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Calcutta University Commission, 1917-19

REPORT

Volume VI

Appendices and Index

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
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CONTENTS.

APPENDICES AND INDEX.

VOLUME VI.

PAGE

I.—Appendix to Chapter I.

Memorandum submitted by the Commission to the Subjects Committee (appointed in connexion with the Reforms) . . . 1

II.—Appendix to Chapter III.

Macaulay's Minute on Education, 1835 8

III.—Appendix to Chapter III.

Despatch from the Court of Directors of the East India Company to the Governor-General of India in Council, No. 49, dated the 19th July 1854 18

IV.—Appendix to Chapter VI.

Memorandum on the Mohsin Fund by Dr. Zia-ud-din Ahmad . 43

V.—Appendix to Chapter IX.

Note on the age of candidates at the matriculation examination of 1918 by Dr Zia-ud-din Ahmad 51

VI.—Appendix to Chapter XI.

Memorandum on the Education of Europeans and Anglo-Indians by Mr. W. W. Hornell 54

VII.—Appendix to Chapter XIV.

Scheme for a proposed School for Hindu Girls in zananas . . 86

VIII.—Appendix to Chapter XV.

List of University Teachers in Post-Graduate Classes, 1918-19—

A. In Arts 91

B. In Science 96

IX.—Appendix to Chapter XV.

University College of Science

A. Scheme sanctioned by the Senate on the 15th February 1919 for the Governing Body 99

B. Description of the grounds and buildings 101

X.—Appendix to Chapter XVI.

Calcutta University Regulations for the M. A. degree in Indian Vernaculars 106

XI.—Appendix to Chapter XVI.

Scheme for the reorganisation and reform of Madrassahs in the Presidency of Bengal

A. Time table for the Junior Department 108

B. Detailed course of studies for Classes VII to X . . 109

PAGE.

XII.—Appendix to Chapter XVII

Excerpts from Calcutta University Regulations relating to Examinations 113

XIII.—Appendix to Chapter XVII.

A. Memorandum on Frequency Curves of the Marks of a number of sub examiners by Dr. Zia-ud-din Ahmad and Mr. P. J. Hartog 125

B. On the Limits of Error in the Marking of Examination Papers and certain Practical Consequences arising therefrom by Dr. Zia-ud-din Ahmad 128

XIV.—Appendix to Chapter XVIII.

Summary of the Report of a Conference held at Simla in August 1917 on the Medium of Instruction in Secondary Schools . 132

XV.—Appendix to Chapter XIX.

Memorandum on the Organisation of Hostels by Dr. Zia-ud-din Ahmad 136

XVI.—Appendix to Chapter XXIII.

Extracts from the Rules and Regulations of the Medical College of Bengal, Calcutta . . 141

XVII.—Appendix to Chapter XXIII.

Memorandum on a Department of Public Health by Dr C. A. Bentley, Sanitary Commissioner with the Government of Bengal . 143

XVIII.—Appendix to Chapter XXIV.

Resolutions passed at recent conferences on Agricultural Education

A Conference held at Pusa on 4th and 5th February 1916 . 153

B Conference held at Simla on the 18th and 19th June 1917 . 155

C Conference forming part of the tenth Meeting of the Board of Agriculture in India, held at Poona from the 10th to 15th December 1917 158

XIX.—Appendix to Chapter XXIV.

Memorandum by Mr L Birley, Secretary to the Government of Bengal, Revenue Department, Calcutta 160

XX.—Appendix to Chapter XXIV.

Extract from the Proceedings of the Conference on Veterinary Education at a Meeting of the Board of Agriculture in India held at Poona, December 1917 164

XXI.—Appendix to Chapter XL.

University Diploma in Spoken English

A. Draft Regulations of the Calcutta University . . . 169

B. Memorandum submitted by the Commission on these Regulations 170

XXII.—Appendix to Chapter XLVI.

Report on the health conditions of the site of the Civil Engineering College, Sibpur, by Dr. C. A. Bentley, Sanitary Commissioner with the Government of Bengal 172

PAGE.

XXIII.—Appendix to Chapter XLVII.

Memorandum on agricultural education by Mr. S. Milligan, Director of Agriculture, Bengal 174

XXIV.—Appendix to Chapter XLVII.

Scheme of the University of London for the Degree in Estate Management 178

XXV.—Appendix to Chapter LI (and Chapter XXXII).

Financial estimate of the Intermediate Colleges 180

XXVI.—Appendix to Chapter LI (and Chapter XXXIX).

Financial estimate for Hostel Accommodation 191

XXVII.—Appendix to Chapter LI.

Financial estimate for the proposed reconstruction of Calcutta University 193

XXVIII.—Appendix to Chapter LI (and Chapter XXXIII).

Financial estimates for the recurring expenditure on the proposed University of Dacca with a summary list of buildings required . 197

XXIX.—*Percentage of Passes at University Examinations* 210

XXX.—*Letters inviting representatives of private colleges to confer with the Commission*

A. Representatives of Missionary Bodies 222

B Representatives of Private Colleges in the Mufassal . . 224

C. Representatives of Private Colleges in Calcutta . . . 226

XXXI.—*List of witnesses* 229

XXXII.—*List of institutions and places visited by the Commission* . . . 267

XXXIII.—*List of persons consulted by the Commission* 276

XXXIV.—*Notes on the Statistical Statements printed in Volume XIII* . . 301

Name Index 316

Subject Index 328

REPORT.

PART I.—ANALYSIS OF PRESENT CONDITIONS.

VOLUME I.

Analyses of Chapters II—XIII.

Classified List of Colleges and Institutions belonging or affiliated to the Calcutta University.

CHAPTER I.—Reference and Procedure of the Commission.

" II.—Preliminary Observations.

" III.—The Development of the Western System of Education in Bengal

" IV.—Government and Private Effort in Education in India.

VOLUME I—*contd.*

CHAPTER V.—The Student in Bengal.
" VI.—The Musalmans and their Educational Needs.
" VII.—The Education of Backward Classes.
" VIII.—The High Schools as the Foundations of the University.
" IX.—The University Matriculation Examination. Its Requirements, Standard and Influence upon the Schools.
" X.—The Recognition of Schools by the University.
" XI.—The Education of Europeans and Anglo-Indians.
" XII.—The Intermediate Classes and the Second-Grade Colleges.
" XIII.—The 'Arts Colleges': their Undergraduate Work.

VOLUME II.

Analyses of Chapters XIV—XX.
CHAPTER XIV.—The Education of Girls and Women.
" XV.—Post-Graduate Teaching and Research.
" XVI.—Oriental Studies.
" XVII.—The Examination System.
" XVIII.—The Medium of Instruction and Examination; and the Teaching of English and the Mother Tongue.
" XIX.—Conditions of Student Life.
" XX.—The Site of the University.

VOLUME III.

Analyses of Chapters XXI—XXIX.
CHAPTER XXI.—The Training of Teachers.
" XXII.—Legal Education
" XXIII.—Medical Education
" XXIV.—Engineering and Mining Education
" XXV.—Agricultural Education.
" XXVI.—Training in Technology (other than Engineering, Mining, Architecture and Agriculture) and in Commerce.
" XXVII.—Governance and Administration of the University of Calcutta.
" XXVIII.—The Relations between Government and the University.
" XXIX.—Inter-University Relations

PART II.—RECOMMENDATIONS OF THE COMMISSION.

VOLUME IV.

Analyses of Chapters XXX—XXXIX.
CHAPTER XXX.—The Need for a New Departure.
" XXXI.—Reform of Secondary Education. Proposed New Authority.
" XXXII.—The Intermediate Colleges
" XXXIII.—The University of Dacca.
" XXXIV.—A Teaching University in Calcutta.
" XXXV.—The Mufassal Colleges.
" XXXVI.—The Education of Women.
" XXXVII.—The Constitution of the University of Calcutta.
" XXXVIII.—The Site of the University.
" XXXIX.—Improved Conditions of Student Life.

VOLUME V.

Analyses of Chapters XL—LI.

CHAPTER XL.—Examination Reform.

„ XLI.—The Medium of Instruction and Examination. The Teaching of English.

„ XLII.—Oriental Studies.

„ XLIII.—The Training of Teachers.

„ XLIV.—Medical Education.

„ XLV.—Legal Education.

„ XLVI.—Engineering, Mining and Architectural Education.

„ XLVII.—Agricultural Education.

„ XLVIII.—Training in Technology (other than Engineering, Mining, Architecture and Agriculture) and in Commerce.

„ XLIX.—The Special Educational Needs of Musalmans.

„ L.—Relations of Government with the Universities.

„ LI.—Financial Aspects of our Proposals.

„ LII.—Summary of Recommendations.

Notes—

A. Dr. Zia-ud-din Ahmad and Dr. J. W. Gregory.

B. Dr. Zia-ud-din Ahmad.

C. Dr. J. W. Gregory.

VOLUME VII.

General Memoranda and Oral Evidence.

I. Agricultural Education.

II. Commercial and Industrial Education.

III. Engineering and Architecture.

IV. Europeans and Anglo-Indians, University Education of.

V. Examinations and Appointment of Examiners.

VI. Government and Education.

VII. Health of Students.

VIII. Madrassahs.

IX. Medicine.

X. Musalmans, Special Needs of.

XI. Post-Graduate Instruction.

XII. Presidency College, Calcutta, Development of.

XIII. Religious and Social Conditions, Effects of.

XIV. Secondary Schools, Teaching and Examination of.

XV. Serampore College, Serampore, Development of.

XVI. Special Departments of Study.

XVII. Teachers, Training of.

XVIII. Teaching, Courses and Methods of.

XIX. Trust Deeds of Colleges.

XX. University, Organisation and Administration of.

XXI. University Policy, Changes in.

VOLUME VIII.

Classified Replies to the Commissioners' Questions 1—3.

1. Defects of the existing system of university education.

2. Essentials of the best kind of university training.

3. Resources of Calcutta as a seat of learning.

VOLUME IX.

Classified Replies to the Commissioners' Questions 4—7

4. Dacca and mufassal universities.
5. Relation between the University and colleges.
6. University and professional requirements.
7. University courses.

VOLUME X

Classified Replies to the Commissioners' Questions 8—12.

8. Conditions of admission to the University.
9. Use and abuse of examinations
10. Improvements in university examinations.
11. Medium of instruction.
12. Scientific study of the vernaculars

VOLUME XI

Classified Replies to the Commissioners' Questions 13—16.

13. Subjects of study omitted in curricula.
14. Government and the University.
15. University examinations and public service.
16. Research in the University.

VOLUME XII

Classified Replies to the Commissioners' Questions 17—23.

17. Conditions of student life in Bengal.
18. Health and physical development of students.
19. Organisation of residence.
20. Financial resources for higher education.
21. Removal of the University to the suburbs.
22. Special communal interests.
23. Women's education.

VOLUME XIII.

Statistics relating to Colleges.

STATEMENT I, (A) AND (B).—Number of students in the session 1917-18.

,, II.—Number of students in the session 1917-18, who have failed and are taking the course for a second or a later year.

,, III.—Localities from which students are drawn.

,, IV.—Number of Muslim students in the session 1917-18.

,, V, (A) AND (B).—Residential accommodation of students in the session 1917-18.

,, VI.—Particulars of teaching staff and teaching for the session 1917-18.

,, VII.—Conditions of service of teaching staff in non-Government colleges.

,, VIII.—List of publications of members of the teaching staff, 1913-17.

, IX, (A) AND (B).—Number of working days in the session 1917-18.

,, X.—Periods which elapse between the first day of the session in the first and third years and the actual beginning of the teaching work for students in those years respectively.

,, XI.—Non-university examination courses.

, XII.—Attendance by persons other than candidates for university examinations.

MAPS.

In Volume I.—Map of Bengal showing the Sites of Colleges.

" II.—Map of Calcutta showing the Distribution of the University Buildings and Colleges.

" IV.—Map showing the Site of the Dacca University and the Town of Dacca.

APPENDIX I.

Memorandum submitted by the Commission to the Subjects Committee (appointed in connexion with the Reforms.)

Relations of government to Higher Education.

Introductory

1. The Calcutta University Commission find that the present system of university education in Bengal is wholly inadequate to the modern needs of the Presidency. They have ascertained that experienced opinion, both Indian and European, is almost unanimous in criticising unfavourably the quality of the training which is usually given, and in deploring its failure adequately to develope the intelligence and practical capacity of the students The constitution of the University is obsolete. It hampers academic freedom and impedes reform At the same time, it is not sufficiently representative of the interests involved. The financial resources of the University and the colleges are insufficient; the courses of study are uninspiring, the conditions under which many thousands of the students live in Calcutta and the mufassal are injurious to their health and character. If the present state of things is allowed to continue, the results will be unhappy for the social welfare, the political development and the material interests of Bengal.

2. The Commission have therefore reached the conclusion that a drastic reconstruction of the present university system should be undertaken without delay This reconstruction will involve a reform of higher secondary education, including the intermediate classes and the high English schools, upon which the work of the University and its colleges depends The character of the changes which the Commission propose, and the grounds upon which they are based, cannot be fully set forth in a short memorandum But, as some of the most important of their recommendations deal with the relations of the Government of India and the Government of Bengal to the future Universities of Calcutta and Dacca and have a direct bearing upon the question of what part of public education, if any, should be transferred to popular control, the Commission think that it will be convenient if they communicate at once to His Excellency the Viceroy for the information of the Reform Scheme Committees those salient features of their plan which touch upon matters now under consideration by those Committees.

Proposed teaching universities in Calcutta and Dacca.

3. The Commission propose the establishment of a teaching university in Calcutta, based upon a new and closer association between the University

and those Calcutta colleges which can be so organised as to take part in this co-operative work, provisional arrangements being made for those other Calcutta colleges which may not at first be able to fulfil the conditions imposed. The Commission also recommend that the new University of Dacca should be a teaching university, largely of a residential type. They recommend that in both universities the direction of academic policy connected with teaching and courses of study should be chiefly in the hands of the teaching body. Further, they propose that those of the mufassal colleges which may provide courses leading up to a university degree should continue for the present to be in association with the University of Calcutta and remain under its ægis, though with more adequate representation than at present; subject however to conditions which will confer upon those stronger colleges which may show potentiality of growth the opportunity of rising stage by stage to academic independence

4 In the constitutions proposed for the Universities of Calcutta and Dacca the Commission recommend a wide departure from the form of government and administration now characteristic of almost all Indian universities. Close contact between the University and all kinds of experienced public opinion in Bengal is secured by the establishment of a large and representative Court, whose sanction will be required for any change in the University Statutes, and, either directly or through a committee, for any substantial expenditure. The co-ordination of the business of the University as a whole is provided for by a strong Executive Council Within the University, financial and administrative business is in the main assigned to one organ, educational business to another The Government of Bengal will have representation upon all the chief Boards of the two universities, and the Governor of Bengal, as the Chancellor of both, will be in intimate relation to all the more important sides of academic policy and business

Future relations of the universities with Government

5. These proposals, which the Commission regard as indispensable to the welfare of the universities, involve a great change in the present connexion between them and Government. They would sweep away the detailed control now exercised by the Government of India over the regulations of the University of Calcutta and would involve the repeal of the Indian Universities Act, 1904, so far as Calcutta is concerned They would establish a new and organic connexion between the University of Calcutta and the provincial Government, while giving to the University responsibility for its own educational affairs and freedom in adapting its work to the needs of the community; in the University of Dacca also, they would make the Government of Bengal the ultimate authority in all matters affecting public policy and public finance. But they propose to throw upon each university greater responsibility for the conduct of its educational affairs

6. Under these conditions, an entirely new form of Governmental supervision will be required. The Universities both of Calcutta and of Dacca should be protected against interference by any other public body or by any

department of Government in those matters of educational administration and policy which are assigned to their responsible care The Commission would therefore strongly deprecate the transfer of the present kind of control over university education to the provincial Government however constituted. For the exercise of control over the details of the internal educational work of a university the Commission feel that Government, whether in its present form or in that which it may assume under new conditions, is not the appropriate body.

Relation of the universities with the Government of India

7. There are clear indications that in future the university problem will become in an increasing degree an all-India problem. Each university, as it wins reputation for special excellence in some branch of learning, will attract a larger number of students from other provinces Developments of technological instruction in the universities will entail some specialisation of work, not only on grounds of economy but because of the special facilities for practical training offered by the industries of different districts And, as the Indian universities extend their work of scholarly research, aid will be required not only from the Government of the province but from the Government of India which alone can survey the whole field of India's needs Moreover, the new universities will require some central authority which will assure public opinion in India and the learned world in other countries that a high standard of excellence is upheld in the award of their degrees and which may serve as a channel of communication between them and the governments of other countries, and be ready to assist them in the very difficult task of recruiting such members of their staffs as it may be necessary to draw from other parts of India and from Europe and America And the Commission think it highly desirable that the power of establishing new universities in British India or of modifying the fundamental Acts or Charters which govern their work, and of making changes in the Acts governing existing universities, should lie with the Government of India and not with any provincial Government

8. However far therefore the process of devolution to provincial Governments may be carried in the sphere of education, there will remain many functions in connexion with university affairs which the Central Government can alone perform These functions are (*a*) University legislation, (*b*) visitation, in order to ascertain continued efficiency of the several universities, (*c*) co-ordination, in order to secure the most economical co-operation among the universities in the advancement of knowledge and in the provision of special types of instruction; (*d*) the encouragement of research, in order that the Indian universities may have the means of rendering greater service to knowledge; and (*e*) assistance in recruitment, so that each university may have access to every source from which it can draw the best available scholars and teachers to its staff. The Commission propose therefore that the Viceroy should be the Visitor of the two universities in Bengal, and are further of opinion that these and other Indian universities will require the aid of the Government of India through a special organisation associating with itself

from time to time expert knowledge from all parts of India and from the West. The Commission would therefore strongly deprecate any form of transference to provincial Governments which would wholly divest the Government of India of responsibilities in regard to university education. They observe that it is not thought desirable by the Indian Industrial Commission that the Government of India should devolve upon provincial Governments all its responsibilities in regard to scientific and technological education.

Proposed reconstruction of higher secondary education.

9. The Commission are of opinion that university studies should begin at the level of the present intermediate examination, and that the training now given in the colleges during the two years of the intermediate course should be wholly remodelled and entrusted to distinct and separate institutions to which they suggest that the name of intermediate colleges should be given. This change, in support of which they have received evidence from experienced witnesses in all parts of Bengal and of India, they regard as essential. It is the pivot of their scheme and a most urgently needed reform. Many of the intermediate colleges ought, in the judgment of the Commission, to be attached to the best of the high English schools Both on educational and economic grounds it is important that the link between the intermediate colleges and the high English school system should be close. The Commission are of opinion that the administration of the intermediate stage and of the high English schools should be unified.

Proposed Board of Secondary and Intermediate Education

10 For the control both of the intermediate colleges and of the high English schools the Commission are of opinion that a special organisation is necessary. In view of the deep concern of the University in this grade of education and of the fact that the University has hitherto conducted the intermediate work and has largely controlled the work of high English schools, the Commission hold it to be essential that the universities should be strongly represented on the proposed new authority for secondary and intermediate education. They also desire to see an adequate representation of the interests of the Hindu and Muslim communities, and, as it is their hope that the new system will render some of its chief services in preparing boys for agriculture, and for industrial and commercial callings as well as for the lower grades of Government service, they think the Board should include representatives of agriculture, commerce and industry. It should also include representatives of medicine (including public health) and secondary education. They believe that these functions can be fulfilled with a Board of workable size, by the use of consultative committees.

11. The Commission therefore recommend that a Board of Secondary and Intermediate Education be established, with functions which would be partly executive and partly advisory. In regard to its executive functions the Board would act under the supervision and financial control of Government, and in its name. It should exercise a general supervision over all the

institutions (*i.e.*, intermediate colleges and high English schools) within its sphere and should grant recognition to high English schools and intermediate colleges, should plan their various courses of study, and should conduct the examinations corresponding to the present matriculation and intermediate. It should inspect all the intermediate colleges and high English schools and report upon their work. It should prepare estimates and should expend, under such conditions as Government might define, the funds allotted by Government in each year's budget for the provision, maintenance, inspection and examination of the intermediate colleges and high English schools.

12. The part of education which would thus be dealt with by a Board under the Minister or Member is conveniently separable from the other parts of public instruction. While forming part of a great whole, it has a distinct character and lends itself to special administrative treatment. It may be designated as higher secondary education.

Summary.

13. The recommendations of the Calcutta University Commission, so far as they bear upon the future relations between Government and the Universities of Calcutta and Dacca and upon the administration of the proposed intermediate colleges and of the high English schools in Bengal, may be summed up as follows :—

(*a*) The Commission recommend that the Viceroy should be the Visitor of the Universities of Calcutta and Dacca, and the Governor of Bengal their Chancellor In order that there may be a link between all Indian universities and due connexion between them and the supreme Government, the Commission suggest that in future the Viceroy should be the Visitor of all reconstituted universities in British India

(*b*) The fundamental points of university legislation described in paragraph 7 above should remain with the Government of India.

(*c*) There should be an organisation in connexion with the Government of India for the assistance of the Viceroy in the discharge of his duties as Visitor of the universities. This organisation should be supplied with information by all Indian universities, should conduct at intervals of, say, five years general surveys of their work; should advise the Viceroy with regard to any appeals which may reach him as Visitor; should be ready to assist the universities in recruiting their staffs, and should be a connecting link between the Indian universities and a means of keeping them in touch with the university work of other countries. In the opinion of the Commission it is important that the Government of India should have funds out of which they may make supplementary grants to the universities in aid of special studies and research which are required in the general interest of India and for which provincial subsidies or private benefactions may not be forthcoming or are insufficient.

(*g*) The reconstituted University of Calcutta and the new University of Dacca will be closely associated with the provincial Government, but should not be subjected to detailed control in their educational affairs. While the question of other Indian universities does not fall directly within the reference of the Commission, the latter would contemplate similar relations being established between Government and other universities which may hereafter be reconstituted or founded upon a plan of supervised responsibility.

(*e*) The intermediate grade of instruction, now part of the university course, should be completely remodelled and be given in distinct institutions, many of which would necessarily for reasons of economy and educational unity be associated with high English schools. The Commission recommend that in Bengal the recognition and supervision of the intermediate colleges and of high English schools, together with the conduct of examinations in both, should be entrusted to a small Board of Secondary and Intermediate Education, acting under the superintendence and financial control of Government and representative of the two universities, of Hindu and Muslim opinion and of experience in agriculture, industry, commerce, medicine (including public health) and secondary education.

14 The Commission consider that it is not within their province to express an opinion as to whether education in Bengal in whole or in part should be reserved or transferred But they recommend that, whether university and higher secondary education (the latter comprising the proposed intermediate colleges and the high English schools) are treated as transferred or as reserved subjects, it should be stipulated (*i*) that the internal educational affairs of the universities, when the latter are reconstituted or established upon the plan proposed, should not be subject to detailed control by external authority, and(*ii*) that the intermediate colleges and high English schools should be administered by a small Board of Secondary and Intermediate Education, representative of the kinds of experience required for the reorganisation and superintendence of this grade of education, assisted by such Consultative Committees as may be found necessary, and acting as an organ of the provincial Government, to which it should annually submit estimates and under whose financial control and general supervision it should carry on its work

M. E SADLER, *President.*
ASUTOSH MOOKERJEE.
W. W HORNELL.
ZIA-UD-DIN AHMAD.*
P J. HARTOG
J. W. GREGORY.*
RAMSAY MUIR.

G. ANDERSON, *Secretary.*

CALCUTTA.
The 21st November 1918.

* Our assent to this memorandum is subject to the following reservations. We consider that the reconstitution of Calcutta University should accord with the principle that the self-government and functions suitable to a teaching university are very different from those suitable to an affiliating university, which as an administrative organisation may have educational jurisdiction extending throughout the Presidency and even beyond it into Assam and Burma Hence if Calcutta University be reconstituted as a combined teaching and affiliating university the extension of its self-government should be more restricted than if reconstituted simply as a teaching university, in the latter case its administrative functions should be restricted.

We consider that colleges which are not included in the teaching organisation of the Calcutta University and are outside the city of Dacca should be affiliated to an affiliating organisation which might be temporarily administered as an independent section of Calcutta University or as a separate university

We consider that the powers of the Board should be executive in regard only to the recognition of schools, determination of curricula, and conduct of the matriculation and intermediate examinations, in regard to the general and financial administration of Government high schools and intermediate colleges, appointments, and the distribution of grants, the Board should be advisory to the Department of Public Instruction.

ZIA-UD-DIN AHMAD.
J W. GREGORY.

APPENDIX II.

Macaulay's Minute on Education, 1835.

As it seems to be the opinion of some of the gentlemen who compose the Committee of Public Instruction, that the course which they have hitherto pursued was strictly prescribed by the British Parliament in 1813, and as, if that opinion be correct, a legislative act will be necessary to warrant a change, I have thought it right to refrain from taking any part in the preparation of the adverse statements which are now before us, and to reserve what I had to say on the subject till it should come before me as a member of the Council of India.

It does not appear to me that the Act of Parliament can, by any art of construction, be made to bear the meaning which has been assigned to it. It contains nothing about the particular languages or sciences which are to be studied. A sum is set apart "for the revival and promotion of literature and the encouragement of the learned natives of India, and for the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories." It is argued, or rather taken for granted, that by literature, the Parliament can have meant only Arabic and Sanscrit literature, that they never would have given the honourable appellation of 'a learned native' to a native who was familiar with the poetry of Milton, the Metaphysics of Locke, and the Physics of Newton, but that they meant to designate by that name only such persons as might have studied in the sacred books of the Hindoos all the uses of cusa-grass, and all the mysteries of absorption into the Deity. This does not appear to be a very satisfactory interpretation. To take a parallel case, suppose that the Pacha of Egypt, a country once superior in knowledge to the nations of Europe, but now sunk far below them, were to appropriate a sum for the purpose of 'reviving and promoting literature, and encouraging learned natives of Egypt,' would anybody infer that he meant the youth of his pachalic to give years to the study of hieroglyphics, to search into all the doctrines disguised under the fable of Osiris, and to ascertain with all possible accuracy the ritual with which cats and onions were anciently adored? Would he be justly charged with inconsistency, if, instead of employing his young subjects in deciphering obelisks, he were to order them to be instructed in the English and French languages, and in all the sciences to which those languages are the chief keys?

The words on which the supporters of the old system rely do not bear them out, and other words follow which seem to be quite decisive on the other side. This lac of rupees is set apart, not only for 'reviving literature in India,' the phrase on which their whole interpretation is founded, but also

for 'the introduction and promotion of a knowledge of the sciences among the inhabitants of the British territories'—words which are alone sufficient to authorise all the changes for which I contend

If the Council agree in my construction, no Legislative Act will be necessary If they differ from me, I will prepare a short Act rescinding that clause of the Charter of 1813, from which the difficulty arises

The argument which I have been considering, affects only the form of proceeding But the admirers of the Oriental system of education, have used another argument, which, if we admit it to be valid, is decisive against all change They conceive that the public faith is pledged to the present system, and that to alter the appropriation of any of the funds which have hitherto been spent in encouraging the study of Arabic and Sanscrit, would be down-right spoliation It is not easy to understand by what process of reasoning they can have arrived at this conclusion The grants which are made from the public purse for the encouragement of literature differ in no respect from the grants which are made from the same purse for other objects of real or supposed utility We found a sanatarium on a spot which we suppose to be healthy Do we thereby pledge ourselves to keep a sanatarium there, if the result should not answer our expectation? We commence the erection of a pier Is it a violation of the public faith to stop the works, if we afterwards see reason to believe that the building will be useless? The rights of property are undoubtedly sacred But nothing endangers those rights so much as the practice, now unhappily too common, of attributing them to things to which they do not belong Those who would impart to abuses the sanctity of property are in truth imparting to the institution of property the unpopularity and the fragility of abuses If the Government has given to any person a formal assurance nay, if the Government has excited in any person's mind a reasonable expectation that he shall receive a certain income as a teacher or a learner of Sanscrit or Arabic, I would respect that person's pecuniary interests—I would rather err on the side of liberality to individuals than suffer the public faith to be called in question But to talk of a Government pledging itself to teach certain languages and certain sciences, though those languages may become useless, though those sciences may be exploded, seems to me quite unmeaning There is not a single word in any public instructions, from which it can be inferred that the Indian Government ever intended to give any pledge on this subject or ever considered the destination of these funds as unalterably fixed. But had it been otherwise, I should have denied the competence of our predecessors to bind us by any pledge on such a subject Suppose that a Government had in the last century enacted in the most solemn manner that all its subjects should, to the end of time, be inoculated for the small-pox · would that Government be bound to persist in the practice after Jenner's discovery? These promises, of which nobody claims the performance, and from which nobody can grant a release, these vested rights, which vest in nobody; this property without proprietors, this robbery, which makes nobody poorer, may be comprehended by persons of higher faculties than mine —I consider this plea merely

as a set form of words, regularly used both in England and in India, in defence of every abuse for which no other plea can be set up.

I hold this lac of rupees to be quite at the disposal of the Governor-General in Council, for the purpose of promoting learning in India, in any way which may be thought most advisable. I hold his Lordship to be quite as free to direct that it shall no longer be employed in encouraging Arabic and Sanscrit, as he is to direct that the reward for killing tigers in Mysore shall be diminished, or that no more public money shall be expended on the chanting at the cathedral.

We now come to the gist of the matter. We have a fund to be employed as Government shall direct for the intellectual improvement of the people of this country. The simple question is, what is the most useful way of employing it?

All parties seem to be agreed on one point, that the dialects commonly spoken among the natives of this part of India, contain neither literary nor scientific information, and are, moreover, so poor and rude that, until they are enriched from some other quarter, it will not be easy to translate any valuable work into them. It seems to be admitted on all sides, that the intellectual improvement of those classes of the people who have the means of pursuing higher studies can at present be effected only by means of some language not vernacular amongst them.

What then shall that language be? One-half of the Committee maintain that it should be the English The other half strongly recommend the Arabic and Sanscrit The whole question seems to me to be, which language is the best worth knowing?

I have no knowledge of either Sanscrit or Arabic —But I have done what I could to form a correct estimate of their value I have read translations of the most celebrated Arabic and Sanscrit works I have conversed both here and at home with men distinguished by their proficiency in the eastern tongues. I am quite ready to take the oriental learning at the valuation of the Orientalists themselves I have never found one among them who could deny that a single shelf of a good European library was worth the whole native literature of India and Arabia. The intrinsic superiority of the western literature is, indeed, fully admitted by those members of the Committee who support the oriental plan of education

It will hardly be disputed, I suppose, that the department of literature in which the eastern writers stand highest is poetry. And I certainly never met with any Orientalist who ventured to maintain that the Arabic and Sanscrit poetry could be compared to that of the great European nations. But when we pass from works of imagination to works in which facts are recorded, and general principles investigated, the superiority of the Europeans becomes absolutely immeasurable. It is, I believe, no exaggeration to say, that all the historical information which has been collected from all the books written in the Sanscrit language is less valuable than what may be found in the most paltry abridgments used at preparatory schools in England. In

every branch of physical or moral philosophy, the relative position of the two nations is nearly the same.

How, then, stands the case? We have to educate a people who cannot at present be educated by means of their mother-tongue. We must teach them some foreign language. The claims of our own language it is hardly necessary to recapitulate. It stands pre-eminent even among the languages of the West. It abounds with works of imagination not inferior to the noblest which Greece has bequeathed to us; with models of every species of eloquence, with historical compositions, which, considered merely as narratives, have seldom been surpassed, and which, considered as vehicles of ethical and political instruction, have never been equalled, with just and lively representations of human life and human nature; with the most profound speculations on metaphysics, morals, government, jurisprudence, and trade, with full and correct information respecting every experimental science which tends to preserve the health, to increase the comfort, or to expand the intellect of man. Whoever knows that language has ready access to all the vast intellectual wealth, which all the wisest nations of the earth have created and hoarded in the course of ninety generations. It may safely be said, that the literature now extant in that language is of far greater value than all the literature which three hundred years ago was extant in all the languages of the world together. Nor is this all. In India, English is the language spoken by the ruling class. It is spoken by the higher class of natives at the seats of Government. It is likely to become the language of commerce throughout the seas of the East. It is the language of two great European communities which are rising, the one in the south of Africa, the other in Australasia; communities which are every year becoming more important, and more closely connected with our Indian empire. Whether we look at the intrinsic value of our literature, or at the particular situation of this country, we shall see the strongest reason to think that, of all foreign tongues, the English tongue is that which would be the most useful to our native subjects.

The question now before us is simply whether, when it is in our power to teach this language, we shall teach languages in which, by universal confession, there are no books on any subject which deserve to be compared to our own; whether, when we can teach European science, we shall teach systems which, by universal confession, whenever they differ from those of Europe, differ for the worse; and whether, when we can patronise sound philosophy and true history, we shall countenance, at the public expense, medical doctrines, which would disgrace an English farrier,—astronomy, which would move laughter in girls at an English boarding school—history, abounding with kings thirty feet high, and reigns thirty thousand years long—and geography, made up of seas of treacle and seas of butter.

We are not without experience to guide us. History furnishes several analogous cases, and they all teach the same lesson. There are in modern times, to go no further, two memorable instances of a great impulse given to the mind of a whole society,—of prejudices overthrown,—of knowledge

diffused, —of taste purified,—of arts and sciences planted in countries which had recently been ignorant and barbarous.

The first instance to which I refer, is the great revival of letters among the western nations at the close of the fifteenth and the beginning of the sixteenth century At that time almost every thing that was worth reading was contained in the writings of the ancient Greeks and Romans Had our ancestors acted as the Committee of Public Instruction has hitherto acted; had they neglected the language of Cicero and Tacitus, had they confined their attention to the old dialects of our own island, had they printed nothing and taught nothing at the universities but chronicles in Anglo-Saxon, and romances in Norman-French, would England have been what she now is? What the Greek and Latin were to the contemporaries of More and Ascham, our tongue is to the people of India The literature of England is now more valuable than that of classical antiquity. I doubt whether the Sanscrit literature be as valuable as that of our Saxon and Norman progenitors. In some departments,—in history, for example, I am certain that it is much less so.

Another instance may be said to be still before our eyes. Within the last hundred and twenty years, a nation which had previously been in a state as barbarous as that in which our ancestors were before the crusades, has gradually emerged from the ignorance in which it was sunk, and has taken its place among civilised communities.—I speak of Russia. There is now in that country a large educated class, abounding with persons fit to serve the State in the highest functions, and in nowise inferior to the most accomplished men who adorn the best circles of Paris and London. There is reason to hope that this vast empire, which in the time of our grandfathers was probably behind the Punjab, may, in the time of our grandchildren, be pressing close on France and Britain in the career of improvement. And how was this change effected? Not by flattering national prejudices, not by feeding the mind of the young Muscovite with the old woman's stories which his rude fathers had believed. not by filling his head with lying legends about St. Nicholas. not by encouraging him to study the great question, whether the world was or was not created on the 13th of September: not by calling him 'a learned native,' when he has mastered all these points of knowledge · but by teaching him those foreign languages in which the greatest mass of information had been laid up, and thus putting all that information within his reach. The languages of Western Europe civilised Russia. I cannot doubt that they will do for the Hindoo what they have done for the Tartar.

And what are the arguments against that course which seems to be alike recommended by theory and by experience? It is said that we ought to secure the co-operation of the native public, and that we can do this only by teaching Sanscrit and Arabic.

I can by no means admit that when a nation of high intellectual attainments undertakes to superintend the education of a nation comparatively ignorant, the learners are absolutely to prescribe the course which is to be taken by the teachers. It is not necessary, however, to say any thing on

this subject. For it is proved by unanswerable evidence that we are not at present securing the co-operation of the natives. It would be bad enough to consult their intellectual taste at the expense of their intellectual health. But we are consulting neither, we are withholding from them the learning for which they are craving, we are forcing on them the mock-learning which they nauseate

This is proved by the fact that we are forced to pay our Arabic and Sanscrit students, while those who learn English are willing to pay us. All the declamations in the world about the love and reverence of the natives for their sacred dialects will never, in the mind of any impartial person, outweigh the undisputed fact, that we cannot find, in all our vast empire, a single student who will let us teach him those dialects unless we will pay him.

I have now before me the accounts of the Madrassa for one month, the month of December 1833. The Arabic students appear to have been seventy-seven in number. All receive stipends from the public. The whole amount paid to them is above 500 rupees a month On the other side of the account stands the following item. Deduct amount realised from the out-students of English for the months of May, June and July last, 103 rupees

I have been told that it is merely from want of local experience that I am surprised at these phenomena, and that it is not the fashion for students in India to study at their own charges. This only confirms me in my opinion. Nothing is more certain than that it never can in any part of the world be necessary to pay men for doing what they think pleasant and profitable. India is no exception to this rule The people of India do not require to be paid for eating rice when they are hungry, or for wearing woollen cloth in the cold season. To come nearer to the case before us, the children who learn their letters and a little elementary arithmetic from the village school-master are not paid by him He is paid for teaching them. Why then is it necessary to pay people to learn Sanscrit and Arabic ? Evidently because it is universally felt that the Sanscrit and Arabic are languages, the knowledge of which does not compensate for the trouble of acquiring them. On all such subjects the state of the market is the decisive test.

Other evidence is not wanting, if other evidence were required. A petition was presented last year to the Committee by several ex-students of the Sanscrit College. The petitioners stated that they had studied in the college ten or twelve years, that they had made themselves acquainted with Hindoo literature and science, that they had received certificates of proficiency; and what is the fruit of all this ! "Notwithstanding such testimonials," they say, "we have but little prospect of bettering our condition without the kind assistance of your Honorable Committee, the indifference with which we are generally looked upon by our countrymen leaving no hope of encouragement and assistance from them." They therefore beg that they may be recommended to the Governor-General for places under the Government, not places of high dignity or emolument, but such as may just enable them to exist.

"We want means," they say, "for a decent living, and for our progressive improvement, which, however, we cannot obtain without the assistance of Government, by whom we have been educated and maintained from childhood." They conclude by representing, very pathetically, that they are sure that it was never the intention of Government, after behaving so liberally to them during their educaton, to abandon them to destitution and neglect.

I have been used to see petitions to Government for compensation. All these petitions, even the most unreasonable of them, proceeded on the supposition that some loss had been sustained—that some wrong had been inflicted. These are surely the first petitioners who ever demanded compensation for having been educated gratis,—for having been supported by the public during twelve years, and then sent forth into the world well furnished with literature and science. They represent their education as an injury which gives them a claim on the Government for redress, as an injury for which the stipends paid to them during the infliction were a very inadequate compensation. And I doubt not that they are in the right. They have wasted the best years of life in learning what procures for them neither bread nor respect. Surely we might, with advantage, have saved the cost of making these persons useless and miserable, surely, men may be brought up to be burdens to the public and objects of contempt to their neighbours at a somewhat smaller charge to the State But such is our policy. We do not even stand neuter in the contest between truth and falsehood We are not content to leave the natives to the influence of their own hereditary prejudices. To the natural difficulties which obstruct the progress of sound science in the East, we add fresh difficulties of our own making. Bounties and premiums, such as ought not to be given even for the propagation of truth, we lavish on false taste and false philosophy.

By acting thus we create the very evil which we fear. We are making that opposition which we do not find. What we spend on the Arabic and Sanscrit colleges is not merely a dead loss to the cause of truth; it is bounty-money paid to raise up champions of error. It goes to form a nest, not merely of hopeless place-hunters, but of bigots prompted alike by passion and by interest to raise a cry against every useful scheme of education. If there should be any opposition among the natives to the change which I recommend, that opposition will be the effect of our own system. It will be headed by persons supported by our stipends and trained in our colleges. The longer we persevere in our present course, the more formidable will that opposition be. It will be every year reinforced by recruits whom we are paying. From the native society left to itself, we have no difficulties to apprehend; all the murmuring will come from that oriental interest which we have, by artificial means, called into being, and nursed into strength.

There is yet another fact, which is alone sufficient to prove that the feeling of the native public, when left to itself, is not such as the supporters of the old system represent it to be. The Committee have thought fit to lay out above a lac of rupees in printing Arabic and Sanscrit books. Those books find no

purchasers. It is very rarely that a single copy is disposed of. Twenty-three thousand volumes, most of them folios and quartos, fill the libraries, or rather the lumber-rooms, of this body. The Committee contrive to get rid of some portion of their vast stock of oriental literature by giving books away. But they cannot give so fast as they print. About twenty thousand rupees a year are spent in adding fresh masses of waste paper to a hoard which, I should think, is already sufficiently ample. During the last three years, about sixty thousand rupees have been expended in this manner The sale of Arabic and Sanscrit books, during those three years, has not yielded quite one thousand rupees In the meantime the School-Book Society is selling seven or eight thousand English volumes every year, and not only pays the expenses of printing, but realises a profit of 20 per cent on its outlay.

The fact that the Hindoo law is to be learned chiefly from Sanscrit books, and the Mahomedan law from Arabic books, has been much insisted on, but seems not to bear at all on the question We are commanded by Parliament to ascertain and digest the laws of India The assistance of a Law Commission has been given to us for that purpose As soon as the code is promulgated, the Shasters and the Hedaya will be useless to a Moonsiff or Sudder Ameen I hope and trust that before the boys who are now entering at the Madrassa and the Sanscrit College have completed their studies, this great work will be finished It would be manifestly absurd to educate the rising generation with a view to a state of things which we mean to alter before they reach manhood.

But there is yet another argument which seems even more untenable. It is said that the Sanscrit and Arabic are the languages in which the sacred books of a hundred millions of people are written, and that they are, on that account, entitled to peculiar encouragement Assuredly it is the duty of the British Government in India to be not only tolerant, but neutral on all religious questions But to encourage the study of a literature admitted to be of small intrinsic value, only because that literature inculcates the most serious errors on the most important subjects, is a course hardly reconcilable with reason, with morality, or even with that very neutrality which ought, as we all agree, to be sacredly preserved. It is confessed that a language is barren of useful knowledge. We are to teach it because it is fruitful of monstrous superstitions. We are to teach false history, false astronomy, false medicine, because we find them in company with a false religion. We abstain, and I trust shall always abstain, from giving any public encouragement to those who are engaged in the work of converting natives to Christianity And while we act thus, can we reasonably and decently bribe men out of the revenues of the State to waste their youth in learning how they are to purify themselves after touching an ass, or what text of the Vedas they are to repeat to expiate the crime of killing a goat ?

It is taken for granted by the advocates of oriental learning, that no native of this country can possibly attain more than a mere smattering of English. They do not attempt to prove this ; but they perpetually insinuate it. They designate the education which their opponents recommend as a mere spelling

book education. They assume it as undeniable, that the question is between a profound knowledge of Hindoo and Arabian literature and science on the one side, and a superficial knowledge of the rudiments of English on the other. This is not merely an assumption, but an assumption contrary to all reason and experience. We know that foreigners of all nations do learn our language sufficiently to have access to all the most abstruse knowledge which it contains, sufficiently to relish even the more delicate graces of our most idiomatic writers. There are in this very town natives who are quite competent to discuss political or scientific questions with fluency and precision in the English language. I have heard the very question on which I am now writing discussed by native gentlemen with a liberality and an intelligence which would do credit to any member of the Committee of Public Instruction. Indeed it is unusual to find, even in the literary circles of the continent, any foreigner who can express himself in English with so much facility and correctness as we find in many Hindoos. Nobody, I suppose, will contend that English is so difficult to a Hindoo as Greek to an Englishman. Yet an intelligent English youth, in a much smaller number of years than our unfortunate pupils pass at the Sanscrit College, becomes able to read, to enjoy, and even to imitate, not unhappily, the compositions of the best Greek authors. Less than half the time which enables an English youth to read Herodotus and Sophocles, ought to enable a Hindoo to read Hume and Milton.

To sum up what I have said, I think it clear that we are not fettered by the Act of Parliament of 1813 ; that we are not fettered by any pledge expressed or implied , that we are free to employ our funds as we choose ; that we ought to employ them in teaching what is best worth knowing , that English is better worth knowing than Sanscrit or Arabic ; that the natives are desirous to be taught English, and are not desirous to be taught Sanscrit or Arabic ; that neither as the languages of law, nor as the languages of religion, have the Sanscrit and Arabic any peculiar claim to our engagement ; that it is possible to make natives of this country thoroughly good English scholars, and that to this end our efforts ought to be directed

In one point I fully agree with the gentlemen to whose general views I am opposed. I feel with them, that it is impossible for us, with our limite means, to attempt to educate the body of the people. We must at prese do our best to form a class who may be interpreters between us and the millions whom we govern ; a class of persons, Indian in blood and colour, but English in taste, in opinions, in morals, and in intellect To that class we may leave it to refine the vernacular dialects of the country, to enrich those dialects with terms of science borrowed from the western nomenclature, and to render them by degrees fit vehicles for conveying knowledge to the great mass of the population.

I would strictly respect all existing interests. I would deal even generously with all individuals who have had fair reason to expect a pecuniary provision. But I would strike at the root of the bad system which has hitherto been fostered by us. I would at once stop the printing of Arabic and Sanscrit books, I would abolish the Madrassa and the Sanscrit College at Calcutta.

Benares is the great seat of Brahmanical learning; Delhi, of Arabic learning. If we retain the Sanscrit College at Benares and the Mahomedan College at Delhi, we do enough, and much more than enough in my opinion, for the eastern languages. If the Benares and Delhi Colleges should be retained, I would at least recommend that no stipends shall be given to any students who may hereafter repair thither, but that the people shall be left to make their own choice between the rival systems of education without being bribed by us to learn what they have no desire to know. The funds which would thus be placed at our disposal would enable us to give larger encouragement to the Hindoo College at Calcutta, and to establish in the principal cities throughout the Presidencies of Fort William and Agra schools in which the English language might be well and thoroughly taught

If the decision of his Lordship in Council should be such as I anticipate, I shall enter on the performance of my duties with the greatest zeal and alacrity. If, on the other hand, it be the opinion of Government that the present system ought to remain unchanged, I beg that I may be permitted to retire from the chair of the Committee I feel that I could not be of the smallest use there—I feel, also, that, I should be lending my countenance to what I firmly believe to be a mere delusion. I believe that the present system tends, not to accelerate the progress of truth, but to delay the natural death of expiring errors I conceive that we have at present no right to the respectable name of a Board of Public Instruction We are a Board for wasting public money, for printing books which are of less value than the paper on which they are printed was while it was blank ; for giving artificial encouragement to absurd history, absurd metaphysics, absurd physics, absurd theology; for raising up a breed of scholars who find their scholarship an encumbrance and a blemish, who live on the public while they are receiving their education, and whose education is so utterly useless to them that when they have received it they must either starve or live on the public all the rest of their lives. Entertaining these opinions, I am naturally desirous to decline all share in the responsibility of a body, which, unless it alters its whole mode of proceeding, I must consider not merely as useless, but as positively noxious.

T. B. MACAULAY.

The 2nd February 1835.

APPENDIX III.

DESPATCH FROM THE COURT OF DIRECTORS OF THE EAST INDIA COMPANY TO THE GOVERNOR-GENERAL OF INDIA IN COUNCIL—(No. 49, DATED THE 19TH JULY 1854).

It appears to us that the present time, when by an Act of the Imperial Legislature the responsible trust of the Government of India has again been placed in our hands, is peculiarly suitable for the review of the progress which has already been made, the supply of existing deficiencies, and the adoption of such improvements as may be best calculated to secure the ultimate benefit of the people committed to our charge

2. Among many subjects of importance, none can have a stronger claim to our attention than that of education It is one of our most sacred duties to be the means, as far as in us lies, of conferring upon the natives of India those vast moral and material blessings which flow from the general diffusion of useful knowledge, and which India may, under Providence, derive from her connexion with England For although British influence has already, in many remarkable instances, been applied with great energy and success to uproot demoralising practices and even crimes of a deeper dye, which for ages had prevailed among the natives of India, the good results of those efforts must, in order to be permanent, possess the further sanction of a general sympathy in the native mind which the advance of education alone can secure

3. We have, moreover, always looked upon the encouragement of education as peculiarly important, because calculated "not only to produce a higher degree of intellectual fitness, but to raise the moral character of those who partake of its advantages, and so to supply you with servants to whose probity you may with increased confidence commit offices of trust" in India, where the well being of the people is so intimately connected with the truthfulness and ability of officers of every grade in all departments of the State

Public letter to Bengal, 5th September 1827

4. Nor, while the character of England is deeply concerned in the success of our efforts for the promotion of education, are her material interests altogether unaffected by the advance of European knowledge in India, this knowledge will teach the natives of India the marvellous results of the employment of labour and capital, rouse them to emulate us in the development of the vast resources of their country, guide them in their efforts and gradually, but certainly, confer upon them all the advantages which accompany the healthy increase of wealth and commerce; and, at the same time, secure to us a larger and more certain supply of many articles necessary for our manufactures and extensively consumed by all classes of our population, as well as an almost inexhaustible demand for the produce of British labour.

5. We have from time to time given careful attention and encouragement to the efforts which have hitherto been made for the spread of education, and we have watched with deep interest the practical results of the various systems by which those efforts have been directed The periodical reports of the different Councils and Boards of Education, together with other official communications upon the same subject, have put us in possession of full information as to those educational establishments which are under the direct control of Government, while the evidence taken before the Committees of both Houses of Parliament upon Indian affairs has given us the advantage of similar information with respect to exertions made for this purpose by persons unconnected with Government, and has also enabled us to profit by a knowledge of the views of those who are best able to arrive at sound conclusions upon the question of education generally.

6. Aided, therefore, by ample experience of the past and the most competent advice for the future we are now in a position to decide on the mode in which the assistance of Government should be afforded to the more extended and systematic promotion of general education in India, and on the measures which should at once be adopted to that end

7. Before proceeding further, we must emphatically declare that the education which we desire to see extended in India is that which has for its object the diffusion of the improved arts, science, philosophy and literature of Europe; in short of European knowledge.

8. The systems of science and philosophy which form the learning of the East abound with grave errors, and eastern literature is at best very deficient as regards all modern discovery and improvements, Asiatic learning, therefore, however widely diffused, would but little advance our object We do not wish to diminish the opportunities which are now afforded in special institutions for the study of Sanskrit, Arabic and Persian literature, or for the cultivation of those languages which may be called the classical languages of India An acquaintance with the works contained in them is valuable for historical and antiquarian purposes and a knowledge of the languages themselves is required in the study of Hindoo and Mahomedan law and is also of great importance for the critical cultivation and improvement of the vernacular languages of India.

9. We are not unaware of the success of many distinguished oriental scholars in their praiseworthy endeavours to ingraft upon portions of Hindoo philosophy the germs of sounder morals and of more advanced science, and we are far from under-rating the good effect which has thus been produced upon the learned classes of India, who pay hereditary veneration to those ancient languages, and whose assistance in the spread of education is so valuable, from the honorable and influential position which they occupy among their fellow-countrymen. But such attempts, although they may usefully co-operate, can only be considered as auxiliaries, and would be a very inadequate foundation for any general scheme of Indian education.

10 We have also received most satisfactory evidence of the high attainments in English literature and European science which have been acquired

of late years by some of the natives of India. But this success has been confined to but a small number of persons; and we are desirous of extending far more widely the means of acquiring general European knowledge of a less high order, but of such a character as may be practically useful to the people of India in their different spheres of life. To attain this end it is necessary, for the reasons which we have given above, that they should be made familiar with the works of European authors, and with the results of the thought and labour of Europeans on the subjects of every description upon which knowledge is to be imparted to them; and to extend the means of imparting this knowledge must be the *object* of any general system of education

11. We have next to consider the manner in which our object is to be effected; and this leads us to the question of the *medium* through which knowledge is to be conveyed to the people of India. It has hitherto been necessary, owing to the want of translations or adaptations of European works in the vernacular languages of India and to the very imperfect shape in which European knowledge is to be found in any works in the learned languages of the East, for those who desired to obtain a liberal education to begin by the mastery of the English language as a key to the literature of Europe, and a knowledge of English will always be essential to those natives of India who aspire to a high order of education

12. In some parts of India, more especially in the immediate vicinity of the presidency towns, where persons who possess a knowledge of English are preferred to others in many employments, public as well as private, a very moderate proficiency in the English language is often looked upon by those who attend school instruction as the end and object of their education rather than as a necessary step to the improvement of their general knowledge We do not deny the value in many respects of the mere faculty of speaking and writing English, but we fear a tendency has been created in these districts unduly to neglect the study of the vernacular languages

13 It is neither our aim nor desire to substitute the English language for the vernacular dialects of the country. We have always been most sensible of the importance of the use of the languages which alone are understood by the great mass of the population. The languages, and not English, have been put by us in the place of Persian in the administration of justice and in the intercourse between the officers of Government and the people. It is indispensible, therefore, that, in any general system of education, the study of them should be assiduously attended to, and any acquaintance with improved European knowledge which is to be communicated to the great mass of the people—whose circumstances prevent them from acquiring a high order of education, and who cannot be expected to overcome the difficulties of a foreign language—can only be conveyed to them through one or other of those vernacular languages

14. In any general system of education, the English language should be taught where there is a demand for it, but such instruction should always be combined with a careful attention to the study of the vernacular language of the district, and with such general instruction as can be conveyed through

that language ; and while the English language continues to be made use of as by far the most perfect *medium* for the education of those persons who have acquired a sufficient knowledge of it to receive general instruction *through* it, the vernacular languages must be employed to teach the far larger classes who are ignorant of, or imperfectly acquainted with, English. This can only be done effectually through the instrumentality of masters and professors, who may, by themselves, knowing English, and thus having full access to the latest improvements in knowledge of every kind, impart to their fellow-countrymen, through the medium of their mother tongue, the information which they have thus obtained At the same time, and as the importance of the vernacular languages becomes more appreciated, the vernacular literatures of India will be gradually enriched by translations of European books or by the original compositions of men whose minds have been imbued with the spirit of European advancement, so that European knowledge may gradually be placed in this manner within the reach of all classes of the people. We look, therefore, to the English language and to the vernacular languages of India together as the *media* for the diffusion of European knowledge, and it is our desire to see them cultivated together in all schools in India of a sufficiently high class to maintain a schoolmaster possessing the requisite qualifications.

15. We proceed now to the machinery which we propose to establish for the superintendence and direction of education. This has hitherto been exercised in our presidencies of Bengal, Madras and Bombay by Boards and Councils of Education, composed of European and native gentlemen, who have devoted themselves to this duty with no other remuneration than the consciousness of assisting the progress of learning and civilization, and, at the same time with an earnestness and ability which must command the gratitude of the people of India, and which will entitle some honoured names amongst them to a high place among the benefactors of India and the human race.

16 The Lieutenant-Governor of Agra has, since the separation of the educational institutions of the North-Western Provinces from those of Bengal taken up himself the task of their management , and we cannot allow this opportunity to pass without the observation that, in this, as in all other branches of his administration, Mr. Thomason displayed that accurate knowledge of the condition and requirements of the people under his charge, and that clear and ready perception of the practical measures best suited for their welfare, which make his death a loss to India, which we deplore the more deeply as we fear that his unremitting exertions tended to shorten his career of usefulness.

17. We desire to express to the present Boards and Councils of Education our sincere thanks for the manner in which they have exercised their functions, and we still hope to have the assistance of the gentlemen composing them in furtherance of a most important part of our present plan , but having determined upon a very considerable extension of the general scope of our efforts, involving the simultaneous employment of different agencies, some of which are now wholly neglected, and others but imperfectly taken advantage of

by Government, we are of opinion that it is advisable to place the superintendence and direction of education upon a more systematic footing, and we have, therefore, determined to create an Educational Department as a portion of the machinery of our Governments in the several presidencies of India. We accordingly propose that an officer shall be appointed for each presidency and lieutenant-governorship who shall be specially charged with the management of the business connected with the education, and be immediately responsible to Government for its conduct.

18 An adequate system of inspection will also, for the future, become an essential part of our educational system ; and we desire that a sufficient number of qualified inspectors be appointed, who will periodically report upon the state of those colleges and schools which are now supported and managed by Government as well as of such as will hereafter be brought under Government inspection by the measures that we propose to adopt. They will conduct, or assist at, the examination of the scholars of these institutions, and generally, by their advice, aid the managers and school-masters in conducting colleges and schools of every description throughout the country. They will necessarily be of different classes, and may possess different degrees of acquirement, according to the higher or lower character of the institutions which they will be employed to visit ; but we need hardly say that, even for the proper inspection of the lower schools, and with a view to their effectual improvement, the greatest care will be necessary to select persons of high character and fitting judgment for such employment. A proper staff of clerks and other officers will, moreover, be required for the Educational Departments.

19. Reports of the proceedings of the inspectors should be made periodically and these, again, should be embodied in the annual reports of the heads of the Educational Departments, which should be transmitted to us, together with statistical returns (to be drawn up in similar forms in all parts of India), and other information of a general character relating to education.

20. We shall send copies of this despatch to the Governments of Fort St. George and of Bombay, and direct them at once to make provisional arrangements for the superintendence and inspection of education in their respective presidencies. Such arrangements as they make will be reported to you for sanction. You will take similar measures in communication with the Lieutenant-Governors of Bengal and of Agra, and you will also provide in such manner as may seem advisable for the wants of the non-regulation provinces in this respect We desire that your proceedings in this matter may be reported to us with as little delay as possible, and we are prepared to approve of such an expenditure as you may deem necessary for this purpose

21. In the selection of the heads of the Educational Departments, the inspectors and other officers, it will be of the greatest importance to secure the services of persons who are not only best able, from their character, position and acquirements, to carry our objects into effect, but who may command the confidence of the natives of India It may, perhaps, be advisable that the first heads of the Educational Department, as well as some of the inspectors, should be members of our Civil Service, as such appointments in the first

instance would tend to raise the estimation in which these officers will be held, and to show the importance we attach to the subject of education, and also, as amongst them, you will probably find the persons best qualified for the performance of the duty. But we desire that neither these offices, nor any others connected with education, shall be considered as necessarily to be filled by members of that service, to the exclusion of others, Europeans or Natives, who may be better fitted for them; and that, in any case, the scale for their remuneration shall be so fixed as publicly to recognise the important duties they will have to perform.

22. We now proceed to sketch out the general scheme of the measures which we propose to adopt. We have endeavoured to avail ourselves of the knowledge which has been gained from the various experiments which have been made in different parts of India for the encouragement of education; and we hope, by the more general adoption of those plans which have been carried into successful execution in particular districts, as well as by the introduction of other measures which appear to be wanting to establish such a system as will prove generally applicable throughout India, and thus to impart to the educational efforts of our different presidencies a greater degree of uniformity and method than at present exists.

23. We are fully aware that no general scheme would be applicable in all its details to the present condition of all portions of our Indian territories, differing so widely as they do, one from another, in many important particulars. It is difficult, moreover, for those who do not possess a recent and practical acquaintance with particular districts, to appreciate the importance which should be attached to the feelings and influences which prevail in each, and we have, therefore, preferred confining ourselves to describing generally what we wish to see done, leaving to you, in communication with the several local Governments, to modify particular measures so far as may be required in order to adapt them to different parts of India.

24 Some years ago, we declined to accede to a proposal made by the Council of Education, and transmitted to us with the recommendation of your Government, for the institution of an University in Calcutta. The rapid spread of a liberal education among the natives of India since that time, the high attainments shown by the native candidates for Government scholarships, and by native students in private institutions, the success of the medical colleges, and the requirements of an increasing European and Anglo-Indian population, have led us to the conclusion that the time is now arrived for the establishment of universities in India, which may encourage a regular and liberal course of education by conferring academical degrees as evidences of attainments in the different branches of art and science, and by adding marks of honour for those who may desire to compete for honorary distinction.

25. The Council of Education, in the proposal to which we have alluded, took the London University as their model; and we agree with them that the form, government and functions of that University (copies of whose charters and regulations we enclose for your reference) are the best adapted to the

wants of India, and may be followed with advantage although some variation will be necessary in points of detail.

26. The universities in India will accordingly consist of a Chancellor, Vice-Chancellor and Fellows, who will constitute a Senate. The Senates will have the management of the funds of the universities, and frame regulations for your approval, under which periodical examinations may be held in the different branches of art and science by examiners selected from their own body, or nominated by them.

27. The function of the universities will be to confer degrees upon such persons as, having been entered as candidates according to the rules which may be fixed in this respect, and having produced from any of the "affiliated institutions" which will be enumerated on the foundation of the universities or be from time to time added to them by Government certificates of conduct, and of having pursued a regular course of study for a given time, shall have also passed at the universities such an examination as may be required of them. It may be advisable to dispense with the attendance required at the London University for the Matriculation examination, and to substitute some mode of entrance examination which may secure a certain amount of knowledge in the candidates for degrees, without making their attendance at the universities necessary, previous to the final examination.

28. The examinations for degrees will not include any subjects connected with religious belief, and affiliated institutions will be under the management of persons of every variety of religious persuasion. As in England, various institutions in immediate connexion with the Church of England, the Presbyterian College at Caermarthen, the Roman Catholic College at Oscott, the Wesleyan College at Sheffield, the Baptist College at Bristol, and the Countess of Huntingdon's College at Cheshunt, are among the institutions from which the London University is empowered to receive certificates for degrees. so in India, institutions conducted by all denominations of Christians, Hindoos, Mahomedans, Parsees, Sikhs, Buddhists, Jains, or any other religious persuasions, may be affiliated to the universities, if they are found to afford the requisite course of study, and can be depended upon for the certificates of conduct which will be required

29 The detailed regulations for the examination for degrees should be framed with a due regard for all classes of the affiliated institutions, and we will only observe upon this subject that the standard for common degrees will require to be fixed with very great judgment. There are many persons who well deserve the distinction of an academical degree, as the recognition of a liberal education, who could not hope to obtain it if the examination was as difficult as that for the senior Government scholarships; and the standard required should be such as to command respect without discouraging the efforts of deserving students, which would be a great obstacle to the success of the universities. In the competitions for honours, which as in the London University, will follow the examinations for degrees, care should be taken to maintain such a standard as will afford a guarantee for high ability and valuable attainments,—the subjects for examination being so selected as to

include the best portions of the different schemes of study pursued at the affiliated institutions.

30. It will be advisable to institute, in connection with the universities, professorships for the purposes of the delivery of lecutures in various branches of learning, for the acquisition of which, at any rate in an advanced degree, facilities do not now exist in other institutions in India. Law is the most important of these subjects, and it will be for you to consider whether as was proposed in the plan of the Council of Education to which we have before referred, the attendance upon certain lectures, and the attainment of a degree in law, may not, for the future, be made a qualification for vakeels and moonsifs, instead of, or in addition to, the present system of examination, which must, however, be continued in places not within easy reach of an university

31 Civil engineering is another subject of importance, the advantages of which, as a profession, are gradually becoming known to the natives of India; and while we are inclined to believe that instruction of a practical nature, such as is given at the Thomason College of Civil Engineering at Roorkee, is far more useful than any lectures could possibly be, professorships of civil engineering might, perhaps, be attached to the universities and degrees in civil engineering be included in their general scheme

32 Other branches of useful learning may suggest themselves to you, in which it might be advisable that lectures should be read, and special degrees given, and it would greatly encourage the cultivation of the vernacular languages of India that professorships should be founded for those languages, and perhaps also for Sanskrit, Arabic and Persian. A knowledge of the Sanskrit language, the root of the vernaculars of the greater part of India, is more especially necessary to those who are engaged in the work of the composition in those languages, while Arabic, through Persian, is one of the component parts of the Urdu language, which extends over so large a part of Hindoostan, and is, we are informed, capable of considerable development. The grammar of these languages, and their application to the improvement of the spoken languages of the country, are the points to which the attention of these professors should be mainly directed; and there will be an ample field for their labours unconnected with any instruction in the tenets of the Hindoo or Mahomedan religions. We should refuse to sanction any such teaching, as directly opposed to the principles of religious neutrality to which we have always adhered

33. We desire that your take into you consideration the institution of universities at Calcutta and Bombay, upon the general principles which we have now explained to you, and report to us upon the best method of procedure, with a view to their incorporation by Acts of the Legislative Council of India. The offices of Chancellor and Vice-Chancellor will naturally be filled by persons of high stations, who have shown an interest in the cause of education, and it is in connexion with the universities that we propose to avail ourselves of the services of the existing Council of Education at Calcutta and Board of Education at Bombay. We wish to place these gentlemen in a position which will not

only mark our sense of the exertions which they have made in furtherance of education but will give it the benefit of their past experience of the subject. We propose, therefore, that the Council of Education at Calcutta and the Board of Education at Bombay, with some additional members to be named by the Government, shall constitute the Senate of the University at each of those presidencies.

34. The additional members should be so selected as to give to all those who represent the different systems of education which will be carried on in the affiliated institutions—including natives of India of all religious persuasions, who possess the confidence of the native communities—a fair voice in the Senates. We are led to make those remarks, as we observe that the plan of the Council of Education, in 1845, for the constitution of the Senate of the proposed Calcutta University, was not sufficiently comprehensive.

35 We shall be ready to sanction the creation of an university at Madras or in any part of India, where a sufficient number of institutions exist, from which properly qualified candidates for degrees could be supplied ; it being in our opinion advisable that the great centres of European Government and civilisation in India should possess universities similar in character to those which will now be founded as soon as the extension of a liberal education shows that their establishment would be of advantage to the native communities.

36 Having provided for the general superintendence of education and for the institution of universities, not so much to be in themselves places of instruction, as to test the value of the education obtained elsewhere, we proceed to consider, *first*, the different classes of colleges and schools, which should be maintained in simultaneous operation, in order to place within the reach of all classes of the natives of India the means of obtaining improved knowledge suited to their several conditions of life , and *secondly*, the manner in which the most effectual aid may be rendered by Government to each class of educational institutions.

37. The candidates for university degrees will, as we have already explained, be supplied by colleges affiliated to the universities These will comprise all such institutions as are capable of supplying a sufficiently high order of instruction in the different branches of art and science in which university degrees will be accorded The Hindoo, Hooghly, Dacca, Krishnaghur and Berhampur Government Anglo-Vernacular Colleges, the Sanskrit College, the Mahomedan Madrassas, and the Medical College in Bengal , the Elphinstone Institution, the Poona College, and the Grant Medical College in Bombay , the Delhi, Agra, Benares, Bareilly and Thomason College in the North-Western Provinces ; Seminaries, such as the Oriental Seminary in Calcutta, which have been established by highly educated natives, a class of places of instruction which we are glad to learn is daily increasing in number and efficiency ; those, which like the Parental Academy, are conducted by East Indians ; Bishop's College, the General Assembly's Institution, Dr. Duff's College, the Baptist College at Serampore, and other Institutions under the superintendence of different religious bodies and Missionary Societies, will, at once, supply a considerable number of

educational establishments worthy of being affiliated to the universities, and of occupying the highest place in the scale of general instruction.

38. The affiliated institutions will be periodically visited by Government inspectors; and a spirit of honourable rivalry, tending to preserve their efficiency, will be promoted by this, as well as by the competition of their most distinguished students for university honors. Scholarships should be attached to them, to be held by the best students of lower schools, and their schemes of education should provide, in the anglo-vernacular colleges, for a careful cultivation of the vernacular languages; and, in the Oriental college for sufficient instruction in the English and vernacular languages, so as to render the studies of each most available for that general diffusion of European knowledge which is the main object of education in India.

39. It is to this class of institution that the attention of Government has hitherto been principally directed, and they absorb the greater part of the public funds which are now applied to educational purposes. The wise abandonment of the early views with respect to native education, which erroneously pointed to the classical languages of the East as the *media* for imparting European knowledge, together with the small amount of pecuniary aid which in the then financial condition of India, was at your command, has led, we think, to too exclusive a direction of the efforts of Government towards providing the means of acquiring a very high degree of education for a small number of natives of India, drawn, for the most part, from what we should here call the higher classes.

40. It is well that every opportunity should have been given to those classes for the acquisition of a liberal European education, the effects of which may be expected slowly to pervade the rest of their fellow-countrymen and to raise, in the end, the educational tone of the whole country. We are, therefore, far from under-rating the importance, or the success, the efforts which have been made in this direction, but the higher classes are both able and willing in many cases to bear a considerable part at least of the cost of their education, and it is abundantly evident that, in some parts of India, no artificial stimulus is any longer required in order to create a demand for such an education as is conveyed in the Government anglo-vernacular colleges. We have, by the establishment and support of these colleges, pointed out the manner in which a liber education is to be obtained, and assisted them to a very considerable extent from the public funds In addition to this, we are now prepared to give, by sanctioning the establishment of universities, full development to the highest course of education to which the natives of India, or of any other country, can aspire; and besides, by the division of university degrees and distinctions into different branches, the exertions of highly educated men will be directed to the studies which are necessary to success in the various active professions of life. We shall, therefore, have done as much as a Government can do to place the benefits of education plainly and practically before the higher classes in India.

