Sc. Course as a third year's course in order to qualify for the Degree will not be allowed to enter for the M.Sc. Examination until after the lapse of one year from the date of his obtaining the B.Sc. Degree. The M.Sc. Degree will not be conferred on him until after the lapse of two years from the date of his obtaining the B.Sc. Degree.

Biochemistry

1. Every candidate for the M.Sc. Degree in Biochemistry is required to attend an approved course of study therefor as an Internal Student, but a candidate who has obtained the B.Sc. Degree as an Internal Student may be exempted from this requirement on the ground of his previous training.

2. Candidates for the M.Sc. Degree in Biochemistry must satisfy the Examiners that they have an adequate knowledge of general Biochemistry, as well as of the special subject selected by them.

3. As a general rule candidates must have obtained the Internal or External B.Sc. (Special) Degree in Chemistry with Honours and with a biological subject as subsidiary or the B.Sc. (Special) Degree in a biological subject with Honours and with Chemistry as subsidiary, but any such candidate may be required to undergo a further course of study in a biological subject or in Chemistry.

4. Internal and External graduates who do not fulfil these conditions will be required to follow an approved course of training in Chemistry or in a biological subject to be completed before registration or in special cases to be followed concurrently with the course for the M.Sc. Degree. Such candidates will be required to produce evidence that they have attained a satisfactory standard of proficiency in that subject, by examination or otherwise.

5. Other Postgraduate Students will be required to produce evidence, satisfactory to the University, of having attained a standard equal to that demanded of graduates of this University, failing which they may be required to pass a qualifying examination either before or after registration for the M.Sc. Degree.

Biophysics

1. Every candidate for the M.Sc. Degree in Biophysics is required to attend an approved course of study therefor as an Internal Student but a candidate who has obtained the B.Sc. Degree as an Internal Student may be exempted from this requirement on the ground of his previous training.

2. Candidates for the M.Sc. Degree in Biophysics must satisfy the Examiners that they have an adequate knowledge of general Biophysics as well as of the special subject selected by them.

3. As a general rule candidates should have obtained the Internal or External B.Sc. (Special) Degree with Honours in Physics or the Internal or External B.Sc. (Special) Degree with Honours in Botany or Physiology or Zoology or Anatomy or the Internal B.Sc. (Special) Degree with Honours in Chemistry (new Regulations) with Biology as a two-year ancillary subject, or the Internal or External B.Sc. (Special) Degree with Honours in Chemistry (old Regulations) with Physics as a subsidiary subject.

In addition candidates with a degree in Chemistry (old Regulations) or Physics should have passed an examination at, at least, two-year ancillary or subsidiary standard in either Botany or Physiology or Zoology or Anatomy or Biology and candidates with a degree in Botany, Physiology, Zoology or Anatomy should have passed an examination at, at least, two-year ancillary or subsidiary standard in Physics.

4. Internal or External graduates who do not fulfil the above conditions will normally be required to follow an approved course of training either in Physics or in a biological subject, such courses to be completed before registration or in special cases to be followed concurrently with the course for the M.Sc. Degree. Such candidates will be required to produce evidence, by examination or otherwise, that they have attained a satisfactory standard of proficiency in the relevant subject.

5. Other Postgraduate Students will be required to produce evidence satisfactory to the University, of having attained a standard equal to that demanded of graduates of this University, failing which they may be required to pass a qualifying examination either before or after registration for the M.Sc. Degree.

Chemical Engineering

Every candidate for the M.Sc. Degree in Chemical Engineering is required, *before being admitted to the Examination*, to attend satisfactorily an approved course of study, and shall be required in addition

(*a*) to have obtained the B.Sc. (Special) Degree in Chemistry of this University with Mathematics or Physics as a subsidiary or ancillary subject, or the B.Sc. (General) Degree with at least second class standard in Chemistry and with either Pure or Applied Mathematics or Physics as a second subject, and to produce evidence of adequate knowledge of Engineering.

or (*b*) if he is a graduate of this University who does not fulfil the above conditions, to pass a qualifying examination;

or (*c*) if he holds a Degree of another University, to produce satisfactory evidence of having attained the standard demanded of graduates of this University, failing which he may be required to pass a qualifying examination.

Candidates who apply under options (*a*), (*b*) or (*c*) must, in addition, pass or have passed an examination satisfactory to the University as being equivalent to that at the end of the final year of the B.Sc. (Eng.) Degree in Chemical Engineering.

[*Note.*—A prospective candidate for a Master's Degree in the field of Chemical Engineering whose first Degree is in the Faculty of Engineering is advised to consult also the Regulations for the M.Sc. (Eng.) Degree in Chemical Engineering (Regulations in the Faculty of Engineering for Internal Students, page 1557.)]

The M.Sc. Degree may be obtained in two ways. The candidate may either (1) be examined by all or some of the methods enumerated under (*a*), (*b*), (*c*), and (*d*) below; or (2) submit a thesis.

(1) M.Sc. WITHOUT THESIS

The M.Sc. Examination without thesis will take place twice in each year, in January and July.

At least six months* before the date on which a candidate wishes to present himself he must submit for approval the subject in which he proposes to present himself for examination and state the proposed scope and method of treatment of the subject. The candidate will then be informed as to the methods by which he will be examined, whether by

(*a*) Written Papers,
(*b*) An Oral Examination,
(*c*) A Practical Examination, or
(*d*) A Dissertation.

The candidate will be examined by some or all of these methods. A candidate who submits a dissertation will also be examined orally, and it is open to the Examiners to examine him further by means of a written or practical examination, or both if they think fit.

The dissertation shall be a critical survey of existing knowledge in the subject in which he presents himself.

Every candidate entering for this Examination must apply to the Academic Registrar for an entry-form, which must be returned, duly filled up, together with the proper fee, not later than September 15th for the January Examination and not later than April 15th for the July Examination.

A candidate submitting a dissertation must furnish not less than four typewritten or printed copies not later than November 1st for the January Examination and not later than June 1st for the July Examination.

* Any subject submitted later than the prescribed date must be accompanied by a fee of 10s. 6*d*.

If the Examiners consider that the dissertation submitted by a candidate, though inadequate, is of sufficient merit to justify such permission, they may, after examining the candidate as prescribed above, recommend that he be permitted to re-present this dissertation in a revised form within one calendar year from the decision of the Senate in regard thereto; and the fee payable on re-entry will be half the fee originally paid.

If the Examiners consider that the dissertation submitted by a candidate is adequate, but the candidate has failed to satisfy them at any of the further tests referred to above, the Examiners may recommend that he be permitted to re-present the same dissertation after six months and within one calendar year from the decision of the Senate in regard thereto; and the fee payable on re-entry will be half the fee originally paid.

No unsuccessful candidate will be permitted to re-enter within one year from the date of his first entry without the permission of the Examiners.

(2) M.Sc. WITH THESIS

The candidate must submit a thesis (four copies) which must be written in English and must be an original contribution to knowledge, printed, typewritten, or published in his own name, treating scientifically some special portion of the subject in which he is presenting himself for examination, or a cognate subject. The candidate must indicate how far the thesis embodies the result of his own research or observation, and in what respects his investigations appear to him to advance scientific knowledge. Conjoint work may be submitted as a thesis for the M.Sc. Degree, provided that the student shall furnish a statement showing clearly his share in the conjoint work and, further, provided that such statement shall be countersigned by his coadjutor.

In view of the Long Vacation, which extends from the end of June until October, a candidate who is eligible to enter for the Examination at the end of the session runs the risk of considerable delay in the decision as to the result. Such a candidate will, therefore, be permitted to submit his entry-form and fee between April 15th and May 1st and his thesis between June 1st and June 5th.

Every candidate will be required to submit to the University with his entry-form a short abstract of his thesis (four copies) comprising not more than 300 words.

A candidate will not be permitted to submit as his thesis a thesis for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a thesis covering a wider field, provided that he shall indicate on his entry-form and also on his thesis any work which has been so incorporated.

The candidate may submit his thesis at any time after the expiration of the prescribed interval from the time of passing the B.Sc. Examination or after completing the prescribed course of study. He must apply to the Academic Registrar for an entry-form, which must be returned duly filled up, together with the proper fee and four copies of the thesis.

After the Examiners have read the thesis they shall examine the candidate orally and they are at liberty also to examine him further, if they think fit, by some or all of the following methods :—(*a*) written papers, (*b*) a practical examination, or (*c*) a dissertation. If the thesis is of special excellence they may exempt the candidate from the oral examination.

If the Examiners consider that the thesis submitted by a candidate, though inadequate, is of sufficient merit to justify such permission, they may, after examining the candidate as prescribed above, recommend that he be permitted to re-present this thesis in a revised form within one calendar year from the decision of the Senate in regard thereto; and the fee payable on re-entry will be half the fee originally paid.

If the Examiners consider that the thesis submitted by a candidate is adequate, but the candidate has failed to satisfy them at any of the further tests referred to above, the Examiners may recommend that he be permitted to re-present the same thesis after six months and within one calendar year from the decision of the Senate in regard thereto; and the fee payable on re-entry will be half the fee originally paid.

No candidate will be permitted to publish his thesis as a thesis approved for the M.Sc. Degree without the special permission of the University. Applications for such permission must be made after the Degree of Master of Science has been granted. Any thesis in respect of which such permission has been granted shall contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

An Internal Student submitting a thesis or dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis or dissertation bound in accordance with the following specification:—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left hand side. Bound in a standardised form as follows: art vellum or cloth; overcast; edges uncut; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME; short title written or printed neatly and legibly on the front cover.

A thesis or dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Book-binders in London, who will bind theses to this specification at a cost of 10*s.* a copy, may be obtained from the Academic Registrar.]

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of Science which he may have published independently or conjointly. If conjoint work is submitted it must be accompanied by a statement of the candidate's share on the work, and this statement must be countersigned by his collaborator.

Every candidate for the Degree of M.Sc. must at each entry pay a fee of 12 guineas (in and after 1951, 15 guineas) except as provided above.

Candidates who have taken the M.Sc. Degree in one branch may enter for the M.Sc. Degree in another branch subsequently on payment of a fee of 12 guineas (in and after 1951, 15 guineas), provided that they comply with the Regulations in all other respects.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A diploma for the M.Sc. Degree, under the Seal of the University, shall be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

M.Sc. in Crystallography

Every candidate for an M.Sc. in Crystallography is required to register (except Internal Students on the "Suspense" list) and to attend an approved course of study in Crystallography as an Internal Student after having obtained an approved B.Sc. Degree (or having passed the Examination for such Degree as an Internal Student).

As a general rule, candidates must have obtained the Internal or External B.Sc. (Special) Degree, with Honours, in Chemistry or in Physics, or the Internal or External B.Sc. (Special) Degree in Geology with Honours and with either Chemistry or Physics as Subsidiary or Ancillary Subject. Consideration may be given to candidates with other suitable qualifications.

Postgraduate Students from other Universities will be required to produce evidence, satisfactory to this University, of having attained a standard equal to that demanded of graduates of this University.

The duration of the course in Crystallography shall not be less than one year.

Students holding an Internal Degree (Special or General) with Honours in the Faculty of Science may enter for the M.Sc. Examination in Crystallography in the year following the award of the B.Sc. Degree and shall be immediately eligible for the award of the M.Sc. Degree.

Students who have passed the Examination for the award of B.Sc. Degree with Honours (Old Regulations) but are on the suspense list may enter for the M.Sc. Examination in Crystallography in the year following the passing of the B.Sc. Examination, but the Degree of M.Sc. will not be awarded until one year after the award of the B.Sc. Degree.

Students who hold an Internal Pass Degree (Special or General) in the Faculty of Science or have passed the Examination for such Degree may enter for the M.Sc. Examination in Crystallography two years later and shall be immediately eligible for the award of the M.Sc. Degree.

Students who hold an External Degree in the Faculty of Science or students holding Degrees of other Universities may enter for the M.Sc. Examination in Crystallography not less than two years after registration.

The Examination for the M.Sc. Degree in Crystallography will be held in the month of July and will consist of (*a*) written papers and (*b*) a practical examination. The Examiners are at liberty to test the candidate by oral questions.

Every candidate entering for this Examination must apply to the Academic Registrar for an entry-form, which must be returned, duly filled up, together with the fee of 15 guineas, not later than April 15th.

M.Sc. in Geography, Mathematics and Psychology

The M.Sc. Examination in Geography, Mathematics and Psychology will take place twice in each year commencing on the first Monday in December and on the fourth Monday in May*, provided that if that day be Whit Monday the Examinations will commence on the following Tuesday.

No unsuccessful candidate will be permitted to re-enter within one year from the date of his first entry without the permission of the Examiners.

Except as provided below, every candidate at the M.Sc. Examination must have taken the B.Sc. Degree as an Internal Student at least two academic years before the M.Sc. Examination or have satisfied the requirements of the Regulations for Postgraduate Students proceeding to a higher Degree (*see* p. 101 *et seq*).

A student who, having passed the External Intermediate Examination, is admitted as an Internal Student to the Final B.Sc. Examination after pursuing a two years' course of study, and passes that Examination, may submit as his third year's course of study for the B.Sc. Degree a course for the M.Sc. Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the B.Sc. Degree, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.Sc. Examination, after the lapse of one further year.

A student who, after attending a three years' course of study as an Internal Student, has *either* passed both the B.Sc. (Special) Examination in Mathematics and the Examinations in Advanced Subjects under the old Regulations, *or* obtained First or Second Class Honours (Upper Division) at the B.Sc. (Special) Examination in Mathematics under the revised Regulations, may present himself for the M.Sc. Examination after one further year.

Students who have taken the M.A. Degree in Geography, Mathematics or Psychology will not be permitted to proceed to the M.Sc. Degree in the same subject.

A student who has obtained a pass at the B.Sc. Examination (General or Special) will not be entitled to receive the M.Sc. Degree until after a lapse of two years from the date of the conferment of the B.Sc. Degree.

Geography

Candidates, other than those who have obtained the B.A. Honours Degree in Geography or the B.Sc. (Special) Pass or Honours Degree in Geography or the B.Sc. (General) Honours Degree with Geography or the B.A. (General) Degree with Geography in the First or Second Division in this University, will generally be required to pass a qualifying examination consisting of four papers (to be selected by the University in relation to the branch of study to be offered at the M.Sc. Examination) of the B.Sc. (Special) Examination in Geography and to reach at least 2nd Class Honours standard therein. Candidates who have obtained an equivalent Degree including Geography in another University may be exempted from the whole or part of the qualifying Examination.

The M.Sc. Degree in Geography may be obtained in one of two ways. The candidate may either (1) be examined by written papers and a dissertation, or (2) submit a thesis.

* In 1951 only the May Examination will begin one week earlier, *i.e.*, on May 21, 1951.

(1) *M.Sc. in Geography without Thesis*

The Examination without a thesis shall be on some major aspect of Geography or on the regional geography of an area of continental or sub-continental extent.

At least six months before the date of the Examination at which a candidate wishes to present himself he must submit for approval (*a*) the major subject in which he wishes to present himself for examination and (*b*) the section thereof on which he proposes to submit a dissertation, stating the proposed scope and method of treatment. He shall then be informed whether such subjects are approved by the University for the purposes of the Examination. Any subject submitted later than the prescribed date must be accompanied by a fee of 10*s*. 6*d*.

The dissertation must be written in English and must be an ordered and critical exposition of existing knowledge of some part of the approved subject.

The Examination shall consist of :—

(*a*) The dissertation ;

(*b*) Two written papers on the approved subject ;

(*c*) An oral examination. It is, however, open to the Examiners to reject the candidate without holding an oral examination.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of his subject which he may have published independently or conjointly. Conjoint work must be accompanied by a statement showing clearly the candidate's own share in the conjoint work, which statement must be signed by his collaborator.

(2) *M.Sc. in Geography with Thesis*

The M.Sc. Examination in Geography will include (1) a thesis ; (2) a written examination ; and (3) an oral examination, especially on the subject of the thesis. It is, however, open to the Examiners to reject the candidate without holding an oral examination.

The thesis must be written in English and must be a record of original work or other contribution to knowledge in some branch of geography. Conjoint work may be submitted as a thesis for the Degree, provided that the student shall furnish a statement showing clearly his share in the conjoint work and further provided that such statement shall be countersigned by his collaborator.

The title and general scheme proposed for the thesis must in all cases be approved by the University, for which purpose they must be submitted to the University not later than October 15th for the next ensuing May Examination or not later than April 15th for the next ensuing December Examination.* Any title submitted later than the prescribed date must be accompanied by a fee of 10*s*. 6*d*.

The written portion of the M.Sc. Examination shall consist of one or more papers on a subject cognate to that of the thesis. The candidate will be informed of the subject in which he will be examined at the same time that the University communicates its decision regarding the approval of the subject proposed for the thesis.

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* Candidates are advised to submit, if possible, the titles of their theses not later than May 1st or December 1st in the year previous to their entry to the M.Sc. Examination in order to avoid delay in regard to the approval thereof.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of his subject which he may have published independently or conjointly. Conjoint work must be accompanied by a statement showing clearly the candidate's own share in the conjoint work, which statement must be signed by his collaborator.

Mathematics

Candidates other than those who have taken the B.A. Honours Degree in Mathematics, or the B.Sc. (Special) Pass or Honours Degree in Mathematics, or the B.Sc. (General) Honours Degree with Pure and Applied Mathematics, or the B.A. (General) Degree with Pure and Applied Mathematics in the First or Second Division, in this University will generally be required to pass a qualifying examination before proceeding to the M.Sc. Degree. In determining the nature of this qualifying examination regard will be paid to the candidate's academic record and to the subjects which he proposes to offer for the M.Sc., but the examination will normally consist of the papers for the B.Sc. (Special) Examination in Mathematics.

The Examination for the M.Sc. Degree in Mathematics will be in one or two subjects of advanced mathematics to be approved in each case by the University. If only one subject is offered, a correspondingly higher standard will be required and the course will normally include the study of original memoirs.

A candidate must submit, not later than six months before the Examination, a statement of the subject or subjects which he proposes to offer for the M.Sc. Examination,* and may, if he so desire, submit a statement as to the line of treatment; and he shall be informed whether the University is prepared to approve such subjects for the purposes of the M.Sc. Examination.

A candidate may submit in connexion with his candidature for the M.Sc. Examination either (1) a dissertation which shall be an ordered and critical exposition of existing knowledge of part or the whole of the subject or subjects submitted by him, or (2) a thesis which shall be a record of original work; but such a dissertation or thesis shall not be required. The dissertation or thesis must be written in English.

Any candidate who submits a thesis will be required to forward to the University with his entry-form a short abstract of his thesis comprising not more than 300 words.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of Science which he may have published independently or conjointly.

The Examination shall consist of (*a*) written papers, in which subjects may be proposed for essays, (*b*) an oral examination, (*c*) a report on a problem or problems proposed by the Examiners; or such of them as may be determined by the Examiners in each case, provided that the examination shall not consist of (*c*) alone. In determining the scope and method of examination, regard will be paid to the dissertation or thesis (if any) submitted by the candidate, who will be informed generally as to this matter as soon as possible.

Psychology

All candidates who have not obtained the B.Sc. (Special) Degree in Psychology are normally required to pass, as a qualification for admission to the M.Sc. Examination, the B.Sc. (Special) Examination in Psychology, but candidates may apply to be exempted from the

* Any statement submitted later than the prescribed date must be accompanied by a fee of 10*s.* 6*d.*

whole or part of this Examination on the ground of having passed an Examination equivalent thereto. Candidates presenting themselves for the B.Sc. (Special) Examination as a qualifying examination are not required to take a subsidiary subject.

The M.Sc. Examination in Psychology will include (1) a thesis, which shall be a record of original work, *or* a dissertation, which shall be an ordered and critical exposition of existing knowledge in regard to a particular subject; (2) a written examination; and (3) an oral examination especially on the subject of the thesis or dissertation. The thesis or dissertation must be written in English.

The written portion of the M.Sc. Examination in Psychology will consist of two papers, as follows:—

1. One paper on the whole branch of study to which the thesis or dissertation belongs.
2. One paper connected still more closely with the thesis or dissertation.

When the thesis is of an experimental character the Examiners shall be at liberty to test the candidate by means of a practical examination bearing on the subject of the thesis.

Conjoint work may be submitted as a thesis for the M.Sc. Degree, provided that the student shall furnish a statement showing clearly his share in the conjoint work and further provided that such statement shall be countersigned by his coadjutor.

Every candidate will be required to forward to the University with his entry-form a short abstract of his thesis or dissertation comprising not more than 300 words.

A candidate will not be permitted to submit as his thesis or dissertation a thesis or dissertation for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or any other University in a thesis or dissertation covering a wider field, provided that he shall indicate on his entry-form and also on his thesis or dissertation any work which has been so incorporated.

The title proposed for the thesis or dissertation must in all cases be approved by the University, for which purpose it must be submitted to the University not later than October 15th for the next ensuing May Examination or not later than April 15th for the next ensuing December Examination.* Any title submitted later than the prescribed date must be accompanied by a fee of 10*s.* 6*d.*

The time-table of the Examination will be furnished by the Academic Registrar to each candidate.

Every candidate entering for this Examination must apply to the Academic Registrar for an entry-form which must be returned duly filled up, together with the proper fee, not later than February 1st for the May Examination and not later than September 15th for the December Examination.

The candidate must furnish, not later than April 1st for the May Examination and not later than October 15th for the December Examination, not less than four typewritten or printed copies of the thesis or dissertation.

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* Candidates are advised to submit, if possible, the titles of their theses not later than May 1st or December 1st in the year previous to their entry to the M.Sc. Examination in order to avoid delay in regard to the approval thereof.

An Internal Student submitting a thesis or dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis or dissertation bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters) DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A thesis or dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Book-binders in London, who will bind these and dissertations to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

The fee for each student is 12 guineas (in and after 1951, 15 guineas) for each entry to the whole Examination.

The fee payable on re-entry by candidates who have been exempted either from the written portion of the examination or from the presentation of a thesis (or dissertation) is 6 guineas (in and after 1951, 7½ guineas).

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Candidates who have taken the M.Sc. Degree in one branch may enter for the M.Sc. Degree in another branch subsequently on payment of a fee of 12 guineas (in and after 1951, 15 guineas), provided that they comply with the Regulations in all other respects.

If the Examiners consider that a candidate's thesis (or dissertation) is adequate, but that he has not reached the required standard in the written portion of the Examination, they may, if they think fit, recommend that the candidate be exempted on re-entry from presentation of a thesis (or dissertation). Similarly, if the Examiners consider that the candidate has reached the required standard in the written portion of the Examination, but that his thesis (or dissertation) is not adequate, they may, if they think fit, recommend that he be exempted on re-entry from the written portion of the Examination. In both the above cases the Examiners may, if they so desire, examine the candidate again orally when he re-enters for the Examination.

A list of candidates for the M.Sc. Degree in Geography, Mathematics and Psychology who have satisfied the Examiners, arranged in alphabetical order, will be published by the Academic Registrar. A mark of distinction will be placed against the names of those candidates who show exceptional merit.

No candidate will be permitted to publish his thesis as a thesis approved for the M.Sc. Degree without the special permission of the University. Applications for such permission must be made after the Degree of Master of Science has been granted. Any thesis in respect of which such permission has been granted shall contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

A diploma for the M.Sc. Degree, under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

M.Sc. in History and Philosophy of Science

The M.Sc. Examination in the History and Philosophy of Science will take place once in each year commencing on the fourth Monday in September.

Except as provided below, no person shall be admitted as a candidate for the Degree of M.Sc. in the History and Philosophy of Science as an Internal Student until after the expiration of one academic year from the time of his taking the B.Sc. Degree in this University as an Internal Student; nor until he shall have attended an approved course of study as an Internal Student extending over not less than one year; nor in the case of a student registered under the Regulations for Post-graduate Students proceeding to a higher Degree until he has completed a course of higher study in accordance with these Regulations (*see* p. 101 *et seq.*). All students must at the beginning of their course of study apply through the authorities of their College for registration as candidates for the Degree.

Students will be required to send to the University, with their entry-forms for the M.Sc. Examination, certificates of having completed the prescribed course of study.

A student, who, having passed the External Intermediate Examination, is admitted as an Internal Student to the Final B.Sc. Examination after pursuing a two years' course of study and passes that Examination, may submit as his third year's course of study for the B.Sc. Degree a course for the M.Sc. Degree in the History and Philosophy of Science in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the B.Sc. Degree he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.Sc. Examination in the History and Philosophy of Science, but the Degree of M.Sc. will not be conferred on him until after the lapse of one year from the date of his obtaining the B.Sc. Degree.

Examination

The Examination will be divided into two Parts, which may be taken together or separately. Either Part may be taken first.

Part I of the Examination will consist of four papers as follows:—

(1) Early History of Science (A) (i).

(2) *Either* the History of Mathematics and the Physical Sciences (A) (ii), *or* the History of the Biological Sciences (A) (iii).

(3) *Either* the History of Mathematics and the Physical Sciences (B), *or* the History of the Biological Sciences (C).

(4) Philosophy and Science (D).

Part II of the Examination will consist of:—

Either a special paper *or* a dissertation (in English) on an approved subject or subjects selected by the candidate from any part or parts of the syllabus.

An oral examination in the branch of knowledge connected with the special subject or dissertation.

The subject or subjects selected by the candidate should be submitted to the University for approval not later than six months before the date of the Examination for which the candidate proposes to enter. Any subject submitted later than the prescribed date must be accompanied by a fee of 10*s.* 6*d.* If a dissertation on an approved subject be not presented within three years from the date of approval, the subject must again be submitted to the University for approval.

The candidate will be expected to show a detailed acquaintance with the special subject. In the case of a dissertation the subject selected should be of limited range, as, for instance, the work of an important investigator, the history or part of the history of an important theory, an aspect of scientific method, some philosophical implication of science or a short historical period. In the case of a special paper a subject of wider range is desirable. In neither case should the subject-matter deal with modern work except incidentally.

If the Examiners consider that the dissertation submitted by a candidate, though inadequate, is of sufficient merit to justify such permission they may recommend that he be permitted to present this dissertation in a revised form within one calendar year from the decision of the Senate in regard thereto. The Examiners may, if they so desire, examine the candidate again orally when he re-enters for the Examination.

Every candidate entering for either Part of this Examination must apply to the Academic Registrar for an entry-form, which must be returned, duly filled up, together with the proper fee, not later than June 1st. If a dissertation is submitted four copies thereof must be forwarded to the Academic Registrar not later than September 1st.

A candidate who enters for both parts of the Examination on the same occasion must pay a fee of 12 guineas (in and after 1951, 15 guineas). A candidate who enters for examination or re-examination in one Part only must pay a fee of 6 guineas (in and after 1951, 7½ guineas).

Candidates who have taken the M.Sc. Degree in one branch may enter for the M.Sc. Degree in another branch subsequently on payment of a fee of 12 guineas (in and after 1951, 15 guineas), provided that they comply with the Regulations in all other respects.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

An Internal Student submitting a dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his dissertation bound in accordance with the following specification :—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Book-binders in London, who will bind dissertations to this specification at a cost of 10*s.* a copy, may be obtained from the Academic Registrar.]

A diploma for the M.Sc. Degree in the History and Philosophy of Science, under the Seal of the University, shall be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

The Syllabus for Part I of the Examination is as follows :—

(A) (i) *Early History of Science*

Antiquity:—The beginnings of Science in the early civilisations ; the Greek and Alexandrian philosophers ; Science in Roman times.

The Middle Ages:—The survival of scientific ideas in the East and their subsequent spread to the West ; Scholasticism and Science ; the forerunners of modern Science.

The Renaissance and the transition to modern times:—Naturalistic tendencies ; Philosophy and the experimental method ; foundation of the Academies.

(A) (ii) *History of Mathematics and the Physical Sciences*

The general rise and development of Astronomy, Physics and Chemistry from the middle of the seventeenth to the end of the nineteenth century and of Mathematics to the end of the eighteenth century.

(A) (iii) *History of the Biological Sciences*

The general rise and development of biological and geological science from the middle of the seventeenth to the end of the nineteenth century.

All candidates must take A (i) and either A (ii) or A (iii). Questions in A (ii) and A (iii) will be of a more general type than those in Papers B and C.

(B) *History of Mathematics and the Physical Sciences*

The history of astronomy, physics and chemistry from the middle of the sixteenth to the end of the nineteenth century and of mathematics from the middle of the sixteenth to the end of the eighteenth century. The paper will be divided into four sections : (i) History of Astronomy ; (ii) History of Mathematics ; (iii) History of Physics ; and (iv) History of Chemistry ; and candidates will be allowed to restrict their answers to one section only.

(C) *History of the Biological Sciences*

The general rise and development of biological and geological science from the beginning of the seventeenth to the end of the nineteenth century. Questions will be set on the general history of the biological sciences, on the history of botany, geology and zoology, and on biological developments in medical science.

(D) *Philosophy and Science*

The methods and mutual relations of history, science and philosophy. Does the scientist adopt a peculiar view of the world, or can he accept the view of common sense ? The nature of scientific activity. The rational and empirical elements in science.

Data: Analysis of the empirical data of the physical, biological and psychological sciences.

Consideration of the procedure followed in science. Theory of measurement. The principle of relativity in its relation to the problem of measurement.

Interpretation: Formation of scientific concepts and theories. The functions of logic and of mathematics in the empirical sciences. Discussion and elucidation of some modern developments of the applications of non-euclidean geometry and non-commutative algebra.

Scientific Concepts and Theories

General characteristics of scientific concepts. Continuity and discontinuity, macroscopic and microscopic concepts, causal and statistical laws, probability; principles of taxonomy, teleological laws, mechanism and vitalism in biology, the problem of the relation between biological and psychological science.

The more comprehensive scientific generalisations; the conservation of energy and increase of entropy, the theory of relativity, quantum theory; Mendelian genetics, the theory of evolution.

Analysis of outstanding concepts; time, space; the universe—its expansion and "running down," the ultimate particles; the fundamental concepts of biology.

Current views and controversies in relation to the philosophy of science.

Candidates will be expected to show a clear understanding of the contents of the syllabus, and not merely a superficial acquaintance with the meaning of the terms occurring in it. They will, however, not be expected to work out detailed problems or to discuss finer points of controversy.

DOCTOR OF PHILOSOPHY (Ph.D.)

[Regulations for the Degree of Ph.D. will be found on pp. 106-115.]

DOCTOR OF SCIENCE (D.Sc.)

Every candidate for the Degree of Doctor of Science must have obtained as an Internal Student of this University the M.Sc. or Ph.D. Degree in the Faculty of Science, or the B.Sc. Degree as an Internal Student and the M.Sc. or Ph.D. in the Faculty of Science as an External Student. Nevertheless a candidate who has obtained the B.Sc. Degree as an Internal Student may, in exceptional circumstances, be exempted by the Senate from this requirement on the ground of published work.

A candidate who, as an Internal Student, has obtained the M.D., M.S. or Ph.D. Degree in the Faculty of Medicine or the M.Sc. (Eng.) or the Ph.D. Degree in the Faculty of Engineering may be permitted to proceed to the D.Sc. Degree if, in the opinion of the Senate, the published work he submit falls within the purview of the Faculty of Science.

A candidate for the D.Sc. Degree in the History and Philosophy of Science must have passed the M.Sc. Examination in that subject as an Internal Student unless specially exempted therefrom by the Senate on the ground of published work.

The D.Sc. Degree is awarded only for work of a high standard such as would give the candidate an authoritative standing in his particular line of research. The work should afford definite evidence of the candidate's ability to initiate and conduct or direct research of such a standard.

A candidate may make application at any time for the Degree and must at the same time submit evidence of his qualifications, such evidence to consist of published* papers or books containing original contributions to the advancement of knowledge. A substantial

* In these regulations the term "published" shall mean printed in a periodical or as a pamphlet or book on sale to the public through booksellers. The purpose of requiring publication is to ensure that the work submitted has been available for criticism by relevant experts, and Examiners are given discretion to disregard any of the work submitted if, in their opinion, the work has not been so available for criticism either on account of its inaccessibility or because it has been submitted for the Degree at too short an interval after its publication.

amount of the work submitted must be independent work published in the candidate's own name. If conjoint work is submitted the candidate must produce satisfactory evidence as to the extent to which he was responsible for the initiation and conduct or direction of such conjoint work. The candidate is required to indicate what part, if any, of the work has been submitted for a Degree in this or any other University by himself or, in the case of conjoint work, by any of his collaborators.

The Examiners may, at their discretion, require the candidate to present himself for an interview.

Every candidate must apply to the Academic Registrar for an entry form which must be returned, duly completed, with a fee of twenty guineas and four copies of such printed contributions of scientific knowledge as he may desire to submit.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A candidate who fails to qualify for the award of the D.Sc. Degree will be required on re-entry to comply with the Regulations in force at the time of his re-entry.

After the report of the Examiners shall have been approved by the Senate the Academic Registrar shall publish a list of the candidates on whom the Degree of D.Sc. has been conferred.

A diploma for the Degree of D.Sc. under the Seal of the University shall be delivered to each successful candidate after the Report of the Examiners shall have been approved by the Senate.

EXAMINATION-PAPERS

The following pamphlets or sets of past Examination-papers can be obtained from the University of London (Publications Branch), Senate House, W.C.1:

Science.

Intermediate	2*s.* 0*d.*, post free.
B.Sc. General	2*s.* 6*d.* ,,
B.Sc. Special:	
Sets of papers in the different subjects for any one examination, including one subject subsidiary to the principal subject if specified	1*s.* 3*d.* each subject, post free.
Sets of papers in the different subjects for the College examinations	1*s.* 3*d.* each subject, post free.
M.Sc.:	
Sets of papers in the different subjects for any one examination	1*s.* 3*d.* each subject, post free.

(Enquirers should state the subject(s), also section or branch, if any.)

A complete list of the Examination-papers published by the University can be obtained on application.

UNIVERSITY OF LONDON

Faculty of Science

AGRICULTURE

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the Degrees of Bachelor of Science (Agriculture) (B.Sc.), and Master of Science (Agriculture) (M.Sc.).

In order to be admitted to the Degree of B.Sc. (Agric.) as an Internal Student, a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Agriculture unless exempted therefrom, *or* pass the Preliminary (Intermediate) Examination in Science with Chemistry, Botany, and Zoology, and one of the following subjects :—Physics, Geology, Pure Mathematics, Applied Mathematics.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the Course for the Intermediate and Final Examinations is normally not less than three years but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Agriculture.

Internal Students who have obtained the Degree of B.Sc. (Agric.) will be permitted to proceed to the M.Sc. (Agric.), Ph.D. and D.Sc. Degrees in accordance with the Regulations for those Degrees.

INTERMEDIATE EXAMINATION IN AGRICULTURE

Course of Study

The Intermediate Course in Agriculture extends over not less than one academic year.

The subjects of the Course are as follows :—

Chemistry

Botany

Zoology

One of the following subjects :—

Physics, Geology, Pure Mathematics, Applied Mathematics, Economics.

Exemptions

Students who are Matriculated Students of the University and who, *either*

(*a*) at an examination recognised by the Ministry of Education as an approved second examination in Secondary Schools, have passed one or more of the subjects required for the Intermediate Examination in Agriculture set out above, *or*

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(*b*) at an examination for a General Certificate of Education awarded by one of the approved University Examining Bodies have passed at the Advanced Level in one or more of the subjects required for the Intermediate Examination in Agriculture,

may apply for exemption in such subject or subjects at the Intermediate Examination in Agriculture.

Graduates in Horticulture of this University are exempted from the Intermediate Examination in Agriculture.

Students who have passed the Intermediate Examination in Arts with Economics or the Intermediate Examination in Economics or Commerce will be exempted from examination in Economics.

Students who have passed Part II of the Intermediate Examination in Economics or Commerce will be exempted from Paper I in Economics.

Students who have passed Part I of the Intermediate Examination in Economics or Commerce or the Intermediate Examination in Estate Management will be exempted from Paper II in Economics.

Date of Examination

The General Intermediate Examination in Science (Agriculture) will take place once in each academic year commencing in the week beginning on the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than April 17th.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination. For re-examination in one subject the fee is 2 guineas. Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper or practical examination up to a maximum of 6 guineas. Other candidates exempted from part of the Examination on the ground of having passed other Examinations in this University are required to pay a fee of 2 guineas for each subject offered up to a maximum of 6 guineas.

The fee for examination in a supplementary subject is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed, "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects are as follows:—

Chemistry (2 papers of three hours each and a practical examination).

Botany (2 papers of three hours each and a practical examination).

Zoology (2 papers of three hours each and a practical examination).

One of the following subjects:—

Physics (2 papers of three hours each and a practical examination).

Geology (2 papers of three hours each and a practical examination).

Pure Mathematics (2 papers of three hours each).

Applied Mathematics (2 papers of three hours each).

Economics (2 papers of three hours each).

The Examiners shall be at liberty to test any candidate by means of oral questions.

The examination will be a Pass Examination only, and the list of successful candidates will present the names in alphabetical order without division into classes.

Candidates shall not be approved unless they have shown a competent knowledge in each of the four subjects selected. A candidate who enters for the whole Examination at one and the same time may, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the remaining subjects is of sufficient merit, be credited with the three subjects in which he has satisfied the Examiners and permitted to present himself on one or more occasions for re-examination in the fourth subject alone, or for examination in another subject allowed by the Regulations, at a subsequent Intermediate Examination (see General Regulations for Intermediate Examinations, p. 10). The approval of the authorities of the School or Institution at which the student is registered must be obtained for any change of subject and a candidate offering a new subject must have followed an approved course of study in that subject.

Candidates must bring to the practical examination their note-books, certified by their teachers as being the record of the work carried out by the candidate in the laboratory, so that the Examiners may inspect them if they so desire. These note-books must be taken away by the candidates at the close of the examination.

A provisional list of successful candidates, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on August 20th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

Supplementary Subjects

Candidates who have passed the Intermediate Examination in Agriculture may enter for examination in one or more supplementary subjects, after having attended an approved course of study in such subject or subjects.

SYLLABUSES

The following syllabuses of the subjects of the Intermediate Course are intended to indicate the general scope and character of the courses without being exhaustive of all parts of the subject :—

Chemistry

[Syllabus as for Preliminary (Intermediate) Science, *see pp.* 1009–1011]

Botany

[Syllabus as for Preliminary (Intermediate) Science, *see pp.* 1008–1009]

Zoology

[Syllabus as for Preliminary (Intermediate) Science, *see pp.* 1017–1018]

Physics

[Syllabus as for Preliminary (Intermediate) Science, *see pp.* 1014–1015]

Geology

[Syllabus as for Preliminary (Intermediate) Science, *see pp.* 1012–1013]

Pure Mathematics

[Syllabus as for Preliminary (Intermediate) Science, *see p.* 1013]

Applied Mathematics

[Syllabus as for Preliminary (Intermediate) Science, *see p.* 1013]

Economics

I *ENGLISH ECONOMIC HISTORY*

The outlines of the economic and social development of England. The questions will deal mainly with the period from the eighteenth century to the present day, but candidates should be familiar with the nature of the open-field system of farming, with the handicraft system of industry, and with the system of foreign trade which existed before 1700. The aim of the syllabus is to enable students to disentangle the causes as well as the course of economic and social change.

Agriculture. The history of agriculture to include changes in agrarian organisation and farming methods, " high farming ", and agricultural adjustments in the late nineteenth and early twentieth centuries.

Industry. The transition to industrialism. Factors in industrial development—invention and technological change, the application of science, the widening of internal and external markets, increasing productivity. Iron, coal, and textiles. The growth and extension of the factory system. Changes in the location of industry. Roads, canals and evolution of railways. The course of railway legislation. The outline history of shipping from sail to steam. Cheap steel and the subsequent course of industrial change ; the new industries of the late nineteenth and early twentieth centuries. Industrial concentration and combination. The industrial policy of governments since the last quarter of the nineteenth century.

Commerce and Finance. Economic problems and policy during and after the American and French Wars. The growth of the liberal economy ; the establishment of free trade. The growth of the banking system before, and after, the Act of 1844. The financing of railways, the achievement of general limited liability and the spread of joint-stock organisation. The expansion of home, and the changing character of foreign, trade. The growth and distribution of foreign investments. Major changes in the general price level. The alternation of good and bad times. Major changes in taxation and government expenditure. Tariff policy in the twentieth century. The economic consequences of twentieth-century wars.

Social Organisation. The expansion of population. Changes in the mobility of labour. The problems created by the growth of towns. The declining influence of the land-owning classes. The growth and influence of the middle classes. The growth and composition of the working-classes ; changes in their standard of living ; the history of Trade Unionism ; the co-operative movement. Changes in the franchise and their economic consequences. The social policy of governments, including the history and break-up of the Poor Law, public health and factory legislation, education, the expansion of the social services.

II *ECONOMICS*

The Economic Structure of the United Kingdom

Population : size, sex- and age-distribution. Geographical and occupational distribution.

Industrial Structure : relevant size of main industries, their location and organisation, including agriculture, coal, steel, textiles.

The Labour Market : trade unions and collective bargaining.

International Trade : visible and invisible imports and exports.

National Income and Output : meaning, composition and distribution.

Public Finance : the main sources of revenue and types of expenditure.

Financial Organisation : the commercial banks. The Bank of England. The capital market.

Some Elements of Economic Analysis

Division of Labour. The Factors determining average income per head. Causes of Location of Industry. Advantages of International Trade.

An outline of the functions of the price-mechanism ; supply and demand in relation to the allocation of resources.

Causes and effects of changes in demand for and supply of goods and factors. Elasticities of demand and supply. The effects of maximum and minimum prices. The incidence of direct and indirect taxes. Causes and effects of monopoly.

The Nature and function of money, banks, and the foreign exchange market. The measurement of changes in the general level of prices and their causes.

B.Sc. (AGRICULTURE) DEGREE

Course of Study

The course for the Final Examination normally extends over not less than two academic years.

The Final Examination is divided into two parts of which the Science subjects form Part I and the professional subjects Part II.

The subjects are as follows :—

PART I

Chemistry
Botany
Zoology
Geology

PART II

Crop Husbandry
Agricultural Engineering
Animal Husbandry
Veterinary Hygiene
Farm Management
Agricultural Economics
Agricultural Accountancy

Date of Examination

The B.Sc. (Agriculture) Examination will take place once in each year, beginning on the third Monday prior to the first Monday in July.

Every student entering for the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee not later than March 7th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate showing both the time and place of the written and oral examinations.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination.*

Candidates who enter for one Part only, whether by reason of previous failure or otherwise, shall pay a fee of 3 guineas on each occasion.

The fee for re-examination in one subject of Part I is 2 guineas.

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* For regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Final Examination are as follows:—

Part I

Chemistry (2 three-hour papers and an oral examination)
Botany (1 three-hour paper and a three-hour practical examination)
Zoology (1 three-hour paper and a three-hour practical examination)
Geology (1 three-hour paper and a three-hour practical examination)

Part II

Crop Husbandry
Agricultural Engineering
Animal Husbandry
Veterinary Hygiene
Farm Management
Agricultural Economics
Agricultural Accountancy

1 paper in each subject and an oral examination.

At the oral examination candidates will be required to produce a note-book recording a year's operations on a farm. At the discretion of the Examiners, the oral examination may be held on a farm, in order that the extent of the candidate's personal acquaintance with the routine of farming may be ascertained.

A candidate may take Part I at the end of his first year's Final Course, and Part II at the end of his second year's Final Course, or he may take Parts I and II together at the end of the Course, but Part II may in no case be taken before Part I.

If a candidate enter for Parts I and II on the same occasion, and pass in Part I but fail in Part II, he shall be credited with having passed in Part I; but if he fail to pass in Part I, the Examiners shall make no report on his work in Part II.

A student who fails in one subject only in Part I of the Examination may, with the consent of the Examiners, take that subject alone at the end of his second year's Final Course together with Part II of the Examination.

A provisional list of successful candidates, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on July 25th.

A diploma for the Degree of B.Sc. (Agriculture), under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations:—

(1) Candidates at the B.Sc. (Agriculture) Examination who have completed more than half of the Examination are eligible to apply for an Aegrotat Degree. Candidates who have entered for Part I only are not eligible to apply for the award of an Aegrotat Degree.

(2) Application from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same Examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

The syllabuses are as follows :—

PART I

Chemistry

The student will be required to possess a knowledge of the chemistry of the more important substances involved in plant and animal life, including the enzymes, and also the chemistry of fermentation. He must also be familiar with the main lines of enquiry and the chief results obtained at Rothamsted and Woburn and also with the more important recent work of foreign stations. History and development of Agricultural Chemistry.

Plant Life.—Proximate and ultimate constituents of plants, their distribution in the plant, current views as to their functions; methods of investigation. Requirements of the crop with respect to air, food, light, water and soil. Elements required for nutrition, their respective functions. Chemical changes during germination, growth and maturation. Composition of the ordinary farm crops, variation with soil, season and manuring. Changes during storage, ensilage.

Soils.—Origin considered in relation to geological structure, soil profiles, composition, chemical and physical properties of soils. Relation of soil to temperature and water content, effect of tillage operations, methods of improving soils, liming, chalking, marling, etc. The soil as a medium for plant and bacterial life. Bacterial changes in soil, nitrification, denitrification, humification, partial sterilisation, etc. Methods for mechanical and chemical analysis of soil, interpretation of results. Movement of salts in soils, drainage water, alkali soils. Soil types.

Manures.—Farm-yard manure, composition, chemical and bacterial changes. Green manuring. Composition and properties of the chief fertilisers, their sources and mode of action. Adaptation to and relative values on soils of different types. Methods of analysis; adulteration. Valuation of manures. Crop residues.

Feeding.—Constituents of the animal body, variation with age and feeding. Constituents of food, their respective functions. Respiration and excretion. Chemistry of animal digestion, methods of investigation. Digestibility and circumstances affecting it. Nutritive value of food, calorimetric experiments. Relation of foods to animal requirements, albuminoid ratio, starch equivalents. Feeding stuffs and sources of supply, preparation. Analysis of feeding stuffs and interpretation of results. Adulteration. Residual manurial value of foods. Methods of conducting feeding experiments.

Sprays.—Composition and properties of the chief materials used in the control of insect and fungus pests. Sprays and dusts. Fumigation. Soil sterilisation. Seed treatment.

Dairy Chemistry.—Composition of milk, butter and cheese. Action of ferments and the changes they produce. Pasteurisation, sterilisation, preservatives. Circumstances affecting quantity and quality of milk. Chemical changes involved in the production of butter and cheese, and their after-changes during ripening. Methods of milk testing, analysis of dairy products. Adulteration.

Practical Work.—There will be an oral examination at which the candidate must submit a note-book duly signed by his teacher containing a record of experiments carried out by him on the chemical and physical properties of soils and manures, the composition of crops; nitrification, properties of enzymes, etc.; analysis of manures, feeding stuffs, dairy products, soils and water; insecticides and fungicides. These note-books must be taken away by the candidates at the close of the examination.

Botany

Grassland Work.—The systematic position of the Gramineæ. Comparison with rushes and sedges. Classification and economic characters and the identification of the commonly occurring grasses and clovers and of parts thereof.

Principles underlying the management of grassland. Alteration in grassland plants by grazing and cultural operations. Natural and semi-natural types of grassland. Principles underlying the selection of a seeds mixture.

Methods for examining the herbage of meadows and pasture.

Cereals.—Classification and comparison of types of wheat, barley and oats. Points of distinction in the diagnosis of new varieties. The general structure of the plant of maize, rice and rye. The effect of external conditions on the cereal crop, laying, tillering, root-system.

Crop Plants.—Systematic review of the Natural Orders to which the useful agricultural plants of Great Britain belong. Detailed study of the important species and varieties of these plants and their recognition in various stages of growth. Influence of habitat and external conditions on agricultural plants.

Mycology.—The life history of the principal fungous pests of cereals, potatoes, root-crops and the hop. Remedial and preventive measures. The mushroom. Yeast and fermentation. Bacteria in their relation to the nutrition of agricultural plants.

Genetics.—Principles of plant breeding, origin of new varieties and development of improved forms.

Seed Testing.—Object and methods of seed testing. Preliminary inspection of samples; methods of sampling; purity, germination and other tests. Adaptations required for special cases. Impurities and their recognition. Points of practical importance as regards legislation.

Weeds and Harmful Plants.—The nature of the damage caused by weeds. Adaptation of plants or parts thereof for distribution by various agencies. Description of plants or seeds scheduled as poisonous or harmful.

Parasitic and semi-parasitic Angiosperms, with special reference to dodder and broomrape. Prevention and eradication of weeds: (*a*) methods correlated with the special life history of the plants, (*b*) effect of cultivation, and (*c*) chemical methods of control. Conditions of growth of arable contrasted with those of grassland weeds. Vitality of dormant seed. Influence of habitat (change of country, etc.). Weed communities. Weeds as soil indicators. Use of a weed survey. Weed seeds as determinants of place of origin of samples.

Classification and identification of common farm weeds or portions thereof.

Foods and Feeding Stuffs.—Botanical examination of foods and feeding stuffs, including the microscopic examination of cakes and meals.

Practical Work.—Examination, recognition and description of plants or parts of plants referred to above, including the preparation and mounting of stained sections. Examination and testing of seed samples, and use of seed-testing apparatus; identification of useful and weed seeds. Examination of diseased plants and identification of the parasite; preparation of slides and examination of simple cultures such as those of yeast or mucor. Examination of cattle foods including microscopic diagnosis of the constituents of cakes and meals.

Field Work.—The relation of plants to habitat conditions. Pasture analysis. Identification of British plants by means of a Flora.

Candidates must bring to the examination their note-books certified by their teachers, as being the record of the practical work carried out by the candidate. These note-books must be taken away by the candidates at the close of the examination.

Zoology

General Principles.—The general principles of Agricultural Zoology and of control methods in relation to animal pests. A study of the phenomena of parasitism, parthenogenesis (including pædogenesis), viviparity, the social behaviour of insects, sexual dimorphism, Mendelism.

General Agricultural Zoology.—The agricultural importance of Protozoa, Platyhelminthes, Nematahelminthes, Annelida, Arthropoda, Aves and wild Mammalia.

Anatomy and Physiology.—A knowledge of the organisation of the types studied in the Intermediate course supplemented by a consideration of the snail, the wasp and an eelworm, *Ascaris*, and the external characters of a millipede and a centipede.

Economic Entomology.—Life histories of the principal injurious Insecta. Feeding habits, particularly in relation to control of insects. Biological control and beneficial insects.

Taxonomy, etc.—The principles of zoological nomenclature and bibliographical indexing. Methods of collecting, preserving and examining specimens.

Practical Work.—The dissection, microscopical examination and description of specimens or parts of the following animals: snail, wasp, eelworm, *Ascaris*. The examination of the external features of millipedes and centipedes. The determination of the zoological position of animals belonging to groups represented in this syllabus. Recognition in the field of the more important animals of economic importance. Candidates must bring to the examination their note-books certified by their teachers as being the record of the work carried out by the candidate in the laboratory, and the field. These note-books must be taken away by the candidates at the close of the examination.

Geology

Rocks and minerals as the sources of sand, silt and clay in soils; igneous, sedimentary and metamorphic rocks, principles of classification. Chronology of sedimentary rocks. Superficial deposits, drifts. Local geology and the interpretation of geological maps in relation to soil-formation. The disintegration of rocks and minerals. Skeleton

soils. Pedogenesis. Geology and deposition of the mineral part of the soil, soil-colour, topography of soils, natural drainage of soils, soil-profile. The principles of soil classification : soil groups (*e.g.*, the soils of the Tundra, Podsols, Brown Earths, Tchernozem, Alkaline Soils, Laterites). Soil series, soil types, soil (textural) classes. Soil surveying. Soil mapping.

Practical Work.—The interpretation of geological maps with special reference to superficial deposits and drift. The relationships between the evidence provided by geological maps and the soil.

Soil maps. Comparisons between soil maps and the descriptions of the soils mapped. Soil-survey methods.

Examination of soils in monoliths and in the field (including soil colour and soil texture): reporting upon such soil-examinations. The evidences of pedogenic processes (*e.g.*, pans, bleaching, colour changes).

The identification in hand-specimens of the common igneous, sedimentary and metamorphic rocks. The microscopical identification and description of common minerals found in the soil such as :—Quartz, Felspar, Mica, Glauconite, Zircon, Rutile, Staurolite, Magnetite, Tourmaline, Hæmatite, Limonite. [List subject to revision from time to time.]

PART II

Crop Husbandry

Soils.—Relation to geological conditions. Formation, composition, properties and classification. Types. Suitability for cultivation or grazing. Indications of fertility and exhaustion. Soils in relation to systems of farming.

Climate.—The effects of climate on soil cultivation and cropping systems. Rainfall. Temperature. Prevailing winds and weather forecasts.

Soil Improvement.—Reclamation. Drainage, irrigation, warping. Bare and summer fallowing. Application and effect of lime and chalk.

Land Drainage.—Relation to geological formation. Objects, systems, methods and costs of drainage. Mole drainage. Drainage of sheep farms. Surface drainage.

Soil Cultivation.—Importance of good soil texture. Tillage operations. Subsoiling. Deep cultivation. Surface tillage. Use of implements of cultivation. Horse, tractor and steam cultivation.

Manures.—Classification of manures. Nitrogenous, phosphatic, potassic and general manures. Compound manures. Farmyard manure. Treatment of the manure heap and disposal of liquid manure. Storage. Mixing manures. Green manuring. Artificial farmyard manure. Valuation. Time of application and amount used per acre. Unexhausted values. Plant growth in relation to manuring. Symptoms of manurial deficiencies. The use of manures as an aid to weed control.

Farm Crops.—Classification. Methods of improvement. Adaptation to soils and climate. Statistics.

Rotations.—Objects. Economic value. Advantages and disadvantages. Early and modern rotations. Adaptation of rotations to systems of farming.

Cereal and Pulse Crops.—Classification, varieties, acreage, and distribution. Preparation of soil, seeding and time of sowing, manuring and cultivation. Place in rotation. Harvesting. Storage and uses. Marketing. Weeds and their control. Estimation of yield and value.

Sugar Beet, Root and Green Crops.—Treatment as above. Clamping, storage and utilisation.

Potatoes.—Treatment as above. Importance of changed seed with special reference to virus diseases and their effect on production of "seed." Wart disease and the use of immune varieties. Results of recent experimental work and production and testing new varieties.

Forage Crops.—Treatment as above. Types and varieties of forage plants. Forage mixtures suitable for soiling, ensilage and hay. Management of ensilage.

Special Crops.—The cultivation of hops, fibre and seed crops. The use of catch crops.

Grassland.—Types of grassland. The improvement of grassland by drainage, irrigation, clearing, fencing, mowing and grazing, mechanical treatment, manuring and the use of lime. The management of grassland. Rotation grazing. Methods of stocking. The control of grassland weeds. The renovation of grassland.

Hay Production.—Manuring of the hay crop. Methods of haymaking. The management of the aftermath.

Laying Down of Land to Grass.—Preparation of the seed bed. Methods of sowing. Nurse crops. Manuring. General management. Seeds mixtures. Suitable constituents. Competition between species. The importance of strain. The utilisation of wild white clover. Factors influencing plant establishment. Seed rates. Variations in mixtures for special conditions and purposes. Temporary leys and their use in arable farming. The effect of temporary leys in improving the fertility and physical condition of soils. The cultivation and use of lucerne, sainfoin, red clover, Italian ryegrass, timothy, crimson clover, trefoil, white clover, etc., as pure crops. The production of grass and clover seeds.

Experimental Technique.—Introduction to the question of design and lay-out of field experiments and calculation of the errors involved.

Agricultural Engineering

(a) Farm Implements and Machinery

Tillage Implements.—The plough, its mechanical principles, construction, handling and care of. Types of ploughs, such as the swing, wheeled, multiple furrow, tractor, digging, ridging, paring, one-way and disc. Rotary tillers. Mole ploughs and their operation. Cultivators, harrows and rollers.

Seeding and Planting Implements.—Construction and operation of seed drills, manure distributors, potato planters and transplanting machines.

Harvesting Machinery.—Construction and operation of farm grass mowers, reapers and binders. Implements used in hay and cereal harvesting, carting and stacking. Potato lifters and root lifting implements. The general principles of the construction and operation of the combine-harvester.

Barn Machinery.—Threshers. Food-preparing machines. Belting and shafting. Pumps. Lifting appliances.

(b) Energy Producers

Wind, Water and Electrical Power.—Simple hydraulic measurements concerning the flow of water in streams and pipes. Water wheels and turbines. Windmills. The application of electrical power on the farm.

Steam and Internal Combustion Engines.—(i) The steam boiler and its accessories. The construction and functioning of the single cylinder steam engine. The construction and functioning of the

four-stroke and two-stroke internal combustion engines. Diesel engines. Suction gas producer plants. Methods of determining indicated and Brake horse-power. The erection of engines and machinery, including concrete foundations. Governing of engines.

(ii) Principles and construction of farm tractors. The engine; carburation; ignition; cooling; lubrication; the transmission system, including the clutch, gear box, differential and final drive; steering; wheels and chain tracks and gripping devices; drawbar pull and calculation of drawbar horse-power; general outlines of chief types of farm tractors; cost of upkeep; engine and accessory faults and their remedies.

(iii) Chief types of motor lorries used by farmers; costs; depreciation; upkeep and management.

Animal Husbandry

British Live Stock.—Importance of the live stock industry. Statistics. Relationship of stock to arable farming. Suitability of types and breeds to local conditions.

Animal Breeding.—Practical application of the laws of heredity. Breed formation. Selection, in-breeding and systematic crossing. Fixation of types.

Stock Feeding.—Classification and valuation of foodstuffs. Selection, preparation and use of home-grown and purchased foods. The balancing of rations for all types of stock. Methods of feeding. Mineral requirements. Effect of foods on health.

Horses.—Points of the horse. Conformation and situation of disease. Examination for soundness. Dentition and age.

Stable Management.—Handling and management of horses in the stable. Stable fittings and appliances. Stable vices. Routine work including feeding, watering, grooming, etc. Horse clothing and bandages. Exercising horses. Types of harness and saddlery, and the fitting, adjustment and care of same. Shoeing.

Farm Horses.—Breeds of heavy and light draught horses. Selection, feeding, housing and management of farm horses. Management of in-foal mares and young stock. Breaking and working young horses. The utilisation of horses in modern farming.

Light Horses.—Breeds of harness and saddle horses, cobs and ponies. Breeding, feeding and general management. Breaking and training. Suitability of light horses and cobs for special purposes and for light land or small farms.

Cattle.—Classification of breeds. History and development of British cattle.

Beef Cattle.—Characteristics. Breeds. Selection, feeding, housing and management of store and fattening cattle. Winter and summer beef production. Baby beef. Marketing of fat cattle. Rearing of beef breeds including herd management and calf-rearing. Estimation of weights and values.

Dual Purpose Cattle.—Characteristics. Breeds and their value.

Dairy Cattle.—Characteristics. Breeds, selection, breeding and herd development. Milk recording. Feeding, housing and general management of a dairy herd. Systems of calf rearing.

Milk Production.—Summer and winter milk production. The handling and marketing of milk. Modern developments in the dairy industry. Graded milks. Milk products. The maintenance of a pure milk supply.

Sheep.—Down, long-wool and mountain breeds. Breeding, feeding, and management of sheep. Arable, grassland and hill flock management. Valuable characteristics of wool. The grading, marketing and treatment of wool. A shepherd's calendar.

Pigs.—Breeds, bacon and pork characteristics. Rearing, feeding and management of pigs. Systems of pig farming. Pig recording. Suitability of pigs for bacon production. Market requirements. Bacon-curing methods.

Poultry.—Breeds of fowls; breeding, hatching, rearing, feeding, housing and management; fattening of poultry.

Veterinary Hygiene

A. Elementary Anatomy and Physiology of Farm Animals

Skeletal System.—Structure and classification of bones, cartilage, ligaments; a general description of the skeleton of farm animals; a typical joint and its parts.

Muscular System.—Structure and function of voluntary and involuntary muscles.

Nervous System.—A general description of the brain, spinal cord and meninges; distribution and function of nerves; organs of special sense—the eye and ear.

Vascular System.—Heart, arteries, veins, blood, the circulation; fœtal circulation.

Lymphatic System.

Respiratory System.—Trachea, lungs, thorax, pleura, respiration.

Alimentary System.—Dentition and ageing of animals; a comparative study of the alimentary tracts of the horse, ox, sheep and pig; prehension of food, saliva, mastication, deglutition, vomition, rumination, digestion and absorption; structure and function of the liver and pancreas.

Excretory System.—Kidneys, ureters and bladder, urine, sweat glands, sweat.

Reproductive System.—Comparative study of the genital organs of horse, ox, sheep and pig; reproduction; physical and physiological properties of milk.

Ductless Glands.—Spleen, thyroid, thymus, suprarenals, pituitary.

The Anatomy of the Foot.

B. General Hygiene

The Principles of hygienic housing of animals, including general construction and arrangement, drainage and ventilation.

Food and feeding and water supplies.

Proximate principles of food, Vitamins.

Signs of health and disease, variation in the pulse, respirations and temperature in health and disease.

Methods of restraint and the administration of medicines.

The principles of shoeing.

C. Diseases of Farm Animals

Definition of disease.—General Symptoms of disease.

Wounds, abscesses and injuries, and their general treatment.

Lameness—common causes and first aid.

Diseases of the foot—horses, cattle and sheep.

Causes, prevention and recognition of the common non-infectious diseases of the domestic animals.—Diseases of the alimentary tract ; respiratory tract ; circulatory system ; urogenital organs ; skin.

Dietetic diseases—deficiency diseases.

Contagious diseases of farm animals—outlines of bacteriology and methods of spread of disease. The principles of immunity, preventive inoculation and use of diagnostic agents. Collection of blood and samples.

Symptoms and control of contagious diseases ; abortion ; actinomycosis ; anthrax ; black-quarter ; foot and mouth disease ; Johne's disease ; tuberculosis ; navel-ill and other diseases of young stock, lamb dysentery ; strangles and equine influenza ; swine fever and swine erysipelas ; coccidiosis ; Bacillary white diarrhœa of poultry.

Diseases due to larger parasites—external and internal—such as ticks, lice, acari, warble and bot flies ; and parasitic worms such as liver flukes, round worms and tape worms.

Obstetrics.—The care of animals before, during and after parturition ; normal and abnormal presentations ; fœtal membranes ; prolapse of the uterus ; milk fever ; metritis ; diseases of the mammary gland ; sterility ; methods of castration and spaying.

General principles of disinfection.

Farm Management

Systems of Farming.—Economic conditions determining the use of land. Systems of arable, stock and mixed farming. Specialised and intensive systems of agriculture.

Farm Selection.—Selection of district and type of farming. Capital requirements. Selection of the farm. Location. State of fertility and productive power, transport and markets. Financial outlay and possible returns. Occupying ownership and tenancy.

Farm Valuations.—Methods of making the farm valuation. Records of a holding. Customs of the country. The ingoing valuation.

Cropping Systems.—The soil factor. Use and modification of rotations to suit economic conditions. Live stock in relation to cropping.

Farm Lay-out.—The division and lay-out of the farm for economical working. Planning the cropping system. Stocking capacity and methods of grazing and foddering live stock.

Farm Equipment.—Equipment of agricultural land. Buildings required on different classes of farms. Economical arrangement of farm buildings. Accommodation for life stock, produce and machinery.

Farm Organisation.—The organisation of a farm with a view to optimum production and economy of labour. Farm labour and wages. Sub-division of labour. Farm operations and routine work. The administration of the farm business. Gauging and forecasting markets.

Farm Capitalisation.—Landlord and tenant's capital. Capital required to stock a farm. Allocation of capital. Stocking, income and expenditure of typical farms. Farm profits and factors affecting profits.

Agricultural Law.—The elements, with special reference to the relation of landlord and tenant. Agricultural Holdings Act. Recent legislation affecting agriculture.

Agricultural Economics

Introductory.—Definition and scope of agricultural economics, its relation to other sciences and to farm management, accountancy and statistics. Farming as an industry : characteristics, advantages and drawbacks.

Development of Economic Problems in Agriculture.—The manorial systems, enclosures, corn laws, foreign competition, growth of population, labour conditions, scientific improvements.

Economic Theory.—Definition of terms and laws ; wealth, value, price, utility, cost of production, supply, demand, capital, rent. Important economic laws—diminishing utility, diminishing returns, supply and demand.

Factors of Production.—Land, labour, capital and organisation. Relative importance of these factors at different times and under different conditions ; economy in the use of each factor ; the law of the minimum.

Land.—Its economic characteristics ; land development schemes and their objects.

Labour.—Characteristics of farm labour, comparison with labour in other industries, the determination of wages, the minimum wages movement, the relation between wages and prices, standards of living.

Capital.—Characteristics of farming capital, requirements for different systems of farming, landowner's *v.* tenant's capital, how farming capital is provided, credit schemes.

Organisation.—Comparison with other industries, the training of a farm organiser, buying *v.* renting land ; large, medium and small farms and small-holdings ; comparison of different countries. Selection of a suitable system of farming for different conditions—choice of crops and livestock, simple *v.* diversified systems, relation to economic conditions.

Standards of Efficiency.—Comparison of different standards.

Rents and Profits in Farming.—Definitions, theory of rent, land values, relation between wages, rents and profits. Farming as a profit-making industry.

Marketing of Farm Products.—Development of marketing problems. Middlemen. Different marketing processes. Special difficulties. Comparison of different countries. Recent developments.

Agricultural Co-operation.—What it means. Co-operative Society *v.* Joint Stock Company. Conditions for successful co-operation. Special difficulties. Comparison of different countries.

Agricultural Statistics.—Different kinds. Collection, interpretation and use. Official statistics, index numbers, farm records, accounting data, the meaning of scientific farm management.

Research Work in Economics.—Cost Accounts, financial accounts, surveys, price analysis. Internal *v.* external records. Comparison of methods at different centres—field work, office work, reporting. Dissemination of results amongst farmers.

Agricultural Accountancy

Reasons for keeping accounts of various kinds. Objectives.

General principles of double-entry book-keeping. Description and use of various books : ledger, journal, cash book, petty cash book, day books, wages book. The Trial Balance, Trading and Profit and Loss Accounts, and Balance Sheet.

Use of the Analytical cash book and other columnar books. Partnership accounts.

General office work : correspondence, invoices, rendering accounts. filing systems. Different kinds of cheques and banking accounts.

Valuations for accounting purposes : when and how to make them. The farm balance sheet.

Methods of farm accounting for different conditions : financial, departmental and cost accounts. Accounts for the owner-occupier.

General principles and methods of cost accounting. Objectives, advantages, and difficulties. Enterprise cost accounts.

Special cost records : *i.e.*, time sheets, records for foodstuffs, manures and consumable stores, cropping schedules, crop and stock production records. Construction of cost accounts for horse labour, tractor work, crops, live-stock and live-stock products.

Interpretation of results from financial and cost accounts. Use of accounts for management purposes.

Assessment of farmers for income tax : special provisions. Preparation of accounts for income tax purposes.

MASTER OF SCIENCE (AGRICULTURE)

Candidates who have obtained the B.Sc. (Agriculture) Degree will be permitted to proceed to the M.Sc. (Agriculture) Degree after the expiration of two years in accordance with the Regulations for the M.Sc. Degree in Science for Internal Students (*see* pp. 1097-1102).

Candidates for the M.Sc. (Agriculture) Degree who have not passed the B.Sc. (Agriculture) Degree will be required to satisfy the University that they possess sufficient acquaintance with the ordinary practice of Agriculture to enable them to apply their scientific knowledge to working conditions.

There is no prescribed list of subjects for the M.Sc. (Agriculture) Examination without thesis but the following are given as suggestions:—

1. Some branch of Agricultural Chemistry, such as soils ; nutrition of plants ; nutrition of animals, etc.
2. Some branch of Agricultural Botany, such as Plant breeding and Genetics ; applied Plant physiology ; applied Plant pathology.
3. Animal breeding, including Physiology and Genetics.
4. Some branch of Agricultural Zoology, such as Economic Entomology ; Agricultural Parasitology.
5. Agricultural Economics and Accountancy.
6. Some branch of Agricultural Geology, such as Pedology.

EXAMINATION-PAPERS

Pamphlets of past examination-papers for the Intermediate and Final Examinations in Agriculture can be obtained from the University (Publications Section), Senate House, W.C.1, price 2s. od. post free.

A complete list of examination-papers published by the University can be obtained on application.

Faculty of Science

HORTICULTURE

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the Degree of Bachelor of Science (Horticulture) (B.Sc.).

In order to be admitted to the Degree as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Horticulture, unless exempted therefrom.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the Course for the Intermediate and Final Examinations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Horticulture.

Internal Students who have obtained the Degree of B.Sc. (Horticulture) will be permitted to proceed to the M.Sc., Ph.D. and D.Sc. Degrees in accordance with the Regulations for those Degrees.

INTERMEDIATE EXAMINATION IN HORTICULTURE

Course of Study

The Intermediate Course in Horticulture extends over not less than one academic year.

The subjects of the course are as follows :—

(1) Chemistry
(2) Botany
(3) Zoology
(4) Geology *or* Applied Physics
(5) Garden Operations

Exemptions

Students who are matriculated students of the University and who, *either*

(*a*) at an examination recognised by the Ministry of Education as an approved second examination in Secondary Schools, have passed one or more of the subjects required for the Intermediate Examination in Horticulture set out above, *or*

(*b*) at an examination for a General Certificate of Education awarded by one of the approved University Examining Bodies have passed at the Advanced Level in one or more of the subjects required for the Intermediate Examination in Horticulture,

may apply for exemption in such subject or subjects at the Intermediate Examination in Horticulture.

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A student who has passed the Intermediate Examination in Arts, Science, Agriculture, or Engineering with Chemistry, or Botany, or Zoology, or Geology, or Physics will be exempted from the course and examination in the relevant subject at the Intermediate Examination in Horticulture.

No exemption in Applied Physics will be allowed in the case of a student who has passed in only one of the two branches of Physics at the Intermediate Examination in Engineering, (*a*) Heat, Electricity and Magnetism, and (*b*) Sound and Optics.

A student exempted from the Intermediate course and examination in any subject or subjects will be required to attend during his first year Final courses in the same or other subjects (as his teachers may advise) in substitution therefor.

Date of Examination

The General Intermediate Examination in Science (Horticulture) will take place once in each academic year commencing in the week beginning on the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than April 17th.

The time-table of the Examination, showing both the time and place of the written and practical examinations, will be furnished by the Academic Registrar to each candidate.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination. The fee for re-examination in one subject is 2 guineas. Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper or practical examination up to a maximum of 6 guineas. Other candidates exempted from part of the Examination on the ground of having passed other Examinations in this University are required to pay a fee of 2 guineas for each subject offered up to a maximum of 6 guineas.

The fee for examination in a supplementary subject is 2 guineas.

All cheques should be made payable to the University of London, or Bearer and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Intermediate Examination are as follows :—

(1) Chemistry (two papers of three hours each and a practical examination).

(2) Botany (two papers of three hours each and a practical examination).

(3) Zoology (one paper of three hours and a practical examination).

(4) *Either* (*a*) Geology (one paper of three hours and a practical examination) ;

or (*b*) Applied Physics (one paper of three hours, a practical examination, and an oral examination on the use of instruments).

(5) Garden Operations (Inspection of certified note-books or diaries of practical work in the garden).

The Examiners shall be at liberty to test any candidate by means of oral questions.

The Examination will be a Pass Examination only, and the list of successful candidates will present the names in alphabetical order without division into classes.

A candidate at the Intermediate Examination in Horticulture who passes in Garden Operations but who fails to pass the whole Examination will be credited with a pass in that subject and will not be required to submit a note-book or diary at any subsequent Intermediate Examination.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the five subjects. A candidate who enters for the whole Examination at one and the same time, or a candidate who has been credited with a pass in Garden Operations and enters for re-examination in all the other subjects of the Examination at one and the same time, may, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the subjects in which he has passed is of sufficient merit, be credited with the subjects in which he has satisfied the Examiners and permitted to present himself on one or more occasions for re-examination in the remaining subject alone, or for examination in another subject allowed by the Regulations, at a subsequent Intermediate Examination (see General Regulations for Intermediate Examinations, p. 10). The approval of the authorities of the School or Institution at which a candidate is registered must be obtained for any change of subject and a candidate offering a new subject must follow an approved course of study in that subject.

A provisional list of successful candidates, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on August 20th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

Supplementary Subject

Candidates who have passed the Intermediate Examination in Horticulture may enter for examination in a supplementary subject, after having attended an approved course of study in such subject. No exemptions can be claimed in virtue of this subject.