41. Our attention should now be directed to a consideration, if possible, still more important, and one which has been hitherto, we are bound to admit,

too much neglected, namely, how useful and practical knowledge, suited to every station in life, may be best conveyed to the great mass of the people, who are utterly incapable of obtaining any education worthy of the name by their own unaided efforts, and we desire to see the active measures of Government more especially directed, for the future, to this object, for the attainment of which we are ready to sanction a considerable increase of expenditure

42. Schools—whose object should be not to train highly a few youths, but to provide more opportunities than now exist for the acquisition of such an improved education as will make those who possess it more useful members of society in every condition of life—should exist in every district in India. These schools should be subject to constant and careful inspection and their pupils might be encouraged by scholarship being instituted at other institutions which would be tenable as rewards for merit by the best of their number

43. We include in this class of institutions those which, like the zillah schools of Bengal, the district Government anglo-vernacular schools of Bombay, and such as have been established by the Raja of Burdwan and other native gentlemen in different parts of India, use the English language as the chief medium of instruction ; as well as others of an inferior order, such as the tehseelee schools in the North-Western Provinces, and the Government vernacular schools in the Bombay presidency, whose object is, however imperfectly it has been as yet carried out, to convey the highest class of instruction which can now be taught through the medium of the vernacular languages

44. We include these anglo-vernacular and vernacular schools in the same class, because we are unwilling to maintain the broad line of separation which at present exists between schools in which the *media* for imparting instruction differ. The knowledge conveyed is no doubt, at the present time, much higher in the anglo-vernacular than in the vernacular schools ; but the difference will become less marked, and the latter more efficient, as the gradual enrichment of the vernacular languages in works of education allows their schemes of study to be enlarged, and as a more numerous class of school-masters is raised up, able to impart a superior education.

45 It is indispensible, in order fully and efficiently to carry out our views as to these schools, that their masters should possess a knowledge of English in order to acquire, and of the vernaculars so as readily to convey, useful knowledge to their pupils ; but we are aware that it is impossible to obtain at present the services of a sufficient number of persons so qualified, and that such a class must be gradually collected and trained in the manner to which we shall hereafter allude. In the meantime, you must make the best use which is possible of such instruments as are now at your command.

46. Lastly, what have been termed indigenous schools should, by wise encouragement such as has been given under the system organised by Mr. Thomason in the North-Western Provinces, and which has been carried out in eight districts under the able direction of Mr. H S. Reid in an eminently practical manner, and with great promise of satisfactory results, be made capable

of imparting correct elementary knowledge to the great mass of the people. The most promising pupils of these schools might be rewarded by scholarships in places of education of a superior order.

47. Such a system as this, placed in all its degrees under efficient inspection beginning with the humblest elementary instruction, and ending with the university test of a liberal education, the best students in each class of schools being encouraged by the aid afforded them towards obtaining a superior education as the reward of merit, by means of such a system of scholarships as we shall have to describe, would, we firmly believe, impart life and energy to education in India, and lead to a gradual, but steady extension of its benefits to all classes of the people

48 When we consider the vast population of British India, and the sums which are now expended upon educational efforts, which, however successful in themselves, have reached but an insignificant number of those who are of a proper age to receive school instruction, we cannot but be impressed with the almost insuperable difficulties which would attend such an extension of the present system of education by means of colleges and schools entirely supported at the cost of Government, as might be hoped to supply, in any reasonable time, so gigantic a deficiency and to provide adequate means for setting on foot such a system as we have described and desire to see established

49 Nor it is necessary that we should depend entirely upon the direct efforts of Government We are glad to recognise an increased desire on the part of the native population, not only in the neighbourhood of the great centres of European civilisation, but also, in remoter districts, for the means of obtaining a better education; and we have evidence in many instances of their readiness to give a practical proof of their anxiety in this respect by coming forward with liberal pecuniary contributions. Throughout all ages, learned Hindoos and Mahomedans have devoted themselves to teaching with little other remuneration than a bare subsistence; and munificent bequests have not frequently been made for the permanent endowment of educational institutions.

50 At the same time, in so far as the noble exertions of societies of Christians of all denominations to guide the natives of India in the way of religious truth, and to instruct uncivilised races, such as those found in Assam, in the Cossye, Garrow and Rajmehal Hills, and in various districts of Central and Southern India (who are in the lowest condition of ignorance, and are either wholly without a religion, or are the slaves of a degrading and barbarous superstition), have been accompanied, in their educational establishments, by the diffusion of improved knowledge, they have largely contributed to the spread of that education which it is our object to promote.

51. The consideration of the impossibility of Government alone doing all that must be done in order to provide adequate means for the education of the natives of India, and of the ready assistance which may be derived from efforts which have hitherto received but little encouragement from the State, has led us to the natural conclusion that the most effectual method

of providing for the wants of India in this respect will be to combine with the agency of the Government the aid which may be derived from the exertions and liberality of the educated and wealthy natives of India and of other benevolent persons.

52. We have, therefore, resolved to adopt in India the system of grants-in-aid which has been carried out in this country with very great success; and we confidently anticipate, by thus drawing support from local resources in addition to contributions from the State, a far more rapid progress of education than would follow a mere increase of expenditure by the Government; while it possesses the additional advantage of fostering a spirit of reliance upon local exertions and combination for local purposes, which is of itself of no mean importance to the well-being of a nation.

53. The system of grants-in-aid, which we propose to establish in India, will be based on an entire abstinence from interference with the religious instruction conveyed in the school assisted. Aid will be given (so far as the requirements of each particular district, as compared with others, and the funds at the disposal of Government, may render it possible) to all schools which impart a good secular education, provided that they are under adequate local management (by the term "local management" we understand one or more persons, such as private patrons, voluntary subscribers, or the trustees of endowments, who will undertake the general superintendence of the school, and be answerable for its permanence for some given time); and provided also that their managers consent that the schools shall be subject to Government inspection, and agree to any conditions which may be laid down for the regulation of such grants.

54. It has been found by experience, in this and in other countries, that not only an entirely gratuitous education valued far less by those who receive it than one for which some payment, however small, is made, but that the payment induces a more regular attendance and greater exertion on the part of the pupils, and, for this reason, as well as because school fees themselves, insignificant as they may be in each individual instance, will in the aggregate, when applied to the support of a better class of masters, become of very considerable importance, we desire that grants-in-aid shall, as a general principle, be made to such schools only (with the exception of normal schools) as require some fee, however small, from their scholars.

55 Careful considerations will be required in framing rules for the administration of the grants, and the same course should be adopted in India which has been pursued, with obvious advantage by the Committee of Council here, namely, to appropriate the grants to *specific objects*, and not (except, perhaps, in the case of normal schools) to apply them in the form of simple contributions in aid of the general expenses of a school. The augmentation of the salaries of the head teachers, and the supply of junior teachers, will probably be found in India, as with us, to be the most important objects to which the grants can ordinarily be appropriated. The foundation, or assistance in the foundation, of scholarships for candidates from lower schools, will also be a proper object for the application of grants-in-aid. In some

cases, again, assistance towards erecting or repairing a school, or the provision of an adequate supply of school-books, may be required; but the appropriation of the grants in each particular instance should be regulated by the peculiar circumstances of each school and district.

56. The amount and continuance of the assistance given will depend upon the periodical reports of inspectors, who will be selected with special reference to their possessing the confidence of the native communities. In their periodical inspections *no notice whatsoever* should be taken by them of religious doctrines which may be taught in any school; and their duty should be strictly confined to ascertaining whether the secular knowledge conveyed is such as to entitle it to consideration in the distribution of the sum which will be applied to grants-in-aid. They should also assist in the establishment of schools by their advice, wherever they may have opportunities of doing so.

57. We confide the practical adaptation of the general principles we have laid down as to grants-in-aid to your discretion, aided by the educational departments of the different presidencies. In carrying into effect our views which apply alike to all schools and institutions, whether male or female, anglo-vernacular or vernacular, it is of the greatest importance that the conditions under which schools will be assisted should be clearly and publicly placed before the natives of India. For this purpose Government notifications should be drawn up and promulgated in the different vernacular languages It may be advisable distinctly to assert in them the principle of perfect religious neutrality on which the grants will be awarded; and care should be taken to avoid holding out expectations which from any cause may be liable to disappointment.

58. There will be little difficulty in the application of this system of grants-in-aid to the higher order of places of instruction in India in which English is at present the medium of education.

59 Grants-in-aid will also at once give assistance to all such anglo-vernacular and vernacular schools as impart a good elementary education; but we fear that the number of this class of schools is at present inconsiderable, and that such as are in existence require great improvement.

60 A more minute and constant local supervision than would accompany the general system of grants-in-aid will be necessary in order to raise the character of the "indigenous schools," which are, at present, not only very inefficient in quality, but of exceedingly precarious duration, as is amply shown by the statistics collected by Mr. Adam in Bengal and Behar, and from the very important information we have received of late years from the North-Western Provinces In organising such a system, we cannot do better than to refer you to the manner in which the operations of Mr. Reid have been conducted in the North-Western Provinces, and to the instructions given by him to the zillah and pergunnah visitors, and contained in the appendix to his first report

61. We desire to see local management under Government inspection and assisted by grants-in-aid taken advantage of wherever it is possible to

future, in any district where a sufficient number of institutions exists, capable, with assistance from the State, of supplying the local demand for education; but, in order fully to carry out the views we have expressed with regard to the adequate provision of schools throughout the country, it will probably be necessary, for some years, to supply the wants of particular parts of India by the establishment, temporary support, and management of places of education of every class in districts where there is little or no prospect of adequate local efforts being made for this purpose, but where, nevertheless, they are urgently required.

62 We look forward to the time when any general system of education, entirely provided by Government, may be discontinued, with the gradual advance of the system of grants-in-aid, and when many of the existing Government institutions, especially those of the higher order, may be safely closed, or transferred to the management of local bodies under the control of, and aided by, the State But it is far from our wish to check the spread of education in the slightest degree by the abandonment of a single school to probable decay, and we therefore entirely confide in your discretion, and in that of the different authorities, while keeping this object steadily in view, to act with caution, and to be guided by special reference to the particular circumstances which affect the demand for education in different parts of India

63 The system of free and stipendiary scholarships, to which we have already more than once referred as a connecting link between the different grades of educational institutions, will require some revision and extension in carrying out our enlarged educational plans We wish to see the object proposed by Lord Auckland, in 1839, "of connecting the zillah schools with the central colleges by attaching to the latter scholarships to which the best scholars of the former might be eligible," more fully carried out, and also, as the measures we now propose assume an organised form, that the same system may be adopted with regard to schools of a lower description, and that the best pupils of the inferior schools shall be provided for by means of scholarships in schools of a higher order, so that superior talent in every class may receive that encouragement and development which it deserves. The amount of the stipendiary scholarships should be fixed at such a sum as may be considered sufficient for the maintenance of the holders of them at colleges or schools to which they are attached and which may often be at a distance from the home of the students. We think it desirable that this system of scholarships should be carried out, not only in connexion with those places of education which are under the immediate superintendence of the State, but in all educational institutions which will now be brought into our general system.

Minute, November 24th 1839, paragraphs 32 and 33.

64. We are, at the same time, of opinion that the expenditure upon existing Government scholarships, other than those to which we have referred, which amounts to a considerable sum, should be gradually reduced, with the requisite regard for the claims of the present holders of them. The encourage-

ment of young men of ability, but of slender means, to pursue their studies, is no doubt both useful and benevolent, and we have no wish to interfere with the private endowments which have been devoted to so laudable an object or to withdraw the additions which may have been made by us to any such endowments But the funds at the disposal of Government are limited, and we doubt the expediency of applying them to the encouragement of the acquisition of learning by means of stipends which not only far exceed the cost of the maintenance of the student, but in many cases are above what he could reasonably expect to gain on entering the public service or any of the active professions of life

65 We shall, however, offer encouragement to education which will tend to more practical results than those scholarships By giving to persons who possess an aptness for teaching, as well as the requisite standard of acquirements, and who are willing to devote themselves to the profession of schoolmaster, moderate monthly allowances for their support during the time which it may be requisite for them to pass in normal schools, or classes, in order to acquire the necessary training, we shall assist many deserving students to qualify themselves for a career of practical usefulness, and one which will secure them an honorable competence through life We are also of opinion that admission to places of instruction, which, like the Medical and Engineering Colleges, are maintained by the State for the purpose of educating persons for special employment under Government, might be made the rewards of industry and ability, and thus supply a practical encouragement to general education, similar to that which will be afforded by the educational service

66. The establishment of universities will offer considerable further inducements for the attainment of high proficiency, and thus supply the place of the present senior scholarships, with this additional advantage, that a greater number of subjects, in which distinction can be gained, will be offered to the choice of students than can be comprised in one uniform examination for a scholarship, and that their studies will thus be practically directed into channels which will aid them in the different professions of life which they may afterwards adopt

67 In England, when systematic attempts began to be made for the improvement of education, one of the chief defects was found to be the insufficient number of qualified school-masters and the imperfect method of teaching which prevailed. This led to the foundation of normal and model schools for the training of masters, and the exemplification of the best methods for the organisation, discipline and instruction of elementary schools This deficiency has been the more palpably felt in India, as the difficulty of finding persons properly educated for the work of tuition is greater , and we desire to see the establishment, with as little delay as possible, of training schools and classes for masters in each presidency in India. It will probably be found that some of the existing institutions may be adapted, wholly or partially, to this purpose, with less difficulty than would attend the establishment of entirely new schools.

68. We cannot do better than refer you to the plan which has been adopted in Great Britain for this object, and which appears to us to be capable of easy adaptation to India. It mainly consists, as you will perceive on reference to the minutes of the Committee of Council, copies of which we enclose, in the selection and stipend of pupil-teachers (awarding a small payment to the masters of the schools in which they are employed for their instruction out of the school hours), their ultimate removal, if they prove worthy, to normal schools; the issue to them of certificates on the completion of their training in those normal schools, and in securing to them a sufficient salary when they are afterwards employed as school-masters. This system should be carried out in India, both in the Government colleges and schools, and by means of grants-in-aid in all institutions which are brought under Government inspection. The amount of the stipends to pupil-teachers and students at normal schools should be fixed with great care The former should receive moderate allowances rather above the sums which they would earn if they left school, and the stipends to the latter should be regulated by the same principle which we have laid down with respect to scholarships

69. You will be called upon, in carrying these measures into effect, to take into consideration the position and prospects of the numerous classes of natives of India who are ready to undertake the important duty of educating their fellow-countrymen. The late extension of the pension regulations of 1831 to the educational service may require to be adapted to the revised regulations in this respect; and our wish is that the profession of school-master may, for the future, afford inducements to the natives of India, such as are held out in other branches of the public service The provision of such a class of school-masters as we wish to see must be a work of time, and in encouraging the "indigenous schools," our present aim should be to improve the teachers whom we find in possession, and to take care not to provoke the hostility of this class of persons, whose influence is so great over the minds of the lower classes, by superseding them where it is possible to avoid it. They should, moreover, be encouraged to attend the normal schools and classes which may hereafter be instituted for this class of teachers

70 Equal in importance to the training of school-masters is the provision of vernacular school-books, which shall provide European information to be the object of study in the lower classes of schools Something has, no doubt, been done of late years towards this end, but more still remains to be done, and we believe that deficiencies might be readily and speedily supplied by the adoption of a course recommended by Mr M Elphinstone in 1825, namely—"That the best translations of particular books, or the best elementary treatises in specified languages, should be advertised for and liberally rewarded."

71. The aim should be, in compilations and original compositions (to quote from one of Mr. Adam's valuable reports upon the state of education in Bengal), "not to translate European works into the words and idioms of the native languages but so to combine the substance of European knowledge

Report, 1850-1851, paragraphs 2983—88

with native forms of thought and sentiment as to render the school-books useful and attractive." We also refer with pleasure upon this point to some valuable observations by Mr Reid, in his report which we have quoted before, more especially as regards instruction in geography. It is obvious that the local peculiarities of different parts of India render it necessary that the class books in each should be especially adapted to the feelings, sympathies and history of the people, and we will only further remark upon this subject that the Oriental Colleges, besides generally tending, as we have before observed, to the enrichment of the vernacular languages, may, we think, be made of great use in the translation of scientific works into those languages, as has already been done to some extent in the Delhi, Benares and Poona Colleges.

72. We have always been of opinion that the spread of education in India will produce a greater efficiency in all branches of administration by enabling you to obtain the services of intelligent and trustworthy persons in every department of Government, and, on the other hand, we believe that the numerous vacancies of different kinds which have constantly to be filled up, may afford a great stimulus to education The first object must be to select persons properly qualified to fill these situations, secondary to this is the consideration how far they may be so distributed as to encourage popular education.

73 The resolutions of our Governor-General in Council of the 10th of October 1844 gave a general preference to well-educated over uneducated men in the admissions to the public service We perceive with much satisfaction from returns which we have recently received of the persons appointed since that year in the Revenue Department of Bengal, as well as from the educational reports from different parts of India, that a very considerable number of educated men have been employed under Government of late years; and we understand that it is often not so much the want of Government employment as the want of properly qualified persons to be employed by Government, which is felt at the present time in many parts of India.

74. We shall not enter upon the causes which, as we foresaw, have led to the failure of that part of the resolutions which provided for the annual submission to Government of lists of meritorious students It is sufficient for our present purpose to observe that no more than 46 persons have been gazetted in Bengal up to this time, all of whom were students in the Government colleges. In the last year for which we have returns (1852), only two persons were so distinguished; and we can readily believe, with the Secretary to the Board of Revenue in Bengal, that young men, who have passed a difficult examination in the highest branches of philosophy and mathematics, are naturally disinclined to accept such employment as persons who intend to make the public service their profession must necessarily commence with.

Letter of the 6th April 1852, with returns in Revenue Department, Bengal.

75. The necessity for any such lists will be done away with by the establishment of universities, as the acquisition of a degree, and still more the

attainment of university distinctions, will bring highly educated young men under the notice of Government. The resolutions in question will, therefore, require revision, so as to adapt them practically to carry out our views upon this subject What we desire is that, where the other qualifications of the candidates for appointments under Government are equal, a person who has received a good education irrespective of the place or manner in which it may have been acquired, should be preferred to one who has not, and that, even in lower situations, a man who can read and write be preferred to one who cannot, if he is equally eligible in other respects.

76 We also approve of the institution of examinations where practicable, to be simply and entirely tests of the fitness of candidates for the special duties of the various departments in which they are seeking employment, as has been the case in the Bombay presidency. We confidently commit the encouragement of educated, in preference to uneducated, men to the different officers who are responsible for their selection, and we cannot interfere by any further regulations to fetter their free choice in a matter of which they bear the sole responsibility.

77. We are sanguine enough to believe that some effect has already been produced by the improved education of the public service of India The ability and integrity of a large and increasing number of the native judges, to whom the greater part of the civil jurisdiction in India is now committed, and the high estimation in which many among them are held by their fellow-countrymen, is, in our opinion, much to be attributed to the progress of education among these officers, and to their adoption, along with it, of that high moral tone which pervades the general literature of Europe Nor is it among the higher officers alone that we have direct evidence of the advantage which the public derives from the employment of educated men We quote from the last report of the Dacca College, with particular satisfaction, as we are aware that much of the happiness of the people of India depends upon the honesty of the officers of Police —"The best possible evidence has been furnished," say the local committee, "that some of the ex-students of the College of Dacca have completely succeeded in the arduous office of darogah" Krishna Chunder Dutt, employed as a darogah under the Magistrate of Howrah, in particular, is recommended for promotion, as having gained the respect and applause of all classes, who, though they may not practise, yet know how to admire, real honesty and integrity of purpose

Report on Public Instruction, Bengal, 1851-1852, page 72

78. But however large the number of appointments under Government may be, the views of the natives of India should be directed to the far wider and more important sphere of usefulness and advantage which a liberal education lays open to them, and such practical benefits arising from improved knowledge should be constantly impressed upon them by those who know their feelings and have influence or authority to advise or direct their efforts. We refer, as an example in this respect, with mingled pleasure and regret, to the eloquent addresses delivered by the late Mr. Bethune, when President

of the Council of Education, to the students of the Krishnaghur and Dacca Colleges.

79 There are some other points connected with the general subject of education in India upon which we will now briefly remark. We have always regarded with special interest those educational institutions which have been directed towards training up the natives of India to particular professions, both with a view to their useful employment in the public service, and to enable them to pursue active, profitable occupations in life The medical colleges in different parts of India have proved that, in despite of difficulties which appeared at first sight to be insurmountable, the highest attainments in medicine and surgery are within the reach of educated natives of India we shall be ready to aid in the establishment and support of such places of instruction as the medical colleges of Calcutta and Bombay in other parts of India. We have already alluded to the manner in which students should be supplied to those colleges, as well as to those for the training of civil engineers

80 The success of the Thomason College of Civil Engineering at Roorkee has shown that, for the purpose of training up persons capable of carrying out the great works which are in progress under Government throughout India, and to qualify the natives of India for the exercise of a profession which, now that the system of railways and public works is being rapidly extended, will afford an opening for a very large number of persons, it is expedient that similar places of practical instruction in civil engineering should be established in other parts of India, and especially in the Presidency of Madras, where works of irrigation are so essential, not only to the prosperity of the country, but to the very existence of the people in times of drought and scarcity The subject has been prominently brought under your notice in the recent reports of the Public Works Commissioners for the different presidencies, and we trust that immediate measures will be taken to supply a deficiency which is at present but too apparent.

81 We may notice in connexion with these two classes of institutions of an essentially practical character, the schools of industry and design, which have been set on foot from time to time in different parts of India We have lately received a very encouraging report of that established by Dr Hunter in Madras, and we have also been informed that Sir Jamsetjee Jeejeebhoy, with his accustomed munificence, has offered to lay out a very considerable sum upon a like school in Bombay. Such institutions as these will, in the end, be self-supporting , but we are ready to assist in their establishment by grants-in-aid for the supply of models, and other assistance which they may advantageously derive from the increased attention which has been paid of late years to such subjects in this country. We enclose you the copy of a report which we have received from Mr. Redgrave upon the progress of the Madras school, which may prove of great value in guiding the efforts of the promoters of any similar institutions which may hereafter be established in India. We have also

Report on Public Instruction, Bengal, 1851-1852, Appendix, page clxxi

perceived with satisfaction the attention of the Council of Education in Calcutta has been lately directed to the subject of attaching to each zillah school the means of teaching practical agriculture, for there is, as Dr. Mouats most truly observes, "no single advantage that could be afforded to the vast rural population of India that would equal the introduction of an improved system of agriculture."

82. The increasing desire of the Mahomedan population to acquire European knowledge has given us much satisfaction We perceive that the Council of Education of Bengal has this subject under consideration, and we shall receive with favour any proposition which may appear to you to be likely to supply the want of so large a portion of the natives of India.

83. The importance of female education in India cannot be over-rated; and we have observed with pleasure the evidence which is now afforded of an increased desire on the part of many of the natives of India to give a good education to their daughters. By this means a far greater proportional impulse is imparted to the educational and moral tone of the people than by the education of men. We have already observed that schools for females are included among those to which grants-in-aid may be given, and we cannot refrain from expressing our cordial sympathy with the efforts which are being made in this direction. Our Governor General in Council has declared, in a communication to the Government of Bengal, that the Government ought to give to native female education in India its frank and cordial support, in this we heartily concur and we especially approve of the bestowal of marks of honor upon such native gentlemen as Rao Bahadur Maguabhai Karramchand, who devoted Rs 20,000 to the foundation of two native female schools in Ahmedabad, as by such means our desire for the extension of female education becomes generally known

Report on Public Instruction, Bengal, 1849-1850, page 2

84. Considerable misapprehension appears to exist as to our views with respect to religious instruction in the Government institutions Those institutions were founded for the benefit of the whole population of India, and in order to effect their object, it was, and is, indispensible that the education conveyed in them should be exclusively secular. The Bible is, we understand, placed in the libraries of the colleges and schools and the pupils are able freely to consult it. This is as it should be; and, moreover, we have no desire to prevent or discourage, any explanations which the pupils may, of their own free will, ask from the masters upon the subject of the Christian religion, provided that such information be given out of school hours. Such instruction being entirely voluntary on both sides, it is necessary, in order to prevent the slightest suspicion of an intention on our part to make use of the influence of Government for the purpose of proselytism, that no notice shall be taken of it by the inspectors in their periodical visits.

85. Having now furnished the sketch that we propose to give of the scheme for the encouragement of education in India, which we desire to see gradually brought into operation, we proceed to make some observations upon the

state of education in the several presidencies, and to point out the parts of our general plan which are most deficient in each

86 In Bengal, education through the medium of the English language, has arrived at a higher point than in any other part of India. We are glad to receive constant evidence of an increasing demand for such an education and of the readiness of the natives of different districts to exert themselves for the sake of obtaining it There are now five Government anglo-vernacular colleges, and zillah schools have been established in nearly every district. We confidently expect that the introduction of the system of grants-in-aid will very largely increase the number of schools of a superior order, and we hope that before long sufficient provision may be found to exist in many parts of the country for the education of the middle and higher classes independent of the Government institutions, which may then be closed, as has been already the case in Burdwan, in consequence of the enlightened conduct of the Rajah of Burdwan, or they may be transferred to local management

87 Very little has, however, been hitherto done in Bengal for the education of the mass of the people, especially for their instruction through the medium of the vernacular languages A few vernacular schools were founded by Government in 1844, of which only 33 now remain, with 1,400 pupils, and upon their transfer in April 1852, from the charge of the Board of Revenue to that of the Council of Education, it appears that "they were in a languishing state and had not fulfilled the expectations formed on their establishment"

88 We have perused, with considerable interest, the report of Mr. Robinson, Inspector of the Assam schools, of which there appeared to be 74, with upwards of 3,000 pupils Mr. Robinson's suggestions for the improvement of the system under which they are managed, appear to us to be worthy of consideration, and to approach very nearly to the principle upon which vernacular education has been encouraged in the North-Western Provinces We shall be prepared to sanction such measures as you may approve of to carry out Mr Robinson's views

89 But the attention of the Government of Bengal should be seriously directed to the consideration of some plan for the encouragement of indigenous schools and for the education of the lower classes, which, like that of Mr Thomason in the North-Western Provinces, may bring the benefits of education practically before them, and assist and direct their efforts We are aware that the object held out by the Government of Agra to induce the agricultural classes to improve their education does not exist in Bengal, but we cannot doubt that there may be found other similar solid advantages attending elementary knowledge, which can be plainly and practically made apparent to the understanding and interests of the lower classes of Bengal.

90. We perceive that the scheme of study pursued in the Oriental Colleges of Bengal is under the consideration of the Council of Education, and it appears that they are in an unsatisfactory condition. We have already sufficiently indicated our views as to those colleges, and we should be glad to see them

placed upon such a footing as may make them of greater practical utility. The points which you have referred to us, in your letter of the 5th of May, relative to the establishment of a Presidency College in Calcutta, will form the subject of a separate communication.

91. In the North-Western Provinces the demand for education is so limited by circumstances fully detailed by the Lieutenant-Governor in one of his early reports, that it will probably be long before private effort will become energetic enough to supply the place of the establishment, support and management by Government, of places of instruction of the highest grade where there may be a sufficient reason for their institution.

92. At the same time, the system for the promotion of general education throughout the country, by means of the inspection and encouragement of indigenous schools, has laid the foundation of a great advancement in the education of the lower classes Mr. Thomason ascertained, from statistical information, the lamentable state of ignorance in which the people were sunk, while the registration of land, which is necessary under the revenue settlement of the North-Western Provinces, appeared to him to offer the stimulus of a direct interest for the acquisition of so much knowledge, at least of reading and writing, of the simple rules of arithmetic, and of land measurement, as would enable each man to look after his own rights.

93 He therefore organised a system of encouragement of indigenous schools by means of a constant inspection by zillah and purgannah visitors under the superintendence of a visitor-general, while, at the headquarters of each tahsildar, a school was established for the purpose of teaching "reading and writing the vernacular languages, both Urdu and Hindi accounts, and the mensuration of land" A school house is provided by Government, and the masters of the tahsili schools receive a small salary, and are further entitled to the tuition fees paid by the pupils, of whom none are educated gratuitously, except "on recommendation given by village school-masters who may be on the visitor's list" A certain sum is annually allotted to each zillah for the reward of deserving teachers and scholars, and the attention of the visitor-general was expressly directed to the preparation of elementary school books in the vernacular language, which are sold through the agency of the zillah and the purgannah visitors. We shall be prepared to sanction the gradual extension of some such system as this to the other districts of the Agra presidency, and we have already referred to it as the model by which the efforts of other presidencies for the same object should be guided

94. In the presidency of Bombay the character of the education conveyed in the anglo-vernacular colleges is almost, if not quite, equal to that in Bengal, and the Elphinstone Institution is an instance of a college conducted in the main upon the principle of grant-in-aid, which we desire to see more extensively carried out. Considerable attention has also been paid in Bombay to education through the medium of the vernacular languages. It appears that 216 vernacular schools are under the management of the Board of Education, and that the number of pupils attending them is more than 12,000. There

are three inspectors of the district schools, one of whom (Mahadeo Govind Shastri) is a native of India. The schools are reported to be improving, and masters trained in the Government colleges have been recently appointed to some of them with the happiest effect. These results are very creditable to the presidency of Bombay, and we trust that each Government school will now be made a centre from which the indigenous schools of the adjacent districts may be inspected and encouraged

95. As the new revenue settlement is extended in the Bombay presidency, there will, we apprehend, be found an inducement precisely similar to that which has been taken advantage of by Mr. Thomason, to make it the interest of the agricultural classes to acquire so much knowledge as will enable them to check the returns of the village accountants. We have learned with satisfaction that the subject of gradually making some educational qualification necessary to the confirmation of these hereditary officers is under the consideration of the Government of Bombay, and that a practical educational test is now insisted upon for persons employed in many offices under Government.

96 In Madras, where little has yet been done by Government to promote the education of the mass of the people, we can only remark with satisfaction that the educational efforts of Christian missionaries have been more successful among the Tamil population than in any other part of India, and that the presidency of Madras offers a fair field for the adoption of our scheme of education in its integrity, by founding Government anglo-vernacular institutions only where no such places of instruction at present exist, which might, by grants-in-aid and other assistance, adequately supply the educational wants of the people. We also perceive with satisfaction that Mr Daniel Elliot, in a recent and most able minute upon the subject of education, has stated that Mr Thomason's plan for the encouragement of indigenous schools might readily be introduced into the Madras presidency where the riotwari settlement offers a similar practical inducement to the people for the acquisition of elementary knowledge.

97 We have now concluded the observations which we think it is necessary to address to you upon the subject of the education of the natives of India. We have declared that our object is to extend European knowledge throughout all classes of the people We have shown that this object must be effected by means of the English language in the higher branches of institution, and by that of the vernacular languages of India to the great mass of the people. We have directed such a system of general superintendence and inspection by Government to be established as will, if properly carried out, give efficiency and uniformity to your efforts We propose by the institution of universities to provide the highest test and encouragement of a liberal education By sanctioning grants-in-aid of private efforts, we hope to call to the assistance of Government private exertions and private liberality. The higher classes will now be gradually called upon to depend more upon themselves; and your attention has been more especially directed to the education of the middle and lower classes, both by the establishment of fitting

schools for this purpose, and by means of a careful encouragement of the native schools which exist, and have existed from time immemorial, in every village, and none of which perhaps cannot, in some degree, be made available to the end we have in view We have noticed some particular points connected with education, and we have reviewed the condition of the different presidencies in this respect, with a desire to point out what should be imitated, and what is wanting, in each

98 We have only to add, in conclusion, that we commit this subject to you with a sincere belief that you will cordially co-operate with us in endeavouring to effect the great object we have in hand, and we desire it should be authoritatively communicated to the principal officers of every district in India, that henceforth they are to consider it to be an important part of their duty, not only in that social intercourse with the natives of India, which we always learnt with pleasure that they maintain, but also with all the influence of their high position, to aid in the extension of education, and to support the inspectors of schools by every means in their power.

99. We believe that the measures we have determined upon are calculated to extend the benfits of education throughout India , but, at the same time, we must add that we are not sanguine enough to expect any sudden, or even speedy, results to follow from their adoption. To imbue a vast and ignorant population with a general desire for knowledge, and to take advantage of that desire when excited to improve the means for diffusing education amongst them, must be a work of many years , which, by the blessing of Divine Providence may largely conduce to the moral and intellectual improvement of the mass of the natives of India

100. As a Government, we can do no more than direct the efforts of the people, and aid them wherever they appear to require most assistance. The result depends more upon them than upon us , and although we are fully aware that the measures we have now adopted will involve in the end a much larger expenditure upon education from the revenues of India, or, in other words, from the taxation of the people of India, than is at present so applied, we are convinced, with Sir Thomas Munro, in words used many years since, that any expense which may be incurred for this object " will be amply repaid by the improvement of the country ; for the general diffusion of knowledge is inseparably followed by more orderly habits, by increasing industry, by a taste for the comforts of life, by exertion to acquire them, and by the growing prosperity of the people "

APPENDIX IV.

MEMORANDUM ON THE MOHSIN FUND BY DR. ZIA-UD-DIN AHMAD.

1. The Mohsin endowment was founded in 1806 by Haji Mohammad Mohsin[1] by a charitable deed or *Wakhnameh* In the deed by which the Trust was created it was laid down that the entire income of the property after paying the Government revenues was to be divided into nine equal shares of which three shares were to be applied to religious ceremonies and the repairs of the Imambara and cemetery ; two were to be allotted to the two *mutwallis* appointed to supervise the religious and zamindar affairs of the endowment ; and four were to be spent in paying the servants of the establishment and certain salaries and pensions according to a list attached to the deed Haji Mohammad Mohsin survived for six years after the registration of this deed and died unmarried, at the age of 82, on the 19th November 1812

2 The first two *mutwallis* of the Imambara, Rajab Ali Khan and Shakir Ali Khan, whom he had appointed, administered the Imambara and the Trust property satisfactorily during his lifetime But after his death they proved dishonest, and endeavoured to conceal the will and take possession of the whole property. They appointed their sons, Wasik Ali Khan and Bakur Ali Khan, to be *mutwallis* after them Their gross mismanagement and corruption led the Board of Revenue to interfere under the provisions of Regulation XIX of 1810, and, as a temporary measure, on November 16th, 1815, Saiyed Ali Akber Khan was appointed Manager by the Government to act in conjunction with the two *mutwallis* and to set the affairs of the Trust on a satisfactory footing. But they continued in their old practices In 1818, the Collector of Jessore, with the approval of the Board of Revenue, ejected them from the management The action taken since 1812 had completely changed

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[1] Haji Mohammad Mohsin, founder of the great Mohsin Fund in Bengal, was of Persian extraction His ancestors came to India from Ispahan and succeeded in making a fortune by commercial pursuits in Murshidabad, Surat and Hooghly. His family settled at Hooghly, then a flourishing port of Bengal.

Haji Mohammad Mohsin was a great scholar and philanthropist He travelled not only throughout the whole of India but also in the western countries of Asia, visiting the places held sacred by the Musalmans and particularly by the Shiahs He visited Mecca, Medina, Najaf, Karballa, and Meshed, and finally went to his native town, Ispahan. Many stories of his liberality and goodness of heart are current locally and have also been recorded in several biographies.

He inherited vast immoveable properties from his step-sister (Mannu Jan Khanum) who was a liberal-minded and pious lady. Almost the whole of this property, to which he succeeded, was reserved by him for religious and public purposes and constitutes the *Mohsin Fund.*

He lies in the family burial ground at Hooghly situated in a beautiful garden on the right bank of the Hooghly. The canopy on his grave was erected on the occasion of the centennial celebration of the foundation of the Trust.

the aspect of the real provisions of the will This time the Government did not take recourse to temporary measures. About 1817, Government took the control of the Trust estate into its own hands, but appointed a manager to manage the Imambara and the purely religious functions of the endowment Syed Ali Akhbar Khan Bahadur was nominated as the first *mutwalli* under the new arrangement.[1]

3 In 1821, the property was sold in *patni tenures* (*i e.*, in tenures subject to a quit-rent fixed in perpetuity) and about six lakhs of rupees were received on this account The son of one of the managers had disputed the validity of the orders of the Government, and pending the decision of the law suit, the income of the endowment was not spent, and a capital sum of about nineteen lakhs of rupees accumulated

4. In 1835, the Government of India, in their letter no 282, dated 28th October 1835, addressed to the General Committee of public instruction, placed on record the following statement :—

"The Governor-General in Council, deeming himself to have succeeded to the full authority and power assigned by Haji Mohsin to the *mutwallis* considers it to be entirely in his power to determine upon the appropriation of the funds, subject of course to the condition of adhering as closely as possible to the wishes of the testator in points on which they have been declared

The Governor-General in Council, adverting to the conditions of the will, resolves that three-ninths of the income from the zamindaris shall permanently be assigned for the current expenses of the Imambara, etc Of the two-ninths of this income assigned to the *mutuallis*, but which are now at the disposal of Government, the Governor-General in Council assigned one-ninth to the *agent* or *mutwalli* appointed by Government, but he does not deem it necessary to appoint a second *mutwalli*, or to appropriate the second ninth share assigned by the testator to the co-trustee nominated in the original will This ninth, therefore, will be available for general purposes of a beneficent nature along with the surplus funds.

The four-ninths of the zamindari income appropriated by the testator to pensions and establishments must remain burthened with these charges, but as many of the pensions etc , etc , will have lapsed, the Governor-General in Council considers that the income arising from such lapses may be fairly added to the surplus fund appropriable to general purposes The expenses of the hospital will, however, remain a permanent charge under this head, but there appears to be an expense incurred for education at present which will be of course merged into the general fund.

In pursuance of the principles above laid down, there remain at the disposal of Government for general purposes of a beneficent nature, first one-ninth of the annual income from the zamindari , second, the lapsed pensions, etc , etc , and, third, the entire amount arising from the interest of the accumulated fund now invested in promissory notes of the Government."

5. In the same letter the Governor-General in Council expressed the opinion that—

"after setting apart from this last-mentioned fund such amount as may be necessary to provide appropriate buildings, including the charge of rebuilding or repairing the Imambara and other religious edifices, if it should be found necessary to renew these, the entire remainder should be considered as a Trust Fund, the interest of which, with other items specified, may be appropriated to the purposes of education by the formation of a collegiate institution imparting instruction of all kinds in the higher departments of education according to the principles heretofore explained."

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[1] *Life of Haji Mohammad Mohsin*, by Ibn-i-Imam, pages. 9-10.

The division as outlined above has continued, and the general items of the income and expenditure of the fund stand as follows[1] :—

Abstract showing the distribution, etc., to be allowed in respect of each of the four shares allotted to secular purposes.

RECEIPTS.

	Rs
1. One-ninth share of fixed remittance from Syedpur Trust Estate	6,667
2 Three-ninths share of fixed remittance from Syedpur Trust Estate	20,000
Secular share.	
3. (*i*) Four-ninths share of fixed remittance from Syedpur Trust Estate	26,666
(*ii*) Miscellaneous receipts	100
TOTAL	26,766
Deduct lapsed pensions transferred to educational share.	1,403
TOTAL SECULAR SHARE	25,363
Educational share	
4. (*i*) One-ninth share of fixed remittance from Syedpur Trust Estate	6,667
(*ii*) Interest on fixed endowments	36,903
(*iii*) Interest on variable endowments	3,156
(*iv*) Lapsed pensions appropriable for education	1,403
(*v*) Savings under (*iii*), if any, from last year's allotment (*vi*) Savings, if any, of educational share from last year's allotment	15,574
TOTAL	63,574
TOTAL RECEIPTS	1,15,604

Budget estimate of the Mohsin Endowment Fund for the year 1918-19.

EXPENDITURE

	Rs.
1. Payments on account of mutwallis one-ninth share	6,667
2 Payments on account of Imambarah Committee's three-ninths share	20,000
3. Payments on account of secular four-ninths share	25,363
4. Expenditure on education	62,893
TOTAL	1,14,923

6. The Mohsin Fund was utilised for the establishment of the Hooghly College, which was opened on the 1st August 1836. Within three days it had

[1] The Mohsin Endowment Budget for 1916-17.

on its rolls 1,200 pupils, of whom less than 40 were Muslims. The site and building were bought for Rs 23,000 The college was maintained at a cost of Rs 51,000 per annum.[1] In 1850 the number of Musalmans was only five out of a total of 409 students

7 Mr. Lees, the Principal of the Hooghly Madrassah, in his report of 22nd October 1864 writes, " that the Mohammadan community feel now, and have long felt, that a flagrant breach of trust was committed by the absorption into the general fund for Government education purposes of the noble bequest left for their benefit by the late Mohammad Mohsin and do not hesitate in their social assemblies to designate this act as one of robbery "

8 Sir William Hunter wrote seven years later to the same effect[2] .— " It is painful to dwell on this charge of misappropriation, because it is impossible to rebut it....they (*i e* , Government) have aggravated this initial wrong by substituting for the pious objects of the Musalman testator an institution which is of no service to the Muhammadan whatever. Some years ago it was stated that out of 300 boys in the English College, not one per cent. were Musalmans."

9. In the year 1872 the general position of Muslim education in Bengal was reviewed, and Sir George Campbell, the then Lieutenant-Governor of Bengal, made a proposal that the entire cost of maintaining the non-Muslim portion of the Hooghly College should in future be borne by Government, and that the consequent savings from the Mohsin Fund should be devoted to Muslim education elsewhere The Government of Bengal, in their letter to the Government of India, No 2916 of the 17th August 1872, made, *inter alia*, the following suggestions —

(*i*) The Mohammad Mohsin Educational Endowment should be withdrawn from the general department of the Hooghly College.

(*ii*) With this endowment and the present grant to the Calcutta Madrassah, three madrassahs might be maintained, namely — a small one at Hooghly, a large one at Calcutta, a moderate-sized one at Chittagong or Dacca

(*iii*) A European principal knowing Arabic should be appointed to supervise the Calcutta and the Hooghly institutions another European on a smaller salary should be appointed to the Eastern District madrassahs.

(*iv*) The funds available, namely Rs. 1,09,500,[3] might be spent thus :— Calcutta Madrassah and principal, Rs. 50,000 ; Hooghly Madrassah, Rs. 11,500 , scholarships, Rs. 7,000 , contingencies, Rs. 5,000 ; Arabic Department at Dacca College, Rs. 4,000 ; Chittagong Madrassah, Rs. 27,000 , subscription to Hooghly College, Rs 5,000.

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[1] Calcutta University Calendar for 1916, Part I, page 249.

[2] *The Indian Musalmans*, published in 1871, page 189.

[3] The sum includes also the Calcutta Madrassah grant of Rs. 46,000, a probable fee realisation of Rs. 1,500 and the scholarship grant of Rs. 7,000.

(v) The Educational Department should insist on a proportion (to be hereafter gradually increased) of Muhammadans being admitted into all grades of Educational Department, specially at the ends of the official chain, namely, deputy inspectorships and normal scholarships

(vi) The accumulated surplus of the Mohsin Endowment should be devoted to increasing boarding-house accommodation in Calcutta and providing a madrassah building and boarding-houses at Chittagong

10. The proposal received the approval of the Government of India and it was decided that the income of the Mohsin Fund was to be spent on the following objects —

(1) The maintenance of the staff and the boarding-houses of the Dacca, Hooghly, Chittagong and Rajshahi madrassahs.
(2) Scholarships for Musalmans.
(3) The payment of a share of the cost of Arabic and Persian teachers in nine zilla schools
(4) The payment of two-thirds of the tuition fees of madrassah boys attending certain schools and law classes.

11. The outcome of the decision arrived at was the establishment of the three madrassahs of Dacca, Rajshahi, and Chittagong. In addition, 42 special scholarships for Musalmans were created for boys attending schools and colleges. Grants were made from the Mohsin Fund to different schools and colleges in Bengal to enable Muslim youths to prosecute their studies at a low rate of fees, usually at one-third the usual rate Schools and colleges were in some cases provided with a Persian staff with the help of this fund. A European scholar was appointed as the principal of the Calcutta Madrassah to look after the interests of Muslim education.

It is important to remember that at that time the special encouragement of Muslim education was not yet regarded as a legitimate charge on provincial funds

12. In 1873, the Government of Bengal made the following assignment of the funds —

"Calcutta Madrassah, etc, Rs 35,000; Dacca Madrassah, etc., Rs 10,000; establishment and boarding-houses of three madrassahs, Rs 21,000; further expenses including scholarships, Rs. 11,800, assignment for Muhammadan education at nine zilla schools, partly for paying two-thirds of school fees of deserving Muslim boys, and partly in bearing a share of the cost of a teacher of Arabic and Persian, Rs. 7,200, assignment to meet the cost of paying two-thirds fees of madrassah boys who may attend at the Presidency, Hooghly and Dacca Colleges or collegiate schools or at the Rajshahi and Chittagong schools or Law classes, Rs. 8,000. Total Rs. 93,000.

13. For some years the income of the Mohsin Fund sufficed to meet all these charges; but in 1895 it suddenly decreased owing to the reduction of the rates of Government securities from 4 per cent. to 3½ per cent. In order to equalise the receipts and expenditure, Government was compelled to revise its policy. The charges on account of the salaries of Arabic and Persian

teachers in the zilla schools were transferred from the Mohsin Fund to provincial revenues, and the fees payable by Muslim students were increased from one-third to half the full fees.

14. At the time of the partition of Bengal in 1905 the Government of Eastern Bengal and Assam received a fixed grant of Rs. 30,000 a year from the fund to supplement the 'short-fee' payment of Muslim students : they used this amount as a nucleus and constituted a kind of Muslim education fund to which were also credited—

(*a*) the fees received from madrassah students,

(*b*) the annual grant from provincial revenues provided in supplement of the grant of Rs 30,000 from the Mohsin Fund above referred to. This general Muhammadan Education Fund came to be regarded as that portion of the income of the general Mohsin Fund Endowment which was available for Eastern Bengal and Assam ; and thus, on the territorial redistribution of 1912, it appeared as if the Mohsin Fund was made up of —

(*i*) a one-ninth of the annual income of the zamindaris ;
(*ii*) the interest on the fixed endowment ,
(*iii*) the interest on variable securities ,
(*iv*) the grant from provincial revenues ,
(*v*) *Madrassah* fees (the fees realised at Government *madrassahs* in Western Bengal have always been credited to Government) ; and
(*vi*) miscellaneous receipts.

15 It was subsequently decided that fees from madrassah students and Government contributions should not be credited to the Mohsin Fund The total income of the Mohsin Fund during the year 1913-14 was as follows —

	Rs
(1) *Mutwalli's* share	6,667
(2) Committee's share	20,103
(3) Establishment	11,099
(4) Pensions	490
(5) Maintenance of, and contribution to, hospitals and dispensaries	14,830
(6) Allotted for education	63,875
(7) Closing balance	7,081

16. Out of the amount of Rs 63,875 allotted for education, a sum of Rs. 648 was assigned to supplement the short-fee payment of Muslim students in the Campbell and Dacca Medical Schools, the sum of Rs. 700 was assigned to Assam, and Rs 3,200 to the province of Bihar and Orissa The grant at the disposal of the Bengal Education Department was therefore Rs 59,327. This sum is distributed as follows :—

	Rs.
(1) Government *madrassahs*	38,044
(2) Scholarships	6,848
(3) Grants to private *madrassahs*	1,000
(4) Short-fee payments of Muslim students	13,385
(5) Miscellaneous	50

17. Mr. W. W. Hornell, the Director of Public Instruction of Bengal, in his letter, dated the 14th June 1914, made the following proposal .—

" Government should now assume the whole charge for the maintenance of those of their own *madrassahs, viz*, Dacca, Chittagong, Rajshahi and Hooghly, towards the current expenses of which an annual contribution from the Mohsin Fund is now made; and the money thus set free, which, in accordance with the above estimate, will amount to an annual sum of Rs 23,284, should be devoted to assisting *Muhammadan* boys to avail themselves more largely of the facilities which already exist or may hereafter be at their disposal in the ordinary colleges and schools and in the *madrassahs* which adopt the reformed course

If my proposal be accepted, I would propose further that the annual amount in question *viz*, Rs 23,284, should be distributed under the following heads —

(*i*) grants for maintenance of students in hostels;

(*ii*) short-fee payments for boys in high schools, and

(*iii*) scholarships "

18 The Government of Bengal made the following statement in their letter, dated 28th January 1915, to the Government of India —

" Originally madrassahs were semi-religious institutions and were established as such; but they will hardly retain that characteristic after the introduction of the reform scheme, two essential features of which are the omission of Persian from the curriculum and the inclusion of English as a compulsory subject These changes are likely to result in a development of the English side of the madrassahs, and the reformed madrassah course will be to all intents and purposes a secular course for Muhammadan students. The Governor in Council is therefore of opinion that the cost of all Government madrassahs and of grants-in-aid to non-Government madrassahs will henceforward be a proper charge on provincial revenues The Director of Public Instruction has estimated the annual amount required for this purpose at Rs 23,284, which he proposed to meet from the Imperial recurring grant of Rs 1,50,000 for the improvement of education in this Presidency. The whole of the Mohsin Fund will thus be set free for the encouragement of Muhammadan education generally, and it is proposed to distribute its income under the following heads :—

(1) Maintenance allowance (equivalent to half the total cost of maintenance) to be given to Muhammadan boys residing in hostels attached to recognised schools.

(2) Payment of a portion of the fees of Muhammadan students in colleges and schools.

(3) Special Muhammadan scholarships "

19 The Government of Bengal with the consent of the Government of India accepted the suggestion that the Mohsin Fund should in future be spent in scholarships and grants for poor Muslim students, and the Director of Public Instruction, in his notification dated 19th September 1917, wrote —

" The number of Muslim students in colleges and pupils in high schools has now increased considerably, and although the amount for short-fee payments has also been increased, this amount will not meet any appreciable portion of the fees payable by all Muslim students and pupils in colleges and high schools It has, therefore, been decided that the object of the grant will be much better attained by giving some material assistance to a few boys rather than by giving small sums to a large number of boys The whole amount now available for short-fee payments has accordingly been converted into 75 college stipends of Rs 5 each, 3 stipends of Rs 3 each, 113 school stipends of Rs 4 each, and 114 school stipends of Rs. 3 each, as detailed in the statement below In consideration of the association which the late Haji Mohammad Mohsin, the founder of the endowment, had with Hooghly, some stipends have been reserved for the Hooghly College, Hooghly Collegiate School and the Amalgamated Branch and Model School at Hooghly Only poor students who are unable to provide for the expenses of their education will be eligible for these stipends, among those eligible on the ground of poverty, the stipends will be awarded in consideration of merit No one who holds any Government or other scholarship or stipend will be eligible for these stipends."

20. The present arrangement appears to be generally satisfactory (and whatever misuse may have been made of the fund in the past there is not much to complain of in the present arrangement). But it is still open to two objections :—

(*i*) The Hooghly hospital is still maintained by the Mohsin Fund from which it receives a grant of Rs. 14,839. The maintenance of a district hospital should be considered as a legitimate charge on public funds and ought not to be provided out of a charitable endowment for the benefit of the Musalmans

(*ii*) The Shia community appear to be not altogether satisfied with the existing arrangement, and they think that the funds should be more extensively used for the benefit of the Shia students It is, however, to be pointed out that the Shia population in Bengal is comparatively small.

APPENDIX V.

NOTE ON THE AGE OF THE CANDIDATES AT THE MATRICULATION EXAMINATION OF 1918, BY DR ZIA-UD-DIN AHMAD.

1. At the matriculation examination of 1918, 14,675 candidates appeared, of whom 8,645, or 58·9 per cent. were successful 5,034 passed in the first division, 3,174 in the second division and 406 in the third division.

2 In the calculation of the average age of candidates given below, I have omitted teachers and private candidates, as, on account of the interruptions in their course of regular study, they should be considered separately I have also been obliged to leave out of account a certain number of candidates whose ages are not given in the registers, the age column being left blank. Omitting these three categories, the number of students counted in the calculations of the average age in the following paragraphs is 14,064

3 *Average age* —The average age is the age obtained by dividing the sum of the ages of the candidates concerned by their number. The average age of all the candidates in the Calcutta University is 18 years 5 months and that for the Bengal schools is 18 years 4 months The average age of the candidates from the Assam[1] schools is the highest, being 21 years 1 month

4 *The average age according to territorial divisions* —The average age of the matriculation candidates from the different divisions of Bengal varies from 17 years 8 months to 18 years 10 months, the average age is lowest in Calcutta and highest in the Dacca division The average age of the Muslim candidates is higher than the general average by ten months

The following table gives the average age of the Muslim and non-Muslim candidates who appeared at the matriculation examination classified according to the division from which they came

Division	Average age of all the candidates [2]		Average age of Muslim candidates [2]		Average age of non-Muslim candidates [2]	
	Years	months	Years	months	Years	months
Calcutta	17	8	19	1	17	6
Presidency	18	8	19	3	18	5
Burdwan	18	5	18	9	18	4
Chittagong	18	8	19	0	18	4
Rajshahi	18	9	19	3	18	6
Dacca	18	10	19	5	18	7
Total of all the candidates from Bengal[3]	18	4	19	2	18	1
Assam and Cooch Behar	21	1	18	1	21	6
Burma	18	8	17	6	18	9
Total of all candidates in the University of Calcutta	18	5	19	0	18	2

[1] Cooch Behar has been reckoned with Assam

[2] It is to be remembered that as stated in paragraph 2 above teachers and 'private candidates' are excluded from these calculations which refer only to candidates presenting themselves from recognised high schools

[3] The averages in these lines are true averages and not averages of averages.

5. The following table shows the number of the candidates who have completed the ages of sixteen and higher years :—

	Number of candidates.
16 years old but under 17	2,475
17 „ 18	2,948
18 „ 19	2,867
19 „ 20	2,220
20 „ 21	1,582
21 „ 22	942
22 „ 23	559
23 „ 24	261
24 „ 25	108
25 „ 26	54
26 „ 27	31
27 „ 28	7
28 „ 29	6
29 „ 30	2
30 „ 31	*Nil*
31 „ 32	1
32 „ 33	1
TOTAL	14,064

6. These figures are illustrated in the accompanying graph, (Plate I) where the abscissae indicate the age of candidates (the total number of years completed), and the ordinates indicate the corresponding number of candidates. The average age of all the candidates is 18 years 5 months and is indicated by the line GL The line GL will pass through the centre of gravity of the area bounded by the axes and the curve [1] The number of candidates who are under 18 is about equal to the number of candidates who are over 19

The regular fall of the curve on the right indicates that the average age has not been increased or diminished by irregular causes

If we suppose the curve continued to the left of the figure, and assume that its slope will be as regular as it is to the right, we can calculate what number of candidates would have presented themselves between the ages of 15 and 16, had the minimum age been fixed by the regulations at 15 instead of at 16 The number so calculated is 667, or less than five per cent of the total In other words we may assume with some degree of certainty that had there been no regulation fixing the minimum age at 16 the number of candidates who would have passed before completing the age of 16 would be about 5 per cent It is indicated by the dotted part of the graph.

7 Mr Heaton prepared a similar graph for the matriculation examination of 1914. He has kindly permitted us to publish his graph, which is indicated by a thick line (Plate I). In each case the slope is very regular.

8 The graph on the second plate indicates the number of matriculation candidates born in different months of the year The graph represents the

[1] See the note on examination statistics by Messrs. Hartog and Zia-ud-Din Ahmad, page 125, footnote 3 of this volume.

PLATE I.

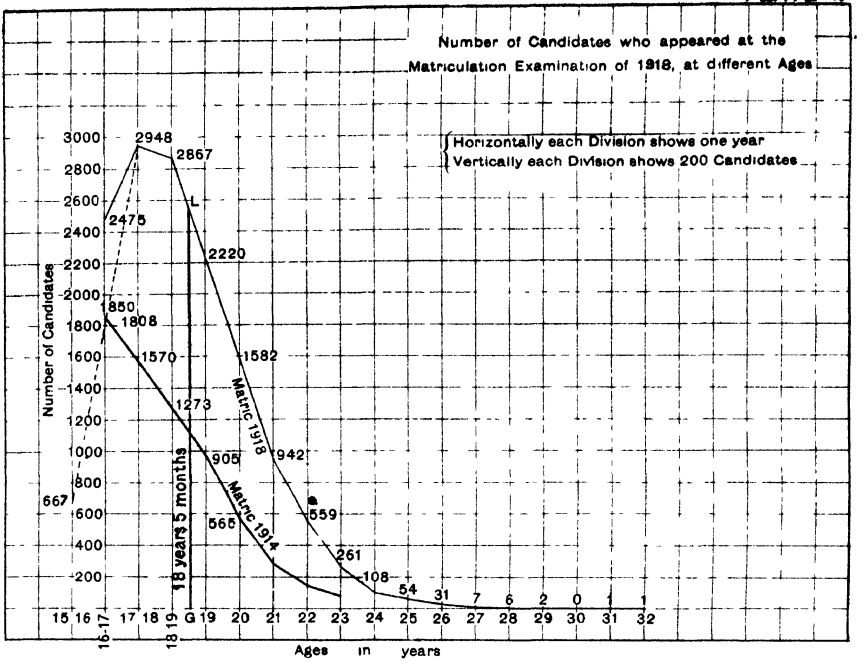
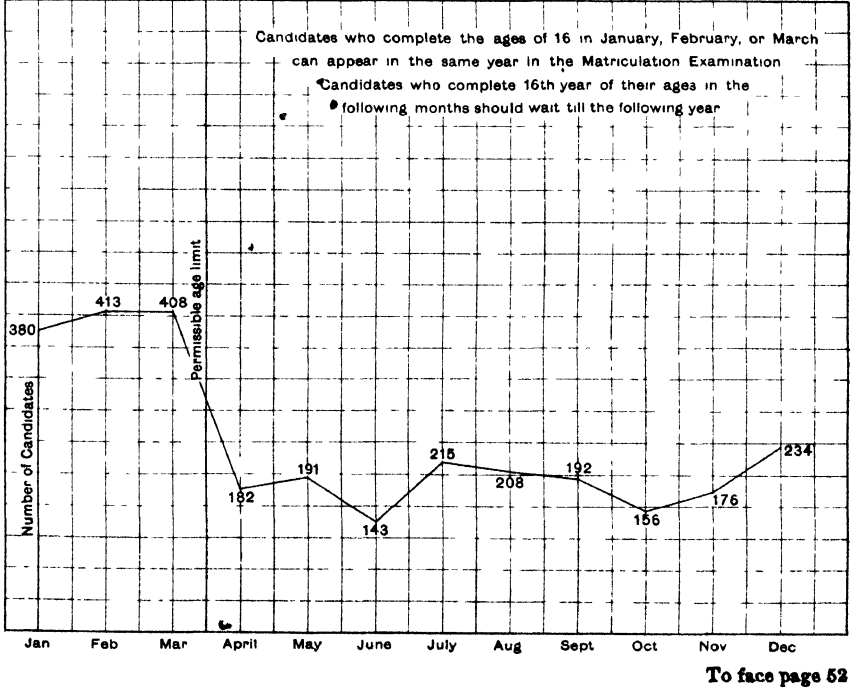


PLATE 2



To face page 52

ages not of all the candidates, but of 2,898, whose names appear in Part II of the list of the matriculation candidates printed by the Calcutta University. The abnormal birth-rate shewn for the first quarter of the year is very striking. I find it impossible to avoid the conclusion that the strict enforcement of the age rule induces a number of candidates to furnish inaccurate returns of their ages in order to enter for the examination a year earlier than would otherwise be allowed. The graph confirms the oral evidence of Mr. Heaton on this subject.

APPENDIX VI.

MEMORANDUM ON THE EDUCATION OF EUROPEANS AND ANGLO-INDIANS BY MR. W. W. HORNELL.

Section I —The problem, the origin of the Domiciled Community, the increase in the number of European and Anglo-Indian children educated in India, the political importance of the community —(1) Recognised unions between European men and Indian women. The position of the children of such recognised unions (2) The Directors' letter of 1786, the *Gazette* Order of 1792 and Lord Cornwallis' resolution of 1795 were all directed against the employment of Anglo-Indians in positions of trust The interest of the Company and of English society in India confined to children who came of recognised male European ancestors and lived as Europeans The criterion of manner of life. Change of attitude in this matter and its effect on the solidarity of the Domiciled Community (3) The test of blood The original meaning of the terms East Indian, Eurasian, Anglo-Indian. Religious workers and the education of the children of West African and Chinese men and Anglo-Indian women The position of Jewish and Armenian children. (4) The complication caused by the diversity of races. (5) The problem of the education of pure European or Anglo-Indian children who owe their existence to more recent developments in connexion with the commerce and industry and administration of India. The political importance of this problem.

Section II.—The European and Anglo-Indian population of India and some statistics of the European schools system of Bengal —(6) Figures quoted by Mr Nathan in the Fourth Quinquennial Review of Education in India, 1897-98—1901-02. (7) Figures quoted by Mr Sharp in the Sixth Quinquennial Review of Education in India, 1907—1912 (8) Figures from the Fifth Quinquennial Review of Education in Bengal, 1912-13 to 1916-17, *viz* number of institutions and pupils in them, and the cost of the system and how it is borne, endowments

Section III —The Code, the grading of schools and the curriculum.—(9) Synopsis of history of European schools up to the issue of Bengal Code in 1883 (10) The main provisions of the Bengal Code (11) Modifications of the Bengal Code Payment by results abolished (12) Lord Curzon's Conference of Directors, Simla, 1901 Decision to produce a uniform code for India and Burma. The appointment of a committee for this work. (13) Proposals of committee in connexion with courses of study (14) Criticism by the Government of India. (15) The Hill Schools Committee, 1903 Its view as to curriculum. (16) The Government of India refer the draft uniform code to the Government of Bengal with request that provisions for courses of study may be considered. The Calcutta Conference of 1906 (17) The Calcutta Committee of 1910 and the orders of the Government of Bengal. The elementary school and the supplementary courses analysed (18) The reclassification of secondary schools. (19) Criticism of the existing system of grading (20) Number of schools in each grade and of the boys and girls in them (21) Pupils by grades of instruction. (22) The Simla Conference of 1912 on the education of the Domiciled Community

The preliminary non-official committee in Calcutta (23) Mr. Arden Wood's notes which were laid before the conference (24) Mr. Arden Wood's two types of secondary schools (25) The study of Indian vernaculars and of European classical and modern languages in European schools (26) The Simla Conference's resolutions on the classification of European secondary schools (27—28) The problem of the concentration of teaching (29) The conscience clause.

Section IV —Examinations —(30) The examinations prescribed by the Bengal Code The revision of 1905. (31) A public meeting in Calcutta in favour of the Cambridge local examinations and the action of the Government of India. (32) The rules issued by the Government of Bengal in 1905 (33) The recommendations of the Calcutta Conference of 1906 (34) The position reviewed in the Third Quinquennial Review of Education in Bengal and in the Resolution of the Bengal Government thereon (35) The standing orders on examinations of European secondary schools (36) The recommendations of the Simla Conference of 1912 (37) The proposal to abolish the Cambridge examinations (38) The recent modifications in the Cambridge examinations.

Section V.— University education —(39) Institutions which occasionally prepare European and Anglo-Indian students for university examinations (40) Reasons why Europeans and Anglo-Indians do not go to the University. (41 & 42) Students from European schools and the Cambridge higher local examinations (43) European students (i) in arts colleges, (ii) successful at university examination, in 1917 (44) European students successful at the matriculation examination, 1911-12—1916-17 (45) The necessity for a university system in which the Domiciled Community will wish to share (46) The recommendations of the Simla Conference of 1912 and the decision of Government thereon.

Section VI —Professional training —(47) The figures of European and Anglo-Indian students in professional and technical colleges and schools during 1916-17

Section VII —Teachers in European schools – (48) The proportion of teachers to taught. The proportion of trained teachers to untrained (49) Teaching in European schools as a profession (50) Number of graduates working in European schools in Bengal (51) Tables showing the qualifications and salaries of the teachers employed (52) Professional organisation of teachers (53) The proposal of the Simla Conference of 1912 as regards apprentice teachers and the views of the Government of Bengal thereon (54, 55 & 56) The Kurseong Training Class. (57) No provision for the training of teachers of domestic science

Section VIII —Scholarships —(58 & 59) The system described and criticised.

Section IX —Grants-in-aid —(60) Various grants in-aid permissible under the Code. Amount spent on maintenance and free boarding grants during 1916-17.

Section XI —Boy Scouts and Girl Guides.—(61) The extent of the movements

Memorandum on the Education of Europeans and Anglo-Indians, by Mr. W. W. Hornell.

I.—The origin of the Domiciled Community

1. It is a mistake to suppose that the Anglo-Indian community was originally derived from promiscuous concubinage The East Indian *Vade Mecum*, a sort of hand-book for recruits to the East India Company service, which was dedicated to the Hon'ble Court of Directors and published under their auspices in 1810, recognised the practice of unions with Indian women, and stated that the number of European women to be found in Bengal and its dependencies could not exceed 250, whereas the male population of respectability including military officers, might be taken at about 4,000 In 1830 a certain Mr William Wynn, M P, speaking in the House of Commons said · "Among the officers who hold the highest situations on the staff of the Company's service in Calcutta, there is not one who is not married to a female of Indian descent." The influx of European women into India did not in fact begin until the Suez Canal was opened Promiscuous concubinage was not of course unknown in those days, but the better class Englishman usually selected as his partner an Indian woman of some position and remained faithful to her Such unions were undoubtedly in many cases without benefit of clergy, but in some cases the civil ceremonial of the caste to which the wife belonged was scrupulously observed. And these permanent alliances were considered irreproachable. The woman had her recognised position in society, and when children were born their births were notified in the public prints 'The lady of Mr. so and so of a son.' The children were acknowledged, christened and brought up, as would be the children of respectable and well-placed Englishmen. On the other hand, such children as were born of temporary companionships were generally made over to the mother with some money as compensation and were absorbed into the general Indian population. Children of the first category were frequently sent to England or Scotland and in a great many cases the boys found their way into the higher services of the Company.

2 Up to about 1780 there appears to have been no prejudice whatever among the Directors against the employment of Anglo-Indians in any grade of the East India Company's service But about this time there came a change. On the 14th March 1786, the Court of Directors issued a letter forbidding the sending of the wards of the Upper Orphan School—sons of English officers by Indian mothers—to England for education. In the *Gazette* of June 1792 there appeared an order excluding the sons of civil and military British officers by Indian women from the civil, military and marine services of the Company ; and in 1795 Lord Cornwallis issued a resolution forbidding all persons not descended from European parents on both sides from serving in the European

side of the Army except as 'fifers, drummers and bandsmen.' If this change of policy had not taken place, the Eurasian or Anglo-Indian problem would have been something very different from what it has been for the last century and still is, but in considering this problem it is important to notice that the East India Company and indeed English society in India were only interested in those half-castes who were not only definitely recognised as coming from European male ancestors, but who lived in such a way as to place their origin beyond doubt The Government of India when they first took up the problem of the Anglo-Indian community were similarly confined in their vision, and consequently they limited the benefits of the special school system to those who lived as Europeans. The embargo still stands on paper, but the attitude of Government and of English society in India has gradually changed The encouragement and generous assistance which the Government of Bengal have always given to St. Andrew's Colonial Homes at Kalimpong are evidence enough that Government does not limit its responsibilities to those half-caste children who are being brought up as Europeans Indeed the rescue of children of European fathers or mothers who are being brought up as Indians in *bazars* or *cooly* lines is now regarded as a work which deserves all the encouragement which the Administration and the European public can give to it I am not questioning the wisdom of this policy, but the point which I want to emphasise is that, whereas the European schools code imposes a double criterion—that of blood and that of manner of life—the latter test has now become practically inapplicable These considerations concern the solidarity of the Domiciled Community and this again affects essentially the problem of its education.

3 But what of the test of blood ? There can be little doubt but that the terms East Indian, Eurasian, Anglo-Indian were coined to denote those born of European fathers and Indian mothers and their descendents by intermarriage The most intelligent and self-respecting of the Anglo-Indians have frequently protested that an Anglo-Indian should be officially declared to be one who can prove that he originally derived his European blood from a European male ancestor On the other hand, religious workers in the slums of Calcutta have urged the desirability of recognising as Europeans for the purposes of education the children of unions between West African and Chinese men and Anglo- Indian women, and the question whether Jewish and Armenian children should be so recognised has been discussed on more than one occasion, and at considerable length, but with no very positive result.

4 The problem of the education of the Domiciled Community is undoubtedly complicated by the diversity of those who are struggling to share in the benefits of the European schools system In the last Quinquennial Review of Education in Bengal I put the case strongly :—

"As it stands the community which claims the title 'European' and for its children the privilege of a European education is composed of peoples of many nationalities, pure and mixed, such as Indian Christians from almost every part of India, but chiefly from Bengal, Madras and Burma, where missionary efforts have been most successful; West Indians, Negroes, Philipinos, Goanese, Chinese, Nepalese, Singalese and others, including Anglo-Indians and pure Europeans. All these are to be found living cheek by jowl in the

slums of Calcutta. With this bewildering conglomeration of races, it is clearly impossible to design one system of education which will meet the individual needs of each and at the same time preserve for the Anglo-Indian proper the characteristics and ideals of a European education Conditions such as these entirely prevent the educative process being one of social and spiritual uplifting and at the same time an adequate preparation for definite avenues of employment. We may by a supreme act of faith believe these children to be Europeans and content in that belief persuade ourselves that they are assimilating the European education which we are providing, but employers refuse to be deceived and state frankly that these people are unemployable save for the meanest kind of work, where wages are utterly inadequate to support them in European habits of life They begin married life at an early age with a burden of debts, charity is looked for as an ingrained hereditary habit, and so the cycle goes on "[1]

5. The Anglo-Indian question, of which the Calcutta half-caste slum problem is as it were the extreme expression, is only one aspect of the problem of the education of the Domiciled Community Another aspect of the problem is the children, whether of pure European or mixed descent, who owe their existence in India to more recent developments in connexion with the commerce and industry, and, to a less extent, the administration, of India I assume that every pure European in India, especially if his wife is a pure European, will send his children to Europe, if he can afford to do so, for part at least of their education—the war has of course made the sending of children to Europe temporarily impossible. But the number of children of this class who have to look to India for an important part, if not the whole, of their education, has been steadily increasing in recent years, as more Europeans on moderate salaries have been brought to the country in connexion with railways, industries and commerce It is of vital importance to India that these children should not be allowed to deteriorate Circumstances are against them—the climate and the general conditions of life,—one thing and one thing alone can stem the process of disintegration—good schools, followed where necessary, by facilities for technical, professional and higher general education

II —The European and the Anglo-Indian population of India and some statistics of the European Schools System of Bengal

6 Figures are not available for showing the European and Anglo-Indian population of the Bengal Presidency, nor, if such figures were available, would they be a very safe guide for the purposes of educational statistics In the Fourth Quinquennial Review of Education in India (for the period 1897-98—1901-02) Mr Nathan explained[2] that the censes of 1901 returned the European population of British India as 108,000 males and 42,000 females, and the Anglo-Indian population as 38,000 males and 37,000 females. Mr Nathan remarked that the disproportionate number of males among Europeans would be at once noticed He explained that this disproportion was due to several causes, the most important among which was the presence of the British

[1] See Progress of Education in Bengal, 1912-13—1916-17, Fifth Quinquennial Review, paragraph 591, pages 131 and 132.

[2] Progress of Education in India—1897-98—1901-02, Fourth Quinquennial Review, paragraph 988, page 327.]

forces. The total European population of all India (*i e.*, for British India and the Native States) was, he added, 123,000 males and 47,000 females and the strength of the British troops in India in April 1901 was 63,000. Bengal (as it was then constituted) had the largest European population—the Bengal Presidency is still well ahead in this respect—and Madras and Bengal between them accounted for 65 per cent. of the Eurasian population—the position in this respect is still unchanged According to the census of 1901 the European population of British India of less than 15 years of age was returned as follows :—

European boys	12,909
,, girls	12,852
Eurasian boys	13,583
,, girls	13,415
	52,759

7. In the Sixth Quinquennial Review of Education in India (1907—12) Mr. Sharp stated that the total number of Europeans and Anglo-Indians in all India (British Provinces and Native States) was returned as 301.433, the actual strength of the British forces then serving in India being 75,319 (*viz*, 2,330 officers and 72,989 in other ranks) He deducted 60,000 from the population for the purposes of calculating the children of school-going age and estimated that the 36,000 children who were at school represented about roughly the number of children of school-going age. In spite of statements made to the contrary the weight of evidence seems to incline to the conclusion that the great majority of European and Anglo-Indian children do attend school for at least some period of their school-going age

8 To turn to the Bengal Presidency, the figures for 1916-17 show 79 recognised institutions for the education of Europeans and Anglo-Indians Three of these were special institutions, *viz*, the Calcutta Technical School (a night school for apprentices), the European Apprentices Night School, Kharagpur (Bengal Nagpur Railway), the Y W. C A Technical and Commercial classes, Calcutta, one was the Government Training Class at Kurseong, 16 were technical, commercial or industrial classes attached to schools, the remaining 59 were secondary and elementary schools—38 being secondary and 21 elementary. On the 31st March 1917 there were in attendance at these institutions 9,634 pupils (*viz*, 402 at special schools and classes and 9,232 at secondary and elementary schools) and of these pupils 8,959 were returned as Europeans and 675 as non-Europeans. The last mentioned total (which is made up of 46 pupils in special schools and classes and 629 pupils in secondary and elementary schools) includes 425 boys and 250 girls who were returned as Indian Christians 78, Brahmins 83, Non-Brahmins 83, Musalmans 64, Buddhists 30, Parsis 123, and others 214 The expenditure for the year was returned as Rs. 27,49,996, *viz.*, Rs 8,32,150 from Provincial revenues including Imperial grants, Rs 19,235 from municipal grants, Rs 10,55,427 from fees, Rs. 1,22,323 from endowments and Rs 7,20,861 from subscriptions, donations and other sources. There are two general endowments, *viz*, the Bruce Institution—a fund left by the Misses Bruce,

the daughters of an indigo planter, for the education and maintenance of Anglo-Indian girls, and the Doveton Trust, formed from the sale of the property of the Doveton College, the annual income of which amounts to about Rs. 5,500 and is spent on scholarships The capital of the Bruce Institution is about 10½ *lakhs* and its annual income amounts to about Rs 37,000.[1]

III —The Code, the grading of schools, and the curriculum.

9. The earliest schools for Europeans in India were day schools founded in connexion with station churches in the plains Gradually these schools grew into, or were followed by, boarding schools and orphanages such as the Free School in Calcutta In 1836 La Martinière was founded in Calcutta as the result of a legacy left nearly 40 years before by Claud Martin of Lucknow In 1823 the Parental Academic Institution was founded in Calcutta by voluntary contributions and in 1853, on the receipt of a legacy of 2½ lakhs from Captain Doveton, it became the Doveton College.[2]

In 1847 the system of hill schools was inaugurated by Sir Henry Lawrence who established the Lawrence Military Asylum at Sanawar in order to remove children from "the debilitating influence of a tropical climate and the demoralising effects of barrak life" Some of these schools received State aid, but no regular system prevailed and the institutions were altogether inadequate for the needs of the community. On the 28th July 1859, the day appointed for general thanksgiving on the suppression of the Mutiny, a collection was made in the churches of the then Diocese of Calcutta for the establishment of a public school in the Himalayas During the course of the next year Bishop Cotton presented a memorial to the Viceroy, pressing on him the need for a more complete system of education for European children Lord Canning dealt with the question in a celebrated minute in which he pointed out how the domiciled English and Eurasians would, if neglected, become profitless, unmanageable, and a glaring reproach to Government, while, if cared for betimes, they might become a source of strength to British rule, and of usefulness to India He considered that schools should be founded for the different denominations, both in the hills and in the plains, by the help of donations, aided by equivalent contributions from Government The main result of this movement was the establishment of several hill schools The foundation-stone of Bishop Cotton School, Simla, was laid in September 1866 In 1865 St Paul's School was removed from Calcutta to the property in Darjeeling, purchased from Brian Hodgson, on which the school now stands.

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[1] Chapter IX, paragraphs 531—536, 550, 559, 590. Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review—Calcutta, 1918

[2] This institution flourished for many years, but later its authorities (by its constitution the parent of any boy or girl in the institution or any contributor of a small amount by way of annual subscription had a voice on the governing body) quarelled among themselves and generally mismanaged the college. After many years during which the institution had been almost completely despoiled and quite ruined as a college, the remnants of the property were sold by virtue of an Act of the Bengal Legislature, and the capital thus realised is held in trust by Government or the education of Europeans and Anglo-Indians.

Church of England schools were also founded at Mussoorie and Naini Tal Other Church of England schools were established in the plains ; the Roman Catholics extended their work and the Church of Scotland came into the field These extensions were, however, incommensurate with the large and growing requirements Especially did they fail to meet the needs of the poorer Europeans and Anglo-Indians In 1871 a commission was appointed to inquire into the condition of European schools. It reported that the system was inadequate and that the objects proposed in Lord Canning's minute of 1861 had been largely overlooked While this report was under discussion, Archdeacon Baly of Calcutta, after a tour extending through Bengal and Northern and Central India, represented to Government that the existing arrangements were in many respects unsuitable, and that many poor European and Eursian children were left altogether without education There was little immediate result, but in 1879 Lord Lytton took up the whole question and wrote the second well-known minute on the subject He referred to Lord Canning's minute and stated that it was little creditable that, in spite of his warnings, so little should have been done in twenty years to remove the reproach A committee was appointed of which Archdeacon Baly was a prominent member, and its labours ultimately resulted in the appointment of another committee which drew up the Bengal code for European schools Under this code which was published under the orders of the Government of India in 1883, the whole range of the education of the Domiciled Community was taken under the control of the Government and institutions of all classes were made eligible for the receipt of State aid in accordance with defined conditions and principles From that time onward the number of schools and pupils steadily increased The code was not applied to Madras and Bombay, where more adequate arrangements for the education of Europeans and Anglo-Indians were already in force, but the local Governments of those presidencies made modifications in their grant-in-aid rules which tended in the direction of the provisions of the Bengal code In Burma also the general grant-in-aid code of the local Government continued to govern, with modifications, the grant of aid to European schools The principal provinces of British India, into which the Bengal code was introduced were Bengal, the United Provinces, the Punjab and the Central Provinces

10 The Bengal code was based on English and Scottish models, altered and extended to meet the special requirements of the Domiciled Community in India Its main object was the encouragement of all classes of privately managed schools by means of grants-in-aid based on the attendance and proficiency of pupils, in other words, on a results grant-system. At the same time arrangements were made for special grants to schools established at places in which the European population was small or poor, to free schools and orphanages in aid of their boarding charges, and for the boarding at suitable schools of children resident in places where there were no schools. A general curriculum was laid down ; this curriculum comprised three grades or standards, primary, middle or high. Schools were classified as primary middle or high, according as they were recognised as capable of teaching the

whole or certain portions only of the course Public examinations were held at the close of the primary, middle and high stages, and the grants, which could be earned by pupils in the high stage of instruction, were proportionately higher than those which could be paid on behalf of pupils in the middle and primary stages respectively. A system of certificated and pupil teachers was also adopted. Pupil teachers continued, until the uniform code was issued (see paragraph 16 below).

11. The Bengal code was modified from time to time and in the year 1895 it underwent a thorough revision at the hands of a committee. The most important change made by this committee was the abolition of the results grant system, in favour of an attendance grant awarded to every school declared efficient by the Inspector At the same time liberal provision was made for the industrial training of poor children.

12 In 1901 Lord Curzon summoned all the Directors of Public Instruction to Simla to confer with him on the whole field of education in India. In the matter of the education of the Domiciled Community this conference observed that there were no special rules for the education of Europeans in Madras, Bombay and Burma, and it recommended that this defect should be remedied by the publication of special and uniform rules, which should be applicable throughout India. The conference suggested that the Bengal code might be taken as the basis for discussion, but suggested that it should not be prescribed as a uniform code until it had been revised by a committee " of experts in the education of Europeans, representing different provinces." In March 1902 the work of revising the Bengal code with a view to the production of a uniform European schools code for India and Burma was entrusted to a committee consisting of all the Inspectors of European Schools in India and the then Director of Public Instruction in Burma (Mr. J. Van Sommeren Pope), who acted as president

13. This committee put forward a series of proposals; as regards the course of studies, the draft code, as it was prepared by the committee, laid down a list of subjects which were to be either compulsory or optional in the primary and middle standards, and described, either by means of a syllabus or by prescribing text books, the progress to be made in each of the seven standards which were included in the range of the primary and middle curriculum. For instruction above the middle standard the schools were directed to prepare for the high school examination or for such other examinations as had been recognised by the local Government for that purpose. The compulsory subjects in the primary and middle standards were English, mathematics, geography, history, object lessons, drill and for girls, needlework Kindergarten was also prescribed for the primary standards The optional subjects were Latin, French, German, vernacular, physics, physiology, drawing, singing by note and manual instruction. The regulations for the high school examination required that candidates should take English and arithmetic as compulsory subjects. They were given a list of eighteen optional subjects from which they might choose not more than seven, subject to the condition that

boys had to take Euclid, algebra and a second language, and that girls had to take domestic economy.

14. The Government of India gave only provisional approval to that part of the draft code which dealt with the course of studies and they decided to ask local Governments to consider more in detail, what curricula would be appropriate for different grades of schools. The defect of the course of studies suggested in the draft code was, as it seemed to the Government of India, that it contained insufficient guidance to the managers of schools in constructing complete courses of study for high schools, that it left individual pupils free to offer chance combinations of subjects from a wide list and that it made no allowance for the difference in the course of studies proper to be pursued by those pupils who are to leave school at 15, and those who are to continue till 18 or 19

15. In 1903 the Government of India appointed a committee to inquire into the financial conditions of the hill schools for Europeans in Northern India. The repeated applications for extraordinary assistance from those schools, the closure of an important school at Mussoorie which had been maintained from the endowment raised by Bishop Cotton after the Mutiny, the total disappearance of the endowment of another of the schools included in Bishop Cotton's scheme, and the alarming growth of debt at the others, showed that these hill schools were approaching a financial crisis and that those which depended upon the employment of salaried masters were in danger of annihilation. It would be beyond my present purpose to describe the financial findings of this committee. The point which is relevant to my narrative is that, though the committee was not directly concerned with the general system of European education, it found it impossible to avoid taking into consideration the question of the curriculum of the hill schools—for the cost of a school must depend largely on the subjects which it is called upon to teach. The committee therefore sketched what should be in its opinion the ordinary curriculum for a hill school for European boys and added a few comments on the system which the Bengal code had enjoined and the draft uniform code proposed to continue, pointing out that the effect of such a system was that an undesirable multiplicity of subjects was attempted, and that there was a tendency for subjects to find their way into the curriculum, not so much on educational considerations, as because they scored marks easily in examinations.

16 In 1905 the Government of India forwarded to the Government of Bengal a revised uniform code for adoption , they added however, that they were not satisfied with the curriculum as outlined in the code and asked that it might be examined with a view to the consolidation of the courses in the various grades of schools in the light of the views expressed on the subject by the Hill Schools Committee The matter was referred to the then Inspector of European Schools who proposed that the European schools of the province of Bengal, as it was constituted when the matter came before him—the partition of Bengal was not promulgated until the 16th October 1905—should be divided into three grades—secondary literary, secondary commercial, and

elementary—and outlined a curriculum for each grade The proposals of the Inspector were laid before a conference of persons connected with, or interested in the education of the Domiciled Community, which met in Calcutta early in 1906. This conference was not prepared to accept the proposals of the Inspector, but it recommended that European Schools should be classified in two grades and suggested a course of studies for each grade

17. A considerable controversy followed and as a result of yet another committee which sat in 1910, the elementary school in Bengal now offers a complete course—that is, it contains an infant stage and six standards, intended to cover nine years up to the age of fourteen The fourth standard corresponds with the preparatory stage in a secondary school, this permits transition to the latter at the age of twelve ; transition is also possible (though less convenient) from the fifth and sixth standards Thus from the age of twelve to that of fourteen a pupil has two alternatives—he may transfer himself to a secondary school, or he may remain in the elementary school, undergo a complete course and obtain a certificate Furthermore, if he then desires to continue his studies on strictly practical lines, he can proceed to a higher elementary school These institutions were designed to provide higher general and supplementary courses—commercial, industrial and agricultural, and to carry a pupil on to something like his seventeenth year These supplementary courses consist of two parts *first*, general subjects, comprising English literature and composition, arithmetic (with special attention to application and practice in expertness of calculation), the keeping of ordinary accounts and drawing, *second*, one or other of four specific courses As regards the specific courses the commercial course was designed to include (*a*) book-keeping (including the purpose and proper form of commercial documents), (*b*) handwriting, (*c*) shorthand, (*d*) typewriting, (*e*) commercial geography ; the industrial course—(*a*) geometry, (*b*) algebra, (*c*) mensuration, (*d*) mechanics, (*e*) wood-work and iron work , the agricultural course—(*a*) mensuration (with regard to land measurement and surveying), (*b*) elementary agricultural botany, chemistry and geology, (*c*) study of newspaper reports, (*d*) repair of agricultural instruments , domestic economy—(*a*) cookery and general house management, (*b*) dress making, embroidery and lace making, (*c*) sick nursing and dispensing The last two years course of the apprentice department of the Sibpur College was recognised as alternative to the industrial course.

18 At the same time the European secondary schools of Bengal were reclassified Each complete secondary school is now divided into three sections (*a*) the preparatory school, (*b*) the general school, and (*c*) the upper school. All secondary schools teach the same curriculum up to the stage which is attained at about 16 and after that considerable latitude is allowed. As regards the preparatory school the curriculum of the infant section is the same as in the elementary school. In the classes of the preparatory school above the infant section the subjects taught are—arithmetic, English, history, elementary, nature study leading to geography, drawing, a modern European language or an Indian vernacular, practical geometry, and music (class

singing) The curriculum of the general school comprises—English, Latin (optional for girls' schools), a modern European language or an Indian vernacular, mathematics, history, geography, science, any two of the following —elementary botany, elementary physics, elementary chemistry or elementary physiology (including hygiene), drawing, music (class singing), manual instruction (including in the case of girls needlework and the elements of housewifery) All elementary schools for boys are required as a condition of recognition, to provide efficient instruction in an Indian vernacular in the highest class of the preparatory section, and in all the classes of the preparatory, in the general and upper sections of secondary schools the subject is obligatory, though, in the case of boys who are proceeding to England for further education a modern European language may, with the permission of the Inspector, be substituted for an Indian vernacular in the four highest classes Instruction in an Indian vernacular is not compulsory in the case of girls studying in European secondary schools, but the code states that the provision of such instruction is to be regarded as desirable Schools which include the upper school section are recognised as higher secondary, those which do not go beyond the general school section are classed as secondary The Cambridge senior school certificate examination is the prescribed school final examination for the former, the Cambridge junior school certificate examination is the prescribed school final examination for the latter

19 Thus schools for European and Anglo-Indian pupils in Bengal are now graded into four classes—elementary, higher elementary, secondary and higher secondary I stated in the recently published Quinquennial Review of Education in Bengal that the vocational courses available at the end of the elementary school are not popular either with parents or with employers I attempted in the following passage which deals with the present grading of secondary schools to sum up the general view of the Bengal Education Department.—

"It has been repeatedly represented by all the school authorities and by those interested in European education that this grading of schools is unsatisfactory A pseudo-secondary education has less value than a sound elementary education augmented by some vocational training and it is proposed therefore to omit the 'secondary' grade school and to recognise only elementary and higher elementary schools and schools which are secondary in the generally accepted sense of the term It should be possible to concentrate real secondary education in a few secondary schools by adopting a transfer system under which pupils of exceptional ability will be transferred at a suitable age. It is not desirable to impose too rigid a curriculum on secondary schools, it will be sufficient to lay down certain principles to which these schools must ordinarily conform. The community concerned is but a small one and with existing machinery and a liberal provision of scholarships there is no reason why any child of merit, no matter what his social position may be, should be overlooked It is granted that there may be well marked social groups, which will have to be separately catered for, but this should be effected by individual schools rather than by the system of grading."[1]

[1] Chapter IX, paragraph 574, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review—Calcutta, 1918

20 Turning to the figures, the two tables which are given below show the number of schools in each grade and the number of boys and girls on their rolls on the 31st March 1917[1]—

Grade of school	Boys' schools. Number of schools	Boys' schools. Number of boys and girls	Total number of pupils
1. Higher secondary (2 unaided . . . ; 4 aided . . .)	6	1,776 boys	1,776
2. Secondary . . (1 Government . . ; 2 aided . .)	3	504 boys; 4 girls	508
3. Higher elementary . 6 aided . . .	6	1,153 boys; 273 girls	1,426
4 Elementary . . 9 aided . . .	9	520 boys; 152 girls	672

Grade of school	Girls' schools. Number of schools	Girls' schools. Number of boys and girls	Total number of pupils
1 Higher secondary . 8 aided . .	8	1,325 girls; 267 boys	1,592
2 Secondary . . (1 Government . . ; 3 aided . .)	4	402 girls; 122 boys	524
3. Higher elementary . (1 unaided . . ; 10 aided . .)	11	1,375 girls; 308 boys	1,683
4. Elementary . . 12 aided . .	12	680 girls; 476 boys	1,056

[1] In the official statistics grades of schools have to be shown in terms of secondary and primary, this division being subdivided into high, middle, and primary schools All secondary and higher secondary schools are classed as high schools, middle schools comprise all higher elementary schools and elementary schools having all the classes or standards I to V. All elementary schools having no class or standard above class IV are classed as primary schools.

21. A table is added which shows the various grades of instruction in which the pupils of the European schools were on the 31st March 1907 .—

Grades of instruction	Boys	Girls	Total.
Supplementary courses in higher elementary schools	45	49	94
Elementary classes of elementary and higher elementary schools, *viz*, the infant section and standards I to VI	2,334	2,429	4,763
The preparatory section of secondary and higher secondary schools	1,537	1,095	2,632
The general section of secondary and higher secondary schools	989	599	1,588
The upper section of higher secondary schools	161	88	249
Total	5,066	4,260	9,326*

* The pupils in special schools (*viz*, 308) are not included in the total 9,326

22 On the 22nd July 1912 there was held in Simla an important conference on the education of the Domiciled Community in India. This conference was preceded by the meeting in Calcutta of a special committee of non-officials interested in the subject The Calcutta committee passed a series of resolutions which were laid before the conference, one of them being .—

"That all recognised European schools should be graded as follows —

(*a*) preparatory schools which should consist of a kindergarten department and the additional classes necessary to carry on the pupils up to the age of nine, but which should also have one or more of the first three classes of a secondary school, when in the opinion of the Education Department local conditions make this desirable,

(*b*) secondary schools, intended to provide a complete course of general education extending to about the age of 18 in the two highest classes of which specialisation should be permitted with a view to the preparation of pupils for commercial careers,

(*c*) collegiate schools, strictly limited in number, intended to provide an education of wider scope, in the two highest classes of which specialisation should be permitted with a view to the preparation of pupils for professional and other careers."

As a corollary to this the committee also resolved :—

"That there should be a sufficient number of tuition and maintenance scholarships to meet the case of necessitous pupils in preparatory and secondary schools"[1]

23. Mr. Arden Wood, Principal, La Martinière College, Calcutta, was a member of the Simla conference as also of the Calcutta committee and he

[1] Appendix I, page 45 Report of the Conference on the education of the Domiciled Community in India—Calcutta 1912.

laid before the meeting at Simla certain notes in which he discussed among other things the question of the grading of schools and their curricula. These notes are published as Appendix 4 to the conference's report and the following is an extract from them :—

The special circumstances of the Domiciled Community have an important bearing upon the general character of the education to be given in European schools. The most important consideration in this connexion is that there is no employment for boys and girls who leave school at the age of 13 or 14 when elementary education properly so called may be considered to terminate. Most of the openings for boys (and the same is largely true of girls) are for boys of 17 or 18 and upwards It seems clear, therefore, that no scheme of 'European' education can be satisfactory which is not framed on the assumption that school education will extend to the age of 17 or 18 and upwards Such education will be secondary, not elementary, and the question which has to be considered is what kind, or kinds, of secondary education should be provided ? It will be admitted that secondary education of a high type should be open to all boys and girls, irrespective of their pecuniary circumstances, whose natural abilities enable them to take full advantage of it, and that it should be also available for boys and girls whose parents are able and willing to pay fees proportionate to the cost of such education The cost of providing secondary education of this type, in schools that employ a highly qualified salaried staff, will be Rs 350 to Rs 400 per pupil per annum for boys, and ordinarily, but not invariably, a somewhat smaller amount for girls This estimate is based on the assumption that the schools will be large enough to be maintained with the maximum of economy—schools with 300 pupils and upwards Obviously it is impossible to provide schools of this costly character for the whole of the children of the Domiciled Community The cost would be prohibitive, moreover the children who could derive the full benefit of such an education, and for whom it is therefore worth while to provide it, are only a fraction of the whole number to be educated It is therefore also necessary to provide a form of education which will be of a less costly and ambitious character, though equally efficient within the limits it proposes for itself, an education costing from Rs 150 to Rs. 200 per pupil per annum in schools large enough to be maintained with the maximum of efficiency and economy "

24 Mr. Arden Wood suggested two types of secondary schools— a higher secondary school and a lower secondary school. He imagined that children would join this school at about the age of 9 and stay until the age of 18 and he consequently provided a course extending over ten classes of which the first class would be the lowest and the tenth the highest. His curriculum for a boy's higher secondary school included as subjects which were to be studied in all the classes—religious knowledge, English, hand-writing and drawing, mathematics (this was to be confined to arithmetic in Classes I, II and III), geography, history and handicraft Singing was to be taught throughout the school as also physical training but in the six highest classes this work was to be done out of school hours Urdu or some other recognised vernacular was to be taught from Class IV onwards, Latin and science were to be studied from Class V onwards—the practical science work was to be done out of school hours and the science work was to be preceded in the four lowest classes by observation lessons and nature study The curriculum suggested for a higher secondary school for girls differed only from that for a school for boys in that a vernacular language was not included, French and Latin were made alternatives, and the subject 'handicraft' was made to include 'housecraft.' In designing the Lower Secondary School course Mr Arden Wood supposed that the pupil would leave at the age of 17, the course therefore was extended over nine classes instead of ten. Latin and French were omitted altogether

both for boys and for girls, and for girls as as well as boys the study of a vernacular was made compulsory. In other respects the subjects suggested for inclusion in the lower secondary schools curriculum were the same as those suggested for the higher secondary schools.[1]

25 I pause here for a moment to refer to the controversy which has centred round the question as to the language, other than English, which should be taught in secondary schools for Europeans I have already shown how under the original Bengal Code the curriculum of the middle and high sections was nothing more than the primary section course extended, certain subjects being added I have also pointed out how, in the matter of additional subjects, a wide choice was allowed and that the tendency was for subjects to be taken for examination not so much because of their educational value as because they were considered to be good subjects for mark-getting Under this system Latin and French were neglected and the vernacular was completely ignored. When they circulated the draft uniform code[2] the Government of India emphasised the importance of an adequate study of the vernacular, the Hill Schools Committee[3] took the same view with regard to the vernacular; but it also emphasised the importance of Latin It must be remembered that this committee was dealing with the curriculum for the most advanced type of secondary school, and that it was largely influenced by the view that there was a strong tradition behind the teaching of Latin in English secondary schools and universities The committee thought therefore that it would be comparatively easy to obtain effective teachers of this subject. The teaching of modern languages in English secondary schools had not, when the committee wrote, (1903), attained the stage of development which it has since reached It is now generally felt that it is a mistake to insist upon Latin for those boys and girls of the Domiciled Community, who do not attempt the more literary form of secondary education. The bad teaching of this subject in many of the secondary schools has strengthened this view. Moreover there has been, and still is, a considerable feeling against making this subject obligatory for girls, this feeling being strongest in the convents. Under article 319 of the revised code of regulations for European schools, Bengal, 1910, an Indian vernacular has to be taught in all secondary schools for boys, though it is optional in schools for girls. A vernacular (generally Urdu) is now taught in all secondary boys' schools, but the prejudice against it is even in boys' schools, still strong, while in girls' schools it is still practically ignored altogether The authorities complain, apparently not without reason, that the *munshis* and *pundits*, who are as a rule the only available teachers are able neither to teach the subject scientifically nor to maintain discipline in the classes I quite realise the difficulty, but the desirability of boys and girls who are going to live and work in India having a real knowledge of the vernacular which they are most likely to be called upon to use is incontestable

[1] Appendix 4, pp 54—65, Report of the Conference on the Education of the Domiciled Community in India—Calcutta 1912

[2] See paragraph 16, *supra*

[3] See paragraph 15, *supra*.

Moreover, I feel that if the vernacular were properly taught, it might be made a very valuable medium of linguistic training. I therefore hold it to be very desirable that the ordinary members of the staffs of the schools should make a scientific study of a vernacular—and in this connexion I may perhaps suggest that any man or woman who is being recruited in England for educational work in India—including work in European schools—would be well advised to take a preliminary course in the vernacular required in the new School of Oriental Studies in London. On the general question of the inclusion or otherwise of Latin or French in the curriculum, I am inclined to agree with the attitude adopted by Mr Arden Wood and not to press for the teaching of either of these languages for those boys and girls of the Domiciled Community who are not going to attempt the more literary form of secondary education. I should desire to see each secondary school given as much freedom as possible in framing its courses to the satisfaction of the Education Department, subject to the control of certain general pedagogic principles which should be defined. But here I desire to enter a *caveat* I feel that a pupil who goes through a secondary course, however practical that course may be, will not get that mental training which that course should give him, unless a sufficient amount of linguistic training is involved Training in language is after all largely training in thought Practical scientific and other education may give a knowledge of facts and a capacity to use hands and eyes, but without that training in thought which language study alone can give, I am doubtful whether the ordinary student can make use of the facts which his practical training has placed in his possession. I believe that there are many pupils in secondary schools in England who can get all the linguistic training which they require by a proper study of English and, say, French or German ; but the question whether European pupils in secondary schools in India can get the linguistic training which they require through a study of English and a vernacular seems to me to depend very largely on the extent to which the study of a vernacular can be carried out on scientific lines There is a real difference between elementary and secondary education and it seems to me essential that in dealing with the problem of the education of the Domiciled Community in India this distinction should not be blurred.

26 With Mr Arden Wood's notes and the resolution of the Calcutta committee before it, the Simla conference recommended—

(*i*) that the great majority of high schools for boys in India should adopt a more definitely modern and practical curriculum, such as is referred to in the resolutions of the Calcutta committee as 'secondary.'

(*ii*) that besides these schools a few schools are required with a curriculum leading to the universities and liberal professions, to be called 'collegiate schools' but to be schools not colleges ;

(*iii*) that Government should be invited to determine in consultation with the managers of schools, what existing schools should be 'collegiate schools' or whether new schools should be founded.

The conference also resolved that concentration of schools is desirable, where *possible*.[1]

27. The resolutions of the conference have been discussed by local Governments but the European school system has not as yet been seriously modified in any Presidency or province. The great difficulty in the way of concentration lies in the denominational nature of the school system. In a paper on the educational policy of the Roman Catholic Church which was contributed to the Simla conference by the Rev. Father T. Vander Schueren, S J, (subsequently printed as appendix II to the report), the author stated that "Catholic schools with Catholic teachers and under Catholic management are the only ones which are acceptable to Catholic parents for the education of their children," and emphasised "the necessity from the Catholic point of view that the management of the staff and indeed the whole atmosphere of the boarding school should be Catholic."[2] Other denominations, and especially the Church of England, are naturally anxious that they should retain the children who belong to them in their own schools and they regard with considerable disfavour any suggestion which would tend to remove their most promising scholars from the sphere of their influence This feeling is not lessened by the fact that, while practically all Roman Catholic children attend Roman Catholic schools—the exceptions would be a handful of children at the Government schools at Kurseong and a few children at the railway day schools on the plains—these schools are also educating a considerable number of children belonging to other denominations The table below which is to be found in the recent quinquennial review of education in Bengal shows the distribution of European schools and pupils according to management.[3]—

Institutions	No of institutions.	No. of pupils.	Percentage of total number of pupils in secondary primary and special schools
Government	5	302	3 13
Jewish	1	131	1 36
Non-Conformist	4	581	6 03
Church of Scotland	2	490	5 09
Roman Catholic	38	5,360	55 64
Church of England	14	1,645	17 07
Undenominational (including Y. W. C A.)	15	1,125	11 68
TOTAL	79	9,634	100 00

[1] Pp. 3—10, 26, 41, 42, Report of the Conference on the Education of the Domiciled Community in India—Calcutta 1912.

[2] Appendix II, pp. 96—99, Report of the Conference on the Education of the Domiciled Community in India—Calcutta 1912

[3] Chapter IX, paragraph 539, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review—Calcutta 1918.

28. The system of schools was intended to be a denominational one and I think that it would be a fatal mistake to seek to modify the denominational policy. I recognise, however, that the Government schools at Kurseong are meeting a distinct need, which the various churches could not wholly satisfy. On the question of concentration, though I recognise the denominational difficulty, I cannot help noticing that there were on the 31st March 1917 only 249 boys and girls in the upper sections of the 14 higher secondary schools of Bengal (an average of about 17 pupils in each school and about 4 pupils in each class) and I therefore cannot refrain from emphasising the impossibility of organising the education of the Domiciled Community on a parochial basis and the extreme desirability of organisation at least within each denomination. All the codes recognise that no school which is considered by the department to be unnecessary is entitled to a grant-in-aid and I imagine that this limitation would apply equally to an unnecessary grade or section. I also feel that the education of European and Anglo-Indian children—especially their secondary education in boarding schools—is not a local or even a provincial—problem there are children in the European schools of Darjeeling and Kurseong from all parts of India and Burma—and it seems to me to be reasonable that before grants are made by a local Government to any such school, that that Government should satisfy itself that the needs which the school is proposing to meet could not be met by the schools of other provinces.

29. All the codes of regulations for European schools insist upon a conscience clause but the conscience clause applies to day scholars only. The 9,232 pupils in secondary and primary schools for Europeans on the 31st March 1917 were distributed locally as follows —Calcutta and Howrah 6,159 ; Darjeeling, Kurseong and Kalimpong, 1,955 ; Asansol 329 ; Dacca 174 ; Chittagong 176 ; along the Eastern Bengal Railway line 75 ; along the East Indian Railway line 187 and along the Bengal Nagpur Railway line 177 [1] Of these 9,232 children in secondary and elementary schools (excluding those who were doing supplementary courses in classes attached to higher elementary schools) 4,405 were boarders and 4,827 were day scholars. The question, whether children who do not belong to the same denomination as that of the school at which they are boarders should attend the religious instruction or the religious observances of the school is, in the absence of any special agreement with Government on this point, a matter which is left entirely to the discretion of the school authorities Government has occasionally made the application of a conscience clause to all its pupils one of the conditions of granting extraordinary aid to a boarding school

IV.—Examinations.

30. Before the Bengal Code was issued such secondary schools for Europeans, as then existed, prepared their pupils for the Calcutta University matriculation examination, and it is noteworthy that during that period the

[1] Chapter IX, paragraph 538, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review—Calcutta 1918

ablest young men of the Domiciled Community used to take up university courses. The Bengal Code, as had been already stated, introduced three public examinations during the school course—the primary, middle and high school examinations, held respectively at the end of the primary, middle and high stages of instruction One of the points on which Lord Curzon's Simla conference of 1901 laid stress was the desirability of reducing the number of public examinations As a result of this the Government of Bengal in 1905 issued revised rules for the examinations of European schools which retained the primary and middle examinations merely for the purpose of awarding scholarships, except that certificates might be issued on the results of the middle examination to those who were taking the examination as a school leaving test

31 In 1900 a public meeting was held in Calcutta under the presidency of Bishop Weldon, who was then Metropolitan of India, and at this meeting a resolution was passed in favour of the adoption of the Cambridge University local examinations as public tests for the European schools of Bengal. The resolution passed at this meeting was forwarded to the Government of India through the Anglo-Indian Association, and upon its receipt that Government made inquiries with the object of ascertaining the relative standards of difficulty of the Cambridge senior local examination and the departmental high school examination. The replies received from the local Governments disclosed such a fundamental divergence of opinion that the matter was referred to the Directors of Public Instruction when they were assembled at the Simla conference of 1901 As the result of this reference the Government of India recommended that local Governments should encourage the Cambridge senior local examination, whenever there was any demand for it, and that the universities should be invited to recognise the examination

32. The Cambridge senior local examination was subsequently recognised by the Government of Bengal as equivalent to the high school or matriculation examination The revised rules for examinations in European schools which were issued by the Government of Bengal in 1905 provided that the Cambridge senior local examination might be taken in place of the high school examination, but it was at the same time expressly stated that this permission did not entitle a school to send up candidates for the Cambridge junior local examination It was stated in the review of education in Bengal for the quinquennium which closed on the 31st March 1907 that " many of the best schools in the province " had then " definitely abandoned the high school examination in favour of the Cambridge senior local examination."[1]

33 I have already explained how the whole curriculum of European schools was then under scrutiny and I have referred above (see paragraph 16) to the conference which met in Calcutta at the beginning of 1906. This conference dealt with the question of curriculum—the two are of course intimately linked — and recommended, as regards secondary schools, the adoption of the Cambridge University senior certificate examination as the

[1] Chapter IX, paragraph 634, Progress of Education in Bengal, 1902-03—1906-07, Third Quinquennial Review by W. W. Hornell—Calcutta 1907.

school final examination This examination was evolved by the Cambridge University local examinations syndicate in accordance with the principles on which the regulations of the Board of Education for England and Wales for secondary schools had been based. The examination was in fact the Cambridge senior local examination, taken under certain specific conditions as to the subjects which had to be or might be offered, and no institution could send up candidates for it, unless it were recognised by the Cambridge authorities as a secondary school. For the purpose of recognition the Cambridge authorities agreed to accept the recommendations of the Bengal Education Department. The conference recommended that the presentation of candidates at the Cambridge junior certificate examination was not to be regarded as in any way incumbent on a secondary school, but that it should be allowed, if for any special reasons it were found to be desirable.

34. These proposals elicited the following comments in Third Quinquennial Review of Education in Bengal —

" The decisions of the conference were undoubtedly wise, and the abolition of the code examinations will certainly not be a matter for regret. In the first place the examinations in themselves are not above criticism The middle examination with its two compulsory subjects and the long list of optionals is not a proper test for the work of elementary schools, nor can the high school examination under its present conditions be regarded as a satisfactory coping stone of an adequate secondary school curriculum Further, school authorities generally have no confidence in these examinations nor can this distrust be ascribed altogether to the recent failures, for some of the best schools abandoned the code examinations long before these results were recorded. In the face of this want of confidence it would be idle for the department to persist in conducting examinations which nobody wants and for which it is by no means easy to arrange, for the number of persons unconnected with the schools presenting candidates and yet capale of examining them is extremely small The University of Cambridge has an elaborate machinery for examining schools, it can command the services of highly competent examiners and its certificates are recognised throughout the British Empire It has not of course any knowledge of the particular local needs of European schools in India This is no doubt a disadvantage but it is probably one which is more than compensated by the advantage of relieving the provincial Educational Department of the task of examining secondary schools for Europeans The teaching in, and not the examining of, schools is the primary concern of the department "[1]

In the resolution which it issued on the quinquennial review the Government of Bengal referred to the code examinations and said that if as the Director of Public Instruction suggested, these were examinations which no one wanted and for which it was by no means easy to arrange, their abolition which had been decided upon would appear to have been a wise step [2]

35. The revised code of regulations for European schools in Bengal, 1910, contains in its articles 95—100 the standing orders for examinations in secondary schools. The upshot of these orders is —

(*a*) that the examinations recognised by the Education Department for the purpose of testing the pupils of recognised secondary schools

[1] Chapter IX, paragraph 990, page 640, Progress of Education in Bengal, 1902-03—1906-07, Third Quinquennial Review by W W. Hornell—Calcutta 1907.

[2] Government of Bengal, General Department, Education Resolution No 1317, dated the 22nd February 1908, paragraph 36, attached to Third Quinquennial Review of Education

at the end of their school career are the Cambridge University local examinations for the award of junior and senior school certificates. These examinations are the school final examinations for pupils leaving school at the end of the secondary and higher secondary stages respectively but a pupil may present himself for examination for the junior school certificate even though he proposes to pass on to the classes of the upper school.

(*b*) that the Education Department will arrange vernacular tests for all recognised secondary schools for boys and for such girls as may be presented for examination in the subject; that these examinations will be of two standards—lower and higher—and they will be held at the same time as the junior and senior school certificate examinations; that all scholars of recognised secondary schools for boys except those who have obtained special exemption under the provisions of the code (see paragraph 18 above) are required to present themselves for examination in the vernacular

(*c*) that the subjects for the junior and senior school certificate examinations in which schools may present candidates require the sanction of the Education Department and that this sanction should issue not less than one year before the date of the respective examinations.

The rules also provide that the Education Department shall make arrangements for the examination of and award of certificates to pupils in the upper sections of secondary schools who are allowed in accordance with the provisions of the code to specialise in commercial and technical subjects and who in consequence do not take the Cambridge University senior school certificate examination I believe that no school has ever yet taken advantage of this provision.

36. The Simla conference of 1912 on the education of the Domiciled Community was of opinion that two kinds of Government certificates should be awarded to the pupils of secondary schools —first school certificates and leaving certificates. It recommended that the first school certificate should be awarded to those pupils whose school records showed; (*a*) that they had been in regular attendance at a secondary school for at least three years, (*b*) that they had completed an approved course of general education as set forth in their school record, (*c*) that they had passed the recognised external examination in the subjects prescribed by the Education Department. The leaving certificate should, it was suggested, be awarded to those pupils whose school records could show (*a*) that they had been in regular attendance at a secondary school for two years after obtaining the first school certificate, (*b*) that they had completed an approved further course of education as set forth in their school record; (*c*) that they had passed the recognised external examination in the subjects prescribed by the Education Department. The conference advised that for the present the Cambridge junior school certificate examination or the Cambridge junior local examination should be the recognised external examination for the first school certificate and that the Cambridge

University senior school certificate examination of the Cambridge University higher local examination or the Cambridge senior local examination should be the recognised external authority for the leaving certificate. The conference also recorded the view that pupils in European secondary schools should be submitted to no external examinations other than those suggested and that no school should without special permission send up candidates both for the Cambridge school certificates examination and for the Cambridge local examinations. It also urged that Government should take action to secure (*i*) that the leaving certificate of the grades of high and collegiate schools, the creation of which it advocated (see paragraph 26 above) should be accepted as a preliminary educational qualification for admission to service in specified grades in the departments of Government; and (*ii*) that the leaving certificates of collegiate schools should confer exemption from such preliminary examination of professional and other bodies as it might be found possible to arrange [1]

37. The Government of India are now considering whether the whole system of Cambridge local examinations should not be abolished from India. The school authorities throughout Bengal are strongly in favour of retaining the system and any scheme which contemplates its abolition will arouse a storm of criticism. A departmental system of examinations was tried for many years and was found wanting, its main defects were constant changes in personnel and policy and a consequent lack of continuity, a dearth of experienced examiners and a variation of standard and a general lack of unanimity and uniformity The admitted defect of the absence of local knowledge on the part of the Cambridge syndicate may be exaggerated and it must be remembered that it would always be possible for the Bengal Education Department to submit an examination syllabus in any particular subject for the approval of the Cambridge authorities The development of educational practice in England is continually affecting the curricula of the Cambridge school examinations and the syllabuses of the examinations tend to keep the work in European schools in India progressive and up-to-date For students proceeding to England for further education the Cambridge certificates are particularly valuable, whereas Indian departmental or university examinations receive no adequate recognition The Cambridge examinations are typical of English school education and are held all over the Empire; this Imperial aspect undoubtedly has weight—and rightly so—with the Domiciled Community.

38. The Cambridge Local Examinations Syndicate has recently modified its system in accordance with the views set forth in the report on examinations published in December 1911 by the consultative committee of the Board of Education, Whitehall. According to the new scheme there will be an examination, which will follow on a general school course and should be taken about the age of sixteen, and two years later an examination of a much more special-

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[1] Report of the Conference on the Education of the Domiciled Community in India—Simla July 912, Section IV. Resolution of the Conference—No. VIII, pp. 42-43.

sed nature. The first examination will be called the Senior Cambridge Certificate A, the second, the Cambridge Higher School Certificate. It should not be difficult to adapt the work of European secondary schools system of Bengal to the new Cambridge scheme.

V.—University education.

39. There are certain institutions which are affiliated to the Calcutta University which occasionally prepare European and Anglo-Indian students for the examinations of the University. These are (*a*) the Jesuit College, St. Xavier's College, Calcutta (for B Sc. and intermediate arts and science examinations), (*b*) the Girls' College at Loreto House, and the Diocesan College, Calcutta—the former is affiliated up to the intermediate arts examination and the licence in teaching, the latter prepares for the degree in teaching as well as in arts, as also for the licence in teaching—and (*c*) the David Hare Training College, Calcutta, which is affiliated to give instruction for the degree and licence in teaching. But, as has been repeatedly stated in official reports, "collegiate education for Europeans as a thing apart from the collegiate education of Indians is practically non-existent."

40 Various reasons are given to account for the small number of students of the Domiciled Community who take up Indian university courses In the first place it is not evident that better pay or prospects of higher avenues of employment are to be gained by the possession of an Indian university degree At any rate the idea has got abroad that domiciled Europeans and Anglo-Indians do not require to go to Indian universities to obtain suitable employment There seems to be something in the contention that the avenues of employment, to which an Indian university education leads specifically, are gradually becoming less accessible to the Domiciled Community. On the other hand the difficulty and expense of recruiting men from Europe—this has of course been intensified by the war—has placed more openings at the disposal of domiciled European and Anglo-Indian lads They are now to be found in the tea-planting and mining industries, in merchants' firms and in such employment as that of the Calcutta Port Commissioners Such employers want the boys young and though they appreciate a good secondary school education—a qualification which they rarely find—they attach little or no importance to the possession of an Indian university degree Then again, the equivalence between the Cambridge examinations and the examinations of the University of Calcutta has been found to be confusing, especially in regard to the equivalence of an honours senior Cambridge school certificate with the diploma of the intermediate arts or science examination The Calcutta University issued rules, dealing with this matter, but these rules were complicated and the complaint of the European school authorities is that the Calcutta University Syndicate has from time to time given a variety of interpretations to its own rules. Be this as it may, it appears certain that some possible European and Anglo-Indian university students have not received from the University the recognition to which they considered that their educational attainments entitled them. This has acted as a deterrent.

41. Certain European secondary schools—more especially schools for girls—have encouraged their pupils, after they have gained the Cambridge senior school certificate, to take up the Cambridge higher local courses. It is pointed out that an increasing number of European girls, who have been educated in Bengal and taken a part of the Cambridge higher local course, proceed to colleges in England and it is stated that for these the higher local certificates are of the greatest value. The Government of India have, however, refused to regard any higher local certificate as equivalent to a university degree for the purposes of the State scholarship which has been made available for the women of the Domiciled Community This is held to be a grievance by some of the European school authorities and by the Domiciled Community generally.

42. I give below a table, taken from the recent Quinquennial Review, which shows for the recent quinquennium the extent to which students from European schools in Bengal made use of the Cambridge higher local examinations :—

Year of examination	Number of entries in Bengal	Passes	Honours.	Distinctions
June 1912	No examination in Bengal			
December 1912	8	6	3	2
June 1913	No examination in Bengal			
December 1913	11	6		
June 1914	7	5		
December 1914	7	3		
June 1915	No examination in Bengal			
December 1915	12	7	1	1
June 1916	16	12	3	2
December 1916	12	11	3	3
TOTAL	73	50	10	8

A number of entries were made for the June 1917 examination but owing to the dislocation of the mail service most of them were received in Cambridge too late to be accepted [1]

[1] Chapter IX, paragraph 548, Progress of Education in Bengal, Fifth Quinquiennial Review —Calcutta 1918.

43. On the 31st March 1917, 18 European and Anglo-Indian young men and 17 young women were reading in university 'arts colleges.' The following table which is for the year 1917 gives some idea of the extent to which the Domiciled Community are now making use of the Calcutta University :[1]—

Name of examination	Number passed		
	Men	Women.	Total.
1. M.A.	1	...	1
2 B.A. (Honours)	..	2	2
3 B A. (Pass)	4	...	4
4 B Sc. (Honours)	1	...	1
5 I.A.	3	3	6
6 I.Sc.	1	.	1
7 Second M B (Pass)	1	...	1
8 First M B (Honours)	.	1	1
9 Ditto (Pass).	1	1	2
10 B E.	1	..	1
11. I E.	1	..	1
12 B.T	2	.	2
13. L T.		4	4
14. Matriculation	4	2	6
Total	20	13	33

44. It has been stated that before the issue of the Bengal code European secondary schools used to send up candidates for the matriculation examination. Certain unaided schools continued to make use of this examination, until the Cambridge examinations were generally adopted, but most of them

[1] Chapter IX, paragraph 549, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review, by W. W. Hornell, C.I.E.—Calcutta. 1918.

then abandoned it in favour of the Cambridge examinations. The table below shows the number of European and Anglo-Indian students who passed this examination during the recent quinquennium.

Years.	Number passed.		
	Boys.	Girls.	Total
1911-12	5	...	5
1912-13	..	1	1
1913-14	2	1	3
1914-15	...	2	2
1915-16	2	..	2
1916-17	4	2	6
Total .	13	6	19

45. I admit that the vital need of the Domiciled Community is good schools and agree that the obvious openings for the community, as a whole, are posts in connexion with industry and commerce, for many of which a university education is not required. On the other hand, the exceptional boy of this, as of any other, community ought to get a chance of the highest intellectual education available, not merely for its own sake but because the community, to which he belongs, ought to be represented in the administrative and educational services of Government and in the learned professions Similarly a girl of the Domiciled Community ought to be able to qualify herself, if need be, in India for the highest intellectual and professional work open to her—the need for teachers from the women of the Domiciled Community is very great—and for a life of cultured activity Many girls educated in India marry men in good positions in the country and they are not without their influence on the general tone of European society For these reasons and also because a university in India ought to be a place of education for all and not merely for certain sections of the population, the general absence of members of the Domiciled Community from university life in India is a matter for nothing but regret A university in India should be a seat of learning to which the most intellectual members of the Domiciled Community would desire to send their sons and daughters.

46 The question of the university education of the Domiciled Community was discussed at the Simla conference of 1912. The conference proposed that the existing difficulties might be met by one of two alternatives—either a separate university arts college might be established—it was suggested that such an arts college might either be affiliated to a western university or be self-contained, conferring its own degrees or that graduate courses in arts or science might be added to any training college which might be started

for the Domiciled Community. The former alternative has been universally condemned by the local Governments, while the latter has met with little support.

VI.—Professional training.

47 According to the returns for 1916-17 there were (excluding 23 girls and women in training schools and colleges for teachers) 483 Europeans and Anglo-Indians studying law, medicine, art, commerce, engineering and veterinary science. The analysis of these figures shows that there were six Europeans and Anglo-Indian students studying law, 48 (31 men and 17 women) studying medicine in the Calcutta Medical College, 2 students (both men) in the Government School of Art, Calcutta, 39 students in the Sibpur Engineering College (4 in the Engineer Department and 35 in the Apprentice Department), and one student in the Bengal Veterinary College, Belgachia.

VII.—Teachers in European schools in Bengal

48 The returns for 1916-17 show that there were 546 teachers on the staffs of the various primary and secondary schools in Bengal This works out at something like an average of one teacher to every 17 pupils This is satisfactory, more especially as the code does not require more than one teacher to every 30 pupils. The same satisfaction cannot be felt when the figures are examined from the point of view of training and other qualifications Of the 546 teachers 211 were trained and 335 were untrained ; thus the number of trained teachers is 38 6 per cent of the total number employed Members of religious orders engaged in teaching are returned as trained teachers , excluding these, one is left, with 62 trained lay teachers working in the Eurepean schools of the Bengal Presidency

49 As regards men, teaching in European schools in India is not a profession at all The pay and prospects are so poor that young men will not become teachers, except perhaps for a short time, while they are waiting for other employment Since 1912 only three men students have been deputed from Bengal to the Government Training College at Sanawar (Punjab)—an institution which has to serve the whole of Northern India Bengal has a training class at Kurseong for women teachers for European schools It is not difficult to fill this class, but the local Government exacts no obligation in the matter of subsequent service in European schools in the Presidency and many of the successful students take up work in European schools outside Bengal where prospects are apparently better. It must be remembered, both as regards men and women teachers, that, so far as the Presidency of Bengal is concerned, all the Roman Catholic schools are worked and largely staffed by members of religious orders, and that all the leading Church of England girls' secondary schools are directed by members of the order of St. John the Baptist Clewer. This fact coupled with the not unnatural tendency for school managers to recruit, wherever possible, not only heads but also assistant masters and assistant mistresses direct from England makes the professional prospects for locally recruited teachers in European schools exceedingly limited.

50. The table below which is to be found in paragraph 558 of the recent Quinquennial Review shows the number of graduates who were working in the European schools of the Presidency during 1916-17.

Schools	Unpaid and in orders.		Paid lay teachers.	
	Men.	Women.	Men.	Women.
Roman Catholic	66	80	53	93
Protestant	...	3	41	148
Railway	..	.	2	27
Jewish	...	...	.	11
Government			8	14
Total	66	83	104	293

51 I also quote from the same review a series of statements which give the average monthly salaries of men and women teaching in all grades of European schools in Bengal For the purposes of these statements it was assumed that free residence is equivalent to Rs. 50 a month and free board and residence to Rs 100 a month For the sake of comparison salaries of residential posts have been increased by Rs 50 a month or Rs. 100 a month according as the post carries with it free residence only or free board and residence [1]

A —Teachers recruited in India (Indian qualifications)

(i) *Untrained*

Teachers	B A	F A	Old pupil teacher examination	Matriculation or Cambridge senior	Junior local	No qualifications
	Rs	Rs	Rs	Rs	Rs	Rs.
Women	158	132	110	103	80	70
Men	213	205	..	170	70	135

(ii) *Trained.*

	Rs
Women	150
Men	205

N.B.—Training for women includes the training given in the Kurseong Training Class and at Madras, Naini Tal and Lahore.

[1] Chapter IX, paragraph 559, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review—Calcutta 1918.

B —TEACHERS RECRUITED IN THE UNITED KINGDOM AND POSSESSING BRITISH QUALIFICATIONS.

Teachers.	M A.	B A.	Intermediate B A	Teachers' training certificate	No qualifications.
	Rs	Rs	Rs	Rs	Rs.
Women . . .	..	300	250	236	
Men . . .	700	600	450	..	300

52. Small educational societies have sprung up from time to time, notably the Teachers' Guild, which owes its existence to the enterprise of the Young Women's Christian Association; but teachers in Bengal European schools have not succeeded so far in organising a professional association of teachers of every grade and of every religious organisation [1]

53. The Simla conference of 1912 discussed the merits and demerits of the pupil-teacher and apprentice-teacher system, now defunct in England, and they considered that the latter system might be tried experimentally in selected schools as a method of selection for the training colleges [2] The Government of India were doubtful as to the proposal but had no objection to its being tried by the local Governments The Government of Bengal, however, saw no difference between the apprentice and the pupil-teacher systems and pointed out that what was really required was to improve the general educational attainments of those who intend to enter the teaching profession. The Inspector of European Schools, Bengal, Mr. Mercer, has suggested the adoption of the English bursar system. This suggestion seems to be worth considering.[3]

54. The maximum number of students who can be taken in the training class attached to the Government Girls' School at Dow Hill, Kurseong, is 20 and the course is for two years The Head Mistress of the Dow Hill School acts as principal of the Training Class and is assisted by a mistress of method and a mistress of kindergarten method. The prescribed entrance qualification for students is the high school or Cambridge senior local pass, but the inadequacy of the average general education possessed by the students who entered the class was found to be a serious handicap During the last few years intending students have been advised to remain another year at school and to study for the Cambridge higher local examination. The effect of this on the standard of work done in the training class has been marked

[1] Chapter IX, paragraph 560, Progress of Education in Bengal, Fifth Quinquennial Review —Calcutta 1918

[2] Pages 14-16, Report of the Conference on the Education of the Domiciled Community in India—Calcutta 1912

[3] Chapter IX, paragraph 562, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review—Calcutta 1918

55 The training class has no connexion with the University of Calcutta The students are examined by the Inspector of European Schools and one of the Inspectresses, acting together, and the certificates awarded to the successful candidates are countersigned by the Director of Public Instruction An attempt has recently been made to effect a differentiation in the training of the students The kindergarten training provided by the class was criticised Some attempt is now made to consult the qualifications and inclinations of the students, when they first enter the class

56 The Kurseong Training Class cost Government during 1916-17 Rs 18,440 A scheme has recently been worked out for improving and developing the Dow Hill School and its attached training class [1]

57 No provision is at present made for the training of teachers of domestic science This is a serious defect

VIII —Scholarships

58 There are two kinds of scholarships available for European school children, *viz*, (*a*) those awarded on the results of public examinations, and (*b*) scholarships awarded on considerations of poverty and merit As regards class (*a*) there are 33 scholarships available each year representing a sum of Rs. 554 a month or Rs 6,648 a year For class (*b*) scholarships, or stipends as they should perhaps be more correctly called, a sum of about Rs 12,500 a year is available The criticism has been passed that the ratio is unequal and that there is little incentive to work for a scholarship, seeing that there is always a chance of a stipend from Government, if sufficiently urgent representations are made It is also represented that, though the awarding officers are supposed to take both merit and poverty into consideration, in practice poverty only is considered There is a still further criticism, namely that there is not sufficient system in the award of these stipends; that they are awarded at any age and held in every grade of school It is certainly desirable that there should be a certain sum of money available for special cases, but I endorse the recommendation of the Inspector of European Schools, which is quoted in the quinquennial review that scholarships proper should be raised in monetary value, so as to indicate their proper importance, and that their number should be increased.[2] At present the average value of a scholarship is less than the average value of a stipend

59 There are also two annual State scholarships for Europeans and Anglo-Indians—one for young men and the other for young women—tenable in the United Kingdom and with special sanction in foreign countries Both scholarships are tenable for three years with a possible extension for a fourth year. Both scholarships are worth £200 a year, but in the case of a young man who is allowed to hold the scholarship in a college at Oxford or Cambridge the annual value of the scholarship is raised to £250 a year.

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[1] Chapter IX, paragraph 563, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review, by W W Hornell—Calcutta 1918.

[2] Chapter IX, paragraph 511, Progress of Education in Bengal, 1912-13 to 1916-17 Fifth Quinquennial Review, by W. W Hornell—Calcutta 1918.

IX —Grants-in-aid

60 The code provides for various grants-in-aid, *viz.* (i) ordinary maintenance grants based on the attendance of pupils, (ii) supplementary grants in cases where ordinary maintenance grants are inadequate, (iii) fixed grants in lieu of maintenance and supplementary grants, (iv) grants to boarding schools and orphanages for the maintenance of free boarders, (v) cadet grants, (vi) grants to night schools, (vii) special grants, (viii) building grants During 1916-17 a sum of Rs 1,84,476 was paid in maintenance grants—Rs 76,204 on account of boys and Rs 1,08,272 on account of girls The free boarding grants paid to all boarding schools, where free boarders are maintained, amounted to Rs 1,84,050 [1] Of all the recognised European schools in Bengal, three only, *viz*, two Jesuit Institutions, St Xavier's College, Calcutta, and St Joseph's College, Darjeeling, and one higher elementary school for girls are not in receipt of annual grants.

X —Boy scouts and girl guides

61. The boy scouts movement is exercising a most beneficial influence in European boys' schools in Bengal There are already 14 troops of Baden-Powell boy scouts in Calcutta It appears from 1915-16 census of the Boy Scouts Association in India that there were during that year in the Presidency of Bengal 5 local associations, 18 troops, 18 scout masters and 560 scouts. The girl guide movement is of the more recent origin, but there is already a company of guides attached to every European girls' school in Calcutta, except one and some 500 guides have been enrolled. The movement has done great deal of good for the girls of the Domiciled Community and promises to do a great deal more [2]

W. W HORNELL.

DARJEELING ;
The 27th July 1918

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[1] Chapter IX, paragraph 554, Progress of Education in Bengal, 1912-13 to 1916-17, Fifth Quinquennial Review, by W. W. Hornell,—Calcutta 1918

[2] Chapter IX, paragraphs 568 and 569, Progress of Education in Bengal, 1912-13 to 1916-17 Fifth Quinquennial Review—Calcutta 1918.

APPENDIX VII.

DRAFT SCHEME FOR THE ESTABLISHMENT OF A *zanana* SCHOOL FOR ORTHODOX HINDU GIRLS SUBMITTED TO THE CALCUTTA UNIVERSITY COMMISSION BY THE LADY PRINCIPAL OF THE DIOCESAN COLLEGE, CALCUTTA.

(*N.B.*—The Diocesan College, Calcutta is *in the charge of* the Sisters of the Community of St John the Baptist.)

A.—Letter, dated the January 27th, 1919, from the Lady Principal, Diocesan College, Elgin Road, Calcutta, to the President, Calcutta University Commission.

May I have the honour of putting before you this scheme for a day school for orthodox Hindu girls who are to live in the *zananas*.

There is at present no school in our neighbourhood for these girls. There are schools termed *zanana* schools, but the curriculum is that of the primary school and does not meet the needs.

The needs of this section of the community are very great. They have tried to meet these by the employment of visiting governesses, but the supply of these governesses is very small and there are very few who are capable teachers.

The high school of to-day does not meet the need, for it leads up to the university examinations, and these girls need a school in which more time can be given to the home arts

I believe that a school of this kind will prosper and that we should have little difficulty in getting the fees for which we ask. I believe also that other schools of a similar type will spring up if we lead the way.

One great difficulty in this land is the lack of teachers We shall materially lessen the cost of such schools when we have schools of art, of music and of technology in which we can train Indian girls. We must for the present recruit all such mistresses from England. We have a piece of property and a school in the centre of a large orthodox Hindu community. If this school be rebuilt we could make the experiment there.

I enclose the curriculum, plans and estimates of the school.

B.—The scheme.

(1) *Aim—*

(*a*) To develope the general intelligence rather than to give detailed specific knowledge

(*b*) To train character

(*c*) To develope the physique.

(*d*) To give a good literary knowledge of the Bengali language and a colloquial rather than a literary knowledge of the English language.

(*e*) To teach those arts and science which will tend to the happiness and usefulness of an Indian lady living the *zanana* life.

(2) *Classification of school.*—The school shall be classified as a secondary school and secondary mistresses should be mainly employed. Where, as in the kindergarten, the assistants have vernacular training certificates only, the mistresses should be of the same social status as the secondary mistresses, and they should be able to speak colloquial English correctly.

(3) *Expert teaching.*—In so far as the pupils of the school are in school for so short a time the teaching must be expert teaching. The science, art and English mistresses must for the present be recruited from England, but it is to be hoped that eventually the science and art mistresses would be recruited from India.

(4) *Science and art.*—The science code, the art code and the nature study code must be carefully drawn up and should be submitted for the inspection and approval of the Education Department. They should be very practical and should be prepared entirely with the view of fitting the pupil for happy and useful employment in the *zanana* life. The mistresses should study the life and the predilections of their pupils and develope these wherever possible.

(5) *Staff*—

First Assistant —Technical Mistress. Domestic science with needlework. £125 rising to £250 if capable, after the first period of three years. Hostel allowance Rs 150 per month. The mistress must make a special study of Indian cookery and Indian embroidery.

Second Assistant —Art Mistress £100 rising after the first period to £150 (Rs. 150 hostel allowance.)

Third Assistant.—English Mistress able to take the physical drill £80 rising to £120 after the first period. (Rs. 150 per month hostel allowance.)

During the first period of work a bonus of Rs. 300 annually for holiday exepenses to each English mistress Passage every five years. A second class return passage with six months' holiday on half-pay should be given.

Kindergarten.—Secondary trained Indian lady with Froebel certificate, Rs. 100 rising to Rs. 150 in three years Board and residence. One assistant to 20 children. Each assistant to be a bilinguist and have a senior Vernacular training certificate. Salary Rs 40 rising to Rs 60 in three years Board and residence.

Lower school.—Secondary trained Indian lady—special subject nature study. Salary Rs 100 rising to Rs. 150 in three years. Board and residence. Two assistants. Matriculation certificate with training. Salary Rs. 60 rising to Rs. 80. Board and residence.

Senior school.—Secondary trained Indian lady. Rs. 100 rising to Rs 150. Board and residence. Special subject geography. Two assistants. Preferably L. T. Salary Rs. 80 rising to Rs. 100. Board and residence.

Music Mistress.—English and Indian, vocal and instrumental. Salary Rs. 100.

(6) *Curriculum—Kindergarten—*

Ages 5—7. Girls only.
Bengali reading and writing.
English reading and writing, on the direct method.
Number work.
Nature study.
History and geography. Both shall be taught in connexion with drawing and handwork.
Handwork—

(*a*) Drawing.
(*b*) Brushwork.
(*c*) Clay-modelling.
(*d*) Paperfolding and cardboard modelling.
(*e*) Needlework.

Physical Drill—Games.
Singing and music. Indian instruments rather than English.

Lower School.

Ages 7 to 10
Three classes graduated.
Bengali literature and grammar (No books for grammar)
English reading, writing and conversation.
Great stress to be laid on conversation.
The simple rules of arithmetic with simple problems.
History—Indian—general (charts and handwork)
Geography—General reading. Map drawing and modelling.
Nature study.
General information classes in the form of object lessons.
Drawing and painting
Music—instrumental and vocal.
Needlework.
Physical drill and games.

Upper School.

Ages 10 to 12
Bengali, general reading with composition
English—Conversation to be the most important
Geography—Travels.
History—Lives of great men.
Arithmetic—All that is necessary for household accounts, with the general rules of the investment of money in Government bonds or commerce.

Upper School—contd.

Ages 10 to 12—*contd.*

Needlework—Plain needlework. Indian embroidery.
Embroidery and lace making.
Drawing and painting with designing.
Science—advanced nature study.
Music—instrumental and vocal. Indian and English.

Continuation Classes.

Ages 12 to 18

Science—

Hygiene
Physiology.
First aid and home nursing
Cooking.
Mother-craft.
Housewifery.

Needlework—dressmaking and cutting out. Embroidery and lace making
Art—drawing and painting
Music—instrumental and vocal.
Literature—English, Bengli and Sanskrit. Great stress to be laid on conversation in English.

It must be clearly understood that the pupils of the school will take no amination either as pupils of the school, or as private pupils, other than those thin the school arranged by the lady principal.

(7) *Finance—*

The grants should cover, during the first period of the school, two-thirds of the expenditure It should be possible after the first period for the school to meet half the expenditure and the grants half of the expenditure.

The tuitional fee should be between Rs. 3 and Rs. 6. The pupils should buy their own books. Rs 50 per mensem would meet the stationery contingencies of the school. Servants to the school, Rs. 64 per mensem

Conveyance.—The initial cost paid by Government, the recurring cost paid by the pupils.

The school should be for the children of the neighbourhood and rickshaws should be the method of conveyance.

The children coming from a distance should come in their own conveyances.

(8) *Milman Memorial School—*

The rebuilding of the school would be at the cost of the Government.

The supervision would be given by the Sisters of the Community of St. John the Baptist. Should the scheme be successful the school might be treated as a model school and the mistresses who served their first period in the school might go on to form the staff of another school of the same type in another district of Bengal.

(9) *Moral or religious teaching—*

This cannot be neglected. Moral teaching must be given daily The girls must be expected to be present. The teaching should not be sectarian and it should not offend the religious beliefs of the pupils. The girls should be taught the generally accepted truths of all civilised nations regarding holiness, goodness, truth, morality —The sins which all condemn, and the virtues which all strive to attain. —The ideal virtues of the daughter, the wife and the mother

The Sisters of the Community of St. John the Baptist could not agree to help in any scheme which did not allow them liberty of this kind.

APPENDIX VIII.

List of University Teachers in Post-Graduate Classes, 1918-19.

A.—In Arts.

English.

Mr. Jaygopal Banerjee, M.A., Class I, 1893. Formerly Principal and Professor Victoria College, Cooch-Behar.

Mr. Srikumar Banerjee, M.A., Gold Medallist, 1912; Professor, Presidency College, Calcutta

Mr. Mohini Mohan Bhattacharjee, M A., Silver Medallist, 1914. Formerly Lecturer, Scottish Churches College, Calcutta.

Mr. Nalinimohan Chatterjee, M A., English, Group A, 1911, Group B, 1913; Latin 1917 Formerly Professor, South Suburban College, Calcutta.

Mr. Suniti Kumar Chatterjee, M A, Premchand Roychand Student, Gold Medallist, 1913 Formerly Professor, Ripon College, Calcutta.

Mr. Sushil Kumar De, M.A, Silver Medallist, 1911. Formerly Professor, Presidency College, Calcutta.

Mr Rabindra Mohan Dutta, M A., Gold Medallist, 1914.

Mr. M Ghose, M A (Oxon), Professor, Presidency College, Calcutta

Mr. Praphullachandra Ghose, M A, 1903; Premchand Roychand Student, 1907, Professor, Presidency College, Calcutta.

Mr. Rajanikanta Guha, M A, Class I, 1893; Professor, City College, Calcutta.

Mr. James W. Holme, M A (Liverpool), Professor, Presidency College, Calcutta

Rev A. B Johnston, M A. (Cantab.), Vice-Principal, St Paul's Cathedral Mission College, Calcutta.

Mr. Robert Knox, M A (Oxon); Professor, Calcutta University. (On leave.)