SYLLABUSES

The following syllabuses of the subjects of the Intermediate Course are intended to indicate the general scope and character of the courses without being exhaustive of all parts of the subjects :—

Chemistry

[Syllabus as for Preliminary (Intermediate) Science, pp. 1009–1011]

Botany

[Syllabus as for Preliminary (Intermediate) Science, pp. 1008–1009]

Zoology

The general physical and chemical properties of living matter as exemplified by *Amœba*. The fundamental functions of living beings as illustrated by the life and habits of *Amœba*.

The structure and habits of *Paramœcium*. Its characteristic "reaction" to stimuli. Nature of the connection between reaction and stimulus. Conjugation and its relation to reproduction. A brief survey of other types of Ciliata.

Euglena as a type of Flagellata. The presence of chlorophyll and its meaning. The distinction between animal and plant.

Volvox. The distinction between body and reproductive cells.

Hydra as a type of the simplest Metazoon. Its structure and habits—with special emphasis on its reproduction.

Lumbricus as a type of Cœlomate animal. Its structure and the outline of its development, to illustrate the meaning of germ layers. Its general histology. Its habits and their relation to horticulture.

Ascaris, its structure, habits, and life-history. Brief survey of the group of Nematoda in their relation to plant diseases.

The *Cockroach* as a type of Arthropoda and of Insecta. Its external features, special emphasis being laid on the structure of the mouthparts. Its internal anatomy and habits.

Helix hortensis as a type of Mollusca. Its anatomy and habits. The common allies of Helix (Arion, Limax, &c.) and their depredations. The carnivorous slugs.

The *Frog* as type of a Vertebrate animal. Its external features, internal structure; the function of the principal internal organs. The skeleton of the Frog. Outline of its histology. Its life-history.

The smaller vertebrates as aids and hindrances to horticulture. Insect-eating and seed-eating birds. The attacks by insect-eating birds on fruit. Importance of estimating the balance of advantage and disadvantage in each species. The smaller mammals in their relationship to horticulture. The Rodentia as pests—the natural foes of the Rodentia.

Practical Work

The candidate must be prepared to examine microscopically, to dissect, and to describe specimens or parts of the animals* comprised in the foregoing syllabus.

Candidates will be required to bring to the practical examinations their note-books, for inspection by the Examiners if desired, certified by their teachers as being the actual working notes made by them in the laboratory. These note-books must be taken away by the candidates at the close of the Examination.

Geology

Physical character and chemical composition of the common rock-forming minerals. Composition, texture, classification, and origin of common rocks. Methods of investigation.

The principal agencies of denudation and deposition, and their work.

Origin of soils and sub-soils, and their relation to rock-types.

The inter-relation of rocks to one another. The structures of rocks and the chief changes which rocks have undergone.

Drainage, and the circulation of underground and surface waters.

* The list of animals may be changed from time to time, but two years' notice of any change will always be given.

The relation of surface relief to the composition and tectonics of the earth's crust, and to the agents acting upon it.

Expression of geological data by means of maps and sections.

The principles of stratigraphical geology. The distribution in the British Isles of the principal formations and rock-types, including superficial deposits, with special reference to the soils with which they are associated and the economic products which are of importance for agricultural purposes, building construction, and road-making.

Practical Work

Description and identification of common rock-forming minerals and of the principal varieties of rocks. The study of the texture and composition of the chief types of rocks under the microscope.

The interpretation of topographical and geological maps by descriptions and the drawing of sections.

Candidates will be required to bring to the practical examinations their note-books, for inspection by the Examiners if desired, certified by their teachers as being the actual working notes made by them in the laboratory. These note-books must be taken away by the candidates at the close of the examination.

Applied Physics

General Properties of Solids, Liquids and Gases.—Force and work as exemplified by levers, pulleys, and other simple machines. Water and its chief physical properties. Pressure head and flow of water. Water supply. Storage and distribution. Lift and force pumps, siphons and hydraulic rams. Relation between pressure and volume in gases. The atmosphere. Use of barometer. Diffusion in liquids and gases. Capillarity. Osmosis.

Heat.—Temperature. Thermometers. Expansion of solids, liquids, and gases, with rise of temperature. Quantity of heat. Specific heat. Latent heat. Vapour pressure. Dew-point. Formation of cloud, rain, hail, snow, fog, dew, and hoarfrost. Use of rain gauge. Conduction. Convection, especially in relation to atmospheric currents. Radiation. Heating systems; principles and simple applications, with special reference to Horticulture.

Optics.—Propagation of light. Reflexion and refraction. Photometry. The general laws of radiation :—Visible, ultra-violet, infra-red. Emission and absorption. Heating effects of radiation.

Electricity.—The simpler phenomena of electrified bodies. Conduction and insulation. Distribution of electrification on conductors. Simple phenomena of magnetism. Electric current. Primary and secondary batteries. Electric motors. A thermo-electric couple and its use in measuring temperatures.

Practical Work

Practical problems illustrative of the principles set forth in the foregoing syllabus.

Candidates must bring to the practical examinations their note-books, certified by their teachers as being the record of the work carried out by the candidate in the laboratory, so that the Examiners may inspect them if they so desire. These note-books must be taken away by the candidates at the close of the examination.

Garden Operations

Before presenting themselves for the Examination candidates will be expected to have acquired an elementary knowledge of garden operations and they must bring to the practical examination in Botany note-books or diaries containing a record of garden work. These note-books or diaries should normally cover a period *either* of one session (Sept. or Oct. to June) *or* of one calendar year, and must have attached to the inside of the cover a certificate in the candidate's handwriting stating :—

(1) the period covered by the note-book or diary ;

(2) that the note-book or diary is the work of the candidate—

such certificate to be countersigned by the teacher or other responsible person under whom the work has been carried out.

B.Sc. (HORTICULTURE) DEGREE

Course of Study

The course for the Final Examination normally extends over not less than two academic years.

Students will be required to attend approved instruction-courses in the following obligatory subjects :—

Principles of Horticulture.

Practice of Horticulture.

Students will be expected to show knowledge of the chief results which have been obtained at horticultural research stations in this country and at the principal foreign stations.

Date of Examination

The B.Sc. (Horticulture) Examination will take place once in each year, beginning on the third Monday prior to the first Monday in July.

[In 1951 the Examination will begin four days earlier, i.e., on Thursday, June 7th.]

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination or 3 guineas for each entry to one Part of the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Final Examination are as follows :—

Part I

Principles of Horticulture (three papers and three practical examinations).

Part II

Practice of Horticulture (four papers and two days' practical and oral examinations).

A student may enter for Parts I and II on the same occasion or on different occasions, and either Part may be taken first. A student who enters for Parts I and II on the same occasion and fails in one Part only will be permitted to enter on any subsequent occasion for that Part alone.

A provisional list of successful candidates, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on July 25th.

A diploma for the Degree of B.Sc. (Horticulture), under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc. (Horticulture) Examination who have entered for both Parts of the Examination or for one Part having already passed in the other Part are eligible to apply for an Aegrotat Degree. In either case the candidate must have completed more than half of the Examination.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Principles of Horticulture

Section I

The relations of plants to temperature, light, air, water, and the properties of the soil, and their horticultural applications. Physiological conditions under glass. The rest-period in plants and seeds, forcing, retarding; seed formation, dissemination, germination, seed testing. Outlines of metabolic changes in plants and their practical significance; the effect of external and internal conditions of growth and reproduction, the processes of ripening and senescence of fruit and of vegetative storage organs, and their relation to practical problems of storage. The special physiology and morphology of horticultural operations, such as methods of vegetative propagation; transplanting trees and herbacious plants, pruning, stem ringing, fruit thinning; the processes of regeneration and the healing of wounds in plants.

Description morphology of plants in general cultivation. Weeds and their effects; the principal horticultural weeds, their life-histories and methods of eradication. Vegetation in relation to habitat, including some study of physiological anatomy; plants of woodlands, heaths and deserts; water, bog, alpine and rock plants.

The general scheme of classification of plants with especial reference to seed plants and ferns in general cultivation. The characters, habits and geographical distribution of the principal families of seed plants and ferns of importance in horticulture.

Heredity, nature, and causes of variation. Mendelian inheritance and its bearing upon problems of breeding. Selection, methods and their limitations. The physical mechanism of heredity, elements of cytogenetics and its horticultural applications; sterility, incompatibility. Breeding-problems and results obtained with the more important horticultural crops.

Section II

The chemistry of the more important substances and processes involved in plant life. Elements required for nutrition, their functions and importance in relation to particular horticultural crops. Composition of the more important market garden and fruit crops; changes during growth, ripening and storage; effects of environmental and cultural conditions.

Soils.—Their origin in relation to the geological formation, topography, natural drainage, soil profile. The principles of soil classification. The correlation of crop performance with soil characters. Chemical and physical properties of soils, methods of chemical and mechanical analysis, interpretation of results. The microbiology of soils; changes due to bacteria and other soil organisms; nitrification, denitrification, nitrogen fixation, humification, partial sterilisation, etc. The atmosphere of the soil. The soil water and movement of salts in soils. Soil temperature. Effects of tillage operations. Physico-chemical methods as applied to soils.

Manures.—Theories of manuring and evaluation of manurial trials. Nitrogenous, phosphatic and potassic fertilisers; their composition, sources, properties, mode of action and relative value for different soils and crops. Farmyard manure, refuse manures, green manures; their composition, properties, chemical and bacterial changes. Manurial residues. Lime and liming. Methods of analysis and valuation of manures and fertilisers. The adulteration of manures and its detection. Legislation relating to the sale of fertilisers.

Section III

Plant Pathology.—The causes of disease. Effect of environmental conditions; parasitic and non-parasitic disease. Predisposition, immunity and resistance to disease; the dissemination of disease. Detailed study of common diseases of important horticultural crops caused by fungi, bacteria, and other agencies. Methods of prevention and remedies. Common virus diseases, their symptoms, vectors and methods of control. The generalised study of the external and internal structure of an insect. Life-history, metamorphosis, structure of immature stages. Characters of the chief orders of Insecta of economic importance. The life-history, habits and injuries caused by the principal insect and other pests of the more important horticultural crops. Mechanical, physical, chemical and biological control. Legislation relating to pest and disease control; import and export regulations.

Composition, properties and application of the chief insecticides, fungicides and weed killers ; their mode of action. Methods of analysis of materials used and detection of adulteration.

One paper and a practical examination will be set in the subject-matter of each of Sections I, II and III.

Practice of Horticulture

Section I

Introductory and General.—Importance of Horticulture in the farming economy of Great Britain. Geographical distribution of home production. Sources and relative importance of imports of horticultural produce. The conception of orderly marketing and recent developments in the marketing of horticultural produce.

Horticultural holdings, their size and management. The processes of cultivation and their results, land clearance and drainage. The selection, use, care and maintenance of machinery and implements, including mechanical tractors. Tillage, seeding and planting implements, spraying and dusting plant, packing and grading machines, boilers and heating apparatus. The construction of glasshouses.

Production Costs and Market Returns.—Object of keeping accounts. Horticultural valuations, including the calculation of depreciation on buildings and equipment and of the annual increment of value in young plantations. Records necessary for the preparation of detailed accounts; labour sheets, use of materials, disposal of crops, etc. General principles of detailed accounting ; apportionment of labour, equipment, overhead and other costs. The method of calculating production costs of field and glasshouse crops. Relative importance of production cost per acre, yield per acre and selling price.

Section II

Hardy Fruits.—Sites and soils. Considerations affecting lay-out, preparation of the ground, planting. Propagation and nursery practice, including a study of rootstocks. The cultivation, manuring, pruning, training, thinning, picking and storage of various kinds of fruits. Description and recognition of the more important varieties. Grading, packing and marketing fruit.

Section III

The Flower-garden.—Suitable sites and soils for flower gardens. Design and lay-out of grounds. Propagation, cultivation and treatment of the various kinds of plants required for the rose garden, herbaceous border, flower beds, rock garden and water garden. The planting, pruning and propagation of trees and shrubs. Formation and management of lawns and playing fields. History of gardens.

The Greenhouse and Conservatory.—The management of greenhouses and conservatories. The treatment of stove, propagating, intermediate and cool houses. The growing of suitable flowering and foliage plants for the conservatory and house to maintain a display throughout the year.

Section IV

Market-gardening.—The culture of vegetables and salads, suitable successions. Intensive systems of production. Production of hardy and half-hardy plants and bulbs for sale. Cultivation of flowers in the open and under glass for the cut-flower market. The cultivation of fruits under glass. Grading, packing and marketing. The heating, ventilation, lighting and management of glasshouses and forcing sheds. Site and soil; water supply; hygienic conditions; soil sterilisation.

There will be one paper in each Section, and practical and oral examinations extending over not less than two days at which the candidate must submit certified note-books of a course in book-keeping and certified plans and note-books of a course in practical surveying. These note-books must be taken away by the candidate at the close of the Examination.

In Sections II and IV candidates may be required to show knowledge of costs and returns in commercial garden operations.

EXAMINATION-PAPERS

Pamphlets of past Examination-papers for the Intermediate and Final Examinations in Horticulture can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 2s. post free.

A complete list of Examination-papers published by the University can be obtained on application.

UNIVERSITY OF LONDON

FACULTY OF SCIENCE

HOUSEHOLD AND SOCIAL SCIENCE

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the Degree of Bachelor of Science in Household and Social Science (B.Sc.). In order to be admitted to the Degree as an Internal Student a candidate must:

(1) Matriculate in one of the ways provided in the Regulations.

(2) Follow the course of study set out below at one or more Schools of the University. The total length of the course is normally not less than three academic years. In the third year of the course some amount of specialisation is introduced as a preparation for students who may wish to enter upon professional careers as (i) Teachers of Household Science, *or* (ii) Institutional Administrators, *or* (iii) Social Workers.

(3) Pass the First (Intermediate), Second, and B.Sc. Examinations in Household and Social Science.

Internal Students who have obtained the Degree of B.Sc. (Household and Social Science) will be permitted to proceed to the M.Sc., Ph.D. and D.Sc. Degrees in accordance with the Regulations for those Degrees (see Regulations for Internal Students in the Faculty of Science and Regulations for Postgraduate Students (pp. 106–115))

FIRST (INTERMEDIATE) EXAMINATION IN HOUSEHOLD AND SOCIAL SCIENCE

COURSE OF STUDY

The subjects of the first year's course are as follows:—

Physics (lectures and practical).
Inorganic Chemistry (lectures and practical).
Biology (lectures and practical).
Household Work (lectures and practical).
Social and Economic History (lectures).

EXEMPTIONS

A candidate who has passed in Chemistry, or Physics, or Biology, or Botany *and* Zoology, either at the Intermediate Examination in Science or Pharmacy of this University or at a recognised Higher School Certificate Examination at main subject standard, will be exempted from Inorganic Chemistry, or Physics, or Biology respectively at the First (Intermediate) Examination in Household and Social Science. For the purpose of exemption by virtue of a Higher School Certificate in Biology, a candidate must have passed the Higher School Certificate Examination of this University in that subject.

DATE OF EXAMINATION

The First (Intermediate) Examination in Household and Social Science will take place once in each year, in June.

Every student entering for this Examination must apply to the Academic Registrar, not earlier than April 15th, for an entry-form and a certificate of course of study which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9) in so far as they are applicable, together with the proper fee, not later than May 1st.

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An additional Examination, open only to candidates who have been referred in one subject on a previous occasion, will be held in November, beginning on the fourth Monday in November. Entries must be received by October 8th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate showing both the time and place of the written and practical examinations.

Fee

The fee for each student is 6 guineas for each entry to the whole Examination. For re-examination in one subject the fee is 2 guineas.

Students exempted from part or the whole of the First Examination on the ground of an approved Higher School Certificate are required to pay the full fee of 6 guineas (which includes the fee for examination in the remaining subject or subjects). Students exempted from part of the Examination on the ground of having passed the Intermediate Examination in Science of this University are required to pay a fee of 2 guineas for each subject offered, up to a maximum of 6 guineas.

Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper or practical examination up to a maximum of 6 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the First Examination are as follows :—

Physics (two papers of 3 hours each and a practical examination of 3 hours).

Inorganic Chemistry (two papers of 3 hours each and a practical examination of 3 hours).

Biology (two papers of 3 hours each and a practical examination of 3 hours).

Social and Economic History (two papers of 3 hours each).

The Examiners shall be at liberty to test any candidate by means of oral questions.

The Examination will be a Pass Examination only, and the list of successful candidates will present the names in alphabetical order without division into classes.

Candidates shall not be approved unless they have shown a competent knowledge in each of the four subjects of the Examination. A candidate who enters for the whole Examination at one and the same time may be permitted, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the subjects in which he has passed is of sufficient merit, to present himself on one or more occasions for re-examination in that subject alone (see General Regulations for Intermediate Examinations, p. 10).

A candidate who is so permitted to present himself for re-examination in one subject at the First (Intermediate) Examination may enter in the same year for the Second Examination in Household and Social Science provided that he shall have attended the necessary courses therefor to the satisfaction of his teachers ; but if he does not satisfy the Examiners at the First Examination he will not be informed of the result of his candidature at the Second Examination.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SYLLABUSES

Physics

General Physics.—Laws of motion. Force. Work. Energy. Distinctions between solids, liquids and gases. Hydrostatics. Barometer. Boyle's Law. Osmotic pressure. Surface tension. Diffusion in liquids and gases. Viscosity.

Heat.—Temperature. Calorimetry. Change of state. Mechanical equivalent of heat. Conservation of energy. Propagation of heat. Thermal expansion.

Sound.—Propagation of sound. Vibrations and wave motion. Resonance. The Ear. Musical Scales.

Light.—Propagation of light. Reflection. Refraction. Telescope and Microscope. Dispersion and Spectra. Polarised light. Undulatory theory. Radiation.

Magnetism and Electricity.—Elementary magnetostatics. Lines of force and induction. Magnetic measurements. Terrestrial magnetism. Elementary electrostatics. Potential capacity. Electric current. Electrolysis. Primary and secondary batteries. Magnetic field of current. Galvanometers. Ohm's Law. Thermal effects of currents. Induced currents. Induction of coil and transformer. Phenomena associated with discharge of electricity through gases.

PRACTICAL WORK.—The practical work will follow the course of lectures.

Chemistry

The general nature of the course is similar to that required for the Intermediate Examination in Science. It includes:

The properties of matter, elementary and compound bodies, the laws of chemical combination, the common elements and their compounds with the use of symbols, formulæ and equations. The determination of equivalents, atomic and molecular weights.

The character of chemical changes, including combustion, thermal dissociation and electrolysis; the conditions which determine and influence them, and the attendant phenomena.

PRACTICAL WORK.—The practical work will include analysis of salts and mixtures, preparations, and simple volumetric analysis.

Biology

The general structure, physiology and life history of animals and plants, especially as illustrated by the following types:—Amœba, Chlamydomonas or Hematacoccus, Paramœcium (or other ciliates), Euglena, Moulds, Spirogyra, Hydra, Obelia, Lumbricus, Amphioxus, Scyllium, Rana, Lepus; including the development of Amphioxus and Rana treated in an elementary manner; Fern, Bean.

Elementary Histology of the higher plants and animals.

PRACTICAL WORK.—The practical work will follow the course of lectures.

Household Work

Housewifery.—The methods of cleaning and keeping clean household appliances and equipment, etc.

Laundry.—The different methods of washing and finishing the various fabrics in general use.

Cookery.—The study of foods mainly in relation to the various methods of cooking the same.

The students will do both theoretical and practical work.

Social and Economic History

General survey of economic development.

Mediæval England.—The Manor—The Town—Commerce—The decay of the Manor and the growth of national feeling.

The Mercantile System.—The regulation of trade, and of every branch of life. The Elizabethan Code. The growth of capitalistic enterprise.

The Industrial Revolution.—Changes in industrial methods—transport, iron, coal, machinery and power, factories.

Agricultural changes and the development of modern farming. Changes due to the French Wars. Changes in thought—the doctrine of laissez-faire and the Utilitarians. Resultant social changes—the growth of factories and the break-up of the family—the repeal of the Elizabethan industrial legislation and the problems of training and wages—the Poor Law and its effect upon the agricultural labourer.

Nineteenth Century Reconstruction.—The abandoning of laissez-faire and adoption of humanitarian principles. The reform of Parliament and the development of Local Government. The Public Health Movement. The Factory and Mines Acts. The growth of Trades Unions. The reformed Poor Law. The reformed Criminal Code. The slow development of Education.

Present-day Problems.—The more important problems relating to industrial and social conditions in connexion with the home, together with the development of social thought.

SECOND EXAMINATION IN HOUSEHOLD AND SOCIAL SCIENCE

No student will be admitted to this Examination unless he has passed the First (Intermediate) Examination in Household and Social Science, except as provided above, and has completed the prescribed course of study.

Course of Study

The subjects of the second year's course are as follows :—

Chemistry, Organic and Physical (lectures and practical).
General and Economic Biology (lectures and practical).
Principles of Economics and Business Affairs (lectures).

In addition the course of study for the B.Sc. Examination in the following subjects will be begun in the second year and continued in the third year :—

Physiology and Biochemistry (lectures and practical).
Household Work (lectures and practical).
Hygiene (lectures and excursions).
Bacteriology (lectures and practical).

Students proposing to take Group III at the B.Sc. Examination will also attend during the second year a two terms' course in Psychology.

Date of Examination

The Second Examination in Household and Social Science will take place once in each academic year, in June or early in July.

Every student entering for this Examination must apply to the Academic Registrar, on or before April 15th, for an entry-form and a certificate of course of study which must be returned duly filled up

and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), in so far as they are applicable, together with the proper fee, not later than May 1st.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written, practical, and oral examinations.

Fee

The fee for each student is 4 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Second Examination are as follows:—

Chemistry—Organic and Physical. (One paper of 3 hours and a practical examination of 6 hours.)

General and Economic Biology. (One paper of 3 hours on General Biology and one paper of 3 hours and a practical examination of 3 hours on Economic Biology.)

Principles of Economics and Business Affairs. (Two papers of 3 hours each on the Principles of Economics and one paper of 3 hours on Business Affairs.)

The Examiners shall be at liberty to test any candidate by means of oral questions.

The Examination will be a Pass Examination only and the list of successful candidates will present the names, in alphabetical order, without division into classes.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the subjects of the Examination.

No candidate shall be allowed to pass who fails to satisfy the Examiners in the practical part as well as the written part of the Examination.

A provisional list of successful candidates, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on July 9th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SYLLABUSES

Chemistry—Organic and Physical

Lectures.—The general methods of Organic Chemistry and the preparation, properties, and relations of the simpler aliphatic and aromatic compounds.

Physical Chemistry. The fundamental theories and principles will be dealt with more fully, and special attention paid to their practical applications.

Practical work.—Preparation in a pure condition of typical inorganic and organic compounds and the study of their more important reactions.

Gravimetric and volumetric estimation of the commoner acids and bases.

General and Economic Biology

General Biology.—The Cell Theory. The Reproduction of Organisms. The Evolution of Sex. Heredity. Variation. The Theory of Organic Evolution. Factors of Organic Evolution.

Economic Biology.—Life histories of important external and internal human parasites, such as tapeworm, round worm, fleas, bugs, lice, etc. Life histories of non-parasitic domestic insects and arachnids, such as cockroach, meal worm, weevils, clothes-moths, spiders, mite, etc. Natural History of certain animal and vegetable products in common domestic use, such as bath-sponge, loofah, and some of the more important foods, etc.

Principles of Economics and Business Affairs

Principles of Economics.

Introductory.—Wealth. The subject-matter of economics and the development of economic thought.

Production.—Factors governing the production of wealth. The part played by labour, land, capital and organisation.

Value and Exchange.—The genesis of exchange. Theories of value—cost of production or classical theories—exploitation of socialist theories—present-day theories. The many factors included in the terms "supply" and "demand."

The financial mechanism of exchange—money—credit—banking—the foreign exchanges—prices.

Distribution.—Incomes, their classification and division. Incomes from property. Incomes from labour. Saving and spending. The relation of income to wealth. The relation of distribution to production.

The Economic Function of the State.—Economic legislation. Taxation and fiscal policies.

Business Affairs.

Office Work. Office Management. Committees. Accounts. Banking.

B.Sc. (HOUSEHOLD AND SOCIAL SCIENCE) DEGREE

No student will be admitted to the B.Sc. (Household and Social Science) Examination unless he has passed the Second Examination in Household and Social Science, and has completed the prescribed course of study.

COURSE OF STUDY

The subjects of the third year's course, in addition to those begun in the second year, are as follows :—

For Group I (Teachers of Household and Social Science) :—

Applied Chemistry and Experimental Hygiene (lectures and practical).
Attendance at Infant Welfare Centres.
Nutrition (lectures).

For Group II (Institutional Administrators) :—

Applied Chemistry and Experimental Hygiene (lectures and practical).
Attendance at Infant Welfare Centres.
Nutrition (lectures).
Institutional Management.

For Group III (Social Workers) :—

Experimental Hygiene (practical).
Attendance at Infant Welfare Centres.
Nutrition (lectures).
Psychology (lectures).
Structure of Industry (lectures).
Public Administration (lectures).
Social Philosophy (lectures).
Social Administration (lectures).

For students taking Group III, 3 months' practical work, providing an opportunity of gaining first-hand knowledge of existing social conditions, will be arranged in two periods of 6 weeks during the Long Vacations of the 1st and 2nd years.

Date of Examination

The B.Sc. (Household and Social Science) Examination will take place once in each academic year, in June or early in July.

Every student entering for the Examination must apply to the Academic Registrar, on or before April 15th, for an entry-form and a certificate of course of study which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, in so far as they are applicable, together with the proper fee, not later than May 1st.

Fee

The fee for each entry to the Examination is 4 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the B.Sc. (Household and Social Science) Examination are as follows :—

For Groups I and II :—

Applied Chemistry (two papers of 3 hours each and a practical examination of 6 hours which will include Experimental Hygiene).

Physiology and Biochemistry with Nutrition (two papers of 3 hours each and a practical examination of 6 hours).

Hygiene (two papers of 3 hours each).

Bacteriology (one paper of 3 hours and a practical examination of 3 hours).

For Group I :—

Household Work and Special Household Work (one paper of 3 hours and a practical examination of 6 hours in Household Work, and one paper of 3 hours and a practical examination of 6 hours in Special Household Work).

For Group II :—

Household Work and Institutional Management (one paper of 3 hours and a practical examination of 6 hours in Household Work, and one paper of 3 hours on Institutional Management).

For Group III :—

Hygiene (two papers of 3 hours each).

Bacteriology (one paper of 3 hours and a practical examination of 3 hours).

Experimental Hygiene (6 hours' practical examination).

Physiology and Biochemistry with Nutrition (two papers of 3 hours each and a practical examination of 6 hours).

Household Work (one paper of 3 hours and a practical examination of 6 hours).

Psychology (two papers of 3 hours each).

Structure of Industry and Public Administration (two papers of 3 hours each).

Social Philosophy and Social Administration (one paper of 3 hours).

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the subjects offered by them.

No candidate shall be allowed to pass who fails to satisfy the Examiners in the practical part as well as the written part of the Examination.

The Examiners shall be at liberty to test any candidate by means of oral questions in any subject.

A provisional list of successful candidates at the B.Sc. Examination will be published by the Academic Registrar at 2 o'clock on July 9th. Successful candidates will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) a Pass Degree.

A diploma for the Degree of B.Sc. (Household and Social Science), under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc. (Household and Social Science) Examination who have completed more than half of the Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Physiology and Biochemistry

Physiology.—The experimental physiology and structure of the central nervous system. Co-ordinated movements. Expression of the emotions. The mechanism of control. The structure and function of organs of special sense—vision, hearing, smell, etc. The structure and function of the heart—blood circulation—and respiration. The structure of the digestive tract. Functions of the kidneys and skin. Regulation of the temperature of the body. Reproduction, the physiology of the embryo, and newly-born. The mammary gland. The phenomena of fatigue and sleep. The physiology of physical training.

Biochemistry.—The chemical and physical nature of such proteins, fats, and carbohydrates as are met with in food. The chemical and physical nature of animal tissues (bone, muscle, connective tissue, blood, glands, etc.). The enzymes of the body and their actions. The chemical and physical nature of animal secretions such as milk. The chemical and physical nature of extracts of animal tissues. The inorganic salts of the body. The chemistry of urine, and the significance of urinary secretions, and perspiration. The chemistry of digestion. The chemistry of respiration. The chemistry of blood and the chemical defence of the body against the action of poisonous substances. Foodstuffs and diets.

PRACTICAL WORK.—The practical work will follow the courses of lectures.

Household Work

Housewifery and Laundry.—Continuation of the first year's work.

Cookery.—The practical study of foods in relation to their food value and general use in household dietaries. Practical working of dietaries under various conditions of income and government requirements. Practical experience in the purchase, storage, and preservation of, foodstuffs.

Students taking Group I will attend a further course, with special reference to the requirements of housecraft.

Hygiene

Municipal and General Hygiene.—1. Water supplies, including the sources of such supplies, the detection of pollution and purification and storage; 2. Sanitary appliances; 3. Sewage disposal and the disposal of refuse in town and country; Conservancy systems; 4. Housing; 5. Parasites; 6. Disinfection; 7. Vital Statistics; 8. Public Health Authorities; 9. General Principles of Sanitary Administration; 10. Preservatives and their effect on health; 11. Food poisoning and diseases spread by food.

Maternity and Infant Welfare Work.—1. *Administration.*—Infant Mortality and its chief causes. Rise of the Movement for Infant Welfare Work. The Notification of Births Act, and its working. Health Visitors, their qualifications, duties, etc. Schemes of infant welfare work in towns and rural areas. Combination of duties. County Nursing Associations. The Midwives Act, and Midwifery work in England. 2. *Infant Hygiene.*—Breast feeding. Human milk and cows' milk; their composition. Milk supply and milk standards. Raw, pasteurised, boiled and dried milk. Methods of artificial feeding. Clothing, exercise, etc. 3. *Disorders of Nutrition and Minor Ailments.*—Diseases caused by insufficiency and deficiency of food, including

Rickets. Scurvy. Malnutrition. Summer diarrhœa, etc. 4. *Development.*—The development of the child up to adolescence. 5. *Antenatal Hygiene.*—Its importance and the general lines of work.

School Hygiene.—School buildings. Education Authorities, and the Medical Inspection of Children. School clinics. The more important diseases common to school age. Hygienic habits.

Infectious Diseases.—Nature of infection and its methods of spread. The notifiable diseases and the duties of Public Health and other Authorities. Epidemics and the detection of their origin. The main points which should receive attention in the commoner forms of infectious diseases.

Personal Hygiene.—Hygienic life and habits. The care of teeth, cleanliness, clothing, etc.

Domestic Hygiene.—Filters. Storage of food. Precautions against freezing of pipes in winter. Cooking arrangements in summer. Planning of houses. Furniture, etc.

Excursions.—Inspections and Demonstrations illustrative of the chief points in the lectures, including visits to Factories, Workshops, Bakehouses, Laundries, Underground Dwellings, Cleansing and Disinfecting Stations, Sewage Works, etc.

Bacteriology

The Bacteriological microscope and use of condenser, oil immersion lenses, etc. Magnification and Resolution, Ultra-Microscopic Particles. The general morphology, structure, biology, and classification of the bacteria. Yeasts and moulds, their examination, isolation and cultivation. Apparatus, incubators, sterilisers, petri dishes, etc. Preparation and sterilisation of culture media. Fermentation and the alcoholic, acetic, lactic, and butyric fermentations. Bacteria in water and the pollution and purification of water. Filtration of water and water-filters. The Bacteriology of Sewage. Disinfection and the standardisation of disinfectants. Bacteria in milk and other foods. Micro-organisms in the atmosphere. The causation of infective diseases. The disease-germ of tuberculosis and diphtheria. Propagation of disease.

Applied Chemistry and Experimental Hygiene

Water.—The methods adopted for the estimation of the total solids, hardness, ammonia (free from albuminoid), chlorides, nitrates and nitrites, and oxidisable organic matter. Plumbo solvency.

The Chemistry of Laundrywork and other cleaning processes. Water for laundry purposes including methods of softening water and the examination of water softeners. The methods adopted for the examination of soaps, soap powders, etc. The action of soap and alkalis as detergents. Dry methods of cleaning.

Textile Fabrics.—The nature of the commoner varieties, their chemical and microscopical characteristics. Quantitative methods adopted in the examination of textile fabrics. Chemical reactions involved in the various processes for bleaching and for the removal of stains. Marking inks.

Paints, Varnishes, Polishes, etc.—Their composition and mode of action.

Enamels and Glazes, with special reference to their use for cooking utensils.

Fuels and Ventilation.—The composition of solid, liquid, and gaseous fuels. Modes of combustion and methods adopted for the determination of calorific powers. Fuel economisers. Gas analysis. Examination of the efficiency of the ventilation of a given room.

Foods.—The chemical and physical methods adopted for the identification and estimation of the commoner proximate constituents of the ordinary foods, condiments, and beverages.

PRACTICAL WORK.—A practical study of the more important analytical methods dealt with in the lectures. In all cases great stress is laid on the importance of the correct interpretation of the results of the various analyses carried out.

Kitchen Laboratory.—In addition to the above course in Applied Chemistry, Kitchen Laboratory Classes are held to demonstrate and investigate certain of the more complex chemical processes which occur in connexion with cooking and other household work.

Attendance at Infant Welfare Centres

Visits to Institutions demonstrating various forms of Infant Welfare Work.

Nutrition

In this course special points in Nutrition will be dealt with in detail. These will include the consideration of the metabolic changes taking place in the body during growth, muscular exercise, lactation and starvation. The importance of a balanced diet and the part played by amino acids and accessory food factors (vitamines) in Nutrition will also be discussed.

Institutional Management

This course of lectures is designed to provide instruction in institutional management and catering. The lectures will have special reference to buying on a large scale, checking in, economy of foods and household goods generally, and the duties and management of domestic staff. Accounts will also be considered.

Practical work in connexion with the above includes visits to restaurants, hotels, hospitals, etc. Actual work and experience in the various departments of these institutions will be arranged.

Psychology

General.—Scope and methods of Psychology. Relation of psychical states to physiological processes. Description and classification of mental processes. Perception and thought. Impulse, desire and will. Instinct, emotion and sentiment. Temperament and character. Individual differences and their measurement.

Social and Educational.—(*a*) The forms of social interaction ; imitation, sympathy, suggestion, habit and custom, tradition, public opinion, social purpose. Group differences ; racial, national, occupational, social.

(*b*) Problems of childhood and adolescence ; the influence of home, school and social environment upon mental development.

Structure of Industry

Structure of modern industry ; sheltered and unsheltered industries ; Trade Unionism ; Employers' organisations ; conciliation ; Trade Boards ; methods of wage payment ; unemployment.

Public Administration

Outline of central government; the Constitution; Parliamentary procedure; the Government Departments; Local Government.

Social Philosophy

Structure of Society; social relations, the individual, the family, the State; liberty, justice and equality in relation to political and economic organisation; Sovereignty and the State; the modern democratic State.

Social Administration

The social services; education; public health; poor relief; social insurance and pensions; the work of voluntary associations; problems of social administration.

EXAMINATION-PAPERS

Pamphlets of past papers for the Second and B.Sc. Examinations in Household and Social Science can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 2*s.* post free.

A complete list of examination-papers published by the University can be obtained on application.

UNIVERSITY OF LONDON

FACULTY OF SCIENCE

VETERINARY SCIENCE

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the Degree of Bachelor of Science, Veterinary Science (B.Sc.).

In order to be admitted to the B.Sc. (Vet. Sci.) Degree a student must normally, after Matriculation, or registration as exempt therefrom, and after registration as an Internal Student, have—

(1) attended prescribed courses of study for five years at one or more Schools of the University or under Recognised Teachers of the University;

(2) passed the following Examinations:—

(*a*) First Examination in Veterinary Science (Inorganic Chemistry, Physics (including Mechanics), and General Biology) not less than nine months after Matriculation.

(*b*) Second Examination in Veterinary Science (Veterinary Anatomy and Veterinary Physiology) not less than two years after completing the First Examination.

(*c*) Final Examination in Veterinary Science, Parts I and II, not less than two years after passing the Second Examination.

Internal Students who have obtained this Degree are permitted to proceed to the M.Sc., Ph.D. and D.Sc. Degrees in accordance with the Regulations for those Degrees (*see* Regulations for Internal Students in the faculty of Science and Regulations for Postgraduate Students (pp. 106-115).

FIRST EXAMINATION IN VETERINARY SCIENCE

This Examination must be taken, as a rule, not less than nine months after Matriculation. Internal Students, however, who matriculate in January will be permitted to enter for the First Examination in Veterinary Science in the following June, provided that they have attended the prescribed course of study for such Examination throughout the session, and provided that they receive the approval therefor of the Governing Body of the School to which they belong, or, in the case of students at an Institution other than a School of the University, of the Recognised Teachers under whom they have studied.

Course of Study

The course of study extends over one academic year and consists of lectures and practical work in the subjects set out below (*see* pp. 1403–1407).

Exemptions

The Senate has power to permit, in special cases, modification of, or exemption from, the course of study anterior to the First Examination in Veterinary Science, provided that an equivalent course has been taken in the University, or in a recognised institution elsewhere.

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The Senate has also power to permit, in special cases, exemption from the whole of this Examination, provided that an equivalent Examination has been taken in this or some other University.

Students who have passed the First Examination for Medical Degrees of the University of London will be exempted from the First Examination in Veterinary Science.

Students who have passed the Intermediate Examination in Science or the B.Sc. Examination of the University of London with Botany *and* Zoology, or Chemistry, or Physics, or in and after 1949 the Intermediate Examination in Science with Biology, will be exempted from examination in the subjects in which they have passed.

Higher School Certificates

(i) Students who are matriculated students of the University and have passed a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools may apply for complete or partial exemption from the First Examination in Veterinary Science.

(ii) Applications must be submitted by the authorities of the School or Institution of the University at which the student proposes to follow his course of study.

(iii) Applications for exemption will be considered in respect of students who have obtained Higher School Certificates and have passed in any of the subjects, as main subjects, corresponding to those required for the First Examination in Veterinary Science. A student who has been exempted from one or two subjects of the First Examination will be required to take the remaining subject or subjects at the First Examination in Veterinary Science for Internal Students. If he is exempted from one subject only he must satisfy the Examiners in both the remaining subjects on the same occasion.

[In order to be exempted from General Biology the candidate must have passed in General Biology (or Biology in and after 1943) at the London Higher School Examination or in Botany and Zoology as main subjects at any of the approved Certificate Examinations.]

(iv) Students who are granted exemption from the whole examination must pay a fee of 6 guineas. Students who are granted partial exemption must pay a fee of 6 guineas at their first entry for examination in the remaining subject or subjects at the First Examination in Veterinary Science.

DATE OF EXAMINATION

The First Examination in Veterinary Science will take place twice in each year commencing on the first Monday following December 5th, and on the last Monday in June.

Every student entering for the Examination must apply to the Academic Registrar on or before April 23rd for the June Examination, *or* November 1st for the December Examination, for an entry-form and a certificate of course of study, which must be returned duly filled up and signed by or on behalf of the appropriate Teachers, accompanied by the proper fee, not later than April 30th for the June Examination, *or* November 8th for the December Examination.

The time-table of the Examination, showing both the time and place of the written, practical and oral examinations, will be furnished by the Academic Registrar to each candidate.

Fees

The fee for each student is 6 guineas for each entry* to the whole Examination and 2 guineas for re-examination in a single subject.

Students exempted from presenting themselves in one or more of the three subjects of the Examination (except students exempted on the ground of a Higher School Certificate) must pay a fee of 2 guineas in respect of each subject for which they are required to enter.

All cheques should be made payable to the University of London or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination will include two papers in Inorganic Chemistry, two in Physics (including Mechanics) and two in General Biology, three hours being allowed for each paper in each subject.

There will also be a practical examination not exceeding three hours in each of the following :—Inorganic Chemistry, and Physics (including Mechanics) ; and a practical examination not exceeding six hours in General Biology.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates must at their first entry present themselves in all three subjects and shall not be approved by the Examiners unless they have shown a competent knowledge in each subject.

A candidate who is not exempted from any part of the Examination, but enters for the whole Examination at one and the same time may, if he fails to reach the minimum standard in one subject only, be "referred," *i.e.*, he may be permitted, with the consent of the Examiners, to present himself on one or more occasions for re-examination in that subject alone.

A provisional list of successful candidates in alphabetical order will be published at 2 o'clock on January 7th and August 14th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SYLLABUSES

Inorganic Chemistry

The curriculum in Inorganic Chemistry consists of not less than 60 lectures, and 120 hours' practical work in the course of an academic year.

The whole subject is to be treated in an elementary manner and with regard to the subsequent work of the student.

The syllabus includes the subjects of the Matriculation Examination with the addition of the following :—

Lectures

Physical Chemistry

Atomic theory. Avogadro's law. Equivalent, atomic and molecular weights and their determination. Valency. Formulæ. Equations.

Classification of the elements.

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* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

Solution and such properties of liquids as diffusion, osmotic pressure, freezing and boiling points, electrical conductivity.

Electrolysis. Ionisation. Hydrogen ion concentration. Relative strengths of acids and bases.

Speed and reaction and the law of mass action. Hydrolysis in aqueous solution. Thermal dissociation.

Catalysis. The colloidal state. Combustion. Heat of combustion and of formation. Heat of solution.

Simple calculations based on the foregoing.

Descriptive Chemistry

The preparation and physical and chemical properties of the following :—

Hydrogen and Oxygen : Ozone. Water. Hydrogen peroxide. Oxides.

Chlorine, Bromine, and Iodine ; their hydrogen acids and their salts. Hypochlorous acid and hypochlorites. Chlorates. Iodates.

Sulphur and its compounds with hydrogen and oxygen. Sulphides. Sulphurous and sulphuric acids and their salts. Sodium thiosulphate.

Nitrogen. Ammonia and the ammonium salts. The oxides of nitrogen. Nitrous and nitric acids and their salts. The composition of air.

Phosphorus, its hydride, chlorides, tri- and pentoxides. Hypophosphites, phosphorous acid. Phosphoric acid and its salts.

Arsenic, its hydride, chloride, oxides, and sulphide ; arsenites and arsenates.

Carbon. Methane. Oxides of carbon. Carbonic acid and its salts. Carbon disulphide. Coal gas.

Silicic acid. Boric acid. Borax.

Chromic oxide and chromium trioxide : the chromates and dichromates.

Manganese dioxide : Potassium permanganate.

The following metals and their more important compounds :—

Sodium ; potassium ; copper ; silver ; magnesium ; calcium ; zinc ; barium ; mercury ; iron ; aluminium ; lead ; antimony ; bismuth.

A knowledge of metallurgical processes will not be required.

Practical Work

The preparation of common inorganic compounds.

The determination of : Vapour density by Meyer's method ; molecular weight by the freezing-point and boiling-point methods ; the solubility of a solid and of a gas ; partition coefficient ; *p*H of a solution by indicators.

Quantitative analyses.

Gravimetric estimation of a sulphate and a phosphate.

Direct and indirect estimations by means of a standard acid or alkali.

Estimation of iron, oxalates, and hydrogen peroxide by potassium permanganate.

Estimation of a chloride by silver nitrate and potassium chromate and by Volhard's thiocyanate method.

Estimations by means of iodine and sodium thiosulphate, namely free halogens, sulphur dioxide, hypochlorites, and permanganates.

Estimation of oxygen, carbon dioxide, and nitrogen in a mixture of these gases.

Qualitative analyses.

Identification of a single element or of a single compound selected from the following :—Oxides, hydroxides, sulphides, sulphites, sulphates, thiosulphates, chlorides, bromides, iodides, nitrites, nitrates, arsenites, phosphates, borates, carbonates, chromates of the above metals or of ammonium hydrogen, arsenic.

Candidates are permitted to bring for use in the practical examination any book or books they desire, including their own laboratory note-books.

Candidates will be required to write out a clear account of their practical work, accurately describing the nature of the processes employed, and where possible representing by equations the chemical changes involved. They will be further required to bring to the practical examination note-books containing a record of their previous practical work. These note-books must be certified by the teachers of the candidates as being the actual working notes made by them in the laboratory.

Physics (including Mechanics)

The curriculum in Physics including Mechanics consists of not less than 60 lectures and 60 hours' practical work in the course of an academic year.

The whole subject is to be treated in an elementary manner, the mathematical development in no case extending beyond a knowledge of quadratic equations and elementary trigonometry.

Lectures

General Physics including Mechanics.—Measurement of length, area, volume and mass in the British and metric systems. Velocity, acceleration, momentum, force, work, energy, power. Conservation of energy. Friction. Simple machines. Laws of pressure in liquids. Characteristic properties of the solid, liquid and gaseous states of matter. Elasticity. Surface tension. Viscosity of liquids. Diffusion in liquids and gases. Osmosis.

Sound.—Production and transmission of sound. Noises and musical notes. Velocity of sound in air and effect of change of temperature. Loudness, pitch, and quality of musical notes, and the physical characters of the waves that determine them. Vibration of stretched strings and air columns. Beats. Resonance.

Light.—Rectilinear propagation of light. Laws of reflection and refraction. Formation of images by plane and spherical surfaces, and by thin lenses. The eye as an optical instrument. Elementary theory of vision. Long and short sight and astigmatism and their correction by spectacles. Action of prisms upon light. Spectroscope. Emission and absorption spectra. Infra-red and ultra-violet radiation. Achromatic combinations of prisms and lenses. Instruments : *e.g.*, the telescope, microscope, and simple ophthalmoscope. Photometry. Elementary outline of the wave theory of light. Polarisation.

Heat.—Temperature and its measurement. Thermal expansion. Quantity of heat. Specific heat. Change of state. Determination of melting-points and boiling-points. Latent heat. Vapour pressure. Hygrometry. Conduction, convection, and radiation. Ventilation. Relation between heat and work. Refrigeration.

Magnetism and Electricity.—Elementary properties of magnets. Lines of magnetic force. Simple phenomena of static electricity. The electrophorus and Wimshurst machine. Electric potential and capacity. Condensers. Electric currents. Electrolysis. Primary and secondary cells. Magnetic field of a current. Galvanometers. Ohm's law. Definition and measurement of current strength and of electromotive force. Absolute and practical electrical units. Resistance and its measurement. Heating effects of currents. Electrical power. Board of Trade unit of energy. Thermo-electric couples. Electromagnetic induction. The telephone and microphone. The induction coil. Elementary treatment of the production, properties and measurement of alternating currents. Ionisation of gases. Electric discharge in rarefied gases. Cathode rays and X-rays. Thermionic emission in reference to rectifiers and amplifiers. Electrical oscillations. Radioactivity and the nature of radioactive change. Properties of α, β and γ rays.

Practical Work

[The following scheme is not exhaustive, and is intended merely to show the general nature of the exercises at the practical examination. The Examiners are not precluded from setting other exercises and practical problems illustrative of the principles set forth in the syllabus.]

Use of vernier, linear and angular. Determination of areas and volumes by measurement of linear dimensions. Measurement of a period of oscillation. Use of the balance, weighing to one milligramme. Determination of volumes by weighing in air and water. Densities of solids, powders and liquids. Use of the common hydrometer. Verification of Boyle's law. Reading the barometer.

Comparison of frequencies of tuning forks by smoked-glass method. Determination of velocity of sound by resonance. Use of sonometer.

Use of simple photometer. Verification of laws of reflection and refraction, tracing paths of rays. Focal lengths of spherical mirrors and thin lenses. Arrangement of two lenses to make simple forms of telescope, microscope, and projection lantern. Arrangement of a slit, lenses and prism to produce a spectrum. Use of spectroscope. Determination of refractive indices of solids and liquids.

Use of thermometers, and testing fixed points. Air thermometers. Determination of melting-points and boiling-points. Simple methods of determining specific heat and latent heat. Measurement of pressure of saturated vapours. Hygrometry.

Investigation of the magnetic field in the neighbourhood of a magnet and of an electric current. Gold-leaf electroscope and its use to detect ionising radiations. Use of galvanometers, ammeters and voltmeters. Measurement of resistance by substitution and by Wheatstone's bridge. Use of simple potentiometer. Internal resistance of a voltaic cell. Measurement of conductivity of electrolytes. Measurement of rate of heat development by a current. Simple experiments on induced currents.

Candidates will be required to bring to the practical examination note-books containing a record of their previous practical work for inspection by the Examiners if desired. These note-books must be certified by the teachers of the candidates as being the actual working notes made by them in the laboratory.

General Biology

The curriculum in General Biology consists of not less than 60 lectures and 120 hours' practical work in the course of an academic year.

The whole course is intended as a general introduction to the science of life, with special reference to the later work of the student.

Lectures

Nature of living organisms.

The elements of the gross organisation, physiology, and life history of the frog. Metabolism, respiration, secretion, excretion, regulation.

[A knowledge of the musculature and of the *details* of the skeleton of the frog will not be required.]

Protoplasm ; its physical and chemical characters, irritability, movements and growth. Cellular structure. Cell division. The elements of the histology of the Vertebrata.

The structure, physiology, and life-history of :—*Chlamydomonas, Pleurococcus ; Pandorina, Endorina, Volvox ; Pythium* (or *Peronospora*), *Mucor, Saccharomyces ; Bacteria. Amœba, Monocystis, Paramecium.*

Holozoic, holophytic, and saprophytic methods of nutrition, the energy changes connected with them, and the parts played by organisms in the economy of nature. Parasitism. The differences between animals and plants.

The elements of the structure, physiology, and life-history of *Spirogyra, Fucus, Dryopteris,* and the flowering plant. The structure of a flower (*e.g.* :—*Lilium, Pisum, Ranunculus*), and the functions of its organs ; pollination. Fertilisation and the formation of embryo, seed and fruit. Germination and the conditions under which it occurs. Reserve materials, and their storage by flowering plants.

The elements of the morphology, physiology, and life-history of *Hydra,* the tape worm, the earthworm, the cockroach, the dogfish and the rabbit, considered comparatively. [The skull of the dog to be substituted for that of the rabbit.]

Soma and germ cells. Sexual and asexual reproduction. Differentiation of gametes. Parthenogenesis. Maturation. Fertilization.

The elements of the embryology of Chordata, including :—(*a*) The modes of cleavage and of the origin of the germ layers in *Amphioxus,* the fowl and rabbit ; (*b*) the formation of the embryonic membranes in the fowl and rabbit ; (*c*) the outlines of organogeny (as revealed by a study of the fowl up to the end of the third day of incubation, or of the frog up to a morphologically corresponding stage) ; (*d*) the modes of nutrition during development.

The principal facts of heredity, including a knowledge of simple Mendelian experiments, and of variation. The evidence for evolution, and an outline of the principal theories of the mode in which it takes place.

Practical Work

The above syllabus is to form the basis of the laboratory work by students and of the practical examination.

Candidates will be required to bring to the practical examination note-books containing a record of their previous practical work for inspection by the Examiners if desired. These note-books must be certified by the teachers of the candidates as being the actual working notes made by them in the laboratory.

SECOND EXAMINATION IN VETERINARY SCIENCE

No candidate will be admitted to this Examination unless he has completed the course of study set out below and has passed the First Examination in Veterinary Science at least two years previously.

A candidate who has been referred in one subject only at the First Examination in Veterinary Science in June or December and passes in that subject at the next following First Examination in Veterinary Science will be permitted to proceed to the Second Examination in Veterinary Science as though he had completed the First Examination in Veterinary Science in June or December respectively provided that he has completed the prescribed course of study.

Course of Study

The course of study for the Second Examination extends over the second and third years of study and consists of lectures and practical work in Veterinary Anatomy and Veterinary Physiology (including Organic Chemistry and Biochemistry).

Exemptions

The Senate has power to permit, in special cases, modification of or exemption from the course of study anterior to the Second Examination in Veterinary Science, provided that an equivalent course has been taken in the University or in a recognised institution elsewhere.

Date of Examination

The Second Examination in Veterinary Science will take place twice in each year, commencing on the third Monday in July and on the second Monday in December.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and signed by or on behalf of the appropriate teachers, together with the proper fee, not later than May 15th for the July Examination, or November 1st for the December Examination.

The time-table of the Examination, showing both the time and place of the written, practical, and oral examinations, will be furnished to each candidate.

Fees

The fee for each student is 9 guineas for each entry to the Examination. *

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The examination in Veterinary Anatomy will consist of 2 papers, a practical examination extending over six hours, and an oral examination, and will embrace :—

1. The special anatomy of the Horse.
2. The comparative anatomy of the common domesticated animals (Horse, Ox, Sheep, Pig, Dog, and Fowl).
3. Histology, including the preparation and identification of specimens.

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* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

Candidates will be required to show a knowledge of the entire anatomy of the horse. In the case of the other domesticated animals the examination will extend to the skeleton, and the salient features of the muscular, vascular, and nervous systems, and viscera, compared with the corresponding part of the horse.

The examination in Veterinary Physiology will consist of :—

(1) Three papers comprising Organic Chemistry and Veterinary Physiology and Biochemistry.

(2) A practical examination in Organic Chemistry and Biochemistry, for which 6 hours will be allowed.

(3) A practical examination in experimental and general Physiology, for which 3 hours will be allowed.

Candidates who have passed Part I of the Second Examination in Veterinary Science under former Regulations are exempted from the Organic Chemistry and Biochemistry portions of the written examination, and from the Organic Chemistry portion of the practical Examination in Veterinary Physiology. The entry fee payable by such candidates is 6 guineas.

Candidates will be required to submit their own laboratory note-books, duly signed by their teachers, as evidence of their past work and they will be permitted to use these note-books at the practical examinations.

The Examiners shall be at liberty to test any candidate by means of oral questions.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in both subjects of the Examination.

A provisional list of successful candidates, in alphabetical order, will be published at 2 o'clock on August 23rd and January 15th.

Certificates of having passed the Second Examination will not be issued except to qualified students applying for such certificates.

SYLLABUSES

Veterinary Anatomy

A complete course of Veterinary Anatomy of not less than 120 lectures, dealing with the anatomy of the Horse and the other common domesticated animals. (*Note.*—By "the common domesticated animals" is meant the Horse, Ox, Sheep, Pig, Dog, and Fowl.)

This course will consist of :—

(*a*) First Year.—A course of not less than 50 lectures on the Osteology and Arthrology of the common domesticated animals.

(*b*) Second Year.—A course of not less than 70 lectures on the Anatomy of the common domesticated animals (except Osteology and Arthrology).

(*c*) A course of dissections extending over not less than twelve months. In this course the candidate must have dissected the whole horse's body and the internal organs of the other common domesticated animals at least once to the satisfaction of his Teacher.

(*d*) A practical course of Histology extending over not less than ten weeks.

Veterinary Physiology

The course of instruction in Veterinary Physiology, including Organic Chemistry and Biochemistry, shall occupy half of the student's time for two years. As a general guide, the following shall be the minimum number of lectures to be given in each branch of the composite subject :—

Veterinary Physiology, 70 hours; Organic Chemistry, 35 hours; Biochemistry, 35 hours. Total 140 hours.

The range covered by each of the branches shall be :—

Organic Chemistry. A theoretical and practical course on the principles of Organic Chemistry leading to an adequate knowledge of the nature, reactions, and as far as possible the constitution of those organic compounds which are of physiological importance.

Veterinary Physiology and Biochemistry. A course of theoretical and practical physiology including the study of the chemical changes taking place in the animal body and their significance in physiological processes. The course will embrace :—

(1) the special physiology of the Dog and of a Ruminant.

(2) the comparative physiology of the common domesticated animals (Horse, Ox, Sheep, Pig, Dog, Fowl).

B.Sc. (VETERINARY SCIENCE) DEGREE

The Final Examination for the B.Sc. (Veterinary Science) Degree is in two Parts.

No candidate will be admitted to Part I of the Final Examination unless he has passed the Second Examination in Veterinary Science at least two years previously and has also completed the prescribed course of study for Part I of the Final Examination.

No candidate may enter for Part II before entry for Part I, but he may enter for both Parts at the same time after completing the prescribed course of study for Parts I and II.

Course of Study

The course of study for Part I extends over the fourth and fifth years of study and consists of lectures and practical work in Veterinary Pathology.

The course of study for Part II also extends over the fourth and fifth years of study and consists of lectures and practical work in Veterinary Hygiene.

Date of Examination

Parts I and II of the Final Examination for the Degree of B.Sc. in Veterinary Science will take place twice in each year, beginning on the fourth Monday in October and on the fourth Monday in March.

Every student entering for this Examination or for either Part of it must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and signed by or on behalf of the appropriate teachers, together with the proper fee, not later than September 7th for the October Examination and February 8th for the March Examination.

The time-table of the Examination showing both the time and place of the written, practical, and oral examinations will be furnished to each candidate.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination or 3 guineas for each entry to either Part.*

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Final Examination, Part I (Veterinary Pathology), will consist of :—

(*a*) Two papers. (The questions will embrace General Pathology, Elementary Chemical Pathology, Morbid Anatomy, Morbid Histology, and Bacteriology and Parasitology of the specified domesticated animals.)

(*b*) A practical examination for which three hours shall be allowed in which the candidate will be tested as to his ability to recognise with the naked eye, or by the aid of the microscope, † morbid conditions of tissues, organs, secretions, and exudates, and to identify the principal animal and vegetable parasites.

(*c*) An oral examination.

The Final Examination, Part II (Veterinary Hygiene) will consist of :—

(*a*) One paper of three hours in Veterinary Hygiene and Dietetics, including Animal Husbandry.

(*b*) One paper of three hours in Veterinary State Medicine.

(*c*) An oral examination and a practical examination not exceeding one hour.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A candidate who enters for both Parts on the same occasion and satisfies the Examiners in one Part will not be required to take that Part again on re-entry for the Examination.

Provisional lists of successful candidates, arranged in alphabetical order, will be published at 2 o'clock on November 29th and April 29th.

A diploma for the Degree of B.Sc. (Veterinary Science), under the Seal of the University, will be delivered to each candidate who has passed both Parts of the Examination, after the Report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc. (Veterinary Science) Examination who have entered for both Parts of the Examination or for one Part having

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* For Regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

† Each candidate must provide for his own use at the practical examination, a microscope, with a $\frac{1}{2}$-inch lens, a $\frac{1}{6}$-inch lens, and a $\frac{1}{12}$-inch immersion lens. The University will supply a microscope with the necessary lenses for use at the Examination, on payment of a fee of 10*s.*, to any candidate who shall have given notice on his entry form.

already passed in the other Part are eligible to apply for an Aegrotat Degree. In either case the candidate must have completed more than half of the Examination.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Veterinary Pathology

The *curriculum* in Veterinary Pathology shall consist of :—

(1) An instruction-course in the Pathology, Morbid Anatomy, Bacteriology, and Chemical Pathology of the Horse and the common domesticated animals (*i.e.*, Horse, Ox, Sheep, Pig, Dog, and Fowl), including not less than 70 lectures, and practical work extending over not less than ten weeks in the last-named three subjects.

(2) An instruction-course in the post-mortem room for not less than five months, with practical experience in making post-mortem examinations.

(3) An instruction-course in Hygiene, including demonstrations extending over a period of not less than five months.

Syllabus :—

General Pathology of the Horse and the other common domesticated animals.

(*a*) Processes of inflammation and repair.

(*b*) Neoplasms.

(*c*) Degenerations and retrogressive changes.

(*d*) The principal disorders of the different systems and organs.

Bacteriology and Parasitology.

The Morphology and Biology of the following micro-organisms :— The pyogenic micrococci and streptococci, bacillus coli communis, bacillus anthracis, bacillus of malignant œdema, bacillus of black-quarter, bacillus tetani, bacillus mallei, bacillus tuberculosis, bacillus of swine-fever, bacillus of swine erysipelis, bacillus of swine pneumonia, bacillus of fowl cholera, actinomyces, bacillus of abortion in cows, necrosis bacillus, cryptococcus of epizootic lymphangitis. The pyrosomata and trypanosomata pathogenic to the specified domesticated animals. The Morphology and Biology of the more important animal parasites.

Morbid Anatomy and Histology. The more important structural changes produced in the organs and tissues by disease, as recognised by the naked eye and by microscopical investigation.

Veterinary Hygiene

The course in Veterinary Hygiene will embrace :—

Dietetics :—The chemical composition and relative nutritive value of the various substances commonly used for feeding the different domesticated animals. The more common defects, impurities and adulterants of food materials.

The construction of stables, byres, and other premises for the housing of the different domesticated animals. The principles of lighting and ventilation. Water supply.

Enzootic and epizootic diseases, with special reference to their causation, natural history, and prevention.

The provisions of the Contagious Diseases of Animals Acts, and of the Orders issued thereunder. Dairies, Cowsheds and Milkshops Orders.

The general principles of disinfection, and the methods of carrying them into effect.

Meat inspection. Construction of abattoirs. The characters of sound or wholesome meat. Methods of inspection. The diseases and conditions which render meat unfit for the food of man. The Statutes governing the seizure and condemnation of unsound meat.

EXAMINATION-PAPERS

Pamphlets of past papers for the First, Second and B.Sc. Examinations in Veterinary Science can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 2*s.* post free.

A complete list of examination-papers published by the University can be obtained on application.

UNIVERSITY OF LONDON

Faculty of Engineering

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following Degrees in the Faculty of Engineering :—

Bachelor of Science (Engineering) (B.Sc.).

Bachelor of Science (Engineering) in Chemical Engineering (B.Sc.).

Bachelor of Science (Engineering) in Metallurgy (B.Sc.).

Bachelor of Science (Engineering) in Mining (B.Sc.).

Master of Science (Engineering) (M.Sc.).

Doctor of Philosophy (Ph.D.).

Doctor of Science (Engineering) (D.Sc.).

In order to be admitted to the Degree of Bachelor of Science (Engineering) as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Engineering in the prescribed subjects, unless exempted therefrom in accordance with the Regulations, or unless proceeding under the Revised Regulations.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the course is normally not less than three academic years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Engineering or Chemical Engineering or Metallurgy or Mining.

No candidate will be allowed to take more than one Branch at one and the same time.

STUDENTSHIPS

Eight Studentships (£250 for one year) are offered at the B.Sc. (Eng.) Examinations in Engineering, Chemical Engineering, Mining, and Metallurgy for Internal and External Students.

[For details, see p. 13 of the General Regulations.]

341/3/3250 8/50. W. & S. Ltd.

B.SC. (ENGINEERING) DEGREE

REVISED REGULATIONS

Special Regulations have been approved by the Senate for Internal Students at University College, King's College, Imperial College of Science and Technology, and Queen Mary College. Copies can be obtained on application to the Academic Registrar.

COURSE OF STUDY

The course for the Final Examination in Engineering normally extends over not less than three academic years.

Before admission to the course a student must qualify to matriculate and must either :—

[*Note.*—For entry to the Faculty of Engineering a student who satisfies the requirements for matriculation at an Examination for the General Certificate of Education awarded by one of the approved University Examining Bodies must have passed at that Examination in Mathematics at Ordinary or Advanced Level.]

(*a*) possess a Certificate awarded on a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools with passes *either* (i) at main subject standard in three of the following subjects, Pure Mathematics, Applied Mathematics, Physics and Chemistry, and at main or subsidiary standard in the remaining subject *or* (ii) at main subject standard in Mathematics (Pure and Applied), Physics and Chemistry ; or

(*b*) have passed at Advanced Level at an examination for the General Certificate of Education awarded by one of the approved University Examining Bodies in *either* the three subjects Mathematics (Pure and Applied), Physics and Chemistry, *or* the four subjects Pure Mathematics, Applied Mathematics, Physics and Chemistry ; or

(*c*) pass a Preliminary Examination in any of these subjects in which he has not so qualified. (For the present the Preliminary Examination will be the Preliminary (Intermediate) Examination in Science or an approved equivalent.*)

A candidate shall be eligible to present himself for the Part I Examination after having satisfactorily attended approved courses therefor extending over five terms.

A candidate who possesses an approved Higher School Certificate with passes at main subject standard in three of the subjects Pure Mathematics, Applied Mathematics, Physics and Chemistry, or has passed in three of the foregoing four subjects at an approved Examination at Advanced Level for the General Certificate of Education or at the Preliminary Examination, may be allowed to complete the qualification required for entry on the course by taking the fourth subject during the course for the Part I Examination and shall be eligible to present himself for the Part I Examination provided he has satisfied the foregoing conditions as to attendance and has passed the preliminary examination in that subject before entry to the Part I Examination.

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* *Students who are matriculated students of the University and have passed an Intermediate Examination of any University in Great Britain and Northern Ireland (and such other Universities as may be approved for this purpose) in the appropriate subjects may apply for admission as Internal Students and for permission to proceed to a first degree in the Faculty of Engineering in this University without having previously satisfied the Examiners at the Preliminary Examination of this University.*

An examination in Engineering Drawing will precede the Part I Examination. A candidate may take the examination either with Part I, or (by permission of the authorities of the Institution at which he is pursuing his course of study) on a previous occasion. The examination will consist of one paper of not less than three hours' duration. Course-work will also be examined. The examination will be qualifying only and the marks obtained will not be taken into account for the purpose of the Final Examination. When the examination is taken with Part I, a student may be referred in Engineering Drawing only if he passes in all papers of the Part I Examination.

A student who has passed, or been exempted from, the Intermediate Examination in Engineering under the old Regulations will be permitted to proceed to Part I of the Final Examination under the Revised Regulations and will not be required to pass the qualifying examination in Engineering Drawing.

Normally a candidate must pass Part I of the Examination before he may enter for Part II. Nevertheless, in exceptional cases, a candidate may be permitted to take both Parts of the Examination in the same year.

The subjects of the Final Course are as follows :—

PART I.—Strength and Elasticity of Materials and Theory of Structures ; Theory of Machines ; Applied Heat ; Mechanics of Fluids ; Applied Electricity ; Mathematics.

PART II.—The Mechanics of Fluids ; Surveying ; Applied Thermodynamics ; Principles and Design of Electrical Machines ; Electrical Power ; Electrical Measurements and Measuring Instruments ; Electronics ; Telecommunications ; Theory of Machines ; Theory of Structures ; Strength and Elasticity of Materials ; Mathematics.

DATE OF EXAMINATION

The B.Sc. (Engineering) Examination will take place once in each year, Part I beginning on the third Monday in March and Part II beginning on the third Monday prior to the first Monday in July.

[*Note.*—In 1951 Part II will begin four days earlier, *i.e.*, on Thursday, June 7th.]

The time-table of the Examination, showing both the time and place of the written and of the practical examination, and of the oral examination if required, will be furnished by the Academic Registrar to each candidate.

Every student entering for either Part of this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9) together with the proper fee, in the case of Part I not later than January 31st, and in the case of Part II not later than March 30th.

Fee

The fee for each student is 4 guineas for each entry to Part I of the Examination, and 3 guineas for Part II. The fee for the qualifying examination in Engineering Drawing is 2 guineas. The fee for re-examination in any subject in which he may have been referred at Part I is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Final Examination are as follows :—

PART I

Strength and Elasticity of Materials and Theory of Structures	One 3-hour paper in each subject.
Theory of Machines	
Applied Heat	
Mechanics of Fluids	
Applied Electricity	
Mathematics	Two 3-hour papers

PART II

The Mechanics of Fluids *either* (*a*) Hydraulics *or* (*b*) Aerodynamics	Two 3-hour papers in each of the selected subjects.
Surveying	
Principles and Design of Electrical Machines	
Electrical Power	
Electrical Measurements and Measuring Instruments	
Electronics	
Telecommunications	
Theory of Machines	
Mathematics	
Applied Thermodynamics	One general paper with alternative second papers in Steam Engines and in Internal Combustion Engines.
Strength and Elasticity of Materials	One general paper with alternative second papers, one in the same subject but of a more advanced standard and the other in Engineering Metallurgy.
Theory of Structures	One general paper with alternative second papers in Civil Engineering Structures and Aircraft Structures.

The standard of the examination in Part I is to be that which would normally be required of a whole-time student after a course extending over five terms subsequent to passing the Preliminary Examination.

Equal weight will be attached to each of the six subjects of Part I of the Examination.

A candidate shall be examined either for a Pass or Honours Degree. A candidate must pass in each of the six subjects of Part I of the Examination; a candidate for a Pass or Honours Degree must pass in at least four subjects of Part II of the Examination, but a candidate will be permitted to offer (*a*) any four subjects, or (*b*) any five subjects, or (*c*) any four subjects with a report upon one or more " problems " which he has undertaken. This report will be examined and will be reckoned for marks as equivalent to a fifth subject. In cases (*b*) and (*c*) only the four " subjects " in which the highest marks are obtained will be taken into account. In each subject a reasonable choice of questions shall be allowed. No exemptions from any part of the Examination are allowed.

A student will be required to submit a certificate in accordance with the requirements of Section 7 of the General Regulations for Approved Courses of Study showing that he has followed to the satisfaction of his teachers, in so far as they are severally concerned, approved Instruction-courses in each of the subjects in which he is to be examined.

At the examinations in Strength and Elasticity of Materials and Theory of Structures in Part I and in Theory of Structures at Part II of the Examination, Tables of the Properties of British Standard Sections may be provided at the discretion of the Examiners.

In all subjects offered for examination except Mathematics the work done by a student during his course of study will be examined and no student whose course-work in any subject does not satisfy the Examiners will be allowed to pass in that subject.

A candidate will be required to submit his course-work for examination on each and every occasion on which he presents himself for the Final Examination. Nevertheless, a candidate who enters for and fails any part of the Final Examination but satisfies the Examiners in course-work in all subjects offered need not re-submit his course-work on re-entry to that part of the Final Examination.

A candidate whose course-work in any subject is rejected by the Examiners shall be notified that he has failed in course-work in that subject.

Special importance will be attached to technical facility in drawing, designing, field-work, or other practical operations which cannot be tested in an examination by questions.

The examination of a student's work done during the course of study will include an examination of the student's drawings and designs and records of practical work in the subjects which he offers for examination.

Course-work for Part II must be appropriate to the standard of the course in the several subjects in Part II of the Examination.

If the Examiners deem it desirable, the Examination may also include an oral examination in the subjects of Strength and Elasticity of Materials, Applied Thermodynamics, and the Mechanics of Fluids, to be conducted in the laboratory in which the student has worked, and for the subject of Surveying in connection with the adjustment of instruments. The Examiners shall be at liberty to test any candidate by means of oral questions in any part of the Examination.

A candidate at Part I of the Examination who fails to reach the minimum standard in any one subject only may be " referred," *i.e.*, he may be permitted on the recommendation of the Examiners to present himself in that subject alone.

A candidate who fails to pass in the referred subject will be permitted to re-enter for examination in that subject alone on any subsequent occasion. A candidate who enters for and is successful at the Part II Examination before he has passed in his referred subject at the Part I

Examination will be credited with Part II and allowed to complete the Degree Examination by passing in the referred subject alone. No candidate will be permitted to enter for the Part II Examination unless he has passed the qualifying examination in Engineering Drawing.

A candidate will be referred only if his failure in the subject is not serious, and if his performance in the remaining subjects is reasonably good.

The marks obtained in Part I of the Examination will be combined with those obtained in Part II for the purpose of the classification for Honours.

A provisional list of successful candidates at the Part I Examination will be published by the Academic Registrar at 2 o'clock on May 5th.

A provisional list of successful candidates at the Part II Examination will be published by the Academic Registrar at 2 o'clock on August 5th. Successful candidates will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) a Pass, B.Sc. (Engineering(Degree.

A copy of the pass list will be sent as soon as available to each successful candidate, and each unsuccessful candidate will receive an individual communication.

A diploma for the Degree of B.Sc. (Engineering) under the Seal of the University shall be delivered to each successful candidate on or after Presentation Day. A notification of the date of the Presentation Ceremony, which takes place in May of each year, will be sent to each successful candidate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final B.Sc. (Engineering) Examination (Part II) may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the general B.Sc. (Eng.) Examination who have already passed Part I and who have completed more than half of the Part II Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Engineering Drawing

Principles of engineering drawing. The British Standard Specification for Drawing Office Practice.

Drawing and sketching engineering details and machine parts.

A knowledge of engineering fastenings, couplings, pulleys, bearings, simple valves, pipe fittings, and other simple engineering components, with some reference to the materials used in their construction.

The meaning of limits and fits.

Practical construction of conics, loci, and other common curves. Geometry of solids, and the orthographic projection of lines and solids. Intersections and developments. Pictorial projections.

Measurement of areas, and determination of centroids and second moments of area. Graphical differentiation and integration.

PART I

Strength and Elasticity of Materials and Theory of Structures

Strength and Elasticity of Materials

The crystallinity of metals. Physico-chemical changes occurring during and after solidification. Undercooling. Cooling curves. Thermal analysis. Construction of simple thermal equilibrium diagrams. An introductory study of deformation processes as applied to metals and alloys. The composition and uses of common ferrous and non-ferrous metals and alloys.

Stress and strain : tension, compression and shear. Complementary shear stress. Hooke's law. Young's modulus. Modulus of rigidity. Poisson's ratio. Temperature stresses. Simple cases of resilience and suddenly applied loads. Composite bars. Elastic and plastic behaviour of common materials in tensile and compressive tests. Stress-strain curves. Simple testing machines. The measurement of strain.