Mr. Herambachandra Maitra, M A., Gold Medallist, 1880; Principal, City College, Calcutta.

Dr Harendracoomar Mookerjee, M A., Gold Medallist, 1898, Ph D., 1917. Formerly Principal, Rajchandra College, Barisal, and Professor, City College, Calcutta.

Mr. Bijoy Gopal Mukerjee, M.A., Gold Medallist, 1896; Professor, Bethune College, Calcutta.

Mr. Saileswar Sen, M.A, Gold Medallist, 1899. Formerly Principal and Professor, Hindu College, Delhi.

Dr. H. Stephen, M A., D.D. (Aberdeen). Formerly Professor, Free Church Institution and Scottish Churches College, Calcutta.

Mr. T. S. Sterling, M.A. (Cantab.), Professor, Presidency College, Calcutta.

Sanskrit.

Mr. Dhireschandra Acharyya, M A. (1913, 1917), Gold Medallist. Formerly Librarian, Sanskrit College.

Mr. Muraly Dhar Banerjee, M.A , Gold Medallist, 1890 ; Professor, Sanskrit College, Calcutta

Mr. Radhagobinda Basak, M A , 1907. Formerly Lecturer, Rajshahi College, Rajshahi.

Mr. D. R. Bhandarkar, M A. (Bombay). Formerly Superintendent, Western Circle, Archæological Survey of India , Carmichael Professor of Ancient Indian History and Culture, Calcutta.

Mr. Kokileswar Bhattacharyya, M A., 1894. Formerly Professor of Sanskrit, Victoria College, Cooch-Behar.

Mr. Pasupatinath Bhattacharyya, M A., Gold Medallist, 1910 and 1911. Formerly Professor, Ripon College, Calcutta.

Mr Prabhatchandra Chakrabarti, M A , Gold Medallist, 1916 Formerly Professor, St Xavier's College, Calcutta.

Mr. Niranjan Prasad Chakravarty, M A., Gold Medallist, 1916

Mr. Surendranath Majumdar, M A , Gold Medallist, 1910 , Premchand Roychand Student, 1911.

Pandit Sakalnarayan Sarma, Professor, Sanskrit College, Calcutta

Vedantabisarad N. S. Anantakrishna Sastri Formerly Principal, Tirupathi Sanskrit College, Trivandrum

Mr. Asutosh Sastri, M.A., Gold Medallist, 1891 ; Professor, Presidency College, Calcutta.

Mahamahopadhyay Laksman Sastri , Professor, Sanskrit College, Calcutta.

Rai Rajendra Chandra Sastri Bahadur, M A , Gold Medallist, 1883 , Premchand Roychand Student, 1885 Formerly Bengali Translator to the Government of Bengal.

Pandit Sitaram Sastri.

Pandit Hargovind Das Sheth, Nyayatirtha, Vyakarantirtha Formerly Professor, Jaina Pathsala, Benares

Dr. Irach Jehangir Sorabji Taraporewala, B A. (Bomb. and Cantab), Ph.D. (Wurzburg). Formerly Professor, Central Hindu College, Benares.

Mahamahopadhyaya Pramathanath Tarkabhushana, Professor, Sanskrit College, Calcutta.

Mr. Debendra Nath Ray, M A., Professor, Bethune College, Calcutta.

Pandit Krishnacharan Tarkalankar

Pandit Rajendranath Vidyabhusan, Professor, Sanskrit College, Calcutta

Mahamahopadhyaya Dr Satis Chandra Vidyabhusana, M A (Sanskrit), 1893 ; (Pali), Gold Medallist, 1901 , Ph D., 1908 , M R A S , F A S B , Principal, Sanskrit College, Calcutta

Pali.

Dr. Benimadhab Baruya, M A., Gold Medallist, 1913 , D Litt. (London) 1917

Mr. Radhagobinda Basak, M A. (1907) Formerly Lecturer, Rajshahi College.

Mr. D. R. Bhandarkar, M.A. (Bombay)

Mr. Nalinaksha Datta, M.A., Gold Medallist, 1915. Formerly Professor, Baptist College, Rangoon.

Rajaguru Bhagavanchandra Mahastavir.

Mr. Surendranath Mazumdar, M.A., Gold Medallist, 1910; Premchand Roychand Student, 1911.

Mr. Sailendranath Mitra, M A, Gold Medallist, 1912 Formerly Professor, Baptist College, Rangoon.

Swami Punnanda.

Swami Rambukwelle Siddharta, Sastravisarad Vinayacharyya.

Mahamahopadhyaya Dr. Satis Chandra Vidyabhusana, M A, Ph.D. M.K.A.S., F.A.S.B.

Arabic and Persian

Sheikh Mahommed Khalil Ahmed, M A, Gold Medallist, 1894. Formerly Persian Translator, High Court, Calcutta

Sheikh Abu Nasr Gilani, High Priest of the Shiahs

Maulvi Abu Musa Ahmadul Haq, formerly Maulvi of the Asiatic Society

Shams-ul-Ulama Vilayat Hussain, formerly Head Maulvi, Calcutta Madrassah, Calcutta

Aga Mahomed Kazim Shirazi, Maulvi, Board of Examiners.

The Hon'ble Dr. Abdulla-al-Mamun Suhrawardy, M.A., Gold Medallist, 1898: Ph D., 1908.

Comparative Philology.

Mr. Suniti Kumar Chatterjee, M A, Premchand Roychand Student, Gold Medallist, 1913 Formerly Professor of English, Ripon College, Calcutta.

Mr. Bijaychandra Majumdar, B.A., 1885.

Dr. Irach Jehangir Sorabji Taraporewalla, B A, Ph D.

Mental and Moral Philosophy.

Mr. Jnanranjan Banerjea, M A, Gold Medallist, 1888; Vice-Principal, Vidyasagar College, Calcutta.

Mr. Krishnachandra Bhattacharya, M A, Gold Medallist, 1896, Premchand Roychand Student, 1901, Professor, Bethune College, Calcutta

Mr. Haridas Bhattacharyya, M A, Gold Medallist, 1914. Formerly Professor, Scottish Churches College, Calcutta.

Mr. Praphullakumar Chakrabarti, M A, Gold Medallist, 1914; M A (Cantab.), Mental and Moral Science Tripos, Class I in both parts.

Mr. Kalidhan Chatterjee, M A., Silver Medallist, 1913; Professor, Scottish Churches College, Calcutta.

Mr. Satis Chandra Chatterjee, M A., Gold Medallist, 1916. Formerly Professor, Ripon College, Calcutta.

Rev. G. Ewan, M A (Edin.), Professor, Scottish Churches College, Calcutta.

Dr. Hiralal Haldar, M A., 1887; Ph.D, 1910. Formerly Professor, Krishnath College, Berhampur, and City College, Calcutta.

Dr. Ramdas Khan, M A (Yale) 1909 · Ph D (Cal.) 1913

Mr. Susilkumar Maitra, M.A., Gold Medallist, 1913. Formerly Professor, Broja Mohan College, Barisal.

Mr. Ambikacharan Mitra, M A., Class I, 1886. Formerly Professor, Cuttack College, Cuttack.

Mr. Khagendra Nath Mitra, M.A., Gold Medallist, 1899 ; Professor, Presidency College, Calcutta.

Dr. Adityanath Mukerjee, M.A., Gold Medallist, 1897 ; Premchand Roychand Student, 1903 ; Ph.D. (1909) ; Professor, Presidency College, Calcutta.

Dr. Brajendranath Seal, M.A , Gold Medallist, 1884 ; Ph D , 1910 Formerly Principal, Krishnath College, Berhampur, and Victoria College, Cooch-Behar George V Professor.

Dr. Narendranath Sen Gupta, M.A., Ph.D., (Harvard) 1915.

Dr. Prabhu Dutt Shastri, M.A (Punjab), Ph D. (Kiel), B Sc. (Oxon) ; M.O.L., B.T. ; Professor, Presidency College, Calcutta

Rev. Dr. W. S. Urquhart, M A , D Phil. (Aberdeen), Vice-Principal, Scottish Churches College, Calcutta.

Experimental Psychology.

Mr. Manmathanath Banerji, M Sc., 1916

Mr. Haridas Bhattacharyya, M A , B L , Gold Medallist, 1915 Formerly Professor, Scottish Churches College, Calcutta

Mr Girindrasekhar Bose, M Sc , Gold Medallist, 1917 ; M B , 1910

Mr. Pramodranjan Das Gupta, M Sc , Gold Medallist, 1916

Mr Bimal Chandra Ghosh, M A (Allahabad), M A , M B (Cantab) ; Professor, Vidyasagar College, Calcutta

Mr. Khagendra Nath Mitra, B A (Wisconsin), 1913.

Dr Brajendranath Seal, M A , Ph D

Dr Narendranath Sen Gupta, M A , Ph D

Mr Haripada Maiti, Gold Medallist, 1918

History

(*Ordinary course except Ancient Indian History*)

Mr. Gauranganath Banerjee, M A , F R.A S., M.R.A.S., Silver Medallist, 1912 ; Premchand Roychand Student, 1914

Mr Indubhushan Banerjee, M A , Gold Medallist, 1916.

Mr Pramathanath Banerjee, M A , Gold Medallist, 1915

Mr. S Khuda Buksh, M A , B C L. (Oxon).

Mr. Nirmalchandra Chatterjee, M.A , Silver Medallist, 1916.

Mr J. N Das Gupta, B A. (Oxon), Bar-at-Law ; Professor, Presidency College, Calcutta.

Mr. A. C. Datta, M A , B C L. (Oxon.) Formerly Professor, City College, Calcutta

Mr. Bejoy Kumar Sarkar, A.B. (Harvard). Formerly Professor, Central Hindu College, Benares

Mr. Bipinbehari Sen, M.A , B.L., Gold Medallist, 1891. Formerly Professor, Hooghly College, Chinsura.

Mr Surendranath Sen, M A., Silver Medallist, 1915. Formerly Professor, Robertson College, Jubbulpore.

Mr. Jogischandra Sinha, M.A , Gold Medallist, 1915.

The Hon'ble Dr. Abdulla-al-Mamun Suhrawardy, M.A , Ph.D.

Mr. Y J. Taraporewala, B A. (Cantab), M A , Bombay.

Mr. K. Zachariah, B.A. (Oxon.), Professor, Presidency College, Calcutta.

Ancient Indian History and Culture (including special course).

Mr Anantakrishna Banerjee, M.A , Gold Medallist, 1917.

Mr Narayanchandra Banerjee, M A , Class I, 1916.

Mr. Radhagobinda Basak, M A , 1907. Formerly Lecturer, Rajshahi College, Rajshahi.

Mr D. R Bhandarkar, M A (Bombay), Carmichael Professor.

Mr Haranchandra Chakladar, M A., 1897. Formerly Professor, Ripon College, Calcutta.

Mr Hem Chandra Ray Chaudhuri, M A , Gold Medallist, 1913. Formerly Professor, Presidency College, Calcutta

Mr Phanindralal Ganguli, M A , Gold Medallist, 1900 ; Premchand Roychand Student, 1904

Rao Bahadur B A Gupte, F Z S

Dr. Ramesh Chandra Majumdar, M A , Silver Medallist, 1911 ; Premchand Roychand Student, 1912. Ph. D , 1919 Formerly Professor, Dacca Training College, Dacca

Mr Surendranath Majumdar, M A , Gold Medallist, 1910 ; Premchand Roychand Student, 1911

Mr Narendrakumar Majumder, M A , Gold Medallist, 1912

Pandit Babuya Misra

Mr Arun Sen, B A (Cantab), 1910

Mr Prabodchandra Sen Gupta, M A , 1901 , B T , 1914 Professor, Bethune College, Calcutta

Mr J Masuda.

Dr R Kimura

Economics

Dr Pramathanath Banerjea, M A , 1902 , D Sc. (London). Formerly Professor, City and Scottish Churches Colleges, Calcutta

Mr Pramathanath Banerjee, Gold Medallist, 1915

Mr Satischandra Chakrabarti, M A , Silver Medallist, 1912. Formerly Professor, Victoria College, Cooch-Behar

Mr. Durgagati Chattoraj, M A , Silver Medallist, 1914. Formerly Professor ; Scottish Churches College, Calcutta

Mr. Rohinimohan Chaudhuri, M A., Silver Medallist, 1916. Formerly Lecturer, D A. V. College, Lahore

Mr. J. C Coyajee, B A. (Bombay and Cantab) ; LL.B. (Cantab.) ; Professor, Presidency College, Calcutta.

Mr. Praphullachandra Ghose, M A , Silver Medallist, 1916 , B Sc , 1914
Mr. C. J. Hamilton, M A. (Cantab), Minto Professor
Mr. J C. Kydd, M A , F R.E.S., Professor, Scottish Churches College, Calcutta.
Mr. Panchanandas Mukherji, M.A , Gold Medallist, 1912 ; Professor, Presidency College, Calcutta.
Mr Radhakamal Mukerjee, M A , 1910 , Premchand Roychand Student, 1915. Formerly Professor, Krishnath College, Berhampur.
Mr. Jitendraprasad Niyogi, M A , Gold Medallist, 1913
Mr. Satis Chandra Ray, M A , 1886 Formerly of the Finance Department of the Government of India, and Chief Accountant, Calcutta Corporation
Mr. Krishnabinod Saha, M.A , Class I, 1915 Formerly Lecturer, Victoria College, Cooch-Behar
Mr. Surendramohan Sanyal, M A (Economics), M Sc (Mathematics) (Iowa).
Mr. Bejoy Kumar Sarkar, A B (Harvard) Formerly Professor, Central Hindu College, Benares
Mr. Bipinbehari Sen, M A , B L , Gold Medallist, 1891 Formerly Professor, Hooghly College, Chinsura
Mr. A. C Sen Gupta, M A , Professor, Presidency College, Calcutta
Mr. Jogischandra Sinha, M A , Gold Medallist, 1915

Pure Mathematics

Dr. Haridas Bagchi, M A , Gold Medallist, 1908 , 1909 , Premchand Roychand Student, 1910 , Ph D , 1912. Formerly Professor, Cotton College, Gauhati.
Mr. Hariprasanna Banerjea, M Sc (Allahabad) ; Gold Medallist, 1914
Mr Satischandra Basu, M A , 1896 , Professor, Vidyasagar College, Calcutta.
Mr Indubhushan Brahmachari, M A , Gold Medallist, 1896 , Premchand Roychand Student, 1898 Formerly Professor, Cotton College, Gauhati, and Scottish Churches College, Calcutta
Dr. C. E. Cullis, M A (Cantab), Ph D (Jena) ' Formerly Senior Professor of Mathematics, Presidency College, Calcutta Hardinge Professor
Mr. Sasindra Chandra Dhar, M Sc , Gold Medallist, 1916
Mr Surendra Mohan Ganguli, M Sc , Gold Medallist, 1912 , Premchand Roychand Student, 1914
Mr. Satischandra Ghosh, M A , Gold Medallist, 1912 Formerly Professor, Scottish Churches College, Calcutta
Mr. Manoranjan Gupta, M Sc , Class I, 1913
Mr Narendrakumar Majumder. M A , Gold Medallist, 1912
Dr. Syamadas Mookerjee, M A., 1890 , Ph D., 1910 Formerly Professor, Presidency College, Calcutta, and Hooghly College, Chinsura

B —In Science

Applied Mathematics

Mr. Sudhansukumar Banerjee, M Sc , Silver Medallist, 1914, Premchand Roychand Student, 1915 , Sir Rash Behary Ghose Research Scholar from November, 1914 to June, 1916.

Mr. Nalinimohan Basu, M Sc, Gold Medallist, 1914. Formerly Professor. St. Paul's Cathedral Mission College, Calcutta.

Mr Satyendra Nath Basu, M Sc, Gold Medallist, 1915. Formerly Professor, Presidency College, Calcutta

Mr. Saradaprasanna Das, M A., Silver Medallist, 1897, Professor, Presidency College, Calcutta

Mr. Bibhutibhuson Datta, M Sc, Class I, 1914

Mr. Sites Chandra Kar, M A., Gold Medallist, 1910, Professor, Bangabasi College, Calcutta.

Mr. Karunamay Khastgir, M Sc, Silver Medallist, 1914; Professor, Presidency College, Calcutta.

Dr. D. N. Mallik, B A. (Cantab), B Sc. (London), Sc.D. (Dublin), F R S E; Professor, Presidency College, Calcutta.

Dr. Ganesh Prasad, B A. (Cambridge), 1901, M A (Allahabad and Calcutta) 1896, D Sc (Allahabad) 1898 Formerly Professor, Queen's College, Benares, Sir Rash Behary Ghose Professor

Mr. Meghnad Saha, M Sc, Silver Medallist, 1915

Mr. Nikhilranjan Sen, M.A, Gold Medallist, 1916

Mr Hemchandra Sen Gupta, M A, 1902 Professor, Presidency College, Calcutta

Physics

Mr Susilkumar Acharya, M Sc., Silver Medallist, 1912. Formerly Professor, City College, Calcutta.

Mr Sudhansukumar Banerjee, M Sc., Silver Medallist, 1914, Premchand Roychand Student, 1915, Sir Rash Behary Ghose Research Scholar from November, 1914 to June, 1916

Mr. Satyendra Nath Basu, M Sc., Gold Medallist, 1915. Formerly Professor, Presidency College, Calcutta

Mr. Charuchandra Bhattacharyya, M A., 1905, Professor, Presidency College, Calcutta

Mr. Phanindranath Ghosh, M A, Gold Medallist, 1908. Formerly Professor, Bangabasi College, Calcutta

Mr. Prasanta Chandra Mahalanobis, B A (Cantab). Professor, Presidency College, Calcutta

Mr. Dwijendrakumar Majumdar, M A, 1903 Professor, Presidency College, Calcutta.

Dr. D N Mallik, B A. (Cantab), B Sc. (London), Sc.D. (Dublin), F R S E., Professor, Presidency College, Calcutta

Mr D B Meek, M A, B Sc, Professor, Presidency College, Calcutta

Mr Sisirkumar Mitra, M Sc, Gold Medallist, 1912 Formerly Professor, Bhagalpur College, Bhagalpur

Mr. Jogeschandra Mukerjee, M A, Gold Medallist, 1907. Formerly Professor, Bangabasi College, Calcutta.

Mr. C V Raman, M A (Mad), Sir Tarak Nath Palit Professor of Physics.

Mr. Abinaschandra Saha, M Sc, Gold Medallist, 1914

Mr. Meghnad Saha, M Sc., Silver Medallist, 1915.

Chemistry.

Mr. Jyotibhushan Bhaduri, M A., F.C.S , Silver Medallist, 1891 ; Premchand Roychand Student, 1894 ; Professor, Presidency College, Calcutta

Dr. Rasiklal Datta, M.Sc , Gold Medallist, 1912 ; D.Sc. (Calcutta), 1916 ; Premchand Roychand Student, 1916.

Dr. Bimanbihari De, M.Sc , 1910 , Premchand Roychand Student, 1912 ; D.Sc. (London) ; Professor, Presidency College, Calcutta.

Mr. Bidhu Bhusan Dutta, M A., 1902 ; Professor, Presidency College, Calcutta.

Mr. Jnanendra Chandra Ghosh, M Sc , Gold Medallist, 1915

Dr. Prafulla Chandra Mitter, M A , 1904 , Ph D (Berlin) 1912 , Sir Rash Behary Ghose Professor

Mr Jnanendranath Mukherjee, M Sc , Silver Medallist, 1915.

Mr. K. G Naik, B.Sc., M.A (Bom.) 1908. Formerly Professor, Krishnath College, Berhampur

Sir P. C Ray, Kt , C I.E , Ph D., D Sc., F.S C , Emeritus Professor, Presidency College, Calcutta ; Sir Tarak Nath Palit Professor.

Dr Anukul Chandra Sircar, M A. 1908 ; Premchand Roychand Student 1910 ; Ph D , 1915 ; F.C.S., Professor, Presidency College, Calcutta

Mr Pulinbihari Sarkar, M Sc , Silver Medallist, 1916

Botany

Mr. Surendranath Bal, M Sc (Michigan).

Mr. Surendra Chandra Banerji, M A , Class I, 1907, B.Sc. ; Professor, Presidency College, Calcutta.

Dr. P J Bruhl, D Sc , Formerly Professor, Civil Engineering College, Sibpur.

Mr J C Nag, B Sc (California) , Professor, Presidency College, Calcutta

Physiology

Mr Nibaranchandra Bhattacharya, M.A , 1905 , Professor, Presidency College, Calcutta.

Mr. S C Mahalanobis, B Sc (Edin), F R S E , Professor, Presidency College, Calcutta.

Geology

Mr Saratlal Biswas, M Sc , Gold Medallist, 1910 Formerly Lecturer, Commercial College, Calcutta

Mr Hem Chandra Das Gupta, M A , F.G S., Silver Medallist, 1900 , Professor, Presidency College, Calcutta.

Mr E. Vredenburg, M A , B.-ès-l., B.-ès-Sc., A R S M , A.E.C.S., F.G.S., Superintendent, Geological Survey of India, Calcutta

Zoology.

Mr. S. Maulik, B A. (Cantab), F E S. Imperial College of Science, London.

APPENDIX IX.

University College of Science.

A.—Scheme sanctioned by the Senate on the 15th February 1919 for the Governing Body.

1. The Senate shall annually appoint a Governing Body for the administration of the University College of Science

2. The Governing Body shall consist of—

(*a*) Members of the Governing Body of the Palit Trust.
(*b*) Members of the Board of Management of the Ghose Fund.
(*c*) University professors attached to each department of the college.
(*d*) Representatives of the university lecturers attached to each department of the college
(*e*) Representatives of investigators, if any, engaged in research in each department of the college.

The Senate shall, for this purpose, specify from time to time, the various departments of the college

The number and mode of selection of representatives in the fourth and fifth categories mentioned above shall be determined by the Senate from time to time

3. The Vice-Chancellor shall be *ex-officio* President of the Governing Body. The Senate shall also appoint a Vice-President, a Secretary and fix the quorum for a meeting.

4. The affairs of the college shall be administered by the Governing Body, subject to such rules as may be framed in that behalf by the Senate from time to time.

Provided that—

(1) All matters arising out of or in any way relating to the Sir Taraknath Palit Trusts shall, in the first instance, be considered and reported on by the Governing Body mentioned in the Trust Deed of the 15th June, 1912, before they are considered by the Syndicate or the Senate.

(2) All matters arising out of or in any way relating to the Sir Rash Behary Ghose Endowment, shall, in the first instance, be considered and reported on by the Board of Management mentioned in the letter of the Founder, dated the 8th August 1913, before they are considered by the Syndicate or the Senate.

5. The Proceedings of the Governing Body shall be laid by the Syndicate before the Senate with such observations as the Syndicate may consider necessary and shall be subject to confirmation by the Senate.

6. Each department of the college shall, not less than six months before the commencement of the academic year, provisionally formulate its programme of work and shall, at the same time, specify as accurately as practicable its requirements and the financial provision to be made therefor The programme shall be drawn up and the requirements formulated conjointly by all the university professors and the university lecturers, attached to the college in that department. Any professor or lecturer may, if he so desires, submit a separate memorandum either by way of dissent from the decision of the majority or for elucidation of special points.

The schemes as drawn up, together with the separate memoranda, if any, shall be laid before the Governing Body of the Palit Trust and the Board of Management of the Ghose Fund for opinion The papers shall then be placed before the Governing Body of the college which will make recommendations thereon for the consideration of the Syndicate. The Syndicate shall obtain a report from the Board of Accounts on the financial aspect of the proposals, and shall thereafter place the matter before the Senate with such recommendations as may be deemed desirable The decision of the Senate shall be communicated, through the Governing Body of the college, to the professors and lecturers attached to each department. They shall thereupon draw up the final programme of work, modifying the provisional scheme, where necessary, in view of the decision of the Senate The final scheme shall be transmitted to the Governing Body of the college after reference to the Governing Body of the Palit Trust and Board of Management of the Ghose Fund, and shall be subject to confirmation by the Governing Body of the college

7. The Governing Body of the college shall annually appoint a small standing committee in each department to supervise and regulate the actual expenditure of the sum allotted to that department by the Senate other than the sum provided for contingencies and like items the nature and amount whereof will be defined by rules.

Provided that—

When a special research grant is made by the Senate for a university professor, the sum shall be at his disposal and the standing committee shall have no concern whatsoever with the question of its expenditure.

The Standing Committee for each department shall consist of—

(1) The university professors attached to that department of the college.
(2) Representatives of the university lecturers attached to that department of the college
(3) One or more persons not included in either of the previous categories.

The number and mode of selection of the persons mentioned in the second and third categories shall be determined by the Senate from time to time.

Each Standing Committee will have authority to sanction expenditure from the grants made by the Senate and will submit to the Governing Body of the college a monthly statement showing in detail the expenditure so sanctioned.

Each Standing Committee will elect its Chairman and also appoint one of its members to act as Secretary who will keep a record of the business transacted by the Committee.

8. The Governing Body of the college shall annually appoint a Standing Committee for the management of the workshop The Workshop Committee shall consist of at least one representative of each department One of the members shall be appointed to act as Secretary and to exercise executive authority. No person shall hold the office of Secretary consecutively for more than two years

The Standing Committee shall, subject to the sanction of the Governing Body of the college, draw up, from time to time, general rules for the management of the workshop, including rules for the distribution of work, the allocation of workmen to meet the requirements of the various departments, or of individual professors, lecturers, or investigators, and for like purposes.

9. The Governing Body of the college shall annually appoint a Standing Committee for the management of the special library attached to the college. The Committee shall consist of at least one representative of each department and will act in accordance with such rules as may be framed for the purpose by the Governing Body.

B—Description of the grounds and buildings.

The University College of Science is located on two distinct properties about four miles apart, namely, (1) at 93, Upper Circular Road, and (2) at 35, Ballygunj Circular Road. Both these properties were given to the University by the late Sir Taraknath Palit On the first property stood a residential building occupied for some years by the Bengal Technical Institute, but the building could not conveniently be converted for use as a modern laboratory Sir Taraknath Palit directed by his first trust deed that the building should be removed and new laboratories constructed on the premises The University accepted the gift subject to this condition and has fulfilled its obligation The area of the site is 4 acres The building stands on 26,440 square feet and consists of a central block 200 feet long running north and south and two lateral wings 160 feet long running east and west. The wings have corridors 8 feet wide on the south only, while the main block is provided with corridors on the east and west The result is that of the 52 rooms in the building, 40 are open on the north, 2 are open on the south and 10 only open on the east and west. The rooms are from 18 to 20 feet high and as they are provided with corridors on the south or on the east and west as the case may be, they keep cool even during the hottest part of the year. Natural ventilation is effected by the large doors $12' \times 5'$ and windows $8' \times 5'$ as well as by clear storey windows, while artificial ventilation is provided by an extensive system of flue pipes with which the building is provided. These pipes are independent of one another and are embedded in the walls. The height of the pipes gives sufficient draft, but the draft can be further actuated by means of gas burners.

The ground floor consists of 21 rooms of which 14 are occupied by the department of chemistry and the rest by the department of physics. The first floor contains 16 rooms, namely 10 occupied by the department of chemistry and 6 by the department of physics The second floor consists of 15 rooms, namely 5 by the department of physics, 6 by the department of applied mathematics (including one room placed at the disposal of the Calcutta Mathematical Society) and 2 by the department of experimental psychology; the remaining 2 rooms on the second floor have been set apart for the accommodation of the library.

The building is amply provided with gas, water and electricity The gas is obtained direct from the street mains; the water is obtained from the storage tanks on the roof of the building to which water is pumped from the street mains by means of an electric pump This gives per tank of over 50 feet pressure in the ground floor and 35 feet in the first floor, so that water vacuum pumps and carbines can be conveniently worked. There is also ample provision for electricity

The following is a statement of the dimensions of the rooms with a brief indication of the purposes for which each room is used :—

Ground floor.

1. 30′×20′ . . Professor's sitting room (Dr Mitter)
2. 30′×20′ . . Combustion room
3. 30′×20′ . . Professor's Laboratory (Dr. Mitter)
4. 30′×15′ . . Balance room
5. 30′×20′ . . Research Laboratory.
6. 30′×20′ . . Professor's Laboratory (Sir P. C. Ray)
7. 30′×15′ . . Professor's room (Sir P. C. Ray)
8. 40′×30′ . . Physical Chemistry Research Laboratory
9. 66′×30′ . . Conductivity.
10. 16′×30′ . . Dark room.
11. 20′×30′ . . Dark room
12. 16′×30′ . . Lecturer's sitting room (Physical Chemistry)
13. 24′×30′ . . Electro-chemical Laboratory.
14. 25′×30′ . . General physics
15. 25′×30′ . . Acoustic Laboratory.
16. 30′×25′ . . Biological Laboratory.
17. 30′×16½′ . . Dark room
18. 30′×25′ . . } Laboratory of the Ghose Professor (Dr Bose).
19. 30′×25′ . . }
20. 30′×20′ . . } Research Laboratory (Professor Raman).
21. 30′×20′ . . }

First floor.

22. 30′×20′ . . Technological Laboratory.
23. 30′×20′ . . Combustion room
24. 30′×20′ . . Research Laboratory (Dr. Dutt).
25. 30′×15′ . . . Preparation room.

First floor—contd.

26.	40′×30′	Lecture room.
27.	30′×15′	Balance room.
28	40′×30′	General Laboratory.
29.	24′×30′	Office.
30.	30′×20′	Store room.
31.	40′×30′	General physico-chemical Laboratory.
32.	50′×30′	Heat Laboratory.
33.	30′×25′	Physics
34	30′×16′	Lecturer's sitting room.
35.	50′×30′	X-Ray and Radiographic Laboratory.
36	30′×20′	Lecturer's sitting room.
37.	30′×20′	Store room.

Second floor

38.	30′×20′	Professor's sitting room (Dr. Banerjee).
39.	30′×20′	Mathematical Seminar.
40	30′×20′	
41	30′×15′	
42.	40′×30′	Mathematical Society
43.	30′×15′	Mathematical Seminar.
44.	64′×30′	Library.
45.	30′×20′	Librarian's Office
46	40′×30′	Advanced optical Laboratory
47	50′×30′	Electrical Laboratory.
48	30′×25′	Electro-Magnetic Laboratory
49.	30′×16′	Dark room
50	50′×30′	Optical Laboratory
51.	30′×20′	Experimental Psychology
52.	30′×20′	

The property at 35, Ballygunj Circular Road was the residence of Sir Taraknath Palit. There are two fine three-storeyed buildings erected about a dozen years before his death which took place on the 3rd October 1914. Both the buildings have been completely renovated by the University and arrangements are in progress for the erection of botanical and zoological laboratories in the eastern building, while the western is ready for occupation by three professors, each of whom will have one flat assigned for his exclusive use There are altogether 38 rooms in the laboratory building. The buildings stand in the middle of the grounds which occupy 8 acres of land The result is that both the buildings have the north and south sides open. The eastern building has in addition the east side open and the western building has the west side open, while the intervening space between the two buildings is such as not to obstruct light and ventilation. There is also in the compound a smaller building now occupied by research students. The following is a statement of the dimensions of the rooms with a brief indication of the purposes for which each room is used.

Ground floor.

1.	35′ 9″×17′ 9″	Lantern Lecture Room.
2. 3.	17′×17′	Soil Bacteriological Laboratory.
4. 5. 6.	6′ 10″×6′ 10″, 8′×7′, 7′ 9″×7′ 2″	Store room.
7.	31′ 9″×6′ 10″	Assistant Professor's room.
8 9. 10.	17′×17′	Biochemical Laboratories.
11	31′ 9″×7′	Combustion and draught chamber room
12. 13. 14.	7′ 10″×7′ 3″, 8′×7′ 3″, 7′ 2″×7′ 2″	Distillation rooms.
15	75′×17′ 9″	Herbarium.
16.		Laboratory for systematic Botanical Work, Phanerogams and Higher Cryptogam

First floor.

17.	36′×17′	Physiological Laboratory.
18	36′×19′ 10″	Library
19	75′ 8″×18′	South verandah used as lecture room and Museum
20 21. 22 23.	57′ ×21′ 3″, 36′×17′ 4″, 19′ 9″×14′ 9″, 17′ 3″×14′ 9″	(Reserved for the Zoological Department)
24. 25 26 27.	5′ 8″×5′ 2″, 0′×7′, 0′×7′ 3″	Verandah Rooms.

Second floor.

28.	57′×21′ 6″	Plant Histological Laboratory and Mycological laboratory.
29.	39′×16′	Microtome Room.
30 31.	21′ 6″×5′ 9″, 16′×5′ 6″	Verandah with Sinks.
32.	75′ 8″×5′	North Verandah utilised as microscopic laboratory.
33 to 38.	.. ..	Side rooms utilised as photographic and staining rooms.

Dr. Brühl, now University Professor of Botany, states that an additional building is required for his department; the ground floor to be fitted up as biochemical laboratory for plant physiological investigations, the first floor to serve as a properly lighted library and reading room, the second floor to be fitted up as an up-to-date mycological laboratory. He also suggests that more land towards the south should be acquired to serve as experimental plots. As there is a large tank on the grounds extending from east to west, a row boat would be useful in connexion with algological investigations. Further, as soon as funds become available, a serviceable botanical garden may well be established in the grounds. It may be explained here that there has been considerable delay in the development of the Ballygunj site by reason of circumstances over which the University had no control. Immediately upon the death of Sir Taraknath Palit, one of his sons commenced a litigation in the High Court for the cancellation of the trusts. The suit was protracted and was ultimately decided in favour of the University, after heavy costs had been incurred which could not be recovered from the unsuccessful plaintiff (Jatindranath Palit *versus* Lokendranath Palit and University of Calcutta, 22, Calcutta Law Journal, 593). What is now urgently needed is adequate funds for furniture, instrumental outfit, microtomes and microscopes and accessories, physiological apparatus and lecture appliances, equipment for a zoological laboratory and lecture room and biological library.

APPENDIX X.

Calcutta University Regulations for the M.A Degree in Indian Vernaculars.

"Candidates who select Indian vernaculars shall be examined in—

(A) An Indian vernacular as principal subject, to be selected by the candidate from a list prescribed from time to time by the Board of Higher Studies in Indian Vernaculars

(B) A second Indian vernacular as subsidiary subject, to be selected by the candidate from a list prescribed from time to time by the Board of Higher Studies in Indian Vernaculars

(C) Elements of two of the following languages, to be selected by the candidate with special reference to their influence on the vernaculars chosen as principal and subsidiary subjects :—

Prakrit, Pali, Persian, Pashtu

This list may be varied from time to time by the Board of Higher Studies in Indian Vernaculars

(D) Elements of Indo-Aryan or such other branch of philology as may be prescribed from time to time by the Board of Higher Studies in Indian Vernaculars

Four papers shall be set on (A), two on (B), one on (C), and one on (D).

The four papers on (A) shall be distributed as follows —

Paper I —History of the literature of the principal language taken up. Candidates will be expected to possess a general knowledge of the entire subject as also a special knowledge of a prescribed period or movement in literature

Paper II —Old texts and unseens

Paper III —Mediæval and modern texts and unseens

Paper IV.—(*a*) A prescribed period of literary or linguistic history, and (*b*) a selected movement, literary, scientific, social or religious.

Candidates will be required in this paper to give their answers in the form of two essays, one of which at least must be composed in the vernacular, taken up as principal subject.

The two papers on (B) shall be distributed as follows :—

Paper V —Easy prescribed texts and unseens.

Paper VI —Elements of grammar, philology and literary history.

The paper on (C) shall include questions on easy prescribed texts and simple questions on grammar.

The paper on (D) shall be devoted to Indo-Aryan or other prescribed branch of philology, in so far as it elucidates the origin and development of Indian vernaculars.

Each of the eight papers shall carry 100 marks.

The scope of the subject included in each paper shall be defined and suitable books recommended, from time to time, by the Board of Higher Studies in Indian Vernaculars.

A candidate who has taken his B. A. degree with honours in a language, or has taken his M. A. degree in a language or comparative philology, may, subject to the conditions specified below, offer a thesis, in lieu of an examination in Papers III and IV.

The conditions to be fulfilled by a candidate who is allowed to offer a thesis are as follows —

(*a*) He must have completed one year's study of the M A. course in Indian vernaculars under university teachers

(*b*) He must at the end of the year submit to the Board of Higher Studies in Indian Vernaculars an application for permission to offer a thesis in lieu of part of the examination.

(*c*) The application shall indicate the subject and scope of the thesis he wishes to offer and must be recommended by the professor or professors under whom he has been working

(*d*) If the application be granted by the Board of Higher Studies in Indian Vernaculars, the thesis must be prepared under the general direction of the professor or professors with whom the candidate is prosecuting his studies.

(*e*) The candidate shall deliver three copies of the thesis (printed or type-written) to the Secretary to the Council of Post-Graduate Teaching in Arts, at least one month before the first day of the M. A. examination at which he intends to present himself.

(*f*) The thesis shall be examined by a board of three examiners and the maximum number of marks assigned to the thesis shall be 200. The examiners may, in their discretion, subject the candidate to a *viva voce* examination on the subject of the thesis.

(*g*) The name of the candidate whose thesis has been approved shall be marked with an asterisk in the list of successful candidates published in the *Gazette* and also in the University Calendar. "

APPENDIX XI.

SCHEME FOR THE REORGANISATION AND REFORM OF MADRASSAHS IN THE PRESIDENCY OF BENGAL.

(Sanctioned under Government of Bengal, General Department, Resolution No 450T.G, dated the 31st July 1914, and modified under Government orders No 193 T—Edn., dated the 15th May, No 1068, dated the 14th August, No. 589T—Edn, dated the 23rd October, and No. 1457Edn., dated 23rd November 1918)

TO BE INTRODUCED FROM THE BEGINNING OF THE MADRASSAH SESSION IN 1919.

A.—Time-table for the Junior Department.

Subject.	Class					
	I	II	III	IV	V	VI
	Periods per week.					
The Koran (recitation) . . .	4	4	..	..		..
Urdu (compulsory)	4	4	3	2	1	1
Vernacular (Urdu or Bengali) . .	6	7	6	6	6	4
Arithmetic	6	6	6	4	4	4
Geography		2	2	2	2	2
History . . .		.	..	2	2	2
English . . .	.	...	7	8	9	9
Arabic	..	...	8	8	9	11
Drawing and Handwork . .	3	2			.	.
Drill	3	3	2	2	1	1
TOTAL NUMBER OF PERIODS .	26	28	34	34	34	34

NOTE 1.—Arithmetic, geometry, history and geography are to be taught through the medium of Bengali In institutions in which Urdu is taught as the vernacular, Urdu may be adopted as the medium of instruction with the special permission of the department.

2.—A boy who has completed the junior madrassah course must study for a further year in a special class before he can be admitted into the fourth class from the top of a high school.

B.—Detailed course of studies for classes VII, VIII, IX and X (1st, 2nd, 3rd and 4th year classes of the senior department) of Madrassahs under the reform scheme.

Class VII.

1. Language—

(*a*) Mabadi-ul-Arabiah (As-Sanatus-Salisah). This book should be taught in three years and finished in class IX and revised in class X.

(*b*) Darajat-ul-Insha, Part I, pages 1—64.

2. Literature—

Prose—

(*a*) Ikhwan-us-Safa, pages 52—77.

(*b*) Alf Lailah.

(*c*) Kalila wa Damna.

The portions of books (*b*) and (*c*) to be taught are included in the selections compiled by Shamsul-Ulama A. N Waheed, M.A.

(*d*) Salasil-ul-Qira'ah (pages 1—40 of Nokhabul-Ulum, Part 1, omitting pages 27 and 28)

(*e*) At-Tarbiyat-wal-Abad-ush-Sharyah, the whole.

Poetry—

Diwan Abul Atahiyah (pages 47—56 of Nokhabul-Ulum, Part II)

3. Arithmetic—

An English Arithmetic book should be taught.

Practice, Reduction and Simple Problems.

Geometry—

School Book of Practical Geometry, Parts I and II (Hall and Stevens).

To be spread over four years, Classes VII-X.

Definitions and Theorems on lines, angles and triangles.

4. History—

Indian History (in English).

Hindu period.

5. Vernacular (Urdu or Bengali).

As in class VII of High Schools.

Class VIII.

1. Language—

(*a*) Mabadi-ul-Arabih (see class VII).

(*b*) Darajat-ul-Insha, Part I, from page 65 to the end.

2. Literature—

Prose—

(*a*) Atbaq-uz-zahab by Isfahani (Nokhabul Ulum, Part II).
(*b*) Adab-ud-Dunya-wad-dın.
(*c*) Salasıl-ul-Qira'ah (pages 48—57, 68—75).
To be taught by means of lectures (pages 97—112).
(*d*) Al-Fakhri (40 pages).

Poetry—

Diwan Abul Atahiyah (20 pages).

3. Fıqh—

Multaqul Abhur, first half of Ibadat portıon. To be had of Maulvi Ahmad Hossaın, Dacca , prıce about Re 1.

4. Arıthmetıc—

An English Arıthmetıc book should be taught.
Decımals and Unıtary method.

Geometry (see class VII) —

Theorems on parallels on equalıty or ınequalıty of trıangles and on parallelograms.

5. Hıstory—

Indıan Hıstory (ın Englısh).
Muhammadan perıod.

6. Vernacular (Urdu or Bengalı)—

As ın class VIII of Hıgh schools.

Class IX.

Subject	Book	Edıtion	Portıon	Perıod.
Language . .	(1) Mabadıul-Arabıah.	Cawnpore .	As-Santaus-Salısah (*see* Class VII)	2
	(2) Darajat-ul-Insah, Part II, first half	Islamıa Press, Dacca.	Up to Artıcle 110) (pages 1—60)	2
Lıterature— . .				
(*a*) Prose . .	Salasıl-ul-Qıra'ah, Part V.	Beırut . .	Tarıkh, pages 86-105. Khutba, pages 107—119.	3
(*b*) Poetry . .	(1) Salasıl-ul-Qıra'ah, Part VI.	Dıtto .	Hekm, pages 166—174	3
	(2) Dewan-i-Hassán.	Sa'adah Press, Egypt.	Pages 75—81, 87—90, 136-137, 148, 155, 172, 271—273.	

Class IX—contd.

Subject.	Book.	Edition	Portion.	Period.
Kalam and Fiqh .	(1) Al-Fiqh-ul-Akbar	Sa'adah Press, Egypt.	Whole . . .	3
	(2) Multaqal-Abhur.	Published by Ahmad Hussain, Dacca.	Ibadat portion (whole).	
	(3) Siratul-Mustaquim	Alexandra Press, Benares	Qism-i-Sani . .	
Logic . . .	Lubabul-Isharat	Sulaimani Press, Benares	Up to beginning of An-Nahjul-Khamis.	2
Arithmetic . .	An English Arithmetic Book should be taught		Square root, Square measure, Ratio and Proportion.	1
Geometry . .	School Geometry, Parts I and II (Hall & Stevens). To be spread over four years—Classes VII—X, the syllabus is roughly indicated here		Problems on lines, angles, triangles, quadrilaterals and Loci.	1
English . .	Same as prescribed for the Matriculation Examination.			8

Class X.

Language . .	(1) Mabadiul-Arabiah.	Cawnpore .	As-Sanatus-Salisah (*see* Class VII).	2
	(2) Darajat-ul-Insha, Part II.	Islamia Press, Dacca.	Second half	2
Literature—				
(*a*) Prose . .	(1) Salasil-ul-Qira'ah, Part V	Beirut . .	At-Talim, As Sana'at, At-Terajat, Aj-Jara'at, Khutab-i-Ali, Ma-quamatus-Sedq-Zamakhasri, Al-Maquamat-ul-Qudsiah-yazeji	3
(*b*) Poetry . .	(1) Salasil-ul-Qira'ah, Part VI.	Beirut . .	Pages 174—178, 180—185.	3
	(2) Dewan-i-Hassán	Sa'adah Press, Egypt	Pages 8—21, 336 .	
	(3) Nukhabul-Ulum, Part I.	Islamia Press, Dacca.	Lamiah of Tughrai	
Kalam and Fiqh .	(1) Multaqal-Abhur.	Published by Ahmad Hussain, Dacca.	Revision: Ibadat portion (whole).	3
	(2) Siratul-Mustaquim.	Alexandra Press, Benares.	Kism-i-Awal, pages 1—45.	
	(3) Serajiah .	Cawnpore .	From beginning to Zawil Arham.	

Class X—contd.

Subject.	Book	Edition	Portion.	Period.
Logic . . .	Lubabul-Isharat	Sulaimani Press, Benares	Whole . . .	2
Arithmetic . .	An English Arithmetic Book should be taught.		Revision	1
Geometry . .	School Geometry, Parts I and II (*vide* Class IX)		Theorems and Problems on areas, and revision	1
English . .	Same as prescribed for the Matriculation Examination			8

APPENDIX XII.

EXCERPTS FROM CALCUTTA UNIVERSITY REGULATIONS RELATING TO EXAMINATIONS

SECTION A.

CHAPTER XXV

EXAMINATIONS

Setting of Papers

1. No question shall be asked at any University examination which would require an expression of religious belief on the part of the candidates; and any answer or translation given by any candidate shall not be objected to on the ground of its expressing peculiarities of religious belief

2. Candidates shall give their answers in their own words as far as practicable in all subjects This rule shall be inserted as a head-note in every question paper.

3 Examiners setting papers shall be guided, as to the scope of the subject of examination, by the syllabus prescribed in the Regulations, and as to the standard and extent of knowledge required, by the books if any, recommended from time to time for such purpose

4 No copy of any examination paper is to be retained by the person setting it

5. The paper set should be such as candidates can reasonably be expected to answer within the time allotted The questions in each subject should be fairly distributed over the whole course in that subject, and should conform to the Regulations laid down for the particular examination, there should not be any marked change of standard from year to year, but it is not required that the same type of questions should be set every year. Examiners shall always allow some choice of questions

6 Questions should be so framed as to encourage good methods of work and teaching, and to discourage unintelligent memorizing.

Awarding of marks.

7. In the case of examinations in all Faculties up to and including the examination for the Bachelors' Degree, the Registrar shall, as soon as the results have been tabulated, prepare a list of the candidates who have failed in one subject only, in order to guard against any possible inaccuracy, their papers in the subject in which they have failed shall be re-examined *on the method of marking already adopted, and without any alteration of the standard.*

8. Examiners, in giving marks, shall take the correctness of the language of the answer into account.

9 Examiners, in giving marks, shall consider whether the answers indicate an intelligent appreciation of the subject or are merely the result of unintelligent memory work.

Meetings of Examiners.

10. As soon as possible after an examination has been held, the persons who have set any question paper in the examination, and those who are to examine the answers to that paper or any portion of it, and the Head Examiner, if there is one, shall meet to determine the kind or standard of answers to be expected from candidates, and to decide upon a system of marking. Their conclusions shall be embodied in a memorandum to be jointly signed by them and forwarded to the Registrar If, owing to unavoidable circumstances, any Examiner who has set a paper is unable to attend the meeting, the remaining Examiners contemplated by this Regulation shall meet and transact the aforesaid business

11 In the case of any examination for the degree of Bachelor, Master, or Doctor in the Faculties of Arts and Science, and in the case of every examination in the other Faculties, the entire body of Examiners for that examination shall meet, as soon as possible after the tabulation of the results, and draw up a report of the examination as a whole for the consideration of the Syndicate

As soon as possible after the publication of the results of every examination in every Faculty referred to in the preceding paragraph the persons who have examined the answer in each subject shall meet together and draw up a report upon the examination in that subject for the consideration of the Syndicate

12. The reports submitted to the Syndicate shall ordinarily embody such remarks and recommendations suggested by the work done by the candidates which it is thought desirable in the interests of education to communicate to the Heads of Colleges and Schools.

Miscellaneous.

13. English shall be the medium of examination in all subjects except where otherwise specifically indicated.

14. Members of the Syndicate or of the Boards of Studies shall not be debarred from acting as Examiners

15 Canvassing for examinership will not be countenanced by the University ; and if it is proved to the satisfaction of the Syndicate that canvassing has been carried on by any person applying for an examinership, the candidate shall be disqualified.

16. Examiners are required to keep the results of the examinations and the marks assigned to candidates strictly secret.

17. If it is proved to the satisfaction of the Syndicate that the questions in any subject are not such as candidates could reasonably be expected to answer within the time allotted, or have not been fairly distributed over the whole course in that subject, or do not conform to the Regulations laid down for the examination in that subject, or show a marked change of standard, or that from any other cause injustice has been or is likely to be done, the Syndicate shall issue such directions as may be necessary to rectify matters.

18. No candidate shall ordinarily be declared to have passed or to have obtained Honours unless he has attained the standard laid down in the Regulations for a Pass or for Honours If, however, the Syndicate are satisfied that consideration ought to be allowed in the case of any candidate by reason of his high marks in a particular subject or in the aggregate, the Syndicate may pass such candidate or award him Honours as the case may be.

Provided that no action shall be taken by the Syndicate in this behalf, except—

(*a*) upon the Report of the Moderators in the case of the Matriculation or the Intermediate Examination in Arts or Science, or

(*b*) upon the Report of the Examiners in the case of any other Examination

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SECTION B

AFTER XVI.

Collegiate students

1 No person who cannot produce a certificate from a College affiliated to the University to the effect that he has completed the course of instruction prescribed by the Regulations, shall ordinarily be admitted as a candidate at any University Examination, other than an examination for Matriculation

2. Exception may be made in certain cases on the recommendation of the Syndicate, by special order of the Senate In each case the recommendation must state special reasons why the privilege should be granted A certificate shall be produced in such form as may be prescribed by the Syndicate

Act VIII of 1904, sec 19

3 Except in very special cases no person shall be admitted under the preceding Regulation who has been enrolled as a regular student of a College during the twelve months previous to the date of the Examination at which he applies for permission to appear.

4. Before a candidate is permitted to present himself in any science subject for which a practical course is necessary under the Regulations, he shall produce a certificate from the Principal of an affiliated College or some other authority approved by the Syndicate, to the effect that he has taken such a course in his laboratory.

5. Employment as a teacher shall not be regarded as a ground of recommendation unless the applicant has been employed for at least three years preceding the Examination in the exercise of his profession in, (1) a College affiliated to the University, or (2) a School recognized by the University as competent to send up candidates for the Matriculation Examination, or (3) any other School approved for the present purpose by the Syndicate.

6. Laboratory Assistants and Demonstrators and Librarians of Affiliated Colleges shall be treated as teachers.

7. The Syndicate shall have power in any case to admit to any University Examination in any Faculty any person who shall present a certificate from any Institution authorised to grant certificates by the Governor-General of India in Council, or by a local Government, or from such other Institutions as may be from time to time recognised for the purpose by the Syndicate, showing that he has attended courses of study, passed examinations, or taken degrees equivalent to those which are required in the case of students of the Calcutta University.

8. All non-collegiate students before they are admitted to a University Examination, shall satisfy the Syndicate by the production of a certificate as to (*a*) their good conduct, and (*b*) their diligent and regular study.

SECTION C

General Rules for Examiners at Examination in Logic, at an Intermediate Examination in Arts

1. Each answer is to be considered as a whole as well as part by part, and, in assigning marks, the impression produced by the whole answer should specially be taken into account.

2. The value assigned to each answer is to be written conspicuously at the top of the answer, and, when marks are assigned to parts, they are to be written in the margin

3. The part values are to be treated as movable, so that excellence in one part may be taken as compensating for deficiencies in another.

4. For every mistake—whether of spelling, grammar, or idiom—$\frac{1}{4}$ is to be deducted; but no deduction is to be made for a repetition of the same mistake or for an evident slip or omission.

5 More credit should be given for reasoned answers and logical sequence.

6 Before putting down the total value for an answer, we should consider whether the answer as a whole is worthy of pass value; and, before putting down the aggregate value of a paper as a whole, we should consider whether as a whole it is fit to pass. Any increase or decrease of the aggregate value as a result of discretion should be noted on the cover.

7. Marks are to be added up with special care.

8. To facilitate the tabulation of results, General Rule 11 for examination of papers should be strictly observed, and Calcutta papers should be examined before the Mofussil ones.

SECOND D.

Paper in English, at a Pass B A Examination with directions for marking answer papers

SECOND PASS PAPER

Candidates are required to give their answers in their own words as far as practicable.

[The figures in the margin indicate full marks]

FIRST HALF

1 'Milton has taken a scheme of life for life itself' How does Raleigh dispose of this explanation of the want of interest in *Paradise Lost?* What reasons does he give to explain that want of interest? 12

2 Sketch, after Raleigh, the character of Satan how does Milton attempt to allay his scruples about his portrait? 14

3 Explain any *three* of the following —

(*a*) The burial of *Clovis* was hastened by ridicule. 12

(*b*) He writes as if all were Cromwells or Miltons.

(*c*) To forego all these diluted forms of speech is to run the risk of the scholar's melancholy

(*d*) It is Ulysses who is 'reluctant' and Calypso who is 'amorous'

4 Illustrate *three* of the following statements — 12

(*a*) In the case of Milton, the imperfection of our sympathy is due to other causes

(*b*) The exigencies of controversy revealed in Milton the flash of real wit

(*c*) How carefully Milton adjusted the sound to the sense is known to every reader of *Paradise Lost*

(*d*) Milton wrings the last drop of value from each word.

SECOND HALF

5 Sketch the views taken by Royalist and Republican respectively, of Shakespeare and Milton 15

Or,

Describe Woodstock what incidents in Scott's novel are connected with Rosamond's Tower and the King's Oak.

6 Describe briefly the scenes in which the following occur — 10

(*a*) What thou dost, do quickly,

(*b*) They are coming hither who shall be called Maher-shalal-hash-baz.

(*c*) You must carry your tricks of fortune-telling to the women of the village.

7 Give the substance of Hood's letter on the uses of literature. Compare his humour with that of Cowper. 14

8 Explain *two* of the following sentences, adding a brief notice of the writer in each case:— 11

(*a*) It is here that letters obtain the noblest triumph.

(*b*) He seemed on the whole a most loving kissing kind-hearted gentleman.

(*c*) The flat dog made me write a flat sonnet.

(*d*) You shan't make canticles of my cantos.

Directions for marking First Half.

1. See Raleigh, 83—87

The sentence quoted from Pattison may be analysed as follows :—

(*a*) The anthropomorphic theology of the poem

(*b*) Paradise Lost wanting in the note of actuality.

(*c*) Satan no longer believed in

(Candidates must note these points to show that they have understood the passage quoted from Pattison)

Raleigh's refutation of Pattison's objection.

It is not people's having lost faith in the theological doctrines on which Paradise Lost is based, but the wide gulf between the world as we see and know it and the world created by Milton's imagination; and the fact that Milton's account of some of the scenes in heaven is repugnant to our habits of thought, which stand in the way of our taking a keen interest in Milton's *Paradise Lost* (Page 87 specially the latter half)

6 marks for the first part and 6 for the second

2 Pages 133-141 10 for the character of Satan and 4 for the second part of the question

Points in Raleigh's remarks on the character of Satan

(*i*) Satan, "the fearless antagonist of Omnipotence"

(*ii*) The nobility of greatness of his bearing (illustrated by encounter with Sin and Death and the monarch of Chaos)

(*iii*) His noble qualities as a general and his sympathy for his followers in their misfortune

(*iv*) His motives and end, though bad, bring out his fearlessness and magnanimity

(*v*) His self-sacrifice for the sake of his followers contrasted with the selfishness and cowardice of angels in heaven

(*vi*) His admiration of the beauty of Eve, and his pity for Adam and Eve whom he resolves to ruin for the sake of a public cause

The second part of the question has two points —

(1) Degradation of the character of Satan after Book IV.

(2) Creation of Abdiel as the counterpoise of Satan

3. Four marks for each explanation , context to be given in each case.

(*a*) Raleigh, p. 178.

(*b*) Raleigh, p. 63.

(*c*) Raleigh, p 215

(*d*) Raleigh, p 252

4. Four marks for each.

In (*a*) explanation and illustration of the sentence are identical. The three points are .—

(*i*) Milton's life is too well known, which gives much occasion for ridicule and hostility.

(*ii*) Milton's narrowness and lack of humour

(*iii*) Milton's lonely greatness

(*a*) Page 5

(*b*) Page 70

(*c*) Page 194

(*d*) Page 208.

In (*b*), (*c*) and (*d*), *two* illustrations to get full marks, but if one instance be very fully given, the candidate may be awarded full marks

Directions for marking Second Half

5 (*a*) Give 8 for Shakespeare, 7 for Milton (Woodstock, Chapter XXV Macmillan's Edition, pp 451—458)

Shakespeare —Republican view (*a*) he sins against decency and good manners, his tendency is to ridicule virtue and recommend vice ; (*b*) not suitable for youth of either sex,—his men are engaged in bloodshed and his women in intrigue Royalist view His sentiments are worthy of dying saints and martyrs, though mixed up with broad jests owing to the coarse taste of the age

Milton —Republican view Milton is an inspired poet without a rival (free from fustian and indelicacy) Royalist view He is fantastic in imagery (his metaphors are devoid of common sense) he is a mere school master, and a parasite of Cromwell—bloody-minded and blasphemous author of *Defensio Populi Anglicani.*

(*b*) 5 for Woodstock. (See Chapter III.) 5 for each of the two incidents—(Chapter XXXIV and Chapter XXVIII)

6 (*a*) 3 Chapter XXXIV, (Macmillan's edition, p. 642).

(*b*) 4 (Chapter I) (1 maximum for merely identifying the scene, 3 for description)

(*c*) 3 (Chapter XVIII)

7. Give 9 for substance and 5 for comparison—

The three points in Hood's letter (p. 433) are .—

(1) literature saves young people from moral shipwreck,

(2) it is a palliative in sorrow and sickness,

(3) it is a source of comfort and strength in other evils of life.

8. Give 2½ for explanation, 3 for notice in each case

(*a*) Page 242.
(*b*) Page 224.
(*c*) Page 425
(*d*) Page 398

(Sd) HERAMBACHANDRA MAITRA.
(Sd) JAYGOPAL BANERJEE.
(Sd) RABINDRANARAYAN GHOSH.

The 27th April, 1917

SECTION E

CHAPTER XVI

Non-collegiate students

1. No person who cannot produce a certificate from a College affiliated to the University to the effect that he has completed the course of instruction prescribed by the Regulations, shall ordinarily be admitted as a candidate at any University Examination, other than an examination for Matriculation

2 Exception may be made in certain cases on the recommendation of the Syndicate, by special order of the Senate In each case the recommendation must state special reasons why the privilege should be granted A certificate shall be produced in such form as may be prescribed by the Syndicate.

Act VIII of 1904, sec. 19

3 Except in very special cases no person shall be admitted under the preceding Regulation who has been enrolled as a regular student of a College during the twelve months previous to the date of the Examination at which he applies for permission to appear

4 Before a candidate is permitted to present himself in any science subject for which a practical course is necessary under the Regulations, he shall produce a certificate from the Principal of an affiliated College or some other authority approved by the Syndicate, to the effect that he has taken such a course in his laboratory.

5 Employment as a teacher shall not be regarded as a ground of recommendation unless the applicant has been employed for at least three years preceding the Examination in the exercise of his profession in, (1) a College affiliated to the University, or (2) a School recognized by the University as competent to send up candidates for the Matriculation Examination, or (3) any other School approved for the present purpose by the Syndicate.

6. Laboratory Assistants and Demonstrators and Librarians of Affiliated Colleges shall be treated as teachers.

7. The Syndicate shall have power in any case to admit to any University Examination in any Faculty any person who shall present a certificate from any Institution authorised to grant certificates by the Governor-General

of India in Council, or by a local Government, or from such other Institutions as may be from time to time recognised for the purpose by the Syndicate, showing that he has attended courses of study, passed examinations, or taken degrees equivalent to those which are required in the case of students of the Calcutta University.

8 All non-collegiate students before they are admitted to a University Examination, shall satisfy the Syndicate by the production of a certificate as to (*a*) their good conduct, and (*b*) diligent and regular study

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SECTION F

Statement showing the number of candidates and number passed for the year 1917

Examination	No. of candidates	1st Division	2nd Division	3rd Divisions	1st Class Hons	2nd Class Hons	Distinction	Pass
1 Matriculation	16,088	5,884	4,745	649				
2 Inter Arts	6,575	1,017	1,612	326				
3 Inter Science	1,571	534	294	20				
4 Bachelor of Arts	3,839				36	234	163	1,460
5 Bachelor of Science	487				24	45	103	132
6 Master of Arts	742	32	148	205				
7 Master of Science	151	33	32	16				
8 Licentiate in Teaching	61						9	43
9 Bachelor of Teaching	71	8						48
10 Preliminary in Law	1,877	71	1,078					
11. Intermediate in Law	1,253	32	689					
12 Final Law	1,005	55	531					
13 Master of Law	6	1	1					

SECTION G

Scale of Remuneration to Examiners.

MATRICULATION EXAMINATION.

	Rs.	A.	P.
Fee for each of the three paper-setters in English for setting two papers	32	0	0
Fee for each of the two setters of passages in each Vernacular .	16	0	0
Fee for each of the three paper-setters in Mathematics for setting two papers	32	0	0
Fee for each of the three paper-setters in each of the Second Languages for setting two papers	32	0	0
Fee for each of the two paper-setters in Vernacular Composition, or Alternative Subject, History, Geography, Mechanics for setting one paper in each	25	0	0

MATRICULATION EXAMINATION—*contd*

	Rs	A	P
Examining an answer paper in any subject	0	10	0
(*a*) Head Examiner's fee in a subject where there are two papers (except English, Mathematics and Sanskrit)	350	0	0
For each of the two Head Examiners in English, Mathematics and Sanskrit	350	0	0
Head Examiner's fee in a subject where there is only one paper	250	0	0

The fee for re-examining an answer paper is fixed at half the ordinary fee allowed for examining it

INTERMEDIATE IN ARTS AND SCIENCE EXAMINATIONS

Fee for each of the three paper-setters in English for setting three papers	50	0	0
Fee for each of the three paper-setters in subjects where there are two papers	32	0	0
Fee for each of the two paper-setters in subjects where there is one paper	25	0	0
Examining an answer paper in any subject	0	12	0
Fee for each of three Head Examiners in English	400	0	0
(*a*) Head Examiner's fee in a subject where there are two papers	350	0	0
(*a*) Head Examiner's fee in a subject where there is only one paper	250	0	0

The fee for re-examining an answer paper is fixed at half the ordinary fee allowed for examining it

B A AND B Sc EXAMINATIONS

(β) Fee for setting a Pass or an Honour Paper	64	0	0
Head Examiner's (γ) fee in vernacular Composition in Bengali	250	0	0
Examining a Pass Paper	1	0	0
Examining an Honour Paper	1	8	0
Practical Examination, either Pass or Honour, of each candidate	3	0	0

The fee for re-examining an answer paper is fixed at half the ordinary fee allowed for examining it

M A AND M Sc EXAMINATIONS

(δ) Setting a paper	75	0	0
Examining a paper	2	8	0
Practical Examination of each candidate	4	0	0

(*a*) The fee of a Head Examiner for re-examining an answer paper is equal to the fee allowed for examining it The remuneration to be paid to a Head Examiner in any subject for the work of re-examining the answer papers is limited to the amount which will be due to him for examining 5 per cent of the papers in that subject

(β) The total amount to be divided equally among all the members of the Board in each subject

(γ) The fee of Head Examiner for re-examining an answer paper is equal to the fee allowed for examining it The remuneration to be paid to a Head Examiner in any subject for the work of re-examining the answer papers is limited to the amount which will be due to him for examining 5 per cent. of the papers in that subject

(δ) The total amount to be divided equally among all the members of the Board in each subject, unless the members of the Board agree among themselves to distribute the fee for setting the papers in a given subject in any other way which may appear to them equitable.

L.T. Examination.

	Rs	A	P
Setting a paper	40	0	0
Examining a paper	1	0	0
Fee for conducting Practical Examination of each Examiner per candidate	1	8	0

B T. Examination

Setting a Paper	50	0	0
Examining a Paper	1	0	0
Fee for conducting Practical Examination of each Examiner per candidate	2	0	0

Ph.D. and D Sc. Examinations

Fee for each member of the Board	100	0	0

Preliminary, Intermediate and Final Examinations in Law.

Setting a paper	64	0	0
Examining a paper	2	0	0
Examining a half paper	1	0	0

M L Examination

Setting a paper	75	0	0
Examining a paper	2	8	0

Preliminary Scientific M.B Examination and Organic Chemistry for the first M B Examination

Setting a paper	50	0	0
Setting a Practical paper	50	0	0
Examining a paper	1	8	0
Practical Examination of each candidate	2	0	0
Oral Examination of each candidate	2	0	0

First M B Examination

(In a subject other than Organic Chemistry)

Setting a paper	60	0	0
Setting a Practical paper	60	0	0
Examining a paper	2	0	0
Practical Examination of each candidate	3	0	0
Oral Examination of each candidate	3	0	0

Final M B Examination

Setting a paper	80	0	0
Setting a Practical paper	80	0	0
Examining a paper	12	0	0
Practical Examination of each candidate	4	0	0
Oral Examination of each candidate	4	0	0

M D, M S, M O & D P H Examinations.

Setting a paper	75	0	0
Examining a paper	2	8	0
Oral, Practical and Clinical Examination of each candidate	10	0	0

INTERMEDIATE EXAMINATION IN ENGINEERING.

	Rs	A.	P.
Setting a paper	48	0	0
Examining a paper	1	8	0
Practical Examination of each candidate . . .	2	0	0

B E EXAMINATION

Setting a paper	64	0	0
Examining a paper	2	0	0
Examining Projects, Designs of each candidate . . .	25	0	0
Examining Drawing of each candidate . . .	25	0	0
Practical Examination of each candidate .	3	0	0

If an Examiner is appointed to look over answers to a paper or papers that he has not himself set, the fee paid to him shall not be less than half the fee paid for setting the papers

Wherever fee is fixed for setting a paper or conducting an Examination and no special provision is otherwise made, the fee is to be equally divided amongst all the persons who take part in setting the papers or conducting the Examination

APPENDIX XIII.

A —Memorandum on Frequency Curves of the Marks of a number of sub-examiners by Dr. Zia-ud-Din Ahmad and Mr. P J Hartog

1. In Chapter XVII, the use of frequency curves has been referred to as a method of comparing the marking of a number of sub-examiners at the same examination, and we have thought that it would be useful to give a few examples of such curves based on the data of examinations of the Calcutta and Allahabad Universities [1]

2 The frequency curve of the marks of an examiner is the curve of which the abscissæ are the successive marks 0, 1, 2, 3 ..... 99, 100 (the maximum being 100), and the ordinates are the numbers of candidates to whom he had awarded these several marks It is convenient to use as ordinates not the actual numbers of candidates, but the percentages of the total number of candidates to which they correspond The ordinates so drawn represent the relative frequencies with which the several marks 0, 1, 2, 3 ..... 99, 100 recur in the marking of the examiner. The normal form of a frequency curve for magnitudes of this kind has been composed by Edgeworth to the longitudinal section of a gendarme's hat [2] In actual practice, the form of the curve often differs considerably from the normal type

3 In addition to the frequency curves, we have given in all cases the average mark allotted by each sub-examiner, and also the average mark of all the candidates at the examination in question [3]

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[1] We desire to thank the authorities of the Allahabad University for permission to publish the results relating to that University included in this note

[2] If we trace the curves for a number of sub-examiners at the same examination, the are a bounded by the curve, the x axis, and the ordinates at the extremities of the curve will be roughly speaking, the same for each sub-examiner, for the ordinates are drawn at unit intervals and the sum of the ordinates is always 100

[3] The average mark is the sum of the marks obtained by all the candidates in question, divided by the number of candidates It may be shown that the ordinate corresponding to the average mark will pass through what may be called the centre of gravity of the area bounded by the curve, the x axis, and the ordinates at the extremities Using the ordinary notation for the determination of the centre of gravity, and supposing a_1, a_2 a_3 ..... are the number of candidates who obtain 1, 2, 3, ... marks.

$$\bar{x} = \frac{\Sigma mx}{\Sigma m}$$

$$m_1 = \rho a_1 \times 1\,, \quad m_2 = \rho a_2 \times 1\,, \quad m_3 = \rho a_3 \times 1$$

$$\therefore \bar{x} = \frac{\rho[a_1 + 2a_2 + 3a_1 + \quad . \quad . \quad . \quad]}{\rho[a_1 + a_2 + a_3 + \quad . \quad . \quad . \quad . \quad]}$$

$$= \frac{\text{the total number of marks}}{\text{the total number of candidates}} = \text{the average mark}$$

4. *Mean Mark.*—The mean mark may roughly be defined as a mark such that the number of candidates who obtain a higher mark is equal to the number of candidates who obtain a lower mark. The ordinate drawn through the abscissa corresponding to the mean mark will bisect the area of the frequency curve. The mean mark will usually be found very close to the average mark. It will be separated more widely from the average if there is an exceptional number of candidates obtaining either very high or very low marks.

5. The accompanying plates (I to X) show (*i*) the average marks allotted by the various sub-examiners, (*ii*) the average marks obtained by all the candidates, and (*iii*) the frequency curves for the most lenient and the strictest sub-examiners and in some cases the frequency curve[1] for the mean examiner (*i.e.*, the curve for the marks of all the candidates) at the following examinations—

Calcutta University Matriculation Examination, 1917.
Compulsory Mathematics (Plate I)[2].
English First Paper (Plate II)[2].
English Second Paper (Plate III)[2].
A school leaving examination (Plate IV)[2].
Allahabad University Matriculation Examination.
English Second Paper (Plate V)[3].
English Third Paper (Plate VI)[3].
History (Plate VII)[4].
Geography (Plate VIII)[4].
Mathematics First Paper (Plate IX)[4].
Mathematics Second Paper (Plate X)[4].

6. We have termed the sub-examiner whose average mark is highest the 'most lenient' and the sub-examiner whose average mark is lowest the 'strictest.' This nomenclature is right if we are justified in regarding the average quality of the batches of candidates examined as the same in all cases.

The assumption will be no doubt justified if the candidates assigned to each sub-examiner were chosen at random, *e g*, by alphabetical order This is however not always the case At the Calcutta Matriculation each sub-examiner examines about 500 candidates, not chosen at random, but comprising all the candidates from a certain number of schools chosen at random. If a large number of candidates from an exceptionally good school or from an

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[1] In frequency curves the ordinates do not indicate the number of the candidates but the percentage of the candidates who obtained the marks indicated on the base line.

[2] In Plates I-IV the maximum number of marks in each paper was 100.

[3] In these papers the maximum number of marks was 50 and in drawing the graphs, for purposes of comparison with graphs I-IV, the marks given by sub-examiners were doubled with the result that even numbers alone are marked on the base line.

[4] In Plates VII-X the maximum number of marks in each paper was 75, and the marks given by the sub-examiners were proportionately raised as if the maximum were 100, with the result that the ordinates could not be drawn for integral numbers alone.

exceptionally poor school fell to a particular sub-examiner his average mark would be correspondingly raised or lowered, apart from his 'personal equation.' The probability of such an occurrence is, of course, diminished as the number of candidates allotted to each sub-examiner is increased.[1]

7. We have expressly chosen only compulsory papers for our examples.

8. For the sake of ready comparison, we have altered the scale of marks, where necessary, so as to correspond to a maximum mark of 100 in all cases.[2] We add below certain comments on the various graphs.

9. *Compulsory Mathematics, Calcutta University Matriculation, 1917* — (Plate I) The figures and corresponding graphs show certain notable features. The pass-marks on this paper was 30, the average mark of all the candidates was 62,[3] a high figure for an examination of this kind.

The average mark of the strictest examiner was 53, that of the most lenient 76. The variation is a very large one, the highest average being 43·4 per cent. in excess of the lowest. We have also to draw attention to the fact that of the 16,088 candidates only 22 failed in mathematics alone; in 1918 out of 14,675 only 39 failed in mathematics alone. It is clear from the figures, as well as from the study of the graphs, taken in connexion with the general quality of the secondary schools, that the standard of the examination is a low one. A severer test would probably yield a frequency curve more nearly corresponding to the *image* of the actual curve.

The steepness of the curves of sub-examiners to the left of the vertex in the case is of both the most lenient and the strictest sub-examiner also remarkable.

10. *English, Calcutta University Matriculation, 1917.*—(Plates II and III). It is noticeable that the average arks of all the candidates (40 6 in Paper I and 39 2 in Paper II) are much lower than in the case of mathematics.

The number of candidates in English alone, failed *i.e*, 1,474 in 1917 and 2,751 in 1918, is in marked contrast to the corresponding figure for mathematics *viz*, 22 and 39

For Paper I the average mark of the strictest sub-examiner was 37·6 and the average mark of the most lenient was 50·6, the corresponding figures for Paper II were 28 5 and 46 5

The variations in the marking of the sub-examiners are almost as great as in mathematics.

11. *A School-Leaving Examination* —(Plate IV) We have prepared for the sake of comparison the frequency curves of three sub-examiners who each corrected 1,000 papers at a School-Leaving Examination under the daily supervision of a head-examiner It will be seen how closely the three curves

---

[1] My personal experience as head-examiner leads me to believe that the distribution of good and bad candidates becomes fairly even in different batches when the total number in a batch approaches 500 —Z U A

[2] We desire to record our thanks to Mr. Aziz Bakhsh, M.A., and Mr. Abu Ali Sabir, of the M. A. O College, Aligarh for their great kindness in checking the statistics and preparing the graphs.

[3] The minimum fixed for the 1st Division is 50 *per cent* of the aggregate marks.

ALLAHABAD UNIVERSITY

MATRICULATION EXAMINATION

MATHEMATICS SECOND PAPER (COMPULSORY SUBJECT)

AVERAGES AND FREQUENCY CURVES.

MAXIMUM 100 MINIMUM 30

PLATE 10 A

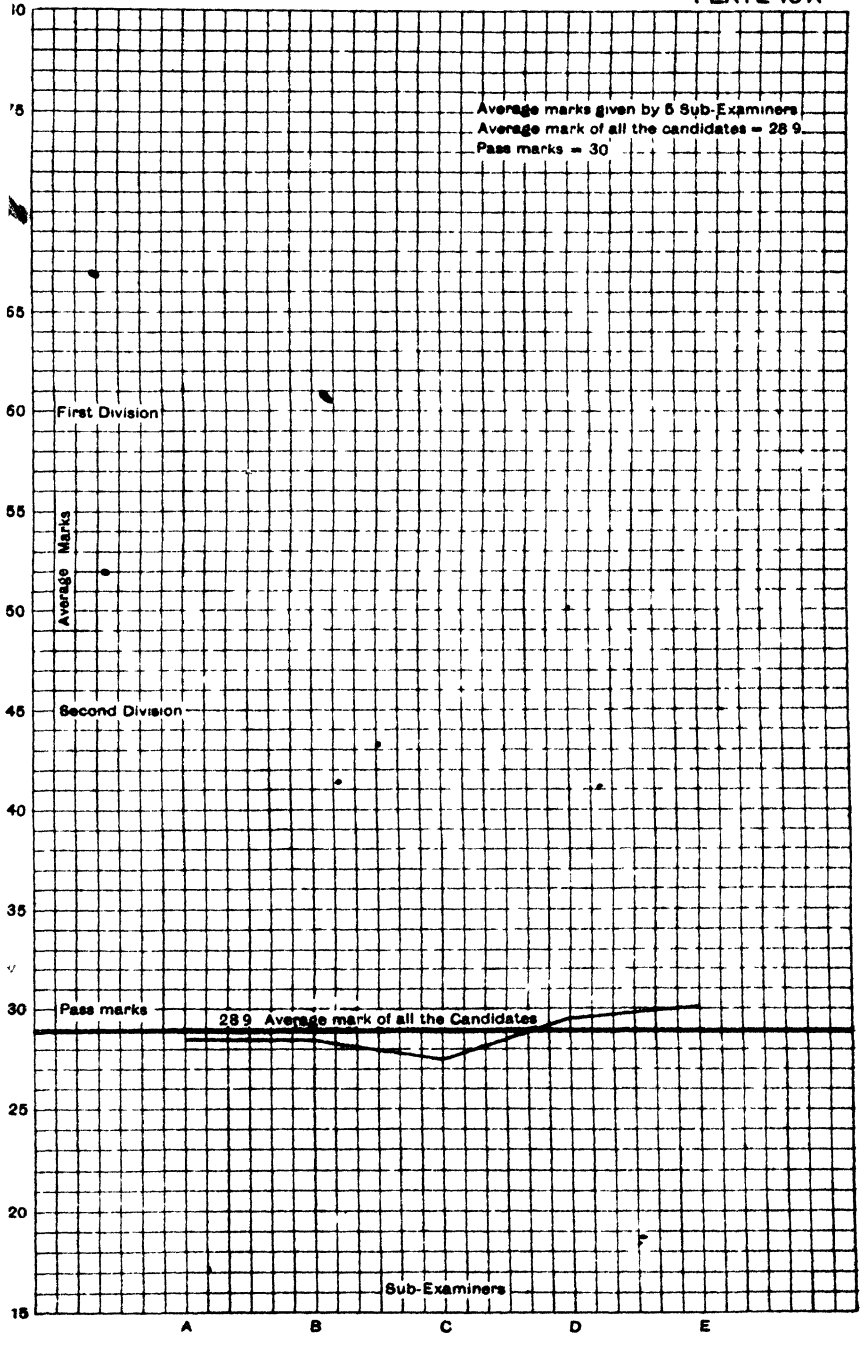
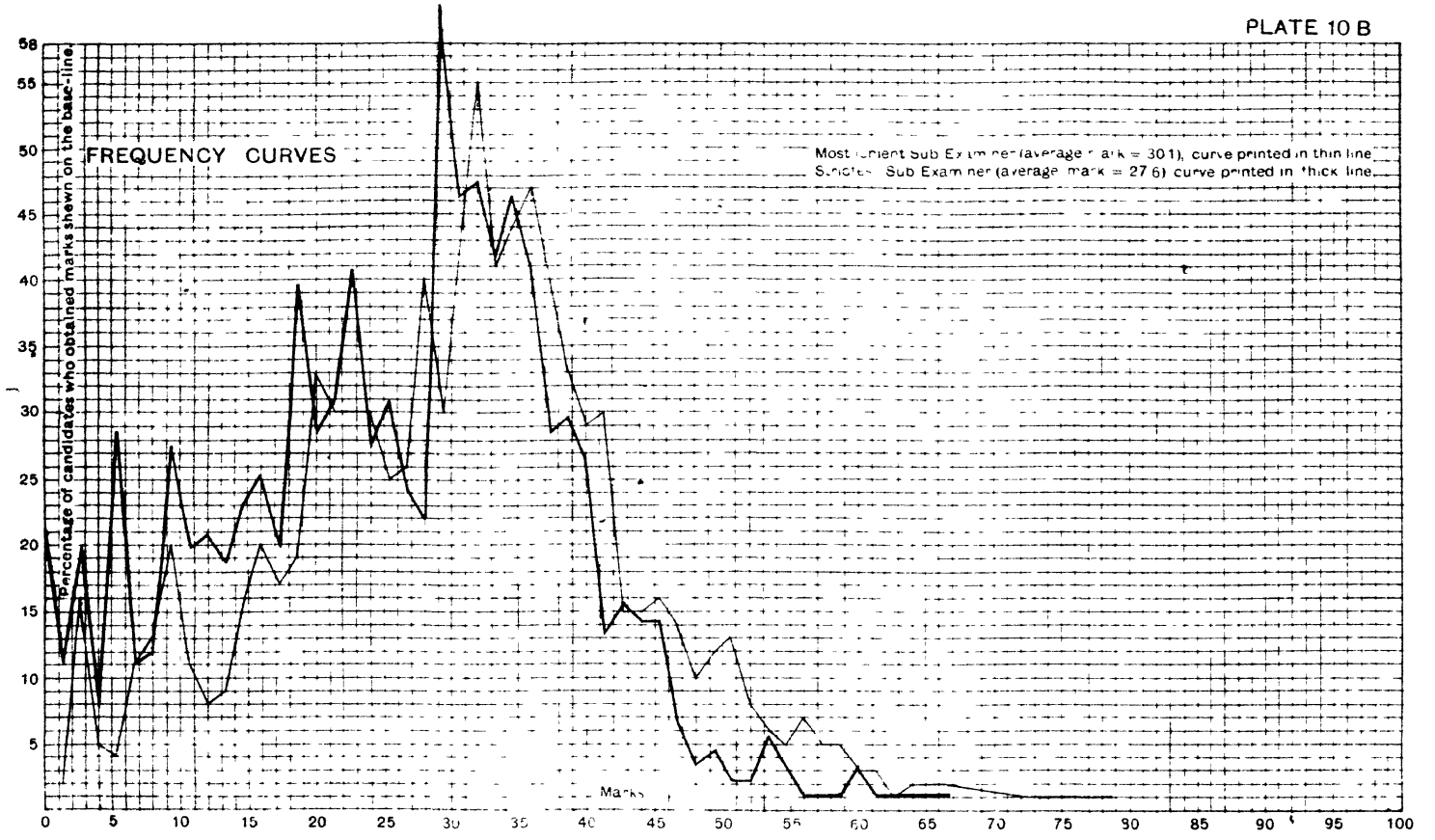


PLATE 10 B


FREQUENCY CURVES
Most efficient Sub Examiner (average mark = 30·1), curve printed in thin line
Smallest Sub Examiner (average mark = 27·6) curve printed in thick line
Percentage of candidates who obtained marks shewn on the base-line.
Marks
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
5 10 15 20 25 30 35 40 45 50 55

CALCUTTA UNIVERSITY

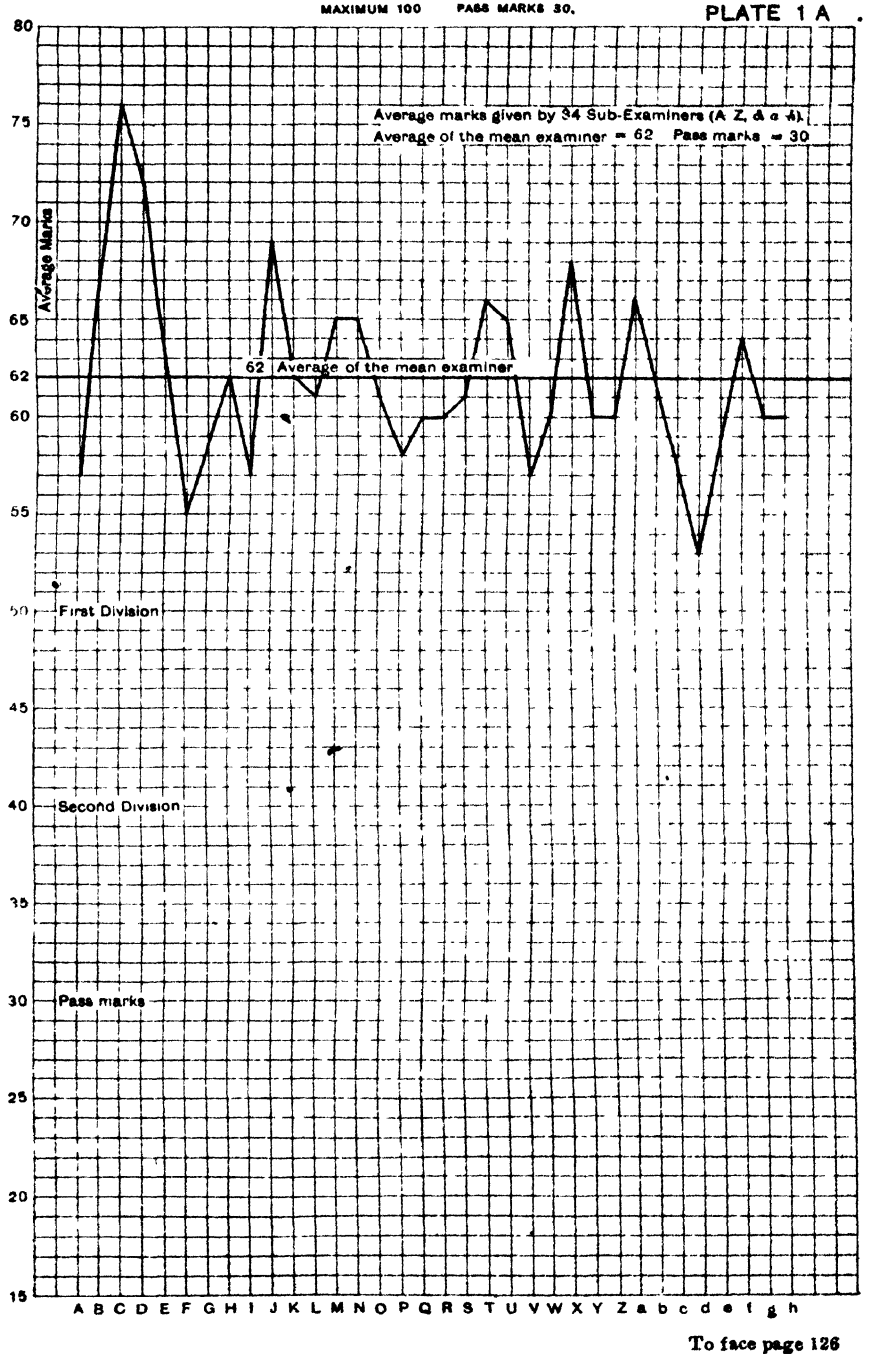
MATRICULATION EXAMINATION (1917)

COMPULSORY MATHEMATICS

AVERAGES AND FREQUENCY CURVES.

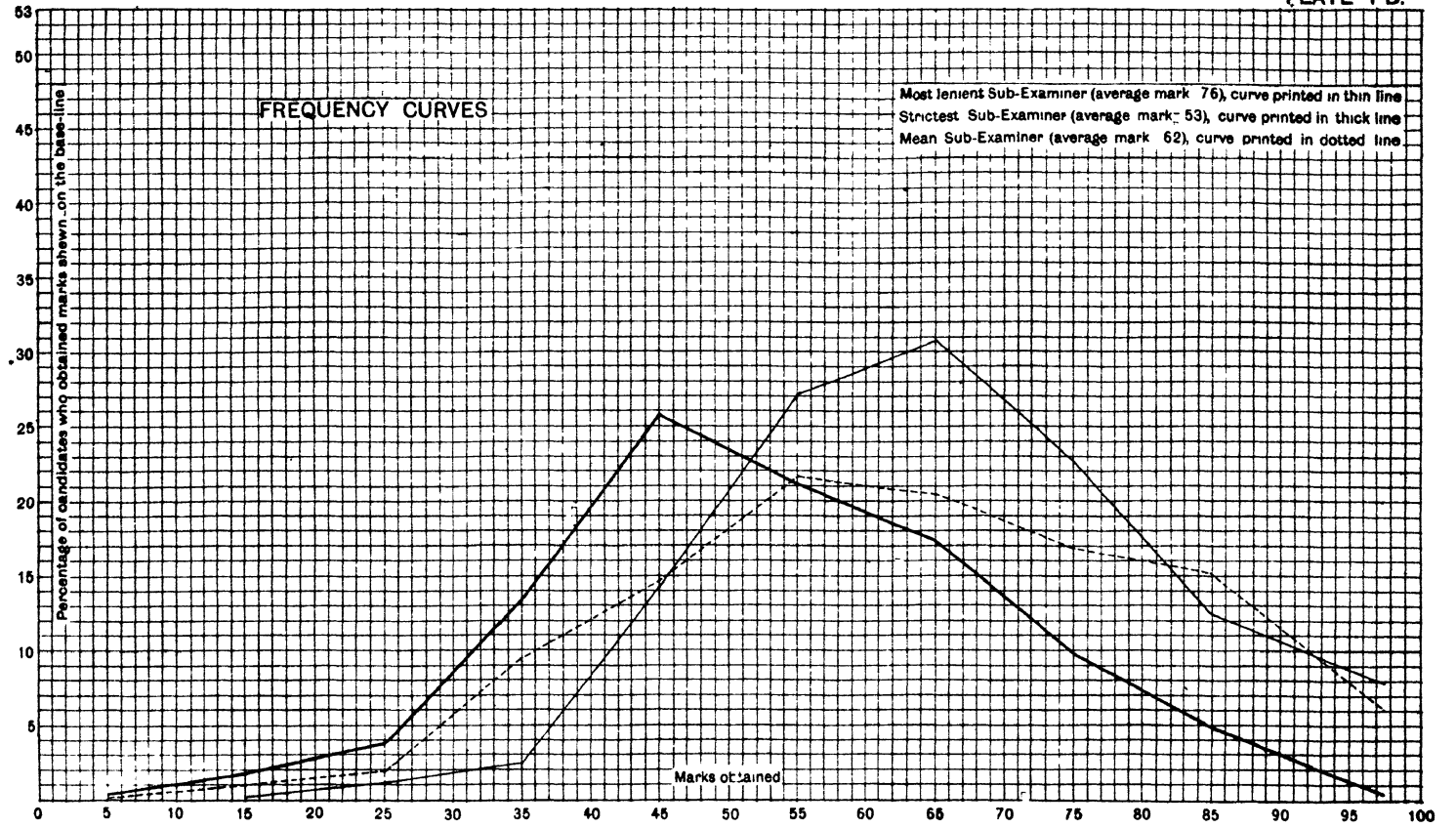
MAXIMUM 100 PASS MARKS 30.

PLATE 1 A



To face page 126

PLATE 1 B.


FREQUENCY CURVES
Most lenient Sub-Examiner (average mark 76), curve printed in thin line
Strictest Sub-Examiner (average mark 53), curve printed in thick line
Mean Sub-Examiner (average mark 62), curve printed in dotted line
Percentage of candidates who obtained marks shewn on the base-line
Marks obtained
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

CALCUTTA UNIVERSITY

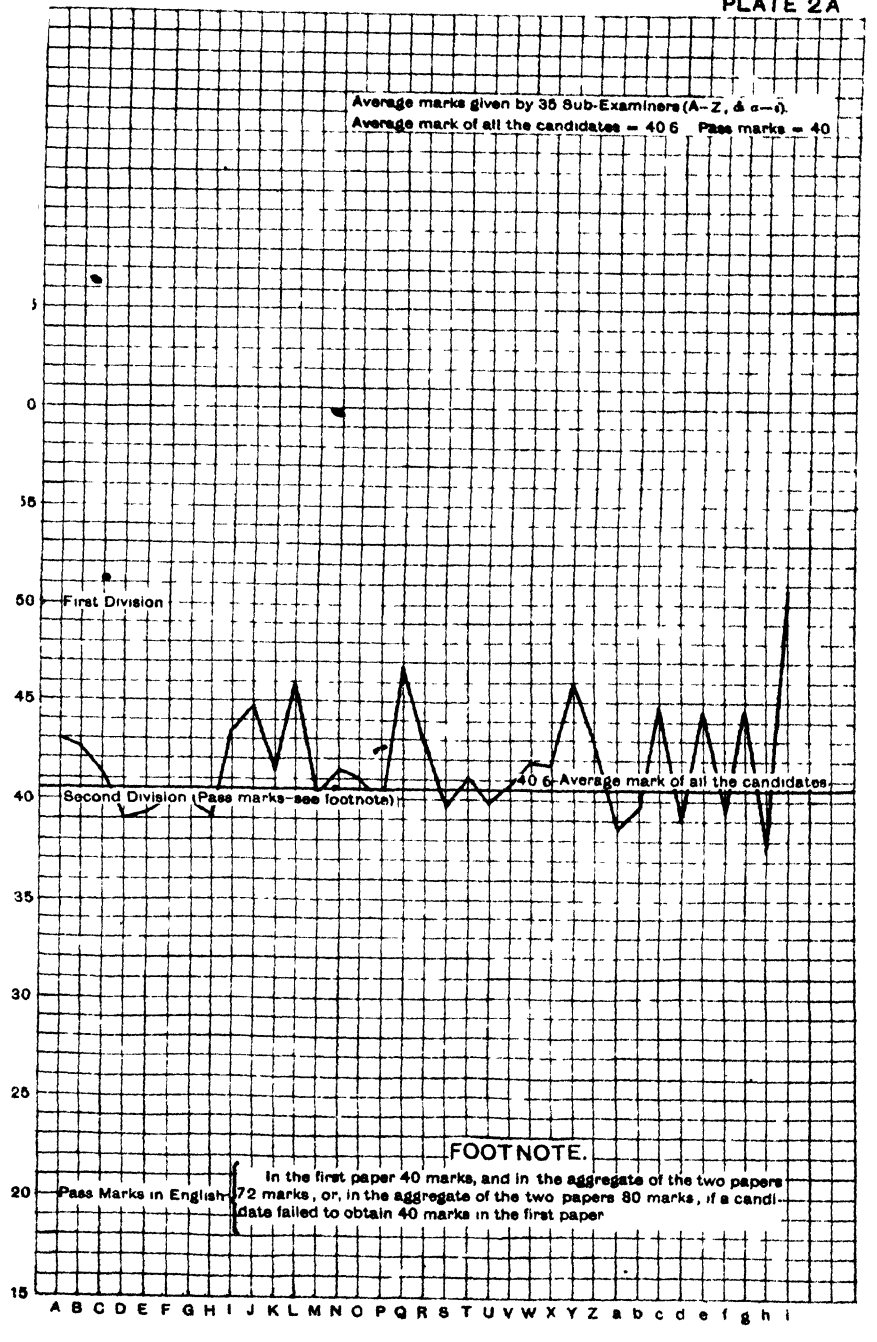
MATRICULATION EXAMINATION (1917)

ENGLISH FIRST PAPER

AVERAGES AND FREQUENCY CURVES.

MAXIMUM 100 PASS MARKS (see foot note)

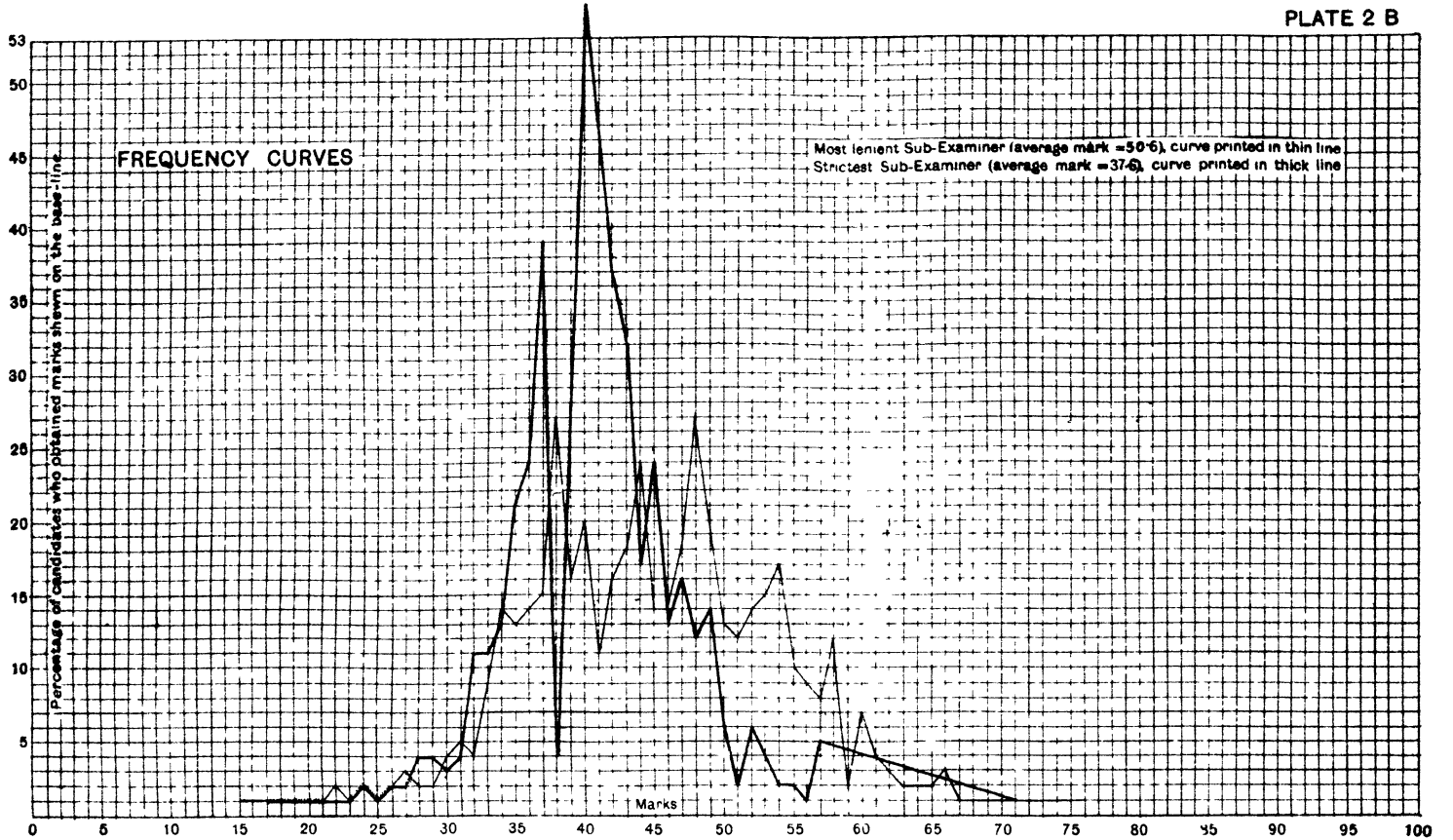
PLATE 2A



FOOTNOTE.

In the first paper 40 marks, and in the aggregate of the two papers 72 marks, or, in the aggregate of the two papers 80 marks, if a candidate failed to obtain 40 marks in the first paper

PLATE 2 B


FREQUENCY CURVES
Most lenient Sub-Examiner (average mark =50·6), curve printed in thin line
Strictest Sub-Examiner (average mark =37·6), curve printed in thick line
Percentage of candidates who obtained marks shewn on the base-line
Marks
0
5
10
15
20
25
30
35
40
45
50
53
55
60
65
70
75
80
85
90
95
100

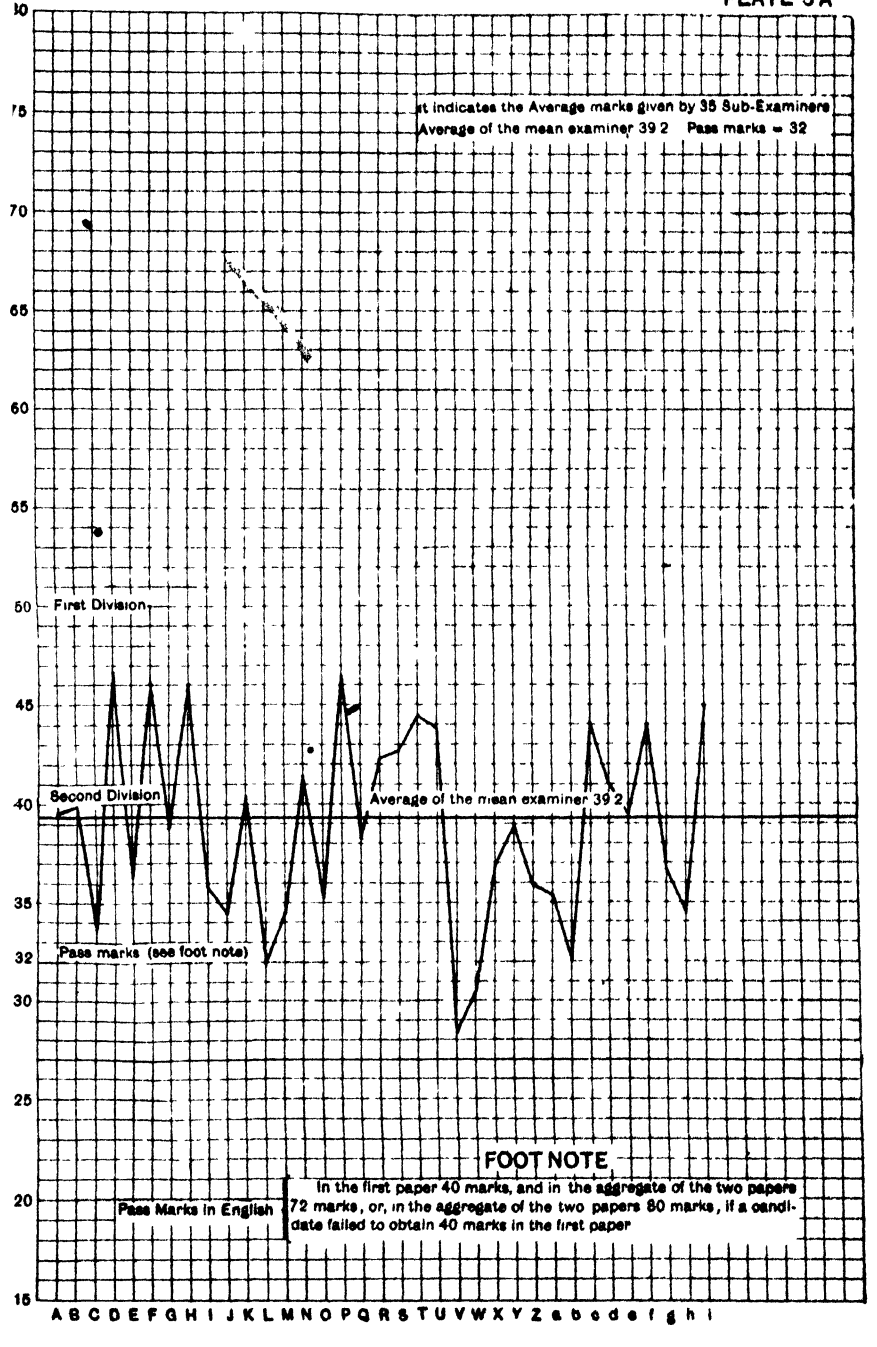
CALCUTTA UNIVERSITY
MATRICULATION EXAMINATION (1917)

ENGLISH SECOND PAPER

AVERAGES AND FREQUENCY CURVES

MAXIMUM 100 PASS MARKS 32

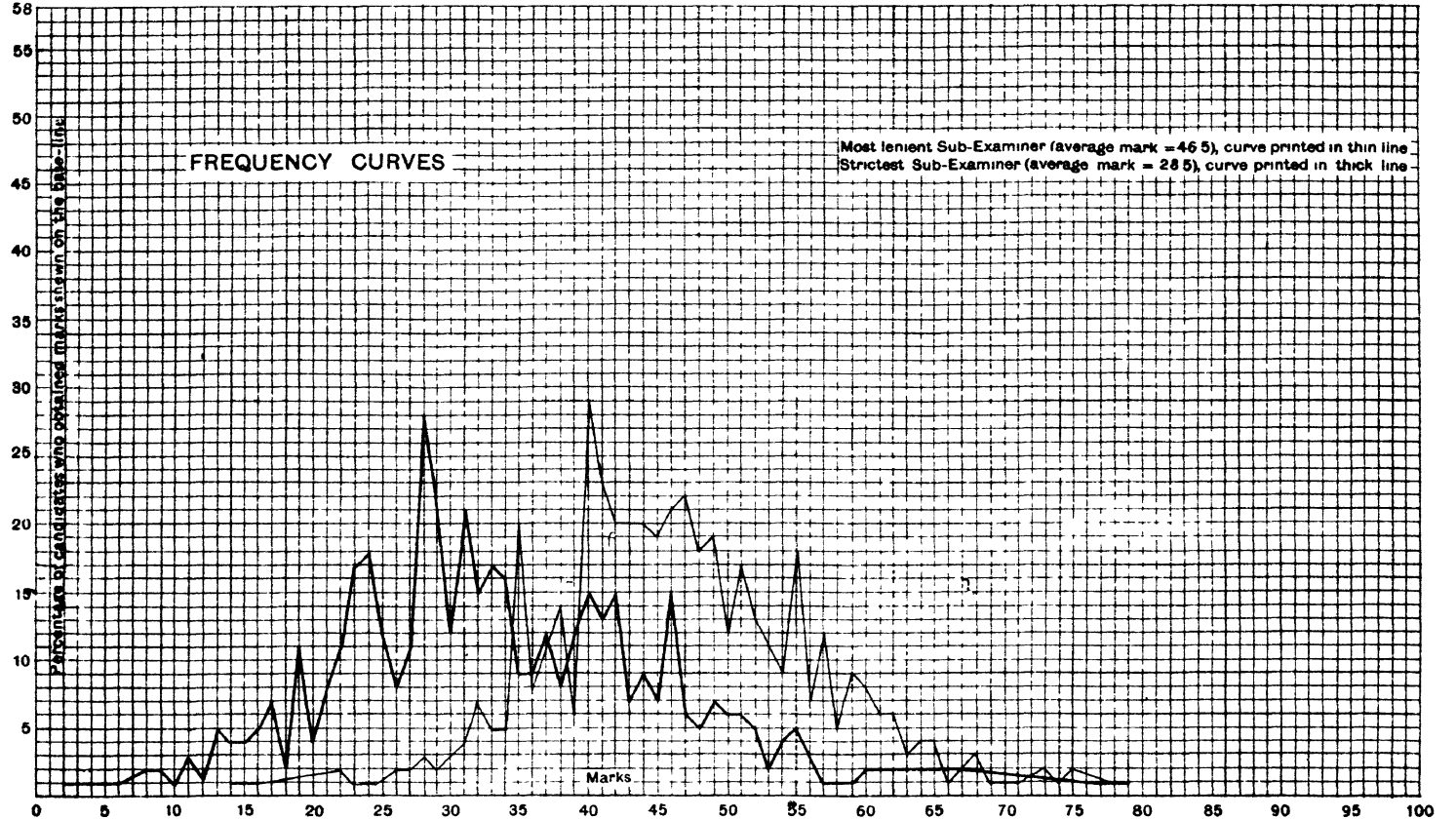
PLATE 3 A



FOOT NOTE

In the first paper 40 marks, and in the aggregate of the two papers 72 marks, or, in the aggregate of the two papers 80 marks, if a candidate failed to obtain 40 marks in the first paper

PLATE 3 B


FREQUENCY CURVES
Most lenient Sub-Examiner (average mark = 46 5), curve printed in thin line
Strictest Sub-Examiner (average mark = 28 5), curve printed in thick line
Percentage of candidates who obtained marks shown on the base-line
Marks
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

PARALLEL EXAMINATION IN ANOTHER PROVINCE

AVERAGES AND FREQUENCY CURVES.

MAXIMUM 100 PASS MARKS 35

PLATE 4 A.

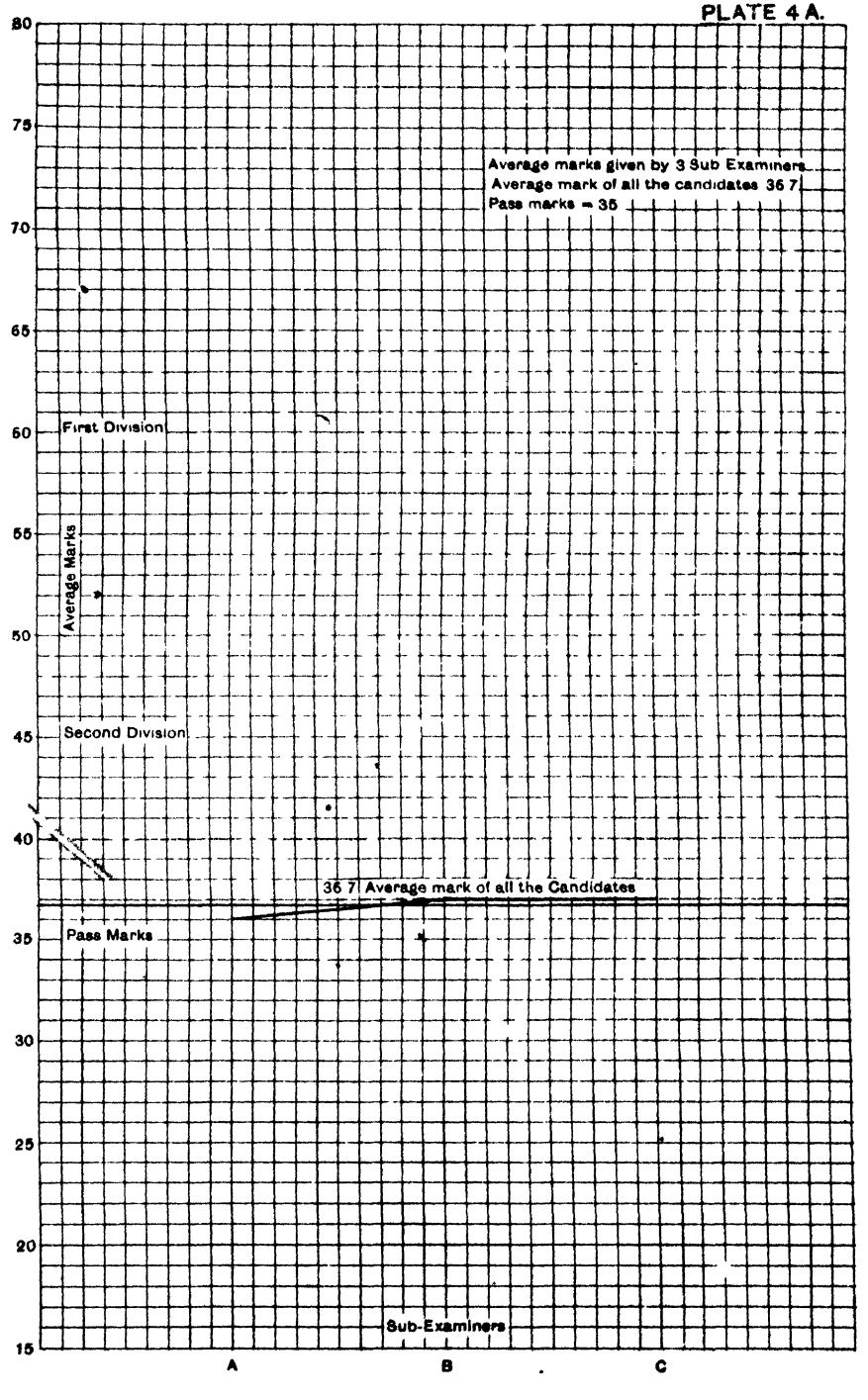
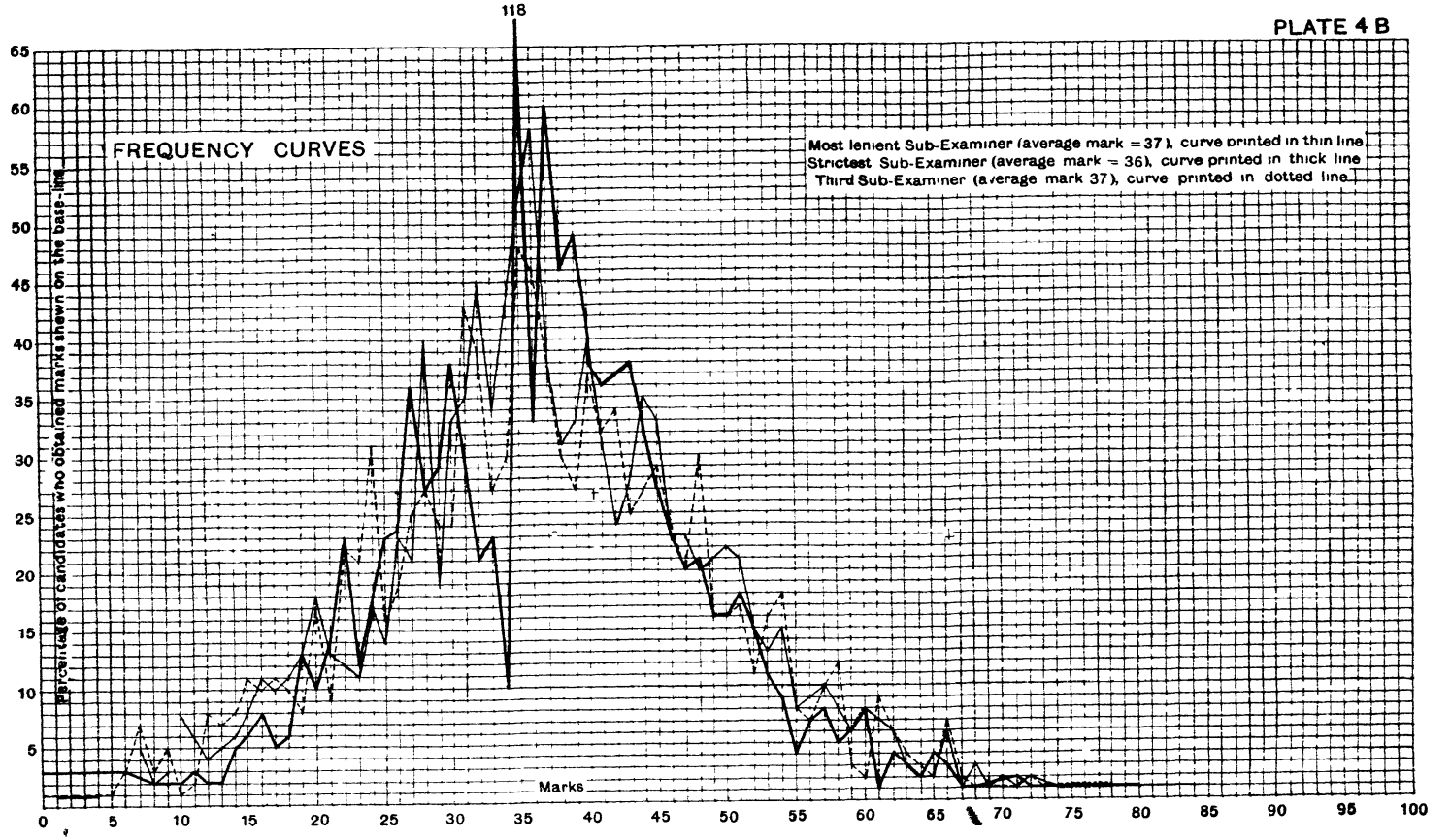


PLATE 4 B


FREQUENCY CURVES
Most lenient Sub-Examiner (average mark = 37), curve printed in thin line
Strictest Sub-Examiner (average mark = 36), curve printed in thick line
Third Sub-Examiner (average mark 37), curve printed in dotted line
118
Percentage of candidates who obtained marks shown on the base-line
Marks
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
5 10 15 20 25 30 35 40 45 50 55 60 65

ALLAHABAD UNIVERSITY

MATRICULATION EXAMINATION

ENGLISH SECOND PAPER

AVERAGES AND FREQUENCY CURVES

MAXIMUM 100 MINIMUM 33

PLATE 5 A

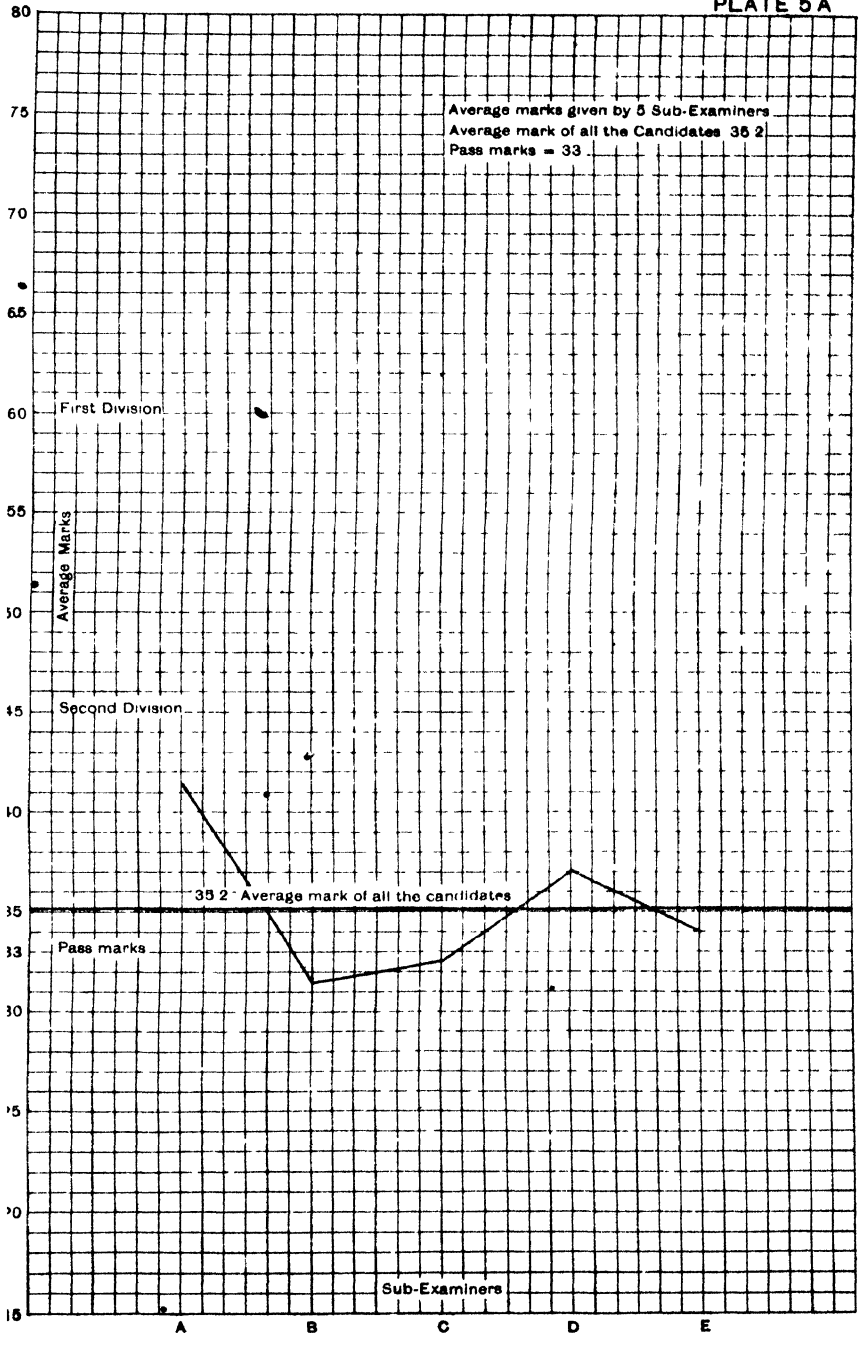
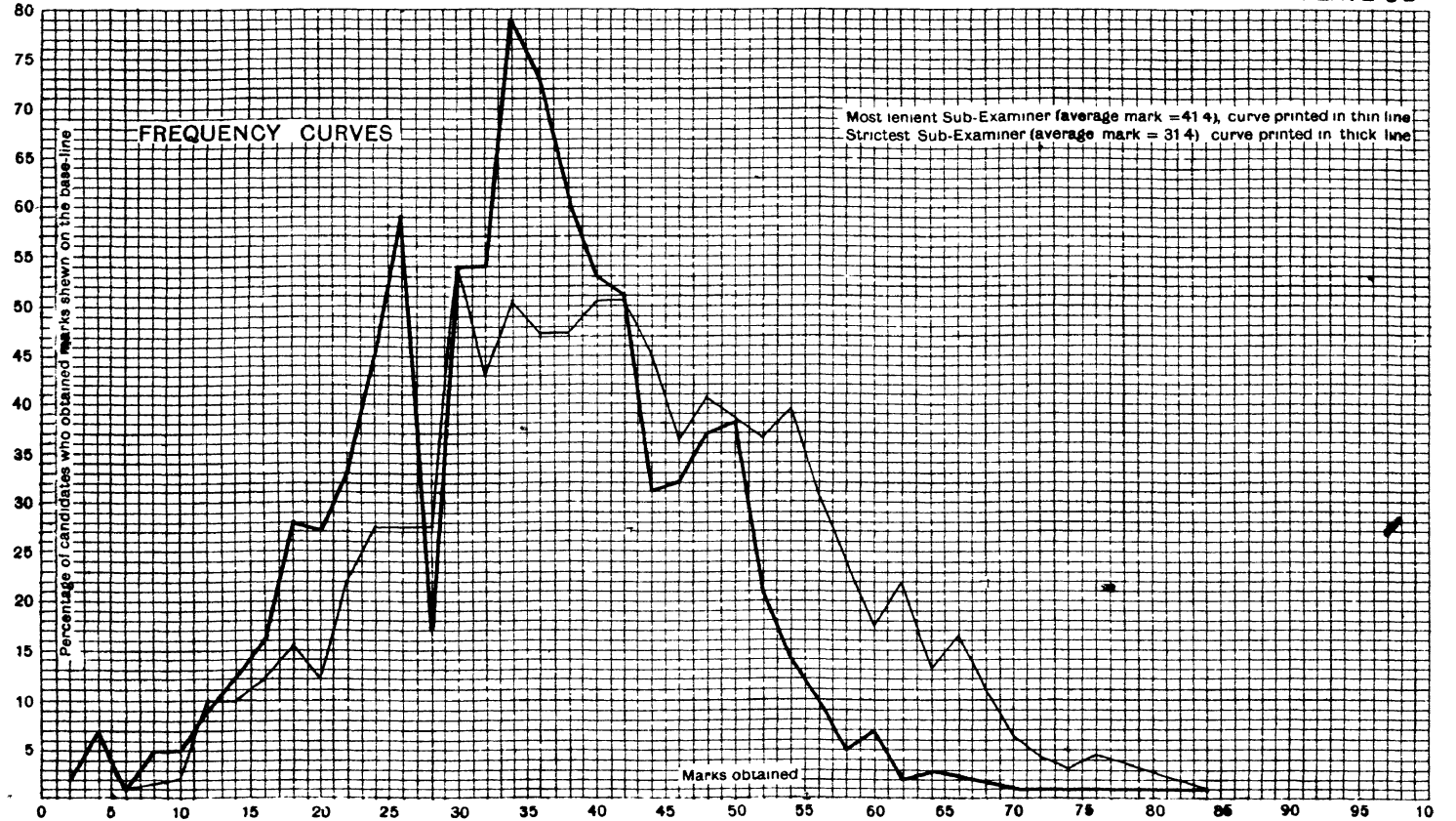


PLATE 5B


FREQUENCY CURVES
Most lenient Sub-Examiner (average mark = 41·4), curve printed in thin line
Strictest Sub-Examiner (average mark = 31·4) curve printed in thick line
Percentage of candidates who obtained marks shewn on the base-line
Marks obtained
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
10

ALLAHABAD UNIVERSITY

MATRICULATION EXAMINATION

ENGLISH THIRD PAPER

AVERAGES AND FREQUENCY CURVES

MAXIMUM 100 MINIMUM 33

PLATE 6 A.

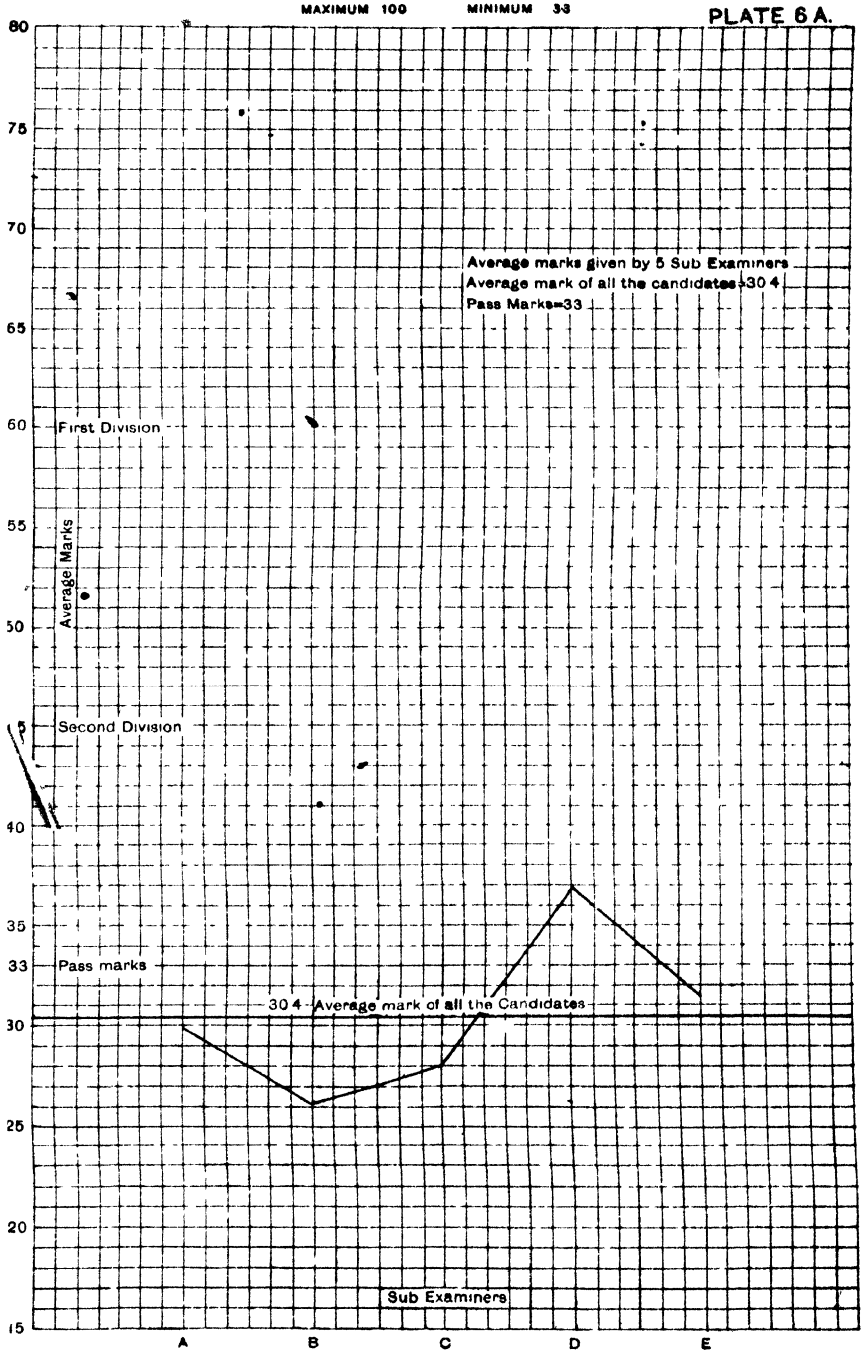
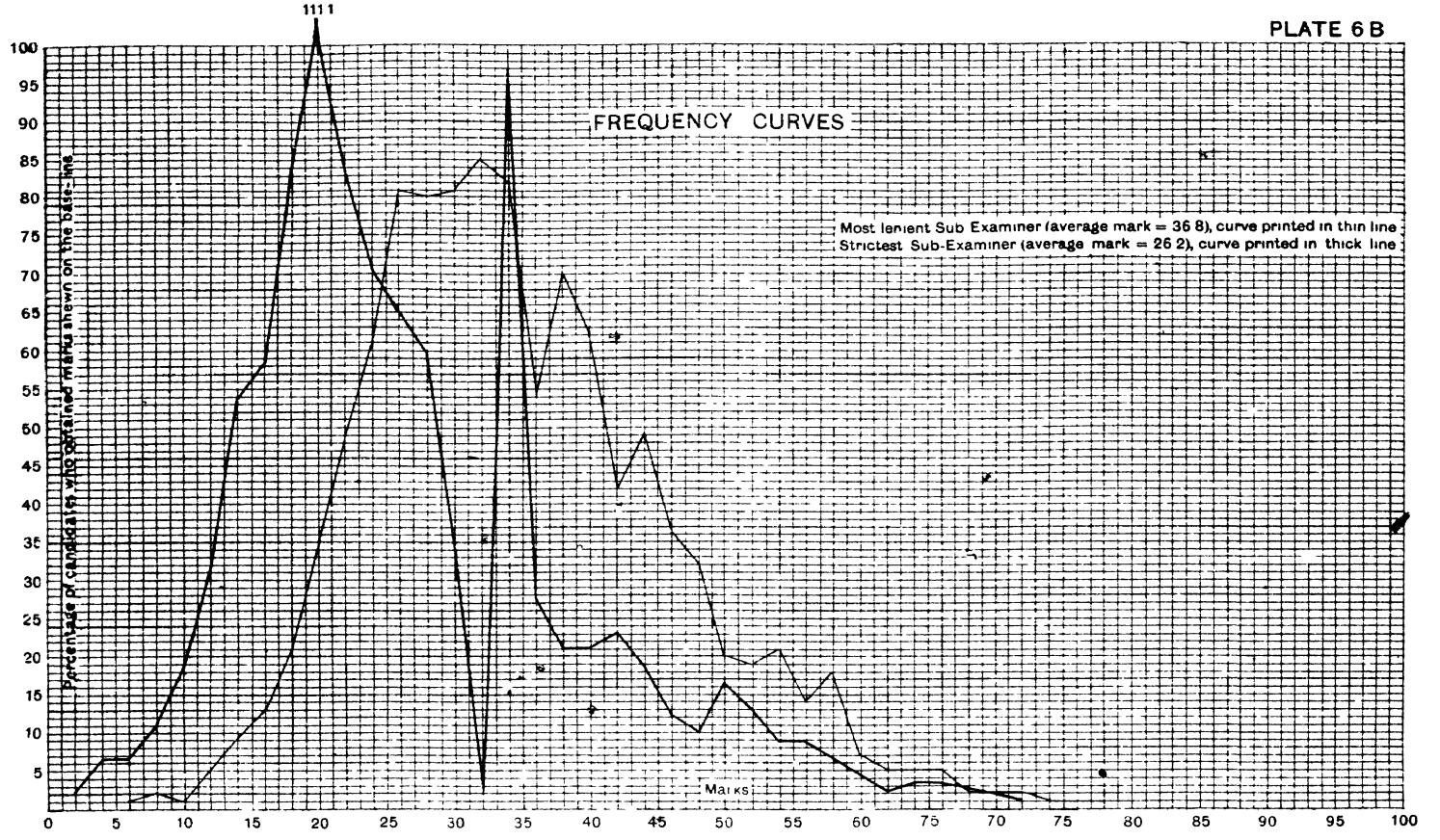


PLATE 6 B


FREQUENCY CURVES
Most lenient Sub Examiner (average mark = 36 8), curve printed in thin line
Strictest Sub-Examiner (average mark = 26 2), curve printed in thick line
Percentage of candidates who obtained marks shown on the base-line
Marks
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
5
10
15
20
25
30
35
40
45
50
55
60
75
70
75
80
85
90
95
100

ALLAHABAD UNIVERSITY

MATRICULATION EXAMINATION

HISTORY (COMPULSORY SUBJECT)

AVERAGES AND FREQUENCY CURVES

MAXIMUM 100 MINIMUM 30

PLATE 7A.