Bending moments and shearing forces in cantilevers and simply supported beams under static loads. Theory of bending beams, including neutral axis, distribution of normal stress due to bending, moment of resistance. Second moment of area of sections. Curvature, slope and deflection of cantilevers and simply-supported beams. Composite beams. Determination of Young's modulus from bending tests. Eccentric loading, including tension or compression combined with bending.

Torsion of circular shafts, including moment of resistance, angle of twist, shear stress. Transmission of power by shafts. Determination of Modulus of Rigidity. Stresses and deflections of close-coiled helical springs made from rods of circular section.

Simple strut theory. Critical loads for slender struts. Empirical strut formulæ. Thin cylinders under internal pressure. Stresses in thin rotating cylinders.

Theory of Structures

Statically-determinate plane frames, including criteria for sufficiency of bracing, stress analysis by graphical and analytical methods. Forces in a tripod. Influence lines of bending moment and shearing force for simply supported beams. Simple cases of rolling loads on girders and trusses with parallel booms. Counter-bracing of framed girders. Unstiffened suspension cables. 3-pinned arches.

Simple cases of deflection of frames treated analytically and graphically. Stability of trapezoidal dams under water pressure on one face and of chimneys under wind pressure.

Theory of Machines

Plane kinematics of simple mechanisms. Constraints and degrees of freedom. Instantaneous centres of rotation. Vector diagrams of displacement and velocity. Graphs of displacement, velocity and acceleration for linear and angular motion. Screws and screw threads. Belt, rope and chain gearing. Simple forms of teeth for spur gears. Wheel trains, including epicyclic trains. Cams. Simple slide-valve motion.

The calculation and experimental determination of centres of gravity and moments of inertia, in two dimensions only. Dynamics of machines. Calculation of piston displacement, velocity and acceleration in the reciprocating-engine mechanism, and inertia force in a single-cylinder engine. Turning-moment diagrams. Flywheels. Simple types of governors. Balancing of rotating masses and primary balancing of reciprocating masses. Simple applications of impulsive forces and torques. Friction of unlubricated surfaces. Efficiency of machines. Brakes, clutches and dynamometers.

Applied Heat*

Laws of thermodynamics. The perfect gas. Expansion and compression of gases with constant specific heats. Internal energy and Joule's law. Reversibility. The Carnot cycle. Entropy. Properties of liquids and vapours. Use of steam tables. Internal energy. Isentropic processes. Simple entropy diagrams for gases and vapours. Fuels: gross and net calorific values. Combustion: air required.

An elementary knowledge of steam engine installations, including boilers and auxiliary plant. Indicators and indicator diagrams. Diagram factor. Determination of cylinder dimensions. The Rankine cycle: efficiency-ratio. The behaviour of steam in the cylinder. Compounding.

Internal-combustion engine cycles. Air standard efficiency of constant-volume and constant-pressure cycles. An elementary knowledge of gas, petrol and oil engines, with their indicator diagrams. Elementary treatment of air compressors and meters.

Testing of engines: efficiencies, heat balances.

Mechanics of Fluids

Fundamental properties of a fluid. Viscosity. Surface tension. Hydrostatic pressure. Centre of pressure. Floating and immersed bodies. Statical stability. Metacentric height. Hydrostatic equations for compressible fluids. Vertical stability of the atmosphere. Bernoulli's theorem for incompressible flow. Introduction to the stream function. Plotting of streamlines. Measurement of velocity of incompressible flow by Pitot and static pressure tubes, nozzles, orifices, notches and Venturi meter. Resistance of immersed bodies at constant velocity. Rayleigh's formula. Reynolds number. Froude number. Critical velocities for flow in pipes. Formulæ with constant coefficients for pipes. Loss of head due to bends, sudden enlargements and contractions. Hydraulic gradient. Simple theory of flow in open channels. Impact and reaction of jets. General principles of the theory of reciprocating pumps, turbines and centrifugal pumps.

Applied Electricity

Units and Definitions

The Electric Circuit

Resistivity, temperature coefficient, heating of conductors. Kirchhoff's laws, simple d.c. network problems. Self and mutual inductance. Effects of inductance in d.c. circuits. Capacitance and its effects in d.c. circuits. Alternating currents and the a.c. circuit, vectorial representation, complex quantities.

Locus diagrams for series and parallel circuits (with one variable quantity). Resonance in simple series and parallel circuits. Power and power factor. The measurement of current, voltage, power and energy in d.c. and a.c. circuits: typical indicating instruments.

Voltage and current relations in balanced three-phase circuits.

Power and energy measurements in balanced three-phase circuits.

D.c. and a.c. systems of supply.

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*Quantities of heat will normally be expressed in British Thermal Units, but Examiners will not be precluded from setting questions involving the metric system. The University will provide the following tables at the examination: Abridged Callendar Steam Tables—Fahrenheit Units (fourth edition, Edward Arnold & Co.).

Electrostatics

Delineation of electric fields. Equipotential surfaces. Calculation of the capacitance of parallel plates and coaxial cylinders. Permittivity, electric stress, stored energy.

Electromagnetism

Delineation of magnetic fields due to currents in conductors and coils.

Definitions of magnetic quantities.

Long, straight and circular solenoids. Flux measurement.

The magnetic properties of ferromagnetic materials : simple methods of testing.

Hysteresis and eddy current losses. Permanent magnets.

The magnetic circuit. Stored energy : tractive force.

Transformers

The magnetic circuit, main and leakage paths. Transformation ratios, vector diagrams. Voltage regulation, losses, conditions for maximum efficiency.

D.C. Machines

Simple lap and wave windings. E.M.F. and torque equations.

The magnetic circuit. Simple treatment of armature reaction and commutation. Commutating poles.

Characteristics as generators and motors.

Voltage and speed regulation. Starting : motor starters.

A.C. Machines

Magnetic circuit. Flux distribution in salient pole and non-salient pole field systems.

E.M.F. in single conductors ; resultant e.m.f. in a coil and in a distributed winding due to a sinusoidal flux distribution.

The characteristics of alternators.

The alternator as a synchronous motor.

The polyphase induction motor : simple theory, characteristics, starting.

Electrochemistry

Secondary batteries, simple theory of action, efficiencies.

Electronics

Electron emission : gas discharge phenomena : the open arc.

The diode, characteristics and use as a rectifier.

The triode, characteristics and use as an amplifier.

Simple principles of the photo-electric cell and cathode-ray tube.

Simple principles of action of the mercury arc and the metal rectifier.

Illumination

Definitions and units. Simple calculations of illumination from a given source. Filament and gas-discharge types of electric lamps.

Simple photometric measurements.

Mathematics

Differentiation and integration of algebraic, trigonometric, exponential, logarithmatic and hyperbolic functions.

Maxima and minima of functions of a single independent variable.

Tangents, normals and curvature of plane curves; geometrical properties of well known curves.

Technique of integration, including change of variable, use of identities and partial fractions, and integration by parts.

Definite integrals, including applications to arcs, areas, volumes, first and second moments; graphical and numerical methods of approximate integration.

Approximate solution of equations by graphical and numerical methods.

Complex numbers and Demoivre's theorem.

Taylor's and Maclaurin's series, and other methods of expansion; use of series for approximation.

Elements of partial differentiation.

First order differential equations with separable variables; second order linear differential equations with constant coefficients.

Elementary ideas of probability and statistics and application to the theory of errors.

Applications of the foregoing to:—plane statics; hydrostatics; dynamics of a particle in one or two dimensions under variable forces; resisted motion and damped oscillations; work, energy, momentum; motion of a rigid body about a fixed axis.

PART II

Mechanics of Fluids

Section (*a*)—The syllabus of Part I, "Mechanics of Fluids," (p. 1508) together with:—

Flow of compressible fluids. Variation of the Bernoulli constant across the stream lines. Vorticity. Distribution of pressure and velocity in free and forced vortices. Flow over flat-crested and submerged weirs. Velocity of approach. Experimental determination of viscosity and the application to lubrication. Dash pots. Dynamical similarity. Application to flow in pipes and resistance of submerged and partially submerged bodies. Hydraulic models. River gauging; instruments and methods. Catchment areas: relation of rainfall and run-off. Storage and conveyance of water. Branched pipes. Power transmission by pipe-lines. Waterhammer. Non-uniform flow in channels. Backwater function. Hydraulic jump. Venturi flume. General theory of turbines and centrifugal pumps. Unit speed. Unit power. Specific speed. Governing of turbines. Surge tanks. Reciprocating pumps, accumulators, intensifiers and other hydraulic machines.

Section (b)

Airflow Theory and Experiment.—Relevant physical properties of the atmosphere. Bernoulli's theorem for compressible flow. Laws of viscosity and the viscous stresses in two-dimensional flow. Aerodynamical applications of the principle of similitude; Reynolds, Mach and Froude numbers. Theory and practice of wind tunnel measurement, systematic tunnel corrections, properties of aerofoils. Elements of potential, incompressible flow. Single rectilinear vortex and vortex pairs. Constancy of circulation. Effects of parallel walls. Elements of Prandtl's aerofoil theory and applications. Thin aerofoil theory; Glauert's and Ackeret's theories. Applications of the Joukowski transformation. Elements of boundary layer theory. Von Karman's theory. Flat plate friction. Reduction of profile drag. Elements of airscrew theory.

Aircraft Motion.—Estimation of glider drag. Equilibrium in steady rectilinear and circular flight. Static stability. Speed range, useful load, rate of climb, ceiling. Prediction of performance, including method of induced drag; wing loading, aerodynamic efficiency. Testing and reduction of performance. Simple manœuvres and elementary theory of spinning. Nature of stability and disturbed aeroplane motion. Systems of control. Rolling moments and the dihedral angle. Full-scale experiments.

Surveying*

Chain surveying, traverses, traverse sheets and plotting by co-ordinates, adjustment of error of closure. Levelling, including precise and barometric levelling, contouring. Plane table surveying. Fundamental principles of photographic surveying. Tacheometry and allied methods. Hydrographical surveys of rivers, harbours and coast-lines.

Setting out simple, compound, transition and vertical curves; tunnelling, plumbing, triangulation. Areas, volumes, mass-haul. Reconnaissance.

The level, theodolite and other surveying instruments in general use, their adjustment and maintenance. Instrumental errors and their elimination. Optical laws as applied to surveying.

Major triangulation Satellite stations. Base lines; trigonometrical levelling. Curvature of the earth and refraction. Latitude and longitude by account. Convergence of meridians. Setting out of boundaries.

Field Astronomy. Time, longitude, latitude and azimuth.

Adjustment of triangulation and other observations. Method of least squares.

Principles and Design of Electrical Machines

Fundamental principles underlying energy conversion in electrical machinery. Details of construction. Materials employed in construction. Measurement of losses, output, efficiency, temperature and regulation.

Transformers

Types of construction and methods of cooling of single and polyphase transformers. Auto-transformers. Waveform of the magnetising

*For the present the University will provide Chamber's seven figure mathematical tables at the examination.

current : the third harmonic and its effects, possible means of preventing circulation of the third harmonic in three-phase transformers. Equivalent circuits. Parallel operation. Surges in transformers. Control of voltage ratio, on-load and off-load devices ; induction and moving-coil regulators. Three-phase transformer connections in relation to balanced and unbalanced loads.

Magnetic Circuits of Rotating Machines

Effects of slots and radial ducts on air gap reluctance and on losses. Determination of flux distribution and leakage factors with salient and non-salient pole fields ; effect of armature reaction.

Direct Current Machines

Types of armature winding. Flux distribution on load ; commutation. Flash-over ; compensating windings ; commutating poles ; equipotential connections. Control of voltage or speed. Estimating performance. Parallel operation. Special types of machines (e.g., amplidyne, metadyne and arc-welding generators).

Synchronous A.C. Machines

Effect of flux distribution, winding distribution and span on the e.m.f. and its wave shape. The prominent harmonics in single and polyphase windings. Armature reaction ; effect on flux distribution ; regulation and excitation. Parallel operation ; phase swinging ; stability ; damping windings. Starting synchronous motors. Effects of short circuits.

Induction Machines

Theory of polyphase motor. Equivalent circuits. Circle diagram. Estimating performance from diagram. Characteristics of wound, single and double-cage rotors. Starting and speed control. Synchronous induction motor. Induction generator. Compensated induction motors. Phase advancers.

Principle of single-phase induction motor. Vector diagram. Starting. Characteristics.

A.C. Commutator Motors

Principles of single-phase series, repulsion and repulsion-induction motors. Load-speed characteristics. Commutation. Starting. Speed control. Principles and performance of three-phase motors.

Rotary Convertors

Current and voltage relations for different numbers of phases. Copper loss ; distribution of heat. Armature reaction ; commutation ; flash-over. Voltage control. Hunting. Inverted operation.

Mercury Arc Rectifiers

Simple theory of operation, including overlap in multi-anode rectifiers. Transformer connections. Voltage and current relations. Wave-forms. Voltage regulation ; grid control. Inverted operation. Back-fire.

Design

Specifications of performance for different kinds of service. Factors governing choice of specific electric and magnetic loadings, number of

poles, proportions of magnetic circuit, main dimensions, number and size of slots, type of winding, type of insulation and method of ventilation. Design of field and commutating-pole windings. Estimation of exciting current at no-load and full-load, losses, efficiency, regulation and temperature rise.

Electrical Power

Theory of three-phase networks ; symmetrical components. Conduction of electricity through gases. Mechanisms of breakdown in gases, liquids and solids. Principles of arc extinction in switchgear. Impulse ratio and impulse testing. Mechanical forces due to heavy currents in busbars and cables.

Generation

Voltage control and parallel running of generators. Automatic voltage regulators. Interconnection of stations. Static and transient stability. Load control. Calculation of symmetrical and asymmetrical short-circuit currents. Generator protection. Substation and converting plant. Busbar and switching arrangements.

Transmission

Transmission systems. Calculation of line constants. Electrical calculations for short and long lines. Voltage regulation and control. Operation of lines in parallel. Insulation of cables and overhead lines ; Electric stress distribution. Corona phenomena. Transients (simple treatment). Protection against fault currents and excess voltages. Interference with communication systems. Calculation of mechanical stress and sag in overhead lines, including composite conductors.

Distribution

Systems : network calculations. Calculation and measurement of insulation resistance. Fault localisation. Earthing and safety precautions.

Utilisation

Electric drive ; starting and speed control for industrial purposes. Electrical heating ; furnaces ; welding. Electrochemical processes. Illumination.

Electric Traction and Allied Applications

Speed-time curves for trains and hoists ; energy consumption. Characteristics of traction and lift motors. Braking. Operation of lifts, trams, trolley-buses, locomotives and multiple-unit trains. Operating schedules and relevant calculations. Systems of supply. Feeding and distribution, converting plant.

Economics

Generating costs. Kelvin's law. Cost comparisons. Tariffs. Economics of inter-connection (the British grid).

Electrical Measurements and Measuring Instruments

General Theory

Systems of units and dimensions. Standards and sub-standards. Circuit theory applied to measurements. Analysis of wave forms. Simple problems in transients. Electric and magnetic field calculations. Screening.

Measurements

Methods for measuring current and resistance in absolute terms. Bridge and potentiometer methods (d.c. and a.c.). Methods of measuring high and low values of resistance; high and low voltages; large and small currents; power and energy; frequency and phase difference. Measurements at high frequencies, simple examples of resonance methods. The oscillographic recording of steady state and transient phenomena. Methods of determining magnetic properties of ferromagnetic materials and electrical properties of dielectrics. Electrical methods of measuring temperature, mechanical strain, angular displacement and velocity. Illumination measurements.

Instruments

The construction and theory of operation of electromagnetic, electrostatic, electronic and thermal instruments for the direct measurement of current, potential difference, resistance, power, energy, frequency and power factor, construction and theory of operation of instrument transformers, galvanometers (d.c. and a.c.); fluxmeters; oscillographs. Testing and calibration of commercial d.c. and a.c. indicating, recording and integrating instruments.

Electronics

General

Electrical structure of matter; linear and non-linear conductors; insulators. Thermionic, photo-electric, secondary and cold cathode emission; contact rectification; fluorescence, phosphorescence. Conduction through gases. Piezo-electric and magneto-striction effects. Elementary electron ballistics.

Valves

Underlying principles, construction and characteristics of high-vacuum valves, cathode-ray tubes, photo-electric cells, electron multipliers, gas-filled valves and X-ray tubes.

Circuit Theory

Series and parallel resonance; Q factor; coupled circuits. Loss-free high-frequency transmission line. Screening; interference.

Rectification

Hard and gas-filled rectifiers; grid control. Metal rectifiers. Smoothing; voltage doubling; typical circuits. Power rectifiers and inverters.

Amplification

Principles of amplification by valve circuits. Positive and negative feed-back. Distortion. Noise. Efficiency. Design of simple voltage and power amplifiers.

Oscillators

Principles of sine-wave and pulse generators. Relaxation oscillators. Elementary design considerations.

Cathode-Ray Oscillography

High and low-voltage oscillographs: beam focus, intensity and deflection control. Screen materials. Time bases.

Applications

Electronic control systems. High-frequency eddy-current heating. Dielectric heating. Counting and timing mechanisms. Accelerators for charged particles. Generation of supersonic waves. Gas-discharge lamps.

Telecommunications

Electro-Acoustics

Propagation of sound : reflection, absorption, interference, resonance. Properties of microphones and sound reproducers.

Circuit Elements and Terminal Equipment

Principles of amplifiers, oscillators, frequency-changers, modulators and demodulators. Simple examples of relays and switching mechanisms employed in telegraphy and telephony. Application of photo-electric devices and cathode-ray tubes in vision transmission. Electromechanical resonators and their applications.

Circuit Theory and Line Propagation

Theory of networks with lumped constants. Theory of the uniform line. Repeated networks, simple filters, loaded lines. Reflections ; matching. Transmission losses.

Aerials and Radiation

Simple treatment of electromagnetic radiation ; radiation resistance. Aerial systems for transmission and reception ; directional properties. The elements of ionospheric propagation.

Communication Systems

Basic considerations in regard to frequency, bandwidth and speed of signalling. Carrier, multi-channel and multiplex systems. Signal to noise ratio. Simple examples of line and radio systems for telephone and telegraph transmission. Basic principles of radio position and direction finding. Basic principles of television. Elementary concepts of telephone switching systems.

Ultra High Frequency Technique

Simple treatment of the generation, transmission and reception of micro-waves including the principles of wave guides and simple radiators.

Theory of Machines

A fuller knowledge of the subjects stated in " Theory of Machines," Part I (p. 1507), together with the following :—

Acceleration diagrams for mechanisms. Acceleration of geared systems. Performance of vehicles. Steam engine valve gears. Inertia governors. Inertia forces and balancing of reciprocating engines. Elementary kinematics of a body moving in three dimensions. Couplings between non-axial shafts. Helical, bevel, worm and screw gearing. Elements of gyroscopic theory. Applications of the elementary principles of rigid dynamics.

The vibrations of mechanical systems including forced vibrations and the effects of viscous friction. The transverse vibrations of wires and beams. Whirling of shafts. Torsional vibrations. Approximate methods.

Mathematics

The syllabus for Part I (p. 1510), together with :—

Further partial differentiation ; maxima and minima of functions of several independent variables, including method of least squares : change of independent variables.

Elementary vectors, including scalar and vector products.

Fourier series and numerical harmonic analysis.

Line, surface, and volume integrals.

Differential equations, including first and second order equations, integrable by quadratures ; linear differential equations with constant coefficients, equations reducible to these, and simultaneous linear equations with constant coefficients ; easy examples of solution in series ; simple partial differential equations, including solution by separation of variables.

Functions of a complex variable, elementary ideas and simple examples of conformal transformation.

Three-dimensional co-ordinate geometry of the straight line, plane, and the simpler curved surfaces ; tangent planes and normals.

Spherical trigonometry.

Plane motion of a rigid body ; work, energy, momentum and moment of momentum.

Virtual work ; stationary energy ; stability of equilibrium.

Questions may be set involving the formulation and solution of mathematical problems associated with engineering subjects.

Applied Thermodynamics*

Candidates will be required to offer Section I and **either** Section II (*a*) **or** Section II (*b*).

Section I—Applied Thermodynamics

A fuller knowledge of the subjects stated in " Applied Heat," Part I, (p. 1508), together with the following :—

The properties of gases including variable specific heats, volumetric heats. The properties of vapours. Mixtures of gases and vapours. Entropy charts for steam and other vapours. Flow of gases and vapours through nozzles. Combustion. Effect of air-fuel ratio. Gas producers. Humidity of the atmosphere. Evaporative coolers. Air conditioning.

Air compressors and motors. Volumetric efficiency. Multi-stage compression. Centrifugal and other rotary compressors.

*Quantities of heat will normally be expressed in British Thermal Units, but Examiners will not be precluded from setting questions involving knowledge of the metric system. The University will provide the following tables and charts at the examination :—Abridged Callendar Steam Tables—Fahrenheit Units (fourth edition, Edward Arnold & Co.). Total Heat-Entropy Chart for Steam (Edward Arnold & Co.).

Air and vapour-compression refrigerators. Absorption machines. Choice of refrigerant.

Heat transfer. Elementary knowledge of radiation, conduction and convection. Applications to tubes, plates and lagging.

Section II (a)—Steam Engines

Steam engine cycles. The Rankine cycle with incomplete expansion. Compounding. Regenerative, resuperheating and binary-vapour cycles. The operating conditions of steam power plant and their effect upon efficiency.

Boiler plant, modern developments. Boiler testing and efficiency. Air supply and regulation. Superheaters, feed heaters, air preheaters. Condensers, extraction systems, de-aeration. Evaporators, accumulators.

Steam turbines. Efficiencies. Condition curves. Multi-stage machines. Turbines for back pressure, mixed-pressure, steam-extraction.

Further work on refrigeration, including multiple-effect cycle. The heat pump.

Section II (b)—Internal-combustion engines

The cycles of operation of internal-combustion engines, with their representation on pressure-volume and temperature-entropy diagrams. The actual cycle as modified by air-fuel ratio, dissociation and variable specific heats. Volumetric efficiency, supercharging, methods of cooling. The constructional details of the various types of internal-combustion engines.

Combustion, detonation, properties of fuels. Shape of combustion head, turbulence. Indicators. Ignition systems, carburettors, fuel pumps, fuel injection systems.

Elementary treatment of gas turbines. The regenerative cycle. Centrifugal and turbo-blowers and compressors. Condition curve and efficiencies.

The testing and performance of internal-combustion engines.

Strength and Elasticity of Materials

Section I

A fuller knowledge of the subjects stated in " Strength and Elasticity of Materials," Part I (p. 1507), together with the following :—

Standard mechanical tests for strength, ductility, hardness, creep and resistance to impact and fatigue.

Systems of complex stress. Principal stresses and principal planes. Principal strains. Relation between the elastic constants. Resilience in tension, bending and torsion. Theories of elastic failure. Effect of impact loads on ties and beams. Encastré beams. Distribution of shearing stresses in beams. The general theory of struts subjected to axial and parallel eccentric loads.

Stresses and strains in thick cylinders subjected to fluid pressure. Compound cylinders. Flat spiral springs and leaf springs. Simple cases of free longitudinal, transverse and torsional vibrations.

Section II (a)

More difficult questions on the work of Section I together with :—

Deflections of beams due to shear. Theory of bending of curved bars with simple applications. Laterally loaded struts and ties. Wire wound cylinders. Open coiled helical springs. Stress analysis of rotating rings and discs. Stresses in the simple cases of thin plates subjected to normal loading.

Section II (b)—Engineering Metallurgy

Elements of crystallography as applied to metallurgy. More detailed discussion of thermal equilibrium diagrams. Typical constitutional diagrams of the common non-ferrous engineering alloys. The iron-carbon diagram. Metallography (microstructure and macrostructure), heat-treatment and uses of plain carbon and alloy steels. Cast irons including high-duty, special and malleable cast irons. Classification of heat-treatment and melting furnaces. Types of industrial pyrometers. Melting and casting of ferrous and non-ferrous metals and alloys. Production of steel ingots ; ingot defects. Effects of elevated temperatures on metals and alloys. Corrosion of metals and methods of protection. Typical examples of deformation processes. Typical welding processes ; examination of welds. Non-destructive testing of metals and alloys ; radiological, magnetic and other methods.

Theory of Structures

Section I

A fuller knowledge of the subjects stated in the syllabus for " Strength of Materials and Theory of Structures," Part I (p. 1507), together with the following :—

Stress analysis of statically determinate plane and space frames. Method of tension co-efficients. Deflection of framed structures by analytical and graphical methods. Clerk-Maxwell's reciprocal theorem. Continuous beams. Elastic displacements of curved members. Elastic theory for members of composite materials excluding reinforced concrete. Suspension bridges with three and two-hinged stiffening girders.

The analysis of statically indeterminate structures. Equilibrium and stress analysis of portal frames and elastic arches of the three-hinged, two-hinged and fixed types by analytical and graphical methods. Stresses in statically indeterminate structures due to lack of fit of a redundant member. Temperature change and movement of supports. Continuous trusses. Bracket-loads on columns and portals. Braced portal frames. Theory and application of moment distribution method to continuous beams and stiff-jointed frames. Column analogy : elastic centre. The use of elastic splines and models for the analysis of structures.

Rolling loads. Influence lines for statically determinate structures : beams, lattice girders, beams with suspended spans and three-hinged arches. Influence lines for statically indeterminate structures : two-hinged arches, continuous beams, fixed beams and propped cantilevers.

Section II (a)—Civil Engineering Structures

The general application of the theoretical work of Section I to Civil Engineering Structures.

Reinforced concrete. Theories and design assumptions. Design of rectangular beams and slabs. Beams with single or double reinforcement. Tee beams. Shear in reinforced concrete beams and design of shear reinforcement. Reinforced concrete columns. Adhesion, grip length. Effect of shrinkage and creep on reinforced concrete members. Combined bending and direct stress.

An elementary knowledge of soil mechanics including the technique of testing and site exploration. The stability of cuttings and embankments. Earth pressure on retaining walls and the bearing capacity and settlement of foundations.

Design of structures such as the following :—

Compound and plate girders, columns, reef trusses and building structures, riveted, pin-jointed and welded connections used in structures, foundations in steel and reinforced concrete, grillages, footings, compound, continuous and cantilever foundations, retaining walls of the cantilever and counterfort types, floor systems of the hollow tile and composite beam types. Gravity dams and walls. Silos and bins.

A knowledge of the constructional details and methods of design for bridges of the plate girder, lattice girder, arch and portal types in steel or reinforced concrete. A general knowledge of the more important British Standard Specifications, Codes of Practice and Regulations controlling the design of Structures, working stresses, impact allowances and estimation of loads and wind pressures.

Section II (b)—Aircraft Structures

The structural features of aircraft and the functions of their parts, with typical arrangements. Preliminary design processes. Aeronautical materials. Accelerometer and load factors. Strength requirements for symmetric manœuvres and gusts. The flight envelope. Aerodynamic balance calculations. Load distribution on main planes. Landing loads. Engine and propeller loads. Struts: torsional instability, energy method. Beams with end loads. Polar diagrams. Bending of fuselage rings. Torsion in wings and fuselages. Torsion of non-circular sections. Membrane analogy. Thin sheet construction. Tension field analysis. Elastic stability of flat sheet under end load. Problems arising from the flexibility of the aircraft structure. Introduction to flutter. Experimental methods.

B.SC. (ENG.) DEGREE IN CHEMICAL ENGINEERING

REVISED REGULATIONS

Special Regulations for the B.Sc. (Eng.) Degree in Chemical Engineering have been approved by the Senate for Internal Students at University College and the Imperial College of Science and Technology. Copies can be obtained from the Academic Registrar.

COURSE OF STUDY

The course for the Final Examination in Chemical Engineering normally extends over not less than three academic years.

Before admission to the course a student must qualify to matriculate and must either :—

[*Note.*—For entry to the Faculty of Engineering a student who satisfies the requirements for matriculation at an Examination for the General Certificate of Education, awarded by one of the approved University Examining Bodies, must have passed at that Examination in Mathematics at Ordinary or Advanced Level.]

(*a*) possess a Certificate awarded on a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools with passes *either* (i) at main subject standard in Chemistry and two of the following subjects, Pure Mathematics, Applied Mathematics and Physics, and at main or subsidiary standard in the remaining subject *or* (ii) at main subject standard in Mathematics (Pure and Applied), Physics and Chemistry : or

(*b*) have passed at Advanced Level at an examination for the General Certificate of Education awarded by one of the approved University Examining Bodies in *either* the three subjects Mathematics (Pure and Applied), Physics and Chemistry, *or* the four subjects Pure Mathematics, Applied Mathematics, Physics and Chemistry ; or

(*c*) pass a Preliminary Examination in any of these subjects in which he has not so qualified. (For the present the Preliminary Examination will be the Preliminary (Intermediate) Examination in Science or an approved equivalent.*)

A candidate shall be eligible to present himself for the first section of the Part I Examination after having satisfactorily attended approved courses therefor extending over one academic year.

A candidate who possesses an Approved Higher School certificate with passes at main subject standard in three of the subjects

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**Students who are matriculated students of the University and have passed an Intermediate Examination of any University in Great Britain and Northern Ireland (and such other Universities as may be approved for this purpose) in the appropriate subjects may apply for admission as Internal Students and for permission to proceed to a first degree in the Faculty of Engineering in this University without having previously satisfied the Examiners in the Preliminary Examination of this University.*

Pure Mathematics, Applied Mathematics, Physics and Chemistry, or has passed in three of the foregoing four subjects at an approved Examination at Advanced Level for the General Certificate of Education or at the Preliminary Examination, may be allowed to complete the qualification required for entry on the course by passing in the fourth subject during the course for Section I of Part I of the Final Examination and shall be eligible to present himself for Section I of the Part I Examination provided he has satisfied the conditions as to attendance set out above.

A student who has passed, or obtained exemption from, the Intermediate Examination in Engineering under the old Regulations will be permitted to proceed to Section I of Part I of the Final Examination under the revised Regulations and will be exempt from the paper in Engineering Drawing at Part I. If he has passed the Intermediate Examination in Engineering, or been exempted therefrom, with an optional subject *other than Chemistry*, he will be required to pass in Chemistry at the Preliminary Examination before proceeding to the Part I Examination.

If a student, who is permitted to present himself for the completion of the qualification for entry on the course in the same year as he presents himself for Section I of the Part I Examination, fails to complete the Preliminary Examination, he will not be notified of the result of his candidature at Section I of the Part I Examination.

The subjects of the Final Course are as follows :—

PART I

Strength and Elasticity of Materials and Theory of Structures.
Mechanics of Fluids.
Applied Heat.
Theory of Machines and Physical Metallurgy.
Applied Electricity.
Inorganic Chemistry.
Physical Chemistry.
Organic Chemistry.
Mathematics I.
Mathematics II
Engineering Drawing.

PART II

Unit Chemical Engineering Operations.
Transport and Storage of Materials and Heat Transmission.
Fuel and Combustion.
Materials of Construction and Plant Design and Construction.
Power Generation and Distribution.
Organisation of Production.
Site Surveying and Setting out of Works.

EXEMPTIONS

1. Candidates at Part I of the B.Sc. (Eng.) Examination in Chemical Engineering who have passed Part I of the B.Sc. (Eng.) Examination with any of the subjects—Strength and Elasticity of Materials and Theory of Structures, Applied Heat and Mechanics of Fluids, Theory of Machines, Applied Electricity—will be exempted from examination in the subjects in which they have so passed.

2. Candidates who have obtained the B.Sc. (Eng.) Degree with Mathematics at Part II will be exempted from the two papers in Mathematics at Part I of the B.Sc. (Eng.) Examination in Chemical Engineering.

3. Candidates who have obtained the B.Sc. (Special) Degree in Chemistry will be exempted from the three papers and the practical examination in Chemistry at Part I. Candidates who have obtained the B.Sc. (General) Degree with Chemistry as one of the subjects may apply for exemption from the three papers and the practical examination in Chemistry at Part I.

4. Candidates who have obtained the B.Sc.(Special) Degree in Mathematics or the B.Sc.(General) Degree with Pure and Applied Mathematics will be exempted from Mathematics I at Part I of the B.Sc.(Eng.) Examination in Chemical Engineering.

Date of Examination

The B.Sc. (Eng.) Examination in Chemical Engineering will take place once in each year, commencing on the last Monday in June.

The time-table of the examination, showing both the time and place of the written and practical examinations, will be furnished by the Academic Registrar to each candidate.

Every student entering for this examination must apply to the Academic Registrar for an entry-form and a certificate of Course of Study, which must be returned duly filled up and attested in accordance with the General Regulations as to approved Courses of Study (pp. 6–9), together with the proper fee, not later than April 23rd.

Fee

The fee for each student is 9 guineas for each entry to the whole Examination, viz. : 3 guineas for Section I, Part I alone ; 3 guineas for Section II, Part I alone ; 3 guineas for Part II alone.

For re-entry in any subject in which he may have been referred the fee is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1., University of London Account ".

Details of Examination

The Final Examination is divided into two parts, Part I being divided into two sections. Section I of Part I being taken normally at the end of the First Post-Preliminary year, Section II of Part I at the end of the Second Post-Preliminary year and Part II at the end of the Third Post-Preliminary year. The subjects of the Examination shall be as follows :—

PART I

1. Strength and Elasticity of Materials and Theory of Structures	One 3-hour paper in each subject.
2. Mechanics of Fluids	
3. Applied Heat	
4. Theory of Machines and Physical Metallurgy	
5. Applied Electricity	
6. Inorganic Chemistry	
7. Physical Chemistry	
8. Organic Chemistry	
9. Mathematics I	
10. Mathematics II	
11. Engineering Drawing	One 4-hour paper.

There will also be a one-day practical examination in Chemistry, which will be marked " pass " or " fail " and will not be considered for the award of Honours.

The foregoing Examination is divided into two Sections as follows, and Section I must normally be taken before Section II. Nevertheless, in exceptional cases candidates may be permitted to take both Sections on the same occasion.

Section I

Mathematics I and Engineering Drawing, together with any other four written papers except Mathematics II.

Section II

Mathematics II and the practical Examination in Chemistry, together with the remaining four written papers not offered at Section I.

Before entering for Section II of Part I of the B.Sc. (Eng.) Examination in Chemical Engineering a candidate must have passed Section I of Part I, or have been referred in one subject of that Examination, or have obtained permission to take Sections I and II together.

The examination will include, in addition to the written papers, an examination of the student's course-work and a student who fails to satisfy the examiners in course-work in any subject of Part I will be notified that he has failed in course-work in that subject and consequently in the subject as a whole. In Chemistry there will also be a one-day practical examination.

PART II

1. Unit Chemical Engineering Operations 2. Transport and Storage of Materials and Heat Transmission 3. Fuel and Combustion 4. Materials of Construction and Plant Design and Construction 5. *Power Generation and Distribution ; *Organisation of Production ; *Site Surveying and Setting out of Works.	One 3-hour paper in each subject.

A student will be required to submit a certificate in accordance with the requirements of Section 7 of the General Regulations for Approved Courses of Study showing that he has followed to the satisfaction of his teachers, in so far as they are severally concerned, approved Instruction-courses in each of the subjects in which he is to be examined.

No candidate will pass who does not satisfy the examiners in each of the major subjects 1-4 of Part II.

Course-work for Part II will be considered as a whole and not with reference to each individual subject.

The examiners shall be at liberty to test any candidate by means of oral questions in any part of the examination.

The records of work done by students during their course of study and presented as course-work shall be such that the Examiners may be able to form an estimate as to its quality.

*These subjects are to be regarded as of minor importance and the lecture time devoted to each should be about one-third of the time allotted to each of the major subjects.

Reference

A candidate at either Section of Part I of the Examination, or a candidate permitted to take Sections I and II on the same occasion, who fails to reach the minimum standard in any one subject only, may be referred, *i.e.*, he may be permitted on the recommendation of the examiners to present himself in that subject on one or more subsequent occasions.

A candidate who has completed the whole of Part I with the exception of a referred subject, and who enters for his referred subject concurrently with Part II of the Examination, and who fails in his referred subject only, may be credited with Part II, but the degree cannot be awarded until he completes Part I of the Examination.

The examiners will recommend that the candidate be referred only if his failure in the subject is not serious, and if his performance in the remaining subjects is reasonably good.

The marks obtained in Part I of the Examination will be combined with those obtained in Part II for the purposes of the classification of Honours.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar at 2 o'clock on August 3rd. Successful candidates will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) a Pass, B.Sc. (Engineering) Degree in Chemical Engineering.

A copy of the pass list will be sent as soon as available to each successful candidate, and each unsuccessful candidate will receive an individual communication.

The reports of the Examiners and the pass lists cannot be laid before the Senate for approval until towards the end of October.

A diploma for the B.Sc. (Engineering) Degree in Chemical Engineering, under the Seal of the University, shall be delivered to each successful candidate on or after Presentation Day. A notification of the date of the Presentation Ceremony, which takes place in May of each year, will be sent to each successful candidate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final B.Sc. (Engineering) Examination in Chemical Engineering (Part II) may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc. (Eng.) Examination in Chemical Engineering who have already passed Part I and who have completed more than half of the Part II Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same Examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

PART I

Strength and Elasticity of Materials and Theory of Structures

Stress and strain : tension, compression and shear. Complementary shear stress. Hooke's law. Young's Modulus. Modulus of rigidity. Poisson's ratio. Temperature stresses. Simple cases of resilience and suddenly applied loads. Composite bars. Elastic and plastic behaviour of common materials in tensile and compressive tests. Stress-strain curves. Simple testing machines. The measurement of strain.

Bending moments and shearing forces in cantilevers and simply supported beams under static loads. Theory of bending of beams : neutral axis ; distribution of normal stress due to bending ; moment of resistance. Second moment of area of sections. Curvature, slope and deflection of cantilevers and simply-supported beams. Composite beams. Determination of Young's Modulus from bending tests. Eccentric loading : tension or compression combined with bending.

Torsion of circular shafts ; moment of resistance ; angle or twist ; shear stress. Transmission of power by shafts. Determination of Modulus of Rigidity. Stresses and deflections of close-coiled helical springs made from rods of circular section.

Simple strut theory. Critical loads for slender struts. Practical strut formulæ. Thin cylinders under internal pressure. Stresses in thin rotating cylinders.

Simple cases of deflection of frames treated analytically and graphically. Stability of chimneys under wind pressure.

Mechanics of Fluids

Bernoulli's theorem for incompressible flow. Introduction to the stream function : plotting of streamlines. Measurement of velocity of incompressible flow : Pitot and static pressure tubes, nozzles, orifices, notches and Venturi meter. Resistance of immersed bodies at constant velocity. Rayleigh's formula. Reynolds number : Froude number. Critical velocities for flow in pipes. Constant coefficient formulæ for rough pipes. Loss of head due to bends, sudden enlargements and constrictions. Simple theory of flow in open channels. Impact and reaction of jets. General principles of the theory of reciprocating pumps, turbines and centrifugal pumps.

Applied Heat

Thermodynamic functions and their relationships. The use of the thermodynamic diagrams (Temperature-Entropy and Mollier diagrams) for the representation of reversible cycles and the calculation of cycle efficiencies. Pressure-volume-temperature relationships of gases and vapours with special reference to dependent internal energy, entropy and enthalpy changes. The use of steam tables.

Steam power installations, including boilers, and auxiliary plant. The Rankine cycle. Steam accumulators, and steam for process work.

Internal combustion engine cycles and their application to gas, petrol and oil engines.

Elementary theory of air compressors, refrigerators and heat pumps.

Testing of engines ; efficiencies and heat balance.

Theory of Machines and Physical Metallurgy

Theory of Machines

Centre of rotation and instantaneous centre. Four link kinematic chain and simple derived mechanisms. Vector and other diagrams of displacement and velocity. Screws and screw threads. Belt, rope and chain drives. Simple and epicyclic gears. Cams. Friction gearing and clutches.

Piston displacement, velocity and acceleration in the reciprocating mechanisms. Diagrams of crank effort. Flywheels. Simple types of governors. Friction of unlubricated surfaces. Efficiency of machines. Brakes and dynamometers. Principles of dynamical balancing of rotating masses.

Physical Metallurgy

The structure of single crystals, polycrystalline metals and alloys. Crystallisation and the simpler crystal forms. Allotropy. Solid solutions. Intermetallic compounds. Types of equilibrium diagram and their significance. Methods of constructing equilibrium diagrams; microscopic examination, cooling curves, X-rays, electrical properties. Heat treatment: precipitation hardening, quenching, tempering, annealing, normalising, recrystallisation, softening. Processes for producing a hard surface on steel. Malleableising.

Stress and strain, slip, plastic properties of single crystals and polycrystalline materials, work hardening, fatigue, corrosion fatigue, creep, rupture, hardness, brittleness, effect of temperature.

The properties of the more important commercial alloys, non-ferrous, and ferrous, including the commoner types of corrosion resisting, heat and creep resisting, and high tensile alloy steels.

Applied Electricity

The basic principles of electrical engineering are required but not a detailed knowledge of design. The subject matter consists of the more advanced treatment of the syllabus of the Preliminary (Intermediate) Examination in Physics (Magnetism and Electricity) together with :—

Alternating currents; wave form, mean and R.M.S. values, vector representation. Resistance, reactance and impedance. Calculation of simple series and parallel circuits with sinusoidally varying currents, resonance. Single- and three-phase systems. Power factor control.

Alternators, general construction, simple aspects of rotor and stator windings; behaviour when on load. Polyphase connections. Synchronous motor considered as an alternator with reversed power supply, use for power factor correction. Simple principles of the induction motor (wound, single cage and double cage rotor). Load characteristics, starting conditions. Starting and control gear.

Transformers; construction and principles of action; single and three-phase connections and Scott connection.

Direct current generators and motors; construction, elementary principles of armature winding, starting and control gear. Conversion of alternating current to direct current, rotary converters, mercury arc and metallic rectifiers.

Elementary principles of the thermionic valve, cathode ray oscillograph and photoelectric cell.

Illumination ; standard sources and definitions, construction and principles of operation of the various types of electric lamps ; the spectral distribution of the light from the various types, and its influence on their practical use. Illumination requirements.

Principles and construction of moving coil, rectifier, moving iron and dynamometer instruments. Extension of instrument range by multipliers, shunts and instrument transformers.

Inorganic Chemistry

General properties of the elements and their compounds treated systematically according to the periodic classification and, in more detail, with regard to their application in manufacturing processes and plant. In particular, the extraction and refining of metals, the manufacture of acids, alkalis, cements, refractories, glass and pigments and the conditioning of boiler feed water. The chemical aspects of fuels and their combustion and of the production and uses of industrial gases.

Physical Chemistry

Matter and energy ; forms of energy and their transformations. First and second laws of thermodynamics in their application to physico-chemical problems, reversible processes, thermodynamic scale of temperature ; entropy, enthalpy, free energy.

Gases : equations of state ; kinetic theory—mean free path, molecular diameter ; Avogadro's Number. Liquids and liquid-vapour equilibrium ; vapour pressure of liquids ; critical point, critical constants ; Joule-Lelvin effect ; liquefaction of gases. Low temperature and vacuum technique. Solids ; crystalline state, crystal structure ; vitreous state. Change of physical state in general ; Clausius-Clapeyron Equation ; pT diagram for a one-component system.

Solutions ; definitions, partial molar quantities, molar chemical potential. Ideal gas mixtures, partial pressures, Dalton's law. Liquid solutions ; ideal systems, Raoult's law ; real solutions, deviations. Solid solutions. Activity, activity coefficient. Dilute solutions of non-volatile solutes ; vapour pressure, boiling point, freezing point. Equilibrium between phases : general distribution law, partition coefficient. General phase theory ; equilibrium in two- and three-component systems ; applications to industrial processes—fractional distillation, crystallisation, etc.

Heat of reaction, law of constant heat summation ; heat of formation. Law of mass action, equilibrium constant. Examples of equilibria in homogeneous reaction in gaseous and liquid systems, and in heterogeneous reactions ; association and dissociation. Chemical affinity and heat of reaction ; reaction isochore and isobar, and their integration. Third law of thermodynamics, absolute entropies. Determination of affinities and equilibrium constants at specified temperatures from electrochemical equilibrium and thermal data. Electronic and electrolytic conduction ; Faraday's laws of electrolysis. Properties of electrolytes ; dissociation theory, ions in solid, liquid and dissolved salts. Transport numbers; strong and weak electrolytes. Voltaic cells ; energy relations ; reversibility, polarisation. Single electrode potentials, electro-chemical series ; solution junction potentials ; concentration cells ; oxidation-reduction potentials. The hydrogen electrode, pH value, buffer solution, indicators, control of pH in industrial processes. Electrometric titration ; examples of various types. Primary and secondary cells. Electrolysis ; decomposition voltage ; electrode reactions, polarisation, overpotential. Polarography ; electroanalysis. Technical electrolysis, application of general principles ; electroplating and electroforming. Principles of the electrolytic extraction and refining of metals.

Viscosity and flow properties of materials. Surface tension, angle of contact, wetting; technical applications—detergency, flotation. Adsorption on solid and liquid surfaces; technique and interpretation of measurements. Monomolecular films. Disperse systems; suspensions, emulsions, foams; colloidal systems; electrokinetics.

Determination of the "order" of a chemical reaction, consecutive reactions; activation energy; theory of unimolecular reactions. Catalysis; in homogeneous gas reactions, in solutions; selective catalysis and catalyst poisons; promoters. Theory of chain reactions as applied to oxidation and polymerisation reactions; phenomena associated with gaseous explosions. Activation in photo-chemical reactions, photo-chemical chain reactions. Activation in heterogeneous reactions.

Organic Chemistry

The principles of organic chemistry with particular reference to general synthetic methods and the conditions under which reactions take place. The general chemical behaviour of the chief classes of aliphatic and aromatic compounds, and of a few of the more important heterocyclic compounds (pyridine quinoline, etc.). Basic processes such as sulphonation, nitration, reduction, diazotization, acetylation, saponification, hydrogenation and their significance in modern industry. The chemistry of substances of industrial importance such as petroleum and its derivatives, plastics, oils, fats, soaps, carbohydrates, cellulose and its derivatives, coal-tar products, and the chief classes of dyestuffs and intermediates.

Mathematics I

Differentiation and integration of algebraic, trigonometric, exponential, logarithmic and hyperbolic functions.

Maxima and minima of functions of a single independent variable.

Tangents, normals and curvature of plane curves; geometrical properties of well-known curves.

Technique of integration, including change of variable, use of identities and partial fractions, and integration by parts.

Definite integrals, including applications to arcs, areas, volumes, first and second moments; graphical and numerical methods of approximate integration.

Approximate solution of equations by graphical and numerical methods.

Complex numbers and Demoivre's theorem.

Taylor's and Maclaurin's series, and other methods of expansion; use of series for approximation.

Partial differentiation, including maxima and minima of functions of several independent variables; change of independent variables; applications to thermodynamics.

Plane statics, including frameworks, bending moment and shearing force and the relations between these and load.

Dynamics of a particle in one and two dimensions under variable forces. Resisted motion and damped oscillations. Work, energy, momentum, motion of a rigid body about a fixed axis.

Hydrostatics, including total thrust and centre of pressure on submerged surfaces.

Mathematics II

Fourier series and numerical harmonic analysis.

Differential equations, including first and second order equations integrable by quadratures; linear differential equations with constant coefficients, equations reducible to these, and simultaneous linear differential equations with constant coefficients; simple partial differential equations, including solution by separation of variables.

Elements of probability; elementary statistics, including frequency distributions, mean deviation and standard deviation, correlation, and an introduction to least squares and curve fitting.

Questions may be set involving applications to such topics as the bending of beams, struts and ties, conduction of heat, fluid flow.

Engineering Drawing

Practical instruction of conics, loci, and other common curves. Geometry of solids, and the orthographic projection of lines and solids. Intersections and developments. Construction of auxiliary projections.

Fundamental principles of engineering drawing, with special reference to the British Standard Specification for Drawing Office Practice.

Drawing, sketching and dimensioning engineering details and machine parts.

A knowledge of engineering fastenings, couplings, pulleys, bearings, simple valves, pipe fittings, and other simple engineering components, and the materials used in their construction.

The meaning of limits and fits.

Pictorial projections.

Determination of centroids and second moments of area. Graphical differentiation and integration.

PART II

Unit Chemical Engineering Operations

The underlying theories of the unit operations of size reduction, separation, evaporation, distillation, crystallisation, leaching and extracting, drying, mixing, absorption and adsorption treated from the point of view of the fundamental physical and physico-chemical laws upon which they are based. The design, construction and operation of the principal types of plant used in such operations. Instrumentation in plant control. The theory and practice of selected basic processes in chemical industry such as roasting and calcining, electrolysis, oxidation and reduction, nitration, halogenation, alkylation and sulphonation, hydrolysis, polymerisation and fermentation.

The preparation of quantitative flow sheets of materials, energy and time and their use in plant design.

Transport and Storage of Materials and Heat Transmission

Transport and Storage of Materials

The principles of mechanical handling and the plant used for the conveyance of solids, semi-fluids, liquids and gases. Design of bins, hoppers and storage tanks. The chemical engineering aspects of problems relating to the flow of fluids. The economic design of pipe lines and the calculations of power requirements. Design and operation of pumps, blowers and elevators.

Heat Transmission

Mechanism of heat transfer by conduction, radiation and convection. Condensation of vapours; effect of non-condensable gas. Radiation from surfaces and flames. Effect of nature of materials and boundary films of liquids and gases on heat transmission and their relation to fluid friction. Design of heat exchangers, recuperators, condensers, tube banks, coils and jacketed pans. Heat conservation and insulation. Heat exchange through packed solids. Induction, eddy current, dielectric and infra-red loss heating.

The inter-relationships between heat transfer, fluid friction and mass transfer by diffusion.

Fuel and Combustion

General principles and thermodynamics of combustion processes. Secondary combustion. Air requirements. Flue gas calculation.

Solid, liquid and gaseous fuels, general properties, relative importance and fields of utility of each.

Classification of coals, their examination, origin and distribution. Characteristics required for steam raising, domestic heating, gas making and metallurgical coke. Ash and clinker formation. Methods employed in coal carbonisation at temperatures between 500 and 1,300°C. Recovery of by-products.

Gas producers. Complete gasification of solid fuels by means of an air or air-steam blast. Design and construction of producer and water-gas plant. Cooling and cleaning of gas for power purposes. Water gas as a raw material for the production of liquid fuels. Hydrogenation of coal.

Brief description of the distribution and refining of petroleum and shale oil, and the industrial application of the products obtained. Physical and chemical testing of oils.

Methods of burning fuels.

Fuel calorimetry; technical pyrometry.

Materials of Construction and Plant Design and Construction

Materials of Construction

The uses of materials of construction: metals, alloys and non-metals, with special reference to corrosion, fabrication, and properties at elevated temperatures. Effect of fabrication and operating conditions on the physical and chemical behaviour of metals and alloys.

Iron and steel. Alloy steels and irons, particularly heat resistant and corrosion resistant types: high silicon iron.

Lead, copper, tin, zinc, nickel, silver, aluminium and their more important alloys.

Timber, rubber, plastics, jointing materials, refractories, chemical stoneware, enamels, cement and concrete.

The chemical principles underlying corrosion in the presence of liquids and by direct attack. Methods of reducing corrosion. Protective coatings.

Plant Design and Construction

The design and fabrication of low, medium and high pressure equipment required in chemical industry. Design of selected plant for unit processes such as stills and condensers, as well as auxiliary plant for the supply and removal of liquors, heating media, etc. Foundations, floor loads and general principles of reinforced concrete construction.

Costs of fabrication due to plant, materials and labour.

Interest, depreciation and overheads. Essentials of good design; economic efficiency, ease of control, facilities for repairs and low capital cost. Specifications and contracts; commercial, legal and general clauses. Brief outline of the principles of estimating cost of plant.

Power Generation and Distribution: Organisation of Production: Site Surveying and Setting out of Works

Power Generation and Distribution

Steam production and distribution. Modern boiler plant design and equipment. Determination of efficiency of boiler installations and steam operated plant. Lay-out and erection of pipe lines; traps and fittings.

Industrial fuel burning equipment and elementary furnace design. Economic power production. Power as a by-product. The problem of fluctuating demand.

Conditioning of water for boilers and industrial processes.

Organisation of Production

Economic structure of industry. Public utility services. Cartels and trade associations. Banking and credit systems. Price level.

Formulation and development of chemical engineering projects. Planning and design of factories. Negotiations with public utility bodies and local authorities.

General acquaintance with the main Acts of Parliament and Government Orders and Regulations which affect the chemical engineer in the design, erection and operation of plant and factories. Common law (trespass, nuisance, negligence). Factory and Workshop Act (safety, health and welfare of workers in factories). Public Health Act (offensive trades). The Alkali, etc., Works Regulation Act (emission of noxious fumes and disposal of effluents and wastes). Patents and Designs Acts. Forms of contract and contractual liability.

Factory administration. Production planning. Stores organisation. Labour management (including general principles of industrial psychology). Methods of remuneration. Health and medical services.

Site Surveying and Setting out of Works

Use of simple surveying instruments. Determination of quantities of excavation and filling. Use of ordnance sheets and allied problems.

B.Sc. (ENG.) DEGREE IN METALLURGY

NOTE.—*Revised Regulations for the B.Sc. (Eng.) Degree in Metallurgy are now in force (see pp. 1539–1556 below), but as a transitional measure properly qualified students may proceed to the Degree under the Regulations set out below provided they complete Part I of the Examination in or before 1949 and Part II in or before 1951.*

COURSE OF STUDY

The course for the Final Examination in Engineering (Metallurgy) normally extends over not less than two academic years.

Candidates who have passed, or have been exempted from, the Intermediate Examination, shall be eligible to present themselves for the Part I Examination after having satisfactorily attended approved courses therefor extending over one academic year.

If a candidate (*a*) has been referred in any subject in the Intermediate Examination, or (*b*) has been allowed to complete the Intermediate Examination in one subject during, or at the end of, the second-year course, he shall none the less be eligible to present himself for the Part I Examination, provided that he has satisfied the foregoing condition as to attendance, although the Examination would take place in the same year as that in which the candidate completes the Intermediate Examination.

If a student, who is permitted to present himself for the completion of the Intermediate Examination in the same year as he presents himself for Part I Examination, fails to complete the Intermediate Examination he will not be notified of the result of his candidature at the Part I Examination.

The subjects of the Final Course are as follows :—

PART I

General Metallurgy (Introductory).
Metallurgical Analysis.
Metallography and Pyrometry.
Fuel and Refractory Materials.
Mineral Dressing.

PART II

Metallurgy : (*a*) Ferrous, and (*b*) Non-Ferrous.
Mechanical Working of Metals and Alloys.
Electro-Metallurgy and Electric Smelting and Melting.
Metallurgical Analysis.
Physical Metallurgy.

EXEMPTIONS

Graduates in Engineering (Mining) are entitled to exemption from examination in any subject in which they passed at their Degree Examination.

DATE OF EXAMINATION

The B.Sc. (Eng.) Examination in Metallurgy will take place once in each year, commencing on the first Monday in July.

The time-table of the Examination, showing both the time and place of the written and practical examinations, will be furnished by the Academic Registrar to each candidate.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of Course of Study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than April 30th.

The student, unless he has taken Chemistry at the Intermediate Examination will also be required to send, together with his entry-form for the Final Examination in Metallurgy, a certificate of having attended to the satisfaction of his teachers, an approved course in Chemistry up to the standard of the Intermediate Examination.

Fee

The fee for each student is 7 guineas for each entry to the whole Examination, viz. : 4 guineas for Part I alone and 3 guineas for Part II alone. The fee for re-examination in any subject in which he may have been referred at Part I is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The subjects of the Final Examination in Metallurgy are as follows :—

PART I (in **1949** only)

General Metallurgy (Introductory) (one paper of three hours).

Metallurgical Analysis (one paper of three hours and a practical examination of eight hours).

Metallography and Pyrometry (one paper of three hours and a practical examination of eight hours).

Fuel and Refractory Materials (one paper of three hours).

Mineral Dressing (one paper of three hours).

PART II (in **1949**, **1950** and **1951** only)

Metallurgy : (*a*) Ferrous, and (*b*) Non-Ferrous (two papers of three hours).

Mechanical Working of Metals and Alloys (one paper of three hours).

Electro-Metallurgy, and Electric Smelting and Melting (one paper of three hours).

Metallurgical Analysis (one paper of three hours and two practical examinations each of eight hours).

Physical Metallurgy (one paper of three hours and a practical examination of eight hours).

The Examination will be divided into two parts, and normally candidates must pass Part I of the Examination before they may enter for Part II. Nevertheless, in exceptional cases, candidates may be permitted to take both Parts of the Examination on the same occasion.

The standard of the examination in Part I is to be that which would normally be required of a whole-time student after a course extending over one year subsequent to passing the Intermediate Examination.

A student will be required to submit a certificate in accordance with the requirements of Section 7 of the General Regulations for Approved Courses of Study showing that he has followed to the satisfaction of his teachers, in so far as they are severally concerned, approved Instruction-courses in each of the subjects in which he is to be examined.

It will be assumed that students possess a knowledge of the Differential and Integral Calculus.

In subjects requiring a practical examination no candidate will be allowed to pass who fails to satisfy the Examiners both in the practical and in the written parts of the examination.

At the practical examinations candidates are required to bring their laboratory note-books for inspection should the Examiners so desire; and further, candidates may bring for use in the practical examinations any book or books they wish, including their own laboratory note-books.

The Examiners shall be at liberty to test any candidate by means of oral questions in any part of the Examination.

The records of work done by students during their course of study and presented as course-work shall be such that the Examiners may be able to form an estimate as to its quality.

A candidate at Part I of the Examination who fails to reach the minimum standard in any one subject only may be "referred," *i.e.*, he may be permitted on the recommendation of the Examiners to present himself in that subject, either alone, or with Part II of the Examination.

A candidate who fails to pass in the referred subject will be permitted to re-enter for examination in that subject alone on any subsequent occasion. A candidate who takes his referred subject with Part II of the Examination and fails in the referred subject only will be credited with Part II and allowed to complete the Degree Examination by passing in the referred subject alone.

The Examiners will recommend that the candidate be referred only if his failure in the subject is not serious, and if his performance in the remaining subjects is reasonably good.

The marks obtained in Part I of the Examination will be combined with those obtained in Part II for the purpose of the classification for Honours.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar at 2 o'clock on August 21st. Successful candidates will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) a Pass, B.Sc. (Engineering) (Metallurgy) Degree.

A copy of the pass list will be sent as soon as available to each successful candidate, and each unsuccessful candidate will receive an individual communication.

The reports of the Examiners and the pass lists cannot be laid before the Senate for approval until towards the end of October.

A diploma for the Degree of B.Sc. (Engineering) in Metallurgy, under the Seal of the University, shall be delivered to each successful candidate on or after Presentation Day. A notification of the date of the Presentation Ceremony, which takes place in May of each year, will be sent to each successful candidate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final B.Sc.(Engineering) Examination in Metallurgy (Part II) may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations:—

(1) Candidates at the general B.Sc. (Eng.) Examination in Metallurgy who have already passed Part I and who have completed more than half of the Part II Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

The syllabuses for Part II are as follows :—

Metallurgy

(a) *Ferrous*

Iron minerals and ores. History and development of modern reduction methods.

Pig iron. Raw materials for the blast furnace. Properties of suitable coke. Preparation of the ore for smelting ; crushing ; magnetic concentration ; calcining ; agglomeration by briquetting, nodulising and sintering. Acid and basic fluxes.

The blast furnace. Layout of plant. Storage bins. Air blast ; methods of drying air ; blowing engines ; hot-blast stoves ; temperature equalisation. " Lines " and details of construction of the furnace. Charging and distribution. Chemistry of the process. Handling and utilisation of the products—pig iron, slag and gas. Cleaning of the gas. Considerations affecting grade of pig iron produced. Calculation of furnace charge. Chemical and thermal balance sheets. Production of ferro-alloys in the blast furnace.

Wrought iron. Composition of suitable pig irons. Furnaces, hand-worked and mechanical. Operative details and chemistry of the puddling process. Slags produced. Mechanical treatment of the iron. Properties and uses of wrought iron. The Aston process.

Steel. The open-hearth process, acid and basic. Layout of plant. Construction of furnaces ; ports ; regenerators ; reversing valves. Charging methods. Composition of charge, and operative details of the acid process and of the " cold scrap and pig " and hot-metal basic processes. Chemistry and physical chemistry of the process. Deoxidisers and deoxidation ; grain size control. Production of alloy steels. Modifications of the process. Tilting furnaces. Mixers.

The Bessemer process, acid and basic. Layout of plant. Construction of converters. Composition and supply of hot metal. Operative details and chemistry of the process. Utilisation of basic slag.

Electric furnace processes. Operative details and chemistry of the acid and basic electric processes, including the hot-metal process, as carried out in arc furnaces. Production of alloy-steels in electric furnaces, including induction furnaces.

Duplex and triplex processes.

Cementation process ; blister steel ; shear steel.

Crucible process ; furnaces ; products ; manufacture of crucibles.

Ladles ; construction and manipulation. Casting pits ; moulds ; top casting and bottom casting. Defects in steel ingots ; methods of producing satisfactory ingots. Soaking pits ; reheating furnaces.

Foundry processes. Melting furnaces and converters. Ladles; moulds. Production of grey and white iron castings. Control of graphite size in grey iron. Malleable cast iron. Alloy cast irons. Production of carbon and alloy steel castings. Properties and uses of foundry products.

Heat-treatment of carbon steels. Normalising; annealing; overheating; burning. Rapid cooling; tempering. Effect of addition of alloying elements on response to heat-treatment. Effect of mass. Surface hardening methods; carburising; nitriding; cyaniding; localised heat-treatment.

Properties, treatment and uses of carbon steels, high tensile structural steels, oil and air-hardening alloy steels, tool steels, manganese steels, stainless steels, magnet steels, etc.

(b) *Non-Ferrous*

The metallurgy of gold, silver, copper, lead, zinc, tin, aluminium, nickel and magnesium, with brief reference to antimony, arsenic, bismuth, cadmium, chromium, cobalt, mercury, molybdenum, tungsten and the platinum metals, considering such of the following details as apply.

Ores and other sources of the metals; composition and economic value. Crushing; mechanical and magnetic separation; concentration by flotation and other means.

Preparation of the ores. Calcination; roasting in heaps, kilns and the various types of hand-worked and mechanical reverberatory and muffle furnaces; sintering plants. Special methods of preparation, *e.g.*, the purification of bauxite. Utilisation of waste gases.

Smelting in reverberatory and shaft furnaces; pyritic smelting. Various fuels employed. Fluxes; chemical reactions; calculation of furnace charges. Operative details. Lining and fettling of furnaces. Bessemerising; types of converters; selective converting. Retorting; retort furnaces; manufacture of retorts and condensers.

Furnace products. Metal; matte; speiss; slag; fume; gas. Collection and treatment of fume. Utilisation of gas. Retreatment of furnace products.

Wet methods of extraction. Sliming methods and appliances. Sulphating and chloridising roasting. Leaching plant and processes. Solvents. Chemistry of processes. Precipitation by displacement and reaction.

Refining by pyrometallurgical, electrolytic and chemical methods. Plant; operative details; chemistry of the processes.

Manufacture and properties of the compounds of metallurgical importance, *e.g.*, lead and zinc oxides, white lead, blue vitriol, etc.

Foundry processes. Types of crucible and reverberatory melting furnaces; fuels used; natural and forced draught. Design, control and efficiency of furnaces. Methods of pouring; operative details. Fluxes and deoxidation. Moulds and dressings. Ingot defects. Die-casting; centrifugal casting. Production of sound castings. Utilisation of scrap; recovery of waste metal.

Metallurgy, fabrication and treatment of the principal alloys of the non-ferrous metals. Properties and uses.

Mechanical Working of Metals and Alloys

This syllabus is intended to include the methods normally employed in ferrous and non-ferrous metallurgical works, and not all those used in engineering for shaping metals.

Mechanical properties of metals. Characteristics of cast metal; macrostructure, blowholes, contraction cavities, distribution of inclusions and impurities. Effect on these of mechanical working. Properties involved in the working of metals; plasticity, strain-hardening, recrystallisation and the effect of temperature. Effects of composition, impurities and methods of production on the working of metals. Hot shortness, cold shortness.

Rolling mills. General design and details; pull over, reversing, three high, universal, looping and continuous mills. The operation of rolling. Action of rolls. Rolling in plain cylindrical rolls; rolling in grooved rolls, guides and guards, forms of grooves. Fins, draught, drawing passes, finishing passes, shaping passes, closed sections. Examples of rolls for various sections, size and strength of rolls; speed of rolls. Forged rolls, cast rolls; roll turning and grinding.

Cogging and slabbing mills; general considerations; two high reversing, three high, universal mills. Roughing and billet mills. Section mills and finishing mills. Plate and sheet mills. Rod mills; various systems in use and their respective advantages. Continuous mills; billet, bar, rod and strip. Special mills.

Handling material at the rolls; manipulators, cambering, flattening and straightening; hot and cold saws and shears; auxiliaries.

Forging. Steam and air hammers; tilting crucible steel; general engineering forgings, drop forgings, hot stampings, fire cracking of non-ferrous metals. Heavy forgings, forging presses, large ingots, reheating, risk of "clinking." Hollow forgings; manipulation and heat-treatment of large forgings.

Tyre making for locomotives and rolling stock.

Tube making; close joint tubes, butt welded tubes, lap welded tubes. Weldless tubes in steel and non-ferrous metals; piercing, rolling, extrusion, pressing from sheets, cold drawing, reeling, finishing tubes. Thickening, staving. Materials used; tests. Special processes for tube making.

The extrusion process. Types of press; dies. Extrusion of lead and compo pipe, zinc, brasses and other metals and alloys. Suitability of alloys for extrusion. Rods, special sections and tubes. Difficulties and defects.

Wire drawing, ferrous and non-ferrous. Draw benches, blocks, dies. Preparation of wire rods; pointing, drawing, continuous drawing, patenting and heat-treatments. Galvanising and plating wire. Cold rolling, stamping, pressing.

Electro-Metallurgy, and Electric Smelting and Melting

Principles and technique of the extraction or refining of the following metals by electrical means:—

Aluminium	Iron	Silver
Calcium	Lead	Sodium
Copper	Magnesium	Zinc
Gold	Nickel	

The above are the more important, but the candidate will be expected to have some knowledge of recent developments.

The use of alternating current in electrolytic work.

The principles of electro-plating.

The electrothermal reduction of iron from its ores. Types of furnaces; methods of working; economic possibilities.

The manufacture of steel in electric furnaces. Types of furnaces and their uses; methods of working; power factor; load factor; regulators; economisers; electrodes; electrical connections and control.

The manufacture of ferro-alloys in electric furnaces.

Design and use of electric furnaces for metal and alloy melting, and for heat-treatment.

The supply, utilisation and control of electric energy for electro-metallurgical work.

Metallurgical Analysis

The analysis of iron and steel, ferro-alloys, alloy steels and steel-works materials generally.

The complete analysis of the non-ferrous metals and alloys of commercial importance.

The examination and analysis of refractory materials.

The complete analysis of ores, mattes, fluxes, slags and metallurgical products generally.

The determination of the less common base metals in their ores, *e.g.*, antimony, arsenic, bismuth, cadmium, mercury, molybdenum, tungsten, vanadium, etc.

Physical Metallurgy

Phenomena associated with casting and working. Causes and effects of gas evolution; methods of prevention. Solidification of metals in moulds. Types of segregation. Effects of cold and hot working. Distribution of inclusions and segregated impurities in worked metals. Internal stress and the conditions under which it is produced and removed.

The tensile test. Load-extension and stress-strain curves. Limit of proportionality. Modulus of elasticity. Yield point. Proof stress. Ultimate tensile stress. Elongation and reduction in area.

Elastic deformation; plastic deformation; strain-hardening. Mechanism of plastic deformation of metal crystals. Effect of crystal size on deformation.

Testing machines and instruments. Types of tensile testing machines; grips and shackles; extensometers; autographic recorders; calibration of machines and instruments.

Torsion, shear and bending tests.

Hardness tests; Brinell, Rockwell, Vickers diamond pyramid.

Notched-bar tests; Izod and Charpy.

Relations between time, temperature and mechanical properties. Strain-ageing and recrystallisation. Effect of rate of loading. Effect of temperature. Creep and creep tests.

Fatigue tests. Machines used. Cycles of stress. Tests to determine endurance limits. Effects of changes of section and surface condition.

Consideration of results of tests in relation to design and acceptance.

Non-destructive testing. Radiography and magnetic methods.

Ternary alloy systems. Constitution and methods of representation.

Effect of heat-treatment on the constitution and microstructure of carbon steels, oil-hardening and air-hardening alloy steels, carburised steels, stainless steels, and high-speed tool steels. The constitution and microstructure of nitrided steels.

The mechanism of age-hardening and of precipitation-hardening; treatment required. Light alloys and other important alloys in which it occurs. Modification of alloys.

High-temperature oxidation of metals. Mechanism of oxidation. Rate of oxidation in relation to time and temperature. Heat-resisting alloys. Atmospheric control in heat-treatment furnaces.

Welding. Methods and metallurgy of welding. Brazing. Soldering.

Corrosion and protection. General features of electro-chemical corrosion and its effects on mechanical properties. Protection by anodising, tinning, galvanising, spraying and electro-deposition. Corrosion-resisting alloys.

Practical Work

Mechanical testing; tensile, hardness, impact.

Effects of heat-treatment on the mechanical properties and microstructure of carbon steels and alloy steels of the oil-hardening and air-hardening types. Microstructure of alloy cast irons, high-speed steels, stainless steels, carburised and nitrided steels, and of light alloys of aluminium with copper, zinc, magnesium, silicon, iron and manganese. Welded joints. Failures in ferrous and non-ferrous alloys.

B.SC. (ENG.) DEGREE IN METALLURGY

REVISED REGULATIONS

Special Regulations for the B.Sc. (Eng.) Degree in Metallurgy have been approved by the Senate for Internal Students at the Imperial College of Science and Technology. Copies can be obtained from the Academic Registrar.

COURSE OF STUDY

The course for the Final Examination in Engineering (Metallurgy) normally extends over not less than three academic years.

Before admission to the course a student must qualify to matriculate and must either:—

[*Note.*—For entry to the Faculty of Engineering a student who satisfies the requirements for matriculation at an Examination for the General Certificate of Education awarded by one of the approved University Examining Bodies must have passed at that Examination in Mathematics at Ordinary or Advanced Level.]

(*a*) possess a Certificate awarded on a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools with passes *either* (i) at main subject standard in Chemistry and two of the following subjects, Pure Mathematics, Applied Mathematics and Physics, and at main or subsidiary standard in the remaining subject *or* (ii) at main subject standard in Mathematics (Pure and Applied), Physics and Chemistry; or

(*b*) have passed at Advanced Level at an Examination for the General Certificate of Education awarded by one of the approved University Examining Bodies in either the three subjects Mathematics (Pure and Applied), Physics and Chemistry, *or* the four subjects Pure Mathematics, Applied Mathematics, Physics and Chemistry; or

(*c*) pass a Preliminary Examination in any of these subjects in which he has not so qualified. (For the present the

Preliminary Examination will be the Preliminary (Intermediate) Examination in Science or an approved equalevent.*)

A candidate shall be eligible to present himself for the Part I Examination after having satisfactorily attended approved courses therefor extending over one academic year.

A candidate who possesses an Approved Higher School Certificate with passes at main subject standard in three of the subjects Pure Mathematics, Applied Mathematics, Physics and Chemistry, or has passed in three of the foregoing four subjects at an approved Examination at Advanced Level for the General Certificate of Education or at the Preliminary Examination, may be allowed to complete the qualification required for entry on the course by taking the fourth subject during the course for the Part I Examination and shall be eligible to present himself for the Part I Examination provided he has satisfied the foregoing conditions as to attendance.

If a student, who is permitted to present himself for the completion of the qualification required for entry on the course in the same year as he presents himself for Part I Examination, fails to complete the Preliminary Examination he will not be notified of the result of his candidature at the Part I Examination.

A student who has passed, or obtained exemption from, the Intermediate Examination in Engineering under the old Regulations will be permitted to proceed to Part I of the Final Examination under the revised Regulations and will be exempt from the paper in Engineering Drawing for Metallurgists at Part I. If he has passed the Intermediate Examination in Engineering, or been exempted therefrom, with an optional subject *other than Chemistry*, he will be required to pass in Chemistry at the Preliminary Examination before proceeding to the Part I Examination.