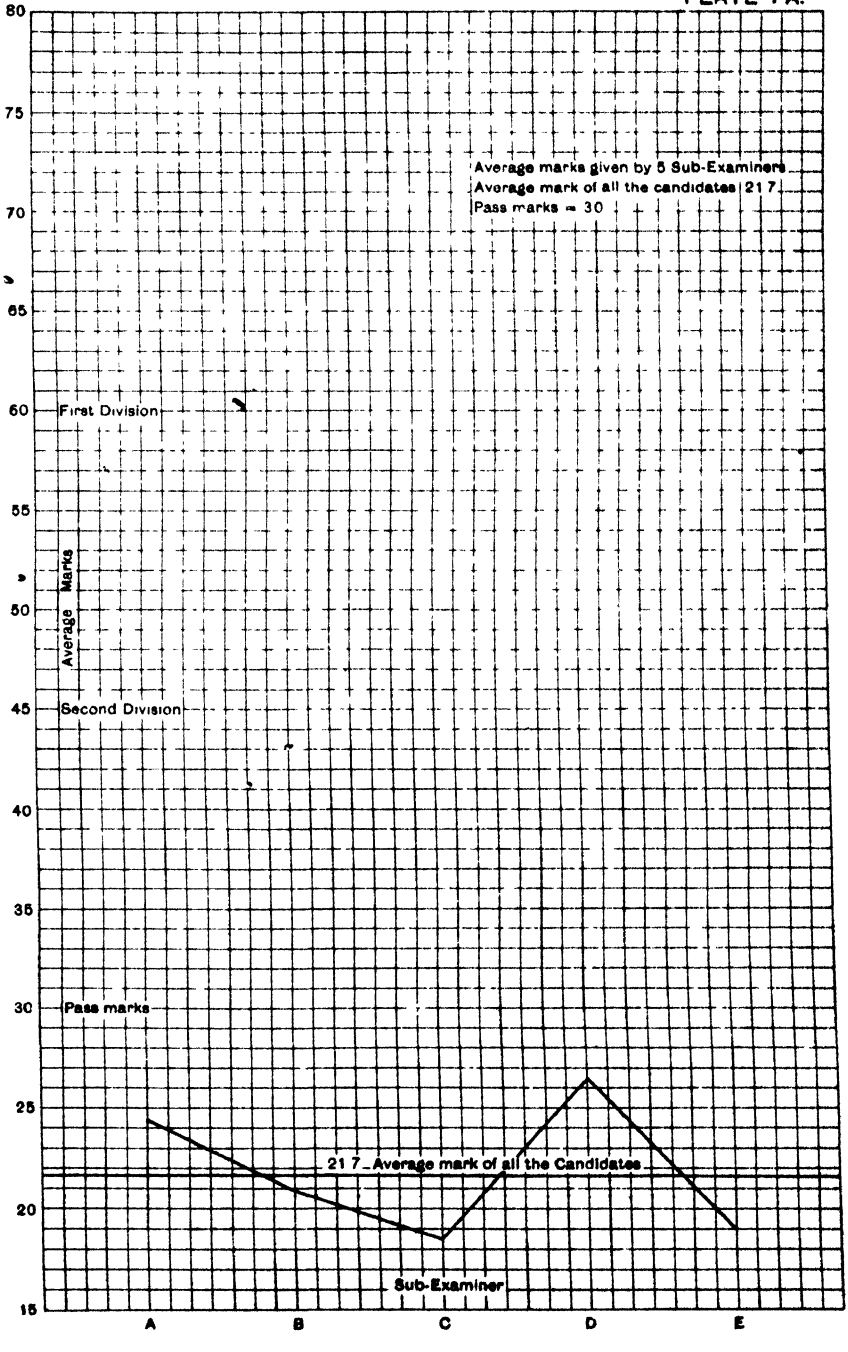
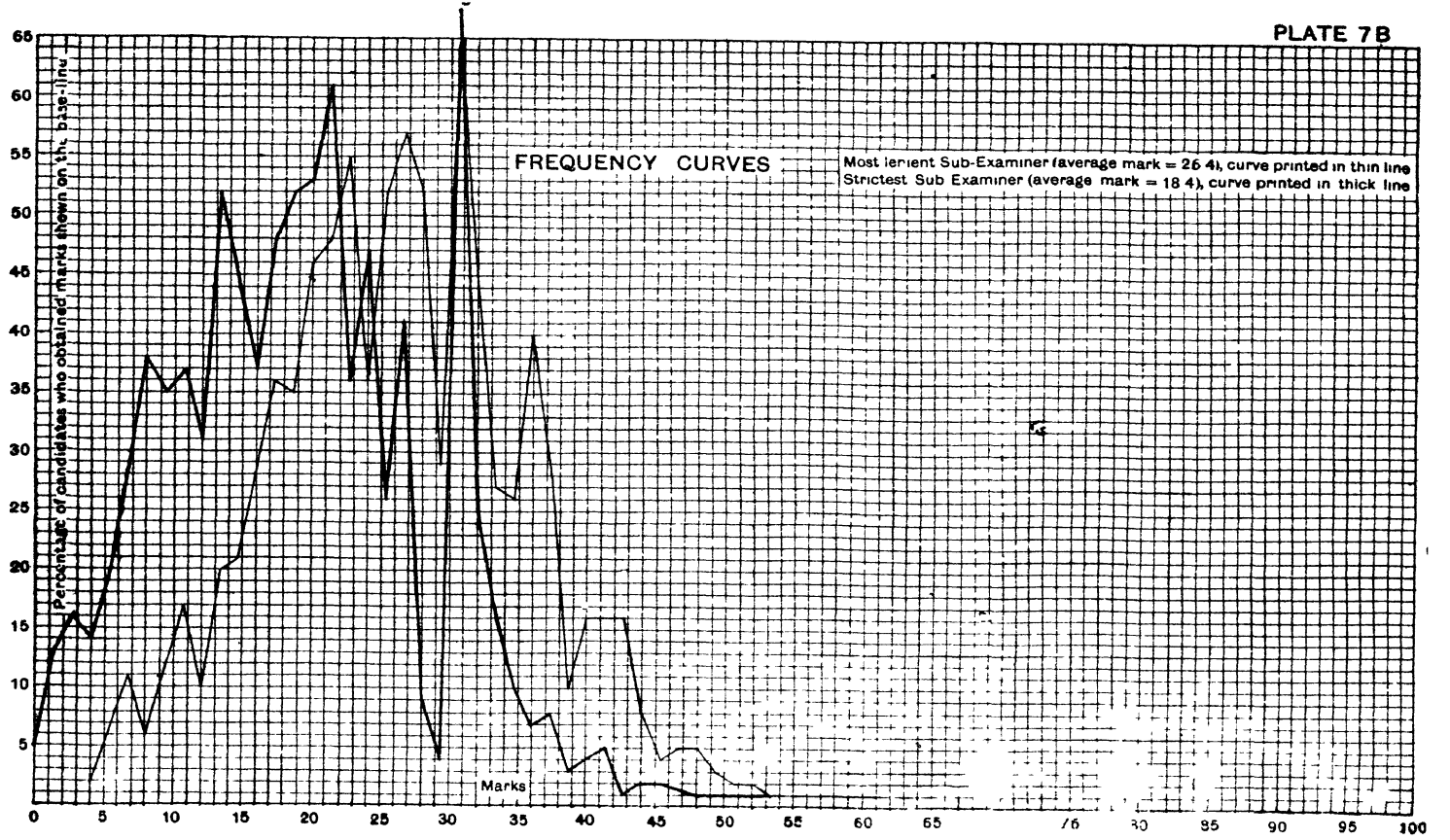


PLATE 7B


FREQUENCY CURVES
Most lenient Sub-Examiner (average mark = 26 4), curve printed in thin line
Strictest Sub Examiner (average mark = 18 4), curve printed in thick line
Percentage of candidates who obtained marks shown on the base-line
65
60
55
50
45
40
35
30
25
20
15
10
5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
80
85
90
95
100
Marks

ALLAHABAD UNIVERSITY

MATRICULATION EXAMINATION

GEOGRAPHY (COMPULSORY SUBJECT)

AVERAGES AND FREQUENCY CURVES

MAXIMUM 100 MINIMUM 30

PLATE 8 A

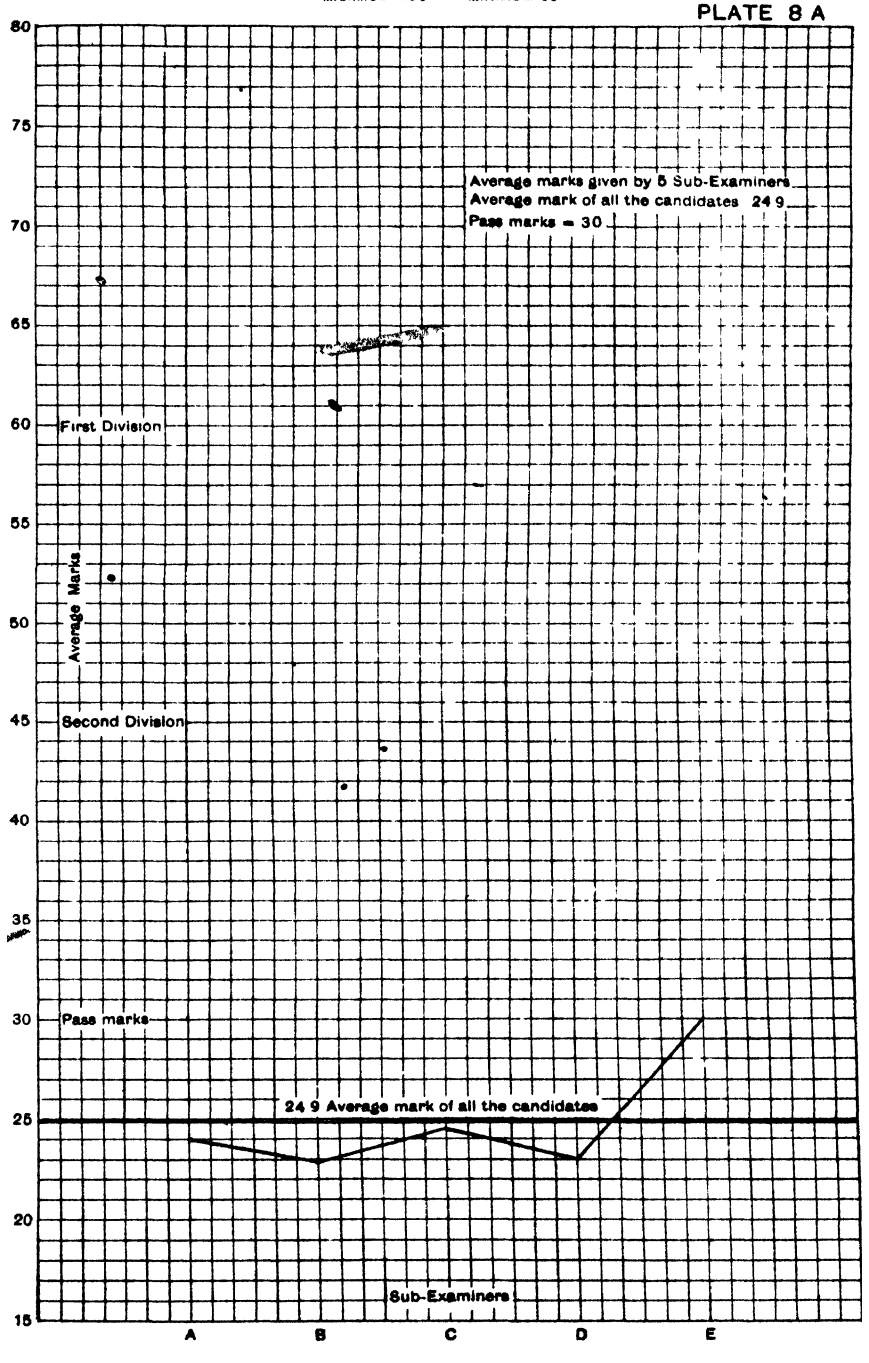
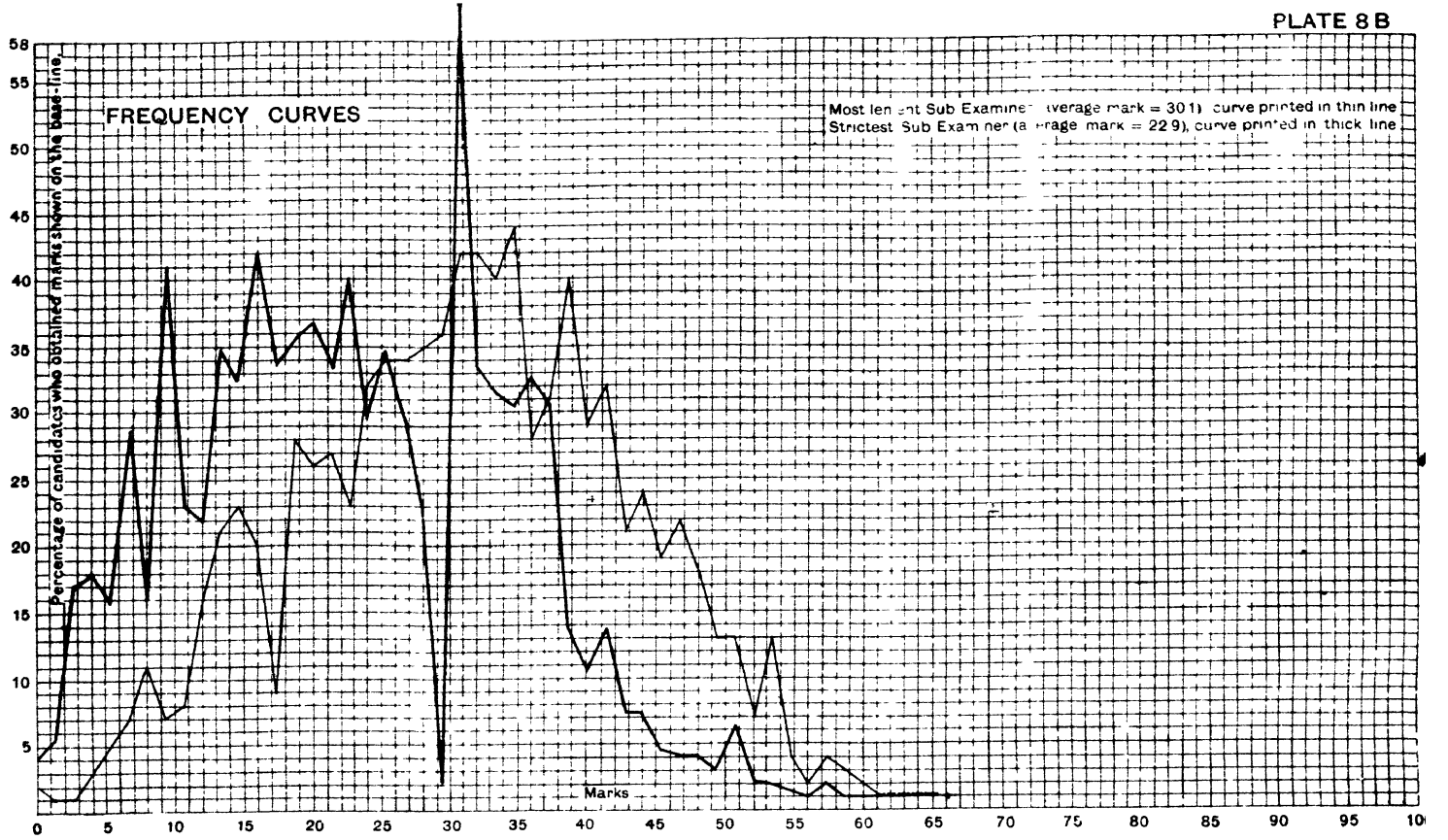


PLATE 8 B


FREQUENCY CURVES
Most lenient Sub Examiner (average mark = 30·1) curve printed in thin line
Strictest Sub Examiner (average mark = 22·9), curve printed in thick line
Percentage of candidates who obtained marks shown on the base-line.
Marks
58
55
50
45
40
35
30
25
20
15
10
5
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

ALLAHABAD UNIVERSITY

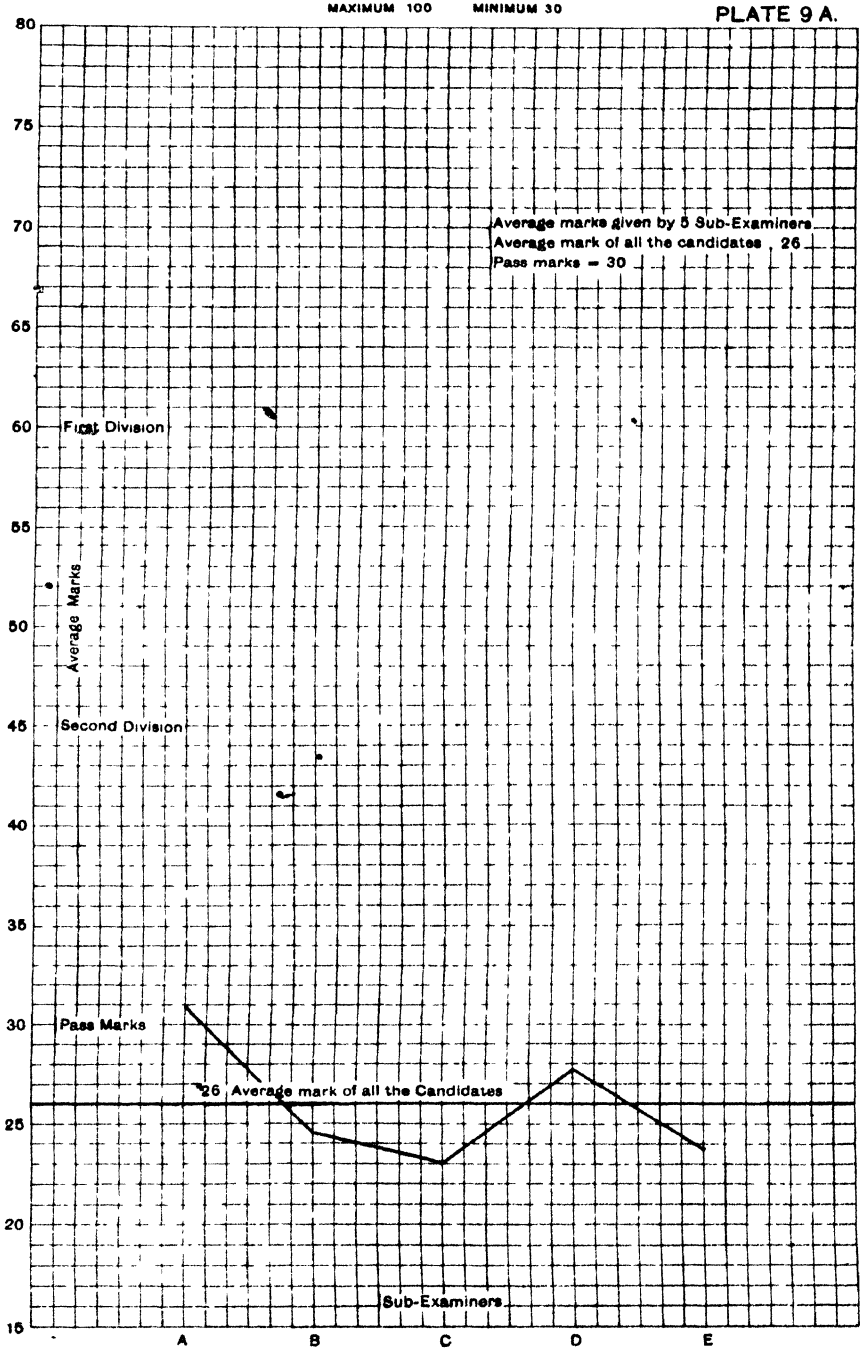
MATRICULATION EXAMINATION

MATHEMATICS FIRST PAPER (COMPULSORY SUBJECT)

AVERAGES AND FREQUENCY CURVES

MAXIMUM 100 MINIMUM 30

PLATE 9 A.



exceptionally poor school fell to a particular sub-examiner his average mark would be correspondingly raised or lowered, apart from his 'personal equation.' The probability of such an occurrence is, of course, diminished as the number of candidates allotted to each sub-examiner is increased [1]

7. We have expressly chosen only compulsory papers for our examples.

8 For the sake of ready comparison, we have altered the scale of marks, where necessary, so as to correspond to a maximum mark of 100 in all cases.[2] We add below certain comments on the various graphs

9 *Compulsory Mathematics, Calcutta University Matriculation, 1917* — (Plate I). The figures and corresponding graphs show certain notable features. The pass-marks on this paper was 30 , the average mark of all the candidates was 62,[3] a high figure for an examination of this kind.

The average mark of the strictest examiner was 53, that of the most lenient 76 The variation is a very large one, the highest average being 43·4 per cent. in excess of the lowest. We have also to draw attention to the fact that of the 16,088 candidates only 22 failed in mathematics alone , in 1918 out of 14,675 only 39 failed in mathematics alone It is clear from the figures, as well as from the study of the graphs, taken in connexion with the general quality of the secondary schools, that the standard of the examination is a low one A severer test would probably yield a frequency curve more nearly corresponding to the *image* of the actual curve.

The steepness of the curves of sub-examiners to the left of the vertex in the case is of both the most lenient and the strictest sub-examiner also remarkable

10. *English, Calcutta University Matriculation, 1917* —(Plates II and III) It is noticeable that the average arks of all the candidates (40 6 in Paper I and 39 2 in Paper II) are much lower than in the case of mathematics

The number of candidates in English alone, failed *i e* , 1,474 in 1917 and 2,751 in 1918, is in marked contrast to the corresponding figure for mathematics *viz* , 22 and 39

For Paper I the average mark of the strictest sub-examiner was 37·6 and the average mark of the most lenient was 50·6 the corresponding figures for Paper II were 28 5 and 46 5

The variations in the marking of the sub-examiners are almost as great as in mathematics

11 *A School-Leaving Examination* —(Plate IV) We have prepared for the sake of comparison the frequency curves of three sub-examiners who each corrected 1,000 papers at a School-Leaving Examination under the daily supervision of a head-examiner It will be seen how closely the three curves

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[1] My personal experience as head-examiner leads me to believe that the distribution of good and bad candidates becomes fairly even in different batches when the total number in a batch approaches 500 —Z U A

[2] We desire to record our thanks to Mr Aziz Bakhsh, M A , and Mr Abu Ali Sabir, of the M. A O College, Aligarh for their great kindness in checking the statistics and preparing the graphs

[3] The minimum fixed for the 1st Division is 50 *per cent* of the aggregate marks

correspond in this case The pass marks at this examination were 35, the average mark of all the candidates was 36 7 It is interesting to note that the average mark for all the candidates was only 1·7 higher than the pass mark The averages of the three sub-examiners were 36, 37, and 37 respectively

12 *Allahabad Matriculation Examination* —(Plates V to X) It will be seen that the variations between different sub-examiners are about the same as those in Calcutta, except in the case of mathematics

In mathematics and in English the average mark is a little higher than the pass mark , in history and geography it is considerably lower

13 This note does not pretend to be in any way exhaustive even of the data furnished We desire to draw attention to the recommendation made in Chapter XL that every University should have a Board of Examinations including a statistician as one of its members to scrutinise and review the results of the previous examinations from time to time

It is clear from the figures given in paragraph 11 above that much may be done by the supervision of a head-examiner to reduce the differences between different sub-examiners and to ensure a greater equality of treatment of the different candidates But the supervision of a head-examiner will not ensure constancy of results from year to year unless each new head-examiner consults his predecessor in office before framing the instructions for his own sub-examiners

Perfect constancy is of course not desirable As the purpose of an examination is altered to meet new ideals and new needs, the methods of marking must be altered correspondingly

B —On the Limits of Error in the Marking of the Examination Papers and Certain Practical Consequences arising therefrom by Dr Zia-ud-din Ahmad

1. In the previous note by Mr Hartog and myself on frequency curves of sub-examiners, we have directed attention to certain examination problems which need further statistical investigation In the present note I wish to draw attention to the unavoidable errors of marking referred to in the report. Professor F Y Edgeworth of Oxford University has drawn attention to this subject in his memoirs[1] in the Statistical Society A readable summary of Edgeworth's memoirs has been given by Mr Hartog in his recent book on examinations,[2] in which he has also discussed other important problems connected with the examinations, including the theory of Competitive Examinations

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[1] (*i*) Journal of Royal Statistical Society, Vol II, pp 599-635 (1888)
(*ii*) The elements of chance, Vol LIII, pp 460-475 and 644 663 (1890)
(*iii*) On problems in probabilities, Phil Magazine, August (1890)

[2] Examinations and their relation to culture and efficiency printed by Constable and Co , Ltd·

2 The object of this note is not to comment on the general problems of examinations, but to draw attention to the probable errors in a well-conducted examination The subject has not completely been investigated in a scientific way. The only published statistical investigations are contained in the 3 memoirs of Professor Edgeworth referred to above We propose to study his investigations with reference to the system of examinations prevalent in India

3 In order to compare the marks and to determine various errors it is necessary to fix a standard. The deviation from the standard would be termed the error The standard called the 'true mark' may be defined by the following postulate · "The true or standard mark of any piece of work is the average of the marks given by a large number of competent examiners equally proficient in the subject and instructed as to the character and purpose of the examination"[1] In order to compare the difference of the standards of various sub-examiners of the same paper we take the mean of the marks given by various sub-examiners all of whom are supposed to be working under the instructions and guidance of the same head examiner.

4 (*a*) The mathematical formulæ for determining the aggregate error If the errors due to various causes be a, b, c, d, then the aggregate error due to the combination of the four different causes will be $\sqrt{a^2+b^2+c^2+d^2}$

(*b*) If n different incidents each of which has an error x *per cent* be taken together then the aggregate error of all the incidents taken together is $\frac{x}{\sqrt{n}}$ per cent Thus the aggregate error in the marking of a paper of 10 questions in each of which there is an error of 5 per cent in marking, will be $\frac{5}{\sqrt{10}}$ per cent

5 The following types of 'error' occur in every examination and are unavoidable however well the examination may be conducted The amount of error is taken from Professor Edgeworth already quoted [2]

(*a*) Errors due to *minimum sensile*. This is the error due to the difference of perception of excellence, whose magnitude varies with the subject, being least in mathematics and perhaps greatest in composition Suppose an examiner has given 20 marks for a piece of work you cannot say with certainty that he might not have given 19 or 21 The error therefore is 5 per cent If there be 8 questions in a paper then the probable error due to the *minimum sensible* will be $\frac{5}{\sqrt{8}}$ or 1 8 per cent

(*b*) Deviation or error due to the personal equation or idiosyncracies of an examiner; it is expressed in two ways.—(*i*) the taste of the examiner in the answers being put in a particular form; (*ii*) the difference in the scale. This cause is much more serious than perception of excellence The error due to

[1] Edgeworth.

[2] See also Mr. Hartog on Examinations, pp. 106-111

this cause is sometimes very large. Mr Edgeworth by comparing the large statistics has fixed 10 per cent to be the error in the marking of a single question due to this difference in taste Suppose there are n questions to be examined in a paper then the aggregate error in that paper due to the idiosyncracies of the examiner will be $\frac{10}{\sqrt{n}}$ per cent.

(*c*) The error or deviation due to the difference of scale adopted by various sub-examiners. The error is estimated to be 4·5 per cent. in each paper. This error is not calculated for each question but is reckoned on the paper as a whole.

(*d*) *The deviation due to speed* —There is another source of error depending on the fact whether the papers have been looked through leisurely or with speed, and the error due to this cause is estimated to be 25 per cent Suppose there are 8 questions in a paper the deviation due to this cause will be $\frac{25}{\sqrt{8}}$ per cent.

(*e*) The errors due to the fatigue of the examiner. The amount of error due to this cause is from 1 to 2 per cent and may be taken at 1 5 per cent. for each paper.

(*f*) Besides these five causes there are various other causes, such as the temper of the examiner at the time of examining the paper, the temper of the examinee at the time of writing and the luck of the examinee in getting questions in which he is particularly interested, etc , in which the deviation is abnormal and cannot be put in numerically. No account of these discrepancies is taken in our calculations.

6. *The aggregate error due to the combination of all the courses* — Suppose that in an examination in one subject there are two papers of 50 marks each in a subject in each of which the students are expected to answer 8 questions which is the usual average for a 3 hours' paper. In this case the number of papers' is 2 and the aggregate questions are 16. (*a*) The error due to minimum sensible is $\frac{5}{\sqrt{16}}$ or 1 25 per cent. (*b*) error due to taste is equal to $\frac{10}{\sqrt{16}}$ *i e* , 2 25 per cent. (*c*) error due to the difference in scale is $\frac{4\,5}{\sqrt{2}}$ per cent *i e* , about 3 per cent. (*d*) error due to speed $\frac{25}{\sqrt{16}}$ *i e* , 6 25 per cent (*e*) error due to fatigue is $\frac{1\,5}{\sqrt{2}}$ *i e* , about 1 per cent The aggregate due to all the causes including the error due to speed is 7 5 per cent , or assuming that all the papers have been leisurely looked into and there is no error due to the speed, the aggregate of the errors due to other causes will be 4 1 per cent Thus if a student whose ideal mark as defined in paragraph 3, is 30, might, owing to all these errors, get neglecting fractions either 28 or 32 If reasonable care has been taken to avoid the deviation due to speed then the student, whose true mark should be 30, may get either 29 or 31

7. *The errors due to the foregoing causes in the aggregate of a number of subjects.*—Suppose in a particular examination there are altogether 8 papers

and in each paper 8 questions are expected to be done by candidates, then the aggregate errors due to the five causes mentioned above would be $\frac{5}{\sqrt{64}}$, $\frac{10}{\sqrt{64}}$, $\frac{4\cdot5}{\sqrt{8}}$, $\frac{25}{\sqrt{64}}$ and $\frac{1\cdot5}{\sqrt{8}}$ per cent, respectively. The aggregate error due to all these causes including speed is $3\frac{3}{4}$ per cent, and excluding speed is about 2 per cent

8 The determination of the order of merit by the aggregate marks awarded by a group of examiners on the marking of answer papers is not possible within certain limits of marks, the limits depending upon the number of questions. the number of papers and the total aggregate marks. The order of merit of the candidates whose marks lie within the limits should be determined from considerations other than examination results The limiting marks should be calculated for each examination

9. *Determination of the order of merit* —Suppose that in the examination referred to in paragraph 7, the first student has actually obtained 350 marks then the error at the rate of $3\frac{3}{4}$ per cent, would be 12 5, then his true mark may be reduceable by 12 and they may be made 338. The second man who has obtained 339 or more may possibly be the best of the two As a matter of fact, it would be impossible to determine precisely the order of merit of the students who have obtained marks between 327 and 350 If one student has obtained 350 and another 325 marks then the true marks of the one will probably be greater than the true marks of the other But no such conclusion can be drawn, if the second man obtained 328

12 *The minimum required for passing an examination* —In a well conducted examination in which there are four subjects and in each subject there are two papers of 50 marks each and a student is expected to obtain 132 marks or 33 per cent, in the aggregate, the error is 3 and it is 5 in the other case

By these considerations we have come to the conclusion that a student who failed in the above examination by not more than one mark in two subjects and by not more than 2 in the aggregate, may have his 'true' marks within the minimum required, and a student who has failed by not more than 2 marks in 2 subjects should have his papers re-examined for detection of errors due to speed The grace marks allotted in some of the examinations and which we have discussed in Chapter XVII of the report are really the compensation in one subject due to the efficiency of another subject and they are not considered in this note

APPENDIX XIV.

SUMMARY OF THE REPORT OF A CONFERENCE HELD AT SIMLA ON 20TH AND 21ST AUGUST 1917 TO CONSIDER THE QUESTION OF ENGLISH AND VERNACULAR TEACHING IN SECONDARY SCHOOLS

The members of the Conference were as follows —

The Hon'ble Sir Sankaran Nair, KT., C.I.E., B.A., B.L., Member of the Viceroy's Executive Council

The Hon'ble Mr H Sharp, M.A., C.S.I., C.I.E., Officiating Secretary to the Government of India

G Anderson, Esq., M.A., Assistant Secretary to the Government of India.

PROVINCIAL DELEGATES.

Madras

1. The Hon'ble Mr. J H Stone, M.A., C.I.E., Director of Public Instruction
2. T V Sivakumara Sastriyar, Esq., B.A., L.T., Lecturer, Teachers' College, Saidapet
3. The Revd W. Meston, M.A., B.D., Bursar and Professor of English, Madras Christian College.
4. Rao Bahadur K Sesha Ayyar, Head Master, Municipal High School, Mayavaram

Bombay.

5. The Hon'ble Mr J. G. Covernton, M.A., C.I.E., Director of Public Instruction.
6. V B Naik, Esq., M.A., Superintendent, New English School, Poona.
7. G. K. Devadhar, Esq., M.A., Servants of India Society, Poona
8. K. Natarajan, Esq., B.A., Editor, Indian Social Reformer, Bombay

Bengal

9. The Hon'ble Mr W. W Hornell, M.A., M.R.A.S., Director of Public Instruction.
10. Rai Bahadur Dr. Purnananda Chatterji, B.A., B.Sc., Inspector of Schools, Rajshahi Division
11. Khan Bahadur Maulvi Ahsanullah, M.A., M.R.A.S., Inspector of Schools, Presidency Division.

United Provinces.

12. The Hon'ble Mr C. F. de la Fosse, M.A., Director of Public Instruction.
13. The Hon'ble Sir Sundar Lal, KT., C.I.E.
14. Rai Bahadur G N. Chakravarti, M.A., LL.B., Inspector of Schools.
15. Khan Bahadur Saiyid Muhammad Abdur Raoof, Bar-at-Law, Allahabad.

Punjab

16. The Hon'ble Mr J. A. Richey, M.A. Director of Public Instruction.
17. The Hon'ble Khan Bahadur M. Fazl-i-Husain, M.A., Bar-at-Law.
18. Bakshi Ram Rattan, B.A., B.T., Head Master, Dayanand Anglo-Vedic High School, Lahore.

Bihar and Orissa.

19. The Hon'ble Rai Bahadur Dvarika Nath, B.A., LL.B.

Central Provinces.

20 Pandit Kanhayalal Guru, M A , Inspector of Schools, Chattisgarh Division.

21. Pandit Sitacharan Dube, M A., B.L , Pleader and Chairman of the District Council, Hoshangabad.

His Excellency the Viceroy delivered a speech at the opening of the Conference, in which he drew attention to the past policy of the Government of India in this matter , and to the importance both of encouraging and developing the vernaculars and of improving the teaching of English , and to the desirability of determining the relative position of the English and vernacular media, having in view the one object, *viz* , that the pupil should derive the greatest possible benefit from his schooling

Sir Sankaran Nair in opening the formal proceedings, of which he acted as chairman, said that that the intention was to see how far modifications in the present system might be effected so that pupils might (*a*) obtain a better grasp of the subjects which they are taught, and (*b*) complete their course with a more competent knowledge of English than at present

The printed record of the proceedings contains a full report of the speech of His Excellency the Viceroy and summaries of the discussions which followed those portions of the proceedings which record formal questions on the agenda paper and which relate to the adoption of resolutions are reprinted in the following sections —

"3 The Chairman invited opinions on the teaching of English and drew attention to the following questions on the agenda paper —

(*a*) "At what period in a pupil's career should English be taught as a language ? Is it better for him, from the point of view of his ultimate mastery over the language, to start its study at an early age or only to receive such instruction after he has been well grounded in a vernacular ?"

(*b*) "Do the younger pupils gain a satisfactory knowledge of English by their instruction through the medium of that language or do they merely gain a smattering of incorrect and unidiomatic English ?"

(*c*) "What is the general experience of those boys who have passed through the vernacular middle course and then studied English at a high school ? How have such boys distinguished themselves in the matter of English in comparison with those who have studied from an earlier period through the medium of English ?"

(*d*) "By what methods should the teaching of English be conducted ? Does the present system attach too much importance to a knowledge of English literature as against the necessity of learning to speak and write the English language correctly ? Should the teaching in the early stages be entirely oral or not ?"

(*e*) "Do the pupils in a vernacular middle school, as a rule, acquire a better knowledge and grasp of the ordinary school subjects than those of a similar age who have been instructed through the medium of English ?"

8. The following resolutions were then put to the meeting .—

(1) "Those pupils who come to the English schools, after some years of study in the vernacular ordinarily do better in subjects other than English than those who have begun the earlier study of the English language."

Messrs. Richey, Fazl-i-Husain, Kanhayalal Guru, Sitacharan Dube, Bakshi Ram Rattan, Saiyid Muhammad Abdur Raoof, Dvarika Nath, Devadhar, Naik, Covernton, and Sir Sundar Lal voted for the proposal.

(2) "Those pupils who come to the English schools after some years of study in the vernacular ordinarily are and continue to be generally weaker in English than those who began their English studies at an earlier stage"

Messrs. Sivakumara Sastriyar, Sesha Ayyar, Maulvi Ahsanullah, Chakravarti, Bakhshi Ram Rattan, Saiyid Muhammad Abdul Raoof, Dvarika Nath, Chatterji, Natarajan, and Sir Sundar Lal voted for the proposal.

Messrs de la Fosse, Richey, Hornell, Fazl-i-Husain, Meston, Stone and Covernton accepted the proposal with the deletion of the words "and continue to be."

13. The following resolutions were put to the vote —

(3) "From the point of view of proficiency in English, pupils should begin their study of the language as early in the school course as possible."

Messrs de la Fosse, Sivakumara Sastriyar, Sesha Ayyar, Maulvi Ahsanullah, Richey, Hornell, Chakravarti, Bakhshi Ram Rattan, Saiyid Muhammad Abdur Raoof, Meston, Stone, Dvarika Nath, Chatterji, Natarajan and Sir Sundar Lal voted for the proposal,

(4) "In existing conditions pupils should ordinarily begin their studies in English between the ages of 9 and 11, and after three years of study through their own vernacular"

Messrs de la Fosse, Sivakumara Sastriyar, Sesha Ayyar, Maulvi Ahsanullah, Hornell, Chakravarti, Bakhshi Ram Rattan, Saiyid Muhammad Abdur Raoof, Meston, Stone, and Sir Sundar Lal voted for the proposal.

(*a*) Messrs Sesha Ayyar and Dvarika Nath preferred to substitute 'two' for 'three' years

(*b*) Messrs Richey, Fazl-i-Husain, Sitacharan Dube, Kanhayalal Guru, Devadhar, Naik, and Covernton accepted the proposal with the substitution of 'four' for 'three' years

19 The Chairman referred to another group of questions on the agenda paper which dealt with the medium of instruction in secondary schools The questions were as follows —

(*a*) "To what extent does instruction through the medium of a foreign language (i) hamper the pupils in the acquisition of knowledge, crushing their independence and originality of thought and instilling in them the necessity of cram as the only means of learning, (ii) impose a burden on the teachers, and (iii) tend to the impoverishment of the vernaculars?

(*b*) "Are the comparative paucity of suitable text-books in the vernacular, the deficiency of the vernaculars in technical nomenclature and the multiplicity of the vernaculars insuperable objections to extending the use of the vernaculars as a medium of instruction?"

(*c*) "Should English be introduced as a medium of instruction gradually or not? If so, at what period and in what degree should it be introduced?"

(*d*) "To what extent is it advisable to examine students in certain subjects at the end of their school career in the vernaculars?"

25 The following resolutions were put to the meeting —

(5) "The vernacular should be the medium of instruction in all the classes of a high school"

Messrs Fazl-i-Husain, Sitacharan Dube and Naik voted for the proposal

Messrs. Sesha Ayyar, Richey, Kanhayalal Guru and Devadhar accepted the proposal with the addition of the words 'as far as possible in subjects other than English'

(6) "English should be the principal medium of instruction in the two higher classes of a high school."

Messrs de la Fosse, Sivakumara Sastriyar, Maulvi Ahsanullah, Hornell, Chakravarti, Saiyid Muhammad Abdur Raoof, Meston, Stone, Dvarika Nath, Chatterji, Natarajan, Devadhar, Covernton, and Sir Sundar Lal voted for the proposal.

(*a*) Mr. Sesha Ayyar accepted the proposal with the substitution of 'the highest class' for 'two higher classes.'

(*b*) Messrs Sivakumara Sastriyar, Maulvi Ahsanullah, Hornell, Chakravarti, Meston, Stone, Dvarika Nath, Chatterji, Natarajan, Covernton and Sir Sundar Lal would accept the substitution of 'three' for 'two' classes

c) Maulvi Ahsanullah, Messrs Hornell, Chakravarti, Dvarika Nath, Chatterji, Natarajan and Covernton would accept the substitution of 'four' for 'two' classes.

5. The Conference was generally agreed that the introduction of English as the medium of instruction should be effected gradually

28 The following resolutions were put before the Conference —

7. "Examinations at the end of the high school course should be in the vernacular in all subjects except English."

Messrs Fazl-i-Husain and Sitacharan Dube for the proposal.

8. "Candidates should have the option of answering the examinations at the end of the high school course in English or the vernacular in all subjects except English."

Messrs de la Fosse, Sesha Ayar, Richey, Fazl-i-Husain, Sitacharan Dube, Kanhayalal Guru, Chakravarti, Bakhshi Ram Rattan, Saiyid Muhammad Abdur Raoof, Chatterji, Devadhar, Naik and Covernton voted for the proposal."

APPENDIX XV.

MEMORANDUM ON THE ORGANIZATION OF HOSTELS, BY DR ZIA-UD-DIN AHMAD.

Introductory

The main report describes the general conditions of student life in Chapters XIX and XXXIX, but I desire also to discuss certain details in regard to hostel organisation and management

By a hostel I mean a unit of social and residential accommodation in a teaching university or college which may itself be sub-divided into smaller units and which I shall call 'houses' A university or a large college may obviously include one or more hostels The number of students in a hostel should not exceed about 300, though in addition a certain proportion of students who reside with their parents may be attached to a hostel for social and teaching purposes, as is recommended in Chapter XXXIII for the University of Dacca If the number of students in a hostel does not exceed 100, there appears to me to be no need for further sub-division If it exceeds that number, the hostel should be sub-divided into houses, each including from 50 to 75 students I think it best that the houses forming part of a single hostel should be built on the general plan of the Minto Circle at Aligarh as recommended in Chapter XXXIII [1] Other types of hostel which seem satisfactory are those which have been erected at Rangoon and at Gauhati

It is important for the sake of discipline that the hostels and houses should be so built that it will be possible to close them entirely at night, in the same way as a college is closed at Oxford or Cambridge

2 *Size and equipment of the rooms in a hostel* —There is considerable variation in the number of students now provided for in a single room I think that for school-boys it is desirable to provide large rooms accommodating three or more boys, but for university students there should be as far as possible single cubicles so that each student may be able to work quietly and undisturbed by others, as in the Baker Hostel in Calcutta

3 Certain witnesses have suggested that the hostels for university students in Bengal are too luxurious In my view they supply nothing more than is barely necessary Each room should be provided by the college authorities with (1) a cot, (2) a wooden table, (3) a wooden chair, (4) hanging pegs for clothes, (5) one or more shelves for books, and (6) a good lamp in places where there is no electricity [2]

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[1] In the case of intermediate classes attached to a high school it is essential that the intermediate students and the pupils of the high school should be accommodated in separate houses

[2] The provision of a lamp is particularly desirable because where students are allowed to provide their own they are of poor quality and give such insufficient light that the eyesight of the students suffers badly. Dr C P Segard has also emphasised this point

4 In addition to the living rooms for students every house should have family quarters for a superintendent For the hostel, as a whole, but not necessarily for each house separately, there should be (i) one or more dining rooms in accordance with caste requirements, (ii) a prayer room where there are Muslim students , (iii) a common room with a library , (4) sick rooms. The teaching arrangements will be made in different colleges and institutions, but it will frequently be found convenient to provide a certain number of rooms for tutorial work

In Chapter XXXIX in connexion with hostels we have laid great stress on the necessity for physical education and have suggested that every hostel should have a gymnasium attached to it

5 *Heads of houses and hostels and their duties* —In Chapter XXXIII we have designated the large hostels as halls, and have suggested that the head of a hall should be called a provost The smaller residential units we have designated as ' hostels,' and we have suggested the title ' warden ' for the head of such a hostel The head of the still smaller unit called a house we have called a house tutor and we have made it clear that the duties of a house tutor are distinct from those of a tutor responsible only for guidance in teaching work I do not deal here with the teaching duties of a tutor which have been elaborately discussed in Chapter XXXIV of the report and confine myself to the duties of the house tutors

6 The supervision of a residential unit consists of two kinds of duties which may be called directive and routine duties [1] Under the latter may be included the keeping of the roll-call and other registers, the keeping of accounts, the management of servants and the supervision of the kitchen These routine duties should, as a rule, be entrusted to an assistant who should be considered a member of the staff of the college, whether he takes part in the actual teaching or not On the house tutor would fall the more onerous directive duties He should keep in close touch with the progress of each student in all his subjects and send him to subject tutors for special guidance if necessary He must be responsible for all questions of discipline, leave, allotment of rooms and the general health of the students , he must see to the organisation of games and be generally in charge of the social side of the university life so as to ensure that the leisure of the students is no less well employed than their working time In a word, each house should be regarded as a family of which the house tutor is the head

7 *The monitorial system* —In the interests of general efficiency and to provide training for the student themselves, it is desirable to associate students as monitors or prefects with the house tutors and their assistants tutors in the general management of hostels and in the maintenance of discipline The monitors should be chosen from the senior students and different monitors should help in the management of the different branches of hostel life It is convenient to appoint a ' senior monitor ' for all the houses in

[1] See Mr R N Gilchrist—General Memoranda, page 276

respect of each branch to supervise the monitor of that branch. Each house should be left to devise its own system of monitorial work.[1]

8 *Appointment of monitors* —Monitors may be appointed in one of two ways, either by the authorities of the hostel or by election, subject to the approval of the principal of the institutions In my opinion, the monitors should be appointed by the head of the whole institution, on the recommendation of the house tutors In a small hostel the system of election may work without friction, but in a large hostel, where the number of students is from 200 to 400, the post of monitor is likely to be contested and there may be a danger that the elected candidates will be partial to the students who have supported their election, and unfavourable to those who have opposed it. Again the unsuccessful candidates may set up a party of opposition with a prejudicial effect on the social life of the hostel. The choice of a monitor should not depend solely on his popularity.

Feeding arrangements.—It has already been stated in Chapter XIX that feeding arrangements are often made by groups of about 20 students In the Bengal hostels the charges for feeding vary from Rs 8 to Rs 12 a month , if the normal charge is exceeded the excess is shared between all the students of the hostel Except in certain missionary hostels, the hostel authorities do not make themselves responsible for the feeding arrangements The secretary of the mess who is in charge of the accounts and cooking is usually elected by the students, but in some cases he is appointed by the superintendent The following arguments may be adduced in favour of the existing system and against the practice of having a common mess for all the students residing in a hostel —

(*a*) The system is elastic It enables different food to be provided to suit the different tastes of different students, and especially the varying tastes of students coming from different districts. It also enables the cost of the mess to be adjusted to the financial circumstances of the students.

(*b*) It has been said that when food is cooked for groups of from 20 to 25 students it is found to be better in quality than when it is provided for larger groups, say of 100 or 200

(*c*) In the case of Hindu students caste distinction does not favour common messing

On the other hand there are strong arguments in favour of common messes.

Distinction among the students based upon the pecuniary circumstances of their parents and the provision of ' rich ' and poor messes in the same house are likely to affect the corporate life and the good understanding between the students. In a well organised hostel there should be no distinction between students except those based on personal qualifications. Even bursaries awarded on the ground of poverty alone should be treated as confidential.

[1] In the M A. O. College, Aligarh, the work is divided into three main branches : (i) house discipline and management, (ii) arrangements for feeding and discipline in the dining hall, and (iii) supervision of prayers.

Whether food cooked for a small group is inferior to food cooked for a large group of 100 or more depends entirely on the management. When there are a large number of students it is quite possible to provide alternative dishes to suit the tastes of all. In Aligarh it is found possible to provide a choice of dishes which suit the tastes of students from districts as distant as Chittagong, Peshawar and Mysore. In Bengal, where the difference of tastes between the students of different districts are much less, the problem is easier to deal with. There is evidence that the caste system is becoming less rigid in Bengal In some of the college hostels not only do the three higher castes mix together, but in certain cases the Namasudras take their food with the rest. In the case of Muslim students no caste differences arise. The provision of a common mess for all students where caste distinctions do not make it impracticable is strongly advocated.

10. *Societies and games*.—A debating society should be regarded as an essential element in hostel life and the chair should be taken either by a house tutor or any other member of the teaching staff. The other officers of the debating society should be elected by the general body of the students. Suitable arrangement for the common room and library should be made for each hostel and not for each house. The cost of books for the common room and library should be defrayed by the college authorities and the cost of the periodicals by the students. The organisation of the reading room and the library should be left entirely to the students themselves acting through officers elected by them. Besides a general debating society there should be other societies for intellectual purposes formed according to the tastes of the students in a hostel at any given time, such as Shakespeare societies, historical societies, etc Some of these societies will naturally be more or less permanent, others will be short-lived. Some of them will be literary or scientific, others will be of a social character Societies for dramatic purposes, recitations, and other kinds of entertainment should form an essential feature of the social life of the hostels.

For all such societies as we have dealt with above we think the larger unit of the hostel and not the smaller unit of the house should serve as the basis. There should also be societies of a philanthropic nature either for the assistance of poorer students as the Duty Society of the Baker Hostel, or for doing social work among the poor, like the settlement work in Great Britain and America.

11. *Games*.—Every hostel should have its own play ground or play grounds. The organisation of games is no less essential a part of hostel life than that of societies In a large college there should be a double form of organisation of games In order to provide efficient teams to play with teams of other colleges there should be amalgamated clubs open to the students of all the hostels and to those who reside with their parents. Simultaneously there should also be hostel teams The competition of one hostel against another largely contributes to stimulate the pride of students in their hostel and the corporate life of that hostel. The proper organisation of games under the physical instructor so as to suit to the physical requirements of each student is of great importance. Games always involve a certain amount of

expense I think this expense should not be wholly borne by the students, but that the institutions should contribute to the games fund. It is convenient to establish a single athletic club for all the games of the hostels and houses with sub-committees dealing with different games such as cricket, foot-ball, etc It is of special importance where the space available is limited, as in Calcutta, that Indian games such as Kabaddi and western games as volley ball, basket ball, badminton, etc , which demand relatively very little space, should be provided

12 *Excursions* —Scientific and other excursions should be organised in connexion with hostels and the hostel authorities should contribute towards their expenses Each excursion should be in charge of a member of the staff Such excursions might either have a scientific or historical or archæological object in view or might be purely for purposes of recreation

13 *Discipline* —Leave for a part of the day might be entrusted to assistant tutor , leave for a whole night should not be granted without the consent of the house tutor In some colleges there is a system of casual leave for seven days in the year under which a student may absent himself without special permission of the tutor for seven days in a whole year. The house tutor should be responsible for the discipline of the house and have power to inflict punishment other than rustication or expulsion which should be exercised only by the principal of the institution

14. At the present moment many students living in hostels have no more feeling towards them than a traveller has towards the hotel in which he takes up temporary quarters But this is far from the real idea of hostel life The hostel should be for the student a home in which he takes an active interest and a personal pride, while it should serve, as a good home does, in the moulding of his character, and he should be able to regard it as the centre of a happy life which he will always look back upon with gratitude and affection [1]

ZIA-UD-DIN AHMAD

[1] I desire to acknowledge the assistance of Mr A. F Rahman, Professor of History at the M. A O College, Aligarh, who has contributed a portion of this note

APPENDIX XVI.

Extract from the Rules and Regulations of the Medical College of Bengal, Calcutta.

Section I

1 The government of the Medical College and Hospital is vested in the principal aided by a consultative council composed of all the professors, subject to the general control of the Surgeon-General with the Government of Bengal.

2 The Council shall take cognisance of all matters which in any way concern the constitution and work of the college and the welfare of the student attached thereto

3 The principal shall convene a meeting of the Council at least once a quarter, and oftener if deemed expedient, on a requisition signed by three professors of the college, the said requisition setting forth the matters to be discussed, or on the special requisition of the Inspector-General of Civil Hospitals

4. Notices of meetings of the College Council shall ordinarily be issued at least ten days beforehand, and shall be accompanied by a memorandum of the subjects for discussion and by all documents bearing on those subjects.

5 In cases of emergency meetings shall be called as early as may appear necessary

6 Three members in addition to the chairman shall constitute a quorum, and business shall not be entered on unless that number be present

7 The chairman of the Council shall be the principal, and in his absence the senior professor[1] in the college shall take the chair The chairman shall have a vote in all questions put to the meeting, and, in the event of opinions being equally divided, shall have a second or casting vote

8 The junior professor present shall act as secretary of the meeting, and shall record the minutes, which will be filed in the office of the principal. A copy of the minutes of the proceedings shall be sent to the Surgeon-General with the Government of Bengal for record or for such orders as may be necessary

9. An indexed abstract of the specific recommendations of the Council on all matters shall be prepared and kept in the custody of the principal

10 Subjects referred by Government to the Council for opinion shall be circulated with all the necessary documents for record of the individual opinions of the members of the Council

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[1] Seniority has reference to military rank

11 All notices and orders relating to the internal management or economy of the college or of the hospital in matters educational shall be signed and issued by the principal.

12 Any proposal involving any change in the prescribed course of instruction or in the general management of the college or hospital in matters educational, which the principal may desire to submit for the sanction of superior authority, shall be laid before a meeting of the Council for discussion before being so submitted, and the principal, when forwarding his own proposal, shall forward also any resolution which may be come to on the subject by the meeting

APPENDIX XVII.

MEMORANDUM ON A DEPARTMENT OF PUBLIC HEALTH, BY DR C. A. BENTLEY, SANITARY COMMISSIONER WITH THE GOVERNMENT OF BENGAL

Note on the curriculum proposed for the diploma in public health at the Institute of Hygiene, Calcutta

The Royal Commission on the Public Services in India recommended in the portion of their report dealing with the Sanitary Department, that—

> "Steps be taken to improve facilities for instruction in hygiene in India, so as to make it possible for statutory natives of India to obtain a diploma in public health, and instruction in tropical hygiene without going to Europe,"

and they added that—

> "This is especially necessary in view of the fact that the sanitary problems of India and England are developing in such different lines The course for the diploma of public health in England no longer covers the whole ground"

On examining the curriculum for the diploma in public health as laid down by the General Medical Council and then comparing it with the courses of study already insisted on by the majority of the universities and examining boards in Great Britain it is clear that the present day requirements have already vastly outgrown the limits of study originally assigned for candidates preparing for a diploma in public health.

Briefly summarised, the minimum requirements for candidates desirous of obtaining a registrable diploma in public health in England are—

I —*A registrable medical qualification*—

The M B or L M S. of Calcutta University satisfies this.

II —The diploma is only obtainable 1 year after securing the medical qualification

III.—A curriculum of study in public health extending over 9 months which must include—

(*a*) 240 hours of work in bacteriology, chemistry, and pathology of diseases of animals transmissible to men extending over 4 to 6 months in a laboratory or laboratories of which half only (120 hours) must be devoted to chemistry.

Broadly speaking 10 hours a week for 6 months covers this, *i e*, 2 hours a day, 5 days a week or 2 days a week of 5 hours daily.

(*b*) 60 working days during 6 months (of which 3 may be concurrent with 3 months off) (*a*) with a whole-time M O H (possessed of diploma of public health) in charge of district with 30,000 population or who is a teacher in the department of public health of a recognised medical school or a Sanitary Staff Officer of R A M C having charge of Division recognised by General Medical Council for this purpose, *i e*, 1st (Peshawar), 2nd (Rawalpindi), 3rd (Lahore), 4th (Quetta), 5th (Mhow), 6th (Poona), 7th (Meerut), 8th (Lucknow), 9th (Secunderabad), Burma.

NOTE 1 —Assistant Medical Officers of Health of a single sanitary district having a population of not less than 50,000 may give instruction and issue certificates

NOTE 2 —Candidates who have held for a period of not less than 3 years an appointment as M O H. of a sanitary district (in British Dominions) having a population of not less than 16,000 are also eligible.

NOTE 3 —The 6 months may be reduced to 3 and the 60 days attendance to 30 in the case of candidates who—
(*a*) attend special course of lectures in hygiene, etc
(*b*) act 3 months as Resident in an infectious diseases hospital with at least 100 beds

Now a careful study of the abovementioned requirements will serve to show that at the present time there must be a very large number of medical men in India who need only put in from 4 to 6 months' laboratory work, totalling 240 hours, together with

3 months' attendance at a general hospital possessing a ward for the treatment of infectious diseases, in order fully to complete the minimum requirements of the General Medical Council for candidates for a diploma in public health There are, for example, in Calcutta 19 Sanitary Inspectors employed by the Corporation, all medical graduates of the Calcutta University, who are engaged in public health work every day of their lives Besides this, there are about 20 second grade Health Officers employed in mufassal municipalities possessing population over 16,000 Moreover there are now many hundreds of Indian medical graduates belonging to the Subordinate Medical Department and others who have accepted temporary military service, and of these very many must have already done qualifying service such as is mentioned above III (*b*)

If, therefore, it is suggested that it is sufficient merely to enable candidates to comply with the minimum conditions laid down on paper for the British diploma in public health all that is necessary will be the arrangement of a course of laboratory instruction in—

(1) Bacteriology and the pathology of diseases of animals transmissible to man
(2) Chemistry, especially that relating to the analysis of air, water, soil, food, etc
(3) A 3 months' course of attendance at a hospital admitting cases of infectious diseases

But I do not think that such a course would fully carry out the intentions of the Public Services Commission, nor would it satisfy either the Indian Government, on the one hand, or the General Medical Council of Great Britain, on the other If an Indian diploma in public health is to carry any weight and have sufficient value to attract candidates it must, in the first place, be accepted by the Indian Government as fully qualifying the holder for employment in the public health services of the country, and, in the second place, it must be accepted as an equivalent to any British diploma

In order that both these conditions should be satisfied it is essential that from the commencement every care should be taken in drawing up the prospectus of the Institute of Hygiene that all semblances of a 'diploma-mill' be avoided, in other words, in drawing up proposals for the curriculum, the aim should be to arrange a course of study which will afford a sound training in every department of modern public health activity rather than one which shall merely conform to the narrow limits originally considered sufficient in England many years ago

Before suggesting a curriculum for the Calcutta Institute of Hygiene I would draw attention to the courses of public health training that have been arranged in connexion with most of the universities and medical schools in England

Let us take in the first place the University of Cambridge The diploma in public health of Cambridge University is justly valued all over the world and the special courses of study arranged for the training of candidates for this diploma have long served as a model to other universities and medical schools

University of Cambridge.

The courses of lectures, laboratory instructions and practical sanitary administration for candidates for the diploma in public health are as follows —

Staff of the department of public health.

Lecturers, etc —

(1) J E Purvis, M A
(2) Professor Sims Woodhead, M.A
(3) Dr G S Graham-Smith, M A, M D
(4) Professor Nuttall, F R S
(5) Dr A E Shipley, F.R S.
(6) Dr. Robinson, M O H. to Cambridge County Council.
(7) Dr Laird, M O H for Boroughs of Cambridge.

The course of study includes—

(*a*) General course of lectures on hygiene—3 times a week
(*b*) Ditto on chemistry and physics—3 times a week.
(*c*) Ditto on bacteriology and preventive medicine—3 times a week
(*d*) Ditto on sanitary law, vital-statistics, sanitary engineering, school hygiene, etc., by Dr. Robinson—3 times a week
(*e*) Special course of lectures on purification of water by Professor Sims Woodhead.
(*f*) Ditto on protozoal disease by Professor Nuttall, F R S
(*g*) Special course of 6 to 8 lectures and demonstrations on animal parasites by Dr A E Shipley
(*h*) Practical laboratory instruction in chemical and physical examination of water, sewage, gases, foods and their adulterants, by Mr J E Purvis
(*i*) Practical laboratory instruction in bacteriology, by Dr G S Graham-Smith.
(*j*) Practical sanitary administration, by Dr Laird
(*k*) Administrative work at Cambridge Infectious Diseases Hospital, by Dr Laird

University of Liverpool

The staff of the department of public health in connexion with the University of Liverpool consists of the following professors and lecturers —

(1) Public Health .	Professor E W Hope, M D, D Sc, M O H, Liverpool
(2) Chemistry . . .	Professor C C Baly, F R S
(3) Bacteriology	Professor E E Glynn, M A M D, M R C S, M R C P
(4) Infectious Diseases	Dr W E Roberts, M B, C M, D P H.
(5) Public Health—Bacteriology	Dr R Stenhouse Williams, M B, C M, B Sc, D P H

Assistant Lecturers and Demonstrators—

(6) Public Health . . .	Dr A A Mussen, B A, M D, D P H
(7) Chemistry . . .	Mr E G Jones, M Sc, F I C

University of Manchester

The staff of the Department of Public Health teaching of Manchester University consists of the following professors and lecturers —

Professors and Lecturers.

Principles of Public Health—

Professor of Public Health and Bacteriology, A Sheridan Delépine, M B, C M., (Edinburgh), B Sc (Lausanne), M Sc (Manchester)
Lecturer in Practical Bacteriology and Microscopy, E J Sidebotham, M A, M B, (Cambridge)
Lecturer in Practical Comparative Pathology, A Sellers, M D (Edinburgh), D P H (Manchester)
Lecturer in Practical Sanitary Chemistry, H Heap, M Sc (Manchester)

Lecturers

Public Health Administration	C H Tattersall, M R C S, D P H A E Brindley, M D (London), B Sc, D P H (Manchester)
Factory Hygiene . . .	T M Legge, M A, M D (Oxford), D P H
School Hygiene . . .	Meredith Young, M D (Edin.), D P H. (Manchester)
Veterinary Hygiene . .	Williams Woods, F R C V S (England).

Also the Professors and Lecturers in Chemistry, Physics and Biology

UNIVERSITY OF DURHAM.

The teaching staff of the Department of Public Health in the University of Durham, College of Medicine—Newcastle-on-Tyne is as follows .—

Bacteriology and Comparative Pathology	Professor H J Hutchins, Assistant Professor, P Coy Lawse, Dr. John Tolluck and Dr George Hall
Public Health . . .	Professor S Eustace Hill, M B (Cambridge), B Sc F I C, M O H, for County of Durham
Chemistry and Physics .	Professor Bedson, M A , D Sc
Practical Sanitation . . .	Dr H E Armstrong, M O H , Newcastle-on-Tyne
Infectious Diseases . . .	Dr H E Armstrong, M O H , Newcastle-on-Tyne
Vaccination	Dr Frank Hawthorn

It may be pointed out that in the case of every University and medical school that provides teaching for the diploma in public health the courses of instruction now-a-days cover far more than they did a few years ago and the tendency is to increase rather than diminish In the case of diplomas in public health also, certain special courses of instruction are now insisted on For example, candidates for the D P H of Aberdeen, in addition to the certificates usually required, have to produce evidence that they have "obtained, under a competent teacher, during not fewer than 10 meetings of not less than an hour each, practical instruction in the drawing and interpretation of plans"

Candidates for the B Sc in public health of the Universities of Edinburgh and Glasgow must show in addition to eight months' laboratory instruction and two separate courses of public health lectures, that they have attained special courses of instruction in both geology and physics

Now-a-days also many of the universities are granting higher degrees in public health such as the D Sc in public health of Glasgow and Edinburgh, the Dr Hygiene (Doctor of Hygiene) of Durham, M Sc in Sanitary Science of Manchester, and the M. Hy (Master of Hygiene) of Liverpool

In view of these facts and in consideration of the recommendations of the Royal Services Commission quoted at the beginning of this note it is essential in my opinion that the proposed curriculum for the Institute of Hygiene of Calcutta should be framed on broad lines, and that when appointing the staff and drawing up the courses of study every advantage should be taken of the existing teaching facilities of the Medical College and those that will be provided for in connexion with the School of Tropical Medicine

The sciences of hygiene and preventive medicine have expanded enormously in recent years and sanitary activities have developed proportionately and we must expect further extensions in every department of public health and be prepared accordingly

The course of studies that I would suggest is given below It is based upon the syllabus for the diploma of public health of Cambridge, Liverpool and Calcutta Universities, and merely covers the ground at present required for an ordinary diploma (not any advanced course) together with a few additions which are absolutely necessary for fitting candidates for sanitary work in India.

Proposed staff and courses of training for the Institute of Hygiene, Calcutta.

Course	*Lecturer.*
Chemistry and physics	Professor of chemistry
Meteorology	Government Meteorologist
Geology . . .	Officer from Geological Survey.
Public health bacteriology and pathology of diseases of animals transmissible to man.	Professor of bacteriology. Lecturer on protozoology. Lecturer on helminthology.
Lectures and practical laboratory work .	Lecturer on entomology
Hygiene	Professor of hygiene (Sanitary Commissioner)
Vital statistics	
Sanitary law, etc. . . .	

Chemical and bacteriological analysis of foods, water sewage, etc.	Special deputy sanitary commissioner under Sanitary Commissioner
School hygiene	
Ship and port sanitation . . .	Port Health Officer.
Hygiene of factory and mines . .	.....
Practical public health work . .	Health Officer of Calcutta and Assistant Health Officers
Infectious hospital administration .	Medical College Hospital, Special cholera wards, etc, and Campbell Medical School
Vaccination	Health Officer of Calcutta, and Special Deputy Sanitary Commissioner under Sanitary Commissioner.

COURSE I —CHEMISTRY AND PHYSICS BY PROFESSOR OF CHEMISTRY OR OTHER LECTURER.

Chemistry and Physics in their application to Hygiene.

(1) *Elementary physics lectures and demonstrations*, including physical properties of gases and liquids, atmospheric pressure, specific gravity, Boyle's Law; barometers; law of diffusion of gases and liquids; dialysis; laws of pressure in liquids; Artesian wells; gases dissolved in liquids.

Chemistry of air, water, food —The general laws of heat, mechanics, pneumatics, hydrostatics and hydraulics in their application to warming, ventilation, water-supply and drainage

Chemistry of air, water, food, and soil, disinfectants and poisons required in manufactures and in commercial and domestic use

Principles of qualitative analysis with special reference to the detection of common inorganic and organic substance of an injurious nature.

Principles of quantitative analysis The construction and use of the chemical balance and gravimetric and volumetric methods

Special lectures and demonstrations on geology, meteorology and climate by (1) Officer of Geological Survey, and (2) Government Meteorologist

(1) *Geology and surface contour in relation to health questions* —Soils, clays, rocks and sedimentary rocks, sub-soils and building sites, springs, natural gases, watersheds, river-basins, catchment areas, etc, ordnance survey

(2) *Meteorology and climate* —Climatology A general knowledge of meteorological conditions, meteorology in relation to health, relation of disease to meteorological conditions; meteorological instruments, their construction and use Reading and correction of instruments and tabulating the results of meteorological observations, meteorological charts and reports

COURSE II —BACTERIOLOGY BY PROFESSOR OF BACTERIOLOGY AND OTHER SPECIALIST-LECTURERS CONNECTED WITH SCHOOL OF TROPICAL MEDICINE.

(1) *Introduction*; *General characters of micro-organisms* —Classification and morphology; biology of bacteria, mode of multiplication, sporulation, movement, chemotaxis, assimilation, ærobiosis and anaerobiosis antagonism, effects of heat and cold upon growth and vitality, effects of pressure, light, electricity and chemical agents

(2) *General considerations relating to infectious disease* —Geographical distribution of disease. Immunity in relation to age, sex, race, occupation, density of population, season, etc. Acquired immunity (natural and artificial) and accompanying phenomena.

Theories of immunity. Modes of infection Epidemiology. Epidemic and endemic diseases

General modes of prevention, prophylactic treatment, isolation, disinfection, etc.

(3) *The cause, mode of spread, specific treatment and prevention of certain infective diseases* —Discovery of the specific causal agent, its habitat, morphology, cultivation, products, behaviour outside the body (resistance, etc), communicability to susceptible animals and man, mode of infection, distribution and effect in the body, incubation period

and duration of the disease, immunity problems, attenuation and increase of virulence, bacteriological diagnosis, specific treatment and prophylaxis

(*a*) *Bacterial diseases*—Anthrax, pyococcal infections,—septicemia, pyaemia, gonorrhœa, pneumonia, epidemic cerebro-spinal meningitis, Mediterranean fever, enteric fever, cholera, diphtheria, influenza, tuberculosis, plague, glanders, tetanus, malignant œdema and dysentery, leprosy

(*b*) *Diseases due to strepto thrixesm, moulds and yeast*—Actinomycosis, Madura foot, etc.

COURSE III—COURSE—PROTOZOA IN RELATION TO PUBLIC HEALTH BY PROFESSOR OF PROTOZOOLOGY OF TROPICAL SCHOOL

Protozoa in relation to disease

Rhizopoda—Entamœba hystolytica, E coli, etc

Flagellata—Trypanosomidæ—T gambiense (sleeping sickness) Tryp Brucei (Ngana), etc, etc

Cercomonida—Cercomonas hominis

Trychomonidae—Trichomonas intestinalis

Bodonidae—Bodo lacertae

Sporozoa—The malaria parasites 'Proteosoma', 'Halteredeum.' The haemogregarines, H lacertarum, H canis, etc The peroplasmata P canis, P baris, etc. 'Leishmania, Donovani' L tropica, etc Hestoplasma capsulata

Coccidia—Eimeria cuniculi Developmental cycle

Sarcosporidia—*e g*, Sarcocystis tenella

Haplosporidia—Rhinosporidicum Kinealyi

Celeata—Belantidum coli Nyctotherus faba

Spirochaetes—Spirochaeta ober meyeri Sp duttoni Sp gallenarum, etc

COURSE IV—COURSE OF LECTURES ON ANIMAL PARASITE BY HELMINTHOLOGIST OF TROPICAL SCHOOL

Plethyhelmia

Trematoda (*Flukes*)—A general knowledge of the class and their life histories—

Schistosomidae—Schistosomum haematobicum, S japonicum

Paramphistomida—Gastrodiscus hominis, Cladorchis watsoni.

Diotomidae—Clonorchis senensis (Asiatic lung-fluke), Paragonimus westermeni (Asiatic lung fluke), etc.

Cestoidea (Tape worms)—A general knowledge of the class especially the following.—

Bothriocephalidae—Dibothriocephalus latus

Taenidae—Taenia solium and Cysticercues cellulesal T echenococcus and hydatide. Hymenolepis nena, etc, etc

Nematoda (Thread worms)—Characters of the main families (genera) and species.

Anguillulidae—Rhabdites peltis, Anguillula accete, etc

Angeostomidae—Strongyloides intestinales

Gnathostomidae—Gnathostoma Siamese

Filaridæ—F medinensis F loa, F bencrofti, etc

Trichotrachelidae—Trechinella spiralis, Trichocephalus trichiurus

Strongylidae—Necator americanus, Ankylostoma duodenalis (Ankylostomiasis), etc.

Ascaridae—Ascaris lumbricoides Oxyuris vermicularis, etc

COURSE V—PUBLIC HEALTH ENTOMOLOGY BY THE PROFESSOR OF ENTOMOLOGY, SCHOOL OF TROPICAL MEDICINE

1 *Crustacea* (Entomostraca)—*Cyclops*—intermediary host of the guinea-worm (Filaria medinensis) Differential characters, life-cycle distribution, etc, methods of control so as to prevent the spread of guinea-worm infection

2 *Ixodidæ* (Ticks)—External and internal anatomy, characters and classification, life-cycle, habits, distribution and specific characters of *Ornithodoros moubata*, *Argus persicus A reflexus* and the species concerned in the transmission of piroplamesis methods of control and prevention of tick-borne disease

3 *Sarcoptidae*—The various species of acarids producing Acariasis in man and domestic animals and methods of prevention

4 *Culicidae* (mosquitoes) —General characters of the family, anatomy, classification, characters of sub families and important genera, habits, distribution and life cycle of the anopheline, culicine, etc , and the relation to the spread of infectious diseases notably malaria, yellow fever, dengue, filariasis, etc Methods of control so as to prevent these diseases

5 *Similidae* (Sand flies) and blood sucking midges of genus ceratopogin and Phlebotomus , their relation to disease papataci fever, pellagra, etc , and methods for their control

6 *Muscidae* Tsetse-flies (Glossina) —General characteristic, anatomy, metamorphosis, habits, distribution Other important members of the Muscidae stable-flies (Stomoxys spp) Lyperosea, the Congo floor maggot (Anchmeromyia luteola) , the house fly (Musca domestica and its allies Pycnosoma spp) , and also the flies producing myiasis The part played by the Muscidae in transmitting infection to men and the methods of control and prevention

7 *Tabanidae* —The four important genera · Pangonia, Tabanus Chrysops and haematopota and the part they play in transmission of infection , *e g* , examples Surra in cattle and filaria loa

8 *Oestridae* —The ox warble flies and bot flies

9 *Hippoboscidae* —The forest flies and their allies, *e g* , Hippobosca Melophagus, etc

10 *Siphonoptera* (*Fleas*) —The general characteristic and habits of these insects with special reference to the species (Pulex cheopis) concerned in the dissemination of plague Also the ' jigger ' (Dematophilus penetrans)

11 *Hemiptera* —The bed bugs (Cimex spp) and the suctorial lice (Pediculus humanus) The part played by bugs and lice in the transmission of disease kala-azar, trypanosomiasis (cruze) relapsing fever, typhus, etc , methods of control Also the biting lice of cattle (Mallophaga)

COURSE VI.—GENERAL COURSE OF LECTURES ON HYGIENE BY PROFESSOR OF HYGIENE

1 *Principles of ventilation and hygiene of public and private buildings* —Quantity of fresh air required , natural and artificial ventilation , effects of overcrowding, vitiated air, dust, etc

2 *Water supply* —Quantity, collection, storage and distribution, sources of impurities, effects of insufficient or impure supply , methods of purification of water supplies, *e g* , filtration, sterilisation, etc

3 *Food* —Diet, effects of bad or insufficient food and conditions of healthy nourishment and activity

4 *Methods of removal and disposal of refuse and sewage*

5 *Occupations and their effect upon health* —The hygiene of particular trade and the diseases to which they give rise Nuisances injurious or dangerous to health

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LABORATORY WORK

Dealing with practical study of (*a*) *Bacteria*, (*b*) *Animal parasites and* (*c*) *Insect carriers of disease*

I —GENERAL

1 *The Nutrient Media* —Broth Gelatine, Agar Serum, Potato, Media for special bacteria

2 *Sterilisation* —Action of superheated steam (the autoclave) Koch's steam steriliser Hot air sterilisation Action of antiseptics in albuminous and non-albuminous fluids Classification of antiseptics

3 *Filtration* —Filtration through cotton, sand, granulated sugar, etc Filtration through porous earths Chamberland's filter The Berkefeld filter The filtration in water works.

4 *Disinfection* —Disinfection of the person, skin, sputum, excreta, clothes, rooms, wounds, surgical dressings

5. *Examination of the air* —Petri dish and plate-glass cultures Apparatus of Hesse, Miquel, Strats and Wurtz, Sedgwick, etc Examination of sewer gas Bacterial distribution in the air

6. *Examination of fluids.*—The bacteria of drinking waters and sewer water. The bacterial distribution in water.

7. *Examination of soils.*—Aerobic and anaerobic bacteria and their distribution in the soil. The pathogenic bacteria found in the soil. The nitrifying bacteria.

8 *Examination of foods.*—Beer, milk, butter, flesh. Food inspection, infected food. Sterilisation of foods.

9. *Examination of the bacteria of the body.*—The bacteria of the skin, of the mouth, stomach, and upper and lower intestine. Examination of the faeces in health and disease. Examination of pus. Examination of sputum.

10. *Cultivation of bacteria* —Comparison of growth upon various media. Liquefying and non-liquefying bacteria. Chromogeni bacteria. Saprogenic bacteria. Pathogenic bacteria. Moulds, fungi and yeasts

11. *Influence of oxygen, of reaction, and of special substances upon the growth and products of certain bacteria*

12. *Action of physical agents upon bacteria.*— Heat, attenuation, resistance of spores. Light. Centrifugalisation and shaking High pressure.