The subjects of the Final Course are as follows :—

PART I

Physical Chemistry.
Applied Electricity.
Engineering Drawing for Metallurgists.
Introductory Metallurgy.
Metallurgical Analysis I.

PART II

Minerals and Mineral Dressing.
Fuel.
Refractory Materials.
Physical Metallurgy I.
Metallurgical Analysis II.

PART III

Thermal and Mechanical Treatment.
Ferrous Metallurgy (Production).
Non-Ferrous Metallurgy (Extraction).
Physical Metallurgy II.
Advanced Metallurgy.

**Students who are matriculated students of the University and have passed an Intermediate Examination of any University in Great Britain and Northern Ireland (and such other Universities as may be approved for this purpose) in the appropriate subjects may apply for admission as Internal Students and for permission to proceed to a first degree in the Faculty of Engineering in this University without having previously satisfied the Examiners at the Preliminary Examination of this University.*

Exemptions

No exemptions from the Final Examination are given in whole or in part except on the result of examinations of this University as follows:—

1. Candidates who have obtained the B.Sc. (Special) Degree in Chemistry may claim exemption from examination in Physical Chemistry.

2. Graduates in Engineering may claim exemption from examination in Applied Electricity and in Engineering Drawing for Metallurgists.

3. Graduates in Engineering (Mining) may claim exemption from examination in Applied Electricity, in Engineering Drawing for Metallurgists and in Minerals and Mineral Dressing.

4. Graduates in Chemical Engineering may claim exemption from examination in Physical Chemistry, in Applied Electricity, in Engineering Drawing for Metallurgists and in Fuel.

Date of Examination

The B.Sc. (Eng.) Examination in Metallurgy will take place once in each year, commencing on the last Monday in June.

The time-table of the Examination, showing both the time and place of the written and practical examinations, will be furnished by the Academic Registrar to each candidate.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of Course of Study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than April 30th.

Fee

The fee for each student is 9 guineas for each entry to the whole Examination, viz. : 3 guineas for Part I alone, 3 guineas for Part II alone, 3 guineas for Part III alone ; for re-entry in any subject in which he may have been referred at Part I or Part II the fee is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account ".

Details of Examination

The Final Examination is divided into three parts, and except in the case of referred candidates, Part I must be completed before entry for Part II and Part II must be completed before entry to Part III. The subjects of the Examination shall be as follows :—

PART I

Subsidiary Subjects

(i) Physical Chemistry	One 3-hour paper in each subject.
(ii) Applied Electricity	
(iii) Engineering Drawing for Metallurgists	One 4-hour paper.

Main Subjects

1. Introductory Metallurgy	One 3-hour paper.
2. Metallurgical Analysis I	One 3-hour paper and one practical exam. of 8 hours.

Part II

3. Minerals and Mineral Dressing 4. Fuel 5. Refractory Materials	One 3-hour paper in each subject.
6. Physical Metallurgy I	One 3-hour paper and one practical exam. of 8 hours.
7. Metallurgical Analysis II	One 3-hour paper and two practical exams. of 8 hours each.

PART III

8. Thermal and Mechanical Treatment. 9. Ferrous Metallurgy (Production) 10. Non-Ferrous Metallurgy (Extraction)	One 3-hour paper in each subject.
11. Physical Metallurgy II	One 3-hour paper and one practical exam. of 8 hours.
12. Advanced Metallurgy	One 3-hour paper and a practical exam. occupying four days of 8 hours each.

The standard of the examination in Part I is to be that which would normally be required of a whole-time student after a course extending over one year subsequent to passing the Preliminary Examination.

A student will be required to submit a certificate in accordance with the requirements of Section 7 of the General Regulations for Approved Courses of Study showing that he has followed to the satisfaction of his teachers, in so far as they are severally concerned, approved Instruction-courses in each of the subjects in which he is to be examined.

It will be assumed that students possess a knowledge of the Differential and Integral Calculus.

In subjects requiring a practical examination no candidate will be allowed to pass who fails to satisfy the examiners both in the practical and in the written parts of the examination.

No candidate shall pass who does not obtain the requisite percentage of the aggregate marks and also such proportion (but lower) of the total marks of each of the subjects taken separately as shall satisfy the examiners.

At the practical examinations candidates are required to bring their laboratory note-books for inspection should the examiners so desire; and further, candidates may bring for use in the practical examinations any book or books they wish, including their own laboratory note-books. Any such books or notebooks must be removed at the close of the Examination.

The Examiners shall be at liberty to test any candidate by means of oral questions in any part of the Examination.

The records of work done by students during their course of study and presented as course-work shall be such that the Examiners may be able to form an estimate as to its quality.

A candidate for Part I or Part II of the Examination who fails to reach the minimum standard in one subject may be referred, *i.e.*, he may be permitted, on the recommendation of the examiners, to present himself in that subject either alone or at one or more subsequent examinations.

A candidate may take a referred Part I subject concurrently with Part II and if he passes in Part II will be credited with that Part and be allowed to proceed to Part III even although he may have failed in the referred subject. Similarly a referred Part II subject may be taken concurrently with Part III but a candidate who passes in Part III but fails in his referred subject will not be awarded the Degree until the referred subject has been passed.

A candidate referred at Part I who enters for Part II without passing or having passed in his referred subject will not be allowed additional reference in any Part II subject.

The examiners will recommend that the candidate be referred only if his failure in the subject is not serious, and if his performance in the remaining subjects is reasonably good.

The marks obtained in Part I of the Examination will be combined with those obtained in Parts II and III for the purposes of the classification for Honours.

A provisional list of successful candidates at the Examination will be published by the Academic Registrar at 2 o'clock on August 21st. Successful candidates will be awarded either (*a*) First Class Honours, or (*b*) Second Class Honours, or (*c*) a Pass, B.Sc. (Engineering) (Metallurgy) Degree.

A copy of the pass list will be sent as soon as available to each successful candidate, and each unsuccessful candidate will receive an individual communication.

The reports of the Examiners and the pass lists cannot be laid before the Senate for approval until towards the end of October.

A diploma for the Degree of B.Sc. (Engineering) in Metallurgy, under the Seal of the University, shall be delivered to each successful candidate on or after Presentation Day. A notification of the date of the Presentation Ceremony, which takes place in May of each year, will be sent to each successful candidate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final B.Sc. (Engineering) Examination in Metallurgy (Part III) may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the General B.Sc. (Eng.) Examination in Metallurgy who have already passed Part I and II and who have completed more than half of the Part III Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

PART I

Physical Chemistry

The constitution of matter. Atomic-molecular theory. Theory of atomic structure : electron, proton, neutron, positron. Atomic number. Nuclear structure. Isotopes. Electronic arrangements and valency. Periodic classification of the elements. Radioactivity, natural and artificial.

Thermodynamics : first and second laws. Absolute scale of temperature. Thermochemistry. Heat of reaction. Free energy and other simple thermodynamic functions.

The properties of gases. Kinetic theory and the gas laws.

Vapour-liquid transformations. Critical phenomena. Latent heat.

The properties of liquids : vapour pressure, specific heat, surface tension, refractive index, viscosity.

Liquid-solid transformations. Crystallisation of liquids. Crystallisation from solution. Velocity of crystallisation. Undercooling phenomena.

The nature and properties of crystalline solids. Lattice structure. Principles of crystal analysis by X-ray and electron diffraction methods. Crystal planes and directions. Nature and types of inter-atomic bonds. Space lattice types of pure metals. Allotropic transformations. Nature and properties of metallic solid solutions and intermetallic compounds. Interstitial compounds. Super-lattices.

The phase rule. Interpretation of typical equilibrium diagrams (temperature-composition) of binary alloy systems and simple ternary alloy systems.

Chemical reactions. The reaction Isotherm. The Activity concept. Law of mass action. Effect of pressure and temperature on equilibria. Velocity of reaction. Catalysis.

Conduction in electrolytes. Transport numbers. Equilibria in electrolytes. Strength of acids and bases. Hydrolysis. Hydrogen ion exponent. Chemical and electrical energy. Voltaic cells. Electrode potential energy. Mechanism of electrolysis. Anodic and cathodic reactions. Decomposition potential. Polarisation including overpotential. Primary and secondary cells.

Surface phenomena, adsorption and colloids.

Physico-chemical principles underlying the extraction of metals from their oxides, sulphides and salts. Reduction of metallic oxides by hydrogen, carbon, carbon monoxide and baser metals. Metallic sulphides : displacement of sulphur by oxygen : reduction. Electrolytic deposition of metals from aqueous solutions and molten salts.

Applied Electricity

1. *Alternating Currents and Alternating Current Circuits.*—Wave forms, average and r.m.s. values. Circuits containing resistance, inductance and capacitance in series and in parallel. Power and power factor. Power factor improvement. Current and voltage waves in the electric arc.

2. *Alternating-current Generators.*—Simple construction of salient and non-salient pole machines. Three-phase machines and circuits. Star and delta connections. Three-phase power measurements. Connections of wattmeters.

3. *Transformers.*—Simple construction. Core and shell types. Arrangements of windings. E.M.F. equation and transformation ratio. Operation on no-load and on load. Voltage regulation. Three-phase transformers. Effects of unbalanced loads. Scott-connected transformers.

4. *Electric Furnaces.*—Essential features of arc, resistance, electrolytic and induction furnaces from the electrical aspect. Forces between conductors, pinch effect. Different transformer connections used. Construction and principles of high-frequency furnaces.

5. *Instruments.*—Construction and action of moving-coil, moving iron and dynamometer instruments and use as (i) ammeter, (ii) voltmeter. Multi-range moving-coil and moving iron instruments. Use of dynamometer instrument as wattmeter : care needed when measuring small power, and when used on circuits of very low power factor. Use of moving-coil instrument with metal rectifier for a.c. measurements. Energy meters. Load-error curve of commercial types.

6. Tariffs and systems of supply.

Practical Work

(This course should occupy about 36 hours, *i.e.*, 18 two-hour experiments to be chosen from this list.)

1. *D.C. Circuits.*—Wheatstone bridge, series and parallel circuits. Simple lattice networks.

2. *A.C. Circuits.*—Circuits containing resistance, inductance and capacitance in series and parallel. Effect of varying frequency. Power and power factor. Resonance in series and parallel circuits. Power factor improvement by use of capacitance. Impedance and affective resistance of solenoids with and without iron cores.

3. *Three-phase Circuits.*—Measurement of power. Two-wattmeter method of power measurement. Relationships between line and phase voltages and currents for star and mesh circuits containing resistance and inductance. Unbalanced loads. Determination of phase sequence.

4. *Transformers.*—Voltage and current ratios. Measurement of iron losses with varying voltages. Load tests at constant voltage. Short-circuit test. Equivalent resistance, reactance and impedance. Three-phase and Scott-connection of transformers.

5. *Alternators.*—Open-circuit, short-circuit and load characteristics of single- and three-phase machines.

Effect of resistance, inductance and capacitance loads on terminal voltage.

6. *A.C. Motors.*—Starting and load tests on induction and synchronous motors.

7. *D.C. Generators and Motors.*—Open-circuit and load characteristics of separately excited and self-excited generators. Load tests on shunt, series and compound motors at constant voltage varying load and constant torque varying voltage. Determination of efficiency from measurement of losses.

8. *Measurements.*—Measurement of high and low resistance. Use of Post-Office box. Megger, bridge megger and voltmeter-ammeter method. Tracing connections with cell and detector. Iron testing and determination of magnetising force, flux density and permeability. Hysteresis. Calibration of voltmeter, ammeter and wattmeter. Temperature measurement by increase of resistance. Characteristics of copper oxide rectifier, diode and triode.

Engineering Drawing for Metallurgists

Fundamental principles of engineering drawing with special reference to the British Standard Specification for Drawing Office Practice.

Practical plane and solid geometry, including pictorial projections. Elements of graphic statics. Drawing and sketching engineering details and machine parts.

A knowledge of engineering components related as far as possible to the requirements of the metallurgical industry and of the materials used in their construction.

Introductory Metallurgy

1. A general and elementary review of the scope and purposes of the metallurgical operations detailed in the subsequent syllabuses and the meaning of the terms commonly used in them. The relationship which exists between these operations. The relevance and importance of the various subsidiary subjects included in the course.

2. The principles underlying the chief classes of operations by which metals are extracted from their ores.

The fundamental requirements of roasting, smelting, refining, leaching and electrolytic processes. The extent to which these can be satisfied in practice. Evolution and development of modern appliances. Elements of furnace construction and methods of heating, including principles of heat exchange, fuel conservation, recovery of waste heat and heat conservation.

Slags : their nature and the various means of classification. Reasons for these classifications.

3. The fundamental principles underlying the operations by which metals are adapted to commercial use.

The molten state and casting operations. Theoretical considerations. Metals and alloys regarded as solutions. Miscibility. Segregation. Methods of casting.

Principles of thermal analysis and of the microscopic examination of cast and worked metals.

Purposes and effects of heat treatment.

Working and shaping of metals and alloys. General principles underlying forging, rolling, pressing, extruding, spinning and drawing.

Mechanical tests : meaning of the terms strength, hardness, ductility, brittleness and toughness as deduced from the tests.

4. *Sampling.*—The purposes of sampling and analytical control. The general principles of the sampling of solid and liquid metals, friable solids, liquids and gases.

5. *Transportation and Storage.*—Transportation in relation to plant layout. Methods of transportation, including grabs and elector-magnetic cranes, conveyor belts, elevators, rope-ways, etc. Stock piles. Storage bins. Tailings disposal.

6. *Air Supply.*—Natural and forced draught. Fans, blowers and compressors. Blast heating.

7. *Dust and Fume.*—Dry, wet and electrostatic methods of dust and fume collection.

8. *Filtration.*—Hydroseparators ; thickeners ; gravity, pressure and suction filtration ; centrifuges.

9. *Water Supply.*—Pumps ; air lifts ; pressure chambers. Water conditioning.

Metallurgical Analysis I

Candidates will be expected to have a sound knowledge of the chemical reactions involved in the analytical methods set forth below, and must be able to discuss, critically, the reason why a method is selected for a particular purpose.

1. Principles and detailed methods of sampling ores, fluxes, fuels, metals and metallurgical products both mechanically and by hand.

2. The fire assay of ores and metallurgical products.

3. The assay of gold and silver bullion.

4. Examination of gold and silver ores to determine their amenability to amalgamation and cyanidation. Examination of cyanide solutions for control purposes. Analysis of commercial cyanide, lime.

5. The determination by wet methods of chromium, copper, iron, lead, manganese (total and available), nickel, sulphur, tin and zinc as major constituents of ores, fluxes and metallurgical products.

6. The testing and analysis of fuels and furnace gases.

PART II

Minerals and Mineral Dressing

Elements of Economic Geology.—The principal ore-forming processes and their relation to mineral dressing. The more important types of ore deposits.

Mineralogy.—Common gangue and economic minerals. Simple methods of identification. Microscopy of minerals by transmitted and reflected light. Elements of sedimentary petrology. Paragenesis. Liberating mesh sizes.

Mineral Dressing—General.—Place and purpose of mineral dressing in extraction metallurgy. Physical characteristics utilised in treatment, including colour and lustre, density, surface properties, paramagnetism, and conductivity. Crystal interlock and economic grinding mesh. Control of chemical conditions in ore pulps.

Concentration Tests.—Simple tests of amenability to treatment by common mineral dressing methods.

Liberation.—Crushing, grinding and grading. Jaw crushers, gyratory and cone crushers, hammer mills, rolls, stamps, ball mills (high and low discharge), rod mills, tube mills, runner and pendulum mills, etc. Screens. Hydraulic and mechanical classifiers.

Concentration.—Washing, sorting and hand-picking. Gravity methods ; sluices, strakes, jigs, tables, heavy media separation. Froth flotation and table agglomeration ; magnetic and electrostatic methods. Typical machines, including fixed and moving-screen jigs, shaking tables, mechanical and pneumatic flotation cells ; centrifugal pumps, thickeners, filters, reagent feeders, etc.

Coal Cleaning.—Rank. Types of coal. Fixed and free ash. Brief consideration of methods of cleaning and screening.

Control.—Arrangement of plant for simple gravity, flotation and other treatments and for combinations of these. Use of roughing and re-treatment circuits. Construction and use of flow-sheets. Methods of control including the use of chemical and screen analyses. Wet and dry sampling. Automatic weighing. Handling of ore and disposal of products. Computation of concentration ratio and efficiency. Economic factors in flow-sheet design and in plant control.

Practical Work

Preliminary.—Density of rock specimens, sands and mineral-water pulps. Determination of voids in crushed gravels. Reduction of samples to convenient assay bulk by coning, rolling and quartering, riffling, etc., and checking accuracy of work by assay.

Recognition of Common Minerals.—Crystal systems and notation. Microscopic examination of minerals and rocks. Simple blow-pipe and chemical tests.

Macroscopic examination in plane and polarised light (transmitted and reflected). Preparation of polished sections. Measurement of grain size. Use of pan, plaque and heavy-liquid methods of separating ground ores into fractions for microscopic examination. Determination of crystal interlock and liberating mesh of simple sulphide ores.

Sizing Tests.—Sizing analysis of ores, and determination of mineral distribution in the various sizes; application to the examination of concentrates, middlings and tailings. Sedimentation tests on subsieve sizes. Elutriation.

Heavy Media Separation.—Use of heavy liquids to make sink-float separation of coal from shale; determination of ash content of each fraction thus separated.

Flotation.—Colorimetric determination of pH values. Elementary tests of sulphide ores for amenability to flotation by shaking in glass vessels.

Ore Testing.—Interpretation of flow-sheets taken from milling practice in cyanidation, flotation and gravity concentration.

Fuel

More attention must be given to underlying principles of heat production and utilisation than to the description of plant or processes.

1. Chemical composition, physical properties and comparative heating values of the principal solid, liquid and gaseous fuels.

2. *Combustion.*—Chemical principles and thermal effects. Ignition temperatures, ignition limits. Excess air and its effect. Heat losses in flue gases.

3. *Solid Fuels.*

(*a*) Coal.—Origin and nature, classification and selection of coals for industrial use and for the manufacture of gas and coke. Impurities in coal.

Thermal decomposition of coal. Properties and yields of products.

Storage of coal. Oxidation during storage; practical effects of oxidation. Precautions to minimise effects of oxidation.

(*b*) Coke.—Properties required for industrial heating, gas making and for blast furnace use.

Brief description of manufacture of gas and metallurgical coke. Effect of modern developments in manufacture on the properties of the coke.

(*c*) Minor solid fuels.—Very brief consideration of the uses and manufacture of charcoal, low temperature coke, briquettes.

4. *Liquid Fuels.*

Properties. Brief description of nature, origin and preparation. Criteria for fuel oils.

5. *Gaseous Fuels.*

(*a*) Derived from carbonisation of coal. Manufacture in gas and coking plant.

(*b*) Derived from total gasification of coal or coke.

Chemical and thermal reactions involved in the total gasification of coal and coke.

Manufacture of producer and water gas. Nature and characteristics of fuel; effects of depth of fuel bed; varying amounts of steam; clinkering; channelling. Efficiency and heat balances.

(*c*) Natural gas.

(*d*) Blast furnace gas.

6. *Pulverised Fuel.*

Materials available. Brief consideration of methods of preparation and distribution.

7. *Combustion in Practice.*

Necessity and methods for securing proper combustion. Draught; primary and secondary air. Influence of time, temperature and turbulence on combustion. *Solid Fuels.*—Physical characteristics of the fuel bed; dimensions of grate; depth of bed; fire-bed cooling; clinker formation. *Liquid, gaseous and pulverised fuel.*—Pre-treatment; burners; combustion space.

Cleaning of gases prior to use.

Comparison of heating by solids, liquid and gaseous fuels.

8. *Heat Transmission and Heat Regeneration.*

Methods of heat transfer. Application of the laws of conduction, convection and radiation. Heat exchangers, regenerators and recuperators. Heat losses from external surfaces. Practical aspects.

9. *Steam Raising.*

Types of boilers; consideration of requisites for efficient design. Operation—air supply, firing, feed water, purification, cleaning, economisers.

10. *Furnaces.*

Considerations governing the design of a furnace. Selection of type, continuous or intermittent operation. Furnace atmosphere. Combustion and heat transmission. Heat losses, insulation, recovery of waste heat.

11. *Efficient Utilisation of Heat.*

Heat balances. General possibilities of recovery of waste heat.

12. *Calculations.*

Calculations in connection with combustion, gasification, preparation of heat balances.

Refractory Materials

1. General properties of a refractory material. Deviations from the ideal. Classification.

2. Chemical and mineralogical composition and physical properties of commercial refractories, e.g., silica, alumino-silicates, dolomite, magnesite, chromite, special refractories.

3. Brief consideration of the materials and the general methods used in the manufacture of refractories, e.g., bricks, tiles, crucibles, retorts, furnace linings, ladle linings, muffles. Physico-chemical changes during manufacture. Influence of texture on properties.

4. Selection and application of refractories. Behaviour in service. Physico-chemical changes. Spalling. Slagging; use of constitutional diagrams. Erosion.

5. Insulating materials. Composition and properties. Selection for and application to metallurgical use. Behaviour in service.

6. The examination and testing of refractory materials (excluding chemical analysis).

Physical Metallurgy I

The structure of the atom. Types of bonding. Principles of X-ray analysis. The lattice structure, crystalline nature and characteristic properties of pure metals, solid solutions and intermediate constituents. Crystal planes and directions. Crystallisation from the molten state: dendritic growth.

Preparation of microsections: practical and theoretical aspects. The metallurgical microscope, construction and optics. Use of polarised light and ultraviolet light. The electron microscope.

The measurement of temperature. Electrical resistance, thermoelectric, optical and radiation pyrometers: galvanometers, potentiometers, recorders, controllers. Calibration of pyrometers. Advantages, limitations and applications of the various types. Degree of accuracy obtainable under various conditions.

Determination of freezing points, melting points and transformations in solid alloys by heating and cooling curves. Methods of plotting the curves. Construction of equilibrium diagrams of binary alloy systems by means of thermal analysis, physical property determinations, X-ray analysis and microscopical examination of annealed and quenched samples.

Interpretation of types of equilibrium diagrams of binary alloy systems. Effects produced by departure from equilibrium conditions. Undercooling: the metastable and labile states. Microstructural constituents of alloys: primary solid solutions, intermediate constituents, eutectics, products of peritectic reactions, changes in solid solubility and solid transformations including eutectoids and Widmanstätten structures. Principles of heat treatment including age-hardening: effects of such treatments on the structure and properties of alloys.

Methods of representing the constitution of ternary alloy systems. Interpretation of simple ternary diagrams.

The effects of direct and alternating stresses on the structure and properties of metals and alloys. The mechanism of plastic deformation of single metallic crystals, polycrystalline metals and alloys. Effects produced by plastic deformation on the structure and properties of metals. Strain ageing. Mechanism and effects of recrystallisation. Hot working compared with cold working.

Constitution, microstructure, properties and uses of the principal binary non-ferrous alloys, based on the equilibrium diagrams, and of more complex alloys of industrial importance, including high-tensile brasses, bearing metals and light alloys.

The iron-carbon diagram. Detailed consideration of the constitution, microstructure, properties and uses of cast steel, cast iron (grey, white, malleable) and of wrought carbon steels in the slowly cooled and normalised conditions. Brief consideration of the effects produced by rapid cooling and by the addition of alloying elements.

Practical Work

Preparation and examination of micro-sections of all the types of metals and alloys (cast, wrought, heat treated), which are considered in the above syllabus. Preparation and interpretation of macro-structures and sulphur prints.

Calibration and use of electrical resistance, thermo-electric, optical and radiation pyrometers. Determination of freezing points, melting points and transformations in solid alloys by heating and cooling curves. Determination of electrical resistivity and magnetic properties of alloys. Dilatation curves.

Metallurgical Analysis II

Candidates will be expected to have a sound knowledge of the chemical and physico-chemical principles involved in the analytical methods set forth below and must be able to discuss, critically, the application of these principles.

They will also be expected to have a reasonably detailed knowledge of modern physical methods of analysis.

1. The analysis of irons, steels, alloy steels and ferro-alloys.

2. The complete analysis of the non-ferrous metals and alloys of commercial importance.

3. The complete analysis of the more common ores, fluxes and metallurgical products.

4. The determination of the less common base metals in ores and metallurgical products, e.g., antimony, arsenic, bismuth, cadmium, mercury, molybdenum, selenium, tellurium, titanium, tungsten and vanadium.

5. The analysis of refractory materials.

PART III

Thermal and Mechanical Treatment

Phenomena associated with the melting, casting and working of ferrous and non-ferrous metals, considered from the practical viewpoint. Characteristics of cast metal: macrostructure, blow-holes, shrinkage cavities, segregation: effect on these of mechanical working. Properties involved in the working of metals: plasticity, strain hardening, recrystallisation and the effect of temperature. Hot shortness, cold shortness.

Foundry Practice

Types of melting furnaces and methods of operation. Melting and pouring technique: fluxing, deoxidation, de-gassing.

Properties, preparation and testing of foundry sands and bonding materials.

Principles and practice of mould making and core making: green-sand, dry-sand and loam moulding. Pattern design.

Fettling sand castings.

Permanent and semi-permanent mould casting: gravity and pressure die-casting.

Centrifugal casting.

Precision casting.

Casting defects; causes, detection, effects, avoidance.

Mechanical Treatment

Rolls and rolling mills: principles of design, types, operation and maintenance. Manufacture of plate, sheet, strip, rod, sections, wire and tube from ingots by rolling. Auxiliary equipment and operations: furnaces, manipulators, saws, shears; flattening, straightening.

Forging, pressing and stamping. Hammers and presses for light and heavy work: types and operation.

Tyre making.

Tube making: piercing, rolling, extrusion, drawing. Seamless and welded tubes.

Manufacture of rod, wire and special sections by cold drawing.

The extrusion process. Presses and dies for rods, sections and tubes.

Spinning and panel beating.

Properties of wrought metals compared with cast metals.

Defects in wrought metals: causes, detection, effects, avoidance.

Welding, Brazing and Soldering

Oxy-acetylene, metal arc, carbon arc, helium arc, atomic hydrogen, butt, flash, spot, seam and projection welding: outline of processes and detailed consideration of metallurgical features including effects on structure and properties of parent metals, residual stresses and causes of cracking in welds and parent metals.

Brazing, hard and soft soldering: methods and effects on metals joined.

Design and strength of joints. Selection of suitable processes for various metals and applications.

Flame cutting.

Heat Treatment

Construction, operation and control of heat treatment furnaces. Advantages, disadvantages and applications of various types.

Furnace atmospheres: effects and control.

Salt baths.

Quenching baths and media.

Distortion, internal stresses and cracking in heat-treated parts: causes and avoidance.

Ferrous Metallurgy (Production)

Iron Minerals and Ores.—Distribution; economic value. Preparation for smelting. Sizing. Agglomeration (nodulising, sintering, briquetting). Calcination. Changes produced in composition of ore due to treatment. Magnetic concentration.

Fuels.—Physical properties necessary. Composition of the various classes of fuel used. Physical tests.

Fluxes and subsidiary ferrous materials used in smelting.

Handling, transportation and storage of raw materials.

Blast Furnace.—Historical development. Layout of modern plant. "Lines" and details of construction. Recent developments in construction and design. Construction and functions of stoves and equalisers.

Function of the Air-blast.—Methods of heating and drying. Effects of these treatments on the working of the furnace. Blowing engines.

The Smelting Process.—Chemistry of the process. Furnace reactions. Chemical and thermal balance sheets. Principles of burdening. Calculation of furnace charges. Effects of distribution of burden on the " zones " of the furnace. Influence of variables on the character of the products from the blast furnace.

Operation of the Blast Furnace.—Drying out, blowing in, damping down, blowing out, scaffolding, etc.

Products of the Blast-furnace.—Tapping of iron and slag. Handling and utilisation of the products. Cleaning of blast-furnace gas. Economic value of slag.

Production of Ferro-alloys in the Blast-furnace.—Brief survey.

Wrought Iron.—Composition of suitable pig irons. Furnaces; hand-worked and mechanical. Preparation of furnace hearth and operative details. Chemical reactions of the process. Type of slag produced. Mechanical treatment of the " ball." Qualities of wrought iron. Properties and uses. Acceptance tests. Modifications of the process—" Aston " ; " Knobbled " charcoal iron.

Steel.—Brief survey of historical development. Classification of the processes.

Bessemer Process.—Acid and basic. Plant lay-out. Construction of converters with particular reference to lining materials. Composition and supply of hot-metal. Working of both acid and basic charges. Chemistry of the process—behaviour of carbon, silicon, sulphur, phosphorus, manganese. Functions of slag compositions.

Open-hearth Process—Acid and basic. Lay-out of plant. Construction of furnaces, ports and regenerators with reference to both stationary and tilting furnaces. Types and properties of fuels used—gas and oil. Charging methods. Mixers and their function. Composition of charge and operative details of the acid process, the " cold scrap and pig " and the hot-metal basic processes. Chemistry of the processes—behaviour of carbon, silicon, sulphur, phosphorus, manganese. Deoxidisers, and deoxidation. Grain size control. Modifications of the process; Campbell, Bertrand Thiel, Talbot, Monell, Duplex and triplex processes. Brief description of the production of alloy-steels in the open-hearth furnace.

Electric Furnace Processes.—Types of furnaces—arc, resistance, combined arc-resistance, induction H.F. Design of representative furnaces of each type. Acid and basic linings. Conductive and non-conductive hearths.

Uses of electric furnaces. Refining of crude molten steel from Bessemer or open-hearth furnaces. Utilisation of raw scrap. Cast iron —synthetic and semi-synthetic.

Production of alloy steels and ferro-alloys.

Ingots and ingot making.—Ladles—construction and manipulation. Methods of teeming. Casting in pits versus car casting. Top and bottom casting. Stripping. Soaking-pits. Production of sound ingots. Solidification of the molten steel in the mould. Principal defects in steel ingots. Rimming steel.

Manufacture of Commercially Pure Iron.—Development of ingot iron. Process of manufacture. Properties and uses.

Electrolytic Iron.—Brief survey of the production methods. Uses of this material.

Non-Ferrous Metallurgy (Extraction)

Candidates will be required to show a reasonably detailed knowledge of the extraction and refining of aluminium, copper, gold, lead, magnesium, mercury, nickel, silver, tin, and zinc in accordance with the items set forth below.

1. *Ores.*—Composition and economic value. Location of the chief ore bodies and the principal extraction plants. Relative importance of the metals both as to tonnages and values.

2. *Preparatory Treatments.*—Mineral dressing and its effect on subsequent treatment. Special methods of preparation (e.g., purification of bauxite, sulphating roasting, etc.). Calcination, roasting and sintering; principles, operation and control. Utilisation of roaster gases.

3. *Smelting.*—Principles of smelting oxide and sulphide ores Fluxes, slags and their composition, properties and classification. Fuels employed. Design and essential features of shaft and reverberatory furnaces. Lining and fettling. Control of slag attack. Operating details. Furnace products and their approximate composition. Dust and fume collection. Disposal and utilisation of waste products and utilisation of waste heat.

4. *Distillation and Gasification.*—Physical chemistry and operating details of the processes. Retort furnaces and other appliances used. Condensers and decomposers.

5. *Wet Methods of Extraction.*—Chemistry of the processes. Solvents. Sulphating roasting. Leaching plant and appliances. Sand, sand and slime and all-sliming treatments. Counter-current treatments. Filtration. Precipitation by reaction, displacement and electrolysis. Control of solutions. Metal recovery..

6. *Refining.*—Principles and scope of fire refining treatments. Bessemerising, liquating, drossing, scorification, cupellation and oxidation. Appliances used. Electrolytic refining. Retreatment and recovery of by-products. Casting to market shape.

7. *Electrolysis of Fused Electrolytes.*—General principles. Purification of the constituents of the bath. Construction and operation of the furnace. Control of the composition of the electrolyte. Manufacture of electrodes.

8. *Secondary Metals.*—Sources of scrap metal; sorting; methods of treatment; recovery and purification.

9. *Metallurgical Calculations.*—Calculation of furnace charges; composition of products; thermal balance sheets; etc.

Physical Metallurgy II

The constitution of ternary and more complex alloy systems: interpretation of equilibrium diagrams.

Tensile testing machines, extensometers, autographic recorders. Calibration of machines and instruments. Stress-strain curves. Elastic and plastic deformation: strain hardening. Effects of dimensions of test-pieces, notches and rate of loading on results of tensile tests.

Torsion, shear and bending tests.

Hardness tests: Brinell, Vickers, Rockwell, scleroscope and pendulum tests: micro-hardness tests.

Notched bar impact tests, Izod and Charpy. Significance of results.

Relations between time, temperature and mechanical properties. Strain ageing and recrystallisation. Effects of temperature and rate of loading. Creep and creep tests.

Fatigue tests. Machines used. Cycles of stress. Endurance limits. Effects of changes of section and surface condition.

Consideration of results of mechanical tests in relation to design and acceptance.

Non-destructive testing: radiographical, magnetic, electrical, supersonic and fluorescent liquid methods.

Properties of molten metals and phenomena associated with melting and casting. Causes and effects of gas evolution: methods of prevention. Solidification of metals in moulds. Types and causes of segregation. Shrinkage cavities. Effect of hot and cold working on distribution of inclusions and other defects in cast metals.

Effect of heat treatment on the constitution, microstructure and properties of carbon steels, oil-hardening and air-hardening alloy steels, carburised steel, stainless steels and high-speed tool steels. The constitution and micro-structure of nitrided steels. Isothermal transformations. Methods of assessing the hardenability of steel.

The mechanism of age hardening. Light alloys and other important alloys in which it occurs. Related phenomena including quench and strain ageing and temper brittleness.

" Modification " of alloys: mechanism and effects.

Corrosion of metals and alloys; theoretical and practical aspects. Protection against corrosion by painting, anodising, tinning, galvanising, spraying and electro-deposition. Corrosion-resisting alloys, ferrous and non-ferrous. " Clad " metals. Stress corrosion. Corrosion fatigue.

High-temperature oxidation of metals. Mechanism of oxidation. Rate of oxidation in relation to time and temperature. Heat resisting alloys.

Internal stresses in cast and wrought metals: causes, effects, detection, relief. Season cracking.

Preparation, structure, properties and uses of " powder metallurgy " products.

Practical Work

Mechanical testing: tensile, hardness, impact, fatigue.

Effects of heat treatment on the mechanical properties and microstructure of carbon steels and alloy steels of the oil-hardening and air-hardening types. Microstructure of alloy cast irons, high-speed steels, stainless steels, carburised and nitrided steels, aluminium alloys, magnesium alloys and powder-metallurgy products. Welded joints.

Failures in ferrous and non-ferrous alloys.

Advanced Metallurgy

Questions in this paper will cover the whole range of the subject—Non-Ferrous Extraction (including Mineral Dressing and the metals not listed in the Syllabus for Non-Ferrous Metallurgy (Extraction)), Ferrous Metallurgy (including the Physical Metallurgy of Iron and Steel) and Physical Metallurgy (including Ferrous and Non-Ferrous Metals). The standard demanded will be higher than that required for other papers. A wide choice of questions will be allowed so that, should a candidate so desire, he may confine himself to one of these major branches. Candidates will be expected to be conversant with the more important developments of metallurgy published in recent technical literature.

Practical Work

Candidates will be provided with samples and/or data from which they will be required to deduce technical information which must be embodied in a suitably worded report. They will, so far as is possible, be allowed access to such literature as they may require and they must be prepared to discuss their problems with the presiding Examiners. Should a candidate wish his practical test to be restricted to one of the branches mentioned above he should, when entering for the Part III Examination, make a statement to this effect and name the branch in which he wishes to be examined.

B.Sc. (ENG.) DEGREE IN MINING

Special Regulations for the B.Sc. (Eng.) Degree in Mining have been approved by the Senate for Internal Students at the Imperial College of Science and Technology. Copies can be obtained from the Academic Registrar.

MASTER OF SCIENCE (Engineering)

Except as provided below no person shall be admitted as a candidate for the Degree of M.Sc. (Engineering) until after the expiration of one calendar year from the time of his taking the Degree of B.Sc. (Engineering) (in Engineering, Chemical Engineering, Metallurgy, or Mining) in this University; nor, in the case of a candidate registered under the Regulations for Postgraduate Students proceeding to a higher Degree, until he has completed a course of higher study in accordance with those Regulations (*see p.* 101 *et seq.*).

Every candidate for the M.Sc. (Eng.) Degree in Chemical Engineering, other than a candidate who has obtained the B.Sc. (Eng.) Degree in Chemical Engineering as an Internal Student, is required *before being admitted to the Examination*, to attend satisfactorily an approved course of study, and shall be required in addition

(*a*) to have obtained the B.Sc. (Eng.) Degree in Chemical Engineering of this University as an External Student;

or (*b*) to have obtained the B.Sc. (Eng.) Degree of this University and to produce evidence of adequate knowledge of Chemistry.

or (*c*) if he holds a Degree of another University to produce satisfactory evidence of having attained the standard demanded of graduates of this University, failing which he may be required to pass a qualifying examination.

Candidates who apply under options (*b*) or (*c*) must, in addition, pass or have passed an examination satisfactory to the University as being equivalent to that at the end of the final year of the B.Sc. (Eng.) Degree in Chemical Engineering.

[*Note.*—A prospective candidate for a Master's Degree in the field of Chemical Engineering whose first Degree is in the Faculty of Science is advised to consult also the Regulations for the M.Sc. Degree in Chemical Engineering (Regulations in the Faculty of Science for Internal Students.

A student who, having passed the External Intermediate Examination is admitted as an Internal Student to the Final B.Sc. (Eng.) Examination after pursuing a two years' course of study and passes that Examination, may submit as his third year's course of study for the B.Sc. (Eng.) Degree a course for the M.Sc. (Eng.) Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the B.Sc. (Eng.) Degree, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself as a candidate for the M.Sc. Degree in Engineering, but the Degree of M.Sc. (Eng.) will not be conferred on him until after the lapse of one year from the date of his obtaining the B.Sc. (Eng.) Degree.

Every candidate entering for the M.Sc. (Eng.) Degree must apply to the Academic Registrar for an entry-form, which must be returned duly filled up, together with the proper fee.

[NOTE.—In view of the Long Vacation, which extends from the end of June until October, a candidate who is eligible to enter for the Examination at the end of the session runs the risk of considerable delay in the decision as to the result. Such a candidate will, therefore, be permitted to submit his entry-form and fee between April 15th and May 1st and his dissertation between June 1st and June 5th.]

Every candidate for the M.Sc. (Eng.) Degree must at each entry pay a fee of 12 guineas (in and after 1951, 15 guineas).

All cheques should be made payable to the University of London or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Every candidate for the Degree of M.Sc. (Eng.) shall, upon the above-mentioned form of entry, state in writing the special subject within the purview of the Faculty of Engineering upon a knowledge of which he rests his qualification for the Degree of M.Sc. (Eng.). Together with the form of entry he shall transmit a dissertation printed, typewritten, or published in his own name, written in English and treating scientifically some special portion of the subject so stated. The candidate must indicate how far the dissertation embodies the results of his own research or observation, and in what respects his investigations appear to him to advance Engineering knowledge or practice.

The candidate must furnish not less than four copies of the dissertation or published work submitted to the Examiners.

An Internal Student submitting a dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his dissertation bound in accordance with the following specification :—

Size of paper, quarto, approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows : art vellum or cloth ; overcast ; edges uncut ; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME ; short title written or printed neatly and legibly on the front cover.

A dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Book-binders in London, who will bind dissertations to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

The dissertation shall be either a record of original work or an ordered and critical exposition of existing data with regard to a particular subject.

Every candidate will be required to forward to the University with his entry-form a short abstract of his dissertation (four copies) comprising not more than 300 words.

A candidate will not be permitted to submit as his dissertation a dissertation for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or in any other University in a dissertation covering a wider field, provided that he shall indicate on his entry-form and also on his dissertation any work which has been so incorporated.

Conjoint work may be submitted as a dissertation for the M.Sc. Degree, provided that the student shall furnish a statement showing clearly his share in the conjoint work, and further provided that such statement shall be countersigned by his coadjutor.

The candidate may also submit in support of his candidature any printed contribution or contributions to the advancement of Engineering knowledge or practice which he has published independently or conjointly.

If conjoint work is submitted, it must be accompanied by a statement of the candidate's share in the work, and this statement must be countersigned by his collaborator.

After the Examiners have read the dissertation the candidate shall be required to present himself at such a place in the University as the Examiners may direct upon such day or days as may be notified to him to be tested orally, and at the discretion of the Examiners by written papers, or practically, or by both these methods, with reference both

to the special branch of Engineering Science selected by him and to the dissertation, but it shall be within the discretion of the Examiners to reject the candidate without such oral or further test; or in case the Examiners shall, upon examination of the dissertation and of the other contribution or contributions to the advancement of Science submitted by the candidate, hold the same to be generally or specifically of such special excellence as to justify the exemption of the candidate from any further test other than oral, he may be so exempted provided that the Report of the Examiners shall set forth the fact and the grounds of such exemption.

If a dissertation submitted by a candidate for the M.Sc. (Eng.) Degree, though inadequate, shall seem of sufficient merit to justify such recommendation, the Examiners shall be empowered to recommend the Senate to permit the candidate in question to re-present his dissertation in a revised form, within one calendar year from the decision of the Senate in regard thereto; and the fee on re-entry, if the Senate adopt such recommendation, shall be half the fee originally paid.

No candidate will be permitted to publish his dissertation as a dissertation approved for the M.Sc. (Eng.) Degree without the special permission of the University. Applications for such permission must be made after the Degree of Master of Science (Engineering) has been granted. Any dissertation in respect of which such permission has been granted shall contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

A diploma for the M.Sc. (Eng.) Degree, under the Seal of the University, shall be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

DOCTOR OF PHILOSOPHY (Ph.D.)

The Regulations for the Degree of Ph.D. will be found on pp. 106–115.

DOCTOR OF SCIENCE (Engineering)

Every candidate for the Degree of Doctor of Science (Engineering) must have obtained as a student of this University the M.Sc. (Eng.) Degree or the Ph.D. Degree in the Faculty of Engineering. He must have obtained as an Internal Student either the B.Sc. (Eng.) Degree or M.Sc. (Eng.) Degree or Ph.D. Degree in the Faculty of Engineering. Nevertheless a candidate who has obtained the B.Sc. (Eng.) Degree as an Internal Student may, in exceptional circumstances, be exempted from this requirement on the ground of published work.

The Degree of Doctor of Science (Engineering) is awarded only for work which affords definite evidence that the candidate has initiated and conducted research in Engineering Science of such quality as has given him an authoritative standing.

A candidate may make application at any time for the Degree and must at the same time submit evidence of his qualifications, such evidence to consist of published* papers or books containing original contributions to the advancement of knowledge. A substantial amount

* In these Regulations the term "published" shall mean printed in a periodical or as a pamphlet or book on sale to the public through booksellers. The purpose of requiring publication is to ensure that the work submitted has been available for criticism by relevant experts, and Examiners are given discretion to disregard any of the work submitted if, in their opinion, the work has not been so available for criticism either on account of its inaccessibility or because it has been submitted for the Degree at too short an interval after its publication.

of the work submitted must be independent work published in the candidate's own name. If conjoint work is submitted the candidate must produce satisfactory evidence as to the extent to which he was responsible for the initiation and conduct or direction of such conjoint work. The candidate is required to indicate what part if any of the work has been submitted for a Degree in this or any other University by himself or, in the case of conjoint work, by any of his collaborators.

The Examiners may, at their discretion, require the candidate to present himself for an interview.

Every candidate must apply to the Academic Registrar for an entry-form which must be returned, duly completed, with a fee of 20 guineas and accompanied by four copies of such printed contributions to scientific knowledge as he may desire to submit. All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A candidate who is not recommended for the Degree of D.Sc. (Eng.) will be required on re-entry for the Examination to comply with the Regulations in force at the time of his re-entry.

After the Report of the Examiners shall have been approved by the Senate the Academic Registrar shall publish a list of the candidates on whom the Degree of D.Sc. (Eng.) has been conferred.

A copy of the published work for which a Degree has been conferred shall be deposited in the University Library and shall be open for public reference.

A diploma for the Degree of D.Sc. (Eng.) under the Seal of the University shall be delivered to each successful candidate after the Report of the Examiners shall have been approved by the Senate.

PRIVILEGES

Exemptions Granted by the Institution of Civil Engineers

The Certificates of persons who pass the Matriculation Examination, whether taken in its ordinary form or in the form of the General School Examination, will be accepted in lieu of the Common Preliminary Examination of the Institution, provided that the Certificate includes (*a*) Mathematics and, (*b*) Mechanics, or Chemistry, or Physics (*i.e.* Heat, Light and Sound, or Electricity and Magnetism), and (*c*) one of the following languages: Latin, French, German, Italian, Spanish, Afrikaans.

A candidate whose Matriculation Certificate does not satisfy all these conditions, but includes at least one of the subjects mentioned in the first paragraph, may qualify for exemption by taking the remaining prescribed subject or subjects as supplementary subject or subjects, at a subsequent Matriculation Examination provided that, where two supplementary subjects have to be passed, the candidates shall pass in them on one and the same occasion.

The Matriculation Examination is accepted for the same purpose without reservation as to subjects, in the case of a candidate for Studentship of the Institution, who is pursuing for at least two years a University course of study in Engineering leading to a degree recognised by the Institution as exempting from Sections A and B of its Associate Membership Examination, if, or when, the candidate has passed the Intermediate Examination.

The Associate Membership Examination comprises three Sections, A, B, and C. The Internal B.Sc. Degrees in Engineering and in Engineering (Mining) (Pass or Honours), if taken after three years' regular day course of study at one of the constituent colleges of the University, are recognised as exempting the holder from Sections A and B. Every candidate for election to Associate Membership must satisfy the Council of the Institution in Section C, which is a test of knowledge of the work of an engineer's office.

The Degrees, which exempt as above mentioned, do not include the Degree " B.Sc. (Engineering) in Metallurgy."

The period to be spent in practical engineering training, as part of the qualifications required for election to Associate Membership of the Institution, is dependent on the course of study pursued for the Degree. A graduate, or intending graduate, who desires to ascertain the effect of the course of study pursued or contemplated by him on the period of training required by the Institution, should apply to the Secretary, The Institution of Civil Engineers, Great George Street, Westminster, S.W.1, giving full particulars of the course.

Exemptions Granted by the Institution of Electrical Engineers

Candidates possessing a B.Sc. (Eng.) Degree will be exempted from Joint Section A of the Associate Membership Examination, and candidates who have passed in at least three distinct electrical engineering subjects, of which two must have been taken at the Final Examination for such Degree, will be exempted from Section B.

Exemptions Granted by the Institution of Mechanical Engineers

The Institution of Mechanical Engineers accepts the Matriculation Examination of the University of London in lieu of its Common Preliminary Examination on certain conditions. Candidates who are thus exempted are also excused the English paper in Section A of the Associate Membership Examination.

The Institution also accepts the Degree of B.Sc. (Eng.) in lieu of Sections A and B of its Associate Membership Examination. The B.Sc. (Eng.) Degree with Honours exempts from the whole of the Associate Membership Examination.

Exemption Granted under Coal Mines Act

Students who present a certificate of practical experience in a mine, which shall be approved by the University, shall have the Diplomas of their Degrees endorsed to that effect.

Bachelors of Science in Engineering (Mining) whose Diplomas are so endorsed will be exempted from two of the five years' practical experience ordinarily required of candidates for certificates to act as Managers of Mines, under the Coal Mines Act, 1911.

The certificate referred to above must be to the effect that the student has had practical experience in a Mine for a period of not less than four months; the said certificate must be in the form of a diary, kept by the candidate, showing the time actually spent at the mine, and stating briefly the manner in which he has been employed; and it must be certified by the manager or some responsible official of the mine.

EXAMINATION-PAPERS

The following sets of past examination-papers can be obtained from the University of London (Publications Section), Senate House, W.C.1 :—

Intermediate Engineering	1*s.* 9*d.* post free.
Intermediate Science	2*s.* 0*d.* post free.
B.Sc. Engineering	2*s.* 6*d.* post free.

B.Sc. (Engineering) College Examinations

University College ; King's College ; Queen Mary College

Sets of papers for the respective College examinations as follows :

Part I or Second Year, 1*s.* 3*d.* post free.
Part II or Third Year, 1*s.* 3*d.* post free.
Both Parts, 2*s.* 0*d.* post free.

Imperial College

*Sets of papers in Mechanical, Civil or Electrical Engineering as follows :

Second Year, 1*s.* 3*d.* post free.
Third Year, 1*s.* 3*d.* post free.
Both Parts, 2*s.* 0*d.* post free.

Enquirers should specify which branch or year they require, and in case of Third Year Electrical Engineering whether Communications or Power.

M.Sc.

Sets of papers in the different subjects for any one examination. 1*s.* 3*d.* each subject post free.

Enquirers should state the subject(s) (also section or branch, if any).

* These papers can also be obtained at Imperial College.

UNIVERSITY OF LONDON

Faculty of Economics

Note.—The full title of this Faculty is "Faculty of Economics (including Commerce and Industry) and Political Science."

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University confers the following Degrees in the Faculty of Economics :—

Bachelor of Science (Economics) (B.Sc.).
Master of Science (Economics) (M.Sc.).
Doctor of Philosophy (Ph.D.).
Doctor of Science (Economics) (D.Sc.).
Bachelor of Commerce (B.Com.) (until 1954 only).
Master of Commerce (M.Com.) (until 1951 only).
Bachelor of Science (Estate Management) (B.Sc.).
Master of Science (Estate Management) (M.Sc.).

In order to be admitted to the Degree of Bachelor of Science (Economics) as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Economics unless exempted therefrom in accordance with the Regulations for Advanced Students proceeding to a Bachelor's Degree or unless proceeding to the Degree under the Revised Regulations (pp. 1614–1644).

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the Course for the Intermediate and Final Examinations under the old Regulations and for the Final Examination under the revised Regulations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Economics.

[For information regarding Degrees in Commerce and Estate Management, *see* pp. 1651 and 1701 respectively.]

B.Sc. (ECONOMICS) DEGREE

[NOTE.—*The Regulations set out below apply only to Internal Students who began their courses of study before October,* 1949. *The B.Sc.* (*Econ.*) *Examination will be held under these Regulations for the last time in* 1954. *For Revised Regulations see pp.* 1614–1644 *below.*]

COURSE OF STUDY

The course for the Final Examination may be taken in two years or more, but a student who has passed the B.Com. Examination as an Internal Student will be required to attend a further approved course of study extending over one year only.

The subjects of the course are as follows :—

I. Economics, including
  (*a*) Principles of Economics.
  (*b*) Applied Economics.
  (*c*) Economic History since 1815.

II. Two of the following alternative subjects, the study of which will normally be undertaken in the first year of the Final Course, and the choice of which is governed by the special subject selected by the candidate (*see* Schedule overleaf) :

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1. English Constitutional History since 1660.
2. Comparative Social Institutions.
3. Social Philosophy.
4. Political History of the Great Powers from 1815.
5. Statistical Method.
6. Elements of English Law.
7. Political and Social Theory.
8. Scientific Method.
9. International Law.

III. One of the following special subjects :

(i) Economics, descriptive and analytical.
(ii) Economic History (Modern).
(iii) Economic History (Mediæval).
(iv) Government.
(v) Sociology, including any two of the following :
  (*a*) Psychology.
  (*b*) Ethnology.
  (*c*) Social Economics.
  (*d*) Social Institutions.
(vi) Banking, Currency and Finance of International Trade
(vii) Transport and International Trade.
(viii) Geography.
(ix) Statistics, including Demography.
(x) Industrial Law.
(xi) Commercial Law.
(xii) History of English Law.
(xiii) International Relations.
(xiv) Social Anthropology.

Schedule of Special and Alternative Subjects

[NOTE.—This Regulation is suspended until further notice and candidates may offer any of the Alternative Subjects in which courses are available, except that candidates offering International Relations must offer (9) International Law and one other alternative subject.]

As his *two* alternative subjects, which are to be regarded as preparatory to the work on his special subject, a candidate will be permitted to offer only the combination of subjects shown opposite the number of his special subject in the table below :

Special Subjects	Alternative Subjects
(i)	5, *and* any other
(ii)	4, *and* any other
(iii)	4, *and* any other
(iv)	7, *and* any other
(v)	2, *and* 3 *or* 5 *or* 7 *or* 8
(vi)	5, *and* any other
(vii)	5, *and* 6 *or* 7 *and* 8
(viii)	Any two
(ix)	5, *and* 2 *or* 3 *or* 7 *or* 8
(x)	6, *and* any other
(xi)	6, *and* any other
(xii)	6, *and* 1 *or* 7
(xiii)	9, *and* 4 *or* 7
(xiv)	2, *and* 3 *or* 5 *or* 7 *or* 8

Date of Examination

The B.Sc. (Econ.) Examination will be held once in each year, commencing on the third Monday prior to the first Monday in July.

[Note.—In 1951 the Examination will begin four days earlier, i.e., on Thursday, June 7th.]

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 1st.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and oral examinations.

Fees

The fee for each student is 6 guineas for each entry to the whole Examination. All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A candidate who takes the language paper alone, either in advance of or subsequently to the rest of his examination, will be required to pay an additional fee of 10*s.* 6*d.*

Details of Examination

There will be ten papers as follows :

I Economics :

(*a*) Principles of Economics
(*b*) Applied Economics } —two papers.
(*c*) Economic History since 1815—one paper.

II Alternative subjects—two papers (one paper in each).

III Special subject—three papers.

IV Essay—one paper. The essays will be of a general character *not* having particular reference to the Special Subjects, and there will be a choice from among not more than five or six subjects.

V Languages—one paper. Translation of passages from French, German and Italian works such as all students may be expected to meet in the course of their general reading for the Degree. Candidates are required to satisfy the Examiners in two of these languages. Candidates are required to translate *one* passage only from each of the languages for which they have entered. The use of dictionaries will be permitted in the Examination. Candidates may enter for examination in either, or both, of the two foreign languages at any B.Sc. (Econ.) Examination held after beginning their course of study in the Faculty of Economics as Internal Students. A candidate who enters for examination in two languages and satisfies the Examiners in one only will be credited with that language and will be permitted to present himself for re-examination in the second language. Candidates taking one language only will be allowed one-and-a-half hours for translating the passage in that language.

Any candidate whose native language is not English, French, German or Italian may offer, in place of the translation paper in one foreign language, a test in English which shall include précis-writing and questions on the contemporary usage of the English language. In the case of bi-lingual students, and in any other case of doubt, the matter shall be referred to the Principal, whose decision shall be final.

A candidate who has passed the Intermediate Examination in Arts or Commerce, with English, is exempted from further examination in that language, provided his native language is not English, French, German, or Italian.

Candidates who have passed the Intermediate Examination in Arts or Economics or Commerce with French, German or Italian will be exempted from further examination in the language, or languages in which they have so passed.

Candidates who enter for the entire Examination and, though failing in the Examination as a whole, nevertheless satisfy the Examiners in the languages paper, will on re-entry be exempted from the languages paper.

Candidates who enter for the entire Examination and, although failing in the language paper, satisfy the Examiners in the remainder of the Examination may be referred in the language or languages in which they have failed. Such candidates will not be eligible for the award of the Degree until they have completed the Examination by passing on a subsequent occasion in the language or languages concerned.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of the successful candidates at the Examination, arranged in alphabetical order in each of the three categories, First Class Honours, Second Class Honours, and Pass, will be published by the Academic Registrar at 2 o'clock on August 8th. The Second Class Honours list will be sub-divided into an Upper and Lower Division.

The Gerstenberg Studentship and two other Studentships in Economics (£250) are awarded at the B.Sc. (Econ.) Examination. For detailed Regulations, *see* p. 13 of the General Regulations or Scholarships Pamphlet.

A diploma for the Degree of B.Sc. (Economics), under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc. (Econ.) Examination who have completed more than half of the examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Economics

(*a*) *Principles of Economics*

The principles of economics, including theories of population, production, value, distribution, money and banking, and international trade, and with special reference to their bearing upon current problems.

Some knowledge of statistical findings in their relation to economic theory will be expected.

(*b*) *Applied Economics*

Practical economic problems of contemporary interest, including :— Long and short term capital market. Monetary systems. Foreign exchange and international trade. Economic problems of distribution of commodities : organised markets, wholesale and retail trade. Machinery for collective purchase and sale, including labour. Industrial relations. The size of the business unit. Location and concentration of industry. Industrial combinations. Public ownership and control. Price and cost problems in industry and trade. Economic problems of transport and public undertakings. Public finance : the economic effects of taxes and subsidies ; public expenditure. Industrial fluctuations.

(*c*) *Economic History since* 1815

The main outlines of Economic History subsequent to 1815, with special reference to the economic development of the Great Powers, including the United States.

ALTERNATIVE SUBJECTS

1.—English Constitutional History since 1660

A brief survey of the struggles of the seventeenth century ; an examination of the Revolution Settlement ; and the general political history of England down to 1914, paying special attention to the following points : the power of the Crown ; changes in the composition, constitutional powers, and influence of the two Houses of Parliament ; the evolution of the Cabinet ; the rise of the office of Prime Minister ; the history of political parties ; the growth and expression of public opinion.

The course will not deal with the economic and social history of the period.

2.—Comparative Social Institutions

Formation and growth of communities ; kinship and inter-marriage ; basis of custom and law ; development of political authority and responsibility ; social differentiation ; caste and class ; rise and decay of slavery and serfdom ; property and economic organisation ; relations between communities and their bearing on internal structure ; intellectual and moral conditions of social development.

3.—Social Philosophy

Fundamental concepts of the study of society ; the philosophical and scientific points of view. Biological and psychological factors. Ethics as applied to social relationships. The basis of rights and duties. Personality and the common good. The meaning of social harmony. The State and the community. The basis of the rights of property.

4.—Political History of the Great Powers from 1815

Prelude. The Vienna Settlement, 1815.

The progress of the revolution :—(*a*) Political : Progress towards democracy in France, England, Germany and Russia. (*b*) Social and Economic : Movements against economic inequality in Austria-Hungary and Russia ; the rise of labour and socialist movements. (*c*) Nationalist movements in Italy, Germany, Austria-Hungary, and the Balkans.

International relations of the Great States of Europe. The attempt at government by Congress (1815–1825) and later action of the Concert of Europe. The reaction of the nationalist movements on international affairs. The evolution of the Eastern Question. The two camps (1870–1914). Epilogue : The Versailles Settlement.

The imperialism of the West and its reactions with the new nationalism of the East. The expansion of Russia in Asia. The relations of the Great Powers with China and Japan. The partition of Africa.

The United States of America : Internal political development and relations with Europe ; Latin America and Eastern Asia.

5.—Statistical Method

1. Collection of data and tabulation. Statistical groups. Arithmetic average, mode, median, geometric mean, mean and quartile deviation. Statistical series in time. Trend and fluctuation. Weighted averages. Index numbers. Simple methods of measuring correlation.

2. Principal sources of statistics in the U.K. relating to population, production, consumption, commerce, prices, wages, income, employment.

3. (*a*) More Advanced Statistical Methods, involving mathematics of the standard required for the paper in Mathematics at the Intermediate Examination in Economics. Elementary mathematical treatment of variation and error (especially in their application to averages), sampling, description of groups and series, and correlation, in relation to economic and social investigations. Methods of interpolation.

(*b*) Further sources of economic, social, administrative, financial, and transport statistics in the U.K. ; *e.g.*, statistics published by central and local government organisations, public corporations, marketing boards, trade associations, trade unions, banks, transport undertakings, commercial and industrial concerns, journals etc.

[A knowledge will be expected of all three parts, which carry equal value in the Examination, but in part 3 candidates may confine themselves to either (*a*) or (*b*). In 3 (*b*) a choice of questions will be given and questions will be set relating to sources of statistics relevant to each of the Special Subjects in connection with which this paper is an Alternative Subject.]

NOTE.—Logarithm tables will be provided by the University and slide rules may be brought to the examination in this subject.

6.—Elements of English Law

The nature and origins of Law. The system of English Law ; Statute Law ; Common Law ; Equity ; Judicial Precedents ; Customs. English legal institutions : the Courts of Law ; the Legal Profession ; the principles of Legal Procedure and Evidence. Legal persons, natural and artificial. The subject and his rights and duties in the State. Elements of the Law of Contract and Tort and of Criminal Law.

The nature of proprietary rights (ownership, tenancy, possession, trusts); outline of the principal classes of property and of modes of disposition (sale, lease, mortgage, pledge, wills and settlements, bankruptcy).

The candidate will be required in addition to show special knowledge of either (*a*) the Elements of Constitutional Law, or (*b*) the Elements of the Law of Contract.

7.—Political and Social Theory

The institutions and functions of the modern state. The history (in general outline) of the main theories of social and political Philosophy since Hobbes in their relation to the working of British political institutions.

8.—Scientific Method

Comparison between Science, History and Philosophy. Comparison of Economics and Sociology with Physics and Biology. Relation between Economics, Psychology, Ethics, Politics, and Sociology. Description and explanation. Principles of classification and definition. The comparative method. The logic of statistical method. The inductive methods and their application to economic and sociological investigations. The function of hypothesis in induction, its application and verification. The use and misuse of analogy.

9.—International Law

The Foundations of International Law :—International Law and Society. The Sources of International Law. International and Municipal Law. The Dominion of International Law. Development and Science of International Law.

International Personality :—The Subjects of International Law. The Principles of Sovereignty and State Equality. Recognition. Representation of States. International Persons other than States. Continuity of States and State Succession.

State Jurisdiction :—General Principles. Territorial Jurisdiction. Limitation of Territorial Jurisdiction under International Customary and Conventional Law. Personal Jurisdiction.

Objects of International Law :—Territory. Land Frontiers. Maritime Frontiers. The High Seas. Individuals. Business Enterprises and Ships.

International Transactions :—International Treaties. Unilateral Acts and Quasi-Contractual Obligations. International Torts.

War and Neutrality :—Measures short of War. State and Effects of War. Warfare on Land. Military Occupation of Enemy Territory. Maritime Warfare. Warfare in the Air. Penalties for the Violation of Rules of Warfare. Neutrality. Civil War and Belligerency. Termination of War.

The Law of International Institutions :—Judicial International Institutions with special reference to the History of International Arbitration, to the Permanent Court of International Justice, and to the International Court of Justice. Administrative International Institutions (*e.g.*, the Universal Postal Union, Unesco or the International Bank for Reconstruction and Development). Quasi-Legislative Institutions, with special reference to the International Labour Organisation. General Purposes Institutions (with special reference to the United Nations and Institutions within the framework of the United Nations).

Books Recommended

Students are advised to read in the first place either *Brierly* or *Winfield*, to base their work on any of the text-books recommended and, in addition, to use as a case-book either *Briggs* or *Scott-Jaeger*.

Text-books and Case-books :—

Brierly : *The Law of Nations* (3rd edition).

Briggs : *The Law of Nations.*

Fenwick : *International Law* (2nd edition).

Hall : *International Law* (8th edition, by Pearce Higgins).

Lawrence : *Principles of International Law* (7th edition by Winfield).

Oppenheim : *International Law* (5th and 6th editions by Lauterpacht, 2 vols.).

Schwarzenberger : *Manual of International Law.*

Schwarzenberger : *International Law as Applied by International Courts and Tribunals.*

Scott-Jaeger : *Cases on International Law.*

Stowell : *International Law.*

Wheaton : *Elements of International Law* (6th and 7th editions by Keith, 2 vols.).

Winfield : *Foundations and Future of International Law.*

Further Reading :—

American Journal of International Law.

British Year Book of International Law.

Hudson : *World Court Reports* (4 vols.).

Smith : *Great Britain and the Law of Nations* (2 vols.).

Current Problems :—

Brierly : *The Outlook for International Law.*

Schwarzenberger : *International Law and Totalitarian Lawlessness.*

The Law of International Institutions :—

Eagleton : *International Government.*

Gihl : *International Legislation.*

Hudson : *The Permanent Court of International Justice.*

International Labour Office : *International Labour Code.*

Kaeckenbeeck : *The International Experiment of Upper Silesia.*

Keeton : *National Sovereignty and International Order.*

Riches : *Majority Rule in International Organisation.*

Smith : *The American Supreme Court as an International Tribunal.*

SPECIAL SUBJECTS

(i) Economics, descriptive and analytical

Economic theory and its history since 1750, including theories of population, production, value, distribution, and international trade, and with special reference to its bearing upon current problems. Forms of industrial organisation. Combination and monopoly. Industrial fluctuations.

Some knowledge of statistical findings in their relation to Economic Theory will be expected.

(ii) Economic History (Modern)

Economic History (Modern), with special reference to England after 1485 and including particular study of *either* the period 1485–1603 *or* the period 1830–1876.

The examination will consist of two papers on General Economic History after 1485 and one paper on English Economic History of the period *either* 1485–1603 *or* 1830–1876. Candidates will be required to show a knowledge of the chief sources of English Economic History, especially in connection with the special period chosen.

(iii) Economic History (Mediæval)

Economic History with special reference to England down to 1485, and including particular study of the period 1377–1485.

The examination will consist of two papers on General Economic History to 1485, one paper on English Economic History 1377–1485, and one paper of passages for translation. Candidates will be required to show a knowledge of the chief sources of English Economic History, especially in connection with the period 1377–1485.

(iv) Government

The Constitution and Administration of Great Britain and the Dominions and a comparison thereof with the governmental systems of other countries, in particular the U.S.A., France, Germany, and Switzerland.

The History of Political Ideas from Hobbes to the present time in outline.

(v) Sociology

The three papers will include a paper of a general character, dealing with theories and methods of Sociology (*see* below), and two papers chosen by the candidate from the four (*a*, *b*, *c*, *d*) set out below :—

General Paper

The development of Sociology since Comte. The influence of biology on Social Theory. The rôle of psychology in sociological explanation. The use of anthropological and historical data in sociology. The value and limitations of the Comparative method. The methods employed in investigating contemporary social conditions. The classification of social aggregates and institutions and the analysis of social processes. The concepts of culture and civilisation. Theories of social development, arrest and decay. The nature of sociological generalisations.

(*a*) *Psychology*

The Psychological standpoint. Comparative Study of Mental Structure : (*a*) in animals and man, (*b*) in child and adult, (*c*) in primitive and advanced peoples. The Psychological basis of social institutions : (*a*) Ideas of moral and political obligations ; (*b*) Nature and development of moral faculty, Psychology of sympathy, self-love, moral sense, conscience, the idea of personality ; (*c*) Psychology of responsibility—analysis of will, desire, impulse, motive, intention. Psychological element in (*a*) æsthetic, (*b*) scientific, (*c*) religious development.

(*b*) *Ethnology*

The physical, mental, cultural, and social characteristics of the main varieties of mankind. The present geographical distribution of races and peoples, and their former wanderings. The antiquity of man ; the physical characteristics of prehistoric peoples and the evolution of their culture. A detailed acquaintance with a selected continent, or area, comprising a knowledge of the main social groups in the region selected, their environment (physical and biological), occupation, property, culture, social structure, religion, expansion, and their influence upon one another.

(*c*) *Social Economics*

Development of economic theory in relation to social theory ; contemporary economic conditions in the United Kingdom ; wages and the standard of life ; housing and sanitation ; provision for children, the sick, the aged ; unemployment ; trade unionism ; co-operation ; state regulation of industrial conditions ; welfare institutions ; social insurance.

(*d*) *Social Institutions*

Sociology in its relations to Biology and Psychology ; the principle of evolution applied to social phenomena. Forms of social organisation : (*a*) The Family—maternal and paternal descent—power of the head of the family ; joint and individual property ; regulation of marriage ; position of women ; (*b*) Society—the clan and tribe : Monarchy, feudalism, the City State ; the modern State ; Federal Government. The maintenance of social order : the blood feud, retaliation, compensation, primitive courts and processes, the oaths and the ordeal, growth of public justice and rational procedure, responsibility, punishment and prevention of crime. The Social Structure : slavery, serfdom, free labour and industrial co-operation, caste and class distinctions, civil and political equality. Religious and other beliefs in their bearing on social relations ; influence of magic, animism, ancestor-worship, polytheism, the world religions, on social morality ; antithesis of temporal and spiritual powers. Those parts of the syllabus which are included also in the syllabus in Comparative Social Institutions to be treated in greater detail.

(vi) Banking, Currency, and Finance of International Trade

(*a*) Monetary Theory, *i.e.*, the nature and definition of money ; the classification of monetary systems ; monetary value and the theory of price changes : problems of monetary organisation.

(*b*) Banking Theory, *i.e.*, the function and significance of banking, including the main theoretical problems arising out of the organisation of banking systems ; Central Banking and the working of the Money Market.

(*c*) Monetary History and Organisation, *i.e.*, the development of monetary and banking institutions in Great Britain, especially in the period 1600–1914. The organisation of banking and currency institutions in the British Empire, Europe, North America, and the principal countries of South America and the Far East.

(*d*) Finance of International Trade : the theory and practice of the foreign exchanges and of the Stock Exchange, including the theory of International Trade in its relation to the development of monetary, and especially foreign exchange, theory.

(vii) Transport and International Trade

(*a*) The history of railways generally, with special reference to the United Kingdom, and relations between the railways and the State. The history of roads of England and Wales from the sixteenth century, of France from Colbert, and of road transport from the beginning of the eighteenth century. History of canals and navigable waterways from the middle of the eighteenth century, with special reference to Great Britain, France, Belgium, and Germany, and North America. History of sea transport from the eighteenth century.

Organisation of railways and railway finance—relation to the State —relations with public—relations to one another—administrative organisation—railway clearing houses. International organisation.

Organisation of roads and road finance—control by the State over road vehicles and road users—various types of road transport and their organisation.

Organisation of inland waterways and their finance—relation to the State—various types of inland waterway—organisation of maintenance and operation.

Organisation of sea transport—State control of ships and shipping —international arrangements—liners—shipping conferences—the ship and its operation—marine insurance—port, dock, and harbour authorities—organisation of dock work.

Rates, fares and charges in theory and practice—monopoly and competition—discrimination in charges. Taxation and subsidies. Production of transport and its costs. Statistics measuring production and efficiency. Elements of law of carriage.

(*b*) The influence of transport on the distribution of population and industries. Commercial policy and growth of the trade of the chief commercial nations, more particularly the United Kingdom, since 1870. The supply and marketing of the chief commodities entering into international trade. Distribution and organisation of trade routes and development of commercial centres. The influence of markets and market organisation on the direction and character of trade. Commercial statistics.

Paper 1 will be devoted to Transport and Paper 2 to International Trade.

Paper 3 will be divided into two sections, one on Transport and one on International Trade, either of which may be taken at the option of the candidate.

(viii) Geography

The Regional, Historical and Economic Geography of the British Isles.

The Regional and Economic Geography of Continental Europe; France and Germany to be considered in greater detail than the rest of Europe.

The Regional and Economic Geography of *either* North America *or* Asia.

Either (i) A less detailed study of the regional and economic geography of one of the continents, (*a*) South America, (*b*) Africa, (*c*) Australia and New Zealand;

Or (ii) The Historical Geography of the Mediterranean Region.

(ix) Statistics, including Demography

The subjects described in the syllabuses in Statistical Method and Scientific Method carried to a further extent. Methods of obtaining data and the logical process of drawing inferences therefrom ; the common fallacies of interpretation. General principles of representation of statistics by mathematical formulæ. The deduction of the curve of error from the binomial. The method of fitting by moments. The elementary theory of correlation, including the case of three variables. Interpolation by finite differences and the simple theory of the life table. Such mathematics, including the theory of probability, as are necessary for the foregoing. Applications, mainly to the official statistical publications of the United Kingdom and to other accessible publications on industrial and demographical subjects. Where detailed knowledge of special subjects is required, a choice of questions will be allowed.

NOTE.—Logarithm tables will be provided by the University and slide-rules may be brought to the examination in this subject.

(x) Industrial Law

General principles of the Law of Employers and Workmen, Statutory conditions of employment in factories, workshops, mines and shops, and on railways and ships. Employers' Liability and Workmen's Compensation. The Law of Trade Unions. Friendly Societies, National Health and Unemployment Insurance. Trade Boards. The Truck Acts. The main outlines of labour legislation in the Overseas Dominions, and in the United States of America, France, and Germany.

(xi) Commercial Law

The history of the Law Merchant. General principles of the Law of Contract. The Law relating to mercantile contracts (sale of goods ; negotiable instruments ; banking ; guarantee ; carriage of goods by land and sea ; insurance). The Law relating to mercantile persons (principal and agent ; partnerships ; companies). The Law relating to mercantile property (goodwill ; patents, trade marks and designs ; mortgages and pledges of goods and choses in action ; mercantile liens ; bankruptcy).