13. *Morphology and mode of reproduction of bacteria.*—Staining for bacteria. Drop cultivation. Pleomorphism. Involution Classification of bacteria.

14. *Products of bacteria.*—Fermentation. Colouring matters. Ptomaines. Toxalbumins. Diastases

15. *Modes of infection.*—Epidemics, sporadic and endemic disease. Infection of air, water, soils, foods.

16. *Mode of action of the pathogenic bacteria* —Inoculation of animals Immunity: natural, acquired, hereditary. Susceptibility Local and general reaction of the tissues inflammation, fever.

17. *The attenuation and exaltation of virus* —Vaccines, serums, vaccination (Jennerian), vaccine, preservation and storage of calf lymph. The treatment of smallpox, cholera, anthrax, symptomatic anthrax, glanders, tubercle, rabies, tetanus, diptheria.

18. *Study of special organisms* —Staphyococcus pyogenes aureus, citreus, albus Streptococcus erysipelatosus, Sarcinae. Bacillus anthracis, subtilis, mallei, pyocyaneus fluorescens, diptheriae, Frankel's pneumococcus, Friedlander's pneumobacillus, septicaemiae haemorrhagicae, typhosus, coli communis, enteritidis sporagenes, Zopfii, mesenteroides, prodigiosus, tetani, mycoides, Spirillum cholerae Asiaticae, of Finkler Prior, Metchnikovii, Proteus vulgaris, Acitinomyces. Aspergillus niger, Favus.

(*a*) *Animal parasites.*

(*b*) Blood and other parasites, technique of examination, stools, blood, etc, special organisms, malaria parasites peroplasmatic Leishmania, etc. Entamoeba hystolytica; spirochatosis. Examination of stools for ova of hookworm, ascaris, tricho chephatines, disfar, etc Examination of meat for trichnoe, etc

(*c*) Practical instruction in entomological methods, etc.—

(1) Methods of collecting, preserving and packing the various orders of the insects and acarina (Ticks, etc)

(2) Apparatus and equipment, and general instruction as to its use.

(3) The care of material in the tropics, *e g.*, prevention of mould, and destructive insects.

(4) The importance of making records in the field on the bionomics of insects and other arthropods.

(*a*) Medical and veterinary;

(*b*) Agricultural.

(5) The importance of labelling specimens with full data.

(6) Text books and general literature.

(7) The characteristics and bionomics of the more important blood-sucking arthopods—

Tsetse flies (Glossina).
Mosquitoes (Anophelinae and Culicinae).
Horse flies, etc. (Tabanidae).
Chiggoes and other fleas (Aphaniptera).
Sand flies (Culicoides, Simulium, etc.).
Ticks (Argasidae and Ixodidae, etc.).

Practical Public Health Laboratory Work.

Working in connexion with Sanitary Commissioner's laboratory where water, food and sewage is being constantly examined.

Chemical Laboratory.

1. *Technical analysis of foods* including the detection of impurities and adulterations in—

(*a*) Water, aerated and alcoholic beverages.
(*b*) Milk, condensed milk, butter, ghee, margarine, etc.
(*c*) Tea, coffee, chicory, cocoa, sugar, etc.
(*d*) Cereal foods
(*e*) Air and other gases

The course includes preparation of standard solutions; alkalimetry and acidimetry, standard permanganate, estimation of iron, oxalic acid, chloride of lime.

Estimation of oxygen and carbonic acid in air, detection in moderate quantities in air of ammonia, chlorine, hydrochloric acid, sulphur dioxide, coal-gas, nitrous gases, carbonic oxide, bisulphide of carbon vapour; water analysis and calculations.

Detection and estimation of lead in water, detection of copper and iron.

Microscopic examination of water deposits, fats

Partial analyses of ghee, butter, milk, bread, etc, estimation of alcohol in beer; estimation of carbolic acid, detection of arsenic and of preservatives, in foods, disinfectants.

2. *The analysis of sewage and sewage effluents.*

3. *Antiseptics and disinfection*, relative value and cost of application of the commoner disinfectants. Chemical and bacteriological methods of testing disinfectants and antiseptics.

Practical routine bacteriological analysis of water and sewage.

The technique of sample taking and the bacteriological analysis of water and sewage can also be undertaken in the Sanitary Commissioner's Laboratory where many hundred of such analysis are conducted every year.

PART II.

Courses of Lectures on Sanitary Law and Public Health Administration by the Professor of Hygiene and others.

1 *Sanitary law and administration*—Exposition of public sanitary administration in the United Kingdom, India and other countries, including the duties and responsibilities of sanitary authorities and of their officers and the legal remedies at their disposal. Sanitary law.

2. *Vital statistics*—Their calculation and significance. The census; calculation and significance of ratios; life tables, etc, instruments and tables in aid of calculations; preparation of report.

3. *Construction of buildings* with special reference to domestic dwellings, hospitals, and schools respectively, illustrated by examples of good and bad systems

4. *Town planning*, water supplies, drainage system, sewerage and disposal of refuse generally; interpretation and criticism of building plans

5. *Control of food supplies.*—Markets, dairies, and milk shops and depôts, slaughter houses, sound and unsound foods, meat inspection; causes and effects of unsound foods, methods of examination

6. *Control and prevention of epidemic diseases.*—Epidemiology general distribution of epidemic, endemic and other infective diseases, methods of medical investigation

Hygiene of factories and mines.

1. Sanitary legislation and administration.
2. Industrial diseases and accidents, Miners' Phthisis, ankylostomiasis, anthrax, etc.
3. Injurious dust, gases and fumes, effect of artificial humidity.
4. Hygiene of the factory with especial reference to . . . . . .for removal of dust and fumes.
5. Periodical medical examination of workers and other preventive measures prescribed under special rules and regulations.

6 Industries involving risk from poisoning by lead, arsenic, mercury, and phosphorus
7 *Trade processes*, the nuisances which they may produce and the disease to which they may give rise.

Special lectures

B *School hygiene*.—To be given by the Special Officer in charge of medical inspection of schools under the Sanitary Commissioner—

Hygiene of the school
Hygiene of the scholar
Medical inspection of schools
Prevention of disease in schools
Legislation and administration in relation to school hygiene.

Hygiene of ports and shipping.—To be given by the Port Health Officer—

Sanitation of ships, ports, etc
Dangers of importation and exportation of disease.
Quarantine legislation—Sanitary convention
Health administration of a port
Disinfection of ships, etc.

Practical sanitary work

Sanitary supervision of dwellings of the poor.
Insanitary areas
Artisans and labourers' dwellings.
Housing and town planning Building bye-laws, open spaces, etc
Prevention of infant mortality
Supervision of midwives, notification of births and child and mother-welfare work.
Public bath and wash houses
House to house visitation and inspection, drain testing
Examination of houses on complaint of conditions prejudicial to health.
Details of action taken on notification of infectious sickness
Special means taken to investigate outbreaks including preparation of spot maps
Spleen census and malaria survey
Inspection of common lodging houses and sublet houses
Inspection of abattoirs and private slaughter houses
Fish and fruit markets
Inspection of offensive trades
Action in regard to unsound or adulterated food, drugs, etc
Inspection of dairies, cowsheds and milk shops
Inspection of bake-houses
Inspection of mineral and aerated water factories
Crematoriums, burial grounds and burning ghats and mortuaries.
Course of proceedings taken to effect abatement of nuisances including attendance at court
Registration and keeping of records of sanitary work
Destructors and disinfectors
General disinfection
Practical details of anti-mosquito, anti-fly and anti-rat work
Vaccination against smallpox and inoculation against plague and enteric fever.

APPENDIX XVIII.

Resolutions passed at Recent Conferences on Agricultural Education

A —Conference held at Pusa on 4th and 5th February 1916

The following was the list of subjects which the Conference was asked to discuss :—

Agricultural colleges.

(1) Should the objective of agricultural colleges be merely the provision of suitable candidates for service in the Agricultural Department or should they aim at providing a liberal and scientific education in agriculture which would be as complete as possible and would attract not only students who aspire to the higher posts in the Agricultural Department, but others who wish to take up higher studies and research work in agriculture for their own sake ?

(2) Is it possible to combine both these aims, and if so, would it be an advantage if the colleges were affiliated to the different universities ?

(3) If both aims were combined, is the best method of procedure the combination of a two years' course, intended mainly for candidates for subordinate posts in the Agricultural Department with a further course of a more scientific character which would lead up to the full diploma or to a B Sc degree, the total length of the two courses being about four years ?

(4) Is it desirable that any instruction in the vernacular should be given at the agricultural colleges either in the form of the two years' course referred to in (3) or in that of short vernacular courses outside the ordinary college courses intended for the sons of zamindars and others farming their own lands ?

Agricultural instruction for agriculturists

(1) Should the idea of giving an agricultural tinge to elementary education generally in primary schools be definitely abandoned ?

(2) If so, is it desirable that there should be any general extension of the Bombay system of vernacular agricultural schools both in the Bombay Presidency itself and in other provinces ?

(3) Should such schools be controlled entirely by the Agricultural Department or by the Agricultural Department in co-operation with the Education Department ? How should the teaching staff for them be recruited ?

(4) In what ways can the cultivator who is working his own land be educated or continue his education in agriculture ? Are demonstration and instruction on the Agricultural Department's own farms sufficient and are they preferable to vernacular or agricultural courses in connection with the agricultural colleges.

The following were the resolutions adopted :—

Agricultural colleges (1)

" The Conference considered that this question could not be answered absolutely While as an absolute proposition they were in favour of providing in colleges under the Agricultural Department a liberal and scientific education which should be as complete as possible, they were not convinced that in the case of all the provincial colleges this was a practicable ideal or one which local conditions rendered desirable For example, there were not enough students in any of the four colleges of Upper India to justify, in any individual case, the provision of training of the type intended On the other hand, it is in the opinion of the Conference, desirable that Upper India should have one college at which the education should not be restricted to the training of men for departmental requirements, provided that the necessary staff and equipment can be made available for such a college without prejudicing the normal development of the general work of the Agricultural Department " (Resolution I)

Agricultural colleges (2).

At the President's suggestion the Conference agreed to record that the answer to the second question in the agenda was implied in the resolution recorded with regard to the first, the two having in fact been considered together.

Agricultural colleges (3)

" It should be possible to arrange that students who are taking a four years' course leading to a degree should be able to qualify by an intermediate examination for employment on probation in the lower ranks of the Agricultural Department, confirmation to depend on the passing of a test in practical farm work on the conclusion of the probationary period " (Resolution II)

Agricultural colleges (4)

" A vernacular course should not be made a department of the college work but there is no objection to the giving of courses of instruction in practical agriculture on the college farm or other farms of the Department without relation to the work of the college " (Resolution III)

Agricultural instruction for agriculturists (1).

" The Conference considered that all attempts to teach agriculture in primary schools should be definitely abandoned, but they desired to re-affirm

Resolution No. XIII passed by the Board of Agriculture at Coimbatore.[1] They further suggested that the holidays and vacations and hours of study in rural schools might be arranged with special reference to the agricultural calendar." (Resolution IV)

Agricultural instruction for agriculturists (2)

"The Conference regard the Bombay experiment as a very valuable one and suggest that Mr Keatinge be asked to prepare a fully explanatory memorandum for communication to local Governments for their consideration They desire to express the opinion that the success of the extension of the experiment would depend on the very careful selection of the master on the educational side and the agricultural officer on the agricultural side" (Resolution V)

Agricultural instruction for agriculturists (3).

"Such schools should be controlled entirely by the Agricultural Department which should rely on the Education Department for co-operation only in respect of the staff which it may be desired to borrow from them" (Resolution VI)

In regard to section (4) under the heading 'Agricultural instruction for Agriculturists' it was decided formally to record that—

"In view of the different stage of development reached by the Agricultural Department in different provinces, the Conference felt itself precluded from passing any general resolution on these questions"

B—*Conference held at Simla on the 18th and 19th June 1917.*

1. It is desirable to lay down the general principle that a method for providing trained teachers in agriculture should be elaborated in each province adapted to meet the requirements of the agricultural school system that may be in contemplation or may have been already devised for that province.

2. The Conference consider that the question whether two years' courses can be combined with four years' courses at agricultural colleges should be left to local Governments to work out in the light of further experience. Uniformity in this matter is not essential For the high schools the full college courses should provide suitable teachers For the teachers of the middle

[1] The Resolution in question reads as follows:—

"The Board consider the question of a sympathetic co-operation between the Educational and Agricultural Departments in adapting rural education to rural needs to be one of great importance In consequence they desire to endorse the recommendation of the Deputy Directors' Sub-Committee as to the willingness of the Agricultural Departments to confer with the Educational Department to discuss this important question The Board also wish to endorse again the principles enunciated in the Report of Committee 'G' of the Board of 1910." (Proceedings of the Board of Agriculture in India, held at Coimbatore, December 1913)

classes it may be necessary in some cases to modify the existing two years' course so as to give a better education in science, to be supplemented by a course in pedagogy This development also should be worked out by local Governments to suit local conditions

3 Bearing in mind the importance of imparting a training in teaching to all those who are charged with instruction in schools of whatever character, it is desirable to require that those who attain to the standards that may be determined on as necessary, under the foregoing resolution, should, before being recognised as qualified to teach in agricultural schools, undergo a period of training in pedagogy

4 The Conference accept the view which was urged by all the heads of Government agricultural colleges present that it is undesirable to attach training schools in pedagogy to the colleges

The Conference consider that the most suitable means at present of giving training in teaching methods for teachers of agriculture in agricultural schools would be to require candidates under the last resolution to undergo a course in a specially selected agricultural school to which should be attached an instructor fully trained in pedagogy For this purpose each province contemplating the establishment of agricultural schools, which has not already done so, would have to establish an agricultural school suitable for such training purposes, preferably one in each language area. When the number of agricultural schools, and consequently the demand for qualified teachers, multiplies sufficiently it would be desirable to establish a special training institution for teachers in agriculture which would remain attached to an ordinary agricultural school.

5 The Conference are of the opinion that it should be laid down as a goal that every rural district should have one or more agricultural middle schools usually situated near to demonstration or experimental farms

They are divided on the question whether the establishment of agricultural high schools is in the same sense desirable, since it is arguable that the boy who is going on for a university course, even in agriculture, will be better qualified by going so far as the matriculation through the ordinary high school of the Education Department It is not considered desirable to pronounce definitely until experience has been gained of the results of establishing agricultural middle schools

Mr Wood wishes to qualify acceptance, so far as regards Madras, by expressing his view that for that province concentration on demonstration is more desirable than the establishment of schools.

6 Having regard to the diversity in the type of schools which has been evolved under the Education Department of different provinces, it is not possible to discuss profitably the precise type of schools required to meet the needs indicated in Resolution 5 but having regard to the desirability of securing that early attention be attracted to this subject, the Conference recommend that the Agricultural Adviser should prepare, for the information of local Governments, a memorandum showing what has already been done or attempted in India in these lines.

The Conference, however, desire to emphasise the importance of practical work in any school which teaches agriculture and of having a plot of land, if not a demonstration or experimental farm, attached to the school.

7. In view of the resolutions which have been passed at this Conference, and of the changing conditions as affecting the expansion of provincial departments of agriculture, the Conference consider that Resolution I relating to agricultural colleges which was passed at the Pusa Conference should be modified and that local Governments should be left to work out their collegiate courses with reference to local conditions They consider that each of the principal provinces of India should have its own agricultural college so soon as the agricultural development of the province justifies that step.

8 The Conference recommend that the question of affiliation of agricultural colleges should be left to the decision of local Governments in accordance with local conditions.

9. While desiring to emphasise the principle that the agricultural middle schools contemplated in Resolution 5 should aim at training boys who will return to the land, there would be no objection to recruiting boys from these schools, if suitable, for the subordinate posts in the Agricultural Department

10 The Conference accept the principle that the text-books of primary schools be adapted to the rural environment of the pupils They consider that, where necessary, the existing text-books should be revised by the Education and Agricultural Departments in consultation, or that special text-books or syllabuses should be prepared by them.

The Conference also strongly insist on the desirability of adapting primary education in rural areas more closely to rural needs. Whilst agreeing that no attempt should be made in primary schools to teach agriculture or horticulture as such, the following suggestions are made towards the solution of this problem —

(*a*) Nature-study should form a necessary part of the curriculum in rural schools

(*b*) All subjects reading, writing and figuring, should be taught in relation to rural life.

(*c*) A garden should be attached to each rural school as an aid to nature-study, though lessons should also be given in the surrounding fields

(*d*) The teachers of rural schools should be recruited as far as possible from the rural population.

(*e*) Special attention should be paid to the training of rural teachers, preferably in a separate training school

(*f*) The Agricultural Department should, when opportunity offers, co-operate by vacation courses for such teachers

(*g*) The Education Department should endeavour to recruit to the lower inspecting staff a larger proportion of the rural population.

(*h*) The Education Department should also endeavour to recruit as inspectors or district deputy inspectors a larger proportion of science or agricultural graduates.

11. The Conference agree that the best method of reaching the illiterate classes is by demonstration work in the village and on the farm, and emphasise the importance of the extension of this method. Under demonstration work should be included short courses in special subjects on Government farms.

C —*Conference forming part of the 10th Meeting of the Board of Agriculture in India, held at Poona from the 10th to 15th December 1917*

NOTE —*Resolutions* 1-12 *of the Board of Agriculture relate to subjects other than agricultural education*

13 (1) That an improvement in the economic condition of the agricultural population in India is a matter of the most fundamental and urgent importance to the country

(2) That, whatever expenditure may be undertaken in connection with general, rural or definitely agricultural education, there should be no resulting diminution in, or limitation of, the funds or staff that are necessary for the maintenance and progressive development of the research and demonstration work which are the main functions of the Agricultural Department

(3) That for the rapid development of agriculture in India a sound system of rural education based on rural needs is essential, that the present system is wholly inadequate in respect of the provision of suitable text-books and premises, and, above all, in respect of the training and pay of teachers

(4) That the carrying out of the revolutionary improvements that are needed in the system of rural education is primarily among the functions of the Education Department, but that there should be co-operation between that Department and the Agricultural Department in effecting the necessary changes

(5) That these changes will involve the expenditure of very large sums of money, and will raise a financial problem of the first magnitude and importance, and that the provision of the necessary funds, whether by local taxation or otherwise, should form the subject of an immediate, careful and detailed examination by the various provincial Administrations.

(6) That the demonstration of improved methods of agriculture is already creating and is likely to increase a demand for improved rural education, and that the latter will in turn facilitate agricultural demonstration.

14 (1) That as this process advances a demand will probably arise for definitely agricultural schools and that preparation should be made for this latter probable demand by the early establishment as an experimental measure, of a very limited number of agricultural middle (Madras, upper

primary) schools, (say one or at most two in each important provincial language area).

NOTE.—The Board is of opinion that in view of the varying needs of different parts of India, it would be worse than useless to submit a definite scheme for such experimental schools. It has, however, drawn up tentative proposals regarding a syllabus and organisation which will indicate the nature, the scope and the standard of instruction that is contemplated These proposals will be found in the appendix attached to the report of the Committee on Agricultural Education

(2) That if, as a result of these experiments, further agricultural schools (as distinguished from ordinary rural schools) are to be started, it is of the utmost importance —

(*i*) that their object should be to send their pupils back to their own land and to cultivate it better,

(*ii*) that the rate of the increase in the number of the schools should not be allowed to outstrip the rate of the provision of properly trained teachers;

(*iii*) that the training of the teachers should, as far as possible, be thoroughly practical on the agricultural side, and should in its final stage be connected with one of the schools already successfully established;

(*iv*) that the schools should be made as nearly self-supporting as possible,

(*v*) that each school should generally be on, or in the neighbourhood of, a demonstration farm.

15. That the view of the Simla Conference "that each of the principal provinces of India should have its own agricultural college as soon as the agricultural development of the province justifies that step" is accepted, the question of affiliation of such colleges being left to the decision of the Government concerned.

APPENDIX XIX.

MEMORANDUM BY MR. L. BIRLEY, SECRETARY TO THE GOVERNMENT OF BENGAL, REVENUE DEPARTMENT, CALCUTTA.

1. The question which I have been asked is of paramount importance in considering the probabilities of openings in Bengal for men with a scientific training in agriculture.

2 Statistics are not readily available as regards the number of estates exceeding 400 acres, and they have not been prepared regarding the size of holdings, but it may safely be said that the number of estates exceeding 400 acres is so large as to leave no doubt that if the proprietor of an estate of 400 acres would employ a scientific agriculturist the openings would be sufficiently numerous to justify the training of such men in large numbers, but that holdings of this area are either non-existent or are so few as to be negligible.

3 I use the terms 'estate' and 'holding' in their meaning in the Bengal Tenancy Act, *i e*, an 'estate' is the interest of a proprietor and means the land for which land revenue is separately paid, while a 'holding' is land held by a *raiyat*

By far the larger proportion of the cultivable land of an estate consists of raiyats' holdings which are held under conditions under which the proprietor cannot restore them to his own cultivating possession A small proportion consists of the private lands of proprietors in which *raiyats* do not easily acquire a permanent interest.

Between the proprietor and the *raiyat* there may or may not be one or more grades of tenure-holders who have acquired a right to hold land "for the purpose of collecting rents or bringing it under cultivation by establishing tenants on it." Where a *raiyat* has a permanent right it is not liable to variation on the termination of the contract between the proprietor and the tenure-holder who are above him

4 The limitation of the size of the holdings of *raiyat* is best illustrated by the presumption of the law that when a tenant holds land in excess of 33 acres he is a tenure-holder (*i e*, he holds it for the purpose of collecting rent or bringing it under cultivation by establishing tenants on it) and not a *raiyat* (*i e.*, a person who holds it for the purpose of cultivating it by himself, or by members of his family, or by hired servants, or with the aid of partners)

5 The following information relevant to the question under consideration is collected from the settlement reports of the districts of Dacca, Faridpur, Bakarganj and Midnapore.

(*a*) *Area of estates*—In Dacca the average size of an estate is 149 acres. In Bakarganj there are 390 estates of an area exceeding

500 acres. In the area of Midnapore covered by the statistics of the recent operations (3,860 square miles) the average area of an estate is 825 acres, and there are 616 estates of an area exceeding 500 acres.

(*b*) *Private lands of proprietors*—

Dacca—8 per cent. of the land area But 65 per cent of the lands held by proprietors are situated in a portion (equivalent to about $\frac{1}{3}$) of the district which contains extensive forests.

Bakarganj—28,255 acres or $1\frac{1}{2}$ per cent of the land area Of this area 5,000 acres only are cultivated The lands reserved by proprietors are mostly sandy, waste, marsh, forest, residences and gardens.

Faridpur—26,999 acres or 2 *per cent* of the land area. A very small part of this is cultivated, most of it consisting of homesteads and gardens

Midnapore—10 5 *per cent.* of the land area, but 10 per cent. of the land area is unculturable and certainly a large proportion of this is in the hands of the proprietors Moreover there is a great deal of forest in Midnapore.

(*c*) *Land reserved by tenure-holders*—

Faridpur—115,902 acres or 14 *per cent.* of the total area leased to tenure-holders This area is chiefly marsh and forest.

Dacca.—16 *per cent* of the total area leased to tenure-holders A large part of this is in the forest area.

Bakarganj—In this district the cultivating tenure-holder is unusually numerous, but 58 *per cent* of the area reserved by tenure-holders is occupied by people whose average tenure is 2 acres

Midnapore—19 98 *per cent.* of the land area The Settlement Officer apparently thinks that deducting culturable jungle, water and non-culturable lands, there is only 12 87 *per cent.* in possession of both proprietors and tenure-holders He concludes that the 12 87 *per cent* is in possession of petty rent-free holders and tenure-holders, who have purchased *raiyat's* holdings. These tenancies may all be taken to be below 400 acres.

(*d*) *Land occupied by* raiyats.

Dacca—Average area per *raiyat* 2 88 acres.

Bakarganj—Average area per *raiyat* 2 80 acres.

Midnapore.—Average area per *raiyat* 4 65 acres.

(*e*) *Percentage of land area occupied by raiyats.*—

Dacca.—95 *per cent.*

Faridpur.—86 *per cent.*

Bakarganj—65 *per cent.*

Midnapore.—66 *per cent.*

N.B—The comparatively small percentage in Bakarganj is due to the large area held by small tenure-holders as noted above, and in Midnapur to the large amount of unculturable land and forest.

6. From these figures it is clear that the area in which the proprietor has direct control over the cultivation of the soil is very small, and apart from the smallness of the area there is the fact that in most cases the proprietor is not one individual but a body of co-sharers amongst whom combined action is difficult. On the other hand the cultivator of the soil is normally a very small man for whom the employment of an expert is out of the question.

7. If an inhabitant of Bengal finds himself in possession of a larger area of land than is necessary for the sustenance of himself and his dependents, his first inclination is to sublet all that he does not require for himself. This fact has been slowly recognised by Government in its treatment of the extensive areas of waste land which it possesses, *viz*, (1) in the Sundarbans, (2) in the Western Duars in Jalpaiguri district Forty years ago the policy was to promote the existence of a class of substantial resident farmers. The result was a class of absentee owners with excessive subinfeudation. The present policy is to make settlements with men who will cultivate the land themselves and the change is illustrated by the fact that whereas under the rules of 1888 the maximum area fixed for grants of land in the Western Duars was 200 acres, the maximum now fixed is 25 acres.

8 There is a marked tendency in Eastern Bengal towards the increase of the area held on produce rent, and in Dacca 4 *per cent* of the cultivated area is held on such rent, while in the four sub-divisions of Faridpur the percentage varies from 6 to 17. It might appear that in these areas the landlords would be sufficiently interested in the increased outturn of crops that it would be worth their while to employ agricultural experts, but the landlords of produce-paying tenants are in most cases small men who are interested in small areas in which they can effectively supervise the collection of their share of the produce.

9 Thus in considering the probabilities of employment of scientific agriculturists it is necessary to regard the proprietor in the capacity of a rent collector and not in the capacity of a farmer, and to remember that his natural attitude to agricultural improvements will depend on his prospects of deriving profit therefrom

10. It is convenient to divide the kinds of agricultural improvement which appear possible in Bengal into four classes as follows .—

(1) The introduction of new crops, and the improvement of existing crops by means of the use of improved seed, manure or improved implements.

(2) The prevention of disease among crops.

(3) The improvement of agricultural stock

(4) (*a*) The construction of wells, tanks, water-channels and other work for the storage, supply or distribution of water for the purpose of agriculture, or for the use of men and cattle employed in agriculture ;

(*b*) the preparation of land for irrigation ;

(*c*) the drainage, reclamation from rivers or other waters, or protection from floods, or from erosion or other damage by water, of land used for agricultural purposes, or waste land which is cultivable ;

(*d*) the reclamation, clearance, enclosure or permanent improvement of land for agricultural purposes.

N B—For reasons to be explained below this class of agricultural improvement has been described in the words of section 76 of the Bengal Tenancy Act which enumerates works which are 'improvements' according to the law

11 Now as a rent collector, the landlord (whether a proprietor or large tenure-holder) is benefited only indirectly by the success of measures taken for the first three classes of improvements It is on improvements of these three classes that the attention of the Department of Agriculture in Bengal is mainly concentrated, and under prevailing conditions it seems probable that scientific work on these objects will continue to be carried out collectively, that is by Government (and it is to be hoped by local authorities) but not by individuals.

12. The rent-collector landlord has no difficulty in finding a cheap agency to collect his rent, for the highly-paid members of his staff a thorough knowledge of legal technicalities is necessary, and it seems very unlikely that there should ever be in Bengal a large demand for highly-paid agents whose qualifications consist mainly in training in these branches of agriculture.

13. On the other hand the attitude of a rent-collecting landlord to the fourth class of agricultural improvements may reasonably be expected to be quite different, because they offer him opportunities of increasing his income. The law on the subject of this class of improvement is briefly as follows : the landlord may carry out the improvement unless the tenant will do it himself ; the landlord after executing the improvement causes it to be registered, and he may bring a suit for enhancement of rent on the ground that the productive powers of the land have been increased by an improvement effected by him or at his expense, and the Court will have regard to the cost of the improvement, on the other hand an occupancy raiyat may sue for reduction of rent on the ground that the soil of his holding has without the fault of the raiyat become permanently deteriorated by a deposit of sand or other specific cause

14 It will be observed that the fourth class of improvements requires a knowledge of agricultural engineering There seems every reason to believe that there would be a fair demand in Bengal for men with practical, as well as scientific, training in agricultural engineering. The necessity of practical training is emphasised because in flat country like that of Bengal such work involves peculiar difficulties These views are not based only on a calculation of probabilities, but also on my experience as the managing collector of large estates under the Court of Wards in Bengal and Orissa. The interests of the proprietor do not justify the appointment by the estate of an agricultural expert in the ordinary sense, but in every estate with which I have been concerned I could have employed with profit to the estate a man with a sound training as an agricultural engineer.

APPENDIX XX.

EXTRACT FROM THE PROCEEDINGS OF THE CONFERENCE ON VETERINARY EDUCATION AT A MEETING OF THE BOARD OF AGRICULTURE IN INDIA, HELD AT POONA, DECEMBER 1917.

Subject VIII.—Veterinary Education

The Committee on this subject consisted of Colonel Pease (Chairman), the Hon'ble Mr. H R C Hailey, Messrs. MacKenna, Sheather, Aitchison, Wilson, Rennie, Quinlan, Harris, Cattell and Shilston, Lieutenant-Colonels Walker, Smith and Lowe and the Hon'ble Mr Purshotamdas Thakurdas

The terms of reference were—

(1) *to report up to what standard each of the colleges and schools now teaches,*

(2) *to consider whether it is advisable and possible to raise the standard at one or more selected colleges so as to turn out students who will be qualified for appointment to the higher grades of the Provincial Service or ultimately to the Imperial Service as recommended by the Public Services Commission in paragraph 7, Annexure II, page 79 of Volume I of their Report, and*

(3) *to make recommendations as to the best method of re-organising and administering the colleges and schools and the minimum staff and expenditure that such re-organisation would involve*

The report of the Committee was as follows —

The scope of the enquiry contained in the terms of reference is too wide to be adequately dealt with in the time available and it has consequently only been possible to form general recommendations on the points raised

It is very evident that there is a great demand for veterinary assistants in the various provincial departments and in the Army and Indian States The type of man required is one who is prepared to work in the villages in tahsil and taluka veterinary hospitals, etc, of moderate education and willing to serve at a fair rate of pay and with the prospects it is possible to hold out to him.

In spite of every effort, the existing veterinary colleges have failed to train a sufficient number of men to fill up the subordinate cadres of the various veterinary departments We consider that efforts should be made, as soon as possible, to provide the type of man required and that at least one more college is needed for the purpose For supervision, direction and teaching work as well as for special appointments a more highly trained man is undoubtedly required.

Attempts to provide this by appointments from the veterinary assistant class have so far failed, some appointments which have been made in this way have not proved satisfactory, and a number of posts remain unfilled owing to the lack of suitable men.

The importance of the work is great and if it is not efficiently carried out considerable harm is done

The only remedy we can suggest is the direct recruitment of more highly-trained men for this service

As a basis for the expression of our views we deem it desirable to indicate what we consider to be an ideal organisation for a veterinary service and in the light of this to frame our report.

The present organisation of the departments is as follows :—

Imperial Service.

(*a*) Superintendents, principals of, and teachers in, colleges Special appointments.

Provincial Service

(*b*) Deputy superintendents and teachers in colleges

(*c*) Veterinary inspectors

Provincial or District Board Services

(*d*) Veterinary assistants.

The existing veterinary colleges teach up to the standard of the grade of veterinary assistant so far as the present staffs permit

At some of the colleges an increase in the number of Imperial officers on the teaching staff is necessary The existing colleges are unable to train men in sufficient numbers to meet the demand for this class of man

The Committee recommend that the following appointments should be regarded as constituting the higher grades of the Department and should be held by gazetted officers.

Imperial Service.

(*a*) Superintendents, principal of, and teachers in, colleges. Special appointments.

Provincial Service.

(*b*) Deputy Superintendents and teachers in colleges

(*c*) District Veterinary officers.

Their duties should be

Imperial Officers.

(*a*) A superintendent in charge of the province.
(*b*) Superintendents in charge of circles or in special appointments.
(*c*) Principals and teachers in colleges.

Provincial Officers.

(*d*) Deputy superintendents in charge of divisions or their equivalent and employed in colleges.
(*e*) District veterinary officers.

For the above grades a higher standard of training is required and this cannot be provided at the existing veterinary colleges as at present staffed.

The minimum educational qualification for this training should be the preliminary science of the Calcutta University or its equivalent. There should also be a selective examination for admission by the principal. The professional education provided should be such as to qualify men for direct admission to the Provincial Service and selected students should be sent to England with scholarships to qualify as members of the Royal College of Veterinary Surgeons to fit them for the Imperial Service The Committee suggest that such men be selected as early as possible during their college career.

Direct appointments to the Imperial Service should continue to be made by the Secretary of State for India from among candidates with an M R. C V S qualification

In certain cases veterinary assistants showing special aptitude may be promoted to the Provincial Service after receiving adequate post-graduate training

The curriculum should be based on those in force at the veterinary colleges in Great Britain and Ireland

In order to provide the education indicated above for Indian Veterinary Surgeons there are two courses open One is to strengthen the superior staffs at the existing colleges to permit of a separate curriculum being conducted in addition to the existing one and the other is to establish a new college

The majority of the Committee consider that if the principle of appointing a higher grade officer for each district is accepted by local Governments a sufficient number of officers will be required to justify the later course, but it is for local Governments to decide whether they will reorganise their colleges to permit of the higher grade education indicated above or whether it shall be carried out at the special college The staff of the college would comprise teachers in the following subjects :—

Biology and physics, anatomy
Physiology and histology.
Materia medica, therapeutics and pharmacy.
Hygiene and sanitary science and animal management.

Pathology, bacteriology, epizootiology and meat inspection.
Parasitology
Medicine.
Surgery.
Obstetrics

One of these teachers would be principal It is necessary, in the first place, to recruit the teachers in seven of these subjects from Europe and they should be appointed specially at salaries personal to them

Teachers recruited in Europe should be paid salaries on the scale of Rs 750 to Rs. 1,500 per mensem. When teachers become available in India the scale of pay should be that suggested in the report of the Public Services Commission, *i e*, Rs. 300—30—600, 50—1,000 per mensem.

Assistant teachers will be required in each subject on the scale of pay of deputy veterinary superintendents

Hospital staff, etc, will also be required, it is difficult to estimate the cost of building and equipping a college to meet the requirements, but it is estimated that not less than 15 lakhs would cover it.

The only arrangement which the committee can suggest pending the development of a complete scheme of training in India is to empower local Governments to grant scholarships, at their discretion, to likely candidates to enable them to proceed to Europe with the object of gaining the diploma of the Royal College of Veterinary Surgeons and become eligible for selection by the Secretary of State for India for appointment to the Imperial Service.

Colonel Thompson, Officiating Director, Veterinary Services in India, added the following note to the Committee's report which was concurred in by Lieutenant-Colonel W. C. Lowe, Deputy Director of Veterinary Services, Southern Army :—

"I wish to make the following remarks with reference to the proceedings of the Committee.

I consider that substantial results can only be obtained by first forming a committee to examine the present organisation of the Civil Veterinary Department in India, which should decide whether its present operation is satisfactory, and if necessary put forward proposals for the firm and satisfactory establishment of the Civil Veterinary Department system.

On the conclusion of this, steps for the future may with confidence be taken, as regards higher education or anything else, but until this is done I consider it is inopportune to proceed, as there can be no adequate structure on unsatisfactory foundations. I consider the first step to this end would be to have a strong Director General of the Civil Veterinary Department to direct and co-ordinate effort.

At present there seem to be many different standards, the Madras College differs widely from the others, the Bombay College is different again There seem to be different systems obtaining in the various provinces, and dissatisfaction at the disadvantages resulting from certain systems I doubt if there is one that could not be largely improved

In view of this I cannot see the advantage of building an idealist's structure for the future until the present system is made good, and placed on a thoroughly satisfactory basis"

APPENDIX XXI.

University Diploma in Spoken English

A —*Draft Regulations of the Calcutta University*

I. An examination for a Diploma in Spoken English shall be held annually in Calcutta and shall commence at such time as the Syndicate shall determine, the approximate date to be notified in the Calendar

II. Every candidate for the Diploma must have passed one of the following examinations in this University —

Master of Arts
Master of Science
Bachelor of Arts
Bachelor of Science
Bachelor of Teaching
Licentiate in Teaching

III Every candidate for the Diploma shall produce a certificate to show that he has received training in elocution for a period of not less than one year under a teacher, recognised for this purpose by the Board of Higher Studies in English

IV Every candidate for admission to the examination shall send his application to the Registrar with a certificate in the form prescribed by the Board of Higher Studies in English, and a fee of Rs 50, not less than three months before the date fixed for the commencement of the examination

V. A candidate who fails to pass or present himself for examination, shall not be entitled to claim a refund of the fee A candidate may be admitted to one or more subsequent examinations on payment of a like fee of Rs. 50 on each occasion.

VI. The examination shall be written and oral, and shall be conducted on the lines of a syllabus to be drawn up from time to time by the Board of Higher Studies in English and Board of Studies in English jointly The examiners shall be appointed by the Syndicate on the joint recommendation of the Boards.

VII The written examination will consist of one paper and will be held with a view to test a candidate's knowledge of the elements of phonetics with special reference to the pronunciation of English words

VIII The oral examination will be held mainly with a view to test a candidate's power of elocution and his ability to carry on an ordinary conversation in English.

IX. As soon as possible after the examination, the Syndicate shall publish a list of successful candidates, arranged in order of merit in two classes.

Candidates shall be bracketted together unless the examiners are of opinion that there is clearly a difference in their merits The candidate who is placed first in the first class shall receive a gold medal and a prize of books to the value of Rs 200, the candidate who is placed second in the first class shall receive a silver medal and a prize of books to the value of Rs 100

B.—*Memorandum submitted by the Commission on these Regulations.*

1 We have considered the communication of the Government of India, No 752, dated the 2nd September, 1918, enclosing draft regulations submitted by the University of Calcutta for a university diploma in spoken English

2. We cordially approve the purpose of the University to encourage the improvement of spoken English, and believe that the institution of the university diploma would materially assist that purpose We trust, therefore, that the Government of India will sanction the regulations communicated to us

3 But while we recommend that the scheme should be brought into operation without delay, we believe that more comprehensive measures might perhaps be taken for promoting the object which the University has in view. The general questions involved will be more fittingly dealt with elsewhere, but we submit below certain suggestions in regard to the scheme as it stands

4 It appears to us that examinations might be conducted, and certificates or diplomas awarded, by the University in spoken English for two allied but distinct objects, and that the present scheme suffers by attempting to combine these two objects.

5. The first kind of diploma would certify the power to pronounce English words correctly, and to read and speak the language with the right cadence and expression A power of this kind is valuable not only for the ordinary purposes of life, but especially valuable for the teachers of all subjects in schools and colleges in which English is used as the medium of instruction. But for such persons, unless they are about to become teachers of English, an expert knowledge of phonetics appears to be unnecessary, and we see no reason why it should form a subject of the examination. We also see no reason why the University should compel its graduates to follow any prescribed course before being admitted to an examination of this kind. Without entering generally into the theory of examinations we may say that we regard the prescription of a course of study as desirable in the great majority of cases, in which the examination test must necessarily be an incomplete test, covering only a portion of the field of study But one or two competent and experienced examiners, in half an hour or less, could completely test the capacity of a candidate to pronounce English well and to read and speak with the proper cadence and expression, without requiring any information as to the way in which he had acquired that capacity

6 The second kind of diploma would be a teacher's diploma The examination for it would not only cover the same ground as the first examination

but would test the power of the candidate to teach others how to speak English well For such a purpose the present scheme appears to us to err not by excess but by defect. A person might be perfectly capable of obtaining the diploma of spoken English proposed by the University and yet be incapable of teaching others, and especially of teaching a class, to speak English well. For a teacher's diploma in spoken English there should, in our judgment, be a course of study, and one which would not only include training in phonetics, as proposed in the present scheme, but training in teaching, and the examination itself should include, in addition to the tests proposed in the scheme, a practical test with a class.

7 We desire to comment on one further point in the scheme It proposes to arrange the candidates in 'order of merit' We fear that this might, in existing circumstances, give rise to some difficulties It must be admitted that while phonetic authorities may recognise a 'standard' pronunciation of English, there are a number of local varieties of pronunciation which are regarded in England as equally admissible in public life Scotchmen and Irishmen suffer from no disability because their pronunciation differs in certain respects from that of well educated Englishmen It seems probable that Indians may learn their spoken English from capable Scotch and Irish teachers and catch up their distinguishing characteristics It would not be right to let any candidate suffer on this account, but nevertheless examiners in deciding between the claims of candidates otherwise equal would probably tend to deduct marks for such characteristics We suggest that special proficiency in this subject might be more conveniently recognised by returning the somewhat heavy fee specified to those students who were judged worthy of distinction, than in the manner proposed in the draft regulations

8 We do not wish to discourage in any way this experiment of the University in a new and important field of education But we cannot help thinking that the diploma proposed may be unduly onerous for the very numerous class of persons other than teachers of English for whom a university diploma in spoken English would be of use, and, on the other hand, that such a diploma may be interpreted as implying a power of teaching good spoken English which those on whom it was conferred will not necessarily possess. We hope, therefore, that the University may be able at a convenient opportunity to modify the scheme on some such lines as those indicated above

CALCUTTA,
The 9th November 1919

APPENDIX XXII.

Report on the Health Conditions of the site of the Civil Engineering College Sibpur

Dated, Calcutta, the 2nd April 1918

From—Dr C A Bentley, m b., d.p h., d t m & h., Sanitary Commissioner with the Government of Bengal,

To—The Director of Public Instruction, Bengal

Sir,

With reference to your letter No 1228-B , dated the 9th ultimo, I have the honour to state that I have been having a detailed examination made o Sibpur and the neighbourhood, including a malaria survey of the locality and an analysis both chemical and bacteriological of samples from the river, the tanks and other water supplies. I have also undertaken an enquiry into the probable effect of the trenching ground on the health of the locality which is as yet not complete.

In view of the fact that I understand that my report is urgently required I have the honour to state that my conclusions are as follows .—

The situation of Sibpur College is by no means a bad one from a sanitary point of view In fact, I am exceedingly doubtful if it would be possible to name a better site, unless it were the very centre o Calcutta, in Dalhousie Square, Chowringhee, for example The college as it stands at present is in a far healthier position than could be found for it in any place to the north, south or east o Calcutta

At one time the locality was supposed to be malarious, but examination does not show any extensive breeding places for anopheles mosquitoes the tanks in the compound failing to exhibit any anopheles larvae and no adult anopheles of the malaria-carrying species being caught in the building during the period from September to December 1917. The spleen index taken in the village near at hand is also so low as to preclude the existence of much malaria.

The only serious drawback to the present site is the proximity to one o the Howrah trenching grounds, and the fact that the surface drainage from this ground flows past the college actually entering the ground at one point. The analysis of the water from the jhil situated at the north-west corner of the ground shows by the presence of a large amount of free ammonia and nitrites that it is contaminated from this source

Beyond the above mentioned trenching ground which ought to be abolished as soon as possible, and this evil of the surface drainage which can easily be remedied, the only serious defects in connexion with the college are the lack of a sufficient supply of pure water, and the want of a proper water carriage system of sewage disposal

I understand that schemes have been already drawn up for remedying the above mentioned deficiencies and in my opinion when this is done and the surface drainage from the trenching ground is diverted the sanitary condition of the college will be greatly improved

What I wish to make clear in the present letter is, that there is absolutely no ground for condemning the college on the ground that the present site is unhealthy owing to the presence of causes which cannot be easily removed I do not consider that the site is an unhealthy one even at present—in fact it is far more healthy a place than could be found in any of the other municipalities adjoining Calcutta Moreover it can probably be greatly improved at a comparatively small expense by the measures that have been indicated, *viz* :—

(1) Increasing and improving the water supply,
(2) Providing a water carriage system of sewage disposal,
(3) Improving the surface drainage of the locality and diverting that from the trenching ground
(4) Abolishing the trenching ground at the earliest possible opportunity.

APPENDIX XXIII.

MEMORANDUM ON AGRICULTURAL EDUCATION BY MR S MILLIGAN, DIRECTOR OF AGRICULTURE, BENGAL, 28TH MAY, 1918.

(1) The following considerations lead me to think that the Agricultural Department will be compelled to develope its educational activities on the technical rather than the theoretical side A development of technical instruction would bring about desirable and possibly far-reaching results Theoretical teaching, on the other hand, can only appeal to a very limited class and a development on that side will undoubtedly lead into the blind alley of unemployment

(2) In the first place, I would observe that the agricultural colleges are by no means finishing institutions so far as agriculture is concerned, and that the passed students require considerable additional training before they are fit for responsible posts This is inevitable owing to the colleges being bound down to prepare for a diploma or degree examination The students, being admitted at the matriculation stage, require a great deal of instruction in elementary science in order to bring them up to diploma standard. There is therefore no time to reach practical agriculture in a satisfactory manner

(3) Nor do I anticipate any marked improvement in this direction so long as the colleges remain a combination of educational and technical institutions. It seems inevitable that so long as it is necessary to hold classes and preserve a rigid time table the technical side will suffer

On the other hand, the colleges turn out a desirable class of men from the social point of view The rural surroundings, the small classes, and the great interest taken by the principals in the welfare of their students, have all markedly beneficial effects

But I find the diplomates wanting in that self-reliance and resource which is the distinguishing character of the mechanically efficient man, and which could be readily imparted at a purely technical institute It is not to be expected that any training institution is capable of turning out practical farmers, in the making of which experience and judgment play so important a part, but the feeling of confidence inspired by a mastery of the technique of his profession goes far to produce honesty and truthfulness and to strengthen a man's character generally. A sketchy theoretical acquaintance with a subject must, on the other hand tend to produce the opposite effect. For this reason alone a post-graduate technical training is an essential and desirable finish to a college education in agriculture.

(4) I was at one time disposed to think that a supplementary post-graduate training at one of the experimental stations would meet the case.

But, owing to the natural tendency of all such stations to resolve themselves into a multiplicity of small experimental plots for testing comparative crop outturns, I find there is neither room, time, nor variety of appliances in use, for training purposes I have therefore come to the conclusion that post-graduate agricultural training will have to be undertaken at specially selected farms, where the employment of machinery would be economically sound and where experimental work would not be interfered with in the process of instruction

II

(5) Another important consideration is the training of the lower grades of the Department for whom at present there is no proper provision The college course is obviously unsuitable owing to the educational qualifications demanded As the agricultural departments expand, the training of the lower ranks of the subordinate service becomes of the greatest importance There is no apparent reason why the want of higher education should be allowed to stand in the way of any man becoming "technically" efficient In the industrial world, the artisan is technically as efficient as the college graduate although the latter through a superior education and up-bringing may occupy a much more responsible post Similarly the Agricultural Department should aim at being technically efficient in all its branches and grades Education will always be given its proper status through enabling the better educated man to occupy those posts demanding powers of organisation and administration

(6) As 'apprenticeship' in technical agriculture is impossible in India owing to the nature of the agriculture practised it would thus seem that there exists at present a real need for technical institutions for the training of all grades of the Agricultural Department

(7) Further, I am quite sure that the training of the different grades can be accomplished at the same institution by breaking away from preconceived ideas regarding methods of instruction

(8) In the first place, the idea of a 'college' should be dropped The institution should be simply called an agricultural institute It should consist of a well equipped, up-to-date farm, so organised as to be in a position to give practical instruction in a variety of different branches of agriculture among which the following are the more important —

I { 1 Tillage, 2 Cropping } by (*a*) indigenous and (*b*) modern methods.
I { 3 Plant selection, storing of seed, etc
II { 4 Land surveying and measuring
II { 5 Construction of bunds and water channels
II { 6 Construction and repairs of buildings
III { 7. Steam, oil, water and wind power engines.
III { 8. Utilisation of power
III { 9. Water lifts and pumps
IV Carpentry and fitting.
V { Care and feeding of animals
V { Treatment of wounds.
V { Diagnosis of contagious and infectious diseases

(9) The main principle to be observed would be that no student would be allowed to leave any operation until he had mastered it. Classes would thus be largely dispensed with. It is obvious that at an institute of the kind it would be possible to arrange courses of instruction for almost any class of student and for almost any employment connected with agriculture

(10) In addition to granting certificates of proficiency for various courses it would be desirable to give a diploma to those possessing theoretical as well as practical qualifications For diploma candidates an entrance examination in botany, chemistry, physics and mathematics would be insisted on, in addition to a full course of not less than two years at the institute Candidates possessing the B Sc in pure science or the diploma of an agricultural college would be exempt from this examination.

(11) Such an institute would naturally be conducted by the Agricultural Department Affiliation with a university should be neither practicable nor desirable

(12) The University could, however, give a great deal of indirect assistance to agricultural training by improving the teaching of subjects bearing on agriculture such as chemistry, physics, botany and mathematics both at the University and the intermediate colleges Chemistry and botany, it may be noted, are already required for medical students. On no account should the teaching of agriculture as a separate subject be encouraged.

(13) I would be quite prepared to consider the question of preparatory schools for the Agricultural Institute, when it is found out by actual experience what the educational defects of the students really are. For the higher grade student there should never be any trouble but as regards the lower grades it is difficult to speak with any certainty without actual experience. The establishment of preparatory schools for this class should not, however, present any great difficulty

(14) In the light of the foregoing, the proposal of the Calcutta University to establish colleges and a Faculty of Agriculture with the object of granting degrees in that subject would seem to be a step in the wrong direction.

Addendum

The proposed Agricultural Institute would primarily be intended for the training of the staff of the Agricultural Department The farm would however have a distinct character of its own and would probably be utilised for such objects as cattle breeding, production of seed of improved varieties, of crops, etc If the area is large enough sufficient opportunity would be afforded of obtaining a good general training in most branches of agriculture. The farm, in fact, would have to be of sufficient area to permit of this. Further, the farming of a large area renders the use of improved appliances profitable, and this in turn necessitates the establishment of workshops The students would therefore have an opportunity of belonging to a going

concern where appliances and methods are utilised for definite purposes, and where 'reality' is given to effort through having an object in view. The institute would, in fact, offer as near an approach as possible to 'apprenticeship' in 'agriculture' or 'estate management.'

One of the chief difficulties would lie in obtaining a suitable site I have already stated that it would probably be necessary to go to North Bengal on account of the difficulty of obtaining the necessary requirements elsewhere This question, however, may for the present be left open. The paramount importance of suitable land must not be overlooked.

Staff —Another difficulty will consist in the employment of a suitable staff for an institution of the kind It must not be forgotten that the institute will differ greatly from the ordinary agricultural college and an ordinary college staff would probably not be suitable Much will depend on the class of men obtained for the heads of the various sections Men of considerable experience in modern agriculture will be necessary It is clear that Indians possessing sufficient experience are not to be obtained in Bengal at any rate, and recruitment from Europe in the first place will be necessary Again ordinary recruitment to the Indian Agricultural Service for this purpose would not do as the officers recruited would be too young. It ought, however, to be possible to get over this difficulty by making short term appointments, say for ten years, and by offering sufficiently attractive terms with a bonus at the expiry of service in lieu of pension, suitable men would doubtless be obtained

Some considerable time would be required to erect buildings and get the farm into workable condition (before students could be admitted) This would probably take two years

The engagement of the staff should however not be postponed on that account as they would be necessary to carry out this work and it would be necessary for them to obtain some knowledge of local conditions It would in fact be advisable that at least one of the staff should be present when the plans for the buildings, etc , are drawn out

APPENDIX XXIV.

Scheme of the University of London for the Degree in Estate Management.

The University of London has adopted a scheme for a degree of B Sc. in estate management. The scheme at present applies only to external students, the regulations for internal students have not yet been drawn up (1918)

SCHEME

Subjects for the Intermediate Examination

Part I

1 Land surveying, including its mathematics, and draughtsmanship.
2. Economics

With one of the following, viz, either

3. Agriculture, including history of agriculture,

or

4. Town planning (history and data).

Part II.

5 Accounting and business organisation.
6. The English law relating to land.

Subjects for the Final Examination

Part I

1. The theory and principles of the valuation of land and buildings.
2 The history and principles of taxation and tithe.
3 The English law relating to land.

Part II.

4. The construction of buildings.

One of the following, viz. —

5. Agriculture

or

6. Town planning.

Two of the following :—

7. Forestry.
8. Agricultural law.
9. Urban public sanitation.
10. Municipal and local government law

It is obvious that any scheme for a corresponding degree in Bengal would need to be modified in order to suit the special requirements of the Presidency.

APPENDIX XXV

Memorandum on Financial Estimates for the Intermediate Colleges.

Contents

I —Types of Intermediate Colleges, three main types required
II —Number required for Intermediate Colleges of each type
III —Scale of salaries in the Intermediate Colleges
IV —Staff required for the Intermediate Colleges in each of the three types
V.—Financial estimates for the three types of Intermediate Colleges, excluding and including allowance for receipts from fee income
VI —Estimates of total expenditure
VII —Deductions to be made from total expenditure
VIII—Total new expenditure
Appendix A —Method used for calculating the teaching staff required
i.—By considering the total number of periods,
ii.—By considering the courses of study for Intermediate Colleges
Appendix B —Rough distribution of Intermediate Colleges in Bengal

I —Types of Intermediate Colleges

In Chapter XXXII, we have pointed out that several types of intermediate colleges will be required Some of them will take only intermediate students, some will have two high school classes attached to them, and some may possibly have the four[1] top classes of a high school Different types will be set up in different places according to the requirements of the localities Though every intermediate college will provide teaching in the arts and science subjects necessary for admission to the University, along with the training for one or more professional careers, every college will not provide professional courses for all the professions Some of the intermediate colleges will provide special training for two and others may provide training for four or more different professions.

For the purpose of these estimates, we classify the colleges in the following paragraphs under three heads, A, B, and C We think none of these colleges should have more than 600 students

Intermediate College of type A —We designate as type A a college of 600 students all of whom will be intermediate students, and without any high school classes attached to it Such a college will provide teaching in at least four different branches of study. The college will have a European principal and at least 2 other European trained teachers representing special subjects. Colleges of this type will be required in towns which provide a large number of matriculated students

Intermediate Colleges of type B —In a college of this type about two-thirds or three-quarters of the pupils, *i e*, from 400 to 450, will be intermediate students, and the rest will be high school boys The college will provide training in three or more courses of study, it will have two Europeans on the staff, a principal and a teacher of a special subject

[1] The number may vary in different provinces to suit school organisation

Intermediate College of type C.—In a college of this type about half, *i e*, 300 students only, will be intermediate students, and the other half will be school boys' It will provide teaching in two or more branches of study, like the other colleges, this type will also have 2 Europeans on its staff.

II.—Total number of Intermediate Colleges required in Bengal

We estimate that 9 colleges will be required of Type A, 21 of Type B and 9 of Type C, making a total of 39 colleges These numbers have been fixed by considering the requirements of each district and the number of students from each district who have matriculated recently

III.—Scale of Salaries

We propose the following scale of salaries —

		Rs
1	Principal, Rs 500—1,000, average per mensem	850
2	Special teachers, Rs 400—750, average per mensem	600
3	Senior Masters in charge of departments, Rs 250 to 400, average per mensem	320
4	Masters teaching mainly intermediate classes, Rs 125 to Rs 250, average per mensem	200
5	Assistant Masters teaching mainly high school classes, Rs 50 to Rs 125, average per mensem	90
6	Clerks	25—100
7	Library clerk	60
8	Physical Instructor	175
9	Gymnastic teacher or Assistant Physical Instructor	50
10	Allowance to the general superintendent of hostels	50
11	Allowance to the superintendents of hostels	25

Note.—Under this scale the average salary per teacher, including the Principal and Gymnastic Instructor, is Rs 278, excluding the Principal, it is Rs 260, and, excluding the three Europeans and Gymnastic Instructor, it is Rs 239 For the scale of salaries in the existing colleges in Bengal we refer to paragraph 14 of the Notes on the general statistics.—(Appendix XXXIV of this volume)

IV.—Staff required for Intermediate Colleges

Each Intermediate College will have 600 students We think the staffs of the colleges should be constituted as follows —

Staff	Type A	Type B	Type C
Principal (Rs 500—1 000)	1	1	1
European specialist teachers (Rs 400—750)	2	1	1
Senior masters in charge of departments (Rs 250—400)	6	4	3
Masters teaching mainly intermediate classes (Rs 125—250)	22	14	11
Assistant masters teaching mainly high school classes (Rs 50—125)		11	15
Physical Instructor at Rs 125	1	1	1
Assistant Physical Instructor or Gymnastic Instructor at Rs 50	1	1	1
Superintendents of hostels at Rs 25	6	6	6
General Superintendent of Hostels at Rs 50	1	1	1

Note.—The strength of the staff has been calculated by two methods (1) By calculating the requirements of the college as a whole (2) By calculating the strength of the staff in each college based on the programme of work prepared for the requirement of different groups of studies These groups are attached in Appendix A to this memorandum

V —FINANCIAL ESTIMATE FOR EACH OF THE 3 TYPES OF THE INTERMEDIATE COLLEGES EXCLUDING AND INCLUDING AN ALLOWANCE FOR RECEIPTS FROM FEE-INCOME.

Monthly salaries.

Type A	Rs	Type B	Rs	Type C	Rs
1 Principal	850	1 Principal	850	1 Principal	850
2 specialist European teachers	1,200	1 specialist European teacher	600	1 specialist European teacher	600
6 senior masters in charge of department at Rs 320	1,920	4 senior masters	1,280	3 senior masters	960
22 masters at Rs 200	4,400	14 masters	2,800	11 masters	2,200
Assistant masters		11 assistant masters at Rs 90	990	15 assistant masters	1,350
Physical Instructor	125	Physical Instructor	125	Physical Instructor	125
Gymnastic teacher	50	Gymnastic teacher	50	Gymnastic teacher	50
4 clerks (Rs 100, 60, 40, 30)	230	4 clerks	230	4 clerks	230
Library clerk	60	Library clerk	60	Library clerk	60
12 peons (including laboratory boys)	100	12 peons	100	12 peons	100
Allowance to 6 superintendents at Rs 25	150	Allowance to 6 superintendents at Rs 25	150	Allowance to 6 superintendents at Rs 25	150
General Superintendent	50	General Superintendent	50	General Superintendent	50
Total monthly salaries	9,135		7,285		6,725

Annual Estimates of Expenditure

	Type A	Type B	Type C
	Rs	Rs	Rs
Annual salaries	1,09,620	87,420	79,700
Library grant	3,500	2,000	1,600
Laboratory grant	6,000	3,500	3,000
Contingencies	1,200	1,000	1,000
TOTAL	1,20,320	93,920	85,300

If we add to these estimates an amount equal to 10 per cent. of the salaries to provide for superannuation allowances, they will rise to Rs. 1,31,282 for type A , Rs 1,02,662 for type B ; Rs. 93,270 for type C

Hostel arrangements.—We anticipate that at least 300 out of the 600 students will reside in hostels, which should be divided into 6 houses, each accommodating 50 students. There will be a resident superintendent in each house,

who will be chosen from the masters of the college, and will receive an allowance of Rs. 25 and free quarters All the six houses should be under the principal, or under another member of the staff who should receive an allowance of Rs. 50, and a free house or quarters These allowances have been provided for in the financial estimates The rent of the hostels should defray the cost of the menial staff, of the repairs of hostels, of taxes, and possibly of grants to be given to the college societies and clubs.

Receipts from fee-income

The fee in the intermediate classes will be Rs 5, and in the high school classes Rs. 3 Assuming that 10 per cent of the students will be exempted from fees, and an additional 10 per cent will pay half fees (which is equivalent to assuming that full fees will be paid by 85 per cent of the students), the income from fees will be as follows —

	Rs
Colleges of type A	30,600
Colleges of type B	26,520
Colleges of type C	24,480

The net expenditure per annum including the bonuses for superannuation allowances, and allowing for receipts from the fee-income, will thus be as follows —

	Rs
Colleges of type A	1,00,682
Colleges of type B	76,142
Colleges of type C	68,790

VI —Estimates of total expenditure

The total expenditure (leaving out of account fee-income and deductions, dealt with in the next section) will be as follows —

	Rs
9 colleges of type A	9,06,138
21 colleges of type B	15,98,982
9 colleges of type C	6,19,110
Total	31 24,230

VII —Deductions to be made from total cost.

We think that this expenditure is liable to deductions under the heads set out below —

(*a*) The total estimate Rs 31,24,230 obtained in the preceding section has been made on the assumption that the colleges will be institutions entirely supported by the State, but in the case of the mission colleges the European teachers would largely be honorary workers

receiving only a small salary, and we think it fair to estimate that the State will only pay three-fourths of the remaining total cost. We anticipate that there will be about five missionary intermediate colleges.

(*b*) In the case of private colleges other than missionary we may anticipate as before that the State will contribute only three-fourths of the entire cost and the managers of the private colleges will provide the remaining one quarter We anticipate that there will be 11 private intermediate colleges

(*c*) Government is already spending money on the students reading in the intermediate and high school classes in the Government and aided institutions The money which the Government is now spending should be deducted from the foregoing estimates in order to get the net new cost It is difficult to calculate the amount so spent with accuracy as the intermediate students are taught in the colleges affiliated to the University and the high school classes are taught in high schools which often contain primary classes as well.

We have based our calculation on the average cost per pupil paid by public funds in the schools and colleges of different types

The deductions from the new cost to be made under the above heads we estimate as follows :—

	Rs
Deduction due to the smallness of the salaries of the European staff of the mission colleges (see (*a*) above) . . .	87,000
One quarter of the expenses of the missionary colleges (excluding the foregoing salaries) to be paid by the missionary societies	71,250
One quarter of the expenses of the aided non-missionary colleges to be paid by the governing bodies .	2,18,800
Total amount which the Government is now spending on its own and aided institutions, estimated at about .	5,20,000
TOTAL .	8,97,050

NOTE —No account has been taken in the deductions nor in the estimates of expenditure on stipends and scholarships

VIII —TOTAL OF NEW EXPENDITURE REQUIRED

The total new expenditure we estimate at Rs 31 24,230 less Rs 8 97,050, that is Rs 22,27 180

NOTE (1) —The average monthly salary of the masters in this financial estimate has been taken at Rs 200 The estimate will be reduced by Rs. 1,50 000, if it is taken at Rs 175 , and it will be reduced by Rs 3,00,000 if it is taken at Rs 150

NOTE (2) —The estimate is prepared for the expenditure when all the intermediate colleges are in full working order In the first few years the recurring expenditure will be considerably less, but the capital expenditure will be great

NOTE (3) —The deductions allowed for in respect of the private and missionary colleges are considered by one member of the Commission as doubtful

APPENDIX A.

METHODS USED FOR CALCULATING THE TEACHING STAFF REQUIRED.

i. By considering the total number of period

1 Estimate of total teaching staff required .—

We may estimate the staff required in the following way —

The 600 students will be grouped in sections of 45 for 3 periods, and grouped in sections of 20, for the remaining $2\frac{1}{2}$ periods.

For the first grouping we require $\frac{600}{45}=13$ sections Therefore we require $13\times3\frac{1}{2}=45$ periods of teaching

For the second grouping we require $\frac{600}{20}=30$ sections, and we require $30\times2\frac{1}{2}=75$ periods

Total number of periods required $45+75=120$

2 The number of teachers required .—

Every teacher will teach in the college for 4 periods each day, equal to about 3 hours which is a very liberal allowance

The number of teachers required=30

3 It is interesting to note that the number of students per head $=\frac{60}{30}=20$ excluding the Principal and the Physical Instructor, which is a very good average

ii By considering the courses of study for Intermediate Colleges

We have also calculated the staff considering the courses of study and the requirements of each subject, and the number of teachers obtained by this method is the same as the number of teachers calculated by considering the total periods required.

In the following table the figures represent periods —

Subject	First year	Second year
Arts Course.		
English	8	6
Vernacular	3	3
History and geography	4	4
Logic or economic or advanced mathematics	3	3
Natural Science	3	3
Sanskrit	2	2
Physical training	2	2
TOTAL	25	23

Subject.	First year	Second year
Science Course		
English	8	6
Vernacular	3	3
Mathematics	3	3
Chemistry	2	1
Chemistry laboratory work	4	2
Physics	1	2
Physics laboratory work	2	4
Botany, biology, or advanced mathematics	3	3
Physical training	2	2
TOTAL	28	26
Course for teachers		
English	8	
Vernacular	3	
Mathematics	3	
History and geography	6	
Natural Science	3	
Methods of teaching and school organisation	3	
Physical training	2	
School practice in second year	2	
TOTAL	30	
Agricultural course [1]		
English	8	8
Vernacular	3	3
Mathematics, including principles of mechanics	3	3
Chemistry	2	2
Chemistry laboratory work	4	4
Botany	3	3
Land-surveying	2	2
Principles of agriculture	2	2
Physical training	2	2
TOTAL	29	29

[1] One of the members of the Commission (Mr P. J Hartog) thinks it essential that physics and some elements of zoology should be included in the agricultural course

Subject.	First year.	Second year.
Commercial Course.		
English	8	..
Vernacular	3	
Mathematics	6	.
Geography	3	..
Science	3	...
Economics	3	.
TOTAL	26	
Engineering Course		
English	8	.
Vernacular	3	..
Mathematics	6	...
Physics	2	...
„ laboratory work	4	.
Chemistry	2	..
„ laboratory work	4	...
Drawing	3	...
Physical education	2	
TOTAL	34	

NOTE —The studen's of the same subject reading for different courses are expected to be grouped together if their number is small

APPENDIX B

Rough distribution of Intermediate Colleges in Bengal

Type A colleges will have 600 intermediate students only, type B will have 400 intermediate and 200 high school students, and type C will have 300 intermediate and 300 high school students

Division	Name of district	No of students who passed the matriculation examination of 1919	No of students intending to read in the intermediate classes taken at 78 per cent of the figures in the preceding column [1]	No of colleges existing in the town		No of students in the first year class of the college or colleges [2]	No of intermediate colleges required	Description or type
				First grade	Second grade			
Presidency Division	Jessore	211	165		1 (Narail only)	90	1	B
Do	Khulna	244	190	1 (Daulatpur)		184	2	B & C
Do	Murshidabad	194	151	1 (Berhampore)		318	1	A
Do	Nadia	214	167	1 (Krishnagar)		105	1	B
Do	24-Parganas	292	228				1	C.
Burdwan Division	Bankura	113	88	1		146	1	B.
Do	Birbhum	93	73		1 (Hetampur)	45	1	C
Do	Burdwan	246	192	1		99	1	B
Do.	Hooghly	243	190	2 (Hooghly & Serampur)		153	2 (1 private)	B & B

Do	Howrah	23	158		1 (Uttarpara)	84	1	B
Do	Midnapur	211	165		1	94	1	B.
Dacca Division	Dacca	789	615	2		253	3 Dacca of A Jagannath of A Muslim of B	A, A & B
Do	Backarganj	360	287	1		250	1	A
Do	Mymensingh	506	304	1		221	2	A & B
Do	Faridpur	395	309		1	unknown	1	A
Rajshahi Division	Bogra	119	93				1	C
Do	Darjeeling	19	15					*Nil*
Do	Dinajpore	89	69				1	C
Do	Jalpaiguri	25	19					*Nil*
Do	Malda	49	39				1	C
Do	Pabna	264	206		1	177	1	A
Do	Rajshahi	133	103	1		122	1	B
Do	Rangpur	105	81	1		228	1	B
Chittagong Division	Chittagong	287	224	1		125	1	A
Do	Noakhali	223	179				1	B
Do	Comilla	488	381		1	310	1	A
Calcutta Division	Calcutta	1,585	1,236	10	1	3,206	10	(Hindu, Madrassah Hare of type C, St Paul's type C, Scottish Churches type B, South Suburban, City, Bangabasi, Ripon, Metropolitan of type B) 4 of type C and 6 of type B
	TOTAL	7,700	6,017	24	8		39	

[1] See Appendix XXXIV, para 6 of this volume

[2] See Volume XIII, Statement I

All the 39 intermediate colleges will not be the State colleges, but some of them will be missionary and some of them will be private colleges

This division taken on the basis of the existing colleges will be as follows :—

Kind of college.	Type A	Type B	Type C	Total
Public	7	9	7	23
Missionary	.	4	1	5
Private	2	8	1	11
Total .	9	21	9	39

APPENDIX XXVI.