(xii) History of English Law

(1) *Property.*—The general conception of property implicit in English Law in its several stages of development. The communal village. The manor. The divisions of the subject-matter of property : (*a*) Land, (*b*) Movables, (*c*) " Things in action," and the rules governing the creation, devolution, and alienation of property in each. Extent and nature of proprietary rights. Creation of derivative rights in (*a*) Land (life estates, leaseholds for years, mortgages, " incorporated hereditaments," surface and mineral rights, etc.) ; effect of this on agricultural and rural development. (*b*) Movables (pledges, liens, bailments generally). (*c*) " Things in action " (tardy recognition by English courts). Influence of the Law Merchant. Growth and legal recognition of negotiable instruments. New forms of " things in action " (shares, stock, debentures). Growths of Company Law. Unwillingness of the Common Law to admit the transfer of " things in action."

(2) *Contract.*—Absence of conception in early stages of English Law. Popular institutions of pledge and warranty. Ecclesiastical doctrine of *læsio fidei* and its reception by the King's Courts. Appearance of the formal contract. Gradual evolution of the " simple " (formless) contract. Curious way in which it arises in English Law and width

of doctrine accepted. The theory of "valuable consideration." Development of the "contractual mind."

Doctrines which have specially affected the English Law of Contract. The ecclesiastical doctrine of usury. The feeling against monopoly and the struggles of the sixteenth and seventeenth centuries. The doctrine of "restraint of trade." The doctrine of "public policy." The doctrine of "freedom of contract."

(3) *Employer and Employed.*—Co-operative and customary labour on the land. The Black Death and the Statute of Labourers. Emergence of the "free labourer." Guilds and "conspiracies." The Combination Laws. Breakdown of the mediæval system and substitution of contract labour for status labour. Repeal of the Combination Laws. The doctrine of "common employment." Employers' Liability Acts. Failure of the Law to reach a system of collective bargaining. Beginnings of a new system of State regulation of wages. Workmen's Compensation Acts.

(xiii) International Relations

(*a*) *International History.*—Diplomatic history of the nineteenth and twentieth centuries, with special reference to the evolution of international political organisations.

(*b*) *International Relations (General).*—Description and analysis of the relationships, political, economic and financial, between Governments as well as peoples ; the causes and occasions of international conflicts and the methods and procedures for their peaceful solution.

(*c*) *International Institutions.*—The development and working of diplomatic and consular machinery ; the growth and forms of international technical co-operation ; the origins, structure and functioning of the League of Nations, International Labour Organisation and Permanent Court of International Justice ; present-day problems of international organisation.

(xiv) Social Anthropology

Scope and history of social anthropology ; methods of research ; theories of culture and social structure ; processes of social change ; relation of culture to race and to environment.

Territorial organisation, kinship grouping and social organisation in terms of sex and age ; ceremonies at critical points of the life cycle ; simple political, legal and economic systems ; values and sanctions in morality and law ; indigenous education ; magical and religious ritual and beliefs ; cult societies, guilds and other specific forms of association.

Candidates will also be required to show special knowledge of the literature dealing with the simpler cultures of *one* major area. Approved areas are :—

(*a*) Eastern Africa.
(*b*) Central Africa.
(*c*) Western Africa.
(*d*) Southern Africa.
(*e*) America north of Mexico (Amerindian and Eskimo cultures).
(*f*) Indian (tribal cultures).
(*g*) South-eastern Asia.
(*h*) Pacific Islands.

B.Sc. (ECONOMICS) DEGREE

REVISED REGULATIONS

[NOTE.—*The following Revised Regulations apply to all Internal Students who begin their courses of study for the Degree in or after October,* 1949. *The Examination will be held under these Regulations for the first time in* 1951 (*Part I*) *and* 1952 (*Part II*).]

COURSE OF STUDY

In order to be admitted to the Degree of Bachelor of Science (Economics) as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations and possess the qualifications detailed below.

(2) Follow an approved course of study at one or more Schools of the University. The total length of the course is normally not less than three academic years, but for Advanced Students the period may be two years.

(3) Pass Part I and Part II Examinations for the B.Sc. (Econ.) Degree.

Before admission to the course, until further notice, a candidate must also

either possess a Certificate awarded on a Higher School Examination recognised by the Ministry of Education as an approved Second Examination in Secondary Schools,

or have passed an Intermediate Examination of this University. In the case of the Intermediate Examination in Economics or Commerce a pass in four subjects will be accepted,

or have passed the Preliminary Examination in Economics for External Students.

or have obtained a Degree of an approved University,

or have been awarded an approved Scholarship for Adult Students†.

or in and after 1951 possess a General Certificate of Education awarded by one of the approved University Examining Bodies, together with the requirement of the University for Matriculation, with *three* subjects taken at the advanced level. (A candidate who has obtained an approved General Certificate of Education but who has not passed in three subjects at Advanced level may qualify for admission to the course by passing in an additional subject or subjects at an approved preliminary examination.)

A student shall be eligible to present himself for the Part I Examination after having satisfactorily attended approved courses extending over two academic years. Nevertheless a student who is admitted under the Regulations for Advanced Students may be permitted to present himself for the Part I Examination after one year.

DATE OF EXAMINATION

The B.Sc. (Economics) Examination will take place once in each year, beginning on the third Monday prior to the first Monday in July.*

† The Adult Scholarships at present approved for this purpose are as follows:—Those offered by the University Extension and Tutorial Classes Council, or an Adult Scholarship awarded by the London School of Economics, or an Exhibition offered by the London School of Economics to Extra-Mural Students, or one of the State Scholarships for Mature Students awarded by the Ministry of Education.

* In 1951 the Examination will begin four days earlier, *i.e.*, on Thursday, June 7th.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee not later than March 1st.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and oral examinations.

FEES

The fee for each student is 6 guineas for entry to either Part of the Examination. The fee for re-examination in one subject is 2 guineas. All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

DETAILS OF EXAMINATION

The Examination is divided into two Parts and normally a candidate must pass Part I before he enters for Part II. Nevertheless in exceptional circumstances, a candidate may be permitted to take both Parts of the Examination on the same occasion.

The subjects of the Examination are as follows:—

PART I (*Compulsory Subjects*)

Principles of Economics. Applied Economics. Political History. Economic History. Elements of Government. History of Political Ideas. Elementary Statistical Method and Sources.	1 paper in each.

Two of the following Alternative subjects, the study of which will normally be undertaken in the first two years of the Course, and the choice of which is governed by the special subject selected by the candidate at Part II (see schedule below).

1. Mathematics. 2 Logic and Scientific Method. 3. Accounting. 4. Elements of English Law. 5. Elements of Social Structure. 6. The Structure of International Society. 7. Psychology. 8. Principles of Economic and Social Geography. 9. International Law.	1 paper in each.
10. An Approved Modern Foreign Language (French, German, Italian, Russian, or Spanish).	2 papers and an oral examination.

PART II (*Special Subjects*)

One of the following:—

1. Economics, Analytical and Descriptive.
   - (i) History of Economic Thought.
   - (ii) Economic Theory.
   - (iii) Applied Economics.
   - (iv) *One* of the following:—
     - (*a*) Public Finance.
     - (*b*) Economic and Social Problems, treated statistically.
     - (*c*) More Advanced Statistical Method.
   - (v) An Essay on a subject within the field covered by (i), (ii), (iii), and (iv) (*a*) above.

2. Money and Banking.
   (i) Monetary Theory.
   (ii) English Monetary and Banking History.
   (iii) International Monetary Economics.
   (iv) Comparative Banking Institutions.
   (v) *One* of the following :—
      (*a*) Public Finance.
      (*b*) Business Finance.
      (*c*) Law of Banking.

3. International Economics.
   (i) International Trade, Migration and Capital Movements.
   (ii) International Monetary Economics.
   (iii) An Essay on the field covered by (i) and (ii).
   (iv) *One* of the following :—
      (*a*) Monetary Theory.
      (*b*) Business Administration.
      (*c*) Principles of Economic and Social Geography.
      (*d*) International Law (Sections A & C of syllabus for Alternative Subject 9).
      (*e*) Economic and Social Problems, treated statistically.
   (v) *One* of the following :—
      (*a*) Public Finance.
      (*b*) Commercial Law.
      (*c*) The Economics and History of Transport.
      (*d*) An Approved Modern Foreign Language.

4. Industry and Trade.
   (i) Business Administration.
   (ii) Industry and Trade.
   (iii) Labour.
   (iv) *One* of the following :—
      (*a*) Business Finance and Cost Control.
      (*b*) Applied Statistics.
      (*c*) Business Administration (Essay Paper).
   (v) Commercial Law.

5. Accounting.
   (i) Accounting.
   (ii) Accounting.
   (iii) Business Administration.
   (iv) Commercial Law.
   (v) *One* of the following :—
      (*a*) Business Finance.
      (*b*) Industry and Trade.
      (*c*) Applied Statistics.
      (*d*) Public Finance.
      (*e*) Law of Administration of Estates and Trusts.

6. Economic History (Modern).
   (i) Economic History of England 1485–1760.
   (ii) Economic History of England 1760–1939.
   (iii) *Either* English Economic History, 1485–1603 *or* English Economic History, 1830–1876.
   (iv) Economic History of the United States of America from 1783.
   (v) *One* of the following :—
      (*a*) Historical Geography.
      (*b*) Constitutional History since 1660.

(*c*) International History.
(*d*) Social Philosophy.
(*e*) Economic and Social Problems, treated statistically.
(*f*) The Economics and History of Transport.
(*g*) Logic and Scientific Method.
(*h*) An Approved Modern Foreign Language.

7. Economic History (Mediæval).
(i) & (ii) Economic History of England and Western Europe in the Middle Ages.
(iii) English Economic History, 1377–1485.
(iv) Mediæval Political Ideas.
(v) *One* of the following :—
(*a*) English Constitutional History to 1485.
(*b*) Constitutional History since 1660.
(*c*) Economic History of England 1485–1760.
(*d*) Economic History of England 1760–1939.
(*e*) International History.
(*f*) Economic History of the United States of America from 1783.
(*g*) Social Philosophy.
(*h*) Economic and Social Problems, treated statistically.
(*i*) An Approved Modern Foreign Language.

8. Government.
(i) A Special Period in the History of Political Ideas studied in relation to set books for that period.
(ii) The Government of Great Britain (advanced).
(iii) Comparative Government.
(iv) Political and Social Theory.
(v) *One* of the following :—
(*a*) Constitutional History since 1660.
(*b*) Administrative Law.
(*c*) Public Finance.

9. Sociology.
(i) General Sociology, i.e., Theories and Methods of Sociology.
(ii) The Contemporary Social Structure of England and Wales. [From time to time other areas may be prescribed as additional options.]
(iii) Comparative Study of *one* of the following topics :—
(*a*) Morals and Religion.
(*b*) Marriage and the Family.
(*c*) Property and Social Class.
(*d*) Political Sociology.
(*e*) Urban Sociology.
(iv) *One* of the following :—
(*a*) Demography.
(*b*) Social Psychology.
(*c*) Social Anthropology.
(*d*) Criminology.
(v) Social Philosophy.

10. Geography.
(i) The Physical and Biological Background of Human Geography.

(ii) Advanced Economic Geography, with special reference to Industry.
(iii) Advanced Regional Geography.
(iv) Advanced Regional Geography.
(v) *One* of the following :—
(*a*) Historical Geography.
(*b*) Political Geography.
(*c*) The Geography of Agriculture.
(*d*) The Economics and History of Transport.
(*e*) Applied Geography.

11. Statistics.
(i) Theory of Statistics including computational methods.
(ii) Theory of Statistics including computational methods.
(iii) Economic and Social Problems treated statistically.
(iv) and (v) *Two* of the following :—
(*a*) Demography.
(*b*) Actuarial Statistics.
(*c*) Economic Statistics.
(*d*) Social Statistics.

12. International Relations.
(i) International History.
(ii) International Relations.
(iii) International Institutions.
(iv) and (v) *Two* of the following :—
(*a*) International Law.
(*b*) International History (special subject).
(*c*) The Problem of International Peace and Security.
(*d*) The Philosophical and Psychological Aspects of International Relations.
(*e*) The Geographical and Strategic Aspects of International Affairs.
(*f*) The Interplay of Politics at the Domestic and International Levels.
(*g*) *Either* Political and Social Theory *or* An Approved Modern Foreign Language.

13. Social Anthropology.
(i) General Principles of Social Anthropology.
(ii) Economic and Political Systems of Simpler Societies.
(iii) Moral and Ritual Systems of Simpler Societies.
(iv) Ethnography of Special Areas.
(v) *One* of the following :—
(*a*) General Sociology.
(*b*) Social Philosophy.
(*c*) Social Psychology.
(*d*) Principles of Economic and Social Geography.
(*e*) Logic and Scientific Method.
(*f*) Demography.
(*g*) Social Statistics.
(*h*) An Approved Modern Foreign Language.

Schedule of Special and Alternative Subjects

As his two alternative subjects which are to be regarded as preparatory to the work on his special subject, a candidate will be permitted to offer only the combination of subjects shown opposite the number of his special subject in the table below :—

Special Subject.	*Alternative Subjects.*
1.	1, 2, 3, 4, 5, 8, 10.
2.	Any two.
3.	Any two.
4.	3 and 4.
5.	3 and 4.
6.	2, 5, 6, 8, 10.
7.	2, 5, 6, 8, 10.
8.	2, 4, 5, 10.
9.	5 and any other.
10.	8 and 1, 5, 6, or 10.
11.	1 and any other.
12.	2, 5, 6, 7, 8, 9, 10.
13.	2, 5, 7, 8, 10.

Certain of the Alternative Subjects of Part I are included as Optional Subjects in Part II of the Examination. A candidate may not include in Part II any Optional Subject which he has offered at Part I. In the case of an Approved Modern Foreign Language, a candidate may not offer in Part II the same language as he has taken in Part I, but he may offer a second language.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A candidate at Part I of the Examination who fails to reach the minimum standard in any one subject only may be referred, *i.e.*, he may be permitted on the recommendation of the Examiners to present himself on one occasion only in that subject, either before or on the same occasion as Part II. A candidate who again fails in his referred subject taken at the same time as Part II will not be informed of the result of his candidature for Part II.

The marks obtained in Part I of the Examination will be considered together with those obtained in Part II for the purpose of the classification for Honours.

Successful candidates will be awarded (1) First Class Honours, (2) Second Class Honours, or (3) Pass. The Second Class Honours list will be sub-divided into an Upper and a Lower Division. The names will be in alphabetical order in each class or division.

A provisional list of successful candidates will be published by the Academic Registrar at 2 o'clock on August 8th.

The Gerstenberg Studentship and two other Studentships in Economics (£250) are awarded at the B.Sc. (Econ.) Examination. For detailed Regulations, *see* p. 13 of the General Regulations or Scholarships Pamphlet.

A diploma for the Degree of B.Sc. (Economics), under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from Part of the Final B.Sc.(Econ.) Examination (Part II) may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc.(Econ.) Examination who have already passed Part I and who have completed more than half of the Part II Examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or Higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

PART I

Principles of Economics

The principles of economics, including theories of population, production, value, distribution, money and banking, and international trade.

Applied Economics

Applications of economic principles to the analysis of contemporary problems of production, trade, labour, money and public finance. A knowledge of the necessary background of economic geography is assumed (see below under *Principles of Social and Economic Geography*). Study for this subject should also be co-ordinated with the syllabus in Elementary Statistical Method and Sources.

Political History

Introductory Survey.

The close of the Middle Ages. The significance of geographical and scientific discovery. The effect of the Renaissance and the Reformation on institutions and intellectual life. The Wars of Religion and their impact. The development of nationalism and absolutism in Europe in the seventeenth century. Political relationships between Europe and the rest of the world from the sixteenth century to the eighteenth century. The expansion of French civilisation during the age of Louis XIV. French development in the eighteenth century; institutions, colonialism. The significance of enlightened despotism. The antecedents and causes of the French Revolution. The significance of an independent America. The effect of the French Revolution and the Napoleonic Wars on ideas and institutions. Importance of the Napoleonic Régime. The reconstruction of Europe 1813–15.

Political History of the Great Powers from 1815.

The progress of the revolution:—(*a*) Political: Progress towards democracy in France, England, Germany and Russia. (*b*) Social and Economic: Movements against economic inequality in Austria-Hungary and Russia; the rise of labour and socialist movements. (*c*) Nationalist movements in Italy, Germany, Austria-Hungary, and the Balkans.

International relations of the Great States of Europe. The attempt at government by Congress (1815–1825) and later action of the Concert of Europe. The reaction of the nationalist movements on international affairs. The evolution of the Eastern Question. The two camps (1870–1914). Epilogue: The Versailles Settlement.

The imperialism of the West and its reactions with the new nationalism of the East. The expansion of Russia in Asia. The relations of the Great Powers with China and Japan. The partition of Africa.

The United States of America : Internal political development and relations with Europe, Latin America and Eastern Asia.

Economic History

Economic Conditions and Development in England and Western Europe during the Fourteenth and Fifteenth Centuries.

Agricultural organisation ; changes in manorial structure and in the position of the peasantry ; the functions of the towns ; the development and organisation of industries ; the pattern of international trade and finance ; economic and social doctrines.

Economic Developments in England and Western Europe during the Sixteenth and Seventeenth Centuries.

The growth of the division of labour ; the factors that stimulated it and the major consequences ; the commercialisation of agriculture ; the development and organisation of industry ; the improvements in transport ; the organisation of internal and international trade ; the mobilisation of capital and the development of financial institutions ; the wage-earning classes and the problem of poverty ; economic relationships between Europe and the rest of the world ; economic thought and policy.

Economic change in Britain, Western Europe, and America, 1700-1850.

The expansion of population ; its possible causes and effects : increased occupational mobility ; internal migration and international movements of labour. The development of agriculture ; agrarian changes in Britain and Western Europe ; the extension of the frontier in America ; the Plantations and slave labour. The application of new techniques to manufacture, transport and trade ; the accumulation of capital and new forms of investment ; the concentration of industry ; the development of factory production ; the recruitment and training of labour ; the rise of trade unions ; industrial communities and the problems of early urbanisation. The expansion of domestic and international trade ; the economic relations of mother countries and colonies. The growth and specialisation of financial institutions ; the migration of capital. The coming of the railway and the effects of this on economic and social life in Britain, Europe and America. The movement of prices, rents, rates of interest, and wages ; industrial fluctuations ; the economic causes and effects of the wars and revolutions. The tendencies in economic thought and in national economic policies in a period of rapid expansion.

Industrialisation and the international economy, 1850–1939.

Industrialisation in the United States, Germany, Western Europe, Japan and Russia, and its effects on relatively backward areas. The development of new industries, world communications, and new economic areas. The reconstruction of agriculture, the development of new agricultural resources, and the survival of peasant agricultures. The development of the main staples of international trade. The gold discoveries. The rhythm of economic development before and after the revival of tariffs. The economic consequences of the first World War. The post-war reconstruction of Europe. The American boom and collapse of 1929. The New Deal policies of the United States. The rise of National Socialism in Germany. The development of planning in U.S.S.R. The economic policy of Great Britain. The organisation and main pattern of international trade in the inter-war period.

The historical analysis of industrial development since 1850. Industrial concentration. The growth of combination, national and international. The new industries and sources of power. Mass production and growing specialisation, technical and managerial. The problems of high productivities and high capitalisation.

The corporate organisation of business. The growth of specialised financial institutions. The sources of capital expansion and the relations of business to the State.

The evolution of labour and labour systems. The changing occupational structure of industrialised communities. The problems of labour mobility, national and international. Standards of living and State industrial policies. Trade unions and the growth of collective bargaining. The International Labour Organisation and international trade union organisation. Co-operative movements.

The Social policies of industrial States. The character of fiscal, insurance and welfare legislation. The growth of public utilities and public enterprise.

A knowledge of the necessary background of economic geography is assumed (see below under *Principles of Economic and Social Geography*).

Elements of Government

(*a*) The necessity of rules in a modern community. The functions of government. Conceptions of law, the state, sovereignty. Centralisation and Decentralisation. The Problem of federalism. The separation of powers. Democracy, oligarchy, dictatorships. The meaning of freedom, individual and social. Constitutionalism and the rule of law. Relation between politics and ethics, and politics and economics. Relation of psychology to politics. Methods of political study.

(*b*) The Government of Great Britain. The study of the principal institutions in Great Britain, central and local, and the relations of Great Britain to the United Nations and the Commonwealth. Comparison, in general terms, of the working of the British Government with those of France and the United States.

History of Political Ideas

The subject will involve a general knowledge of the history of political philosophy from Plato and Aristotle to the present time with some attention to the general history which gives its perspective to the major classics in the subject. Students will be expected to show acquaintance with Plato's *Republic*, Aristotle's *Politics*, Augustine's *City of God*, Machiavelli's *Prince*, Hobbes' *Leviathan*, Locke's *Second Treatise Concerning Government*, and his *Letter Concerning Toleration*, Rousseau's *Discourse on the Origins of Inequality* and his *Social Contract*, Burke's *Conciliation with America, Reflections on the French Revolution*, and *Thoughts upon Scarcity*, Hamilton and others, *The Federalist*, Bentham's *Fragment on Government*, J. S. Mill's *Liberty and Representative Government*, Karl Marx and F. Engels, *The Communist Manifesto*, T. H. Green's *Principles of Political Obligation*, Bosanquet's *Philosophical Theory of the State*, and N. Lenin's *State and Revolution*.

Elementary Statistical Method and Sources

Collection, definition and tabulation of data. Approximations and error. Frequency groups, time series and graphical representation. Measures of average and dispersion. Index numbers. The elements of the analysis of time series. The simplest ideas of sampling and correlation.

The main sources of statistics of population, manpower, industrial health, production, consumption, prices, trade, national income and capital. The nature and limitations of these statistics and the application of elementary statistical methods to them. Index numbers in practice. The use of statistics in the treatment of social problems and the elements of the technique of social surveys.

[NOTE.—Logarithm tables will be provided by the University and slide rules may be brought to the examination in this subject.]

ALTERNATIVE SUBJECTS

1.—Mathematics

Limits and the elementary theory of convergence of series.

Differentiation and integration of functions of one variable. Expansions of functions ; Taylor's and Maclaurin's theorems. Maxima and minima of functions of one variable. Tangents to curves ; areas and lengths of curves. Differentiation and integration of functions of two or more variables and elementary applications. Areas and volumes of solids. Numerical methods of integration. The simplest differential and difference equations.

Finite differences and applications to interpolation, summation and integration. Compound interest and annuities. The basic principles and the elementary theory of probability. The elements of the theory of determinants and matrices. The simplest properties of complex numbers, the Argand diagram and de Moivres theorem. Gamma and Beta functions.

[NOTE.—Knowledge of algebra up to and including the Binomial Theorem and of the elements of trigonometry and co-ordinate geometry, is assumed. Logarithm tables will be provided by the University, and slide rules may be brought to the examination in this subject.]

2.—Logic and Scientific Method

Origin and problems of modern logic. The Paradoxes. Languages under Discussion (object language) and the language in use (meta-language). Truth of statements vs. validity of arguments. Validity as the fundamental problem of elementary logic. Formative and descriptive signs of a language. Definition of " valid inference ". Outlines of the logic of statement composition. Derivation vs. Demonstration. Detailed comparison of the traditional logic of categorical propositions with Boolean methods. Rôle of definitions. Scientific Method and its limitations. The aims of science. Logical analysis of explanation. Strictly universal statements and their negation. Theories and observational tests. Hypothetical deductive systems. Hypotheses about single cases and frequency hypotheses. Probability. The problem of induction and its historical background. Inductive probability vs. degrees of confirmation. The aims and the status of the theoretical social sciences. Causation, determinism, historicism. Methodological collectivism, individualism, psychologism, scientism. Social science and ethics. Social theory and social history. Applications to economics.

3.—Accounting

The balance-sheet, and profit and loss acount.

The ledger and the double-entry system : the recording of ordinary trade transactions, and adjustments ; the books of original entry.

Accounts as instruments of management and control. Internal check. Interpretation of accounts, and their uses and limitations for control.

Partnership and company accounts, and more especially the annual reports to shareholders. Company finance ; simple annuity calculations.

Accounts of public bodies.

Capital and revenue; "goodwill"; depreciation; company dividends and reserves.

Elements of British income tax, and its treatment in accounts.

4.—Elements of English Law

Candidates must take Part A and *either* Part B *or* Part C. Those specialising in Accountancy, Banking and Finance or Industry and Trade must take Part C and those specialising in Government must take Part B.

Part A. English Legal Institutions.

The nature and origins of law. Historical outline of English law and the development of Common Law and equity. Main characteristics of modern English law. Sources; legislation and statutory interpretation, case law, and custom. Organisation of the courts and their jurisdiction. Arbitration. Codification. The theory of binding precedent. The personnel of the law and the legal profession; judges, Justices of the Peace, juries, barristers and solicitors. Legal Aid and Advice. An outline of procedure and evidence. Legal persons, natural and artificial. The subject and his rights and duties in the State. The branches of the Law and their principal characteristics; Constitutional Law, Administrative Law, Criminal Law, Contract, Tort, Family Law, Property and Mercantile Law.

either :—

Part B. Elements of British Constitutional Law.

The nature and sources of British Constitutional Law; separation of powers; the supremacy of Parliament; constitutional conventions.

Parliament : its meeting and procedure. The House of Commons; qualifications for membership, officers of the House, elections, process of legislation, opportunities for control of Government policy, financial control, parliamentary privilege. The House of Lords; its composition and functions. Conflicts between the two Houses.

The Executive.—The Monarchy. Royal prerogative. The Crown and foreign relations; the treaty-making power and Acts of State. The Privy Council. The Cabinet. Ministerial responsibility. The Prime Minister. Type of governmental powers, delegated legislation, the *ultra vires* doctrine. The rule of law.

The Judiciary.

The Citizen and the State.—Freedom of the person; arrest and search; freedom of discussion; the Press; public meetings; military and martial law.

The British Commonwealth.—Distinction between dominions, colonies, protectorates and trust territories. Dominion status. The Judicial Committee of the Privy Council.

or :—

Part C. Common Law Foundations of Commercial and Industrial Law.

Law of Contract.—Formation; offer, acceptance, consideration and capacity. Defective contracts; Statute of Frauds and Sale of Goods Act, Section 4, misrepresentation, mistake, undue influence, and illegality. Discharge; agreement, frustration, performance and breach. Remedies; damages, specific performance and injunction. Limitation. Assignment of contractual rights. Distinction between assignability and negotiability.

Law of Tort.—General principles. Negligence, contributory negligence, dangerous things. Conversion. Business competition, including restraint of trade, conspiracy, interference with contractual and proprietary rights (including patents, trade marks and copyrights), passing-off and slander of title. Master and Servant.

5.—Elements of Social Structure

The possible meanings of the term "social structure". Social institutions and non-institutional elements in society. Social order and social change. The main concepts used in the analysis and classification of social groups, relationships and forces. The application of these concepts to the study of the main forms of (*a*) *Social Groups, i.e.*, the family and other primary groups, national and local communities, associations, social classes; (*b*) *Social Relations, i.e.*, co-operation, competition, bargaining, conflict, leadership; (*c*) *Social Controls, i.e.*, law, custom, convention, morals and religion; (*d*) *Authority and Power, i.e.*, familial, political and economic power, their sanctions and methods of enforcement. A general comparison of the above elements as combined in the social structure of feudal, early capitalist and contemporary British Society.

6.—Structure of International Society

I.—Context of the Study :—

The relevance and necessity, in the study of international relations, of the companion disciplines of history, economic geography, political theory and international law.

II.—Basic Ideas :—

The Notion of the State as " Person "—its perils, uses and implications.

The Notion of an " International Society "—forms and bases of social solidarity on an international scale.

The Notions of International Right and Wrong—standards of propriety—legal, moral, ethical—in the relations between States: the rôle of jurisprudence and of moral philosophy in the appreciation of international affairs.

The Notion of a Single World Order—the relations between sovereignty, order and international law; theories of world-wide constitutional integration.

III.—International Politics :—

The Behaviour of States—the needs, interests, aspirations and anxieties of States; and the responsibilities of statesmen: motivations of State behaviour; traditional and environmental factors conditioning the outlook of States.

Internal Elements—the interplay and interdependence of politics at the domestic and international levels.

The Mutual Impact of States—means and methods of pressure in the relations between States.

The Grading of the Powers—the ever-shifting balance of influence and authority in diplomatic exchanges, and the factors on which it depends.

The States of Relationships between States—points of contact, and of friction, between peoples: the conditions of misunderstanding: the basic beliefs and the ruling enthusiasms of mankind and their influence upon the attitudes of States: man's urge to make a better world and the conflicting modes of its expression.

IV.—Institutional Elements :—

The nature of international institutions: the architecture of institutionalised international co-operation, including devices for the attempted consolidating of peace.

7.—Psychology

Scope and Methods of Psychology. Introspection, Observation of Behaviour and experiment.

Types of response : reflex actions, instinctive and acquired reactions, learning. Emotion and Sentiment. Temperament and Character. Volition. Rôle of Unconscious Factors.

Cognitive Processes : perception, judgment and reasoning. Memory. Language and conception. Subjective and objective factors of belief. Prejudice.

Phases in the growth of personality. Individual differences in intelligence, temperament and character, and the methods of assessing them.

8.—Principles of Economic and Social Geography

(i) A review of the main types of terrestrial environment and the influence of physical and climatic conditions on human society and economy. This part to be taken as a background course (non-examined) by all students in relation to the courses in Applied Economics and Economic History.

(ii) A further development of the foregoing principles with special reference to production in the modern world, and illustrated by specific regional instances.

9.—International Law

(An adequate knowledge of which will also be presupposed in papers (i), (ii), and (iii) of Special Subject 12 International Relations.)

A. General Principles.

1. The Foundations of International Law. International Law and Society. The Sources of International Law. International and Municipal Law. The Domain of International Law. Development and Science of International Law.

2. International Personality :—The Subject of International Law. The Principles of Sovereignty and State Equality. Recognition. Representation of States. International Persons other than States. Continuity of States and State Succession.

3. State Jurisdiction :—General principles. Territorial Jurisdiction. Limitation of Territorial Jurisdiction under International Customary and Conventional Law. Personal Jurisdiction.

4. Objects of International Law :—Territory. Land Frontiers. Maritime Frontiers. The High Seas. Individuals. Business Enterprises and Ships.

5. International Transactions :—International Treaties. Unilateral Acts and Quasi-Contractual Obligations. International Torts.

6. War and Neutrality :—Measures Short of War. State and Effects of War. Warfare on Land. Military Occupation of Enemy Territory. Maritime Warfare. Warfare in the Air. Penalties for the Violation of Rules of Warfare. Neutrality. Civil War and Belligerency. Termination of War.

And *either*

B. The Law of International Institutions.

Judicial International Institutions with special reference to the History of International Arbitration, to the Permanent Court of International Justice, and to the International Court of Justice. Administrative International Institutions (*e.g.*, the Universal Postal Union,

Unesco or the International Bank for Reconstruction and Development). Quasi-Legislative Institutions, with special reference to the International Labour Organisation, General Purposes Institutions (with special reference to the United Nations and Institutions within the framework of the United Nations).

or

C. International Economic Law.

Basic Standards, with special reference to the Standards of National and Most-Favoured-Nation Treatment. Protection of Property Abroad. Commercial Treaties, Monetary Agreements, State Loans and other State Contracts. The Calvo Clause, Methods of International Financial Control, and the Porter Convention. The Law relating to Trading with the Enemy, the International Economic and Financial Law of Military Occupation, the Protection of Neutral Property, and the Law of Reparations. The Law of International Economic and Financial Institutions (*e.g.*, The International Bank for Reconstruction and Development and the International Monetary Fund).

Books Recommended.

A. General Principles.—Students are advised to begin their studies by reading either Brierly's *Law of Nations* (3rd ed.) or Part One of Schwarzenberger's *Manual of International Law* (2nd ed.).

Text-books :—

Oppenheim : *International Law* (7th ed., ed. by Lauterpacht—two vols.).

Schwarzenberger : *International Law as Applied by International Courts and Tribunals* (2nd ed.).

Case-books :—

Briggs : *The Law of Nations.*

Scott-Jager : *Cases on International Law* (2nd ed.).

Periodicals :—

American Journal of International Law.

British Year Book of International Law.

International Organisation.

Year Book of World Affairs.

Further Reading (Special Subjects).

B. The Law of International Institutions :—

Eagleton : *International Government* (2nd ed.).

Goodrich-Hambro : *The Charter of the United Nations* (2nd ed.).

Hudson : *International Tribunals.*

Schwarzenberger : *The League of Nations and World Order.*

C. International Economic Law :—

Foreign Office : *Handbook of Commercial Treaties.*

McNair : *Legal Effects of War* (3rd ed.).

Schwarzenberger : *The Province and Standards of International Economic Law* (2 International Law Quarterly 1948).

Smith : *The Economic Use of International Rivers.*

[NOTE.—If International Law has been taken as an alternative subject in Part I it cannot be taken as an option in Special Subject 3 (International Economics) or 12 (International Relations).]

10.—Approved Modern Foreign Language

1. The following languages have been approved :—
French, German, Italian, Russian, Spanish.

2. In all languages, in addition to a knowledge of the normal vocabulary, familiarity with terms used in at least one of the social sciences will be required, and in the paper containing translation from the foreign language alternative passages will be included.

3. The standard, whether the language be taken with Part I or with Part II, will be equivalent to two years' work after the Intermediate or the advanced stage of the General Certificate of Education (Higher School Certificate).

4. The syllabus will be a follows :—

I. Grammar. (Direct grammar questions will not be set.)
II. Translation into English.
III. Translation from English into the foreign language.
IV. Essay in the foreign language.
V. Oral.

5. The required length of the essay will be between 300 and 400 words. A choice of essay subjects will be given, to include both themes connected with the civilisation and culture of the foreign country and themes taken from the specialised fields with which the degree is concerned.

6. The oral test will consist of conversation on general themes, on the civilisation and culture of the foreign country, and on matters connected with the social sciences. There will be no test in extempore translation.

7. Set Books will not be prescribed, but candidates will be expected to have read texts in the foreign language in one or more of the social sciences.

[NOTE.—The same language cannot be taken in both Part I and Part II.]

PART II

SPECIAL SUBJECTS

1.—Economics, Analytical and Descriptive

(i) *History of Economic Thought.*

The history of economic thought from Aristotle to the present day. Special attention should be paid to the period since 1776. A part of the paper will consist of questions on Adam Smith, *Wealth of Nations ;* Ricardo, *Principles of Economics ;* Marshall, *Principles of Economics ;* Wicksell, *Interest and Prices.*

(ii) *Economic Theory.*

The principles of economic analysis treated at a more advanced level than in Part I.

(iii) *Applied Economics.*

Applications of economic principle to contemporary problems at a more advanced level than in Part I. Agricultural economics. Economics of modern industry, business finance and the money market. International economic problems.

(iv) *One* of the following :—

(*a*) *Public Finance.*—The main problems of public finance, national and local, and social accounting treated both analytically and descriptively, with appropriate reference to budgetary policy and the size and content of the principal economic aggregates. A knowledge of the constitutional and administrative background is required.

(*b*) *Economic and Social Problems, treated statistically* (syllabus as for paper (iii) Statistics).

(*c*) *More Advanced Statistical Method.*—Frequency distributions, moments and cumulants. Elementary theory of correlation. Binomial, Normal and Poisson distributions. The elements of the theory of sampling.

(v) *Essay.*

Candidates will be given an opportunity of writing either one long essay or two shorter essays on any of the subjects dealt with under (i) to (iv) (*a*) above.

2.—Money and Banking

(i) *Monetary Theory.*

The nature and definition of money. The theory of price changes. The rate of interest. The trade cycle. The principles of banking, and the main theoretical problems arising out of the organisation of banking systems. The theoretical aspects of central banking. The whole to be illustrated by reference to significant monetary experiences of any country.

(ii) *English Monetary and Banking History.*

The history of English money and banking with special reference to the period since 1797; to include also the main controversies the behaviour of prices and the foreign exchange aspects. (Half the paper to be devoted to the period since 1890.)

(iii) *International Monetary Economics.*

The theory and practice of the foreign exchanges. Items in and factors affecting the balance of payments. Foreign exchange control and other government intervention in the foreign exchange markets. The Sterling Area. International payments agreements. International monetary institutions; their aims, their experience, and the fundamental problems in their work. Candidates will be expected to show a knowledge of the main relevant economic and financial developments in recent years.

(iv) *Comparative Banking Institutions.*

Contemporary banking and other money market institutions, both official and private, in Britain, the United States, the Dominions, and other principal countries, to be treated comparatively.

(v) *One* of the following :—

(*a*) *Public Finance* (syllabus as for paper (iv) (*a*) Economics, Analytical and Descriptive).

(*b*) *Business Finance.* Business risks and their distribution among suppliers of capital; problems of internal finance; the capital market; amalgamations; capital re-organisations; financial institutions.

(*c*) *Law of banking.* Law of Negotiable Instruments. Banking Law :—The legal relationship between banker and customer. Current accounts, deposit accounts, trust accounts, overdrafts. The pass book. The Bankers' Books Evidence Act, 1879. Cheques and documents analogous to cheques. The payment and collection of cheques. The payment of cheques by mistake. Forged cheques. Securities for

advances in general, pledges and mortgages of negotiable instruments, stocks and shares, life policies, interests in land and documents of title to goods. Bankers' commercial credits. The realisation of securities, bankers' guarantees. The legal position in the event of the insolvency of the customer. An outline of Stock Exchange Law.

[NOTE.—An elementary knowledge of the English Legal System and of the Law of Contract will be presumed and candidates are advised not to select this option unless they have taken Elements of English Law (Parts A and C) in Part I.]

3.—International Economics

(i) *International Trade, Migration and Capital Movements.*

Causes and consequences of international trade in goods and services and of the international movements of labour and capital. Factors affecting the localisation of industries. Methods of state regulation of international trade, migration and capital movements. Candidates will be expected to show a knowledge of the theoretical issues involved; of the historical development of ideas; of the main relevant economic and financial development in recent years; and of the relevant international institutions.

(ii) *International Monetary Economics* (syllabus as for paper (iii) Money and Banking).

(iii) An Essay on the field covered by (i) and (ii).

(iv) *One* of the following :—

(*a*) *Monetary Theory* (syllabus as for paper (i) Money and Banking).

(*b*) *Business Administration* (syllabus as for paper (i) Industry and Trade).

(*c*) *Principles of Economic and Social Geography** (syllabus as for alternative subject 8 in Part I).

(*d*) *International Law* (Parts A and C)* (syllabus as for alternative subject 9 in Part I).

(*e*) *Economic and Social Problems, treated statistically* (syllabus as for paper (iii) Statistics).

(v) *One* of the following :—

(*a*) *Public Finance* (syllabus as for paper (iv) (*a*) Economics, Analytical and Descriptive).

(*b*) *Commercial Law* (to be treated from a commercial standpoint) :—

Introduction.—History of the Law Merchant.

The Law of Agency.—The creation of the principal and agency relationship and the scope of the Agent's authority. The position of the Principal and the Agent *vis-à-vis* third parties in connection with Contracts and Torts. Passing of property by Agents and The Factors Act, 1889. Rights and duties of the Principal and Agent *inter se*. Agents' commission. Termination of Agency. The Agency of Married Women.

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* This option is open only to candidates who have not taken the corresponding alternative subject in Part I.

Partnership and Company Law.—The nature and advantages of corporate personality and the distinction between companies incorporated under the Companies Act, and other commercial associations, incorporated and unincorporated. The nature of Partnership. The formation of partnership and the rights and duties of partners towards third parties and *inter se*. The firm name and property. Termination and dissolution and rights to property especially goodwill. Limited Partnerships. Formation of Companies under the Companies Act, 1948. Types of Companies. The nature and contents of the Memorandum and Articles of Association. Flotation of Companies, promoters and prospectuses. Capital. Shares and dividends. Meetings and Resolutions. Directors and other officers. Annual Return, Accounts and Audit. Debentures; and (in outline only) Reconstruction and amalgamation, Inspection, and winding up.

Sale of goods.—The special rules relating to Sale of Goods under the Sale of Goods Act, 1893. C.i.f., f.o.b., and other special forms of international sales and provision of finance by Banker's Commercial Credits. Hire Purchase Agreements.

Cheques and Bills of Exchange, Carriage by Sea and Land and General Principles of Insurance Law with particular reference to Marine Insurance. The objects of the Law of Bankruptcy and the Effect of Bankruptcy on Proprietary and Contractual Rights. Candidates will only be expected to display an elementary knowledge of this paragraph to the extent necessary for a proper understanding of the main subjects previously mentioned (especially Sale of Goods).

An elementary knowledge of the English Legal System and of the Law of Contract and Tort will be presumed and candidates are advised not to select this subject unless they have taken Elements of English Law (Parts A and C) in Part I.

[NOTE.—Candidates will be supplied in the Examination Room with King's Printer copies of the Partnership Act, 1890, the Companies Act, 1948, the Sale of Goods Act, 1893 and the Bills of Exchange Act, 1882.]

(*c*) *The Economics and History of Transport.*—The terms of investment in transport under competition and monopoly, and under State (including municipal) and private enterprise. The general character of transport costs and the influence of geographical factors upon them. The theory and practice of transport charges, passenger and freight. The economic consequences of technical progress. Factors affecting the size and organisation of transport undertakings. International transport arrangements, agreements and institutions. The rôle of the State in relation to the development of transport generally. The problems of transport under State enterprise. Transport costs as an element in the price of goods and the cost of living. The influence both of the distribution of industry and population upon the development of transport, and of transport upon the growth and distribution of industry and population. All forms of transport to be studied, including shipping and air transport. The period covered historically to be from 1800 onwards.

(*d*) *An Approved Modern Foreign Language* (syllabus as for alternative subject 10 in Part I).*

* If alternative subject 10 has been taken in Part I, the candidate is not permitted to take the same language in Part II, but may taken a second language.

4.—Industry and Trade

(i) *Business Administration.*

The purpose and structure of business organisation, both inside and outside the business unit; a comparison of practice as regards organisation in the principal branches of business enterprise.

The special features of the organisation and of the administrative and economic problems of large-scale business: the delegation of functions, the allocation of responsibility, and the machinery of control. The specialised forms of organisation within the business unit for (*a*) management and the determination of business policy, (*b*) purchasing, (*c*) manufacturing, (*d*) finance, (*e*) selling, (*f*) recruitment, promotion and retirement of staff.

Buying, financing and selling policy in various conditions of the market, with special reference to the price problems of industrialists and wholesale and retail traders.

The effects of predictable and non-predictable variations in demand and supply on the operation of a business.

Trade associations and their influence on market conditions.

(ii) *Industry and Trade.*

Industrial and commercial structure. The financing of business enterprise. The depreciation of assets. The location of the business firm and of the producing unit. Marketing, including specialised markets, wholesale and retail distribution and import and export business. The provision of transport services. Works management: production planning, progressing of work, and stock control. The pricing of products. Business fluctuations. The relations between business and the State. Technical invention and the working of the patent system. Government control of monopoly and restrictive practices. The constitution and special problems of Government-owned and Government-controlled enterprises: including compensation for compulsory purchase, methods of organisation, control of competition and the determination of prices.

(iii) *Labour.* (*a*) Organisation and relations. (*b*) Law. Candidates are required to show a knowledge of both parts.

(*a*) Working population and total population. Distribution of working population between occupations and industries. Sources of current statistics.

Trade Union organisation. Outline of development in Great Britain. International comparisons. Types of Union. Functions of the Union.

Voluntary wage negotiation: structure and working. Arbitration. Forms of wage regulation. Industrial disputes. Public policy towards wage movements.

Measurement of changes in the cost of living.

Methods of wage payment. Incentive systems.

Human nature in the working life: motivation and morale. Relations between management and labour at the place of work. Joint consultation.

Measurements of productivity.

Unemployment: types and causes.

(*b*) The legal relations between employers and employed. The contract of employment at common law and statutory modifications. The liability of the employer for industrial accidents. Legislation

affecting wages, holidays, hours of work, safety, health, welfare, and other working conditions of employed persons. Wages Councils and other wage regulating authorities. The Truck Acts. Legislation affecting factories and workers in particular industries, *e.g.*, mining, transport, agriculture, shipping, retail distribution. The law of Trade Unions. Collective Agreements. Civil Conspiracy. Strikes and Lock-outs. Industrial Arbitration and Conciliation. Main principles of National Insurance Law, including Insurance against Industrial Injuries and Diseases.

(iv) *One* of the following :—

(*a*) *Business Finance and Cost Control.*—Business risks and their distribution among suppliers of capital ; problems of internal finance ; the capital market ; amalgamations ; capital re-organisations ; financial institutions. The use and limitations of accounting and statistical records for the ascertainment and control of costs. Accounting for labour, material and equipment. The treatment of overheads. Budgetary control. Standard costs.

(*b*) *Applied Statistics.*—Sources of statistics ; actual construction of tables, diagrams, etc., based on the original data (official or private) of statistics of trade, production, costs, sales, prices, wages ; index-numbers ; the writing of reports and précis ; use of mechanical aids to calculation.

[NOTE.—Candidates are required to submit their original note-books for inspection by the examiners. Candidates will be instructed on the examination programme sent with the entry form as to the time and place for submission of their note-books. Logarithm tables will be provided by the University, and slide rules may be brought to the examination in this subject.]

(*c*) *Business Administration* (Essay Paper).—A choice of subjects will be offered from the range of topics covered by the syllabuses for the papers in (i) Business Administration, (ii) Industry and Trade, and (iii) Labour.

(v) *Commercial Law* (syllabus as for paper (v) (*b*) International Economics).

5.—Accounting

(i) and (ii) Advanced company accounts : formation, reconstruction, and audit ; holding companies.

Valuation of a business, shares, partnership rights, etc. ; measurement of income ; depreciation ; case law of dividends.

Introduction to trustees' and executors' accounts.

The principles of the law of income taxation.

Business administration and the measurement of costs ; information for controlling efficiency and for price and output decisions. The meaning of "cost" : historical and opportunity cost, marginal cost and average cost ; job, process, and operating costs. Accounting for material, labour, and equipment ; description and criticism of oncost allocation. Budgetary control and standard costs.

(iii) *Business Administration* (syllabus as for paper (i) Industry and Trade).

(iv) *Commercial Law* (syllabus as for paper (v) (*b*) International Economics).

(v) *One* of the following :—

(*a*) *Business Finance* (syllabus as for paper (v) (*b*) Money and Banking).

(*b*) *Industry and Trade* (syllabus as for paper (ii) Industry and Trade).

(*c*) *Applied Statistics* (syllabus as for paper (iv) (*b*) Industry and Trade).

(*d*) *Public Finance* (syllabus as for paper (iv) (*a*) Economics, Analytical and Descriptive).

(*e*) *Law of Administration of Estates and Trusts.*—Devolution of Property on Personal Representatives. Appointment of Executors. Grants of Probate and Letters of Administration. Property devolving on Personal Representatives. Administration of Assets of Solvent and Insolvent Estates. Rules of Succession in Intestacy. Assents. The nature and classification of Trusts. Settlements upon Trust for Sale. Powers, Duties and Liabilities of Personal Representatives and Trustees. Apportionments between Capital and Income. Remedies of Beneficiaries and Creditors. "Following" Trust Property. Release and Discharge of Personal Representatives and Trustees.

6.—Economic History (Modern)

(i) *Economic History of England from* 1485 *to* 1760.

(ii) *Economic History of England from* 1760 *to* 1939.

(iii) *Either English Economic History* 1485–1603 or *English Economic History* 1830-1876.

(iv) *Economic History of the United States of America from* 1783.

(v) *One* of the following :—

(*a*) *Historical Geography* (syllabus as for paper (v) (*a*) Geography).

(*b*) *Constitutional History since* 1660 :—

The Restoration, the Revolution, Act of Settlement, Act of Union.

The crown, the prerogative, the dispensing, suspending and pardoning powers. Armed forces, police. Treason and riot. The civil list.

The prime minister, secretaries of state, and principal departments.

Parliament. Duration and intermission. Composition of both houses. The unreformed electorate. Qualifications of members. Impeachment and attainder. Privileges of parliament. Its control of finance. The position of the Speaker. Dissolution.

The Judiciary and its independence.

Liberty of the subject. Habeas Corpus. Right to petition. Freedom of the Press. General warrants. Fox's Libel Act.

Political parties, their influence on the formation and fall of ministries. Patronage and influence. Relations of the sovereign, ministers, and parliament in the system of parliamentary monarchy.

The old colonial system. Unreformed local government. The reform of the franchise 1832, 1867, and 1884. The development of party organisation. The conventions of the constitution and the growth of cabinet government. The civil service. The re-organisation of the administrative and judicial systems after 1832. The procedure of the Commons and the problem of the House of Lords. The growth of local government and the changes in its relations with the central government. The reform of the judicial system. The development of Dominion status.

(*c*) *International History* (syllabus as for paper (i) International Relations).

(*d*) *Social Philosophy* (syllabus as for paper (v) Sociology).

(*e*) *Economic and Social Problems, treated statistically* (syllabus as for paper (iii) Statistics).

(*f*) *The Economics and History of Transport* (syllabus as for paper (v) (*c*) International Economics).

(*g*) *Logic and Scientific Method* (syllabus as for alternative subject 2 in Part I).*

(*h*) *An Approved Modern Foreign Language* (syllabus as for alternative subject 10 in Part I).†

7.—Economic History (Mediæval)

(i) and (ii) *Economic History of England and Western Europe in the Middle Ages.*

(iii) *English Economic History* 1377–1485.

(iv) *Mediæval Political Ideas* (syllabus as for paper (i) (*b*) Government).

(v) *One* of the following :—

(*a*) *English Constitutional History to* 1485.

(*b*) *Constitutional History since* 1660 (syllabus as for paper (v) (*b*) Economic History (Modern)).

(*c*) *Economic History of England* 1485–1760.

(*d*) *Economic History of England* 1760–1939.

(*e*) *International History* (syllabus as for paper (i) International Relations).

(*f*) *Economic History of the United States of America from* 1783.

(*g*) *Social Philosophy* (syllabus as for paper (v) Sociology).

(*h*) *Economic and Social Problems treated statistically* (syllabus as for paper (iii) Statistics).

(*i*) *An Approved Modern Foreign Language* (syllabus as for alternative subject 10 in Part I).†

8.—Government

(i) *A Special Period in the History of Political Ideas studied in relation to set books for that Period.* One of the following special periods must be chosen :—

(*a*) *The Ancient World* (History of Political Ideas from Plato and Aristotle to the fall of the Roman Empire).

Plato : *The Republic, The Statesman,* and the *Laws* (Jowett's Translation).

Aristotle : *Politics* (Jowett's Translation).

Cicero's *Republic* and *Laws* (Loeb's classics edition).

Augustine : *City of God* (Everyman's Library edition).

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* This option is open only to candidates who have not taken the corresponding alternative subject in Part I.

† If alternative subject 10 has been taken in Part I, the candidate is not permitted to take the same language in Part II, but may take a second language.

(*b*) *The Mediæval World* A.D. 476 to 1500.

John of Salisbury : *Policraticus* (translated Dickinson).

Marsiglio of Padua : *Defensor Pacis* (ed. Prévité-Orton).

Aquinas : *Selected Political Writings* (ed. A. P. D'Entreves).

Dante : *De Monarchia* (trans. Wicksteed).

Fortescue : *Governance of England* (ed. Plummer).

(*c*) *Political Ideas*, 1500–1640.

Machiavelli : *The Prince* (Everyman's Library).

Luther : *To the Nobility of the German Nation* (trans. Wage and Cucheim) ; *On Good Works* (trans. W. A. Lambert).

Calvin : *Institutes*, Bk. IV.

Anon : *Defence of Liberty against Tyrants* (ed. Laski).

Hooker : *Ecclesiastical Polity* (Everyman's Library).

James I : *The True Law of Free Monarchies* (in C. H. McIlwain, Political Works of James I).

(*d*) *Political Ideas* 1640–1715.

Thomas Hobbes : *Leviathan.*

Benedict Spinoza : *Tractatus—Theologico—Politicus* (trans. Elwes).

John Lilburne : *England's Birthright Justified.*

Gerard Winstanley : *The true Law of Freedom in a Platform.* In G. Winstanley, *Works* (ed. G. H. Sabine).

George Savile, Marquis of Halifax : *The Character of a Trimmer* (in *Works*—ed. Raleigh).

John Milton : *Areopagitica.*

John Locke : *Second Treatise on Government ; Letter concerning Toleration.*

James Harrington : *Oceana* (ed. S. B. Liljegren).

(*e*) *English Political Ideas*, 1715–1815.

H. St. John (Viscount Bolingbroke) : *The Idea of a Patriot King. A Dissertation on Parties.*

David Hume : *Essays* (ed. Green and Grose (II–IX in Part I and I, II, VII, XII–XVI in Part II).

Edmund Burke : *The Present Discontents ; Conciliation with America ; Reflections on the French Revolution ; Thoughts on Scarcity.*

Jeremy Bentham : *Fragment on Government.*

Thomas Paine : *Rights of Man* (Parts I and II).

(*f*) *French Political Ideas*, 1715–1815.

Voltaire : *Lettres sur l'Angleterre* (ed. G. Lanson) ; *Essai sur les Moeurs.*

Montesquieu : *Lettres Persanes ; Esprit des Lois.* Bks. 1–12.

Rousseau : *Discours sur l'origine de l'inégalité ; Du Contrat Social ; Lettres écrites de la Montagne.*

Sieyès : *Qu-'est-ce-que le Tiers-Etat ?*

Condorcet : *Tableau historique du Progrès de l'esprit humain.*

Declaration of Rights ; Constitutions of 1791, 1793.

Buonarroti : *Histoire de la Conspiration des Egaux.*

(*g*) *German Political Thought,* 1780–1848.

Immanuel Kant : *Kleine Schriften zur Geschichtsphilosophie, Ethik und Politik* (ed. Karl Vorlander).

J. G. Fichte : *Der geschlossene Handelsstaat ; Reden an die deutsche Nation ; Die Staatslehre.*

G. W. F. Hegel : *Grundlinien der Philosophie des Rechts ; Gesellschaft, Staat, Geschichte* (ed. F. Bulow).

F. List : *Das nationale System.*

K. Marx and F. Engels : *The Communist Manifesto.*

(*h*) *English Political Thought,* 1815–1939.

James Mill : *Essay on Government.*

J. S. Mill : *Liberty, Representative Government.*

J. F. Stephen : *Liberty, Equality, Fraternity.*

Matthew Arnold : *Mixed Essays.*

T. H. Green : *Principles of Political Obligation.*

B. Bosanquet : *Philosophical Theory of the State.*

Sidney Webb and Others : *Fabian Essays.*

Graham Wallas : *Human Nature in Politics.*

L. T. Hobhouse : *Elements of Social Justice.*

(*i*) *French Political Thought,* 1815–1939.

F. Lamennais : *Paroles d'un croyant.*

Fourier : *Pages Choisies* (ed. Ch. Gide).

Saint-Simon : *Doctrine de Saint-Simon* (ed. Halévy et Bougle).

L. Blanc : *Organisation du Travail.*

C. Dunoyer : *Liberté du Travail.*

P. J. Proudhon : *Confessions d'un Révolutionnaire.*

A. Thiers : *De la Propriété.*

Louis Napoleon Bonaparte : *Idées Napoléoniennes.*

C. Maurras : *Enquête sur la Monarchie.*

G. Sorel : *Réflexions sur la Violence.*

L. Blum : *Sur l'échelle humaine.*

(*j*) *American Political Thought,* 1776–1939.

A. de Tocqueville : *Democracy in America* (World's Classics).

A. Hamilton, etc. : *The Federalist.*

H. S. Commager : *Documents on American History* (New York, 1946)

(ii) *The Government of Great Britain* (*advanced*).

A knowledge will be required of the main institutions, central and local. Students should pay special attention to recent developments in Parliamentary Government (including the party system), the civil service, nationalised industry, and the newer fields of public administration and planning, with particular reference to contemporary problems.

(iii) *Comparative Government.*

All students will be expected to show detailed knowledge of the constitution and governments of France, the United States of America, and of *one* region of those set out below :—

(*a*) The Governments of India, Pakistan and Ceylon. (Commonwealth relations will be included in the study of these regions.)

(*b*) The Governments of Canada, New Zealand, Australia and South Africa. (Commonwealth relations will be included in the study of these regions.)

(*c*) The Governments of Central Europe.

(*d*) The Governments of Scandinavia.

(*e*) The Government of Soviet Russia.

(This list of regions may be varied from time to time.)

(iv) *Political and Social Theory.*

The place of the individual citizen in the modern community. The basis of political and social obligation. The criteria of values. Forces which shape these criteria. The theory of rights. Philosophies of freedom and constitutional government. Criticisms of constitutional government, and of democracy and freedom. Limitations upon individual right and governmental right. Nations and Nationalism. Emergence of political communities with authority reaching beyond the claims of the nation-state. Political power and ethical obligation. Political power and economic organisation. The ethical and related problems arising from the contact of advanced and primitive societies. The concepts of civilisation and progress. The sociological approach to political and social philosophy. Philosophic analysis of the structure of a modern community. Significance of history in political and social philosophy.

(v) *One* of the following :—

(*a*) *Constitutional History since* 1660 (syllabus as for paper (v) (*b*) Economic History (Modern)).

(*b*) *Administrative Law.* I. The nature of administrative law. The separation of powers. Public and private law. Droit administratif.

The legislative powers of the administration. Bills, Clauses and Adoptive Acts, provisional orders, statutory instruments, special procedure orders ; schemes, proposals and plans ; bye-laws.

The judicial powers of the administration. "Administrative" and "quasi-judicial" powers. Types of administrative institutions exercising judicial powers.

The executive powers of the Administration.* The distribution of powers among Government Departments.

II. Parliamentary Control of the administration. The division of Parliamentary time. Control over legislative and executive powers.

Control of the administration by the Judiciary. The use of mandamus, certiorari, prohibition. Natural justice. Administrative discretion, ultra vires and "unreasonable exercise." Statutory appeals and applications to the High Court.

III. Crown liability.

IV. Local Government. Structure, finance, and functioning.* Statutory powers and duties. Legal liability.

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* Subjects marked with an asterisk are dealt with in outline only.

V. Public corporations. Statutory provisions. Legal status, powers and privileges. Ultra vires.

An elementary knowledge of the English Legal System and of British Constitutional Law will be presumed and candidates are advised not to select this subject unless they have taken Elements of English Law (Parts A and B) in Part I.

(*c*) *Public Finance* (syllabus as for paper (iv) (*a*) Economics, Analytical and Descriptive).

9.—Sociology

(i) *General Sociology, i.e., Theories and Methods of Sociology.*

The development of Sociology since Comte. The influence of biology on Social Theory. The rôle of psychology in sociological explanation. The use of anthropological and historical data in sociology. The value and limitations of the comparative method. The classification of social aggregates and institutions and the analysis of social processes. The concepts of culture and civilisation. Theories of social development, arrest and decay. The nature of sociological generalisations. The methods employed in the investigation of contemporary society.

(ii) *The Contemporary Social Structure of England and Wales.**

The recruitment, distribution and composition of the population. Households and families. Family characteristics. Family and poverty.

The educational process. Ability and opportunity. The changing structure of education.

The entry to employment. The recruitment of the professions. Occupational and social mobility. The structure of occupations. Occupation, status and levels of living. The State in relation to levels and standards of living.

Groups—religious, professional and others. The relation between group and community. Social stratification and group consciousness.

(iii) *Comparative study of* one *of the following subjects :—*

(*a*) *Morals and Religion.*—Scope and methods of comparative religion. Psychological analysis of the religious attitude. Theories of the social functions of religion. Comparative study of moral ideas and practices. Relations of morals and religion. The bearing of religious beliefs on social institutions.

[NOTE.—Use will be made of material drawn from the principal religions and moral codes, concerning one of which students will be expected to show some specialised knowledge.]

(*b*) *Marriage and the Family.*—The use of the comparative method in the study of marriage and the family. The relation of family and kinship groups to the wider society, with special reference to the pattern of authority and social control. Family structure in relation to economic organisation and social stratification.

The links between the psychological and sociological approaches to the study of the family.

[NOTE.—Comparative material will be drawn from the record of Roman civilisation, feudal and early capitalist European society, and contemporary Britain, France and U.S.A.]

* From time to time other areas may be prescribed as additional options.

(*c*) *Property and social class*, with special reference to England and Wales and the U.S.A.—Historical development of the institution of private property. Comparison with feudal property relations. The rise of corporate ownership. The divorce of ownership from control. Kinds and distribution of property, public and private. Property and power under contemporary conditions. The social function of private property.

Class and status. The relation of property to social class. Criteria of status. Class consciousness. Class conflict. Class and power in contemporary society; the bureaucracy, the proletariat, the middle classes. Social mobility.

(*d*) *Political Sociology*. Factors in the making of the State. The relations of the State to other institutions. The influence of social and economic conditions on political institutions. Comparative study of party systems. Sociological and geographical study of representation. The comparative study of political change and revolution.

(*e*) *Urban Sociology*.—The development of cities and of urbanism. Types of cities and their functions. The selective aspects of urban structure. Rural urban relations. The ecology of the city and the process of urban expansion. Urban life and social structure. The intellectual and political aspects of urban life. The objectives of urban planning.

(iv) *One* of the following:—

(*a*) *Demography* (syllabus as for papers (iv) and (v) (*a*) Statistics).

(*b*) *Social Psychology*.—Relations between Sociology and Psychology. Self-regarding and other-regarding elements in human nature. Sympathy, co-operation, competition, aggression. Social factors in the formation of personality. Psychological analysis of group structure. Group sentiments, and group consciousness. Theories of group mentality. Public Opinion and factors affecting its formation. Methods of investigating Public Opinion. Suggestion. Propaganda. Group differences in intelligence. Relative influence of heredity and environment. The Psychology of Family Relationships. Psychological aspects of Property.

(*c*) *Social Anthropology*.—This paper will include questions on history of anthropological theory and its development in relation to other social sciences; also questions on the various aspects of the structure of simpler societies.

(*d*) *Criminology*.—Conception of Crime. Functions and Methods of Criminology. Criminal types and causal factors in crime; physical; psychological; social and economic factors. Special problems; juvenile and female delinquency.

Penal philosophy and psychology, especially meaning and objects of punishment. Penal history. The modern English penal system and the criminal courts.

(v) *Social Philosophy*.

Ethics as applied to problems of social organisation. Rights and Duties. The theory of justice, distributive and corrective. Responsibility. Liberty and Equality. The ends and limits of State action. Compulsion and consent. Ethical aspects of Marriage and the Family. Ethical aspects of Property. Ethical aspects of the relations between States.

10.—Geography

(i) *The Physical and Biological Background of Human Geography.*

An outline survey of the physical geography of Land, Air and Ocean, and of major biological distributions as constituents of the human environment.

(ii) *Advanced Economic Geography with special reference to Industry.*

The geography of production in a modern economy with particular reference to the selection and utilisation in production of the physical conditions in the light of economic conditions. Geographical application of distinctive economic principles including the evaluation of geographical margins of production.

(iii) and (iv) *Advanced Regional Geography.*

The concept of regional method and its development, with special reference to the British Isles, Western and Central Europe, and *either* Monsoon Asia, *or* North America.

The relevant cartographic aspects and methods as applied to all these subjects are to be regarded as integral parts of the subjects.

(v) *One* of the following :—

(*a*) *Historical Geography.*—(1) A general study of the inter-relation between man and his physical environment in historical time, to be illustrated by specific instances. (2) A more detailed study of the historical geography as thus defined of the British Isles, and *either* Western and Central Europe *or* the Mediterranean Region *or* North America.

(*b*) *Political Geography.*—(1) A general study of the interaction between geographical factors and the State since the early nineteenth century. This study will include the following aspects : territorial organisation ; frontiers and boundaries ; demographic considerations ; and strategic factors.

(2) A closer study of the political geography, as indicated above, of
(i) Europe (exclusive of the U.S.S.R.), and
(ii) ONE of the following :—

Africa,
Monsoon Asia,
North and Central America,
The U.S.S.R.

(*c*) *The Geography of Agriculture.*—Geographical and economic factors concerned in the organisation of agricultural distributions with particular reference to specialisation of area.

(*d*) *The Economics and History of Transport* (syllabus as for paper (v) (*c*) International Economics).

(*e*) *Applied Geography.*—The application of geographical methods of survey and analysis to current problems.

11.—Statistics

(i) and (ii) *Theory of Statistics, including computational methods.*

Collection of data. The processes of statistical deduction ; fallacies of interpretation.

Frequency distributions and their properties. Binomial, Normal, Poisson and other particular distributions.

Interpolation and graduation. Curve fitting. Analysis of Time Series.

Association, contingency and correlation. Regression and correlation analysis for two and for several variables.

General theory of sampling and of sampling distributions. The χ^2, t, z and F tests. The elements of statistical inference; tests of hypotheses.

Elements of the analysis of variance and covariance.

Mechanical aids to computation. General principles and use of calculating machines and punched card equipment.

(iii) *Economic and Social Problems, treated statistically.*

The statistical treatment of problems in the economic and social field, with particular reference to demography; social surveys; wages, earnings and the cost of living; employment, production and consumption; international trade and the balance of payments; national income and social accounting.

(iv) and (v) *Two* of the following:—

(*a*) *Demography.*—Vital statistics (including biometry), sickness and mortality, reproduction rates and other measures of fertility. Enquiries by census and by sample. Population trends and projections. The history of population growth.

(*b*) *Actuarial Statistics.*—Actuarial treatment of statistical data; decremental and other rates; Life Tables. Elementary principles and practice of graduation.

(*c*) *Economic Statistics.*—Analysis of time series. Theory and practice of index numbers. Problems of sampling. General methods and problems of econometrics. Construction of national income and social accounts. The balance of payments.

(*d*) *Social Statistics.*—Design and analysis of census and sampling enquiries. Questionnaires and methods of interviewing. Surveys of social environment, behaviour and opinions. Elements of factorial analysis. Problems of index numbers. Family budgets; wages, earnings and the cost of living.

[NOTE.—Logarithm tables will be provided by the University and slide rules may be brought to the examination in all papers in this subject.]

12.—International Relations

Besides pre-supposing a sufficient appreciation of the matters covered by alternative subject 6, The Structure of International Society in Part I, this subject includes:—

(i) *International History.*

Diplomatic history of the nineteenth and twentieth centuries, with special reference to the evolution of international political organisations.

(ii) *International Relations (General).*

A more intensive analysis of the relationships between states and peoples and of the forces and factors by which they are affected; the geographical and strategic aspects of international affairs; the inter-relationship between politics at the domestic and international levels; the philosophical and psychological approaches to international relations, including the relevant political theory and philosophy of law.

(iii) *International Institutions.*

The development and working of diplomatic and consular machinery; the growth and forms of international technical co-operation; the origins, structure and functioning of the League of Nations and the United Nations organisation, of the International Labour Organisation and the other "specialised agencies", and of the former Permanent Court of International Justice and the existing International Court of Justice; present-day problems of international organisation.

(iv) and (v) Any *two* of the following :—

(*a*) *International Law* (syllabus as for alternative subject 9 in Part I)* an adequate knowledge of which will also be pre-supposed in papers (i), (ii) and (iii) above.

(*b*) *International History* (*Special Subject*).—Some special problem, period or episode in international history.

Subject prescribed till further notice.—Negotiations for an Anglo-French Pact, 1921–22.

Reference should be made to :—

Cmd. 2169, 1924.

Papers concerning the negotiations for an Anglo-French Pact.

1924 documents diplomatiques concernant la garantie de securité contre une agression de l'Allemagne.

Jordan, W. M. : *Great Britain, France and the German Problem.*

Wolfers, A. : *Britain and France between two Wars.*

(*c*) *The Problem of International Peace and Security.*—Closer comparative study of the United Nations organisation and the League of Nations with a certain allowance for differential emphasis, in terms of individual preference, as between (*a*) the political and legal, and (*b*) the economic and social, aspects of their respective activities.

(*d*) *Philosophical and Psychological Aspects of International Relations.*—The ideas on the nature of international relations that are shown in the teachings of Herder, Kant, Fichte, Hegel, Marx, Mazzini, and their latter-day spiritual legatees ; the ideologies, theologies and scepticisms of our time in their relevance to international life ; the bearing of modern insights into the motivation of political behaviour upon the interpretation of diplomatic events.

(*e*) *Geographical and Strategic Aspects of International Affairs.*—The elements of political, and economic, geography in their bearing on the relations between states ; relationships of land masses and oceans and their political significance ; implications of shape, size, position, climate, population, and economic resources of states and territories ; frontier problems. Sea, air and land as means of communication, travel and transport. Use and misuse of political geography in influencing opinion for political and strategic ends. The rôle of strategic aims and anxieties in the outlook of states and the preoccupations of statesmen. Total war and planned economy. Interdependence of sea, air, land and economic strategy. New technological developments and their influence in diplomacy and war.

(*f*) *The Interplay between Politics at the Domestic and International Levels* (with special reference to the problems of Western Europe, the North Atlantic and the British Commonwealth of Nations).—The appreciation of international problems in the particular light of trends of feeling and opinion, the movement of events, and other conditioning factors within the countries concerned. Comparative constitutional practices and methods of political action in their bearing on the determination of foreign policies. Dependence of governments upon the support or acquiescence of bodies of sectional opinion. Popular memories and established educational techniques as contributing to special climates of opinion. Influence of business, the services, trade unions and other organised interests, the press and other opinion-forming agencies. Importance of such factors as anti-clericalism, Little-Englandism, hyphenated Americanism.

* This option is only open to candidates who have not taken the corresponding alternative subject in Part I.

(*g*) *Either : Political and Social Theory* (syllabus as for paper (iv) Government),

or : An Approved Modern Foreign Language (syllabus as for alternative subject 10 in Part I).*

13.—Social Anthropology

(i) *General Principles of Social Anthropology.*

Scope, methods and techniques; theories of Cultures and Society including relations with environment, biology and psychology. Social and Culture Change. Social structure, criteria for analysis of groupings, residence, sex, age, descent, occupation. Analysis of institutions; rôles of family, lineage, clan, territorial and other organisations.

(ii) *Economic and Political Systems of Simpler Societies.*

Organisation of economic activities; land tenure and other property rights. Conceptions of wealth and capital. Organisation of labour. Principles of exchange and of allocation of production. Political organisation in states and stateless societies. Public opinion, chieftainship, councils and executive organisations. Concept of sanctions. Civil and criminal law of primitive societies. The relations of law and custom and morality.

(iii) *Moral and Ritual Systems of Simpler Societies.*

Social values; cosmological systems; religion and society, belief, dogma and ritual. Demarcation of religion and magic; types and components. The relation of mythology, totemism, witchcraft, etc. in primitive societies.

(iv) *Ethnography of Special Areas.*

Descriptive and comparative studies in relation to the branches of social anthropology outlined in the previous sections. Candidates will also be required to show special knowledge of the literature dealing with the simpler cultures of *one* major area. Approved areas are :—

(*a*) Eastern Africa, approx. from N.25° to S.15°;
(*b*) Central Africa, approx. from N.5° to S.15°;
(*c*) Western Africa, approx. from N.20° to zero and West of 15° E.;
(*d*) Southern Africa, S. of approx. 10°S.;
(*e*) America, north of Mexico (Amerindian and Eskimo cultures);
(*f*) India (tribal cultures);
(*g*) South Eastern Asia;
(*h*) Pacific Islands.

(v) *One* of the following :—

(*a*) *General Sociology* (syllabus as for paper (i) Sociology).
(*b*) *Social Philosophy* (syllabus as for paper (v) Sociology).
(*c*) *Social Psychology* (syllabus as for paper (iv) (*b*) Sociology).
(*d*) *Principles of Economic and Social Geography* (syllabus as for alternative subject 8 in Part I).†
(*e*) *Logic and Scientific Method* (syllabus as for alternative subject 2 in Part I).†
(*f*) *Demography* (syllabus as for papers (iv) and (v) (*a*) Statistics).
(*g*) *Social Statistics* (syllabus as for papers (iv) and (v) (*d*) Statistics).
(*h*) *An Approved Modern Foreign Language* (syllabus as for alternative subject 10 in Part I).*

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* If alternative subject 10 has been taken in Part I, the candidate is not permitted to take the same language in Part II, but may take a second language.

† This option is open only to candidates who have not taken the corresponding alternative subject in Part I.

MASTER OF SCIENCE (ECONOMICS)

Except as provided below, no person shall be admitted as a candidate for the Degree of M.Sc. (Economics) as an Internal Student until after the expiration of two academic years from the time of his taking the B.Sc. (Economics) Degree in this University as an Internal Student; nor, in the case of a candidate registered under the Regulations for Postgraduate Students proceeding to a higher Degree, until he has completed a course of higher study in accordance with those Regulations (*see* p. 101 *et seq.*).

A student who has passed the B.Com. Examination as an Internal Student and who wishes to proceed to the M.Sc. (Econ.) Degree will be required to apply, through the authorities of the School at which he proposes to pursue his course, for registration as a candidate for the M.Sc. (Econ.) Degree. If his application is approved, he will be required to pursue for the M.Sc. (Econ.) Degree an approved course of study as an Internal Student.

A student who, having passed the External Intermediate Examination or having been exempted from the Internal Intermediate Examination on the ground of having passed the Higher School Examination, is admitted as an Internal Student to the Final B.Sc. (Economics) Examination after pursuing a two years' course of study and passes that Examination, may submit as his third year's course of study for the B.Sc. (Economics) Degree a course for the M.Sc. (Economics) Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (*see* p. 8). If at the end of the third year's course of study he obtains the B.Sc. (Economics) Degree, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.Sc. (Economics) Examination after the lapse of one further year.

A student who has entered for the B.Sc. (Econ.) Examination after only two years of study as an Internal Student, and who has failed in the language paper at that Examination, may attend in his third year an approved course of study for the M.Sc. (Econ.). If at the end of the third year's course of study he passes in the language paper and is awarded the B.Sc. (Econ.) Degree he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.Sc. (Econ.) Examination after the lapse of one further year.

A student who has failed in the language paper at the B.Sc. (Econ.) Examination after three years of study may enter for the M.Sc. (Econ.) Examination one year after completing, by passing in the language paper, the B.Sc. (Econ.) Examination.

At least twelve months before the date on which the candidate wishes to present himself he must submit for approval the general subject and a special section of that subject which he proposes to offer.* This application must include a clearly stated syllabus of the general subject.

The following is a list, arranged under group headings, of the general subjects which may be offered. Other subjects may be submitted for approval in exceptional circumstances.

Geography

Either The detailed Economic Geography of an area, chosen from or commensurate with *one* of the following:—

(*a*) The British Isles. The North Sea and its Coastlands.

(*b*) The Mediterranean Lands.

* Any statement submitted later than the prescribed date must be accompanied by a fee of 10*s.* 6*d.*

(*c*) Western and Central Europe (excluding (*a*) and (*b*) above and the U.S.S.R.).

(*d*) The U.S.S.R. and Central Asia.

(*e*) The Monsoon Lands of Asia.

(*f*) The U.S.A. and Canada.

(*g*) Mexico, Central and South America.

(*h*) Africa (south of the Sahara), and Australia and New Zealand.

or Some Major Aspect of Geography, chosen from or commensurate with the examples following :—

I Agricultural Geography.

II The Geography of Industry.

III The Historical Geography of an approved country or major region for one of the following periods :—

(*a*) Ancient.

(*b*) Mediæval.

(*c*) Modern—either before 1800 or after 1800.

IV Population Problems in their Distributional Aspects (including migration and Urban Geography).

Economic History—

The economic history of England or some other approved country or region during one of the following periods :—

Early Mediæval.

Late Mediæval.

Sixteenth to Mid-seventeenth Centuries.

Mid-seventeenth to Mid-eighteenth Centuries.

Mid-eighteenth Century to 1830.

Nineteenth Century.

Political Science—

Greek and Roman Political Theory.

Mediæval Political Theory from 476 to 1200.

Mediæval Political Theory from 1200 to 1500.

Political Theory in the sixteenth and seventeenth Centuries.

Political Theory from 1689 to 1815.

Political Theory since 1815.

Comparative Central Government (Federal and Unitary).

Comparative Local Government.

Sociology—

Social Institutions.

Comparative Study of religious and moral ideas.

Psychological aspects of Sociology.

Biological aspects of Sociology.

Social Philosophy.

Economics (including Banking, Commerce and Business Administration)—

The General History of Economic Thought.

The Population Question (including the history of the theory and some acquaintance with vital statistics in modern times).

The Distribution of Income (between economic categories and between persons, including the history of the theory and some acquaintance with the relevant statistics in modern times).

The Theory of Value (including history of the theory).

The Structure of Modern Industry.

Problems of Monopoly (theoretical and descriptive).

Industrial Fluctuations.

Problems of Wages and Wage Regulation (theoretical and descriptive).

Capital and Interest.

International Trade (including the theory of International Trade and some acquaintance with the relevant statistics in modern times).

Public Finance.

Economic Functions of the State.

Economic Aspects of Social Institutions.

Monetary and Banking Theory (historically and comparatively treated).

The History, Present Organisation and Problems of Money and Banking (treated comparatively).

An Approved Period of Monetary and Banking History.

The Organisation and Problems of the Long Term Capital Market (including the theory and practice of Stock Markets).

Economic Problems in Agriculture.

Trade of a particular Region.

Organisation and Regulation of International Commerce.

Administration and Economic Aspects of Public Utilities.

Business Administration.

Marketing.

Transport—

Development, organisation and inter-relation of means of Inland transport.

Economics of Railways.

Economics of Roads and Road Transport.

Economics of Shipping and Docks.

Statistics—

Mathematical Statistics : Frequency groups and curves, sampling.

Mathematical Statistics : Correlation.

Applied Statistics : Demographic.

Applied Statistics : Social (income, wages, prices, etc.).

Applied Statistics : Commercial (trade, production, prices, etc.).

International Law and Relations—

International Law (Peace, War and Neutrality).

International Relations.

A phase of the History of International Relations in the nineteenth and twentieth centuries.

The University will inform the candidate whether the title and syllabus of the subject are approved in their original or in an amended form. The examination will be based on the approved subject and syllabus.

The examination shall consist of (*a*) four written papers, including an essay paper, which shall be set on the selected general subject, one of the papers to have reference to the approved section of the general subject, with the provision that (except in Geography) candidates may submit a thesis or dissertation written on the approved section in substitution for the essay paper and the paper on the approved section; and (*b*) an oral examination at the discretion of the Examiners. Candidates in Geography must submit a dissertation in substitution for the essay paper and the paper on the approved section. The thesis or dissertation must be written in English.

If the Examiners consider that a candidate's thesis or dissertation is adequate but that he has not reached the required standard in the written portion of the Examination, they may, if they think fit, recommend that the candidate be exempted on re-entry from presentation of a thesis or dissertation. Similarly, if the Examiners consider that the candidate has reached the required standard in the written portion of the Examination but that his thesis or dissertation is not adequate, they may, if they think fit, recommend that he be exempted on re-entry from the written portion of the Examination. In both the above cases the Examiners may, if they so desire, examine the candidate again orally when he re-enters for the Examination.

A diploma for the M.Sc. (Economics) Degree, under the Seal of the University, shall be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

No unsuccessful candidate will be permitted to re-enter within one year from the date of his first entry without the permission of the Examiners.

Date of Examination

The M.Sc. (Econ.) Examination will take place twice in each year commencing on the first Monday in December and on the fourth Monday in May,* provided that if the fourth Monday in May be Whit Monday the Examination will commence on the following Tuesday.

Every candidate must apply to the Academic Registrar for an entry-form, which must be returned not later than February 1st for the May Examination, and not later than September 15th for the December Examination, accompanied by four copies of the approved syllabus of the subject in which he presents himself, and by the proper fee.

Thesis or Dissertation

If the candidate submits a thesis or dissertation he must furnish, not later than April 1st for the May Examination and not later than October 15th for the December Examination, four typewritten or printed copies thereof. He will also be required to forward to the University with his entry-form a short abstract of his thesis or dissertation (four copies) comprising not more than 300 words.

An Internal Student submitting a thesis or dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his thesis bound in accordance with the following specification:—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows: art vellum or cloth; overcast; edges uncut; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME; short title written or printed neatly and legibly on the front cover.

* In 1951 the May Examination will begin one week earlier, *i.e.*, on 21st May, 1951.

A thesis or dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, who will bind theses to this specification at a cost of 10*s.* a copy, may be obtained from the Academic Registrar.]

Work approved for the Degree of M.Sc. (Econ.) and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

FEE

Except as provided below every candidate for the Degree of M.Sc. (Economics) must at each entry to the whole Examination pay a fee of 12 guineas (In and after 1951, 15 guineas.).

The fee payable on re-entry by candidates who have been exempted either from the written portion of the Examination or from the presentation of a thesis is 6 guineas (In and after 1951, 7½ guineas.).

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

DOCTOR OF PHILOSOPHY (Ph.D.)

[Regulations for the Degree of Ph.D. will be found on pp. 106-115.]

DOCTOR OF SCIENCE (Economics)

Every candidate for the D.Sc. (Economics) Degree must have obtained as an Internal Student of this University the M.Sc. (Econ.), or M.Com., or Ph.D. Degree in the Faculty of Economics, or the B.Sc. (Econ.) Degree as an Internal Student and the M.Sc. (Econ.), or M.Com., or Ph.D. Degree in the Faculty of Economics as an External Student. Nevertheless a candidate who has obtained the B.Sc. (Econ.) Degree as an Internal Student may, in exceptional circumstances, be exempted by the Senate from this requirement on the ground of published work.

The D.Sc. (Econ.) Degree is awarded only for work of a high standard such as would give the candidate an authoritative standing in his particular line of research. The work should afford definite evidence of the candidate's ability to initiate and conduct or direct research of such a standard.

A candidate may make application at any time for the Degree and must at the same time submit evidence of his qualifications, such evidence to consist of published* papers or books containing original contributions to the advancement of knowledge. A substantial amount

* The term "published" shall mean printed as a pamphlet or book on sale to the public through book-sellers or in a periodical. The purpose of requiring publication is to ensure that the work submitted is available for informed criticism. To this end the University may, when necessary, suspend judgment upon the award of the Degree for a period of not more than one year from the date of the candidate's entry for the Degree.

of the work submitted must be independent work published in the candidate's name alone. If conjoint work is submitted the candidate must produce satisfactory evidence as to the extent to which he was responsible for the initiation and conduct or direction of such conjoint work. The candidate is required to indicate what part, if any, of the work has been submitted for a Degree in this or any other University by himself or, in the case of conjoint work, by any of his collaborators.

The Examiners may, at their discretion, require the candidate to present himself for an interview.

Every candidate must apply to the Academic Registrar for an entry-form which must be returned, duly completed with a fee of 20 guineas and accompanied by four copies of such printed contributions of scientific knowledge as he may desire to submit.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A candidate who fails to qualify for the award of the D.Sc. (Econ.) Degree will be required on re-entry to comply with the Regulations in force at the time of his re-entry.

After the Report of the Examiners shall have been approved by the Senate the Academic Registrar shall publish a list of the candidates on whom the Degree of D.Sc. (Econ.) has been conferred.

A Diploma for the Degree of D.Sc. (Econ.) under the Seal of the University shall be delivered to each successful candidate after the Report of the Examiners shall have been approved by the Senate.

Faculty of Economics

COMMERCE

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

The University will confer the Degrees of Bachelor and Master of Commerce (B.Com. and M.Com.) until 1954 and 1951 respectively.

In order to be admitted to the Degree of Bachelor of Commerce (B.Com.) as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Commerce, Parts I and II, unless exempted therefrom in accordance with the Regulations for Advanced Students proceeding to a Bachelor's Degree.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the course for the Intermediate and Final Examinations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Commerce in or before 1954.

SCHOLARSHIP

For particulars of the Scholarship awarded in connection with Examinations in Commerce, *see* p. 1663 below.

B.COM. DEGREE

[NOTE.—*The B.Com. Examination will be held for the last time in* 1954. *Internal Students who begin their courses of study in or after October,* 1949 *must comply with the Revised Regulations for the B.Sc.* (*Econ.*) *Degree, see pp.* 1614-1644 *above.*]

A candidate who obtained a B.Com. Pass Degree prior to 1934 will be permitted, on one occasion only, to re-enter for the B.Com. Examination under the Regulations set forth below with a view to Honours; but the name of any such candidate, if he fails to obtain Honours, will not appear on the pass list.

COURSE OF STUDY

The Course for the Final Examination normally extends over not less than two academic years.

A student who has passed the B.Sc. (Econ.) Examination as an Internal Student may present himself for the B.Com. Examination after attending a further approved course of study extending over one year.

The subjects of the course are as follows:—

I Economics.

II A foreign language.

III Elements of Commercial Law.

or Only for candidates taking Group B with Organisation of Commerce and Industry as an alternative subject:—A second foreign language.

IV One of the following Groups:—

A. Banking and Finance.
B. Trade and Transport.
C. Industry and Public Utilities.
D. Economics and Geography of Trade.
E. Accounting.

Date of Examination

The B.Com. Examination will be held once in each year, commencing on the third Monday prior to the first Monday in July.

[*Note.*—In 1951 the Examination will begin four days earlier, i.e., on Thursday, June 7th.]

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than February 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 1st.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate showing both the time and place of the written and oral examinations.

Fees*

The fee for each student is 6 guineas for each entry to the whole Examination. The fee payable on entry for the compulsory foreign language alone is 10*s.* 6*d.* All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Candidates who passed Part I of the B. Com. Examination under the old Regulations and who have not entered for Part II shall on one occasion be permitted to enter for the whole of the B.Com. Examination under the present Regulations on payment of a fee of three guineas, or if they paid a fee of six guineas for Part I with the compulsory foreign language of Part II, shall be permitted to enter without payment of a fee. All such candidates shall be required to pay a fee of 10*s.* 6*d.* if they enter for the foreign language separately.

Details of Examination

The subjects of the Examination are as follows :—

I **Economics** (three papers) :—
- (*a*) Principles of Economics.
- (*b*) Applied Economics.
- (*c*) Economic History of the Great Powers and the British Empire.

II **A Foreign Language** (two papers and oral).

III **Elements of Commercial Law** (one paper).

or Only for candidates taking Group B with Organisation of Commerce and Industry as an alternative subject :—

A Second Foreign Language (two papers and oral).

IV **Group A. Banking and Finance** (four papers) :—
1. Banking and Finance (two papers).
2. Accounting,
   or Applied Statistics (one paper).
3. Business Administration,
   or Business Risks and History and Law of Insurance,
   or History of the Modern World,
   or Law of Banking (one paper).

*For regulations relating to the return of examination fees to candidates prevented from presenting themselves for an Examination, *see* p. 5.

OR

Group B. Trade and Transport (four or five papers) :—

1. Economics and Geography of Trade.
2. Economics of Transport.
3. Organisation of Commerce and Industry in a Special Area,
   or Shipping,
   or Inland Transport (one paper),
   or A Second Foreign Language (two papers and oral).
4. Accounting,
   or Business Administration,
   or Applied Statistics,
   or Cost Accounting and Statistics of Inland Transport,
   or History of the Modern World.

OR

Group C. Industry and Public Utilities (four papers) :—

1. Business Administration.
2. Economics of Modern Industry,
   or Economics of Public Utilities.
3. Industrial Law,
   or Administrative Law with relation to Public Utilities.
4. Accounting (including Cost Accounting),
   or Applied Statistics,
   or Applied Psychology.

OR

Group D. Economics and Geography of Trade (four papers).

1. Economics and Geography of Trade.
2. A second Foreign Language (two papers and oral).
3. Organisation of Commerce and Industry in a Special Area,
   or Accounting,
   or Business Administration,
   or Applied Statistics,
   or History of the Modern World.

OR

Group E. Accounting (five papers).

1. Accounting, including Costing and Auditing (two papers).
2. Business Administration (one paper).
3. Law of Commercial Associations and Law of Income Tax for Accountants (one paper).
4. British Central and Local Government (one paper).

An adequate knowledge of statistical method will be required of all candidates.

The Examination shall be conducted by means of printed papers; but, for the purpose of ascertaining the competence of the candidate to pass, the Examiners shall not be precluded from putting oral questions to any candidate in the subjects in which they are appointed to examine.

A provisional list of successful candidates at the Examination, in alphabetical order, in each of the categories First Class Honours, Second Class Honours (Upper Division), Second Class Honours (Lower Division), and Pass, will be published by the Academic Registrar at 2 o'clock on August 8th.

A diploma for the Degree of B.Com., under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Com. Examination who have completed more than half of the examination are eligible to apply for an Aegrotat Degree.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Economics

(*a*) *Principles of Economics*

The principles of economics, including theories of population, production, value, distribution, money and banking, and international trade, and with special reference to their bearing upon current problems.

Some knowledge of statistical findings in their relation to economic theory will be expected.

(*b*) *Applied Economics*

Practical economic problems of contemporary interest, including :— Long and short term capital market. Monetary systems. Foreign exchange and international trade. Economic problems of distribution of commodities : organised markets, wholesale and retail trade. Machinery for collective purchase and sale, including labour. Industrial relations. The size of the business unit. Location and concentration of industry. Industrial combinations. Public ownership and control. Price and cost problems in industry and trade. Economic problems of transport and public undertakings. Public finance : the economic effects of taxes and subsidies ; public expenditure. Industrial fluctuations.

(*c*) *Economic History of the Great Powers and the British Empire*

The subject is to be interpreted as the history of the rise of industrialism in the British Empire, France, Germany, Russia and the United States of America, and the resultant world economy. The main topics to be covered are as follows :—

1. Economic after-effects of the French Revolution, leading to changes in the status of persons, freedom of movement and free choice of occupation, compared with the free trade movement in the United Kingdom.

2. Industrial leadership of England and her commercial and imperial policy. Economic predominance of France on the Continent up to 1870. Evolution of Germany from a tariff mosaic into a united empire and an industrial state of the first rank. Economic transformation of Russia from a mediæval to a modern state. Development of the U.S.A. from an agricultural disunited country into a united industrial empire and effect of her wheat exports on the agricultural development and policy of Europe.

3. Internal and external effects of transport developments. Railway and shipping policies and tariff changes.

4. Labour problems of the different countries and attempts to deal with them.

5. Growth of economic imperialism in the later nineteenth century and main agencies of development in the British Dominions and tropical countries.

Foreign Languages

The following languages have been approved :

Arabic.	Gujarati.	Roumanian.
Bengali.	Hindi.	Russian.
Burmese.	Italian.	Spanish.
Chinese.	Japanese.	Swahili.
Danish.	Malay.	Swedish.
Dutch.	Modern Greek.	Tamil.
English (*for foreign students only*).	Norwegian.	Telugu.
	Persian.	Turkish.
French.	Polish.	Urdu.
German.	Portuguese.	

No candidate shall be permitted to offer his native language. A candidate whose native language is not English shall be required to take English. English shall not be taken by English, Scottish, Irish, nor Welsh students, whether resident in the British Isles or not. In the case of bi-lingual students, and in any other case of doubt, the matter shall be referred to the Principal, whose decision shall be final.

Every candidate proposing to take a particular language other than one of those already approved must, through the authorities of the College, School or Institution to which he is attached, inform the University thereof not later than the end of the first term of his course of study. He will then be informed if the proposed language will be accepted.

In all languages, colloquial and commercial knowledge will be required.

Standard Gujarati must be used in all written work. Parsi Gujarati will be permitted in the oral examination, but more credit will be given for Standard Gujarati.

Candidates offering Oriental and African Languages are required to use the native script, except that in

Malay—both the native (Arabic) and the Roman scripts will be required.

Swahili—only the Roman script will be required.

In Turkish the romanised is the native script.

In all languages other than English for Foreign Students the syllabus is that of the Intermediate Examination, the Examination being carried to a higher standard.

The syllabus in *English for Foreign Students* is that of the Intermediate Examination carried to a more advanced stage.

All candidates offering two languages must offer French, German or Spanish as one of their languages.

The second foreign language offered by a candidate taking Group B and the foreign language offered by a candidate taking Group E shall be of a standard equivalent to one year's work after Intermediate.

In all languages there will be an oral examination. In the compulsory language for candidates offering Groups A, B, C, or D, and in the second Foreign Language at Group D, the oral will include a test in extempore translation both from and into the foreign language. In the compulsory language for candidates offering Group E, and in the second language offered as an alternative at Group B, the oral may include a test in dictation but will not include a test in extempore translation.

Candidates may, if they so desire, enter for examination in the compulsory language at any Examination held between passing the Intermediate Examination in Commerce and entering for the Final Examination. Candidates who enter for the entire Examination and, though failing in the Examination as a whole, nevertheless satisfy the Examiners in the compulsory language, will on re-entry be exempted from that subject.

Candidates who have satisfied the Examiners in the compulsory language at the Final Examination in Commerce for External Students will be exempted from the corresponding paper at the Final Examination for Internal Students.

A second language offered as a subject of Group D, or as an alternative subject by a candidate taking Group B must, however, be taken at the Final Examination itself and cannot be offered separately at an earlier examination, nor can exemption from examination in such a language be granted to a candidate in virtue of having satisfied the Examiners in that language on the occasion of an unsuccessful entry to the examination.

Elements of Commercial Law

Elements of Commercial Law (treated from a commercial rather than a legal standpoint)—including the principles of contract, sale of goods, insurance, carriage of goods by land and sea, negotiable instruments, partnerships, companies, agencies, statutory bodies, and bankruptcy as affecting business contracts.

Banking and Finance

The theory of money and credit : the history of banking and currency in England with particular reference to the period since 1797 ; the development, recent history and present organisation of the currency

and credit systems of the leading countries of the world, treated comparatively; the organisation and working of security markets, and the technique of company finance; the technique of international payments; the theory of the foreign exchanges considered in relation to the theory of money and the theory of international trade.

Law of Banking

Law of Negotiable Instruments. Banking Law:—The legal relationship between banker and customer. Current accounts, deposit accounts, trust accounts, overdrafts. The pass book. The Bankers' Books Evidence Act, 1879. Cheques and documents analogous to cheques. The payment and collection of cheques. The payment of cheques by mistake. Forged cheques. Securities for advances in general, pledges and mortgages of negotiable instruments, stocks and shares, life policies, interests in land and documents of title to goods. Bankers' commercial credits. The realisation of securities, bankers' guarantees. The legal position in the event of the insolvency of the customer. An outline of Stock Exchange law.

Accounting (Groups A, B and D)

The accounts of traders at home and abroad, including foreign currencies and accounts of branches.

Applied Statistics

Sources of statistics; actual construction of tables, diagrams, etc., based on the original data (official or private) of statistics of trade, production, costs, sales, prices, wages, index-numbers; the writing of reports and précis; use of mechanical aids to calculation.

Candidates will be required to produce for inspection by the Examiners, if desired, their note-books, certified by their Teachers as being the actual working notes made by them. These note-books must be taken away by the candidates at the close of the Examination.

NOTE.—Logarithm tables will be provided by the University and slide-rules may be brought to the examination in this subject.

Business Administration

The purpose and structure of business organisation, both inside and outside the business unit; a comparison of practice as regards organisation in the principal branches of business enterprise.

The special features of the organisation and of the administrative and economic problems of large-scale businesses:—the delegation of functions, the allocation of responsibility, and the machinery of control. The specialised forms of organisation within the business unit for (*a*) management and the determination of business policy, (*b*) purchasing, (*c*) manufacturing, (*d*) finance, (*e*) selling, (*f*) recruitment, promotion and retirement of staff.

Buying, financing and selling policy in various conditions of the market, with special reference to the price problems of industrialists and wholesale and retail traders.

The effects of predictable and non-predictable variations in demand and supply on the operation of a business.

Trade associations and their influence on market conditions.

Business Risks and the History and Law of Insurance

Analysis of the incidence of risk in business transactions ; methods of reducing and eliminating certain elements of risk, and of transferring its incidence, exemplified by business practice in industry, trade and finance. The theory of insurance and its scope ; the history of insurance development (marine, fire, life, social and general) broadly treated. Administration and management problems of insurance businesses. Relations of insurance firms to the State. A knowledge will be required of the law relating to insurance in the United Kingdom, and of the legal principles involved, sufficient to make insurance developments intelligible.

History of the Modern World

The subject comprises the internal history and international relations of the states of Europe and America from 1789, together with the relations of those states with the peoples of Africa and Asia, and the development of the self-governing dominions of the British Empire. The main topics to be studied are as follows :—

1. The prelude to the nineteenth century ; Reforming monarchs and the old régime. The French Revolution and its consequences. The work of Napoleon and the Vienna settlement.

2. The progress of the Revolution in nineteenth-century Europe : The struggles for political democracy and economic equality and the national movements. National and international socialism.

3. International relations in the world of great states ; the attempt at government by congress (1815–25) and later action by the Concert of Europe. The evolution of the Eastern Question. Origins of the Great War (1914–1918). Peace settlements following the Great War and subsequent international action.

4. Western imperialism and the new nationalism of the East : the expansion of Russia in Asia. The development of British India and the growth of a national movement. The great powers and China. The making of an Eastern great power, Japan. The partition of Africa. The growth of self-government within the British Empire. Comparative study of colonial methods.

5. The New World : later development of Europe's revolted colonies, to include the broad outlines of Latin American history, the main incidents in the internal development of the U.S.A. and the growth and activity of the latter as a great power.

Economics and Geography of Trade

General movements of International Trade. The economic and geographical conditions of the Production, Transport and Marketing of the more important commodities entering into overseas trade. The character and organisation of the chief commercial routes and the trade of the great ports of the world with their hinterlands

Economics of Transport

The functions of transport in the economic and social organisations. Transport as an industry and as the provider of a public service, with a brief historical background.

The organisation of the means of transport—relations to the State, to one another, and to the public. The production of the transport including the finance, general lay-out, and suitability to the traffic demand.

Theories of rates and fares. Their application in practice, particularly the modifications imposed by outside authority.

Influence of transport costs and services on the location of industries and the development of trade.

The means of transport to be studied are railway, road, inland waterway and sea transport.

The Organisation of Commerce and Industry in a special area

The basic economic and geographical conditions of the area, especially as affecting the distribution of population and the location of industries. The main problems of commercial and industrial organisation. Transport, marketing and finance in relation to trade. Tariffs and commercial policy. Commercial statistics.

AREAS.—*Either* Europe (candidates may concentrate mainly on Eastern or Western Europe).
or North and South America.
or India and the Far East.
or Africa and Australasia.

Shipping

The subject includes Ports and Docks as well as Shipping.

The forms of organisation for the provision and working of ships, ports and docks. The administrative and economic problems involved therein. The ship in relation to its work. Theories of rates and fares and their application in practice. Character and use of the chief Shipping documents. Warehousing and the transport of commodities of a perishable and special character. Marine Insurance. The aims and methods of State intervention. A knowledge of shipping law is required.

Inland Transport

The scope of this subject will be railway, road and inland waterway transport with an historical background.

The constitution and special problems of each of the means including the production and marketing of the transport. Competition and co-operation within each means, and with the other means of transport. The aims and methods of State intervention, including a knowledge of the law of carriage.

Cost Accounting and Statistics of Inland Transport

The application of the principles of cost accounting to the provision of inland transport. The estimation of the relative economy of materials, and types of equipment and appliances.

The application of statistical methods to the control of inland transport, its production, and sale. The compilation of the statistics and their interpretation. Their use as a means of administrative and governmental control. The making of international comparisons.

The Economics of Modern Industry

Industrial structure. The financing of industrial enterprise. The depreciation of industrial assets. The location of industries and of the producing unit. The lay-out of fixed plant and equipment. Technical invention and the working of the patent system. The purchasing of raw materials. Works management; progressing of work, and stock control. The marketing of industrial products. The pricing of products. Industrial fluctuations. Industrial risks. Problems of labour supply—selection, apprenticeship and training; remuneration; working conditions; collective agreements; State intervention in industry.

Economics of Public Utilities

The constitution and special problems of public utility undertakings, including Gas, Electricity and Hydraulic Power, Water Supply and Irrigation, Transport (particularly urban transport and docks), and Communications. The aims and methods of State intervention.

Industrial Law

The subject-matter is the law governing the relations between employers and employed. The Common Law of master and servant and statutory modifications. The principles of workmen's compensation. Legislation affecting hours of work, safety, health, wages, and other working conditions of employed persons. Legislation specially affecting workers in particular classes of industries, *e.g.*, mines, railways, shops, factories, workshops, etc. Protective provisions relating to particular classes of workers, such as women, young persons, and children. Social insurance. The Law of Associations—restraint of trade—trade unions. Collective contracts—strikes and lock-outs—picketing—unlawful breaches of contract—civil conspiracy—interference with contractual relations. Arbitration and conciliation. Comparison with foreign experience.

Administrative Law in relation to Public Utilities

The scope and nature of Administrative Law. The characteristics of legislation, administration and adjudication. The organs of administration and the sources of their authority. The delegation of legislative and judicial functions. The forms of administration. The principles involved in the conception of administration according to law.

Administrative powers over persons and property in relation to public utilities, including gas, water, electricity, transport, hydraulic power and irrigation. The legal regulation of public utilities carried on by private undertakers. The control of utilities administered by public authorities. The problems arising out of the control of public utilities (*a*) by the legislative, (*b*) by the executive, (*c*) by the judiciary.

Accounting, including Cost Accounting (Group C)

The accounts of traders at home and abroad, including foreign currencies and accounts of branches. The preparation and presentation of Cost accounts of industrial undertakings.

Applied Psychology

The evolution of business in its psychological bearings. Native and acquired abilities, instincts, emotions, temperament and character. Psychological conditions affecting the routine and lay-out of offices and works. Illumination, ventilation and temperature. Worry, over-strain and boredom. Incentives. Organisation of personnel. Vocational guidance, selection and training. Psychological factors in the advertisement, distribution and design of products.

Some knowledge of the methods employed in investigating the above will be expected.

Accounting, including Costing and Auditing (Group E)

(1) The application of accounting principles to the accounts of commercial and financial undertakings of various kinds, including associations and companies governed by statutory regulations. Holding and subsidiary companies. The law and custom governing the publication of accounts. The accounts of trustees and executors. The treatment of income tax in accounts.

(2) The principles underlying the preparation and presentation of cost accounts of industrial undertakings of various kinds. Costing as an instrument of management control. Uniform costing schemes. Standard and marginal costing. The general principles of auditing. The appointment, remuneration and removal of Auditors by sole traders, partnerships, companies and other bodies. Rights and obligations arising under statute and at common law. Auditing Case Law. Investigations.

Law of Commercial Association and Law of Income Tax for Accountants

A more advanced treatment of those parts of the law of partnership and of company law which specially concern the Accountant, *e.g.*, Distribution of profits and losses between partners, Rights and Liabilities of incoming and outgoing partners, dissolution of partnership

Rights, duties, and liabilities of auditors, in general and with special reference to partnerships and companies. Formation of companies. Legal requirements as to registers and books of account to be kept, and as to financial information to be disclosed, by companies. Parent and subsidiary companies. Rights of various classes of share capital. Alteration and reduction of share capital. The concept of divisible profits with reference to company dividends. Arrangements with creditors on members, reconstruction, and amalgamation of companies. General principles governing receivership and winding-up.

Introduction to the law of Income Tax, *e.g.*, the legal concept of "income." The five Schedules of the Income Tax Act, and Schedule D in particular. The administration of Income Tax. Returns, assessment, deduction at source, and demand. Allowances, reliefs, etc. "Profits and gains" distinguished from "additions to capital." Permissible and non-permissible deductions: Revenue expenditure and capital expenditure. Wear and tear allowance and obsolescence. Taxation of new businesses, discontinued business, and in case of succession to business. Treatment of losses. Principles governing sur-tax, including "sur-tax on companies."

British Central and Local Government

The fundamental characteristics of the British Constitution (that it is unitary and not federal; representative and not republican); the Conventions; the Cabinet system; the membership, organisation and functions of the House of Commons and the House of Lords; the nature and function of Parties; the electoral system.

The Administrative System including: an outline of the organisation of Government Departments and their powers; the structure and functions of the Civil Service; the financial administration of Britain.

The Judiciary and the Rule of Law. The organisation and functions of the Courts and the nature of English Administrative Law.

An outline of the system of local government and the relation between the central and local authorities.

MASTER OF COMMERCE (M.COM.)

[NOTE.—*This Degree will not be conferred after* **1951.**]

A candidate for the Degree of M.Com. as an Internal Student must have previously obtained the Degree of B.Com. either as an Internal Student or as an External Student. If he obtained the Degree of B.Com. as an External Student he must further have been registered as a candidate for the Degree of M.Com. under the Regulations for Post-graduate Students proceeding to a higher Degree (*see* p. 101 *et seq.*).

No person shall be admitted as a candidate for the Degree of M.Com. as an Internal Student until after the expiration of two calendar years from the date of his passing the B.Com. Examination.

Every candidate who desires to proceed to the Degree of M.Com. will be required to have had practical commercial experience approved by the University extending over a period of not less than two years after passing the B.Com. Examination, provided that in special cases the University may approve suitable commercial experience obtained before passing the Examination.

Not less than one year before he desires to enter for the Examination the candidate shall submit for the approval of the University (1) details of his practical commercial experience, and (2) the special subject which he proposes to offer, together with a syllabus thereof and a statement of the proposed method of treatment. If the candidate changes his occupation or employment after the approval of his experience and subject, full particulars of such change must be submitted to the University before the candidate presents himself for Examination.

The Examination for the M.Com. Degree will consist of (*a*) written papers based on the subject, and syllabus, approved by the University, (*b*) an oral examination, (*c*) a dissertation or thesis written in English and consisting of either published or unpublished work.

The dissertation shall be an ordered and critical exposition of existing knowledge of the subject in which the candidate presents himself; but if the candidate so desire, he may submit a thesis which is a record of original work as part of his qualification.

The candidate must indicate how far the thesis or dissertation embodies the result of his own research or observation, and in what respects his investigations appear to him to advance the knowledge of his subject.

Every candidate will be required to forward to the University with his entry-form a short abstract of his dissertation or thesis (four copies) comprising not more than 300 words.

A candidate will not be permitted to submit as his thesis or dissertation a thesis for which a Degree has been conferred on him in this or in any other University, but a candidate shall not be precluded from incorporating work which he has already submitted for a Degree in this or any other University in a thesis or dissertation covering a wider field, provided that he shall indicate on his entry-form and also on his thesis or dissertation any work which has been so incorporated.

The candidate is also invited to submit in support of his candidature any printed contribution or contributions to the advancement of Economic Science which he may have published independently or conjointly.

Every candidate entering for this Examination must apply to the Academic Registrar for an entry-form, which must be returned duly filled up, together with four copies of the dissertation or thesis and four copies of the approved syllabus and accompanied by the proper fee and a statement of the candidate's occupation or employment since the approval of his experience and subject.

An Internal Student submitting a dissertation or thesis in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his dissertation or thesis bound in accordance with the following specification:—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows:—art vellum or cloth; overcast; edges uncut; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME: short title written or printed neatly and legibly on the front cover.

A thesis or dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, who will bind theses to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

In view of the Long Vacation, which extends from the end of June until October, a candidate who is eligible to enter for the Examination at the end of the session runs the risk of considerable delay in the decision as to the result. Such a candidate will, therefore, be permitted to submit his entry-form and fee between April 15th and May 1st and his thesis between June 1st and June 5th.

The fee for each entry to the Examination is 12 guineas. (In 1951, 15 guineas.) All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The time-table of the Examination will be furnished by the Academic Registrar to each candidate.

It shall be within the discretion of the Examiners, after consideration of the dissertation or thesis, to reject the candidate without further test; or, in case the Examiners shall, upon examination of the dissertation or thesis, hold the same to be generally or specifically of such special excellence as to justify the exemption of the candidate from any further test, he may be so exempted, provided that the Report of the Examiners shall set forth the fact and the grounds of such exemption.

No candidate will be permitted to publish his thesis as a thesis approved for the M.Com. Degree without the special permission of the University. Applications for such permission must be made after the Degree of Master of Commerce has been granted. Any thesis in respect of which such permission has been granted shall contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

A diploma for the M.Com. Degree, under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

SIR EDWARD STERN SCHOLARSHIP

Sir Edward Stern has founded a Scholarship to be awarded annually in connection with Degrees in Commerce.

Regulations

1. The Sir Edward Stern Scholarship is of the total value of £80, paid as stated below.

2. Candidates for the Scholarship must be of British nationality and must have passed both Parts of the Intermediate Examination in Commerce in the eighteen months immediately preceding the award.

3. Selected candidates will be summoned to appear before a Selection Committee at the University of London.

4. Any candidate who desires to compete for a Sir Edward Stern Scholarship must state this in the appropriate section of the entry-form for the Intermediate Examination in Commerce when making his entry. After the July Examination in each year a list of all candidates eligible for the Scholarship will be prepared and from this will be selected candidates for interview who will then be required to submit testimonials

and a letter of application in their own handwriting. The award of the Scholarship shall be made by the Scholarships Committee on the recommendation of the Commerce Degree Scholarships Sub-Committee after interviewing candidates so selected.

5. The annual award of the Scholarship will be made in July.

Note.—The first instalment of £40 will be paid to the Scholar as soon as he has satisfied the University that he has, *in bona fide*, commenced systematic study, approved by the University, either as a full-time or part-time student at a teaching institution or otherwise, in preparation for the Final Examination in Commerce. The second instalment of £40 will be paid on production of evidence satisfactory to the University that the student has, *in bona fide*, commenced a second year of systematic study approved by the University, either as a full-time or part-time student at a teaching institution or otherwise for the Final Examination in Commerce.

When the commencement of systematic study for the Examination depends upon the payment of fees which the Scholar proposes to defray out of his Scholarship, the University will give a definite undertaking to the College or other Institution under which the Scholar proposes to study, to the effect that the instalment of the Scholarship will be paid as soon as possible after he has commenced his studies.

EXAMINATION-PAPERS

The following pamphlets or sets of past examination-papers can be obtained from the University of London (Publications Section), Senate House, W.C.1:

Intermediate Economics (External) [Nov.]	1*s.* 9*d.*, post free
Intermediate Economics (External) [July]	1*s.* 9*d.* ,,
B.Sc. (Economics)	2*s.* 3*d.* ,,
* M.Sc. (Economics)	1*s.* 3*d.* ,,
† Intermediate Commerce (External) [Nov.]	1*s.* 9*d.* ,,
† Intermediate Commerce (External) [July]	1*s.* 9*d.* ,,
B.Com.	2*s.* 3*d.* ,,

For papers set at the Special Intermediate Examinations in Economics and Commerce for Internal Students application should be made to the Colleges where courses for these examinations are taken.

A complete list of examination-papers published by the University can be obtained on application.

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* Enquirers should state the subject(s).

† Only English, French, German and Spanish are included among the modern language papers in these pamphlets. Papers in all other modern languages can be obtained, price 6*d.* each, post free.

UNIVERSITY OF LONDON

Faculty of Economics

ESTATE MANAGEMENT

REGULATIONS FOR INTERNAL STUDENTS
Session 1950-51

The University confers the following Degrees :—
Bachelor of Science (Estate Management) (B.Sc. (Est. Man.)).
Master of Science (Estate Management) (M.Sc. (Est. Man.)).

In order to be admitted to the Degree of B.Sc. (Est. Man.) as an Internal Student a candidate must

(1) Matriculate in one of the ways provided in the Regulations.

(2) Pass the Intermediate Examination in Estate Management, unless exempted therefrom in accordance with the Regulations for Advanced Students proceeding to a Bachelor's Degree.

(3) Follow an approved course of study at one or more Schools of the University or under Recognised Teachers of the University. The total length of the course for the Intermediate and Final Examinations is normally not less than three years, but for Advanced Students the period may be two years.

(4) Pass the Final Examination in Estate Management, Parts I and II.

INTERMEDIATE EXAMINATION IN ESTATE MANAGEMENT

Course of Study

The Intermediate course normally extends over not less than one academic year.

The subjects of the Intermediate course are as follows :—

Land Surveying.

Economics.

Accounting and Business Organisation.

English Law relating to Land (Elementary).

Exemptions

A student who has passed the LL.B. Examination of this University with English Land Law will be exempted from English Law relating to Land at the Intermediate Examination in Estate Management.

A student who has passed the Intermediate Examination in Arts or Agriculture with Economics as a subject or Part I of the Intermediate Examination in Economics or Commerce, or who has obtained the Academic, External or Extension Diploma in Public Administration, will be exempted from Economics at the Intermediate Examination in Estate Management.

Date of Examination

The Intermediate Examination in Estate Management will take place once in each year, and will begin on the second Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than May 1st.

343/3/1000/8/50. W. & S. Ltd.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and oral examinations.

FEES

The fee for each student is 6 guineas for each entry to the whole Examination or 2 guineas for re-examination in one subject.

Registered Advanced Students who have been exempted from part of the Examination are required to pay a fee of 1 guinea per paper or practical examination up to a maximum of 6 guineas. Other candidates exempted from part of the Examination on the ground of having passed Examinations in this University are required to pay a fee of 2 guineas for each subject offered up to a maximum of 6 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

DETAILS OF EXAMINATION

The subjects of the Intermediate Examination are as follows:—

(1) Land Surveying, including its Mathematics, and Draughtsmanship (2 papers of three hours each and one-half day's practical examination).

(2) Economics (2 papers).

(3) Accounting and Business Organisation (2 papers).

(4) The English Law relating to Land (Elementary) (2 papers).

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the four subjects, and in the case of Land Surveying no candidate shall be allowed to pass who fails to satisfy the Examiners in the practical part as well as the written part of the examination.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A candidate who enters for the whole Examination at one and the same time may, if he fails to reach the minimum standard in one subject only, and if in the opinion of the Examiners his performance in the remaining subjects is of sufficient merit, be credited with the three subjects in which he has satisfied the Examiners and permitted to present himself on one or more occasions for re-examination in the fourth subject alone (*see* General Regulations for Intermediate Examinations, p. 10).

A provisional list of successful candidates, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on August 19th.

Certificates of having passed the Examination will not be issued except to qualified students applying for such certificates.

SYLLABUSES

Land Surveying

Elements of Mensuration and Plane Trigonometry. Theory and use of common logarithms.

Ordnance Survey Maps—their scope, uses and interpretation.

Construction and use of scales. Enlargement and reduction of plans. Ascertainment of areas, including use of the planimeter.

Chain surveying, field-work and plotting.

The theodolite and prismatic compass, their use and adjustment.

Traverse surveying with (*a*) theodolite and (*b*) compass. Plotting by protractors; computation of, and plotting by, rectangular co-ordinates. Adjustment of closing errors.

Tacheometry—Principles, field-work, computation and plotting. Determination of constants.

Plane-table surveying—Principles and practice.

Levelling—Principles and practice. Taking and plotting sections and spot levels. Use and adjustment of level and clinometer.

Contouring with level, tacheometer and clinometer; including interpolation of contours from spot levels.

Ascertainment of gradients and volumes from contour lines and sections.

Setting out circular curves, roads, drains, slope pegs and boundaries.

The care and maintenance of surveying instruments.

Office practice, including instruments in use. Preparation of plans and sections of land and plans of buildings.

Candidates will be expected to have some knowledge of recent developments in surveying instruments and methods.

Field-work

The scope of the practical examination will include :—

(*a*) Chain Surveying and the measurement of buildings; the recording of results;

(*b*) Surveying with such types of theodolite, plane-tabling, compass, level, clinometer and tacheometer as are likely to be met with in practice, the recording of results and the testing of such instruments;

(*c*) Setting out angles, straight lines, circular curves, slopes and contours.

Candidates must bring to the practical examination, for inspection by the Examiners if they so desire, their original Field-Books containing a record of actual field surveys carried out by the candidate. These Field-Books must bear a certificate by the candidate's teachers that the work is the candidate's original work carried out in the field. These Field-Books must be taken away by the candidates after the practical examination.

Economics

Economics, analytical and descriptive, with special reference to the United Kingdom.

To include :—Meaning of the principal economic terms; causes of differences in productive power; forms of social institutions and economic activity; *e.g.*, economic aspects of the family, property, and contract; alternative forms of business; markets; demand and supply in relation to price; production and costs, the problems of the business unit; competition and monopoly; the distribution of income between individuals and classes; causes of variation in wages, profits, interest and rent; the economic activities of the State; the nature and function of money and banks; outline of the structure of the English capital market; general variations of prices and output; the foreign exchanges; elements of international trade. The whole to be studied with reference to present conditions of the United Kingdom.

[It should be noted that knowledge of the history of economic thought is not required; nor are any but the simplest analytical methods. In general, while elementary diagrammatic treatment is relevant, the syllabus does not involve knowledge of advanced geometrical or algebraic methods. The analysis involved is such that at every stage it can be illustrated by reference to the general knowledge of contemporary economic movements and structure in the United Kingdom.]

Accounting and Business Organisation

General principles of accounting and their application to the different classes of business.

Agency accounts. Branch accounts and departmental accounts.

Prevention and detection of fraud. Goodwill. Depreciation.

Treatment of income tax in accounts. Accounts of receivership. Executorship and trust accounts.

The constitution of business houses.

Organisation of responsibility and control.

The organisation of the various departments of an estate office, distinguishing those run for profit and those devoted solely to administration and upkeep.

The connexion between records and results.

The intelligence department. Co-operation and profit sharing, and their bearing on efficiency.

The relation of speculation to business.

English Law Relating to Land (Elementary)

(1) (a) *General Introduction*

Present organisation and jurisdiction of the Civil Courts. Law and equity. Statute law and case law.

(b) *Estates and Interests in Land*

The difference between real and personal property.

Tenure and the evolution of freehold, copyhold and leasehold tenures.

The abolition of copyholds and its results (in outline only and excluding details of extinguishment of manorial incidents).

The common law doctrine of estates in land; freehold and leasehold estates and interests.

Incorporeal hereditaments.

Characteristics and varieties of easements and profits; licences distinguished.

Equitable estates and interests before 1926 and after 1925.

Joint tenancies and tenancies in common.

The transfer of land; the nature of the transactions of sale, lease and mortgage (in outline).

Settlements of land (in outline).

Powers of management of tenants for life under the Settled Land Act, and trustees holding land upon trust for sale.

(2) *Elementary Principles of Contracts and Torts*

The nature and formation of contract.

Contracts under seal and simple contracts.

Offer and acceptance.

The doctrine of consideration.

The meaning of " void," " voidable " and " unenforceable."

Options to purchase.

Section 4 of the Statute of Frauds, 1677 (in outline); Section 40 of the Law of Property Act, 1925.

The doctrine of part performance.

Section 4 of the Sale of Goods Act and the definition of "goods" in that Act.

Capacity, infants, corporations.

Mistake; fraud; misrepresentation; non-disclosure.

Conditions and warranties.

Discharge of contract.

Remedies for breach of contract; damages; specific performance; injunction.

General principles of the law of agency.

Nature of tort; tort distinguished from breach of contract and from crime.

General principles of liability for torts.

B.Sc. (ESTATE MANAGEMENT) DEGREE

Course of Study

The whole course for the Final Examination extends over not less than two academic years, but students may enter either for Part I or for Part II of the Examination after attending a course extending over at least one academic year.

The subjects of the course are as follows:—

Part I: Theory and Principles of Valuation of Land and Buildings
Principles of Public Finance.
English Law relating to Land.

Part II: Applied Economics.
One of the following Groups:—

Group A

Construction of Buildings, Rural.
Agriculture.
Forestry.
Agricultural Law.

Group B

Construction of Buildings, Urban.
Town Planning and Estate Development.
Sanitation.
Local Government Law.

Date of Examination

The B.Sc. (Estate Management) Examination will take place once in each year, commencing on the third Monday prior to the first Monday in July.

[Note.—In 1951 the Examination will begin four days earlier, *i.e.*, on Thursday, June 7th.]

Every student entering for the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study (pp. 6–9), together with the proper fee, not later than March 7th.

The time-table of the Examination will be furnished by the Academic Registrar to each candidate, showing both the time and place of the written and practical examinations.

Fees

A student who enters for both parts of the Final Examination on the same occasion shall pay a fee of six guineas. A student who enters for Part I only, or for Part II only, shall pay a fee of three guineas in respect of such entry.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Final Examination is divided into two Parts. A student who has completed the prescribed course of study for the Final Examination extending over at least two years may enter for Part I and Part II on one and the same occasion, or on different occasions, in which case either Part may be taken first. Nevertheless a student may enter for either Part of the Final Examination at the end of the first year of his Final course provided he has completed the prescribed courses of study in the relevant subjects to the satisfaction of his Teachers. A candidate who enters for Parts I and II on the same occasion, and passes in one Part but fails in the other, will be credited with the Part in which he has been successful.

A candidate referred at the Intermediate Examination will be permitted to enter for his referred subject concurrently with Part I of the Final Examination, provided that he is entering for Part I before Part II, and also provided that if such a candidate fails in his referred subject, no report shall be made on his performance in Part I of the Final Examination.

The subjects of the Examination are as follows:—

Part I

(1) Theory and Principles of Valuation of Land and Buildings	2 papers
(2) Principles of Public Finance	1 paper
(3) English Law relating to Land	2 papers

Part II

(4) Applied Economics	1 paper
(5) One of the following Groups:—	
Group A	
Construction of Buildings, Rural	1 paper
Agriculture	2 papers
Forestry	1 paper and a practical examination
Agricultural Law	1 paper
Group B	
Construction of Buildings, Urban	2 papers
Town Planning and Estate Development	2 papers
Sanitation	1 paper
Local Government Law	1 paper

Candidates shall not be approved by the Examiners in either Part of the Examination unless they have shown a competent knowledge in all of the prescribed subjects of that Part.

The Examiners shall be at liberty to test any candidate by means of oral questions.

A provisional list of successful candidates at each Part of the Examination, in alphabetical order, will be published by the Academic Registrar at 2 o'clock on August 8th.

A diploma for the Degree of B.Sc. (Estate Management), under the Seal of the University, will be delivered to each candidate who has passed both Parts of the Final Examination, after the report of the Examiners shall have been approved by the Senate.

Aegrotat Degree

A candidate who has completed his course of study as an Internal Student and who has been absent through illness from part of the Final Examination for a First Degree may apply to the University for the award of an Aegrotat Degree in accordance with the following Regulations :—

(1) Candidates at the B.Sc. (Estate Management) Examination who have entered for both Parts of the Examination or for one Part having already passed in the other Part are eligible to apply for an Aegrotat Degree. In either case the candidate must have completed more than half of the Examination.

(2) Applications from, or on behalf of, students must be accompanied by a medical certificate and should reach the Academic Registrar within seven days from the last day of the Examination.

(3) An Aegrotat Degree will not be awarded unless the Examiners consider that, in the work which the candidate has submitted at such part of the Examination as he has attended, he reached a standard which, if also reached in the remainder of the Examination, would have qualified him for the award of a Degree.

(4) An Aegrotat Degree will be awarded without distinction or class.

(5) Holders of an Aegrotat Degree are not permitted to re-enter for the same examination, but may proceed to a second or higher Degree on complying with the Regulations for such Degree.

SYLLABUSES

Theory and Principles of Valuation of Land and Buildings.

The various uses to which land is put, and the income obtainable from such uses. Tenures. Comparison of the value of incomes derived from land with incomes from other sources.

Definitions of value.

The effect on values of demand and supply, and of the state of the money market.

The use and application of the tables used for valuation purposes.

Insurances and the application thereof to meet risks and deferred liabilities.

The outgoings upon property. Necessary deductions in order to arrive at net income.

The valuation of freehold and leasehold property and of all interests therein. The effect of easements, restrictions and adverse rights.

The valuation of annuities held for definite periods and for lives, whether in possession or deferred. Allowance for the accumulative rate of interest differing from the required remunerative rate. Computation of deferred capital value. Allowance for deferred liabilities. The determination of the amounts of premiums to be paid for renewals and extensions of leases and reduction in rent.

Valuations for special purposes, viz. rating, income tax, extinguishment of manorial incidents, mortgage, partition, death duty. Valuations of compensation for land taken, severance and injurious affection, in connexion with the exercise of statutory powers for public or quasi-public purposes, and the prescription of building lines and improvement lines. Compensation for improvements and goodwill as between landlord and tenant.

Principles of Public Finance

Public Income.—Sources

(i) *Taxation.* The theory of taxation; direct and indirect taxation. The economic effects of different kinds of taxation:

(a) *National Taxation.* The various forms of National Taxes, their nature and incidence. Taxes on Capital; taxes on incomes. Relations between National and Local Taxation.

(b) *Local Taxation.* An elementary knowledge of powers and duties of local authorities. The authorities concerned with local taxation and valuation. The nature and incidence of rates. The valuation list, its preparation, revision and amendment. Rateable occupation. Rates and contributions under Land Drainage Act, 1930.

(ii) *Charges* by Central and Local Governments for services and commodities.

Tithe The nature of tithes and the Statutes relating thereto.

Public Expenditure Objects of National and Local Expenditure. The economic effects of Public Expenditure; subsidies. Grants-in-aid. The relation between expenditure upon Income and Capital Account.

Public Debt Various forms of Public Debt.

The whole to be considered with particular reference to the Ownership and Occupation of Land.

English Law Relating to Land

1 (a) *Rights and Duties of Owners and Occupiers of Land*

Rights and duties of estate owners in regard to buildings, fixtures, boundaries, mines and minerals, trees and crops, game and fish.

Natural rights in respect of air, water and support.

Easements and profits; acquisition by grant and reservation (express and implied) and by prescription (*a*) at common law and (*b*) under the Prescription Act, 1832; prevention of acquisition.

Infringement and disturbance of natural rights, easements and profits and the remedies therefor.

Licences; nature and varieties; licence coupled with an interest.

Proceedings for recovery of land.

Law of Trespass to Land.

Law of Nuisance.

Law of Negligence.

Duties of occupiers with regard to dangerous property.

The rule in *Rylands* v. *Fletcher*.

Liability for fire.

Damage by animals.

(b) *Rights and Duties of Landlord and Tenant*

Different varieties of tenancies; distinction between tenancies and licences.

Agreements for leases; when enforceable; Section 40 of the Law of Property Act, 1925; part performance.

Contents of leases; formal parts; executions; stamping; counterparts.

Covenants; express and implied covenants; covenants running with the land; usual covenants.

Rent; apportionment; distress; re-entry for non-payment of rent and other remedies.

Liability for rates, taxes and other outgoings.

Repairs: interpretation generally of the covenant to repair; measure of damages; dilapidations; waste.

Variation of terms; endorsements.

Assignments; sub-leases.

Surrender; forfeiture; notice to quit; recovery of possession; action for use and occupation (details of legal procedure are regarded as being beyond the scope of the course).

Fixtures.

The principal statutes relating to Landlord and Tenant.

The main provisions of the Rent and Mortgage Interest Restrictions Act.

2 (a) *Sales and Mortgages of Land*

Contracts for the sale of land; the vendor's duty of disclosure; the effect of fraud, innocent misrepresentation and mistake.

The obligations implied in an open contract and in a contract by correspondence.

Interpretation of particulars and conditions of sale; typical conditions contained in contracts for sale.

Rights of the contracting parties after contract and before completion.

Remedies for breach of uncompleted contract.

Rights and liabilities of the parties after completion.

Restrictive covenants; their nature; conditions essential to their enforcement; "building scheme"; modification and discharge.

The nature of a mortgage transaction.

The common law form of mortgage.

The borrower's equity of redemption.

Legal and equitable mortgages.

Mortgages of freeholds and leaseholds.

Rights, powers and duties of the parties.

Remedies of mortgagee.

Sub-mortgage.

Mortgages to trustees and building societies.

(b) *Arbitrations*

The nature of an arbitration.

Arbitrations distinguished from valuations.

Arbitrations compared with actions at law.

References arising from a submission; the Arbitration Acts, 1889–1934.

The arbitration agreement; the parties; the subject matter; appointment of arbitrators or umpire.

Conduct of an arbitration; powers and duties of the arbitrator; principal rules of evidence applicable to arbitrations.

Preparation and publication of award; method of enforcing and impeaching an award.

Costs.

The application of the Arbitration Acts, 1889–1934 to statutory arbitrations.

References under order of Court (i) for enquiry and report, (ii) for trial.

(c) *Compulsory Purchase and Compensation Acts*

The right of the State to appropriate land for purposes of public utility or to delegate that power to bodies or corporations.

The taking of land by exercise of the Royal Prerogative.

The taking of land under statutory powers; procedure by Private Act, General Act, Provisional Order or Compulsory Purchase Order made under the authority of a General Act.

The right to compensation. Distinction between a right to compensation and a cause of action at law.

Principles governing the right to compensation for (i) land compulsorily acquired and (ii) land injuriously affected by the exercise of statutory powers.

The meaning and functions of "The Special Act."

The nature, functions and provisions of the Defence Acts, 1842–1873, the "Lands Clauses Acts" and of the Acquisition of Land (Assessment of Compensation) Act, 1919.

The principles of "recoupment," "betterment" and "set-off."

The taking of part only of property.

Statutory rights of entry on land. Accommodation works.

Rights in respect of mines and minerals in relation to compulsory acquisition of land.

General principles of interpretation of modern compulsory purchase Acts.

Applied Economics

Section I must be taken by all candidates, together with *either* Section II *or* Section III.

I

The organisation of the long and short term capital markets and the system of interest rates. The relation between capital value and annual value of the various kinds of property. Industrial fluctuations

and problems of employment and unemployment. Monetary policy and its effect upon values and output. International trade, including commercial policy. Problems of population and labour supply. Risk and Insurance. The control of production and marketing.

II

The demand for farm products with special reference to the United Kingdom.

The size of farms. Economic aspects of land tenure. The finance of farming and of the distribution of farm produce. Agricultural labour. The analysis of farm costs. Fluctuations in farm output and their significance in the organisation of production.

The marketing of farm products. Grading. The organisation of produce markets. Future dealings. Competitive and co-operative marketing. Wholesale and retail market problems. Transport in relation to agriculture.

The State in relation to agriculture. Fiscal policy. Regulation of conditions of production and marketing. Wage regulation.

III

Outlines of the industrial and commercial organisation of Great Britain. Occupational and industrial distribution of population. The value of industrial output and its distribution. Royalties.

The size of business undertakings. Problems of cost analysis and of price policy. Invention and the problems of obsolescence and depreciation. Forms of industrial combination. The financing of industry and trade. Public ownership and control of industry. The special problems of public utility undertakings.

The location and concentration of industry. The theory of rent and its application to urban properties. The economic effect of the ordinary actions of governments upon urban properties. Problems of transport and distribution. Wholesale and retail trade.

Construction of Buildings (Rural)

Location, planning and lay-out, construction and maintenance of farm buildings and habitations, roads, fences and field drains. Choice, properties and uses of materials relating thereto.

Relationship between capital costs and anticipated revenue.

Ventilation, water supply, drainage, sanitation and lighting of farm buildings and farm habitations.

Plans, specifications, estimates and contracts for farm buildings and habitations.

Requirements of local authorities and central government departments, affecting farm buildings and habitations.

Agriculture

General Character of British Agriculture

Soils and their treatment. Physical and chemical characteristics; agricultural characteristics. General soil types of the United Kingdom. Principles of plant nutrition and manuring. Principles of cultivation.

Types of farming and their relation to climate, soils, markets.

Equipment of farm with live and dead stock. Capital and manual labour required. Organisation of labour. Utilisation of power on the farm.

The purpose and form of farm records and accounts.

Crops

Farm implements and machinery.

Drainage, liming and rotations. Description of crops commonly grown. Their requirements as to climate, soil, sowing, manuring and harvesting.

Temporary and permanent grass. Improvement of pastures. Formation of grassland, choice of seed mixture, sowing, subsequent treatment and management. Haymaking and ensilage. Weeds and their control. The general principles of the control of the more common insect, eelworm and fungoid pests.

Live Stock

The principal breeds of horses, cattle, sheep, pigs and poultry and their special characteristics. Principles of breeding, rearing and management. The principles of nutrition. Home-grown and purchased feeding-stuffs. The production of meat, dairy produce, wool, poultry and eggs.

The general principles of the mode of spread and control of the more important diseases and parasitic infestations of farm animals.

Marketing

The preparation and disposal of farm produce.

Tenant Right

Principles of tenant right, by statute, terms of agreement and customs. The tenant's claim and the landlord's claim. Common customs, tillages and improvements.

Valuations of tenant right, unexhausted improvements, live and dead stock, etc.

Forestry

The history of English Forestry. The direct and indirect utility of forestry; duties of the State and of private owners in regard to it.

Climate, soil, situation and aspect in relation to sylviculture; methods of sylviculture; formation and regeneration of woods; mixed and pure woods, light and shade; tending of woods; fencing, draining and development of woodland areas; formation and treatment of nurseries; forest roads.

The structure and identification of forest trees.

Control of the more important injurious insects and fungi harmful to forests.

The sale and utilisation of forest produce and the industrial uses of wood; the identification and characteristics of various kinds of timber; defects.

The felling and conversion of trees and other forest produce; the transport, seasoning and preservation of timber; its measurement and valuation; computation of contents of woodland areas; calculation of sample trees; forestry statistics.

Preparation of forest working plans and reports; methods of preparing financial statements; law and custom relating to woods and plantations; rating and taxation; contracts relating to sales of forest products.

Candidates are required to bring to the practical examination their *original* laboratory note-books for inspection should the Examiners so desire. These note-books must be taken away by the candidates at the close of the examination.

Agricultural Law

The Law relating to Agricultural Holdings, including contracts of tenancy, rights and liabilities of landlord and tenant, custom of the country, game, trees, mines, minerals and quarries. The principal statutes relating to agricultural holdings.

Rights of Common ; enclosure.

The Law relating to Stock and Crops, including contracts for the sale of animals and goods, conveyance of animals and goods, dangerous animals, general principles of the Agricultural Marketing Acts, statutes relating to the sale of seeds, fertilizers and manures, and to animal and plant diseases.

Law of Highways ; types of highway ; modern highway authorities ; ownership of highway ; rights of owner of soil and of public authorities ; creation, stopping up or diversion of highways ; liability for repair and maintenance ; nuisances in connexion with highways ; rights of access to and fencing of highways ; restrictions on use of land adjoining a highway ; restrictions on access to highways ; roadside wastes.

Statutory provisions and bye-laws relating to public health, sanitation and water supply, so far as they affect agricultural property.

Statutory provisions relating to land improvement, land drainage, electricity way-leaves, agricultural credits and housing of agricultural workers.

The Law relating to Small Holdings, Allotments and Allotments Gardens.

The Law of Master and Servant, including insurance of employees.

Construction of Buildings (Urban)

The construction of residential and simple commercial buildings, including all details. The calculation of simple stresses and the determination of the necessary sizes of beams and pillars of timber, steel and reinforced concrete.

Foundations, shoring and underpinning. Alterations to buildings.

Domestic sanitation, including sanitary fittings, waste pipes and drains, sanitary construction and arrangement, water services, drainage of subsoil and the prevention of dampness.

Ventilation, heating and lighting of residential and simple commercial buildings.

The properties and uses of the materials commonly used in building construction and drainage and the methods of testing their quality.

The preparation of specifications for building work, including drainage.

The various forms of contract for building work.

The administration of building works including the nature and use of Specifications and Bills of Quantities, Inviting and accepting Tenders, Notices and applications to Local Authorities, supervision of work in progress and the issue of certificates.

Town Planning and Estate Development

The economic basis of town growth. The evolution of historic towns. Planning of urban and rural estates by great landlords. The evolution of industrial towns. The character and design of the landscape. Recent developments in town planning.

The objects, preparation and presentation of surveys of planning areas.

The preparation and scope of development plans under current planning legislation and of development proposals for new towns.

Procedure under current legislation.

Reservation of land for various purposes. Planning of civic, educational, business and industrial centres, communications, public and private open spaces, airfields and other such civic requirements.

Principles and objects of zoning. Control of development.

Preservation of amenities. Tree planting.

Improvement and re-development of built areas.

Applications for planning consent, and the making and pursuing of objections. Procedure at public inquiries.

Claims for compensation. Development or betterment charges. Compulsory purchase.

Estate Development (*One paper*)

Factors governing the suitability and maturity of land for building. Importance of encouraging a suitable type of development. Differing types of development.

Requirements of Local Authorities in regard to proposed streets and sewers.

The preparation of estate development schemes.

The effect of statutory provisions on Estate Development including Ribbon Development.

Negotiations with Local Authorities, Town Planning Authorities, Highway Authorities, railway companies and statutory authorities (such as gas, water and electric). Negotiations with adjoining owners and others in regard to rights of way, easements, timber, minerals, adjustments of boundaries, communicating streets, sewers and similar matters.

The planning of Estate roads; different types, the width and use of the different parts of the roads. The materials used for, and mode of construction of such roads.

The division of land into plots. The grouping of buildings.

The methods of disposal of building land. The financing of building operations.

Sanitation

Water Supply

Sources of supply. The quantity and quality of water required. Rain gauges and the estimation of available rainfall. Filtration, sterilisation and other methods of treatment of impure water. Hardness and acidity and methods of reducing these. The general forms and purposes of impounding, settling and service reservoirs, public supply mains and valves. Waste detection.

Sewerage and Sewage Disposal

Sewerage schemes; separate and combined systems; the capacity required; the materials used and methods of construction; manholes, storm overflows, ejectors, gullies and other sewerage details; the ventilation and flushing of sewers. The various methods of disposal of sewage and storm water; discharge into the sea or tidal estuaries, land treatment, precipitation and bacterial processes. Methods of disposing of sludge. Purification plants for country houses and small communities.

Disposal of Refuse

Nature and quantity of house refuse. Temporary storage. Methods of collection and disposal, including controlled tipping, disposal at sea, incineration. Salvaging methods; utilisation and disposal of residuals. Collection, disposal and utilisation of trade refuse.

Cleansing of Streets

Street cleansing by hand and machine. Organisation and methods of snow clearing.

Local Government Law

Local Authorities General principles of the law relating to the organisation and procedure of local authorities; general principles governing the central administrative control of local government; general principles of the doctrine of *ultra vires*, of the control by the courts of local authorities and of the process of statutory interpretation.

Public Health Public Health Law in so far as it affects owners and occupiers of property, including sewerage and drainage (except sewage disposal and pollution of rivers); water supply; privies, water-closets, cesspits, etc.; regulation of cellar dwellings; nuisances; offensive trades; regulation of streets and buildings.

Housing Authorities responsible for housing conditions; statutory provisions relating to repair, maintenance and sanitary condition of houses and to the closing or demolition of insanitary premises and the demolition of obstructive buildings; procedure in connexion with Clearance Areas, Re-Development Areas and Improvement Areas, including the acquisition of land and payment of compensation to owners and occupiers affected; general provision as to the making, form, validity and date of operation of clearance orders and compulsory purchase orders; re-development and re-conditioning by owners; statutory provisions for the abatement of overcrowding; provision of housing accommodation for the working classes; financial assistance for erection of houses and improvement of housing accommodation; powers of the courts and of the Minister of Health in relation to Housing. Statutory provisions governing Town and Country Planning and Restriction of Ribbon Development.

Highways and Streets Types of highway; the rights of the owner of the soil, the public, public authorities and statutory undertakers; the creation, stopping up or diversion of highways; liability for repair and maintenance—the authorities now responsible; remedies for non-repair; nuisances in connexion with highways; extraordinary traffic; right of access to highways and liability for fencing; the laying out, making up and taking over of private streets; restrictions on use of land adjoining a highway; building lines; improvement lines; restriction on access to highway; owner's right to compensation for such restrictions; statutory powers to acquire land for construction, widening and improvement of highways.

Notes:

(i) The student should have a thorough knowledge of those aspects of the above matters which directly concern owners or occupiers of property, including making of bye-laws, orders and regulations, giving of notices, rights of objection and appeal, and holding of local inquiries. He is not expected to study details of procedure or administrative or financial provisions which are mainly the concern of local authorities or of the responsible government department.

(ii) Emphasis will be laid on the general principles of the law rather than upon the details of statutory provisions. Wherever practicable the student will be provided in the examination with copies of the principal Acts of Parliament referred to in the questions set for any particular year, so that the Examiner may test his practical grasp of the principles of the subject as distinct from his power to memorise statutory provisions.

(iii) A detailed knowledge of case law is not required, but the student should be familiar with the leading decisions on the branches of the law mentioned above.

(iv) The matters dealt with should relate primarily to areas outside London but candidates will be expected to know the main differences between the law on the subjects dealt with in London and outside London.

M.Sc. (ESTATE MANAGEMENT) DEGREE

Except as provided below, no person shall be admitted as a candidate for the Degree of M.Sc. (Estate Management) as an Internal Student until after the expiration of two academic years from the time of his taking the B.Sc. (Estate Management) Degree in this University as an Internal Student; nor, in the case of a candidate registered under the Regulations for Postgraduate Students proceeding to a higher Degree, until he has completed a course of higher study in accordance with those Regulations (see p. 101 *et seq*).

A student who, having passed the External Intermediate Examination, is admitted as an Internal Student to the Final B.Sc. (Estate Management) Examination after pursuing a two years' course of study and passes that Examination, may submit as his third year's course of study for the B.Sc. (Estate Management) Degree a course for the M.Sc. (Estate Management) Degree in accordance with Section 14 of the General Regulations as to Approved Courses of Study (see p. 8). If at the end of the third year's course of study he obtains the B.Sc. (Estate Management) Degree, he will, provided that he has otherwise complied with the Regulations, be permitted to present himself for the M.Sc. (Estate Management) Examination after the lapse of one further year.

At least twelve months before the date on which the candidate wishes to present himself he must submit for approval the general subject and a special section of that subject which he proposes to offer.* This application must include a clearly stated syllabus of the general subject.

The general subject chosen should fall broadly within one of the following fields, and the special subject should deal with some part or aspect of the general subject. Other subjects may be submitted for approval.

Valuation of Land and Buildings, Urban.
Valuation of Land and Buildings, Rural.
Town Planning.
Country Planning.
Estate Development and Management, Urban and Rural.

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* Any statement submitted later than the prescribed date must be accompanied by a fee of 10s. 6d.

The University will inform the candidate whether the title and syllabus of the subject are approved in their original or in an amended form. The Examination will be based on the approved subject and syllabus.

Date of Examination

The M.Sc. (Estate Management) Examination will take place once in each year beginning on the fourth Monday in May* provided that if the fourth Monday in May be Whit-Monday the Examination will begin on the following Tuesday.

Every candidate must apply to the Academic Registrar for an entry-form, which must be returned not later than February 1st accompanied by four copies of the approved syllabus of the subject in which he presents himself and by the proper fee.

Examination

The Examination shall consist of (*a*) two written papers on the selected general subject; (*b*) a dissertation on the approved special subject; and (*c*) an oral examination at the discretion of the Examiners.

If the Examiners consider that a candidate's dissertation is adequate but that he has not reached the required standard in the written portion of the Examination, they may, if they think fit, recommend that the candidate be exempted on re-entry from presentation of a dissertation. Similarly, if the Examiners consider that the candidate has reached the required standard in the written portion of the Examination but that his dissertation is not adequate, they may, if they think fit, recommend that he be exempted on re-entry from the written portion of the Examination. In both the above cases the Examiners may, if they so desire, examine the candidate again orally when he re-enters for the Examination.

A diploma for the M.Sc. (Estate Management) Degree, under the Seal of the University, shall be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

Candidates who have obtained the M.Sc. (Estate Management) Degree in one subject may enter again in another subject on complying with the Regulations in all other respects.

Dissertation

The candidate must furnish, not later than April 1st, four typewritten or printed copies of his dissertation. The dissertation must be written in English.

An Internal Student submitting a dissertation in typescript will be required to supply, before the Degree is conferred on him, one of the four copies of his dissertation bound in accordance with the following specification:—

Size of paper, quarto approx. 10 inches by 8 inches, except for drawings and maps on which no restriction is placed. A margin of 1½ inches to be left on the left-hand side. Bound in a standardised form as follows:—art vellum or cloth; overcast; edges uncut; lettered boldly up back in gold (¼ inch to ½ inch letters), DEGREE, DATE, NAME; short title written or printed neatly and legibly on the front cover.

A dissertation which consists of a collection of printed pamphlets or excerpts or of a single pamphlet must be bound in a similar cover.

[The name and address of a firm of Bookbinders in London, who will bind dissertations to this specification at a cost of 10s. a copy, may be obtained from the Academic Registrar.]

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* In 1951 the May examination will begin one week earlier, *i.e.*, on 21 May, 1951.

Work approved for the Degree of M.Sc. (Estate Management) and subsequently published must contain a reference, either on the title-page or in the preface, to the fact that the work has been approved by the University for the award of the Degree.

Fee

Except as provided below every candidate for the Degree of M.Sc. (Estate Management) must at each entry for the whole Examination pay a fee of 15 guineas.

The fee payable on re-entry by candidates who have been exempted either from the written portion of the Examination or from the presentation of a dissertation is 7½ guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

EXAMINATION-PAPERS

A pamphlet for Intermediate and B.Sc. (Estate Management) (External) can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 2s. 0d. post free.

A complete list of examination-papers published by the University can be obtained on application.

Academic Diplomas

REGULATIONS FOR INTERNAL STUDENTS

Session 1950-51

Registration

Students who wish to proceed to any Academic Diploma are required to register as Internal Students. Application for registration must be made through the authorities of the College, School or Institution at which the student is to pursue his course.

Applications for registration as an Internal Student should normally be made within three months from the first attendance at the course on account of which registration is desired and before the end of the session in which such course was begun. The period of three months will be reckoned as from the last day of the month in which the course in question was begun. A fee of 10*s.* 6*d.* is payable in respect of each application accepted at a later date.

Except as stated above no fee is required on the registration as an Internal Student of a student who has matriculated in the University of London. An Internal Diploma Student who has not matriculated is required to pay a fee of 3 guineas on registration as an Internal Student. Should such students subsequently qualify for exemption from the Matriculation Examination, they may, on application, be registered as matriculated students without fee.

Return of Examination Fees

1. Registration Fees and Special Fees (*e.g.* late entry fees for Internal B.A. and B.Sc. Examinations) are not returnable.

2. Examination Fees cannot be transferred from one Examination to a later one, and the full Examination Fee will be payable by a candidate at any subsequent entry, which must be made by the date given in the Regulations.

3. A candidate whose provisional entry for an examination is accepted pending the result of an earlier examination and who is subsequently found to be ineligible or is not required to sit for the second examination may receive back the fee paid less £1 1s. 0d.

4. No entry fee that has been paid by or on behalf of a candidate for a Matriculation, Diploma or First Degree Examination held in the United Kingdom who withdraws from the examination will be refunded, except in cases provided for in paragraph 3 (above) and in others for one of the following reasons :—

(a) *Inability to take the examination owing to candidate's illness, or to death of parent.*

The Principal may at his discretion and on receipt of medical evidence satisfactory to him return the examination fee paid.

In cases of infectious illness of a person with whom the candidate has been in contact, the Principal may at his discretion return the whole examination fee paid.

A medical certificate certifying illness at the time of the examination must be sent with any application.

247/3/2,250/7/50. W. & S. Ltd.

(b) *Inability to take the examination by reason of National Service.*
A candidate who is prevented from sitting by approved National Service may, at the discretion of the Principal, have his entry fee returned in full.

(c) *Death of Candidate.*
Entry fee returnable in full.

Application for return of fees from Internal candidates should be addressed to the Academic Registrar. Application must be made not later than one month after the commencement of the Examination.

EXAMINATION-PAPERS

The following pamphlets or sets of past examination-papers for Diplomas can be obtained from the University of London (Publications Section), Senate House, W.C.1, price 1s. 3d. post free :—

Anthropology	Librarianship
Archæology	Medical Radiology
Archive Administration	Military Studies
Bacteriology	Phonetics
Clinical Pathology	Psychology
Comparative Philology	Public Administration
Dietetics	Public Health
Education	Slavonic and East European Studies
Fine Art	Postgraduate Certificate in Education
Geography	Theology
History of Art	Town Planning

A complete list of examination-papers published by the University can be obtained on application.

ACADEMIC POSTGRADUATE DIPLOMA IN ANTHROPOLOGY

The University grants an Academic Postgraduate Diploma in Anthropology.

COURSE OF STUDY

The Course for the Diploma is open to :—

(*a*) Students of postgraduate standing whose undergraduate courses have in the opinion of the University included a suitable preliminary training.

(*b*) Students who, though not graduates, have satisfied the University that their previous education and experience qualify them to rank on the same level as graduates approved under (*a*) for this purpose.

Except as provided below students are required to attend a course of study approved for this purpose by the University, extending over two sessions. The course of study must, unless special exemption be obtained, be continuously pursued.

In the case of the following classes of candidates, who must be otherwise qualified to be registered as candidates for the Diploma :—

(i) Senior Civil Servants who have spent at least two years in service overseas (*i.e.*, working under engagements or agreements with the Governments of the Dominions, Government of India, Crown Colonies, Protectorates, or Mandated Territories) or Civil Servants of equivalent standing of other countries ;

(ii) at the discretion of the University on report by the Board of Studies in Anthropology, persons who have spent at least two years overseas holding positions which afforded them facilities for Anthropological studies in the field ;

the student will be required to attend an approved course of instruction at a School of the University during a substantial portion of three academic terms, which terms need not necessarily be consecutive.

Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the School to which he is attached at the earliest opportunity to the Academic Registrar.

Candidates are required to take the following :—

1. One general paper designed to test the student's knowledge of the scope and methods of the main branches of Anthropology. Questions will be set on the following :—

(*a*) Archæology (Pre-history of the Old World) ;
(*b*) Physical Anthropology (Racial criteria and types) ;
(*c*) Technology ;
(*d*) Social Anthropology ;
(*e*) Linguistics (Social Aspects).

Candidates will be required to select questions from at least four of these sections. Those offering alternative 2 A (Social Anthropology) will be required to select from sections (*a*), (*b*), (*c*) or (*e*) ; those offering alternative 2 B (Physical Anthropology) will be required to select from sections (*a*), (*c*), (*d*) or (*e*).

2. Four special papers on either of the following branches of Anthropology :—

A. Social Anthropology (4 papers) :—

(i) Social Structure (including kinship, local, political and economic organisation).

(ii) Religion and Magic, Education, Law.

(iii) Ethnography of a Selected Region (selection of the region to be approved by the University).

(iv) One of the following :—

(*a*) Technology ;

(*b*) Elementary Linguistics (including phonetic notation and the structure of language) ;

(*c*) Applied Anthropology.

Original work in the form of a thesis may be submitted by any candidate, and if such work be approved by the University on report by the Board of Studies in Anthropology the candidate may be exempted from either one or both of papers (iii) and (iv). The subject of the original work must be submitted to the University for approval not later than March 15th.

B. Physical Anthropology (4 papers) :—

(i) Comparative survey of the Primates, human palæontology ;

(ii) Anatomical, physiological and genetic variations in man.

(iii) Racial classification of modern man, anthropometric methods ;

(iv) One of the following :—

(*a*) Primitive Psychology (including mental measurements, intelligence and aptitude tests) ;

(*b*) Pre-historic Archæology ;

(*c*) Racial theories and problems.

Original work in the form of a thesis may be submitted by any candidate, and if such work be approved by the University on report by the Board of Studies in Anthropology the candidate may be exempted from either one or both of papers (iii) and (iv). The subject of the original work must be submitted to the University for approval not later than March 15th.

Date of Examination

The Examination for the Diploma will take place once in beginning on the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than March 15th. Any original work must be submitted not later than May 15th.

Fee

The fee is 7 guineas for each entry to the whole examination and 3½ guineas for each entry to part of the examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

At the discretion of the Examiners there may be an oral or a practical examination in any subject, in addition to the written examination in that subject.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in all the branches prescribed for the Examination.

A student may either enter for the whole Examination at the end of his two years' course, or, with the permission of his teachers, he may enter for examination in the general paper 1. at the end of his first year, and (provided he satisfied the Examiners in this paper) for examination in the special papers 2. or thesis, at the end of his second year.

A student who fails to pass in the general paper 1. taken at the end of his first year may take this subject again, together with the other papers under 2 A or 2 B, or a thesis, respectively at the end of the second year.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the "Academic Postgraduate Diploma in Anthropology," under the seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

ACADEMIC POSTGRADUATE DIPLOMAS IN ARCHÆOLOGY

The University grants the following Diplomas in Archæology:

Academic Postgraduate Diploma in Chinese Archæology.

Academic Postgraduate Diploma in Classical Archæology.

Academic Postgraduate Diploma in Egyptology.

Academic Postgraduate Diploma in European Archæology.

Academic Postgraduate Diploma in Indian Archæology.

Academic Postgraduate Diploma in Archæology of Western Asia.

The Courses for the Diplomas are open to:—

(*a*) Students of postgraduate standing;

(*b*) Students who, though not graduates, have satisfied the Professors in charge of the course that their previous education and experience qualify them to profit by the course.

Students are required to attend a course of study, approved for the purpose by the University, extending over at least two sessions. Students with exceptional qualifications may, however, apply for permission to pursue a course of study extending over less than two sessions. Students who have had no previous training in Archæology are recommended to pursue a course of study extending over three years.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the College or School to which he is attached at the earliest opportunity to the Academic Registrar.

The detailed syllabuses for the Diplomas are set out below. Candidates for the Diploma in Chinese Archæology must have a reading knowledge of French. Candidates for all the other Diplomas in Archæology must have a reading knowledge of German and either French or another modern language approved by the University.

Students of postgraduate standing, but without certain qualifications, who desire to undertake the course in Egyptology or in the Archæology of Western Asia may be required to pass, at the end of the first year, a test in the language related to, but not included in, the relevant syllabus, *e.g.*, Greek, Hebrew or Arabic.

The Examination for each Diploma will consist of written papers and an oral examination. The papers and oral examinations will be framed to test the candidate's practical as well as theoretical knowledge.

The Examinations for the Diplomas will take place once in each year, beginning on the third Monday prior to the first Monday in July.

Every student entering for these Examinations must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than March 15th.

The fee is 7 guineas for each entry to each Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Provisional lists of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the

second week following that in which the Examinations conclude. A mark of distinction will be placed against the names of those candidates who show exceptional merit.

A certificate under the Seal of the University will be delivered to each candidate who has passed, after the Reports of the Examiners have been approved by the Senate.

Academic Postgraduate Diploma in Chinese Archæology

1. Outline of the history of Chinese civilisation and chief foreign influences.
2. General knowledge of the arts and crafts of China.
3. *Either* (*a*) Detailed study of a period to be selected by the candidate and submitted for the approval of the University.
   or (*b*) Evolution of style and technique as exemplified in one of the arts or crafts to be selected by the candidate and submitted for the approval of the University.
4. General knowledge of religious beliefs and ritual.
5. Elementary geography of China.
6. Chinese language. Candidates will be examined in the following:—
   (i) Bullock: *Progressive Exercises in the Chinese Written Language* (3rd edition, 1923, pp. 1–42).
   (ii) Karlgren: *Sound and Symbol in Chinese* (1923).
   (iii) Elements of Epigraphy.
7. Elementary facsimile drawing.

There will be seven papers covering the sections 1–6 above and an oral examination. Candidates will be required to pursue a course of instruction in section 7. Candidates must have a reading knowledge of French; they will also be required to prepare, during the course, a series of drawings illustrative of the subject, for inspection at the examination.

Academic Postgraduate Diploma in Classical Archæology

Candidates must select one of the three Groups set out below.

A: *Greece*

1. Outline of the history of Greece and Rome from the beginning of the sixth century B.C. to the end of the second century A.D.
2. Detailed study of the history of a special period to be selected by the candidate and submitted for the approval of the University.
3. Beliefs and ritual.
4. Sculpture and Architecture.
5. Painting, pottery and the other arts and crafts.
6. Elementary epigraphy and numismatics.
7. Greek language.
8. Elementary surveying.
9. Elementary architectural and facsimile drawing.

There will be seven papers covering the sections 1–7 above and an oral examination The paper on the language will include unseen translations of two pieces of prose and one piece of verse. Candidates will be required to pursue a course of instruction in sections 8 and 9.

B : *Italy to the End of the Republic*

1. Italy and Sicily in (*a*) the Stone Age,
   (*b*) the Bronze Age,
   (*c*) the Prehistoric Iron Age.
2. Outline of the history of Greece, Italy and Sicily from the beginning of the sixth century B.C. to the end of the first century B.C.
3. The Etruscans : and the Greeks in Italy and Sicily.
4. The archæology of Republican Rome.
5. Beliefs and ritual.
6. Elementary epigraphy and numismatics.
7. Elementary surveying.
8. Elementary architectural and facsimile drawing.

There will be seven papers covering the sections 1–6 above and an oral examination. The papers will include extracts from Greek and Roman authors for translation. Candidates will be required to pursue a course of instruction in sections 7 and 8.

C : *Roman Empire*

1. Outline of the history of Greece and Rome from the beginning of the fifth century B.C. to the end of the third century A.D.
2. Beliefs and ritual.
3. Architecture.
4. Sculpture, painting, and the other arts and crafts.
5. The general conditions of the principal provinces of the Roman Empire (Africa, Britain, Gaul, Germany, Spain, and the East).
6. Elementary epigraphy and numismatics.
7. Elementary surveying.
8. Elementary architectural and facsimile drawing.

There will be seven papers covering the sections 1–6 above and an oral examination. The papers will include extracts from Greek and Roman authors for translation. Candidates will be required to pursue a course of instruction in sections 7 and 8.

ACADEMIC POSTGRADUATE DIPLOMA IN EGYPTOLOGY

1. Outline of the History of the Ancient Near East down to the death of Alexander.
2. Religion.
3. Art and Architecture.
4. Middle Egyptian Grammar and Texts.
5. *Either* (*a*) History of Egyptian Civilisation down to the Roman Conquest :
   or (*b*) Study of Small Antiquities and the chief technical processes used in the arts and crafts :
   or (*c*) Old, Middle and Late Egyptian and Coptic Grammar and Texts.
6. Elementary human skeletal anatomy.
7. Elementary surveying and facsimile drawing.

There will be six papers covering sections 1–5 and an oral examination. Candidates selecting either section 5 (*a*) or 5 (*b*) will also be required to pursue a course of instruction in sections 6 and 7.

ACADEMIC POSTGRADUATE DIPLOMA IN EUROPEAN ARCHÆOLOGY

Candidates must select one of the two Groups set out below.

A. *Western Europe* (*Prehistoric*)

[*For Examinations in* **1951** *and* **1952** *only.*]

1. Europe in the Palæolithic and Mesolithic Ages.
2. Europe in the Neolithic and Bronze Ages.
3. Europe in the Early Iron Age.
4. Special study of any one of the following regions in either the Palæolithic and Mesolithic Ages, the Neolithic and Bronze Ages or the Early Iron Age :—British Isles ; Central Europe ; Northern France and the Low Countries ; Southern France and the Iberian Peninsula ; Italy ; Scandinavia and Northern Germany.

Outlines of the following subjects as they affect Archæology :—

5. Elements of Social Anthropology, with particular attention to primitive thought in relation to Religion, Art and Social Structure.
6. Elements of Technology.
7. Elementary human skeletal Anatomy.
8. Elementary Geology, Palæobotany and Palæontology.
9. Elements of archæological technique.

Candidates will be expected to undertake practical field-work during the course, unless they have already done so. There will be six papers, five covering sections 1–4 (two being on section 4) ; the sixth paper will be a general paper to cover sections 5–9 ; there will also be an oral examination. With reference to section 4, candidates will be expected to show a first-hand knowledge of antiquities in the field, relevant museum collections, and primary written sources.

A. *Prehistoric Europe*

[*For Examinations in and after* **1952.**]

1. Europe in the Palæolithic and Mesolithic Ages.
2. Europe in the Neolithic and Bronze Ages.
3. Europe in the Early Iron Age.
4. Detailed study of (*a*) a special area with (*b*) more intensive study of a particular period in that area. The area and period to be selected from the following :—the Palæolithic and Mesolithic Ages, the Neolithic and Bronze Ages or the Early Iron Age :—British Isles ; Central Europe ; Northern France and the Low Countries ; Southern France and the Iberian Peninsular; Italy, Southern France and the Islands of the Western Mediterranean ; Scandinavia and Northern Germany.

Outlines of the following subjects as they affect Archæology :—

5. Elements of Social Anthropology, with particular attention to primitive thought in relation to Religion, Art and Social Structure.
6. Elements of Technology.
7. Elementary human skeletal Anatomy.
8. Elementary Geology, Palæontology and Climatology.
9. Elements of archæological technique.

Candidates will be expected to have undertaken approved practical field-work before the examination and to produce a certificate to this effect satisfactory to the examiners. There will be seven papers; three covering Sections 1–3; two covering Section 4, one of which shall cover the special area throughout all periods, and the other the selected period within that area; the sixth paper will cover Sections 5, 6 and 9, and the seventh Section 7 and 8; and there will also be an oral examination.

B. *Western Europe (The Roman Provinces and the Migration Period)*

1. Historical Outlines.
2. Roman Provinces.
3. Barbarian Cultures.
4. Early Christian Archæology in Western Europe.
5. Special study of any one of the following:—British Isles in the period of the Roman occupation; British Isles 400 A.D. to 800 A.D.; Roman Gaul and Roman Germany; The Goths and the Lombards in Italy; The German Migrations; Merovingian France and Visigothic Spain; Migration and Viking Periods in Scandinavia.
6. Elements of archæological technique.

Candidates will be expected to show a knowledge of elementary epigraphy relative to their special subject and to undertake practical field-work during the course, unless they have already done so. There will be six papers covering sections 1–5, two being on section 5; there will also be an oral examination. With reference to section 5, candidates will be expected to show a first-hand knowledge of antiquities in the field, relevant museum collections, and primary written sources. Candidates will be required to pursue a course of instruction in section 6.

ACADEMIC POSTGRADUATE DIPLOMA IN INDIAN ARCHÆOLOGY

1. Outline of history and geography of ancient India and adjacent countries.
2. Detailed study of a special subject to be selected by the candidate and submitted for the approval of the University.
3. Social and economic life and organisation.
4. Elements of religious history, beliefs and practices.
5. Arts and crafts and the chief technical processes used in them.
6. Elementary epigraphy and numismatics.
7. Sanskrit or Persian language.
8. Elementary physical anthropology.
9. Elementary surveying.
10. Facsimile drawing.

There will be seven papers covering the sections 1–7 above and an oral examination. The papers on 3, 4, and 6 will have particular reference to the special subject selected by the candidate. The paper on the language will consist of (*a*) questions on grammar, (*b*) translation of simple unprepared passages. Candidates will be required to pursue a course of instruction in sections 8, 9 and 10.

ACADEMIC POSTGRADUATE DIPLOMA IN ARCHÆOLOGY OF WESTERN ASIA

Candidates must select one of the four Groups set out below:—

A. *Mesopotamia*

1. Outline of the History of the Ancient Near East from the earliest times to the death of Alexander.
2. History of civilisation in Mesopotamia down to the Parthian Conquest.
3. Religion.
4. Art and Architecture and the chief technical processes used in arts and crafts.
5. Akkadian Language.
6. Special study of laws, letters, and contracts.
7. Study of small antiquities.

There will be seven papers covering the above syllabus and an oral examination.

B. *Palestine*

1. Outlines of the History of the Ancient Near East from the earliest times to the death of Alexander.
2. History of Palestine to the end of the Seleucid Dynasty.
3. Religion.
4. Social life, including arts and crafts.
5. North Semitic inscriptions.
6. Special study of the history and archæology of a selected period.
7. Special study of a selected site.

There will be seven papers covering the above syllabus and an oral examination.

C. *Syria*

1. Outline of the History of the Ancient Near East from the earliest times to the end of the Seleucid Dynasty.
2. History of civilisation in Syria down to the accession of Constantine.
3. Religion : Selected period, *either* down to 323 B.C. *or* from 323 B.C. to the accession of Constantine.
4. Art and Architecture and the chief technical processes used in arts and crafts.
5. Language : *either* (*a*) a language in cuneiform script, *or* (*b*) Aramaic inscriptions ; *or* (*c*) Greek and Latin.
6. Special study of the history and archæology of a selected period.
7. Study of small antiquities, with emphasis on the special period chosen for (6) above.

There will be seven papers covering the above syllabus and an oral examination.

D. *Anatolia*

[A syllabus will be approved for individual students.]

UNIVERSITY DIPLOMA IN ARCHIVE ADMINISTRATION

The University grants a Diploma in Archive Administration.

Admission of Students

The course for the Diploma is open to graduates who have obtained a First or Second Class Honours Degree in Arts of the University of London or other approved University. Other candidates may be admitted on producing evidence satisfactory to the University that their previous education and experience are such as to enable them to follow the course with profit. Occasional students will be accepted for any of the subjects of the course.

Course of Training

The course of training for the Diploma will extend over not less than one academic year for full-time students, and over not less than three years nor more than five years for part-time students, and will include approved instruction in all subjects to be taken at the Examination.

The course of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the School of Librarianship and Archives at the earliest opportunity to the Academic Registrar.

The course will be subject to the General Regulations for Approved Courses of Study (see pp. 6–9 of the Regulations for Internal Students) in so far as they are applicable.

Examination

The subjects of the ordinary course and examination are as follows :—

(i) General bibliography : (one paper).

(ii) *Either* (*a*) National and University library administration : (one paper) :
or (*b*) Special library administration : (one paper) ;
or (*c*) Urban, county and school libraries : (one paper).

(iii) Palæography of English archives, including transcription : (two papers).

(iv) Administrative history ; diplomatic of English documents : (two papers).

(v) Archive administration : (two papers).

(vi) Mediæval Latin and Anglo-Norman French : (two papers).

The Diploma will not be awarded to a full-time student until and unless, in addition to attending the courses in the School of Librarianship and Archives and passing the Examination, he has been employed in full-time paid service in an approved repository for a period of not less than twelve months.

A part-time student who is not at the same time engaged in paid service at an approved repository will be required, before obtaining his Diploma, to produce evidence that he has been employed in full-time service in an approved repository for a period of not less than two years.

Full-time students who follow a course of training extending over one year shall be required to take the whole Examination at the end of their course.

Full-time students who follow a course of training extending over two years shall be required to take the Examination in two parts, one at the end of each year of their course.

Part-time students shall be required to pass the Examination in three parts, each part to consist of two subjects of the Examination.

A candidate who fails in one subject only in a part of the Examination may, with the permission of the Examiners, offer that subject at the next following Examination.

If a candidate who has been referred in one subject does not present himself for re-examination in that subject at the next following Examination, or having presented himself fails to pass in it, he shall only be permitted to enter for that subject taken by itself on one subsequent occasion in exceptional circumstances and by special permission of the Academic Council.

The Examination for the Diploma will take place once in each year in June. Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 10th.

A provisional list of successful candidates arranged in alphabetical order will be published by the Academic Registrar on July 19th.

A certificate to be called the "University Diploma in Archive Administration," under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners has been approved, and evidence of the service in an approved repository referred to above has been received by the Senate.

Fee

The fee for the whole Examination is seven guineas for each entry. If the Examination is taken in two parts, the fee for each part is three and a half guineas. If the Examination is taken in three parts, the fee for each part is two and a half guineas. A candidate who is permitted to enter for re-examination in one subject must pay an extra fee of two guineas in respect of re-examination in that subject.

All cheques should be made payable to the University of London or Bearer, and crossed "Westminster Bank Ltd., Tavistock Square, W.C.1, University of London Account."

ACADEMIC POSTGRADUATE DIPLOMA IN BACTERIOLOGY

The University grants an Academic Postgraduate Diploma in Bacteriology.

Course of Study

The Course for the Diploma is open to :—

(*a*) Graduates in Medicine, Science and Pharmacy of this or another approved University whose previous training has, in the opinion of the University, fitted them to profit by the course.

(*b*) Registered Medical practitioners and other students who, though not graduates, have obtained a qualification and undergone a previous training which, in the opinion of the University, has fitted them to profit by the course.

Students are required to attend a course of study approved by the University, and extending over not less than one academic year at one or more of the Colleges or Schools of the University.

The course of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstance, must be notified by the authorities of his College or School at the earliest opportunity to the Academic Registrar.

The subjects of the course are as follows :—

A. General Bacteriology, including the Morphology and Physiology of Bacteria ; Bacterial Classification ; the description and identification of the more important bacterial groups ; the antigen-antibody reactions in relation to general Bacteriology ; quantitative methods in bacteriological investigation ; and elementary bacteriological chemistry.

B. Special courses of instruction in Bacteriology as applied to one of the following subjects :—

(1) Medicine and Hygiene.

(2) Industry.

Date of Examination

The Examination for the Diploma will take place once in each year beginning on the Thursday following the third Monday in June.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 1st.

Fee

The fee is 7 guineas for each entry to the Examination. All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination will consist of :—

Two papers, a practical and an oral examination on the subjects under A above.

Two papers, together with a practical and an oral examination, on the subject under B above which has been selected and more specifically studied by the candidate.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes. A mark of distinction will be placed against the names of those candidates who show exceptional merit.

A certificate, to be called the " Academic Postgraduate Diploma in Bacteriology," under the Seal of the University, will be delivered to each successful candidate, after the Report of the Examiners shall have been approved by the Senate.

ACADEMIC POSTGRADUATE DIPLOMA IN CLINICAL PATHOLOGY

The University grants an Academic Postgraduate Diploma in Clinical Pathology.

Course of Study

The Course for the Diploma is open to :—

(*a*) Graduates in Medicine of this or another approved University whose previous training and clinical experience has, in the opinion of the University, qualified them for registration as students for the Diploma ; or

(*b*) Registered medical practitioners whose training and clinical experience has, in the opinion of the University, qualified them for registration as students for the Diploma.

Students are required to pursue an approved course of instruction and training, lasting at least one calendar year, as a whole-time worker under the supervision of the head of the Pathological Department of one of the Colleges or Schools of the University.

Students must receive instruction in :—

(1) Morbid Anatomy and Histology including post-mortem work, for at least twelve months ;

(2) Bacteriology and Serology, for at least twelve months ;

(3) Chemical Pathology for at least twelve months.

(4) Hæmatology and such other methods of laboratory examination as are generally used in hospital practice.

These periods may run concurrently provided that suitable facilities are available.

The course of instruction must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstances, must be notified by the authorities of his College or School at the earliest opportunity to the Academic Registrar.

Examination

The Examination will normally include practical examinations in the subjects (1), (2), (3) and (4) above, and an oral examination. The Examination will occupy three days and include

(*a*) the examination of pathological material followed by written or verbal reports ;

(*b*) questions on the theory and principles involved in the methods of examination and in the specific tests of pathological material ;

(*c*) the scope and application of laboratory examinations to the diagnosis and treatment of disease and the interpretation of the results of such examinations.

The Examination for the Diploma will be held once in each year in the week beginning on the first Monday in October.

Every student entering for this examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in

accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than September 1st. The certificate shall show that the student has conducted tests as part of the routine work of the hospital department on all of the subjects of the course to the satisfaction of the head of the department.

The fee is 12 guineas for each entry to the Examination. All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the " Academic Postgraduate Diploma in Clinical Pathology," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

ACADEMIC POSTGRADUATE DIPLOMA IN COLONIAL STUDIES

The University grants an Academic Postgraduate Diploma in Colonial Studies.

The course is designed for persons engaged in or hoping to take up work in colonial territories and others with comparable problems. It may also be of interest to persons wishing to gain an understanding of British administration and policy in overseas territories. It is intended to provide an understanding of the problems characteristic of underdeveloped territories in general, and the subjects listed are to be understood as being treated with special reference to such areas.

Course of Study

The Course for the Diploma is open to :—

(*a*) Graduates of this or another approved University whose undergraduate studies have, in the opinion of the University, included a suitable preliminary training.

(*b*) In special circumstances, students who, though not graduates, have satisfied the University that their previous education and experience qualify them to rank on the same level as graduates approved under (*a*) for this purpose.

Except as provided below students are required to attend a Course of Study approved for this purpose by the University, extending over two sessions. The Course of Study must, unless special exemption be obtained, be continuously pursued.

In the case of the following classes of candidates, who must be otherwise qualified to be registered as candidates for the Diploma :—

Civil Servants (British or foreign) who have spent at least two years in service overseas, or, at the discretion of the University on report by the Special Advisory Board on Colonial Studies, persons who during a similar period have obtained comparable experience ; the student will be required to attend an approved course of instruction at a School of the University during three academic terms, which terms need not necessarily be consecutive, but shall be concluded within five years of registration.

Any interruption in a student's attendance at a Course of Study, through illness or other exceptional circumstance, must be notified by the authorities of the School to which he is attached at the earliest opportunity to the Academic Registrar.

Date of Examinations

Terminal examinations will be held during the course at the end of the first and third terms. The Final Examination will be held once each year beginning on the 1st Monday in July.

Every student entering for the Final Examination must apply to the Academic Registrar for an entry form and a certificate of course of study which must be returned, duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than April 1st.

Fee

The fee is 7 guineas for each entry to the Examination. All cheques should be made payable to the University of London or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1., University of London Account."

Details of Examination

Candidates are required to take the following :—

A. *Compulsory Subjects.*

1. The Administration of Colonial Territories (one paper) ;
2. Political and Economic Development of Tropical Dependent Territories, 1850 onwards (one paper) ;
3. Social Structure and Organisation (one paper).

B. *Optional Subjects.*

Two subjects to be selected from the following list. The choice will be subject to the University's being satisfied that the candidate has had a suitable preliminary training.

1. Economics (one paper) ;
2. Colonial Law (one paper) ;
3. Anthropology (one paper) ;
4. Social Administration (one paper) ;
5. Geography of a Selected Region (one paper) ;
6. Demography (one paper) ;
7. An Oriental or African Language (one paper).

In the case of the language option (Option 7) the Standard to be reached will be approximately that of the B.A. (General) Degree.

Original work in the form of a dissertation may be submitted by any candidate, and if such submission be approved by the University on report by the Special Advisory Board in Colonial Studies, the candidate may be exempted from any or all of the optional papers. Application for such exemption shall be made by the candidate during the first year of the course, or, if he is permitted by the University to take the Diploma after three terms, during the first term of his course.

At the discretion of the examiners there may be an Oral examination in any subject, in addition to the written examination in that subject.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the " Academic Postgraduate Diploma in Colonial Studies," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners shall have been approved by the Senate.

SYLLABUSES

The Administration of Colonial Territories

Administrative systems in relation to problems of policy; the advance towards self-government, race relations in the plural society, the place of indigenous institutions; land rights, labour questions, education, development of co-operatives; attitudes and methods of British and other nations administering colonies compared.

Political and Economic Development of Tropical Dependent Territories, 1850 onwards

The syllabus will cover the main changes in political and economic organisation which have taken place in tropical dependent territories since 1850.

Social Structure and Organisation

Theories of Society and Culture. Structure of Composite Societies in Colonial and other economically under-developed territories. Indigenous and Western elements in process of change. Analysis of social groups and institutions, social controls and social values. Rank, status and class alignments. Economic organisation of colonial peasantry. Indigenous law and custom. Indigenous political organisation. Religious beliefs and practices. Social bases of nationalism. Criminology.

Economics

Principles and practices in relation to the special problems of dependent territories and other under-developed areas.

Internal economic conditions of Colonial territories. Regional characteristics with special reference to available supplies of natural resources, labour, capital, etc. The relation of these to the prevailing types and methods of production. Economics of farming systems. Trends and variations in production. National incomes and their distribution, National and Local Government finance.

External economic relations of Colonial Territories and the effect of these on finance, trade and incomes.

Demands and prices for foodstuffs and other products. Marketing Functions, problems, and institutions.

Contemporary economic policies with reference to Colonial territories Aims and instruments of British policy. The U.N. and its specialised agencies.

Colonial Law

The constitutional basis of authority in dependent territories; modes of legislation; machinery of government, courts and their jurisdiction, including Native Courts and Muslim Courts; systems of law applied (including native law); procedure standards of justice; penal systems. Nature and sources of indigenous law; principles of indigenous law—family, property, crimes; indigenous judicial institutions; procedure, evidence and modes of proof; effect of contact with European legal systems.

Anthropology

(*a*) *Applied Anthropology.* Application of anthropological analysis to problems of administration, land tenure, legal relations, labour migration, religious cult formation, etc., characteristic of many colonial territories.

(*b*) *Anthropology of a Selected Region.* Selection may be made from areas such as : Eastern Africa, Central Africa, Western Africa, Southern Africa, South-East Asia, Pacific Islands.

The paper will contain a section on each of these subjects ; candidates may answer questions from either or both.

Social Administration

The development and administration of social services in the United Kingdom ; the corresponding stages of development in colonial and other underdeveloped territories ; a comparison of the relevant factors and their influence.

This paper will require a knowledge of the principles of Central and Local Government in relation to Social Services.

Geography of a Selected Region

Social, economic and political geography of selected areas, with special reference to agricultural and pastoral economics.

Demography

(*a*) *Elementary Statistics and Sources.* Collection, definition and tabulation of data. Approximations and error. Frequency groups, time series and geographical representation. Measures of average and dispersion. The elements of the analysis of time series. The simplest ideas of sampling and correlation.

The main sources of statistics of population, man-power, industrial health. The nature and limitation of these statistics and the application of elementary statistical methods to them. The use of statistics in the treatment of social problems and the elements of the technique of social surveys.

(*b*) *General demography, including formal demography and demographical analysis, with their Colonial applications.*

Sources and reliability of population statistics. Development of census and vital statistics. Problems of collecting population data in under-developed areas. The application of sample inquiries in Colonial territories. The interpretation of population statistics. Analysis of population by economic statistics. The analysis of mortality, nuptiality and fertility. Projections of future populations.

ACADEMIC POSTGRADUATE DIPLOMA IN COMPARATIVE PHILOLOGY

The University grants an Academic Postgraduate Diploma in Comparative Philology.

Course of Study

The Course for the Diploma is open to :—

(*a*) students of postgraduate standing whose undergraduate courses have in the opinion of the University included a suitable preliminary training.

(*b*) students who, though not graduates, have satisfied the University that their previous education and experience qualify them to rank on the same level as graduates approved under (*a*) for this purpose.

Students are required to attend a course of study approved for the purpose by the University, extending normally over two sessions, but students with exceptional qualifications may apply for permission to pursue a course of study extending over less than two sessions.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the College or School to which he is attached at the earliest opportunity to the Academic Registrar.

Each student before being admitted to the Examination will be required to produce certificates signed by the Head of the College at which he is registered that he has satisfactorily pursued the prescribed course of training.

Date of Examination

The Examination for the Diploma will take place once in each year, beginning on the last Monday in June.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than April 17th.

Fee

The fee for each student is 7 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination will consist of four papers of three hours each and an oral test, as follows :—

One paper on the principles and history of Comparative Philology (Linguistics).

Two papers containing questions on

either

(*a*) the comparative grammar of Indo-European with special reference to two of the following languages, the candidate's choice being subject to the approval of the University :—
Sanskrit, Ancient Greek, Latin, Gothic, Old Irish, Old Bulgarian, Lithuanian.

or

(*b*) The comparative and historical grammar of two living languages selected from any one of the following groups, the candidate's choice being subject to the approval of the University :—
Indo-Aryan, Romance, Germanic, Celtic, Slavonic.

One paper containing passages in the two languages offered by the candidate for translation and linguistic comment.

The oral examination will test the candidate's acquaintance with the elements of practical phonetics, and his ability to read the literature of his subject in French and German.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the " Academic Postgraduate Diploma in Comparative Philology," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate. The certificate will state that the candidate has shown a competent knowledge of the principles and history of Comparative Philology and indicate the linguistic group in which he has specialised.

ACADEMIC POSTGRADUATE DIPLOMA IN DIETETICS

The University grants an Academic Postgraduate Diploma in Dietetics.

Course of Study

The Course for the Diploma is open to :—

(*a*) Graduates in Household and Social Science of this University ;

(*b*) Graduates in Science of this or another approved University who have passed in both Chemistry and Physiology at the final examination for the Degree ;

(*c*) Other graduates who in the opinion of the University are qualified by their previous education and experience ;

(*d*) Students who, though not graduates, have satisfied the University that their previous education and experience qualify them to rank on the same level as graduates for this purpose ;

(*e*) Registered Medical Practitioners.

Students are required to attend a full-time course of study extending over not less than two terms at a School of the University and subsequently to attend for not less than three months in the Diet Kitchen of an approved Hospital and three months in the general kitchen of an approved Hospital or other approved institution.

Students who have not already been trained in cookery will be required to attend an approved course in cookery extending over not less than three months before being admitted to the course.

Examination

The Examination for the Diploma is in two Parts. No student will be admitted to Part II unless he has passed Part I.

Part I will begin on the third Tuesday in March and Part II on the first Tuesday in December.

The subjects of Part I are as follows :—

Chemistry and Physiology of Nutrition (one paper of three hours).

Principles of Dietetics (two papers of three hours each).

A practical examination of six hours.

The subjects of Part II are as follows :—

Diet and Disease (one paper of three hours).

Large scale catering and the nutritional needs of the population (one paper of three hours).

A practical examination of six hours in Cookery and the construction of special diets.

An oral examination at the discretion of the Examiners.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance

with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than February 8th for the March Examination or November 8th for the December Examination.

The fee is 2½ guineas for each entry to either Part of the Examination.* All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Candidates shall not be approved by Examiners in either Part of the Examination unless they have shown a competent knowledge in all the prescribed subjects of that Part.

Candidates who fail in either Part may be re-examined in that Part at any subsequent Examination on payment of the proper fee.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate to be called the "Academic Postgraduate Diploma in Dietetics," under the Seal of the University, will be delivered to each candidate who has passed the whole Examination, after the Report of the Examiners has been approved by the Senate.

SYLLABUSES

Part I

Biochemistry and Physiology in relation to Nutrition. Bacteriology in relation to food and nutrition. Distribution and function of individual nutrients, composition of normal diets. Analysis of food, blood and excreta. Elementary statistics. Methods of carrying out dietary and nutritional surveys and practical investigation of diets. Economic aspects of Nutrition. Nutritional problems affecting industrial and child welfare. Large scale catering, including visits to institutions to gain practical experience of varied types of catering.

Part II

Nutrition in health and disease. Diseases in which diet is known to play an important causative or curative part. The construction of therapeutic diets for the promotion of health and the treatment of disease. Infant feeding in health and disease. Practical instruction in the preparation, cooking and analysis of special diets. Large scale catering.

* In and after 1951 the fee for each entry to either part will be 3½ guineas.

POSTGRADUATE CERTIFICATE IN EDUCATION

The University grants a Postgraduate Certificate in Education.

Course of Study

The course of training for the Certificate for Internal Students and the subsequent Examination are open to graduates of this University, to graduates of other approved Universities, to persons who have passed all the Examinations required for a degree in other approved Universities, to women who previous to 1922 obtained a Tripos Certificate granted by the University of Cambridge, and to women who previous to 1920 obtained Certificates showing that, under the conditions prescribed by the Delegacy for Women Students at Oxford, they have passed the Second Public Examination of that University or have obtained Honours in the Oxford University Examination for Women in Modern Languages.

The course must extend over not less than one academic year.

The course of study will include the following branches :—

I The Principles of Education.

II Special Method.

III Psychology and Health Education.

IV The Present Educational System of England and its Recent History.

V *Either* (*a*) Psychology (with practical work) carried to a higher standard than in Branch III above,

or (*b*) History of Education,

or (*c*) Comparative Education and Administration.

VI Practical Training in Teaching.

Date of Examination

The Examination for the Postgraduate Certificate in Education will take place once in each year. The practical examination in teaching will be held at convenient times during the summer term ; the written examination will begin on the Wednesday prior to the first Monday in July.

The time-table of the Examinations, showing both the time and place of the written and practical examinations, will be furnished by the Academic Registrar to each candidate.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than March 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 15th.

Fee

The fee for each student is 6 guineas for each entry to the whole or written portion of the Examination. The fee for re-examination in the Practical part only is 3 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The written examination will include :—

I The Principles of Education (one paper).

In connexion with the examination in this subject the Examiners will take into account the essays written by the candidate as part of his course.

II Special Method (one paper).

The paper will be set in such a form that candidates may either confine themselves to questions dealing with a special subject and the subjects closely related thereto, or show a general knowledge of the methods of teaching the more elementary parts of several subjects of the school curriculum.

III Psychology (one paper of two hours) and Health Education (one paper of two hours).

IV The Present Educational System of England and its Recent History (one paper of two hours).

V *One* of the following :—

(*a*) Psychology (one paper).

In connexion with the examination in this subject the Examiners may require the production of any candidate's note-book or record of practical exercises.

(*b*) History of Education (one paper).

(*c*) Comparative Education and Administration (one paper).

Candidates will be required to take papers in subject I to IV and in one of the subjects V (*a*), V (*b*), and V (*c*). No candidate will be examined in more than one of the subjects V (*a*), V (*b*), and V (*c*).

In determining the proficiency of the candidate in teaching, the Examiners will take into account (i) a report by the authorities of his institution upon his teaching work during his course of training, and (ii) at the discretion of the Examiners a report by an Examiner upon a lesson or lessons given in the Examiner's presence.

The lesson given before the Examiner should, if possible, be taken in a school in which the candidate has taught for some time during his course of training. The Examiner may require the production of the candidate's note-book or record of teaching given and lessons observed.

A candidate who fails to satisfy the Examiners in the theoretical or the practical part of the Examination may be permitted to present himself in that part only at a subsequent Examination, and if he attains to a sufficiently high standard will be recommended by the Examiners for the award of the Postgraduate Certificate in Education. But, if upon re-examination he fails again to satisfy the Examiners, he shall not be recommended for the award of the Postgraduate Certificate in Education unless and until he satisfies the Examiners at some subsequent Examination both in the written examination and in the examination in practical teaching.

The authorities of each College, School, or Institution shall, in respect of each candidate registered as belonging thereto, transmit to the Chairman of the Board of Examiners at least three clear days before the commencement of the practical examination the report of the University Teachers on the candidate's practical work during his course of training. The Chairman of the Board of Examiners shall, before the publication of the pass list, certify to the Academic Registrar that a report has been received in respect of each candidate who has presented himself for the Examination.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on August 9th. A mark of distinction (the nature of which will be indicated on the certificate awarded) will be placed against the names of those who excel either in the practical part of the Examination or in the written or in both parts, provided that they pass the whole Examination at the same time.

A certificate to be called the " Postgraduate Certificate in Education " under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiner shall have been approved by the Senate.

SYLLABUSES

The syllabuses are as follows :—

I The Principles of Education

The concept of education ; educational aims.

The mental endowment of children.

The mental and moral development of children under the influences of home, school and other social institutions.

The general principles of teaching and of school organisation and discipline.

The main types of schools and their distinctive functions.

Every student will be required, as part of the course upon the Principles of Education, to write essays upon topics falling within the above-named or cognate subjects prescribed by the authorities of his institution.

II Special Method

The methods of teaching a special subject or group of subjects of school instruction.

III Psychology and Health Education

A. *Psychology :—*

The general bearing of psychology upon the theoretical and practical problems of education.

The psychology of individual differences ; general intelligence, its nature, measurement and distribution ; temperament and character ; instinct and emotion.

The psychology of teaching methods, and of the fundamental school studies.

B. *Health Education :—*

The general characteristics of living organisms ; the interactions between organisms and their environment.

The main features of the development of organisms from the ovum. Heredity. Individual variations.

The broad principles in general physiology.

The conditions of healthy physical life and development of children at home and at school.

The functions and responsibilities of teachers with reference to health and disease. Medical inspection.

IV* The Present Educational System of England and its Recent History

The more important features of the present educational system of England.

The influences that have mainly determined the history and form of the system since the beginning of the twentieth century.

V (a) Psychology (with practical work)

The general methods of psychology with special reference to educational problems.

Simple exercises on psychological methods; mental work; mental testing; the economy and technique of learning.

The practical examination of individual cases.

V (b) History of Education

One or more of the historical periods (A, B, C, D, E, F) set forth below, together with the study of one or more of the works in the attached lists illustrating the periods.*

A. *Education in Ancient Greece and Rome* :—

(1) Plato : *Republic* (selected books).

(2) Aristotle : *Ethics* (selected books) ; *Politics* (selected books).

(3) Quintilian : *Institutes of Oratory*, I, II, X, XI, XII.

B. *Education in Western Europe from the fall of the Roman Empire to* 1400 :—

(1) S. Augustine : *Confessions*.

(2) Quintilian (the books mentioned in A, with special reference to Colson's edition of the *Institutio*, bk. i).

(3) *Mediæval Lore from Bartholomæus Anglicus*, ed. by R. Steele (King's Classics).

(4) Leach : *Educational Charters* (selections).

C. *Education in Western Europe*, 1400–1630 (*with special reference to England*) :—

(1) The Tractates (one or more) translated in W. H. Woodward's *Vittorino da Feltre*.

(2) The education treatises of Erasmus (in *Erasmus concerning Education*, pt. ii, by W. H. Woodward).

(3) Erasmus : *Letters* (selection).

(4) Elyot : *The Boke named the Governour*.

(5) Ascham : *The Scholemaster*.

(6) Leach : *Educational Charters* (selection).

(7) Mulcaster : *Elementarie* (Oxford Univ. Press).

(8) Wilson : *Art of Rhetorique* (Oxford Univ. Press).

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* **1951, 1952** and **1953.** Section E with the following works:—(4) *or* (6) *or* (10).

D. *Education in Western Europe*, 1630–1800 (*with special reference to England*) :—

(1) Bacon : *The New Atlantis ; Essays.*

(2) Milton : *Of Education.*

(3) Comenius : *The Great Didactic.*

(4) The educational writings of John Locke (ed. J. W. Adamson).

(5) The Port-Royalists on Education (ed. H. C. Barnard).

(6) Rousseau : *Emile.*

(7) Sir Joshua Reynolds : *Discourses.*

(8) Edgeworth : *Practical Education.*

E. *Education in England since* 1800 :—

(1) The educational writings of Pestalozzi (ed. J. A. Green).

(2) Wordsworth : *The Prelude*, 1–5 ; *The Excursion*, 8, 9.

(3) The chief educational writings of Froebel (ed. Fletcher and Welton).

(4) Newman : *The Idea of a University* (ed. May Yardley).

(5) M. Arnold : *Reports on Elementary Schools.*

(6) M. Arnold : *Culture and Anarchy* (ed. F. A. Caveragh).

(7) Huxley : *Science and Education*, 4–9, 15–17.

(8) Herbart : *General Pedagogy* (in the original or translation).

(9) Selected essays and addresses from Carlyle, Ruskin, J. S. Mill, Herbert Spencer, William Morris, R. L. Stevenson.

(10) James Mill : *On Education* ; and J. S. Mill : *Address at St. Andrews* (ed. Cavenagh, Camb. Univ. Press, 1930).

(11) Sir James Kay-Shuttleworth : *Four Periods of Public Education* (a report of the pamphlets of 1832, 1839, 1847 and 1861, together with other material, including the *Reports*, on Battersea, Longmans, 1862).

(12) Herbert Spencer : *Essays on Education.*

F. *Education in the British Empire, with special reference to* :—

(*a*) one or more of the Dominions (to be specified from time to time),

or (*b*) India,

or (*c*) a group of Colonies and Dependencies (to be specified from time to time).

V (c) Comparative Education and Administration

(i) The Educational Systems of countries other than England (especially Scotland, France, Germany and the United States of America) : a study in general outline.

or (ii) A comparative study of education among primitive peoples.

VI Practical Training in Teaching

The preparation of lessons ; the giving of lessons under supervision.

The observation of teaching in a school or schools.

Training in the general duties of a teacher in a school.

ACADEMIC DIPLOMA IN EDUCATION

The University grants a Diploma entitled the " Academic Diploma in Education."

Course of Study

The courses for the Diploma are open to students who :—

(i) have obtained the Teacher's Diploma or Teacher's Certificate of this University ;

or (ii) have undergone a course of training for the profession of teacher, approved by the University for this purpose, and have passed an approved professional examination ;

or (iii) possess qualifications accepted by the University as equivalent to one of the foregoing.

Students are required to attend a course of study approved by the University, extending over not less than one academic year for full-time students and not less than two academic years for part-time students.

The course of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstance, must be notified by the authorities of the Institution at which he is registered at the earliest opportunity to the Academic Registrar.

Date of Examination

The Examination for the Diploma in Education will take place once in each year, beginning on the fourth Monday in May*, provided that if that day be Whit Monday the Examination will begin on the following Tuesday. The time-table of the Examination will be furnished by the Academic Registrar to each candidate.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned filled up and attested in accordance with the General Regulations for Approved Courses of Study, together with the proper fee, not later than February 1st.

Fee

The fee is seven guineas for each entry to the Examination. All cheques should be made payable to the University of London or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

All candidates, with the exception of those who have passed, as post-graduate students, the Internal Examinations for the Teacher's Diploma (now renamed " Postgraduate Certificate in Education ") or Teacher's Certificate of this University, must take one paper in the General Theory of Education.

In addition, they will be examined in any two of the following subjects :—

1. The Philosophy of Education. Two papers.

2. Comparative Education. Two papers, of which one will deal with the general principles and problems of comparative education : the second will be concerned with the educational system of some country or group of countries outside the United Kingdom, approved for this purpose by the University.

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* In 1951 the examination will begin one week earlier, *i.e.*, on May 21st, 1951.

3. History of Education. Two papers.

4. Educational Psychology. Two papers.

5. Educational Sociology. Two papers.

Alternative A—General Educational Sociology.

Alternative B—Anthropology and Sociology applied to the educational problems of tropical and non-industrial regions.

6. Educational organisation and administration—its theory and recent history. Two papers.

Alternative A—The United Kingdom.

Alternative B—Tropical and non self-governing territories.

7. Theory and Practice of Teaching. Two papers of which one will deal with the general problems of curriculum and methods of teaching including the methods and results of experimental research; while the second will be concerned with more specific problems of curricula—the teaching of a particular subject or group of subjects or teaching in educational institutions of a particular kind.

Candidates are advised not to offer Subject 7 unless they have had adequate practical experience. Candidates taking the papers in this subject must indicate at the time of registration the range of topics they offer for the second paper, and this range must be approved for this purpose by the University.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar in the course of the third week following that in which the Examination concludes. A mark of distinction will be placed against the names of those candidates who show exceptional merit.

A certificate to be called the "Academic Diploma in Education," under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners has been approved by the Senate.

DIPLOMA IN FINE ART

The University grants a Diploma in Fine Art, which is given in one or both of the following subjects, viz. :—

(*a*) Painting (including Drawing) and (*b*) Sculpture (including Drawing).

The Course for the Diploma is open to students of the Slade School at University College, and of such Schools of the University as may be recognised by the University for this purpose. The course extends over three sessions, but students with certain qualifications may apply for permission to pursue a course extending over not less than two sessions.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the College or School to which he is attached at the earliest opportunity to the Academic Registrar.

The student will be required to submit, together with his entry-form, certificates, signed by the teacher in each case,

(1) of having attended to the satisfaction of the teacher a course of Fine Art Anatomy extending over not less than three terms ;

(2) of having attended to the satisfaction of the teacher a course in Geometry and Perspective extending over not less than two terms ;

(3) of having attended a course in the History of Art to the satisfaction of his teacher or teachers, extending over three sessions ; unless in exceptional circumstances exemption is granted on the ground of having passed an equivalent examination, or unless he has the necessary qualifications to enable him to pass a test in the entire course at the end of two sessions ;

(4) of having undergone to the satisfaction of the teacher practical tests consisting of the identification of typical examples of various periods of Art ;

(5) of having attended courses in the following subjects, such courses to extend together over not less than three sessions, or two sessions in the case of students who have permission to take the Diploma course in two sessions :—

Principal Subjects :—

(*a*) ***Either*** (i) Painting, *or* (ii) Sculpture ;

(*b*) Drawing.

Subsidiary Subjects—One of the following :—

(*c*) Architecture ; (*d*) Design ; (*e*) Painting (if not offered as a principal subject ; (*f*) Sculpture (if not offered as a principal subject).

Students may, however, be specially exempted from presenting certificates under headings (1) and (2) above, if they produce evidence satisfactory to the University of their knowledge of the subjects in question at the beginning of their course of study. Application for such exemption must be made to the Academic Registrar before the end of the first term of the course.

Every candidate must

(*a*) submit a series of not less than six drawings of the human figure from life.

Every candidate must further submit works under *two* of the following headings of which one must be either (*b*) or (*c*) :—

(*b*) *Painting* : A series of six works, including two paintings of the head, two paintings of the figure, and two compositions.

(*c*) *Sculpture* (as a principal subject) : Three figures in the round, of which one at least must be from life ; six heads from life ; a composition, in relief or in the round, either modelled or carved, of which the dimensions are not less than 15 in. by 20 in. ; and a specimen of carved lettering of an approved type.

(*d*) *Sculpture* (as a subsidiary subject) : Three heads from life ; a composition, in relief or in the round, either modelled or carved, of which the dimensions are not less than 15 in. by 20 in. ; and a specimen of carved lettering of an approved type.

(*e*) *Architecture* : Four drawings of an architectural subject or subjects.

(*f*) *Design* : A series of six original designs.

Candidates will be permitted to present themselves for examination in one or more of the prescribed subjects before the end of the three year's course provided that they have completed the instruction-course required in the subject or subjects in question, and furnish the requisite certificate of attendance in connexion with such instruction-course.

Candidates shall not be approved unless they have shown a competent knowledge in the foregoing subjects, but a candidate who has reached a sufficiently high standard in one or both of the principal subjects or in the subsidiary subject, but who has failed to satisfy the Examiners in the remaining subject or subjects, may be allowed to present himself for re-examination in the remaining subject or subjects at a subsequent Examination.

The Examination for the Diploma will take place once in each year, beginning on the first Monday in June.

Every student entering for this examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, not earlier than April 1st, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 8th.

Candidates will be required to pay a fee of 5 guineas on presenting themselves for the whole or any part of the Diploma Examination ; and a fee of 2 guineas for re-examination in any subject.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A Studentship of the value of £250 and tenable for one year is offered at the Diploma Examination. For detailed Regulations see p. 13 of the General Regulations.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the " Diploma in Fine Art," stating the Principal and Subsidiary subjects in which the candidate has satisfied the Examiners, under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

ACADEMIC DIPLOMA IN GEOGRAPHY

The University grants an Academic Diploma in Geography.

Course of Study

The Course for the Diploma is open to :—

(1) Matriculated Students of the University.

(2) Persons recognised by the Board of Education as Certificated Teachers.

(3) Teachers on the Register of the Royal Society of Teachers.

Students are required to attend a course of study approved by the University for the purpose, extending normally over two sessions. Students who can produce evidence of a qualification in Geography at least equivalent to the standard required at the Intermediate Examination of this University may apply for permission to pursue a course of study extending over less than two sessions.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the College or School to which he is attached at the earliest opportunity to the Academic Registrar.

Examination

The Examination for the Diploma will take place once in each year, beginning on the first Monday in May.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than March 7th.

The fee for each student is 5 guineas for each entry to the Examination.

All cheques should be made payable to the University of London or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The Examination will consist of :—

1. General and Regional Geography (Three papers of three hours).
2. Physical basis of Geography (One paper of three hours).
3. Map work (One paper of three hours).

Satisfactory evidence must be submitted to the Examiners of adequate instruction having been received in field-work.

A minimum standard of attainment will be fixed in each of the three subjects, but candidates will be required to have reached a higher standard in not less than two of the subjects.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the fourth week following that in which the Examination concludes.

A certificate, to be called the " Academic Diploma in Geography," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

SYLLABUSES

The syllabuses are as follows :—

General and Regional Geography

General. The distribution of land and water, of major relief features, of climatic and vegetation regions, and the broad influence of these physical factors on the distribution of man and his work, leading up to a division into major geographical regions.

Regional. A study of the following :—

(*a*) The British Isles.

(*b*) Europe, including the Mediterranean Lands of Asia and North Africa.

(*c*) North America.

(*d*) The Monsoon Lands of Asia.

Physical Basis of Geography

A broad knowledge to form a basis for the study of regional geography.

The movements of the earth and the resulting diurnal and seasonal changes.

Distribution and periodic variation of atmospheric pressure and temperature, wind systems, precipitation ; climatic types.

Form of sea and ocean beds and the chief regular movements of the surface waters of the oceans.

General classification of the materials of the earth's crust : processes of denudation and deposition : typical land forms.

Map Work

The study and interpretation of the principal maps of the Ordnance Survey and of the International 1/M map.

The study and use of atlas maps, including some knowledge of the principles of the networks commonly used.

Simple methods of survey, including the use of the chain, plane-table, prismatic compass and clinometer.

Cartographic and diagrammatic expression of data relating to climatic, economic and population (demographic) facts.

ACADEMIC DIPLOMA IN HISTORY OF ART

The University grants an Academic Diploma in the History of Art.

COURSE OF STUDY

The course for the Diploma is open to :—

(*a*) Students of postgraduate standing whose undergraduate courses have in the opinion of the University included a suitable preliminary training.

(*b*) Students who, though not graduates, have satisfied the Professors in charge of the course that their previous education and experience qualify them to profit by the course.

The course extends over not less than two academic years for all students, and the standard of the course is that for the B.A. Honours Degree in the History of Art.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the College or School to which he is attached at the earliest opportunity to the Academic Registrar.

The syllabus of the course and examination is as follows :—

(1) *and* (2). History of Art in the Renaissance c. 1300–c. 1600.

Particular attention should be paid to the history of Art in Italy throughout the period, and that in Northern Europe during the 15th and 16th centuries.

(3) Renaissance : a critical study of prescribed texts (see below).

(4) *and* (5). The history of Art in England *either*—

(*a*) up to c. 1550 *or*

(*b*) from c. 1550 onwards.

(6) A paper in which candidates will be required to discuss works of art of which photographs are provided. The material will be taken from the Renaissance and the two English papers as defined above.

(7), (8) *and* (9). One of the following special periods in the history of Art in Western Europe :—

(*a*) Byzantine, c. 400 to c. 1400.

(*b*) Carolingian and Romanesque, c. 800 to c. 1200.

(*c*) Gothic, c. 1100 to c. 1500.

(*d*) 17th Century.

(*e*) 18th Century.

(*f*) 19th Century to present day.

[In special circumstances, a candidate will be allowed to submit for approval an alternative to the above prescribed special periods.]

Candidates will be expected to show a knowledge of the principal schools of Painting, Architecture, Sculpture and the Applied Arts in the periods with which they are concerned. They will also be expected to show some knowledge of :—

(*a*) Iconography.

(*b*) The history of Costume.

(*c*) Technical methods.

(*d*) The history of Art Criticism.

Paper 9 in the examination will consist of questions on the general historical background of both the Renaissance and Special Period chosen. Emphasis will be placed on social and cultural rather than on political history.

Students must satisfy the authorities of the School concerned that they are able to translate from at least two modern languages, other than their own, of value for the study of the history of art.

Examination

The Examination for the Diploma will take place once in each year, beginning on the Thursday after June 5th.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than March 7th.

The fee for each entry to the Examination is 7 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The Examination will consist of nine papers as above and an oral examination.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the fourth week following that in which the Examination concludes.

A certificate, to be called the " Academic Diploma in History of Art," under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners has been approved by the Senate.

PRESCRIBED TEXTS

1951, 1952 and **1953.**

Vasari : *Lives* (trans. G. du C. de Vere)—the Prefaces, etc., on pages xiii-lix ; the Author's Prefaces to Parts II and III of the Lives ; Part I, Cimabue, Giotto ; Part II, Masaccio, Brunelleschi, Donatello ; Part III, Leonardo, Raphael, Michelangelo.

Condivi : *Life of Michelangelo* (trans. C. Holroyd).

Ghiberti : *Commentaries* (trans. to be obtained from the University).

Ridolfi : *Life of Tintoretto* (trans. to be obtained from the University).

A. Dürer : *Records of Journeys to Venice and the Low Countries* (trans. R. Tombo, ed. R. Fry, or in M. Conway : *Literary Remains of A. Dürer*).

ACADEMIC POSTGRADUATE DIPLOMA IN LAW

The University grants an Academic Postgraduate Diploma in Law.

Course of Study

The course of study for the Diploma is open to graduates of this or another approved University whose undergraduate courses and/or previous experience have included an approved preliminary training in Law.

Before admission to the course a student must submit, for approval by the University, evidence of his qualifications.

Students are required to attend a course of study approved for the purpose by the University extending over not less than one session.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstances, must be notified by the authorities of his College or School at the earliest opportunity to the Academic Registrar.

Each student before being admitted to the Examination will be required to produce a certificate signed by the Head of the College at which he is registered that he has satisfactorily pursued the prescribed course of training.

Date of Examination

The Examination for the Diploma will take place once in each year, beginning on the 3rd Monday in September.

Every student for this Examination must apply to the Academic Registrar for an entry form and a certificate of course of study which must be returned duly filled up and attested in accordance with the General Regulations as to approved courses of study together with the proper fee not later than June 1st.

Fee

The fee is 7 guineas for each entry to the Examination. All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The candidate must submit a dissertation which must be written in English and must afford evidence of serious study by the candidate and of his ability to discuss a difficult problem critically. The subject of the dissertation must be submitted for the approval of the University not later than April 15th for the next ensuing examination. Any subject submitted at a later date must be accompanied by a fee of 10*s.* 6*d.*

The candidate shall also be examined in English Legal Method, or, with the permission of the University, in one of the subjects for the time being which can be offered for the Master of Laws Degree Examination. In each subject the Examination shall consist of one three-hour paper. The examiners may, in addition, if they see fit, examine any candidate orally.

The candidate must forward to the University with his entry form not less than 2 typewritten or printed copies of his dissertation and a short abstract (2 copies) of his dissertation comprising not more than 300 words.

A certificate to be called the " Academic Postgraduate Diploma in Law," under the seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners shall have been approved by the Senate.

SYLLABUS

English Legal Method

The meaning of the term " common law." The place of judge-made law and of legislation in the English legal system. The principles of precedent. Comparison between English case-law method and Continental method of arguing from codified principles. The meaning of equity.

The principle of the sovereignty of Parliament. English and Continental methods of legislation compared. Delegated legislation.

Movements towards codification in England.

The organisation of the Courts, method of appointment of judges and magistrates. The legal profession in England, the part taken by the judiciary and legal profession in the development of Law. Lay participation in the administration of justice : the magisterial system and the jury system ; admissibility of evidence in English Law.

Relationship between central and local government.

The English approach to administrative law : comparison with the continental approach.

The meaning of the " rule of law." The importance of the law of evidence and procedure in English justice.

UNIVERSITY DIPLOMA IN LIBRARIANSHIP

The University grants a Diploma in Librarianship.

Admission of Students

The course for the Diploma is open to :—

(*a*) Matriculated Students.

(*b*) Non-matriculated Students whose preliminary education appears to the School of Librarianship Committee to be sufficient to enable them to take advantage of the course of training.

Applications for registration should be made within five months from the first attendance at the course on account of which registration is desired. The period of five months will be reckoned as from the last day of the month in which the course in question was begun.

Course of Training

The course of training for the Diploma will extend over not less than one academic year for full-time students and over not less than three years nor more than five years for part-time students, and will include approved instruction in all subjects to be taken at the Examination.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the School of Librarianship and Archives at the earliest opportunity to the Academic Registrar.

The course will be subject to the General Regulations for Approved Courses of Study (see pp. 6–9) in so far as they are applicable.

A part-time student in the School of Librarianship and Archives who, while following a part-time course in the School is at the same time engaged in approved Library service, will be required to devote to his part-time studies in the School and to the approved paid Library service a period of not less than four years or, if he is a graduate of this University or another approved University, a period of not less than three years. A part-time student who is not at the same time engaged in approved paid Library service will be required, before obtaining his Diploma, to produce evidence that he has been employed in full-time service in an approved Library for a period of not less than two years.

The University may grant to a student who is a graduate of this University or of another University approved for the purpose or to a student who, while satisfying the requirements for admission, has already held a salaried post in a Recognised Library for not less than five years the following concession :—

Exemption from attendance at courses in which he has received approved training, provided that before being admitted to the Examination for the Diploma every full-time student shall pursue an approved course in this University extending over not less than one year and every part-time student a course extending over not less than two years.

A student, before being admitted to the Examination, will be required to produce a certificate signed by the Director of the School of Librarianship and Archives that he has satisfactorily pursued the prescribed course of training.

The subjects of the ordinary course and examination are as follows :—

PART I (*First Year*)

(i) English Composition : one paper.

(ii) Latin *or* Greek *or* Sanskrit *or* Classical Arabic : one paper.

(iii) & (iv) Two approved modern European languages.

Or An approved modern European language and an approved modern Oriental language : two papers.

The following languages have been approved :—French, German, Italian, Portuguese, Spanish, Dutch, Danish, Norwegian, Swedish, Russian, Welsh, Afrikaans, Arabic, Persian, Turkish, Malay, Chinese. Other languages may be submitted for approval.

(v) English Literature (general) : one paper.

(vi) Literary history of literature, science and history ; literary appreciation, criticism and reading tastes : one paper.

(vii) Elementary library economy : one paper.

PART II (*Second Year*)

(viii) Cataloguing and classification : three papers.

(ix) General bibliography : one paper.

(x) Book selection and reference bibliography : one paper.

(xi) General library administration : one paper.

(xii) *Either* (*a*) Elementary English Palæography ;
or (*b*) the Palæography of an Oriental (including Semitic) Language, approved by the University* : one paper.

(xiii) *Either* (*a*) National and University library administration : one paper ;
or (*b*) Special library administration : one paper ;
or (*c*) Urban, county and school libraries : one paper.

(xiv) *Either* (*a*) Advanced English Palæography and Archives : one paper ;
or (*b*) the Palæography and Archives of an Oriental (including Semitic) Language, approved by the University* : second paper ;
or (*c*) Historical bibliography : one paper.

**Note.*—The following Oriental languages have been approved : Sanskrit Pali, Hebrew, Arabic, Persian. Other Oriental languages may be submitted for approval.

Students desiring to take Oriental (including Semitic) Palæography and Archives will be admitted to the one year Diploma course only if they have attained intermediate standard in the relevant language.

PART III (*Third Year*)

(xv) A bibliography of an approved author or subject, or thesis on some aspect of librarianship approved by the Director, and tested by oral examination.†

(xvi) Twelve months' continuous full-time paid service in an approved library. [*Note.*—This service need not be completed within the third academic year of the Diploma course, but should be completed as soon as possible afterwards.]

† Candidates resident overseas may, with the consent of the Examiners, be exempted from the oral examination.

Date of Examination

The Examination for the Diploma will take place once in each year, in June.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study together with the proper fee, not later than May 10th.

Fee

The fee for each Part of the Examination is two guineas. A candidate who is permitted to enter for re-examination in one subject must pay an extra fee of one guinea in respect of re-examination in that subject whether taken alone or as one of the subjects at Part II or Part III of the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Examination

The Examination will consist of three parts. Graduates of the University, or of another University approved for the purpose, may be exempted from Part I. Undergraduate students will be examined in Part I at the end of the first year, and in Part II at the end of the second year. Part III will be completed during the third year (or in the case of graduates exempted from Part I, during the second year) except that the experience required under (xvi) may be discharged in approved cases before the beginning of the course.

Part-time students will take Part I of the Examination at the end of the first or second year of the course as the University may determine, and Part II at the end of the course. Part-time students engaged in approved library service will be exempted from the practical experience required under Part III (xvi), and may, subject to the approval of the Director, present the thesis required under Part III (xv) when they enter for Part II of the Examination.

A candidate who is required to take the Examination in three parts and fails in one subject only in the first part may, with the permission of the Examiners, offer that subject as one of his subjects in the second part. A candidate who fails in one subject only in the second part may, with the consent of the Examiners, be permitted to offer himself for re-examination in that subject at the next following examination.

If a candidate who has been referred in one subject does not present himself for re-examination in that subject at the next following examination, or having presented himself fails to pass in it, he shall only be permitted to enter for that subject taken by itself on one subsequent occasion in exceptional circumstances and by special permission of the Academic Council.

A candidate who is required to take the Examination in three parts and fails in the first part may be permitted, on the recommendation of the Director of the School of Librarianship and Archives, to take the first and second parts together at the end of the next following session, provided that he shall have taken a whole-time course in that session.

A provisional list of successful candidates arranged in alphabetical order will be published by the Academic Registrar on July 19th.

A certificate to be called the "University Diploma in Librarianship," under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners has been approved, and evidence of the Library service referred to above has been received by the Senate.

ACADEMIC POSTGRADUATE DIPLOMA IN MEDICAL RADIOLOGY (DIAGNOSIS)

[*The Students entering the course in* **1950** *and* **1951** *only.*]

The University grants an Academic Postgraduate Diploma in Medical Radiology (Diagnosis)—D.M.R.D.

COURSE OF STUDY.

The Course for the Diploma is open to registered medical practitioners and to graduates in Medicine of this or another approved University.

Before admission to the course all candidates must have held an appointment as Resident House Officer (medical or surgical) for twelve months or satisfy the University that they have had equivalent clinical experience.

Students are required to devote their whole time to a course of study approved by the University, and extending over not less than two academic years at one or more of the Colleges or Schools of the University.

The course of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstance, must be notified by the authorities of his College or School at the earliest possible opportunity to the Academic Registrar.

The course will consist of lectures and demonstrations as well as practical instruction in the following subjects :—

Lectures and demonstrations extending over the first four months of the course and comprising (*a*) Physics and Electro-Technology in relation to Diagnostic Radiology; (*b*) Pathology in relation to Diagnostic Radiology; and (*c*) Radiographic Technique.

Lectures in Diagnostic Radiology extending over the remainder of the first year of the course.

The student must also attend regularly throughout the six terms in the Radiodiagnostic Department of a general teaching hospital which is attached to a Medical School of the University. In special cases other hospitals may be approved.

A syllabus indicating the general scope of the Diploma is set out below.

EXAMINATION.

The Examination for the Diploma is in two Parts. A candidate will not be permitted to proceed to Part II of the Examination until he has satisfied the Examiners at Part I.

Part I of the Examination will consist of a paper and a practical examination in Physics and Electro-Technology in relation to Diagnostic Radiology. The Examiners may test any candidate by means of oral questions.

Part II will consist of 2 papers and an oral examination in Diagnostic Radiology.

Part I of the Examination will be held twice in each year, beginning on the third Tuesday in February and on the second Monday prior to the first Monday in July. The last Examination for Part I will be held in July, 1954.

Part II of the Examination will be held twice in each year, beginning on the first Monday in July and on the first Monday in December. The last Examination for Part II will be held in December, 1954.

Every student entering for either Part of the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than January 5th for the February Examination, April 8th for the June and July Examinations, or November 1st for the December Examination.

The fee is five guineas for each entry to either Part of the Examination.*

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the "Academic Postgraduate Diploma in Medical Radiology (Diagnosis)" under the Seal of the University, will be delivered to each successful candidate after the Report of the Examiners on Part II of the Examination shall have been approved by the Senate.

SYLLABUS

The following syllabuses are intended to indicate the general scope and character of the course without being exhaustive of all parts of the subjects :—

Part I.

(A knowledge of general Physics equivalent to that of the First Medical Examination is assumed.)

Elementary electricity and magnetism including alternating currents. Electromagnetic induction. Impedance. Transformers.

Introduction to study of electromagnetic radiations. Structure of the atom. Cathode rays. Thermionic emission. Photo cells. Cathode ray oscillograph. X-rays. Properties and nature. X-ray spectra. Absorption and scattering. Variation with wave length and nature of absorbing medium. Compton effect. Secondary radiations. Filters. Ionisation of gases. Measurement of X-rays. The röntgen. Physical and geometrical principles of diagnostic radiology. Factors affecting sharpness, size and shape of shadows. Localisation. Stereography. Tomography. Kymography. Fluorescent screens. Photographic effects of radiations and theory of photographic action. Development. Fixation. Intensification. Blackening. Photographic density and its measurement. Contrast, speed and sharpness.

Electrotechnics, including construction and action of A.C. and D.C. generators and motors. High tension transformers.

Diagnostic X-ray apparatus. Its construction and care. Production of X-rays. Measurement of high tension and tube current. Circuits used in diagnostic apparatus. Rectification. Construction of X-ray tubes and of the diode. Time switches. Stabilisers. Methods of reducing secondary radiation, e.g., Cones, Potter-Bucky diaphragm and grids of various types.

Protection against radiation and electrical dangers. International protection recommendations.

* In and after 1951, the fee for each entry to either Part will be 6 guineas.

Practical Course.—The course is designed to illustrate the basic principles of the subject matter of the foregoing syllabus and to give practice in the use of apparatus employed in this field of radiology, including the detection of faults.

Part II.

Radiological technique and diagnosis as applied to the various systems of the body in normal and pathological states.

ACADEMIC POSTGRADUATE DIPLOMA IN MEDICAL RADIOLOGY (THERAPY)

[*For students entering the course in* **1950** *and* **1951** *only.*]

The University grants an Academic Postgraduate Diploma in Medical Radiology (Therapy)—D.M.R.T.

Course of Study.

Before admission to the course all candidates must have obtained a qualification in Medicine, Surgery and Midwifery recognised by the University and subsequently to such qualification have held an appointment as Resident House Officer (medical or surgical) for twelve months or satisfy the University that they have had equivalent clinical experience.

Students are required to devote their whole time to a course of study approved by the University, and extending over not less than two academic years at one or more of the Colleges or Schools of the University.

The course will consist of lectures and demonstrations as well as practical instruction in the subjects set out below. The student must also attend regularly throughout the six terms in the Radiotherapy Department of a Hospital to which a Medical School of the University is attached.

Part I: A course extending over two terms and comprising (*a*) Physics and Electro-Technology in relation to Radiotherapy; and (*b*) Principles of General Pathology.

Part II: A course extending over the subsequent four terms and comprising (*a*) Radiotherapy; (*b*) Biological effects of radiation; and (*c*) Special Pathology.

The course of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstance, must be notified by the authorities of his College or School at the earliest opportunity to the Academic Registrar.

Syllabuses indicating the general scope of the Diploma are set out below.

Examination.

The Examination for the Diploma is in two Parts. A candidate will not be permitted to proceed to Part II of the Examination until he has satisfied the Examiners at Part I.

Part I of the Examination consists of two papers, a practical examination and an oral examination in Physics, and one paper in General Pathology.

Part II consists of two papers, a clinical examination and an oral examination.

Part I of the Examination will be held twice in each year, beginning on the Tuesday following the third Monday in March and on the second Monday prior to the first Monday in July. The last Examination for Part I will be held in July, 1954.

Part II of the Examination will be held twice in each year, beginning on the first Monday in July and on the first Monday in December. The last Examination for Part II will be held in December, 1954.

Every student entering for either Part of the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than February 9th for the March Examination, April 8th for the June and July Examinations, or November 1st for the December Examination.

The fee is five guineas for each entry to either Part of the Examination.*

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the "Academic Postgraduate Diploma in Medical Radiology (Therapy)" under the Seal of the University, will be delivered to each successful candidate after the Report of the Examiners on Part II of the Examination shall have been approved by the Senate.

SYLLABUSES

The following syllabuses are intended to indicate the general scope and character of the course without being exhaustive of all parts of the subjects :—

Part I.

(*a*) *Physics and Electro-Technology.*

(A knowledge of general Physics equivalent to that of the First Medical Examination is assumed.)

Elementary electricity and magnetism, including alternating currents. Dynamos. Motors. Generators.

Introduction to study of electromagnetic radiations. The physical properties of infra-red, visible and ultra-violet radiations in relation to their medical use. Photo-cells. Wave and quantum theories of radiation.

Outline of theories of structure of matter. Structure of the atom. Elementary physics of the atomic nucleus. Fundamental particles including neutrons and protons. Wilson expansion chamber. Motion of charged particles in magnetic and electric fields.

Cathode rays, their nature, production and properties. Cathode-ray oscillograph. Thermionic emission. Elementary properties of diode and triode valves. Amplification of ionisation currents.

X-rays, their properties and nature. X-ray spectra, line and continuous. Scattering of X-rays. Compton effect. Secondary electromagnetic and corpuscular radiations. X-ray absorption by scatter, fluorescence and nuclear interaction. Pair formation. Measurement of X-rays, particularly by ionisation methods. The röntgen. Instruments for the measurement of X-ray dose and dosage-rate. Standard chambers. Spectrographic and absorption methods of measuring X-ray quality.

Natural radioactivity. Radioactive substances. Nature of radioactivity. Disintegration theory. Radioactive equilibrium. General laws of radioactivity. The physical properties of alpha, beta and gamma rays.

* In and after 1951, the fee for each entry to either Part will be 6 guineas.

Physical basis of Radiotherapy. Physical basis of the biological action of ionising radiations, including X-rays, gamma rays, neutrons and protons. Dose. Backscatter. Depth dose. Percentage depth dose. Physical conditions on which these quantities depend. Direct reading dosage-rate meters. Integral dose. Geometrical methods of studying dose distribution. Beam direction. Distribution of radiation in tissues.

X-ray apparatus, its construction and care. Production, control and measurement of high voltages for therapeutic purposes. X-ray tubes, valves, high tension circuits.

Van der Graaf generators. The cyclotron, betatron and synchroton. Linear accelerator.

Dosage. The physical basis of, and apparatus appropriate to, interstitial, surface, intra-cavitary and teleradium therapy. Methods of preparation and use of radon.

Artificial radioactivity. Production, properties and measurement of radio-isotopes. The chain-reacting pile. The physical basis of the therapeutic use of radio-isotopes and of tracer techniques. Dosage in the use of natural and artificial radio-active substances.

Protection. Protective measures against radiation and electrical dangers. Tolerance dose.

(*b*) *General Pathology.*

Effects of injury. Repair. Factors involved in the localisation and spread of infection. Types of inflammation. Infective granulomata. End results of inflammation. Principles of repair. General effects of infection. Reactive and degenerative changes including those in the blood and blood forming organs.

Exchange of tissue fluids and œdema.

Thrombosis. Embolism and infarcation.

Hypertrophy. Hyperplasia.

Benign and malignant tumours, their classification and mode of spread.

Part II.

(*a*) *Radiotherapy.*—The principles and practice of radiotherapy with special reference to radio active substances and X-rays, including the following :—Methods of Radiotherapy. Localisation of tumours. The management of the patient, curative and palliative treatment. Radiotherapy of benign and malignant disease. Radiotherapy of tumours of skin, eye, breast, mouth and pharynx, salivary glands, thyroid, larynx, lungs, oesophagus, rectum and anus, uterus and other female genital organs, urinary tract, male genital organs, central nervous system. Sarcoma of bone and soft tissues. Lymphosarcoma, Hodgkin's disease and the leukæmias.

(*b*) *Biological effects of radiation,* including cytological effects, genetic effects, effects on normal tissues and organs, effects on tumours, effects on inflammatory tissues. Radiosensitivity. Radiation damage, local and general. Protection against radiation damage.

(*c*) *Special Pathology.*—Special Pathology of the conditions commonly treated by Radiotherapy and of those closely related to them by differential diagnosis. Special attention will be paid to benign and malignant tumours and to disorders of the blood and blood-forming organs.

ACADEMIC DIPLOMA IN MILITARY STUDIES

The University grants an Academic Diploma in Military Studies.

Course of Study

The course of study for the Diploma is open only to students (whether matriculated or not) who, in the opinion of the University, are suitably qualified to attend the course.

Students are required to attend a course of study approved for the purpose by the University extending over two years. Arrangements will be made for visits to centres of military interest. Throughout the course exercises relating to the subjects of instruction will be set, including outdoor exercises.

The details of the course are as follows :—

First Year

Principles of the organisation of defensive forces. Organisation of the forces of the British Empire. Organisation and functions of the Staff. Staff duties in relation to organisation. Principles of War. Characteristics amd principles of the employment of the several arms. Command and the methods by which it is exercised. Principles governing the preparation and issue of orders. Principles of tactics and their application by the several arms. Administration and supply. Signal services. Intercommunications. Study in detail of a prescribed period of the Great War, to illustrate principles of war, of organisation, and of tactics, with visits to battlefields in France and Belgium.

Second Year

General Staff duties with the brigade and division in war. The Intelligence service in the field. Adjutant-General's and Quarter-master-General's services in the brigade and division in war. Organisation of a Line of Communication. Staff duties of the Line of Communication. Imperial Military Geography and Imperial defence. Combined naval and military operations in relation to staff duties. Co-operation with Royal Air Force. Administrative and tactical problems of mechanisation. Defence against gas. Staff duties in the brigade and division in peace. Mobilisation.

Examination

The Examination for the Diploma will consist of two parts. Part I may be taken at the end of the first year's course and Part II at the end of the second year's course. A candidate must pass Part I before being admitted to Part II.

The subjects of the examination are as follows :—

Part I

Principles of War and of organisation and their application to the British Army (one paper).

The prescribed period of Military History (one paper).*

* 1932 and until further notice.—1914 from the beginning of the War to the beginning of the first battle of Ypres.

Part II

Co-operation with the Navy and Air Force and of the various arms (one paper).

General Staff duties in the field in relation to specific problems (one paper).

Adjutant-General's and Quartermaster-General's Staff duties in the field in relation to specific problems (one paper).

Candidates shall not be approved by Examiners in either Part of the Examination unless they have shown a competent knowledge in all the prescribed subjects of that Part.

Candidates who fail in either Part may be re-examined in that Part at any subsequent Examination on payment of the proper fee.

The Examination will be held once in each year, Part I beginning on the first Monday in July, and Part II on the Thursday following the second Monday in July.

Every student entering for either Part of the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study which must be returned, duly filled up and accompanied by the proper fee, not later than May 25th.

The time-table showing both the time and place of the examination will be furnished by the Academic Registrar to each candidate.

The fee for each entry to either Part of the Examination is 2½ guineas. All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the "Academic Diploma in Military Studies," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

ACADEMIC POSTGRADUATE DIPLOMA IN PHONETICS

The University grants an Academic Postgraduate Diploma in Phonetics.

Course of Study

The Course for the Diploma is open to :—

(*a*) Graduates of this or another approved University whose undergraduate courses have in the opinion of the University included a suitable preliminary training, or who produce evidence of ability for phonetic work ;

(*b*) Students who, though not graduates, have satisfied the University that their previous education and experience qualify them to rank on the same level as graduates approved under (*a*) for this purpose.

Students are required to attend a course of study approved for the purpose by the University, extending normally over six terms, but students with exceptional qualifications may apply for permission to pursue a course of study extending over less than six terms.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the College or School to which he is attached at the earliest possible opportunity to the Academic Registrar.

Each candidate before being admitted to the Examination will be required to produce a certificate signed by the Head or other appropriate officer of the College at which he is registered that he has satisfactorily pursued the prescribed course of training.

Date of Examination

The Examination for the Diploma will be held on a date or dates to be arranged by the University.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than three months before the date of the Examination.

Fees

The fee for each candidate entering for the Examination (A, B and C) is five guineas.* An additional fee of two guineas is payable by candidates entering for the optional Examination in Experimental Phonetics.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination for the Diploma consists of four papers of three hours each, ear tests, and an oral examination, as follows :—

* In and after 1951, the fee will be 7 guineas.

A. *Papers*

(1) *General Phonetic Theory.* The mechanism of utterance, the formation and classification of speech sounds, combinations of sounds, the attributes of sounds (particularly length, stress and voice-pitch) and their functions, the theory of phonemes, principles of phonetic transcription, different styles of phonetic transcription, principles of orthography as distinguished from phonetic transcription.

(2) *The Phonetics of English.*

(i) For English candidates. Detailed study of the phonetics of various kinds of English.

(ii) For candidates whose mother-tongue is not English. Detailed study of the phonetics of English, with some reference to the phonetics of the candidate's mother-tongue.

(3) *The Phonetics of a Foreign Language.* Detailed study of the phonetics of a foreign language approved by the University. In special cases a candidate may apply to be examined in the phonetics of more than one foreign language. The paper will include a passage of the foreign language (or passages of the foreign languages) to be transcribed phonetically by the candidate. If a selected language is a tone language, candidates will be expected to indicate the tones in their transcripts.

(4) *Special Applications of Phonetics.* Any two of the following :—

(i) teaching acceptable types of English speech to those whose pronunciation is markedly dialectal ;

(ii) teaching the pronunciation of English to foreign learners ;

(iii) teaching the pronunciation of the foreign language(s) approved for paper 3 to English learners ;

(iv) speech therapy ;

(v) the historical study of English ;

(vi) the historical study of a foreign language approved by the University ;

(vii) methods of investigating phonetically a language hitherto not analysed or inadequately analysed ;

(viii) phonetics and phonology in their relation to general linguistics.

B. *Ear Tests* (not more than an hour and a half), comprising :

(i) Dictation of a passage of English to be written phonetically by the candidate ;

(ii) Dictation of a passage of the language (or one of the languages) selected for paper 3 to be written phonetically by the candidate ;

(iii) Dictation of a number of words from a language unknown to the candidate, or of meaningless words containing difficult foreign or dialectal sounds as well as normal English sounds (for testing the candidate's power of recognising or analysing sounds) ;

(iv) Dictation of a passage of a tone language unknown to the candidate or of invented tone patterns (for testing his power of appreciating distinctions of tone).

C. *Oral Examination* (not more than one hour). English-speaking candidates will be expected to pronounce the approved foreign language(s) in a manner approximating to that of a native speaker: foreign candidates will be expected to speak English with a pronunciation approximating to that of English people. All candidates will be required to pronounce difficult foreign sounds in isolation and in combinations, and to demonstrate orally their command of phonetic theory and its applications. The examiners may require candidates to read aloud from phonetically transcribed texts, both of English and of the approved foreign language(s).

There is also an *optional* examination in *Experimental Phonetics* covering the construction and use of the more elementary apparatus. Each candidate is tested (i) by a paper of two hours on Elementary Principles of Experimental Phonetics and their bearing upon practical speech problems, and (ii) by a practical examination of not more than three hours involving the handling of apparatus and the interpretation of results.

A certificate called the "Academic Postgraduate Diploma in Phonetics," under the Seal of the University, will be delivered to each candidate who has passed in A, B and C, after the Report of the Examiners has been approved by the Senate. When a candidate also passes the optional Examination in Experimental Phonetics, special mention of this fact will be recorded on the certificate.

ACADEMIC POSTGRADUATE DIPLOMA IN PSYCHOLOGICAL MEDICINE

The University grants an Academic Postgraduate Diploma in Psychological Medicine.

Course of Study

The courses for the Diploma include laboratory, clinical and theoretical instruction and are open to registered medical practitioners and to graduates in Medicine of this or another approved University who, in the opinion of the University, are qualified for registration as students for the Diploma. Students are required to pursue courses of study, approved by the University and extending over three academic years of full-time study at one or more Colleges or Schools of the University, unless the student can show that before registering for the Diploma he has pursued at a College or School of this or another approved University equivalent courses of whole-time study in some branch of the required curriculum for the Diploma, in which case appropriate exemption may be granted, though in no case can such exemption be for a longer period than one year.

Courses of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of his College or School at the earliest opportunity to the Academic Registrar.

Date of Examination

The Examination will be held in two parts. Part I will be held twice in each year beginning on [a date to be decided] in April and on [a date to be decided] in October. Part II will be held twice in each year beginning on [a date to be decided] in April and on [a date to be decided] in October.

Every student entering for either Part of the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than [a date to be decided].

Fee

The fee is 6 guineas for each entry to either Part of the Examination. All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

PART I

Part I of the Examination is concerned with the sciences relevant to psychiatry (normal anatomy and physiology of the nervous system), the biochemistry of metabolism and nervous action, psychology, genetics and sociology.

No student will be admitted to Part I of the Examination until he has produced evidence of satisfactory and regular attendance at an approved course of study, extending over a period of not less than six months in the subjects specified, at one or more of the Colleges or Schools of the University.

Part I will consist of three papers and an oral examination in the subjects specified. One paper will be in anatomy, physiology, and biochemistry, and may include a question on genetics; one paper will deal with the psychology of individual differences and mental tests; and the third paper will deal with developmental psychology and the psychology of emotion, perception and learning. A question on sociology may be included in one of the papers on psychology.

A candidate must pass in all the subjects of Part I of the Examination on one and the same occasion.

PART II

Part II of the Examination is concerned with clinical psychiatry, including mental deficiency and the psychiatry of childhood; clinical neurology and internal medicine; the pathology, including the morbid anatomy and chemistry and the psychopathology, of mental disorders and deficiency; the social, administrative and forensic aspects of psychiatry; the applications of psychology to psychiatric theory and practice.

No student will be admitted to Part II of the Examination until he has:—

(*a*) passed Part I of the Examination.

(*b*) followed an approved course of study which will include, besides lectures and work in laboratories, three years clinical instruction and experience, gained through work with adults and children having diseases of the central nervous system, personality disorders, neuroses, psychoses, mental deficiency, and psychological disturbances consequent on or causative of physical disease. Candidates must during these three years have spent at least twelve months in the in-patient practice of a psychiatric hospital in a full-time capacity, examining thoroughly and treating a wide variety of mental disorders; they must also have spent the equivalent of six months in a full-time capacity in each of the following:—the out-patient practice of psychiatry for adults and adolescents; the clinical study of children and their psychological disabilities; the clinical and laboratory study of neurological disease. The order in which students receive their clinical experience and instruction in various branches of the subject may be varied, according to the discretion of the Head of the College or School in which the student is registered for the Diploma, but exemption from the foregoing minimum requirements shall not be granted by the University, save on the special recommendation of the Head of the College or School of the University in which the student is registered.

(*c*) presented:—

(1) a dissertation on a subject which has been approved by the authorities of the College or School by whom the course is provided, and

(2) a book recording for each half year of clinical instruction the number and type of cases examined or treated, and concise observations on the lines of investigation and treatment pursued.

Clinical instruction for the Diploma shall be approved only in hospitals and clinics which are either Medical Schools of the University or are associated hospitals of these Schools, provided that no such hospital or clinic shall be approved unless the work of postgraduate students there is actively supervised and directed by an Appointed or Recognised Teacher of the University.

Part II will consist of one paper in neurology and two papers in psychiatry; a clinical and oral examination in neurology; a clinical and oral examination in psychiatry. The candidate's dissertation will be taken into account in the assessment of marks.

A candidate must pass in all the subjects of Part II on one and the same occasion.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar in the course of the second week following that in which the Examination concludes. A mark of distinction will be placed against the names of those candidates who show exceptional merit in the whole examination.

A certificate to be called the "Academic Postgraduate Diploma in Psychological Medicine," under the seal of the University, will be delivered to each candidate who has passed both Parts of the examination, after the Report of the Examiners shall have been approved by the Senate.

ACADEMIC POSTGRADUATE DIPLOMA IN PSYCHOLOGY

The University grants an Academic Postgraduate Diploma in Psychology.

The course of study for the Diploma is open only to graduates of this or other approved Universities whose undergraduate courses and previous experience have included a suitable preliminary training.

The object of the course is to afford facilities for instruction in the theory and practice of certain branches of applied psychology to students who are intending to take up practical work in certain specific fields.

Course of Study

Students are required to attend a course of study approved for the purpose by the University, extending normally over two sessions and involving not less than 200 hours in each academic year ; but students with certain qualifications may apply for permission to pursue a course of study extending over less than two sessions or involving less than 200 hours in each year.

The conditions determining admission to the course of study are as follows :—

(1) Students who have obtained a B.A. Honours or a B.Sc. (Special) Degree in Psychology or who have obtained a B.A. (General) or a B.Sc. (General) Degree with Psychology in this University, will be entitled to a reduction in the number of hours of attendance according to the amount of work already done in Psychology. The number of hours to be required in each case will be determined by the University.

(2) The courses and time required of students who are graduates of other approved Universities and whose examination for the Degree included Psychology will be decided in each case by the University.

(3) Students whose qualifications on entry upon the course included the passing of an examination equivalent in scope and standard to Part I of the Diploma Examination may apply for exemption from that Part of the Examination.

(4) Students whose Degree courses did not include Psychology and who have not passed an examination in Psychology which is acceptable to the University will be required to pass a preliminary qualifying examination in the elements of general psychology,* consisting of a written paper with or without an oral examination.

Application for registration should be made not later than the third term of the session preceding that in which the course is to begin.

Unless special exemption be obtained the course of study must be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified to the Academic Registrar at the earliest opportunity by the authorities of the College or School to which he is attached.

* *e.g.*, the topics treated in the briefer standard textbooks.

Date of Examination

The Examination for the Diploma will take place once in each year, beginning on the second Monday prior to the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 8th.

Fees

The fee for each student is 7 guineas for each entry to the whole Examination, and 3½ guineas for examination in either Part.

The fee payable on entry to a preliminary qualifying examination is 2 guineas.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination for the Diploma consists of two Parts, which may be taken together or separately.

The subjects of the Examination are as follows :—

Part I General

Data and Principles of Psychology (two papers of three hours each).

Methods of Psychology (one paper of three hours).

A practical examination.

Candidates must also submit for the inspection of the Examiners their notebooks of laboratory work in Psychology.

Part II Special

Sections A, or B, or C.—Two papers of three hours each.

An oral examination, with special reference to any written reports which may be submitted by the candidate on work he may have carried out on his special subject. Such reports must reach the Academic Registrar not later than June 15th.

A practical examination.

Candidates must also submit for the inspection of the Examiners their notebooks of laboratory work, or other practical work, in their selected section of Applied Psychology (A, B, or C).

A candidate taking Section A may, as an alternative to the practical examination, submit an essay. The essay must reach the Academic Registrar not later than June 15th.

Section D.—Three papers of three hours each.

A practical and oral examination at the discretion of the Examiners.

Every candidate must present (i) a dissertation on an approved subject, (ii) specimen reports embodying practical work carried out during the course.

Candidates shall not be approved by Examiners in either Part of the Examination unless they have shown a competent knowledge in all the prescribed subjects of that Part.

Examiners may take into account the reports of the supervisors on the work of the candidates during their course of training.

Candidates who fail in either Part may be re-examined in that Part at any subsequent Examination on payment of the proper fee.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on August 15th.

A mark of distinction will be placed against the names of those candidates who show exceptional merit.

A certificate, to be called the "Academic Postgraduate Diploma in Psychology," under the Seal of the University, and indicating the special section and branch thereof in which the candidate has passed, will be delivered to each candidate who has passed the Examination, after the Report of the Examiners shall have been approved by the Senate.

SYLLABUSES

The subjects of the course are as follows :—

(1) The Data and Principles of Psychology, including its physiological, pathological, comparative and social aspects.

(2) The Methods of Psychology, including elementary scientific and statistical methods.

(3) A Course of Laboratory work.

(4) One of the following Applications of Psychology—A, B, C or D—selected by the candidate :—

A. *Anthropological and Sociological*

1. Social Psychology.

   (*a*) The psychological basis of social relationships. Individual adjustment and maladjustment in society. Co-operation, competition, submission, prestige. Antagonism, crime, social aspects of the psycho-neuroses. Authority and leadership. Psychological aspects of social control, as exemplified in law, morals and conventions. Custom and Tradition. Public opinion. Fashion. Plasticity and change in social groups : borrowing, innovation, revolt.

   (*b*) Group differences in mental characters. Racial and national characters. Group mentality. Mental factors in social development.

2. The Comparative Study of Social Institutions.

   Family and kinship groups, law and the state, justice and punishment, class and property, studied by an analysis of modern societies, and compared with the institutional forms of primitive peoples and early civilisations.

3. Practical Work.

B. *Educational*

1. General Educational Psychology, including the application of psychological methods and principles to educational problems and a broad knowledge of the three topics (*a*), (*b*) and (*c*) mentioned under 2 below.

2. One of the following branches of Educational Psychology studied in greater detail :—

(*a*) The Psychology of the Individual Child, including the study of intellectual and temperamental differences according to age, sex, race, environment, and the like, with special reference to abnormal cases.

(*b*) The Psychology of Teaching Methods, including mental hygiene, general classroom management, and the application of psychological principles and experiment to the methodology of special subjects.

(*c*) The Psychology of Infancy and Early Childhood.

3. Practical Work.

In addition to attending the prescribed course of study at a School of the University, every candidate taking branches 2 (*a*) or 2 (*c*) above must present evidence of having carried out at a Child Guidance Clinic or other institution a course of practical work approved by the University.

Every candidate taking branch 2 (*b*) above must obtain some practical knowledge of teaching.

C. *Industrial and Commercial*

1. General Occupational.

(*a*) Historical background : including the growth of social legislation and of employers' and employees' combinations.

(*b*) Staff : recruitment, administration, selection, training, promotion and control.

(*c*) Environment and Organisation.

(i) General external conditions affecting the worker : lighting, heating, ventilation, noise time- and movement-study.

(ii) Personal reactions : boredom, discontent, worry, maladjustment, fatigue, absenteeism, accidents, sickness, spoiled work, labour-turnover.

(iii) Organisation : principles of layout, planning, inspection, measurement of output, incentives, staff relations.

(*d*) The statistical methods appropriate to the study of the preceding sections.

2. One of the following three subjects :—

(*a*) Mental Hygiene of individuals and personnel.

(*b*) Production.

(*c*) Distribution.

3. Laboratory and Field Work in General Occupational Psychology (see 1 above).

(The first branch of study will deal with the human factors in occupational life generally, the three remaining branches being concerned with the special and more detailed consideration of these factors in relation to the personnel, productive or distributive side of industrial and commercial work.)

Before being admitted to Part II of the Examination, every candidate offering Section C (Industrial and Commercial Applications of Psychology) must present evidence of having carried out a course of practical work approved for the purpose by the University.

D. *Abnormal Psychology*

1. (*a*) The nature and causes of deviations from normality—cognitive, affective and conative—during childhood, maturity and old age: their effects upon behaviour and the formation of character.

   (*b*) Scientific methods in the psychological study of abnormal mental conditions, the interpretation of test results and other data contributing to the diagnosis of abnormal conditions, *i.e.*, psychoses, neuroses, mental deficiency and allied states.

   (*c*) The principles involved in modern methods of care and treatment of the mentally abnormal. Relevant legislation.

2. The candidate is required to submit a dissertation, the subject of which has been approved by the authorities of the School or College by which the course is provided.

3. It is further required that the candidate should, in addition to attending the prescribed course of study at a School of the University, have completed not less than 400 hours of supervised practical work at one or more approved institutions offering practical work and case study relevant to the course.

ACADEMIC DIPLOMA IN PUBLIC ADMINISTRATION

[*For Examination in* **1951** *only. For Revised Regulations, see p.* 1868.]

The University grants an Academic Diploma in Public Administration.

Course of Study

The Course for the Diploma is open to matriculated students and to other students who have attained a standard of education satisfactory to the teacher in charge of the course.

The course normally extends over two sessions, and students are required to attend for 240 hours in all. Students with exceptional qualifications, or students who have pursued part of the course of study leading to a Diploma in Public Administration in another University, may apply for permission to pursue a course of study extending over less than two sessions, or to take either Part at the end of the first session, or for exemption from not more than three subjects of the Examination provided that they have passed examinations in these subjects at least equal in scope and standard to the Examination of this University. Each such application will be considered individually and on its own merits.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified at the earliest opportunity to the Academic Registrar by the authorities of the School to which he is attached.

The subjects of the course are as follows :—

A. Compulsory

1. Public Administration, Central and Local.
2. Economics (including Public Finance).
3. Social and Political Theory.

B. Optional

Three of the following subjects, at least one to be selected from each group :—

Group A.
1. English Constitutional Law.
2. English Economic and Social History since 1760.
3. The Constitutional History of Great Britain since 1660.
4. Accounting and Auditing.

Group B.
5. Statistics.
6. The History and Principles of Local Government (Advanced).
7. Social Administration.

Examination

The Examination is divided into two Parts which may be taken together at the end of the second session, or either Part may be taken at the end of the second session, and the remaining Part at the end of the third session.

Part I consists of three papers, *i.e.*, one paper of three hours on each of the three compulsory subjects. The Examiners are at liberty to require a test of the candidate by means of oral questions.

Part II consists of three papers, *i.e.*, one paper of three hours on each of the three optional subjects. The Examiners are at liberty to require a test of the candidate by means of oral questions.

Candidates shall not be approved unless they have shown a competent knowledge in the foregoing subjects, but a candidate who enters for both Parts of the Examination at the same time may, if he fails to reach the minimum standard in one subject only and if in the opinion of the Examiners his performance in the remaining subjects is of sufficient merit, be credited with the five subjects in which he has satisfied the Examiners and permitted to present himself for re-examination in the sixth subject alone at any subsequent Examination or Examinations. If a candidate enters for both Parts of the Examination at the same time and satisfies the Examiners in one Part only, he shall be credited with that Part.

The Examination for the Academic Diploma in Public Administration will take place once in each year, begining on the last Monday in June.

Every student entering for the whole or part of this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 8th.

The fee is 5 guineas for each entry to the whole Examination, 2½ guineas for each entry to either Part, and 2 guineas for re-examination in one subject.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on August 5th.

A mark of distinction will be placed against the names of those candidates who show exceptional merit. Distinction will be awarded in both Parts of the Examination considered together and a candidate taking the Examination in two Parts will be eligible for distinction on completing the whole Examination.

A certificate, to be called the " Academic Diploma in Public Administration," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

SYLLABUSES

The syllabuses are as follows :—

Public Administration, Central and Local

The Parliamentary Aspect.—The parliamentary machine. The processes of legislation. Financial control. The relations between the Cabinet and Parliament. The House of Commons and the supervision of the executive. Party organisation of elections. Proposals for the reform of the parliamentary machine. Differences between British and foreign legislative methods as illustrated in the methods of France, Germany, and the United States of America. Problems of parliamentary government such as second chambers, the initiative, the referendum, and the party system

The Departmental Aspect in Great Britain.—The meaning and growth of public administration. Allocation of function to departments. The internal organisation of typical departments. Relation of Minister, chief officials, and subordinate staff. Recruiting of the Civil Service. Problems of personnel—tenure, discipline, right of association, political rights. Civil service and business methods: possible new forms of administration. The regional and functional devolution of administration.

Local Government in Great Britain.—History since 1832; areas; central control of local government; grants-in-aid. Local finance, rating and valuation, the ratepayer and the beneficiary. Municipal organisation, composition of councils and committees by election and co-option; recruitment of personnel. Municipal enterprise; poor relief; public health; education; police; roads; civic amenities. Schemes of reform in function and areas. Comparison with local government experience in France, Germany, and the U.S.A.

Economics, including Public Finance

General Principles.—Scope of economics and methods of economic enquiry. Criteria of economic welfare. Production of wealth and organisation of production. Causes of differences in productiveness of different communities. Theory of population. Dependence of economic organisation on various social institutions. Economic provision for the future. Theory of value and its application to various commodities and services. Distribution of income between economic categories and between persons. Relation between income and economic welfare. Forms of economic activity. Theories of wages, rent, interest and profits. Risk-bearing and speculation. Monopoly and quasi-monopoly. Problems of industrial organisation and control. Industrial fluctuations; types, causes, and possible remedies.

Currency, Banking, and International Trade.—Part I. The nature and function of currency. The value of units of currency. The British currency system. The nature and function of Banking. The British Banking System and the London Money Market.

Part II. The *raison d'être* of a separate discussion of external trade. The measurement of such trade. Special features of its organisation. The settlement of external debts; the mechanism of the Foreign Exchanges. General view of the relation between internal and external price levels.

Public Finance, regarded both from the standpoint of administrative practice and economic theory.

Social and Political Theory

The basis of rights and duties. Individual right and the common good: the State and the community. Nature of political obligation: compulsion and consent: social harmony. The problems of liberty, justice, and equality in relation to political and economic organisation. The basis of rights of property. Self-government, nationality and internationalism. The limits of State competence. Federalism (territorial and functional).

English Constitutional Law

The general characteristics of the Constitution and the special position of Great Britain in the British Empire; a description from the point of view of constitutional law of the parliamentary executive, and judicial organisation of the State; and an outline of English local government.

English Economic and Social History since 1760*

Political and social conditions of the 18th and 19th centuries. The agrarian changes. "The Industrial Revolution." The new political economy. The movement for parliamentary reform. The growth of pauperism and the reform of the Poor Law. Population and migration. The trade union movement from 1824 to 1850. The beginnings of factory legislation. The Chartist movement. The early co-operators. The growth of a system of public education. The reform of local government and the growth of municipal enterprise. The growth and character of modern trade unionism. The policy of the State towards industry and social questions. Recent changes in social and political thought. The present position of the industrial problem.

Constitutional History of Great Britain since 1660

The constitutional position in 1660; the general constitutional development of Great Britain from 1660 to the present time, with special attention to the following points: the power of the Crown; changes in the composition, constitutional powers and influence of the two Houses of Parliament; the evolution of the Cabinet; the development of the Civil Service; the rise of the office of Prime Minister; the history of political parties; the growth and expression of public opinion; relations between the central Government and Ireland and the Dominions.

Accounting and Auditing

Book-keeping.—The general theory of book-keeping by double entry. Records of original entry. Sectional balancing. Tabular ledgers. Mechanical and other methods of analysing and posting. Records of materials and stores. Control of cash. The double account system.

Commercial Accounting.—Income and expenditure accounts. Trading and Profit and Loss accounts. Reserves and provisions (specific and general). Depreciation and amortisation. Principles of valuation of assets and liabilities. Principles of costing. General outline of costing methods.

Accounting for Public Authorities.—Control of expenditure. Control of revenue. Budgeting. Estimating. Authorisation. Forms of Account.

Auditing of Accounts of Public Authorities.—The nature and purpose of an audit in its application to the accounts of public authorities. Internal check and the prevention of fraud. The principles and practice of vouching and test-checking. Verification of assets. Stocktaking inventories. The duties and powers of various types of auditors when auditing accounts of public authorities. Certification and reporting.

Statistics

Collection of data, definition, and tabulation. Statistical groups, arithmetic average, mode, median, mean and quartile deviation. Statistical series in time; trend and fluctuation. Weighted averages. Index numbers. Simple methods of measuring correlation. Elementary interpolation. Application to statistics of population, production, consumption, commerce, prices, wages, income, and capital. The main sources of these statistics, their character and meaning.

Note.—Logarithm tables will be provided by the University and slide rules may be brought to the examination in this subject.

History and Principles of Local Government

As in Public Administration (Local Government) but more advanced, with wider comparative treatment, and with knowledge of the development of the modern institutions of local government, especially since 1832.

Social Administration

The work of the central and local government authorities and of voluntary agencies, and the distribution of functions between them, with regard to the following services :—

Health.—Personal and environmental health services, including the work of doctors, nurses and hospitals, and the services for maternity and child welfare, for the physically and mentally defective, and for rehabilitation.

Education.—Nursery, Primary and Secondary Schools, Technical and Further Education. Social Services in Schools.

Housing.—The powers and duties of Central and Local Authorities in regard to the provision and upkeep of dwellings, slum clearance and overcrowding, and town planning. Housing subsidies, rent rebates and rent restriction.

Employment.—Vocational guidance. The work of Employment Exchanges. Wages regulation. Arbitration and Industrial Disputes. The regulation of working conditions in factories, shops, etc.

Social Insurance.—The insurance method of providing for sickness, unemployment, old age, widowhood, and family allowances.

Social Assistance.—Provision for those outside the insurance scheme through the Assistance Board and the Public Assistance (Social Welfare) schemes of Local Authorities.

Students will be expected to possess knowledge of Government Reports, White Papers and other official publications regarding current questions of social administration.

ACADEMIC DIPLOMA IN PUBLIC ADMINISTRATION

[*For Examinations in and after* **1950.**]

The University grants an Academic Diploma in Public Administration.

Course of Study

The course of study for the Diploma extends over two sessions and is open to persons who have been employed by a public authority in administrative work of an approved standard for at least three years and—

either (*a*) hold a Degree in this or another approved University;
or (*b*) hold a technical or professional qualification approved by the University;
or (*c*) occupy at the time of their application a responsible administrative position with a public authority, and who, although not graduates, have satisfied the University that their previous education and experience qualify them to rank on the same level as graduates for this purpose.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified at the earliest opportunity to the Academic Registrar by the authorities of the School to which he is attached.

The subjects of the course are as follows:—

Public Administration, Central and Local.

Statistics.

English Economic and Social History since 1815.

Social and Political Theory.

Any *two* of the following:—

English Constitutional Law.

The History and Principles of Central Government since 1832.

The History and Principles of Local Government since 1834.

The Evolution and Administration of Nationalised Industries.

Economics, with special reference to Public Finance.

Date of Examination

The Examination for the Academic Diploma in Public Administration will take place once in each year, beginning on the last Monday in June.

Every student entering for the whole or part of this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 8th.

Fees

The fee is 7 guineas for each entry to the whole Examination, 3½ guineas for each entry to either Part, and 2 guineas for re-examination in one subject.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account".

Details of Examination

The Examination is in two Parts, and candidates may either present themselves for Part I, consisting of any three subjects, after not less than one year's study, or for the whole Examination on one and the same occasion after not less than two years' study. A candidate who has passed Part I must Pass Part II within not more than four years from the date of completing Part I.

The Examination consists of one three-hour paper in each subject. In addition, each candidate will be required to submit an essay of approximately 5,000 to 10,000 words on an approved theme connected with one of his two Optional Subjects. Every candidate when making entry for the Optional Subject in connection with which he proposes to submit an essay, must forward two double spaced typewritten copies of his essay for examination.

The Examiners shall be at liberty to test any candidate by means of oral questions.

All answers to examination-questions shall be written in English unless instructions are given to the contrary.

On or before January 8th of the year in which he proposes to take the Optional Subject in connection with which he proposes to submit an essay, the candidate must submit for approval the title of his proposed essay, together with a brief syllabus. A candidate whose essay satisfies the Examiners will not be required to re-submit his essay, whatever his performance in the written part of the Examination, but a candidate who fails in the essay will fail in the relevant subject as a whole.

A candidate who fails in either Part of the Examination may re-enter on one occasion only, but not again except by special permission.

A candidate who enters for both Parts of the Examination at the same time and who fails to satisfy the Examiners in one subject only may, on the recommendation of the Examiners, be referred, *i.e.*, he may be permitted to re-present himself for examination in that subject alone, within not more than four years. A candidate who on re-entry again fails in his referred subject will not be allowed to enter again except on the recommendation of the Examiners, and a candidate who is not given permission for such re-entry or who after such re-entry fails will not be permitted to complete the Examination on a subsequent occasion.

Candidates will not be approved unless they have shown a competent knowledge in each of the six subjects and have satisfied the Examiners in the essay ; but a candidate who enters for both Parts of the Examination at the same time and satisfies the Examiners in three or four subjects only may, on the recommendation of the Examiners, be credited with three of those subjects as Part I of the Examination. This concession may also be granted to candidates who satisfy the Examiners in five subjects but who are not recommended for reference.

The Examiners will recommend that a candidate be referred only if his failure in one subject is not serious and if his performance in the remaining subjects is reasonably good.

A candidate who has been referred must complete the Examination within not more than four years from the date at which he was credited with the remaining subjects.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on August 5th.

A certificate to be called the " Academic Diploma in Public Administration " under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

SUPPLEMENTARY SUBJECTS

Candidates who have obtained the Diploma may enter for examination in an additional optional subject or subjects in which they had not previously satisfied the Examiners, and may have such subject or subjects endorsed on their Diploma. The fee for examination in each such supplementary subject is 2 guineas.

SYLLABUSES

Public Administration, Central and Local

The general principles of the Parliamentary system. The administrative process in relation to democratic government. The principles involved in the structure, organisation, functions and methods of all types of public authority engaged in administration, whether national, regional or local, and whether executive or advisory. These include not only the central departments and local authorities but also the non-departmental organisations, public boards and corporations.

The general functions of administrative authorities, including executive, legislative and judicial functions. The various methods appropriate to different types of functions.

The various forms of control over administration. External control by Parliament and the Cabinet; Treasury control; central control of local government; ministerial control of public corporations, etc.; judicial control by the courts and administrative tribunals. Internal control of the administrative machine (integration, co-ordination, decentralisation); financial control; "common service" departments as a medium of control; control by a local council of its committees.

Personnel problems (e.g. recruitment, grading, promotion, retirement, training) relating to the civil service, local government service and analogous staffs. The place of the specialist in administration.

Problems relating to planning, research, information and public relations services and the exercise of administrative discretion.

Statistics

Collection, definition and tabulation of data. Approximations and error. Frequency groups, time series and graphical representation. Measures of average and dispersion. Index numbers. The elements of the analysis of time series. The simplest ideas of sampling and correlation.

The main sources of statistics of population, manpower, industrial health, production, consumption, prices, trade, national income and capital. The nature and limitations of these statistics and the application of elementary statistical methods to them. Index numbers in practice.

Either: More advanced statistical methods, including elementary mathematical treatment of the following subjects:—Frequency distributions, moments and cumulants. Elementary theory of correlation. Binomial, Normal and Poisson distributions. The elements of the theory of sampling.

Or: Further sources of economic, social and administrative statistics, particularly statistics published by central and local government authorities, public corporations, nationalised industries and trade associations. The use of statistics in the treatment of social problems and the elements of the technique of social surveys.

[*Note.*—Logarithm tables will be provided by the University and slide rules may be brought to the examination in this subject.]

English Economic and Social History since 1815

The growth of population ; changes in the geographical and occupational distribution of the people. The development of agriculture, manufacture, transport, trade and banking. The sources of industrial capital ; the growth of factory production ; the economic and social effects of the railways ; industrial concentration and combination.

Urbanisation ; the health of towns. Poverty and the Poor Laws. The development and changing structure of trade unions ; the evolution of wage systems.

The movements of prices ; the major fluctuations of activity and employment ; changes in the distribution of income and property.

The chief currents of economic thought. Individualism ; the removal of restrictions on industry and commerce ; the Free Trade movement. Collectivism ; the expansion of the functions of central and local government ; the growth of the professions and of the civil service ; industrial and social legislation ; the extension of public enterprise.

Social and Political Theory

The place of the individual citizen in the modern community. The basis of political and social obligation. The criteria of values. Forces which shape these criteria. The theory of rights. Philosophies of freedom and constitutional government. Criticism of constitutional government, and of democracy and freedom. Limitations upon individual right and governmental right. Nations and nationalism. Emergence of political communities with authority reaching beyond the claims of the nation-state. Political power and ethical obligation. Political power and economic organisation. The ethical and related problems arising from the contact of advanced and primitive societies. The concepts of civilisation and progress. The sociological approach to political and social philosophy. Philosophic analysis of the structure of a modern community. Significance of history in political and social philosophy.

English Constitutional Law

The nature of constitutional law. Sources and characteristics of British constitutional law. The separation of powers. Parliamentary sovereignty. The royal prerogative, including the treaty-making power. Constitutional conventions.

Parliament, its position, functions, and powers. Parliamentary privilege and procedure. Control of national finance.

The Privy Council and the Cabinet. Committees of the Cabinet. Ministerial responsibility. The position of the prime minister. The principal government departments. The civil service.

The position of the judges. Proceedings by and against the Crown, Crown servants and public authorities. Judicial control of public administration. Prerogative writs and orders.

Administrative tribunals and delegated legislation. The rule of law. Outline of the structure of local government. Central control of local authorities ; the finance of local authorities.

The citizen and the State. The rights of personal liberty, free speech, and public meeting. Police search. The Public Order Act.

Allegiance, nationality, and citizenship.

The British Empire and the British Commonwealth of Nations. The distinctions between Dominions, colonies, protectorates, and trust territories. Dominion status. The position of the Crown in the Commonwealth. Appeals to the Judicial Committee of the Privy Council.

The History and Principles of Central Government since 1832

The development of the franchise and the growth of party organisation in the country and in Parliament. The development of Cabinet government and changes in Cabinet organisation. Parliamentary procedure and the relations between the House of Commons and the House of Lords. The growth of the administrative machinery of the State including : the reform of old and the creation of new government departments ; the Treasury ; the reform and development of the Civil Service ; delegated legislation and administrative law ; the main changes in the structure of local government and the nature of central and local relations. The reorganisation of the judicial system. Dominion status and the constitutional problem of Ireland. The prerogatives of the Crown, the rights and liberties of the people, the relation between law, convention and opinion.

The History and Principles of Local Government since 1834

The relation between political ideas and local government. The evolution of local government during the 19th and 20th centuries. Local government as an expression of democracy. Parliamentary control.

The problem of areas and authorities. *Ad hoc* and multi-purpose organs. The Committee system. Relations between councillors and officials. Methods of co-ordination and control. Relation between major and minor local authorities.

The main functions of local authorities and the principles underlying their distribution. Methods of conferring and delegating powers. The organic relation between structure and function.

The relations between Central Departments and Local Authorities. The instruments of control and influence. Grants-in-aid.

Judicial control of local authorities.

The local government service. Its characteristics and problems.

The impact of present day economic, technical and social forces on local government. The special problem of conurbations and metropolitan centres. Schemes of reform in function and areas. The English system compared with those of France, the United States and Germany.

The Evolution and Administration of Nationalised Industries

The development of public utilities during the 19th and 20th centuries. The role in this sphere of Parliament, Government Departments, regulatory Commissions, the judiciary, local authorities, *ad hoc* bodies and public boards.

The use of a Ministerial Department for the conduct of a nationalised service or a public utility. The rise of the public corporation in the 20th century. Its special characteristics and the reasons for its emergence. The constitutional, political, legal, administrative and economic aspects of the corporations responsible for such industries and services as coal, broadcasting, forestry, transport, civil aviation, electricity, gas, the Bank of England, new towns, raw cotton, colonial development, overseas food resources, etc.

The appointment and status of the Board. Ministerial control. Parliamentary supervision. Relations with consumers and employees. Finance and audit. Compensation and capitalisation. Advisory Councils and administrative tribunals.

The problems of personnel, co-ordination, organisation, measurement of results, competition, the size of the operating unit, price policy, incentive, etc.

Economics, with special reference to Public Finance

The principles of economics, including theories of population, production, value, distribution, money and banking and international trade, and their applications to practical problems of contemporary interest, and in particular to the problems of public finance and the relationship between budgetary policy and public economic policy at large.

ACADEMIC POSTGRADUATE CERTIFICATE AND DIPLOMA IN PUBLIC HEALTH

The University grants an Academic Postgraduate Certificate in Public Health and an Academic Postgraduate Diploma in Public Health.

Course of Study

The Courses for the Diploma consist of a Preliminary Course and a Final Course, and are open to :—

(*a*) Registered medical practitioners. The qualification must have been registered for a period of at least two years before the student becomes eligible for admission to the Preliminary Course, subject to the reduction of this period to one year in favour of (1) any practitioners who satisfy the authorities of the School of the University concerned that there is good reason under the existing law for exempting them from the general requirement, and (2) any practitioners who are required by law in future to have held compulsory pre-registration House Appointments for one year after passing a final examination in Medicine, Surgery and Midwifery. The grant of the Diploma to a successful candidate whose period of registration prior to admission to the Preliminary Course has been reduced to one year may be made in July, provided that his qualification was conferred on him two years before the end of that month, or in September, provided that his qualification was conferred on him two years before October 31st next following.

(*b*) Persons who have held for two years a medical qualification which, although not registered in this country, is approved by the University and whose experience is such as to enable them to profit by the courses.

Note.—Persons whose medical qualification is not registered in this country are debarred from having a Diploma in Public Health registered by the General Medical Council, and cannot therefore enjoy the special privileges with respect to the tenure of posts of Medical Officers of Health which are conferred by Statute on registered medical practitioners who hold a registered Diploma in Public Health.

Students are required to attend courses of study approved by the University and extending over an academic year of whole-time study.

Courses of study must, unless special exemption is obtained, be continuously pursued. Any interruption in a student's attendance, through illness or other exceptional circumstances, must be notified by the authorities of his College or School at the earliest opportunity to the Academic Registrar.

Preliminary Course

The preliminary course of instruction extends over an academic term of not less than ten weeks of whole-time study :

Systematic Instruction

(*a*) The history of Public Health and Public Assistance ; the evolution of central and local authorities in relation thereto ; the evolution of the law in relation to Health, Public Assistance, and Social Security.

(*b*) The existing functions of central and local authorities and voluntary organizations, and the nature and objects of the Public Health and Medical Services they administer.

(*c*) Social Security, and the agencies for the relief of poverty and the promotion of social welfare.

(*d*) International health organizations.

(*e*) The nature and sources of information bearing on the health of the people, and its numerical presentation. The preparation of memoranda and scientific articles containing statistical data.

(*f*) The casual agents of infection, their sources and control.

(*g*) The influence on physical and mental health of environment, including house and occupation, economic circumstances and nutrition and personal hygiene.

(*h*) Physical education.

(*i*) The influence of heredity on health.

(*j*) The principles of Health Education.

Practical Instruction

(*a*) Practical demonstrations of problems illustrative of the subjects dealt with in the part of the Course devoted to Systematic Instruction.

(*b*) Exercises in the solution of epidemiological problems, and in the preparation of memoranda containing statistical data.

(*c*) Visits to places and institutions of importance to Public Health.

Preliminary Examination

A candidate, on entering for the Preliminary Examination, must produce evidence of satisfactory and regular attendance at the preliminary course of study, at one or more of the Colleges or Schools of the University.

The Preliminary Examination will consist of two papers and oral examinations in the subjects of the Preliminary Course. A candidate must pass in all the subjects of the Preliminary Course at one time.

The Preliminary Examination will be held twice a year, beginning on the Monday of the week prior to that in which Christmas Day falls and one the first Monday in April, or if that be a Bank Holiday, on the second Monday in April.

Every candidate entering for the Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with these Regulations and the General Regulations as to Approved Courses of Study, together with the proper fee, not later than November 21st for the December Examination or March 1st for the April Examination.

The fee is 5 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

An Academic Postgraduate Certificate in Public Health will be awarded by the University to successful candidates.

Final Course

No candidate shall be admitted to the Final Course unless he presents a Certificate in Public Health granted by the University. Exemption from this requirement may be granted for special reasons. Application for such exemption must be made to the University.

A candidate, on entering for the Final Examination, must produce evidence of his satisfactory and regular attendance at the Final Course of study.

The Final Course of Instruction extends over not less than five calendar months of whole-time study.

Systematic Instruction

(*a*) Physiology, Biochemistry, Food, and Nutrition, in relation to the Public Health.

(*b*) Bacteriology, Parasitology, and Medical Entomology, as applied to Epidemiology.

(*c*) Mass Aspects of Disease. Administrative measures in relation to communicable and other diseases.

(*d*) Sanitation, Water Supplies, Housing, Town and Country Planning, and the application of scientific principles thereto.

(*e*) Statistical Data and Methods.

(*f*) Interpretation of Plans.

(*g*) Administration. Organization and management of Medical Departments and Institutions.

(*h*) The law relating to Public Health.

(*i*) Mental Health Services.

(*j*) Occupational Health.

(*k*) Methods of educating the public as to the promotion and maintenance of health.

Clinical Instruction

Every candidate shall produce evidence that he has either (*a*) resided and received instruction for four weeks in a Hospital for Infectious Diseases approved by the University,* or (*b*) attended satisfactorily and regularly and received instruction at such an approved Hospital for three months ; and that in either case such instruction was received during the late autumn, winter, or spring :

Provided that a candidate who shows to the satisfaction of the University that he has served for not less than six months as a Resident Medical Officer in such an approved Hospital may be exempted by the University from receiving the clinical instruction prescribed by this Rule.

Practical Instruction

(*a*) Except as provided below, every candidate shall produce evidence that he has during a period of not less than five months attended at the Health Department of the Local Authority of an area approved by the University,† and has personally observed and studied the daily work of each section of the Department under the guidance of administrative, technical, and executive officers of the Authority.

A candidate who shows to the satisfaction of the University that he has held a whole-time appointment for not less than twelve months in the Health Department of the Local Authority of an area approved by the University may be exempted by the University from receiving such instruction.

(*b*) Every candidate for the Final Examination must present :—

(i) A *Day-book* in which he has made regular entries relating to subjects in which practical instruction is given during the Course, and brief observations on the objects of such instruction, and the conclusions to be drawn therefrom.

(ii) A *Dissertation* on a subject which has been approved by the authorities of the School or College by which the Course is provided.

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* For list of approved Hospitals, *see* page 1878.
† For list of approved Areas, *see* page 1879.

Final Examination

The Final Examination will consist of three papers, a clinical examination in Infectious Diseases, an oral examination in Infectious Diseases, Epidemiology, and General and Special Hospital Administration, and a general oral examination.

The candidates' Day-books and Dissertations will be taken into account in the assessment of marks.

A candidate must pass in all the subjects of the Final Examination at one time.

The Final Examination will be held twice a year, beginning on the last Monday in June and on the fourth Monday in September.

Every candidate entering for the Final Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with these Regulations and the General Regulations as to Approved Courses of Study, together with the proper fee and the candidate's Day-book and Dissertation, not later than May 1st for the June Examination, or September 1st for the September Examination.

The fee is 7 guineas for each entry to the Final Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes. A mark of distinction will be placed against the names of those candidates who show exceptional merit in the whole examination.

A certificate, to be called the " Academic Postgraduate Diploma in Public Health," under the Seal of the University, will be delivered to each successful candidate, after the Report of the Examiners shall have been approved by the Senate.

APPENDIX

The following Fever Hospitals are recognised by the University for the purpose of the Diploma :—

Birmingham	City Hospital, Little Bromwich.
Brighton	Isolation Hospital, The Downs.
Bristol	City Isolation Hospital, Ham Green.
Cardiff	City Fever Hospital, Grangetown.
Leeds	City Fever Hospital, Seacroft.
Leicester	City Isolation Hospital and Sanatorium.
Liverpool	City Fever Hospital, Fazakerley.

London :

Brook Hospital, Shooters Hill, Woolwich, S.E.18.
Croydon Borough Hospital, Waddon Marsh Lane.
Eastern Hospital, Homerton Grove, E.9.
East Ham Corporation Isolation Hospital, Roman Road, E.6.
Enfield & Edmonton Joint Isolation Hospital, N.21.
Grove Hospital, Tooting Grove, Tooting Graveney, S.W.17.
Hornsey, Finchley & Wood Green Joint Isolation Hospital, N.10.
London Fever Hospital, Liverpool Road, N.1.
North-Eastern Hospital, St. Ann's Road, South Tottenham, N.15.
North-Western Hospital, Lawn Road, Hampstead, N.W.3.
Park Hospital, Hither Green, S.E.13.
South-Eastern Hospital, Avonley Road, New Cross, S.E.14.
South Middlesex Fever Hospital, Isleworth.
South-Western Hospital, Landor Road, Stockwell, S.W.9.
Western Hospital, Seagrave Road, Fulham, S.W.6.
West Ham Fever Hospital, Plaistow, E.13.
Willesden Municipal Hospital, Brentfield Road, Neasden.

Manchester	Corporation Hospital for Infectious Diseases, Newton Heaton, Monsall.
Newcastle-upon-Tyne ..	City Hospital for Infectious Diseases, Walker Gate.
Nottingham	City Fever Hospital, Bagthorpe.
Portsmouth	Fever Hospital, Milton Road.
Sheffield	City Hospital for Infectious Diseases—Lodge Moor Hospital.
Southampton	Fever Hospital, Millbrook.

Scotland

Aberdeen	City Hospital for Infectious Diseases.
Edinburgh ..	City Hospital for Infectious Diseases.
Glasgow	City Fever and Smallpox Hospital, Belvidere; Fever Hospital, Ruchill.

The University is prepared to consider additions to the above list.

The following areas are approved for the purpose of instruction in Public Health Administration :—

Metropolitan Borough of Hammersmith.

Urban District of Harrow.

Metropolitan Borough of Islington.

Royal Borough of Kensington.

Municipal Borough of Luton.

Metropolitan Borough of St. Marylebone.

Metropolitan Borough of St. Pancras.

Metropolitan Borough of Stepney.

Borough of Tottenham.

Municipal Borough of Twickenham.

Municipal Borough of Wembley.

Borough of Willesden.

A Rural District in Surrey approved by the University after consultation with the County Medical Officer of Health.

ACADEMIC DIPLOMA IN SLAVONIC AND EAST EUROPEAN STUDIES

[*For Examinations in* **1951** *and* **1952** *only.*]

The University grants an Academic Diploma in Slavonic and East European Studies.

Course of Study

The Course for the Diploma is open to :—

(*a*) Matriculated students.

(*b*) Non-matriculated students whose preliminary education is judged by the University, on the recommendation of the Board of Slavonic and East European Studies, to be sufficient to enable them to profit from the course of study.

The course will normally extend over not less than two years for full-time students and over not less than three years for part-time students.

Students must submit applications for registration through the authorities of the School of Slavonic and East European Studies.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the School at the earliest opportunity to the Academic Registrar.

Students are required to select *one* of the following Branches :—

(i) Russian.
(ii) Polish.
(iii) Czech and Slovak.
(iv) Serbo-Croat and Slovene.
(v) Hungarian.
(vi) Bulgarian.
(vii) Roumanian.

Examination

The subjects of examination in each of the five Branches enumerated above are as follows :—

(1) Translation and composition, including some form of free composition (one paper).

(2) Any two of the following :—

(*a*) History of the country selected (one paper).

(*b*) The Literature of the language or languages selected, with special reference to the period since the beginning of the 19th century (one paper).

(*c*) Economic history and geography of the country selected (one paper).

(3) An essay in English (one paper).

There will in addition be an oral examination.

In Branch (iii) translation passages will be set from Czech *and* Slovak into English, but the candidate will be expected to write his composition and free composition in *either* Czech *or* Slovak.

In Branch (iv) translation and composition will be from and into *either* Serbo-Croat *or* Slovene, but candidates offering Serbo-Croat will be tested in their ability to write both the Latin and the Cyrillic script.

Candidates shall not be approved unless they have shown a competent knowledge in the foregoing subjects, but a candidate who passes in three subjects out of the four may, with the consent of the Examiners, be allowed to offer the fourth subject alone at the next following Examination on payment of the proper fee.

The Examination will take place once in each year, beginning on the second Monday prior to the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned, duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 1st.

The fee is 5 guineas for each entry to the whole Examination, and 2 guineas for re-examination in one subject.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate, to be called the " Academic Diploma in Slavonic and East European Studies," stating the Branch in which the student has been examined, under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners has been approved by the Senate.

ACADEMIC DIPLOMA IN THEOLOGY

The University grants an Academic Diploma in Theology.

Course of Study

The Course for the Diploma is open to (*a*) matriculated students, and (*b*) non-matriculated students, who are certified by the authorities of a School of the University in the Faculty of Theology as having received training in Arts subjects before or during their College Course sufficient to enable them to enter the Theological Classes with profit.

Students are required to attend a course of study, approved for the purpose by the University, extending over two sessions at least.

The course of study must, unless special exemption be obtained, be continuously pursued. Any interruption in a student's attendance at a course of study, through illness or other exceptional circumstances, must be notified by the authorities of the School to which he is attached at the earliest opportunity to the Academic Registrar.

Date of Examination

The Examination for the Diploma will take place once in each year, beginning on the second Monday prior to the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than May 1st.

Fee

The fee for each student is 5 guineas for each entry to the whole Examination, 3 guineas for entry in each half (three subjects), and 2 guineas for re-examination in one subject.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

Details of Examination

The Examination will consist of :—

1. Old Testament (2 papers).
2. New Testament (2 papers).
3. Biblical Theology (1 paper).
4. Philosophical Introduction to Theology (1 paper).
5. Church History (1 paper).
6. *One* of the following (1 paper in each subject) :—
   - (i) Hebrew.
   - (ii) Introduction to the Vulgate.
   - (iii) Comparative Study of Religions.
   - (iv) English Church History.
   - (v) Christian Ethics.
   - (vi) The History and Development of Christian Worship.

Candidates may enter for the whole Examination after having attended a course extending over not less than two sessions. They may as an alternative enter for examination in any three subjects after pursuing a course of study extending over not less than one session and, if successful, they may enter for the remaining three subjects after pursuing a further course extending over not less than one session.

Candidates shall not be approved unless they have shown a competent knowledge in the foregoing subjects, but a candidate who enters for the whole Examination at one time and satisfies the Examiners in three, four or five subjects shall be deemed to have passed in the three subjects in which he has obtained the highest marks and shall be permitted to offer the three other subjects at the next following Examination. On the recommendation of the Examiners a candidate who satisfies them in five subjects may be permitted to offer at the next following Examination the one subject in which he has failed.

A candidate who is referred in one subject only and on re-entry for this subject fails to satisfy the Examiners will be credited with the three subjects in which, at the previous Examination, he obtained the highest marks, and will be required to present himself for re-examination in the remaining three subjects.

A candidate who has obtained either the Academic or the External Diploma in Theology may enter subsequently for examination in one or more supplementary subjects on payment of a fee of 2 guineas for each subject, provided he has attended an approved course of study in such subject or subjects.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on July 23rd.

A certificate, to be called the "Academic Diploma in Theology," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved by the Senate.

SYLLABUSES

Old Testament

(*a*) History of Israel (one paper). Outlines of the History from the Exodus to the death of Simon Maccabaeus.

(*b*) The Religion of Israel (one paper). The Development of the religious ideas and institutions of Israel down to 100 B.C.

Candidates will be expected to show a general knowledge of Old Testament Introduction.

New Testament

I.—General Introduction to all the Books of the New Testament—authorship, date, place of origin, outline of contents.

II.—(*a*) Translation from a specified book or books of the New Testament together with Introduction and exegesis.

1951 and **1952** *St. John.*

1953 *St. Matthew.*

Special emphasis will be laid upon the knowledge of the subject-matter of the set book or books.

(*b*) Easy unprepared passages for translation from the Gospels.

Biblical Theology

1951 The Incarnation and the Trinity

Biblical teaching on the subject with special reference to the following :—

(1) The Doctrine of God and the conception of Spirit in the Old Testament.

(2) The Old Testament antecedents to the New Testament doctrine of the Person of Christ ; the Jewish ideas in the time of Christ concerning mediation, the Messiah, the Son of Man and the Logos.

(3) The teaching of the New Testament as to the Person of Christ.

(4) The data for the doctrine of the Trinity contained in the New Testament.

1952 The Work of Christ

Biblical teaching on the subject with special reference to the following :—

(1) The Covenant relation in the Old Testament ; the moral and ceremonial conditions of fellowship with God ; the idea of holiness ; the sacrificial system in outline and meaning ; the Old Testament conceptions of Salvation, redemption and life after death ; the soteriological and eschatological conceptions in the time of Christ in Jewish and Greek thought.

(2) The New Testament teaching as to the work of Christ.

Note.—Special attention should be given to the inter-relation of the doctrines of the Person and Work of Christ in the New Testament.

1953 Man, Sin and Grace

Biblical teaching on the subject with special reference to the following :—

(1) The psychological terms of the Old Testament ; the ideas of corporate personality, life and death ; the terminology of sin and grace in primitive, prophetic and legalistic ideas ; the development of the relevant ideas in Judaism to the time of Christ.

(2) The New Testament experience of salvation, with its implications regarding man and sin and the work of the Holy Spirit.

Note.—Special attention should be given to the relation of the doctrine of Grace to the Work of the Spirit.

Philosophic Introduction to Theology

I.—(*a*) Definition of religion and theories of its origin. (*b*) Belief in God and proofs of the divine existence. (*c*) Polytheism, pantheism, deism, monotheism. (*d*) The belief in immortality. (*e*) Reason and revelation.

II.—(*a*) Non-theistic theories : Agnosticism, Dualism, Materialism, Monism. (*b*) Theism.

Church History

History of the Christian Church to A.D. 451.

Hebrew

Set Book. Passages for translation from Hebrew into English with exegetical notes, pointing, grammar questions. (Easy sentences for translation into Hebrew.)

1951 2 *Kings* I–VII.

1952 and **1953** *Exodus* III–XII.

Introduction to the Vulgate

Origin of the Vulgate; its general relation to the original texts of the Old and New Testaments, to the Septuagint, and to earlier Latin versions; ecclesiastical recognition and use of the Vulgate; value for textual criticism of the Old and New Testaments. The selected portion of the Vulgate shall be that corresponding to the Greek text prescribed for the same year under Section II (special introduction, translation and exegesis) of the syllabus in New Testament above; passages for unseen translation will also be set.

Comparative Study of Religions

A. A study of the main principles of *two* selected religions, with special reference to the following points :—

(*a*) Sacred Literature. Conceptions of inspirations and authority.

(*b*) Conceptions of Deity; the Divine-human relation, origin and government of the world.

(*c*) The religious life; sin, salvation, sacrifice, prayer, worship, ethics.

1951 Brahmanism, Hinduism and Judaism since the fall of Jerusalem A.D. 70.

1952 Brahmanism, Hinduism and Shinto.

1953 Zoroastrianism and Shinto.

and *either*

B. A study of the main principles of two other religions prescribed for study, with special reference to the points mentioned in A above.

1951 Zoroastrianism and Buddhism.

1952 Islam and Buddhism.

1953 Islam, Confucianism and Taoism.

or

C. Elementary forms of religion. Their embodiment in rites, customs and beliefs.

English Church History

1951 The History of Christianity in England, 1600–1900.

1952 From the beginnings of Christianity in England to A.D. 1100.

1953 The History of Christianity in England, 1100–1600.

Christian Ethics

The Ethics of the New Testament.—(*a*) Relation to the moral teaching of the Old Testament. (*b*) Connexion of the moral life with the facts of the Christian Gospel. (*c*) The moral life in relation to (1) the Christian Society, (2) the World, (3) the Individual.

The Ethics of Greece and Rome.—(*a*) As compared with the Ethics of the New Testament. (*b*) As influencing subsequent presentations of Christian Ethics.

Some Types of Christian Ethics.—(*a*) *Patristic:* Clement of Alexandria, Augustine. (*b*) *Mediæval:* Aquinas, à Kempis. (*c*) *Reformation:* Luther, Calvin.

The History and Development of Christian Worship

To be studied in general outline with reference to the following :—

The Origins and Principles of Christian Worship ; Liturgies, Eastern and Western.

The Services of the Western Mediæval Church.—The Reformation changes in England and Abroad. The Book of Common Prayer : (*a*) The Eucharist, (*b*) Morning and Evening Prayer, (*c*) the Ordinal, (*d*) the Kalendar and Occasional Offices.

ACADEMIC DIPLOMA IN TOWN PLANNING AND CIVIC ARCHITECTURE

The University grants a Diploma in Town Planning and Civic Architecture.

Course of Study

The course of training for the Diploma is open to students of the University School of Architecture at University College.

A student before being registered as a candidate for the Diploma must present either the University of London School of Architecture Certificate in Town Planning, or some other approved Certificate in Town Planning.

Students are required to attend in the Department of Town Planning for at least two evenings a week during the first and second terms of one session, or for at least one day a week during the three terms of one session.

Examination

The Examination will consist of :—

(*a*) An examination of course work done in the Studio during the course.

(*b*) A written examination (two papers of three hours) and an oral examination.

(*c*) A thesis on a subject approved by the Professor, which subject shall include the production of an original scheme and the development of the architectural details.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the three portions of the Examination.

The Examination for the Diploma will take place once in each year, beginning on the Friday prior to the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than June 1st. The candidate must submit his thesis not later than June 25th.

The fee for each student is 5 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The Diploma will only be conferred on candidates who, in addition to having pursued the course of study and passed the Examination, produce evidence *either*—

(i) that they are Associates or Fellows of the Royal Institute of British Architects, *or*,

(ii) that they have had practical experience approved by the University in Town Planning.

The evidence above referred to may be submitted either with the entry-form for the Examination or at any time subsequently.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate to be called the " Academic Diploma in Town Planning and Civic Architecture," under the Seal of the University, will be delivered to each candidate who has passed, after the report of the Examiners has been approved and the evidence referred to above has been received by the Senate.

ACADEMIC DIPLOMA IN TOWN PLANNING AND CIVIC ENGINEERING

The University grants a Diploma in Town Planning and Civic Engineering.

COURSE OF STUDY

The course of training for the Diploma is open to students of the University School of Architecture at University College.

A student before being registered as a candidate for the Diploma must present either the University of London School of Architecture Certificate in Town Planning, or some other approved Certificate in Town Planning.

Students are required to attend in the Department of Town Planning for not less than two evenings a week during the first and second terms of one session, or for one day a week during the three terms of one session.

EXAMINATION

The Examination will consist of—

(*a*) An examination of course work done in the Studio during the course.

(*b*) A written examination (two papers of three hours) and an oral examination.

(*c*) A thesis on a subject approved by the Professor, which subject shall include the production of an original scheme and the development of the engineering details.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the three portions of the Examination.

The Examination for the Diploma will take place once in each year, beginning on the Friday prior to the first Monday in July.

Every student entering for this Examination must apply to the Academic Registrar for an entry-form and a certificate of course of study, which must be returned duly filled up and attested in accordance with the General Regulations as to Approved Courses of Study, together with the proper fee, not later than June 1st. The candidate must submit his thesis not later than June 25th.

The fee for each student is 5 guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank, Ltd., Tavistock Square, W.C.1, University of London Account."

The Diploma will only be conferred on candidates who, in addition to having pursued the course of study and passed the Examination, produce evidence *either*—

(i) that they are Corporate Members of the Institution of Civil Engineers, *or*,

(ii) that they are Corporate Members of the Institute of Chartered Surveyors, *or*,

(iii) that they have had practical experience approved by the University in Town Planning, *or*,

(iv) that they are Corporate Members of the Institution of Municipal and County Engineers.

The evidence above referred to may be submitted either with the entry-form for the Examination or at any time subsequently.

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on Saturday in the second week following that in which the Examination concludes.

A certificate to be called the "Academic Diploma in Town Planning and Civic Engineering," under the Seal of the University, will be delivered to each candidate who has passed, after the Report of the Examiners has been approved and the evidence referred to above has been received by the Senate.

ACADEMIC POSTGRADUATE CERTIFICATE AND DIPLOMA IN TROPICAL MEDICINE AND HYGIENE

[*The Courses will be held for the first time from the beginning of the session* **1951-52.**]

The University grants an Academic Postgraduate Certificate in Tropical Medicine and Hygiene and an Academic Postgraduate Diploma in Tropical Medicine and Hygiene.

Courses of Study

The courses for the Diploma consist of a Preliminary Course and a Final Course, and are open to registered medical practitioners and to persons who, while holding a medical qualification which although not registered in this country is approved by the University, possess such experience as will enable them to profit by the courses.

Students will be admitted to the Preliminary Course and to the examination for the Certificate at any time after receiving their medical qualification, but students may not enter for the Final Course unless they produce evidence that they have experience of the practice of medicine extending over a period of at least twelve months in a country accepted by the University as a place where tropical diseases prevail.

Students are required to attend Preliminary and Final Courses of whole-time study at a College or School of the University and extending over a total of not less than one academic year. The Final Course need not be attended in the same academic year as the Preliminary Course provided that the interval between the completion of the Preliminary Course and the commencement of the Final Course does not exceed five years.

The Preliminary and Final Courses of Study must, unless exemption is obtained, be continuously pursued. Any interruption in the student's attendance through illness or other exceptional circumstances must be notified by the authorities of the College or School to which he is attached at the earliest opportunity to the Academic Registrar.

Preliminary Course

The Preliminary Course extends over a period of not less than four months' whole-time study. It includes :—

(*a*) Systematic instruction in the following subjects as they are related to the principles of tropical medicine :—

Parasitology.
Tropical Medicine and Pathology.
Entomology.
Bacteriology.
Hygiene.
Nutrition.

and (*b*) Practical instruction in :—

Parasitology.
Tropical Medicine.
Entomology.
Bacteriology.

Preliminary Examination

The candidate on entering for the Preliminary Examination must produce evidence of a satisfactory and regular attendance at the Preliminary Course of study at a College or School of the University.

The Examination will consist of two papers, a practical and an oral examination. The Preliminary Examination will be held twice a year beginning on (a date to be decided) and on (a date to be decided).

Every candidate entering for the Examination must apply to the Academic Registrar for an entry form and a certificate of course of study, which must be returned duly filled up and attested in accordance with these Regulations and the General Regulations as to Approved Courses of Study, together with the proper fee, not later than (dates to be announced later).

The fee is five guineas for each entry to the Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed " Westminster Bank Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order, will be published by the Academic Registrar on the Saturday in the second week following that in which the Examination concludes.

An Academic Postgraduate Certificate in Tropical Medicine and Hygiene will be awarded by the University to successful candidates.

Final Course

The Final Course extends over a period of not less than four calendar months of whole-time study.

On entering the Final Course a student will elect to study one of the three following subjects :—

Clinical Tropical Medicine.

Medical Biology in relation to Tropical Medicine.

Tropical Hygiene.

An applicant for admission to the Final Course must specify one or more topics in which he is interested and which in the course of his experience he has had an opportunity to study. In the Final Course he will make a special inquiry into one of these topics approved by the authorities of the School or College.

The Course of study will include :—

For those electing Clinical Tropical Medicine

(*a*) Instruction and practice in clinical medicine, with special reference to diseases prevailing in the tropics, in the wards of hospitals approved for this purpose.

(*b*) A special inquiry into a clinical subject approved by the authorities of the School or College.

For those electing Medical Biology

(*a*) Practical instruction in helminthology, protozoology and entomology.

(*b*) A special inquiry into a subject in medical Biology approved by the authorities of the School or College.

For those electing Tropical Hygiene

(*a*) Practical instruction in the preventive aspects of clinical medicine, including Child Health, Maternal Welfare and Mental Health Services.

(*b*) Systematic instruction in the epidemiology and prevention of diseases common in the tropics; preventive medicine; nutrition and statistics.

(*c*) A special inquiry into a subject concerned with Public Health approved by the authorities of the School or College.

Final Examination

No candidate shall be admitted to the Final Examination unless he has a Certificate in Tropical Medicine and Hygiene granted by the University and produces evidence of satisfactory attendance at a Final Course of Study.

The Final Examination will consist of two papers, an oral examination and a clinical or practical examination.

A candidate will also be required to submit a dissertation on his subject of special inquiry.

The Final Examination will be held twice a year beginning on (a date to be decided) and on (a date to be decided).

Every candidate entering for the Final Examination must apply to the Academic Registrar for an entry form and a certificate of course of study, which must be returned duly filled up and attested in accordance with these Regulations and the General Regulations as to Approved Courses of Study together with the proper fee and the candidate's Day-book and Dissertation, not later than (dates to be announced later).

The fee is 7 guineas for each entry to the Final Examination.

All cheques should be made payable to the University of London, or Bearer, and crossed "Westminster Bank Ltd., Tavistock Square, W.C.1, University of London Account."

A provisional list of successful candidates, arranged in alphabetical order will be published by the Academic Registrar on the Saturday in the second week following that in which the Examination concludes.

A certificate to be called the "Academic Postgraduate Diploma in Tropical Medicine and Hygiene," under the Seal of the University, will be delivered to each successful candidate after the report of the Examiners shall have been approved by the Senate.

*