Financial Estimate for Hostel Accommodation

(*a*) *For Calcutta*

1 By the removal of the intermediate students from the University and by adding an extra year to the B A course, the number of the undergraduates will be 6,142 [1] Assuming that the number of the post-graduate, law and medical students remain unchanged, the number of the students in the reconstituted University of Calcutta will be 10,685 We find both from the figures supplied to us by the principals and from our personal enquiry that about 40 *per cent* of the students reside with parents and *bonâ fide* guardians Accommodation will, therefore, be required for 6,411 students The present hostel accommodation in Calcutta is for 2,257 Additional accommodation will therefore be needed for 4,154 students [2]

2 We have already mentioned in Chapter XXXIX, that attached messes, though not a very desirable form of residence, may be continued for the present and that unattached messes should be dispensed with at an early date The number of the students now residing in the attached messes is 2,556 Accommodation at an early date is therefore required for 1,598 students [2]

3 If the students who have failed in the B A examination are not compelled to attend lectures, the number will be further reduced by 925[3] and the number requiring hostel accommodation will again be reduced by 555

4 Broadly speaking, hostel accommodation will be required for 1,600 students in the immediate future and an additional accommodation of 2,500 will be required to transform the attached messes into hostels

5 The cost of providing accommodation for each student in Calcutta, taking the figures from the recently built hostels, is about Rs 1,000 excluding the cost of land This includes the dining room, common room, but it does not provide family quarters for superintendents, nor does it provide gymnasia for students

6 Rs 16,00,000 will therefore be the sum required in the near future and an additional sum of Rs 25,00,000 will be required later on to replace attached messes by hostels It is difficult to estimate the cost of land whose value depends on the localities

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[1] See Appendix XXXIV, para 4 (*a*) of this volume
[2] *Ibid*, para. 11
[3] *Ibid*, para 5 and footnote to para 11

7. A substantial margin, say about Rs 2,00,000, should be set aside for the provision of libraries, gymnasia, family quarters for superintendents and students' clubs

(b) For Mufassal Colleges outside Calcutta and Dacca

8. After the separation of the intermediate classes and the addition of an extra year to the B A course the number of university students in the mufassal colleges will be 2,605 [1] Some of the existing accommodation will be sufficient for the university students The number of students for whom accommodation will be needed is roughly 288 [2]

9 Some of the mufassal colleges in the future will be developed into university colleges and would require increased accommodation It is difficult at this stage to give an estimate of such expansion

10 We have already referred in Chapter XXXIX that in mufassal towns the hostel buildings should be of the same quality as that of the new hostels of the Carmichael College at Rangpur The Carmichael hostel has three different types of buildings in which the cost of accommodation per head is Rs 500, Rs 600 and Rs 700, respectively We take Rs 600 as the cost of accommodation per head in the new hostels to be built in the mufassal towns

11 The immediate cost of providing accommodation for 300 students in the mufassal will be Rs 1,80,000, excluding the price of land And a substantial sum of not less than Rs 2,00,000 should be set apart for the provision of family quarters for the superintendents, gymnasia and clubs for students, not only in the new hostels but also in the existing ones.

12 The increased accommodation in the university colleges should be considered along with the general developments of these colleges And it is not possible to forecast at present which of the mufassal colleges will become University colleges and to what extent increased accommodation will be required there

(c) Summary of Expenditure.

IMMEDIATE REQUIREMENTS

	Rs
Hostels for Calcutta	16,00,000
Improvements for Calcutta hostels (family quarters for superintendents and gymnasiums, etc)	2,00,000
Hostels in mufassal towns	1,80,000
Improvements for mufassal hostels	2,00,000
TOTAL	21,80,000

This estimate does not include the price of land. An additional sum of Rs. 25,00,000 will ultimately be required to replace attached messes by hostels.

[1] See Appendix XXXIV, para 4 (*b*) below.
[2] *Ibid* para 13.

APPENDIX XXVII.

Financial Estimate for the proposed Reconstruction of Calcutta University

We have already discussed the financial estimate of Calcutta University in Chapter LI and for the sake of ready reference we give here the summary of the estimate

I Teaching University of Calcutta—

	Rs
(*a*) Administration	71,400
Expenses of new Boards	39,000
(*b*) Travelling expenses	10,000
(*c*) New university chairs at the Sanskrit and Islamia College	25,000
(*d*) Addition for Presidency Chairs	50,000
(*e*) Fund for payment of university teachers	1,25,000
(*f*) Department of Education (salaries)	29,000
(*g*) Physical education of students	24,000
(*h*) Bengali	9,000
(*i*) Urdu	6,000
(*j*) Phonetics	12,600
(*k*) Statistics	12,600
(*l*) Library grant	50,000
(*m*) Librarian	7,200
(*n*) New technological departments and agriculture	1,16,400
(*o*) Contribution to Calcutta colleges for their improvement	6,37,000
Total	12,24,200

II Mufassal colleges (excluding Dacca)—

Mufassal Board	12,000
Contribution to mufassal colleges for their improvement	5,00,000
Total	5,12,000

III. Grant from Government to the University of Calcutta in compensation for loss of matriculation and intermediate examination fees 3,00,000

IV. Certain capital grants proposed for the Teaching University of Calcutta and mufassal colleges (excluding Dacca New science departments at Presidency College) . .	4,00,000
Residential accommodation for Calcutta—	
Expenditure on hostels . . .	16,00,000
For replacement of attached messes .	12,00,000
Students' clubs, gymnasia, etc .	2,00,000
Library Initial grant for books .	2,00,000
Laboratories and libraries for botany and zoology .	50,000
Extension for technological laboratories, land and buildings .	10,00,000
New University building on fish market site and furniture for it	11,00,000
Hostels in mufassal colleges	4,00,000
TOTAL .	61,50,000
GRAND TOTAL .	81,86,200

3 *Staff required.*

SUBJECT	Professor	Reader	Lecturer	Junior Assistant	Demonstrator	TOTAL
English .		1	2			3
Philosophy	.	1				1
Political Economy		1	1	1		3
Mathematics . .		1	1	1		3
Physics . .	.		1		1	2
Chemistry			1		1	2
History .		1	1	1	.	3
Islamic History and other Islamic studies	1 (*a*)	1	1	1		4
Arabic	1 (*a*)		1	2		4
Persian .	1 (*a*)		1	2		4
Urdu . .			1			1
TOTAL	3	6	11	8	2	30

(*a*) University Professors

In the case of Islamic studies, Arabic and Persian, the Junior Assistants will be Moulvis On account of the vast range of subjects included in Islamic studies and Islamic History a reader has also been provided for

4 *Monthly Salaries*

The scale of salaries is taken to be the same as in the Dacca University.

	Rs.
Allowance to the Principal	200
6 Readers (at Rs 400—600) the average being Rs 533	3,198
11 Lecturers at Rs 330	3,630
8 Assistants at Rs 100	800
2 Demonstrators Rs 150	300
Physical Instructor	150
Librarian	100
TOTAL	8,378

5 *Total Cost*

	Rs
Salaries of the Staff	1,00,536
Office establishment	2,000
Contingency	1,200
Library	3,000
Laboratory	1,000
TOTAL	1,07,736

6 *Conclusion*

The college is likely to have 600 students 100 of whom may be students reading for Islamic studies. This number will include the students reading for special Islamic degree as well

We have obtained the total cost by considering the requirements of each subject, it tallies with the cost of the college obtained by considering the average salaries of the teachers [1]

The average number of the students per teacher will be about 20

Note

In Section XV of Chapter XXXIV and in Chapter LI, paras 39—45, we have described the need for new colleges and have discussed their cost by taking the average salaries of all the teachers It is desirable to illustrate the results by considering the detailed requirements of a new college We have recommended that an Islamia College should be established in Calcutta,[2] for which site has already been acquired No nucleus exists for this college and the whole staff can be appointed on terms recommended by us

[1] In para 42, Chapter LI, the cost of a college of 1,000 was found to be Rs 1,29,200 and that of 500 students to be Rs 1,05,200 The cost of a college for 600 obtained above is Rs 1,07,736

[2] Chapters XXIV and LII

2 Subjects to be taught in the Islamia College will provide advanced teaching in Arabic and Persian including the teaching for special degree in Islamic studies[1] and the teaching in ordinary arts and science subjects The students reading for honours degree in science subjects will go to the Presidency College for practical work and general lectures, but they will receive tutorial guidance in the Islamia College. A small staff in science subjects will therefore be provided for the teaching of pass students and for the tutorial guidance of honours and M A students.

3 The Professors of Arabic and Persian, and Islam History will be University Professors attached to the Islamia College and their salaries are excluded in the general estimate In calculating the cost of a new college, in para. 41, 42, Chapter LI, we have not included salaries of the University Professors.

[1] Chapter XLII, para 30

APPENDIX XXVIII.

Estimates of initial recurring annual expenditure of the Dacca University assuming the number of students to be 1,500.

Part I.

Introductory.—In Tables A to G below we submit estimates of initial recurrent expenditure based on the hypothesis that there will be 1,500 (post-intermediate) students at Dacca University of whom 300 will be graduates, and we assume that 400 undergraduate students will join the three years' course each year [1] In Part II, we give estimates for the increase in net recurring expenditure which an increase in the student population from 1,500 to 2,000 will necessitate.

Table A.—Details of the teaching staff
Table B.—Salaries of the teaching staff
Table C.—Miscellaneous subordinate establishment for laboratories, etc.
Table D.—Administrative staff.
Table E.—Menial staff
Table F.—Details of other annual expenditures
Table G.—Demonstration school of 300 boys.

TABLE A

Details of the teaching staff.

Arts and Science.

Subjects	Professors	Readers	Lecturers	Assistants	Demonstrators	Total.
English (Language and Literature)	1	3	8	4	.	16
Mathematics (pure and applied and Astronomy)	1	1	4	2	..	8
Philosophy .	1	2	2	..	..	5
History . .	1	2	2	1	..	6
Political Economy .	1	1	1	1	..	4
Sanskrit and Bengali .	1	1	2	3	.	7
Persian and Urdu .	..	1	1	1		3
Arabic .	(Included in Islamic Studies)					
Physics . .	1	2	1	.	4	8
Chemistry . .	1	2	2	..	4	9
Zoology } . . . Botany }	1	1		..	2	4

[1] We include in this figure a provision for a certain number of students readmitted after failure at their examinations.

Arts and Science—contd.

Subjects.	Professors.	Readers.	Lecturers	Assistants	Demonstrators	TOTAL.
Geography	1 (*a*)	.	1		1	3
French and German		1 (*b*)	.	.	.	1
Islamic Studies						
Islamic Studies and Arabic	1	3	5	2		11
Education						
Education	1	3 (*c*)	3	.		7
Physical Education (*d*)	1		.	..	1	2
Law						
Law . .	1		6 (*e*)			7
TOTAL	14	23	38	14	12	101

(*a*) Or Reader

(*b*) One Tutor at a salary of Rs 400 *per mensem*.

(*c*) Including a Reader in Phonetics, who might later be head of a department

(*d*) In the Dacca University Report the Professor of Physical Education, and the Gymnasium Instructor at Rs 100 (who for convenience we have classified as Demonstrators) were included under the heading Central Administration, Superior Staff

(*e*) With a salary of Rs 200 *per mensem*

TABLE B.

SALARIES OF THE TEACHING STAFF

I—Monthly salaries of the teaching staff

All figures are given in rupees per mensem

	Rs
14 Professors (at Rs 600—1,000) the average being Rs 850	11,900
Additional allowance to 6 Professors at Rs 500 .	3,000
23 Readers (at Rs 400—600) the average being Rs 533	12,259
38 Lecturers (32 at Rs 330 and 6 Lecturers in Law at Rs 200)	11,760
14 Assistants at Rs 100 .	1,400
11 Demonstrators at Rs 150 and one Physical Instructor at Rs 100	1,750
Total of the monthly salaries of the teaching staff .	42,069

II.—Monthly allowances of the staff in respect of work in Halls and Hostels.

	Rs
3 Provosts at Rs. 200	600
12 Tutors at Rs. 100	1,200
24 Assistant Tutors at Rs. 50	1,200
1 Proctor at Rs. 200	200
Principal of the Training College or Head of the Department of Education	200
Head of the Department of Law	200
Two Tutors for the two hostels for the students of law and training department at Rs. 100	200
Total of monthly allowances of the staff in respect of Halls and Hostels	3,800

III.—Total expenditure on teaching staff.

Total of monthly salaries and allowances of the teaching staff	45,869
Total annual expenditure on teaching staff	5,50,428

TABLE C.

MISCELLANEOUS SUBORDINATE ESTABLISHMENT FOR LABORATORIES, ETC.

I.—Monthly salaries.

For Chemistry.

	Rs.
Mechanic	50
3 Compounders at Rs. 30	90

For Physics.

Mechanic (Rs. 100—125)	116
Assistant Mechanic (Rs. 40—50)	47
Carpenter (Rs 50—60)	57

(Hospital establishment is excluded It is expected that he fees paid by students will cover the expenses.)

For Mathematics.

Drawing Instructor	100
Mechanics, at Rs. 60—80	73
TOTAL	533[1]

[1] The estimate of the Dacca Committee under this heading was Rs 576 and it was reduced to Rs 573 as ultimate and Rs. 412 as immediate. No reduction can be made under this heading.

II.—Annual salaries.

	Rs.
Total of annual salaries	6,396

TABLE D.

ADMINISTRATIVE STAFF

I —Monthly salaries of the superior staff for general administration

	Rs
Vice-Chancellor	4,000[1]
Registrar	1,000
Librarian	850
University Steward	500
2 Assistant Librarians	400
2 Assistant-Surgeons	450
Groundman for playing fields	300[2]
TOTAL .	7,500

II —Monthly salaries for clerical establishment

(The estimates are taken by reducing the Dacca University Committee's estimate by one-fourth as suggested by the Government of India)

	Rs
1 Head Assistant, Registrar's office (or Assistant Registrar)	330
Accountant . .	533
Cashier on Rs 100—150 . .	133
Stenographer on Rs 75—100 . . .	92
Upper Division	
2 Clerks on Rs 100	200
2 Clerks on Rs 80	160
2 Clerks on Rs 60	120
3 Clerks on Rs 40	120

[1] This is the salary suggested for the first Vice-Chancellor, who will be responsible for organising the university. The normal salary should be Rs. 3,000

[2] We have included the Groundman under this heading as was done by the Dacca University Committee, in order to avoid creating a fresh category.

Lower Division.

	Rs.
4 Clerks on Rs. 60	240
5 Clerks on Rs. 45	225
6 Clerks on Rs. 35	210
8 Clerks on Rs 25	200
TOTAL	2,563[1]

III.—Total of salaries for administrative staff.

Total monthly salaries of administrative staff (excluding menials)	10,063
Total annual salaries of administrative staff (excluding menials)	1,20,756

TABLE E

MENIAL STAFF.

	Rs
(The estimate of the Dacca Committee was Rs. 3,912 ; of the Government of India, ultimate Rs 2,750 and immediate Rs 2,400.)	
Total monthly salaries of the establishment	2,400
Total annual salaries	28,800

TABLE F.

DETAILS OF OTHER EXPENDITURE CALCULATED ANNUALLY

	Rs
Library (for books, binding, etc)	35,000
Contingencies	16,000
Laboratories and Oriental History (Museum)	27,000
Scholarships and Prizes and Allowances	15,000
Increased stipends for Musalmans and backward classes	2,880
Grant-in-aid to Union	500
Grant for games	1,500
Travelling allowances	10,000
Scavenging	1,400
Water, Drainage and Electric supply	40,000
Printing charges and contribution to the University Press	10,000
TOTAL	1,59,280

[1] The estimate of the Dacca Committee under this heading was Rs 2,626, which was reduced by the Government of India to Rs 2,015 as ultimate and Rs. 1,500 as immediate. We have increased the pay of the Assistant Registrar and the Accountant, but reduced the number of clerks

TABLE G.

Demonstration School of 300 boys.

I.—Monthly salaries.

	Rs.
Head Master (Rs. 400—600)	533
Second Master	330
13 other teachers on average salary of Rs. 90	1,170
Total of monthly salaries	2,033

II.—Annual salaries.

Total of annual salaries	24,396
Contingencies including two clerks	1,800
Total	26,196

TABLE H.

(i) The total initial annual recurring expenditure may be summarised as follows :—

	Rs.
1. Salaries of the teaching staff at the rate of Rs 46,869 per month (Table B)	5,62,428
2. Subordinate establishment for laboratories, etc., at the rate of Rs. 533 per mensem (Table C)	6,396
3. Salaries of the administrative staff at the rate of Rs. 10,063 per mensem (Table D)	1,20,756
4. Menial staff wages at the rate of Rs. 2,400 per mensem (Table E)	28,800
5. Other expenditure (Table F)	1,59,280
6 Demonstration School (Table G)	26,116
Total	9,03,776

(*ii*) To calculate the net increase in expenditure, over and above the recurring expenditure at present incurred at Dacca, the following sums must be deducted :—

	Rs
1. Income from fees at Rs 6 per mensem (*a*) . . .	91,800
2. Tuition fee at Rs. 3 per mensem realised from 300 school boys in the demonstration school (*a*) . .	10,080
3. The sum which the Government is now spending on the Dacca, Jagannath and the Training Colleges Rs.	
(*i*) Dacca College 1,35,308	
(*ii*) Jagannath College . . . 12,000	
(*iii*) Training College . . . 54,762	
	2,02,070
Scholarships now given by the Government to the students	5,000
TOTAL .	3,08,950
(*iii*) The net additional expenditure will be .	5,94,826

(*a*) It is assumed that 10 per cent will be free scholars and 10 per cent will pay half fees The fee is therefore charged on 85 per cent of the students.

PART II

In Part I we have submitted estimates for the increase in initial recurring expenditure at Dacca if the total number of students is 1,500 But we think the number may be 2,000 The reformed madrassahs are, we understand, likely to contribute 30 students in 1921, 60 in the following year , and it is estimated that the number may rise soon to 100 The total number of students contributed to the three years' course would be in that case, allowing for wastage, between 250 and 300 The present intermediate classes and future intermediate colleges at Dacca will no doubt form the largest feeders of the University But there may be a considerable influx from other districts, especially those like Noakhali and Faridpur which are unlikely to have university colleges ; and the Assam Government may reasonably ask for a number of places to be reserved for Assamese students as was originally contemplated. In these circumstances it may be necessary to increase the accommodation of the University from 1,500 to 2,000 at the outset, or soon afterwards

2. The following additional staff is likely to be required if the number of the undergraduate students be increased by 400, with a corresponding increase in the number of the graduate students, and a new hall is established.

TABLE I.

Subjects	Professors.	Readers.	Lecturers	Demonstrators	Junior Assistants	Total.
English . .	..	2	2		1	5
Mathematics .		1			1	2
Philosophy .	...		1			1
History .		1	1	..	1	3
Political Economy .		.	1	.	1	2
Sanskrit and Bengali .	.	1	1		1	3
Persian and Urdu			1	.	.	1
Physics	.	1	1	1		3
Chemistry . . .		1	1	1	..	3
Geology and Botany .	..		1	1		2
Islamic studies				.		.
Education . .	..		.	..	..	..
Law . .			.		.	...
TOTAL .	.	7	10	3	5	25

3. The monthly salaries of the additional staff set out in Table I would be as follows —

TABLE J.

	Rs.
Seven Readers at Rs. 533	3,731
Ten Lecturers at Rs. 330	3,300
Three Demonstrators at Rs. 150	450
Five Junior Assistants at Rs. 100	500
Allowance of the Provost	200
Four Tutors at Rs 100	400
Eight Assistant Tutors at Rs. 50	400
Total monthly salaries .	8,981

We estimate the increased expenditure on contingencies, clerks and peons at say Rs. 3,000 per annum.

4. The monthly income from fees at the rate of Rs 6 per mensem would be Rs. 2,550 The additional monthly cost would therefore be Rs. 6,431 or Rs. 80,000 per annum. Thus the total expenditure of the University (additional to the present expenditure at Dacca) would be raised from about Rs. 5,95,000 to Rs 6,75,000 per annum, if the number of students at the outset were 2,000 instead of 1,500.

PART III.

Notes on the foregoing estimates.

(A) The strength of the staff has been calculated for the strict requirements of each subject on the basis of previous documents, and in some cases with the assistance of expert advice. It is interesting to note that the number of students per teacher comes out to be a little over 15 If the number of students is increased by 500 to 2,000 and the number of the staff is increased by 25 to 126, the number of students per teacher will rise to 16

(B) No provision has been made for bonuses or pensions Pensions were not included in the *previous* estimates of the Dacca University Committee A further sum of Rs 70,000 should be added to the annual expenditure if the bonus is reckoned at the rate of 10 per cent. of the salaries, and this must be proportionately raised in case a higher rate of bonus is settled A further sum of Rs 8,000 (on the 10 per cent basis) should be added if the number of students be increased to 2,000, and consequently the staff to 126

(C) No provision is made for the repairs of the buildings, and the rents of bungalows and hostels are not included in the receipts We understand that the rents of the hostels will pay for the repairs of the hostels and menial hostel establishments The allowances of the Provosts, Tutors and Assistant Tutors are included in the salaries of the teaching staff.

(D) Though we have provided for the teaching of Sanskrit, the School of Sanskritic Studies is not included in this immediate estimate. Nor have we included geology, physiology, medicine, agriculture or civil engineering, which should all be provided for at future dates.

(E) Travelling allowances are not included in the estimates. The travelling allowance in a teaching university should be relatively less than in an affiliating university An allowance of about Rs. 8,000 should be made for travelling expenses [1]

(F) The income from the examination fees in the Calcutta University not only pays the examination expenses, but supplies a substantial contribution to the expenses of the post-graduate teaching. In other universities also the examination fees cover all the examination expenses [2] The Dacca University will not conduct matriculation and intermediate examinations and the number of students for higher examinations will be small in the first few years after the establishment of the University A special grant for the deficit on the examination expenses will therefore also be necessary

(G) It is difficult for us to give an estimate either of repairs or of electric charges We understand that the Dacca Electric Supply Company have made a contract with the Government and the University may have to take electricity from the Company We have provided in the Budget a lump sum of Rs. 40,000 for electric and water supply which may not be found to be sufficient.

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[1] The travelling allowance bill of the Allahabad University for the Fellows, Inspectors, Examiners and others, was Rs 11,736 in the year 1917.

[2] In the Allahabad University in the year 1917, the fee income was Rs 1,97,673 and the examination expenses were Rs 1,64,263-15-8.

(H) The Dacca Committee contemplated the establishment of an Engineering College in Dacca, whose staff might have been useful to the University in repairs and the construction of new buildings In subsequent discussions it was assumed that the University buildings would be Government property and as such would be looked after by the Public Works Department. Under our scheme the management of the property will be transferred to the University, and we recommend that the University should make an allowance for the services of the Superintending Engineer of the Dacca Division, if he supervises repairs and construction on behalf of the University. The University might employ its own subordinates for this purpose.

(I) It may be of interest to compare the expenditure of the new University of Mysore with the University of Dacca that we are now proposing The total cost of the University of Mysore is Rs 3,25,094 and the cost per student is Rs 529 The total proposed cost of the University of Dacca is Rs. 10,14.548 and the cost per student is Rs 508

PART IV

The cost of establishing a Medical College at Dacca

1 In Chapter XXXIII, para. 120, we have discussed the establishment of a Medical College at Dacca It is not possible to estimate the cost of establishing a Medical College at Dacca until we know what will happen to the Medical School and how far its resources can be utilised for the college.

2 *Staff*—We give here the minimum staff that will be required at the outset The further development and the addition of new departments will depend on the funds available in future —

Subject	Professor	Reader	Lecturer	Assistant	Total
Medicine and clinical medicine .	1		1	1	3
Pathology . .	1		1	1	3
Surgery .	1		1	1	3
Physiology (*a*) . .	1		1	1	3
Anatomy .		1		0	2
Midwifery .		1	1	1	3
Materia Medica . .		1			1
Hygiene . .	1	.	1	1	3
Medical Jurisprudence . .			1		1
Opthalomology . .			1	1	2
Total .	5	3	8	8	24

(*a*) Already included in the general science staff, but not included in the estimate of immediate cost Chapter XXXIII, para 92

3. *Salaries*—The Professors in the Medical College should be compensated for the loss of general practice (see Chapter XLIV, para. 43) and therefore their salaries should be a little higher than the corresponding salaries in the

departments of arts and science The maximum salaries recommended for arts and science[1] are taken as the basis of calculation in the present estimate.

4 *Monthly Salaries of the Staff*—The department of physiology, which will have a professor, a lecturer and a demonstrator is excluded in the following estimate :—

	Monthly salary. Rs
4 Professors at Rs 1,000 each	4,000
Additional allowance to Professors	1,000
3 Readers at Rs 600 each	1,800
7 Lecturers at Rs 400 each	2,800
7 Demonstrators at Rs 150 each	1,050
Allowance to the Principal in addition to his salary as a Professor	200
Allowance to one tutor and two assistant tutors	200
TOTAL	11,050

5 *Estimate of Annual Recurring Expenditure*—

Annual Salaries	1,32,600
Principal's Office Establishment	3,000
Library	3,000
Scholarships and Prizes	3,000
Aid to Muslim students and backward classes	2,400
Laboratories excluding physiology	5,000
Contingencies	4,000
TOTAL	1,53,000

6. *Fees*—The college will have about 200 students, about 10 per cent. will be free scholars and about 10 per cent will pay half tution fees; assuming the fee is charged at Rs 7 per mensem, the income from fees will be Rs 14,280

The net cost will therefore be about Rs 1,38,720 excluding the department of Physiology and about Rs 1,60,000 including the department of Physiology.

PART V

Buildings for the Dacca University.

1. We do not propose to make definite recommendations in regard to the exact use of the existing buildings at Dacca, nor do we propose to give detailed estimate of the buildings which should be built on the Ramna site. The estimate of some of the buildings were prepared by the Dacca University

[1] See Table B of this Appendix.

Committee On account of the war conditions, the rates for building have changed very greatly and it is impossible to give the estimate of the rates at the time of actual building All that we can say at present is that in our view the buildings proposed were on too lavish a scale

2 The Dacca Committee estimated the capital expenditure at Rs 65,17,615 which were reduced to Rs 38,40,000 in 1914 on account of the outbreak of the war These estimates were again revised and they were reduced to Rs 11,25,000 spread over three years at the time when the opening of the University contemplated to be in July 1918

3 With the expansion of the University, the buildings may be provided as in the revised estimates, but beginning can be made at once with the existing buildings after providing cheap hostels for the residence of the students

4 We have already said that we do not like to make definite recommendations about the use of the existing buildings, but we would like to make a few suggestions for the consideration of those who would be asked to assign the existing buildings for various purposes

5 The Government House is too gorgeous for the residence of the Vice-Chancellor It may have been suitable for the Vice-Chancellor according to the scale of buildings contemplated by the Dacca Committee In the light of the reduced estimates, we think that its front portion should be given to the University library and its back portion should be used for the offices and the University meetings

6 The Engineering school which is now located in the compound of Dacca College should be removed to Press buildings or elsewhere and the Dacca and Engineering hostels which are both situated in the same compound and which provide accommodation for 384 students should form the Dacca Hall The Engineering school might be transferred into physics laboratory and the Chemistry Department should be located in the existing science laboratory of the Dacca College A big lecture theatre should be built between the two laboratories and it should be used both by the physics and the chemistry departments

The Dacca College should be used as auditorium for arts lectures The upper storey of the wings can be completed without much cost and, if necessity arises, the building can be extended

7 The Muslim dining hall has already been built behind the old Secretariat and we think the two wings of the old Secretariat might be given to the departments of law and Islamic studies, while the middle portion should continue to be a part of Muslim Hall Two more blocks should be built at the back of the Secretariat and these with the middle portion of the Secretariat would constitute Muslim Hall

8 The Jagannath Hall would be a new building and the stable might be used as the nucleus of one of the hostels, which may either be a hostel of the Jagannath Hall or it may be the hostel for the law students

9 The proposed physics laboratory which has already been built up to the plinth should be completed and used as Biology and Geography Laboratories.

10. The Training College with hostel accommodation and the demonstration school should also be built on the Ramna site. A building for the University Union should also be provided and it should be built at a place within easy approach from different halls

11 We have said in paragraph . . . that a fourth hall may be necessary for the outset It should be built on the line of the Jagannath Hall. We are impressed with hostels of the new Rangpur College and we think that the style is most suitable to adopt It is cheap and it costs about Rs 600 per student The ground plan as we have already said should be similar to the Minto Circle of the Aligarh College A number of bungalows for the residence of the senior staff and a number of family houses with full Indian comforts should also be provided for the Indian staff We lay great stress on the provision of the accommodation for the members of the staff, whose residence close to the halls to which they are attached is the necessary part of the organisation of a residential University

APPENDIX XXIX.

Percentage of passes at University Examinations.

Dr. Gregory has in his note[1] quoted certain figures from a speech made by Dr Watson at a meeting of the Senate of the Calcutta University in 1915 The imputation, if I am not mistaken, is that the increase in the percentage of passes is attributable to a fall in the examination standard The gravity of such a charge against a university cannot be over-estimated and the matter requires a fuller treatment than it has hitherto received.

2. The percentage of passes at an examination is the result of a number of complex causes which it may be difficult if not impossible to enumerate exhaustively. If we confine our attention to a single institution it is clear that if all other circumstances remained invariable, the percentage of successful candidates may be made to vary from year to year by the exercise of greater or less care in the selection of candidates to be presented at the examination. To take a concrete illustration. Let us assume that there are 100 students in the final class of a school or college of whom only 50 have attained the standard of efficiency prescribed for the examination. If the institution presents for the examination all the 100 students the percentage of successful candidates will be 50 If, on the other hand, the institution presents only those 50 who are duly qualified the percentage will be 100. The figure may be made to vary between these limits by sending up any number of candidates between 50 and 100. The institution may be guided in its choice by one or other of two motives —

(*i*) regard for the good name of the institution as an efficient place of instruction,

(*ii*) compulsion exercised by a superior authority by a restrictive rule that if the percentage of passes falls below a prescribed standard, the institution will be deprived of its privileges

3 It is manifest that in the case of the same institution, if all other circumstances remained invariable from year to year the percentage of passes is liable to be affected by an improvement or a deterioration of the standard of training given to its students If it is established that steps have been taken —whether voluntarily or under pressure is immaterial—to improve the efficiency of the institution as a place of instruction and this is followed by a rise in the percentage of successful candidates it is not unreasonable to hold that there is a causal relation between the two circumstances Whether there has or has not been an improvement in the condition of the institution is a question of fact to be determined upon evidence in each case

4. If we still confine our attention to only one institution and its students, the percentage of successful candidates may be affected by variations in the courses of studies prescribed by the examining body. I shall illustrate this by a reference to two concrete instances. In the University of Calcutta up to

[1] Volume V, Note C, paras 2-7

the year 1884, every candidate for the B. A. examination was required to take up mathematics and to pass a test in dynamics, hydrostatics and astronomy. To my knowledge, a great many students failed in this subject at the examination, there were many young men of more than average ability who had no taste for mathematical studies and consequently failed at the examination. From 1885, the examination was divided into two parts, in one of which mathematics, in the other philosophy, was made obligatory. This afforded some relief to non-mathematical men but proved irksome to men who had no taste for philosophy. This system was abolished by the regulations framed in 1906. Since then many candidates have passed the B A examination with combination of subjects like history, economics and Sanskrit who would have failed if they had been compelled to take up either philosophy or mathematics. A choice of subjects unquestionably facilitates passes at an examination.

5. It is plain that if we do not limit our attention to one institution but consider a large number of institutions of various grades of efficiency, the operation of the circumstances indicated above may become very complex and it may be dangerous to draw an inference from a superficial examination of average statistics.

6 With these preliminary remarks, I proceed to narrate some of the events which took place when the University was reorganised as the result of the legislation of 1904, for I cannot but feel that it is a cruel libel upon those who devoted their time and energies in the strenuous years which followed the legislation of 1904 to ignore the value of the work which was then accomplished in the way of improvement of our schools and colleges as agencies for instruction.

7. At the time when the Indian Universities Act was passed in 1904, the condition of secondary schools in Bengal was unsatisfactory This was fully recognised by the framers of the regulations promulgated by the Government of India in 1906. It was accordingly arranged that the University should undertake a survey of all schools, governmental, aided, and unaided, and determine in each instance the fitness of the institution to be maintained as a recognised school, that is, as a school qualified to present candidates at the matriculation examination The Syndicate in 1907 provisionally adopted a set of resolutions for the guidance of the first inspectors. These resolutions were confirmed on the 21st April 1908, and were as follows :—

Resolutions adopted by the Syndicate regarding the principles on which the merits of schools seeking recognition should be judged

Resolutions.

That the University Inspectors of Schools in judging of, and reporting on, the claims of schools to be recognised should keep in view the requirements formulated in the following clauses, (*a*), (*b*), (*c*), etc , referring to the clauses in Section 3 of Chapter XXII of the University Regulations (the scope and application of which the clause is meant to define).

(*a*) The Managing Committee should be so constituted as to include not more than two members of the teaching staff, one of whom ought to be elected by the teachers. The Committee should draw up rules defining their constitu-

tion and functions, and should meet ordinarily once a month. In the case of schools under the management of Government, the Committee will meet at such intervals as may be decided by the Department of Public Instruction.

(*b*) As a rule a recognised High School should have on its staff not less than two B. As. and two F. As or in lieu of two B As one B A and one L. T. A recognised High School in Burma will be considered to have satisfied the requirements of the University as regards the strength of its staff, if instead of having two B As or one B A and one L T , it has on its staff two trained teachers certified as competent by the Director of Public Instruction, Burma. One of the Pandits, and in the case of schools teaching Persian or Arabic, one of the Maulvis also should have some knowledge of English, and in cases where this condition cannot be complied with, there should be among the other teachers of the school one sufficiently acquainted with the Classical Language (Sanskrit, Persian or Arabic as the case may be) to supervise the work of the upper classes as far as translation from English into the Classical Language and from the Classical Language into English, is concerned

(*b*) and (*k*) With regard to the salaries of teachers the following minimum scales should be binding —

1. In case of schools in Calcutta—

	Rs
Head Master .	60 a month
Second Master	45 ,,
Third Master	25 ,,
Fourth Master	25 ,,
Head Pandit	25 ,,
Head Maulvi	25 ,,

2. In the case of Mofussil schools—

	Rs
Head Master	50 a month
Second Master	40 ,,
Third Master	25 ,,
Fourth Master . .	25 ,,
Head Pandit . . .	25 ,,
Head Maulvi	25 ,,

(*c*) and (*d*) At least eight square feet should be allowed for each boy of a class , provision on this scale being made for 80 per cent of the boys on roll (which is about the average attendance). In the case of new buildings to be erected, ten square feet for each boy should be insisted upon. All classes but the infant class ought to be provided with suitable desks. For the infant class there should be benches with backs

(*g*) There should be a regular separate Library allowance. Schools very backward as far as the Library is concerned should spend at once Rs. 100, and in the future no less than three rupees a month, on books of general interests (exclusive of mere text-books).

(*i*) At least half an hour's interval should be allowed for recreation apart from shorter intervals between the different lessons

(*l*) and (*m*) The fees levied at any school should not be such as to favour unfair competition.

On the lines indicated in these resolutions, every school was inspected and a detailed report was drawn up, which was subsequently discussed by the Syndicate in 1908 An order was next passed setting out in specific terms the steps to be taken by the school to remove the defects pointed out by the inspectors and to reach the prescribed minimum standard of efficiency. In most instances, substantial improvements were effected, till a stage was reached when further improvements become impossible by reason of lack of available funds. That the efficiency of the schools was increased by reason of the steps taken by the University is established by incontrovertible contemporary testimony. In the report on Public Instruction in Bengal for 1908-09 (paras 77-79) drawn up by Mr. H. R James, Officiating Director of Public Instruction, occurs the following passage —

> "In face of this abortive outcome of so much strenuous planning (for increased Governmental aid), it is impossible to avoid some sense of frustration. It might seem that after all nothing had so far been accomplished. This impression would be erroneous. Something is gained even in the position reached as regards the two suspended schemes (for the improvement of secondary education drawn up by a conference held under the joint auspices of the Governments of Bengal and of Eastern Bengal and Assam) At the same time, in every division much quite readjustment has been going on, partly as a result of the generally awakened interest in schools, partly under the direct impulse of the University A systematic inspection of the high schools was carried out on behalf of the University mainly by officers of this department, during the latter half of 1907 and the first three months of 1908 In every case, the school's fitness for recognition, whether publicly or privately managed, has been carefully examined, and the results are embodied in a series of reports which fill two stout volumes We now know more accurately the actual extent to which schools are defective and the nature of the deficiencies The reports bring into relief the more serious deficiencies of every school and lay down conditions of recognition by the University This is undoubtedly acting as an efficient spur to effort, not only in the case of privately managed schools but in those which are administered by the Department. We are not able to remedy all defects immediately, but we are more conscious of their existence and the more uncomfortable in acknowledging inability to rectify them. Every where also something is being done, though not all that is required. The inner adjustment to the higher standard has thus been working universally throughout the year, and there has been some advance all along the line"

Mr. James cites in support of his opinion the testimony of an Inspector of Schools :—

> The chief feature of the year in reference to the working of high schools is the undoubted awakening in the managing authorities of a keen sense of responsibility in the matter of complying with the requirements of the University. The benefit arising out of the systematic inspection instituted by the University cannot be exaggerated. Improvements along the lines indicated by the University are being carried out in all our schools, managers finding and laying out as much money as they can be expected to spent on them.

Another Inspector of Schools wrote in the same strain .—

> As a result of the new requirements for the improvement of secondary education, more attention is being given to the accommodation, furniture, teaching appliances and to the strengthening of the teaching staff in both high and middle schools

The view expressed by Mr. James was endorsed in the resolution of the Government of Bengal dated the 28th December 1909 —

> The proposals which were made by the Bengal Government for the improvement of secondary education and which involve a recurring expenditure of 16 *lakhs* are still in abeyance, but Mr James assures Government that something has been done to stimulate Secon- education in high schools through the inspection of these schools Master by officers of the Department on behalf of the University During the year, scholars in high schools have increased by over 2,000 and expenditure by Rs 1,43,000, at the same time, the number of schools has decreased by two This, in His Honour's opinion, gives evidence of more efficient working on the part of the existing schools.

In the report on Public Instruction in Bengal for 1909-10 (para. 343), Mr. G. W. Kuchler, Director of Public Instruction, observed as follows .—

> The secondary schools for Indian boys were better attended than in the preceding year. There was a steady endeavour to improve the staff of these schools whether under Government or under private management, and the result was an increase of over a lakh of rupees in their maintenance charges which were met from fees and subscriptions. Another satisfactory sign of the year's improvement was a growing appreciation of the direct method of teaching English for which credit is due to the training colleges for Indian teachers.

The opinion thus expressed was adopted by the Government of Bengal in the resolution dated the 27th December 1910 .—

> The Lieutenant-Governor in Council notices with satisfaction many healthy signs in connexion with high schools, in particular a general anxiety to give full effect to the improvements prescribed by the Syndicate and a general increase in the average income from private

sources. It is not a matter for regret that the total number has decreased, because as indicated in the report, it is desirable to weed out weak schools in order to invigorate the rest. The results of the new matriculation examination under the new university regulations judged by the percentage of passes have been satisfactory Great caution was exercised by headmasters in sending up pupils and in consequence every 3 boys out of 4 who attended the examination came up to the prescribed standard.

The inspection and consequent improvement in the condition of high schools was not limited to institutions in the province of Bengal, but was also extended to the then province of Eastern Bengal and Assam Mr H Sharp at that time Director of Public Instruction in Eastern Bengal and Assam wrote in his report on Public Instruction for 1907-1908 (para 50) —

One principal feature of the year has been the formal inspection of recognised schools by the University and all the high schools shown in the returns enjoy recognition Some have only provisional recognition , some have not even that , but 198 out of 212 schools which existed at the close of the previous year enjoyed this privilege and as such were required to fulfil the conditions set forth in Chapter XXII of the regulations The University decided to make a complete inspection of all these recognised schools and asked the Local Government to appoint one or more special inspectors. Rai Sahib Dr Chatterjee was placed on deputation throughout the year for this purpose and later on Babu Satyendranath Bhadra was added to assist. The Divisional Inspectors also inspected for the University and shortly after the close of the year the work was finished The reports of all the 198 recognised schools were submitted to the Syndicate within or shortly after the year, each report or a small group of reports being accompanied by a covering letter framed with a view to introducing uniformity into the standard adopted by the various inspecting officers. The benefit of this wide and systematic inspection cannot be exaggerated. It has placed in the hands of the university and of the Department a mass of most useful information which will serve as a basis for the introduction and carrying out of reforms Such inspection is also beneficial in bringing inspecting officers into closer touch with the views and aims of the University. Even more important than the actual inspection was its necessary corollary, the initiation of measures of reform indicated by the report It was obviously desirable that the provinces of Bengal and Eastern Bengal and Assam, situated as they are within the jurisdiction of the same University, should work hand in hand in this matter, and just before the close of the year a series of conferences was held at Calcutta at some of which the Hon'ble the Vice-Chancellor of the University was present at the last and most important and of which His Honour the Lieutenant-Governor presided. It is

hoped that these conferences will prove fruitful of most important and beneficent results in the sphere, not merely of high schools, but of secondary education generally.

In the Resolution of the Government of Eastern Bengal and Assam dated the 18th January 1909 occurs the following passage —

> The Inspectors' reports on high schools are now before the University by whom vigorous measures have been taken to improve the intellectual and moral conditions under which secondary education is imparted in these institutions.

In the report on Public Instruction in Eastern Bengal and Assam for 1908-09, Mr. H E Stapleton, then officiating Director of Public Instruction, after stating that the inspection of high schools on behalf of the University was completed at the beginning of the year and that action was subsequently taken by the Syndicate on the Inspectors' report, quoted the following opinion of the Inspector of Schools of the Dacca Division .—

> Since the inspections of high schools by the University, there has been an improvement in the tone and management of these schools , but limited as their resources are, a further improvement without material help from Government seems out of the question.

The officiating Director of Public Instruction further pointed out that while the total number of schools had decreased by one, the total expenditure had increased from Rs 9,82,668 to Rs. 10,49,961, that is by 6 8 per cent. The increase in aided schools was due, it was observed, to sanction of grants-in-aid at increased rates.

In the resolution of the Government of Eastern Bengal and Assam dated the 14th January 1910 occurs the following passage :—

> The satisfactory results of the entrance examination in the case of high schools in general and of Government high schools in particular is a gratifying feature of the year's record As in previous years, the Dacca Division heads the list, and the Government high schools of this division attained the remarkably high percentage of 93 1 success. There was an increase of over one thousand in the number of candidates who appeared at the entrance examination, and the fact that there was a proportionate increase in the percentage of the total success as compared with the previous year shows that promotion to the top classes in high schools is well regulated. These results are the more satisfactory inasmuch as the total number of high schools remained practically stationary.

In the report on Public Instruction in East Bengal and Assam for 1909-10, Mr. H. Sharp, then Director of Public Instruction, stated as follows (para. 51) :—

> The main feature emphasised in the reports (of the inspectors) is the attempt which is being made to improve these institutions consequent upon the orders issued by the University as a result of inspection.

> Managing committees have been formed where they were wanting The authorities of the privately managed schools are gradually raising their fee rates. The pay of the staff is being improved In some cases, however, there is obstinate evasion of the Syndicate's orders, but it is to be hoped that this attitude will, in the interests of the education at large, receive the attention of the University and that pressure will be used to insist upon the required improvements It is satisfactory to note that in three cases in the Dacca Division, amalgamation of contiguous schools has been carried through, but in certain other cases difficulty is being experienced in this respect.

Mr. Sharp further pointed out that the number of pupils had increased from 51,904 to 56,982, that is, by 9 7 per cent against 4 per cent in the preceding year, and added that the expenditure had increased from Rs 10,49,961 to Rs 11,79,540, that is, by Rs 1,29,579 or 12 3 per cent as against an increase of 6 8 per cent last year. The contribution from provincial revenues rose from Rs 1,65,431 to Rs 1,88,362 or by Rs 22,931, fees, from Rs 7,57,845 to Rs. 8,30,586 or by Rs. 72,741, and subscriptions, from Rs. 1,25,104 to Rs. 1,58,638 or by Rs 33,534

In the resolution of the Government of Eastern Bengal and Assam dated the 15th December 1910 occurs the following passage —

> The comment has frequently been made on the unsatisfactory condition of the high schools and of the need for improvement in Government and still more in privately managed institutions. An endeavour is now being made to raise the standard of the schools in the light of the inspection made on behalf of the University and a revised and improved curriculum is being introduced The thorough inspection that has been made of every high school in the province is in itself of enormous advantage since, for the first time, accurate statement of the conditions and requirements of each school has been obtained and a standard has been set to which they should endeavour to conform. The achievement of this standard is mainly a question of expenditure and the Lieutenant-Governor earnestly trusts that the requisite funds will before long be made available. Some progress has been made. The buildings, equipments and staff of Government high schools have been improved in places where this is most urgently needed but the progress up to date falls short of what should ultimately be effected As regards privately managed schools, attention is at present mainly directed to institutions at the headquarters of large subdivisions. Several of these have been selected for reform, and with the aid of Government grants at a greatly increased scale, they have been brought up to a reasonable standard of efficiency. School managers are also assisting in the work. Fees have in some cases been increased and the staff improved and some of the most urgent defects pointed out

in the course of inspection are being remedied The Lieutenant-Governor very gladly recognises the assistance he has received from school committees in this matter.

It is not necessary to refer to other evidence to establish that when the Indian Universities Act, 1904, came into operation, and the Calcutta University was reconstituted, a determined effort was successfully made to introduce improvements in secondary schools The nature of these improvements may be briefly outlined. The conditions of recognition were revised, after a careful preliminary survey had been made by a body of special inspectors. Each school was placed under a duly appointed managing committee including not less than 2 members of the teaching staff, one of whom was elected by the teachers The teaching staff of every school was thoroughly reorganised At that time, few schools had more than one graduate on the staff, and there were many schools which had not even a single graduate teacher. The majority of teachers in most schools consisted of persons who had read up to the standard of the entrance examination or had passed it. The teachers who taught Sanskrit, Arabic and Persian had, as a rule, no knowledge of English The scale of pay was very low all round, indeed, the scale which was prescribed by the Syndicate in 1907 was at the time deemed a considerable advance. The accommodation was inadequate, and many schools were without benches and desks Few schools possessed a library, and even those that had some sort of library made no provision for regular additions to the stock. The pressure put by the University upon the schools (more than one half of which had never been inspected before) resulted in considerable improvements and money was spent for the purpose both from private and public sources It is true that the present condition of schools is unsatisfactory. But it is equally true that the condition of schools at the time when the Indian Universities Act was passed was decidedly worse There were two other changes introduced which require special mention The university regulations fixed the maximum number of students in each class (Chapter XXII, Section 5) Classes I and II, 50, Classes III to VI, 40, Classes VII and VIII, 30 The University further insisted upon regular exercises and periodical tests, as will appear from the form of certificate which the headmaster was required to sign in the case of all applicants for admission to the matriculation examination, " He has diligently and regularly prosecuted his studies, he has satisfactorily passed the periodical school examination and other tests, and judging from the exercises that he has sent up, and the test examination to which he has submitted, there is in my opinion a reasonable probability of his passing the matriculation examination " Finally, a stringent condition was imposed that if a school failed to pass 33 per cent of the candidates sent up for examination on the average of three years, the recognition, granted to the school, would be withdrawn. The purpose of this rule was that the students should be so carefully selected that at least 33 per cent of those that were sent up might pass. At the same time the rule fixing the number limit indirectly obliged the authorities of the school to be careful in awarding promotions. To take one illustration: if

as a result of lax promotion, there are 50 students in the first class, 20 of whom only are fit to be sent up, 30 would stay behind, with the result that if more than 20 were promoted from the second to the first class, two sections must be opened for that class, which would involve the supply of additional accommodation and the employment of additional teachers.

As regards the colleges, there can be no question that their condition was materially improved and their efficiency, as places of instruction, was considerably increased by reason of the action taken by the University. In every college, the affiliation was restricted to specified subjects. The number of students was restricted by the operation of the rule that no class could contain more than 150 students. The University further insisted upon the employment of a larger number of teachers than had ever been done before, and minutely, sometimes probably over-minutely, scrutinised the academic qualifications of the persons employed. New libraries were created in many instances and the same observation applies even more strongly to laboratories. Hostels and messes were provided, where students could reside under conditions which would have been deemed comfortable by their predecessors. Considerable sums of money were spent out of private and public funds to render the achievement of these improvements practicable Then, again, principals were required to certify, as they had never been required to do before, that each applicant for admission to the I A or I.Sc. or B A. or B Sc examination had been regularly trained, had passed the college tests, and had a reasonable probability of passing the examination.

> He has completed the course of instruction prescribed by the University for the . . . examination; his conduct has been good, he has diligently and regularly prosecuted his studies, he has satisfactorily passed the college periodical examinations and other tests, and judging from the work done by him, there is in my opinion a reasonable probability of his passing the examination.

Finally, the rules as to attendance were made more stringent than before. Under the old system, a student was deemed to have satisfied the regulations if he attended two-thirds of all the lectures delivered in the subjects taken up by him, the consequence was that the deficiency in attendance in one subject could be made up by attendance in another subject Under the new regulations, a student was required to attend three-fourths of the lectures delivered in each subject

The improvement effected in the condition of colleges all round may be vividly realised by a systematic perusal of the inspection reports of the various colleges which are published in the University Minutes for successive years. I take at rondom one institution in Calcutta In 1904-05, the Ripon College had 831 pupils on the rolls and a staff of 13 professors (including the principal) to teach English, mathematics, physics, chemistry, philosophy and logic, history and political economy, Sanskrit and Persian in the F A. and B.A classes. The laboratory was practically non-existent. There was some arrangement for practical work by a few honours students in chemistry. The library possessed a few useful books, but the bulk consisted of annotated editions of

text-books. In 1907, the number of students had been reduced to 629, but the numerical strength of the staff continued as before. The laboratory was in the same condition, but the library was stated to have received a large collection of books. In this year, the affiliation in physics, chemistry, history and political economy for the B.A. examination was withdrawn. In 1908, the number of students had been reduced to 415. The staff had been reduced to 12 and affiliation in History and Political Economy up to the B.A. standard was restored. Considerable additions were made to the library and more apparatus was ordered for the laboratory. In 1909, the number of pupils was 557. The staff had been increased to 17 professors. The laboratory had been improved by the purchase of apparatus at a cost of Rs. 10,000. The library received further additions. Similar improvements are mentioned in inspection reports for subsequent years. In the case of other colleges, especially colleges in the mufassal, even more noticeable improvements were effected. This was rendered feasible, as for several years, the Government of India gave large grants to enable the colleges, both in and outside Calcutta, to improve their libraries and laboratories

While the schools and colleges were thus materially improved as agencies for instruction, the courses of study were radically reorganised. In the case of the matriculation examination, the text-book in English was abolished. This has undoubtedly removed one of the chief sources of cram, as students, almost without exception, used to commit to memory the contents of a note-book of 500 pages prepared for the elucidation of a text-book of 150 pages. The study of the vernacular was also made compulsory and the compulsory course in mathematics was made somewhat shorter than before. At the intermediate stage, the number of subjects to be studied was reduced from 7 to 4, and the study of the vernacular was made obligatory. Further, the course was bifurcated leading to the institution of the I.A. and I.Sc. examinations. A large choice of subjects was allowed for each examination. In the case of the B A. examination, a similar choice was allowed. This enabled a large proportion of students to make a selection of subjects to the exclusion of philosophy which had been obligatory under the old system. The study of the vernacular was made obligatory also at this stage. In the case of the B.Sc. examination English disappeared from the list. The results that we witness to-day may reasonably be attributed to the combined action of these causes. It seems to me most unscientific to ignore the existence of these factors and to attribute the high percentage of passes to a lowering of the standard of examinations for which no foundation has been laid in the evidence. The examinations have been conducted year after year by a very large body of examiners both European and Indian. What is the foundation for the suggestion that all these examiners have conspired to reduce the standard of examinations. What could have been the motive for such united action ? It is further worthy of note that if we analyse the results of the different institutions in the case of any of these examinations, the percentage of passes is found to vary in a remarkable manner. In the case of the matriculation examination, for instance, the figure is known to have varied for different schools from 0 to 100. In the case of the

last I.A. examination, the percentage varied between 36 in the case of the Hooghly College to 87 in the case of the Presidency College. In the case of the I.Sc. examination, it varied between 35 (Uttarpara College) and 100 (Cotton College, Gauhati). In the case of the B.A. examination it varied between 33 (Daulatpur) and 100 (Diocesan College). The facts just mentioned emphasise an aspect of the problem, which, so far as I know, has not been taken into account by those who maintain that an increase in the percentage of passes at an examination in which candidates are presented by a number of institutions, indicates a fall in the standard of examination.

ASUTOSH MOOKERJEE.

APPENDIX XXX.

LETTERS OF INVITING REPRESENTATIVES OF PRIVATE COLLEGES TO CONFER WITH THE COMMISSION.

A.—*Representatives of Missionary Bodies.*

(Confidential, dated Calcutta, the 2nd March 1918.)

In reviewing the evidence submitted to it in the course of its enquiry the Calcutta University Commission has found it necessary to consider (among other questions affecting affiliated colleges and their administrative relations to the University) the relationship in which the several colleges situated in a university town (or in its immediate vicinity) might advantageously stand towards the governing body of a teaching university of a type not yet established in India, especially in regard to :—

(*i*) the part which might be assigned to representatives of each of those colleges in the government and administration of such a teaching university; and, reciprocally, whether there should be representatives of the university on the governing bodies of the colleges,

(*ii*) the recognition and payment by the teaching university, as university professors or lecturers, of approved members of the teaching staffs of those colleges which are readily accessible from one another and from the headquarters of the university ;

(*iii*) the admission of such members of the teaching staffs of those colleges to the benefits of any superannuation scheme or provident fund which might be established in the interests of members of the staff of a teaching university.

In the event of its being thought feasible and desirable to develope (within the wider framework of the University as a whole) the teaching side of the University in Calcutta and its environs by a reorganisation of some of its educational resources, some changes would be found necessary in the form and substance of the statutory connexion which now attaches to the University some of its affiliated colleges. And among the colleges which would naturally be invited to enter into such a more intimate (and, it is hoped, reciprocally beneficial and helpful) association with the teaching university, certain missionary colleges hold a distinguished place.

The members of the Calcutta University Commission desire, therefore, to have an early opportunity of consulting experienced representatives of such missionary colleges as to the form of co-operation which (in the contingency mentioned above) would be consistent with principle and be conducive in the highest degree to the future welfare both of the teaching university and of

the colleges concerned. They also wish to discuss with representatives of such colleges other points which arise in a consideration of the constitution which would be most suitable for a new unitary and autonomous university, if any such were established hereafter in a town where the educational efforts of the missionary bodies have not yet taken the form of affiliated colleges.

Another question which has been pressed upon the attention of the members of the Commission and about which they would be glad to consult you is the desirability or otherwise of treating the intermediate course as pre-university work and of extending the post-intermediate course to three years of preparation for the first degree. This might involve not only the maintenance of existing literary and scientific courses but also a more varied and costly provision, during the two years now given to the intermediate course, of instruction preparatory to careers in industry, commerce and agriculture and of professional training for some grades of school teaching. It is possible that a change of this character might stimulate a demand for a new type of college, the students' work in which would be completed at the stage now fixed by the intermediate examination, and might possibly lead the authorities of some existing colleges to concentrate themselves upon the task of meeting what is regarded by some experienced observers as a pressing educational need

Though, as you are doubtless aware, the reference from the Government of India limits the labours of the Commission to the province of the University of Calcutta, its members realise that recent discussions and suggested developments elsewhere may cause the questions upon which they desire to consult you to have a bearing upon the work of colleges situated in other parts of India For this reason they feel it desirable, before arriving at a decision upon such parts of the subject as fall within the limits of their own enquiry, to ascertain the views of experienced representatives of some more distant institutions.

I am therefore instructed to invite you to favour the Commission by your presence at a private conference with the Commissioners at their office at No 5, Esplanade Row (West), Calcutta (old Legislative Council Building, next to the Town Hall), on Tuesday, March the 12th, at $\frac{10\cdot30\text{ A M}}{2\text{ P M}}$ and again $\frac{\text{ }}{5\text{ P M}}$ (if a second consultation is found desirable) at the same hour on the following day.

Though this letter is marked 'confidential,' there will be no objection to your showing it at your discretion to any friends whom you may wish to consult

In the event of your being able to accept this invitation, the travelling expenses which you would incur by your attendance would be defrayed as follows .—

Double first class fare for all journeys by rail ; 8 annas a mile for all journeys by road , and a single first class fare in addition to table money for all journeys by steamer

B.—*Representatives of Private Indian colleges in the Mufassal* [1]

(*Confidential, dated Calcutta, the 7th March 1918*)

During the last few months the members of the Calcutta University Commission have visited, either together or in groups, nearly all the affiliated colleges in the mufassal. Through the courtesy of the governing bodies, principals and staffs, whose valuable assistance they cordially acknowledge, the Commissioners have been enabled to ascertain the views of representative citizens upon many aspects of the educational problems which have been referred by the Government of India to the Commission for enquiry and report.

Since their visits to the mufassal, the Commissioners have had the opportunity of studying the large amount of written evidence which has been sent to them in reply to their *questionnaire*, and this evidence contains new and important suggestions for the re-construction of the University The Commission desire, therefore, to consult representatives of affiliated colleges in the mufassal on the questions thus raised

Accordingly, I am instructed to invite the president of the governing body of your college (or his representative) and the principal of your college (or his representative) to attend a private conference with the Commissioners at their office at No 5, Esplanade Row (West), Calcutta (old Legislative Council Building, next to the Town Hall), on Thursday, March the 14th, at 10-30 A.M.

Among other points which it is proposed to consider at the conference, the following are of outstanding importance —

(*i*) In the event of its being thought desirable to develope the teaching side of the University in the city of Calcutta and its immediate environs by a systematic reorganisation of its resources, would any of the following three plans of any variant of any of them, recommend itself as desirable to the representative of the affiliated colleges in the mufassal in view of the educational needs of their districts ?

(*a*) The grouping of the mufassal colleges in an independent affiliating or federal university which would bear a new name and from which would be excluded the teaching university of Calcutta together with constituent colleges in the metropolis and in its immediate vicinity—steps, however, being taken to secure, so far as possible, joint action between the two universities in such matters as matriculation and the transfer of students

(*b*) The incorporation of a few carefully selected Calcutta institutions —preferably those which are now the property of the Government—as a teaching university, by the instrument of a new charter Alongside of this, the continuance of the existing

[1] A copy of this letter was also sent to the representatives of Missionary Bodies

affiliating university, which would comprise the non-Government colleges in the city of Calcutta together with the affiliated colleges in the mufassal. For reasons of historic continuity it has been suggested that the title 'The University of Calcutta' should be attached to the last named combination of non-government Calcutta colleges *plus* all the mufassal colleges. To the small teaching university in Calcutta which would be formed by the union of a few of the present constituents of the existing University, a new name would be assigned.

(*c*) The retention of the mufassal colleges as members of the University of Calcutta—the teaching side of the University in Calcutta being developed upon a large scale, while some measure of federated autonomy under the ægis and guidance of the University would be secured for the body of mufassal colleges without change in the University's present name

In any of the suggested cases steps might also be taken to foster the further development (ultimately, perhaps, into independent universities) of certain colleges in the mufassal which, from their geographical situation or educational efficiency, show marked promise of further growth.

(*ii*) What administrative changes would open the brightest hope of systematic and progressive improvement in the quantity and quality of the high school training to be furnished for the rising generation in Bengal, in preparation both for university courses and for entrance (whether subsequently to graduation or at an earlier age) upon industrial, commercial and other courses ?

(*iii*) Whether, in the educational interests of the students of Bengal, it would be expedient or otherwise to treat the intermediate course as pre-university work, and, if the answer to this question were in the affirmative, to extend the post-intermediate course to three years in preparation for the first degree ? Such a change might involve—

(*a*) the removal or reduction of the present age-limit for matriculation ;

(*b*) the maintenance of existing literary and scientific courses ;

(*c*) the provision, during the two years now devoted to the intermediate course, of instruction preparatory to careers in industry, commerce and agriculture of such a kind as not to preclude the student from proceeding, if he should so wish, to the later stages of the university course , and, possibly,

(*d*) the organisation of professional training for some grades of school teaching

If experiments in this direction were successful in enabling promising students with practical gifts to secure posts affording a good livelihood at an earlier date than is at present possible, a demand might arise for a new type of college, the students' work in which would be completed at the stage now

fixed by the intermediate examination. In that event, the authorities of some of the existing colleges might decide to concentrate their efforts upon the task of meeting what is deemed by some experienced observers to be a pressing educational and economic need

Though the letter is marked 'confidential,' there will be no objection to your showing it at your discretion to any friends whom you may wish to consult

In the event of your being able to accept this invitation, the travelling expenses which you would incur by your attendance would be defrayed as follows —

Double first class fare for all journeys by rail, 8 annas a mile for all journeys by road, and a single first class fare in addition to table money for all journeys by steamer

---

C —*Representatives of Private Indian Colleges in Calcutta.*[1]

(*Confidential, dated Calcutta, the 7th March 1918*)

In reviewing the evidence which has been submitted to it in the course of its enquiry, the Calcutta University Commission has found it necessary to consider whether it is possible to establish in Calcutta a teaching university of a type new to India and, if so, what would be the relation of the several colleges situated in the city and in its immediate vicinity to the governing body of such a University, especially in regard to —

(*i*) the part which might be assigned to representatives of each of those colleges in the government and administration of such a teaching university, and, reciprocally, whether there should be representatives of the University on the governing bodies of the colleges;

(*ii*) the recognition, with or without payment, by the teaching university, as university professors or lecturers, of approved members of the teaching staffs of those colleges which are readily accessible from one another and from the headquarters of the University,

(*iii*) the admission of such members of the teaching staffs of those colleges to the benefits of any superannuation scheme or provident fund which might be established in the interests of members of the staff of a teaching university

In the event of its being deemed desirable to develope the teaching side of the University in Calcutta and its immediate environs by a re-organisation of some of its educational resources, changes would be necessary in the form and substance of the statutory connexion which now attaches to the University some of its affiliated colleges

The members of the Calcutta University Commission desire, therefore, to have an early opportunity of consulting representatives of the private colleges in Calcutta as to the form of co-operation which (in the contingency

[1] A copy of this letter was also sent to the repesentatives of Missionary Bodies

mentioned above) would be most conducive to the future welfare of the University and to educational efficiency

Among points which it is proposed to consider at the conference, the following are of outstanding importance —

(*i*) In the event of its being thought desirable to develope a teaching university in Calcutta, would any of the following three plans, or any variant of any of them, be desirable in view of the educational needs of Bengal ?

(*a*) The grouping of the mufassal colleges in an independent affiliating or federal university which would bear a new name and from which would be excluded the teaching university of Calcutta together with constituent colleges in the metropolis and in its immediate vicinity—steps, however, being taken to secure, so far as possible, joint action between the two universities in such matters as matriculation and the transfer of students

(*b*) The incorporation of a few carefully selected Calcutta institutions—preferably those which are now the property of the Government —as a teaching university, by the instrument of a new charter. Alongside of this, the continuance of the existing affiliating University, which would comprise the non-Government colleges in the city of Calcutta together with the affiliated colleges in the mufassal For reasons of historic continuity it has been suggested that the title " The University of Calcutta " should be attached to the last named combination of non-Government Calcutta colleges *plus* all the mufassal colleges To the small teaching university in Calcutta which would be formed by the union of a few of the present constituents of the existing University, a new name would be assigned

(*c*) The retention of the mufassal colleges as members of the University of Calcutta—the teaching side of the University in Calcutta being developed upon a large scale, while some measure of federated autonomy under the ægis and guidance of the University would be secured for the body of mufassal colleges without change in the University's present name

In any of the suggested cases steps might also be taken to foster the further developement (ultimately, perhaps, into independent universities) of certain colleges in the mufassal which, from their geographical situation or educational efficiency, show marked promise of further growth.

(*ii*) What administrative changes would open the brightest hope of systematic and progressive improvement in the quantity and quality of the high school training to be furnished for the rising generation in Bengal in preparation both for university courses and for entrance (whether subsequently to graduation or at an earlier age) upon industrial, commercial and other courses ?

(*iii*) Whether, in the educational interests of the students of Bengal, it would be expedient or otherwise to treat the intermediate course as pre-university work, and, if the answer to this question were in the affirmative, to extend the post-intermediate course to three years in preparation for the first degree? Such a change might involve—

(*a*) the removal or reduction of the present age-limit for matriculation;

(*b*) the maintenance of existing literary and scientific courses;

(*c*) the provision, during the two years now devoted to the intermediate course, of instruction preparatory to careers in industry, commerce and agriculture of such a kind as not to preclude the student from proceeding, if he should so wish, to the later stages of the university course, and, possibly,

(*d*) the organisation of professional training for some grades of school-teaching.

If experiments in this direction were successful in enabling promising students with practical gifts to secure posts affording a good livelihood at an earlier date than is at present possible, a demand might arise for a new type of college, the students' work in which would be completed at the stage now fixed by the intermediate examination. In that event, the authorities of some of the existing colleges might decide to concentrate their efforts upon the task of meeting what is deemed by some experienced observers to be a pressing educational and economic need.

I am therefore instructed to invite you as chairman of your governing body (or your representative), together with the principal of your college (or his representative), to favour the Commission with your presence at a private conference with the Commissioners at their office at No. 5 Esplanade Row (West), Calcutta (old Legislative Council Building, next to the Town Hall), on Friday, March the 15th, at 10-30 A.M.

Though this letter is marked 'confidential' there will be no objection to your showing it at your discretion to any friends whom you may wish to consult.

APPENDIX XXXI.

List of witnesses

Particulars of person consulted	*Volumes in which contributions will be found.*
Abdullah, Shams-ul-Ulama Mufti Muhammad, Head Maulvi, Arabic Department, The Madrassah, Calcutta	VII
Abdurrahman, Dr, B A, LL B, Dr Jur, Bar-at-Law, Educational Adviser to Her Highness the Ruler of Bhopal, Ahmadabad Palace, Bhopal	VIII, X
Acharya, Dr Kedareswar, M B, Vice-President, Rajshahi Association, Ghoramara, Rajshahi	VII, IX, X
Ahmad, Sayid Ashrafuddin, Nawabzada, Khan Bahadur, Honorary Fellow, Calcutta University, Nawab Kothi, Barh	VIII.
Ahmad, Khabiruddin, B A, Second Inspector of Schools, Burdwan Division, Chinsura.	VIII, X
Ahmed, Maulvi Khabiruddin, B A, B T, Assistant Inspector of Schools for Muhammadan Education, Dacca Division, Dacca.	VIII, IX, X
Ahmed, Taslimuddin, Khan Bahadur, B L, Pleader, Rangpur.	VIII, IX, X.
Ahmed, Maulvi Tassadduq, B A, B.T., Assistant Inspector of Schools for Muhammadan Education, Burdwan Division, Chinsura.	VIII, X
Ahsanullah, Khan Bahadur Maulvi, M.A, M R A S, Additional Inspector of Schools, Presidency Division, 8, Dalhousie Square, Calcutta.	VII, IX, X
Aiyer, Sir P. S. Sivaswamy, K C.S.I, C I E, B A, B L., Vice-Chancellor, Benares Hindu University, Madras	VII, VIII, IX, X
Ali, A F M Abdul, M A, M R A S, F R S, I R S, F R G S, Deputy Magistrate and Deputy Collector, Mymensingh	IX
Ali, The Hon'ble Mr. Altaf, Nawab of Bogra, Additional Member, Bengal Legislative Council, and Member, Governing Body, Hastings House School, 24, Alipore Road, Alipore, Calcutta.	VIII, IX, X.
Ali, Saiyad Muhsin, B A, Assistant Inspector of Schools for Muhammadan Education, Chittagong Division, Chittagong.	VIII, IX, X
Ali, Nawab Nasirul Mamalek, Mirza Shujaat, Khan Bahadur, Persian Consul, 26, Theatre Road, Calcutta.	VII, VIII, IX, X.
All-India Muhammadan Educational Conference.	VII

Particulars of person consulted	*Volumes in which contributions will be found.*
Allen, H. J, M A, Bar-at-Law, Principal and Professor of History, Presidency College, and Fellow, Madras University, Madras	VII, IX, X
Allen, Dr. H. N, B.Sc, Ph D., Principal, College of Engineering, Poona	VIII, IX, X
Alum, Sahebzadah Mahomed Sultan, B.A, Member of the Mysore Family, and Attorney-at-Law, High Court, No. 12-1, Old Post Office Street, Calcutta.	VII X
Anmanand, Rewachand, Superintendent, Boys' own Home, 47-A, Durga Charan Mitter Steet, Calcutta	I
Annandale, Dr. N, B A, D Sc, F L S, F A S B, C M Z S, Director, Zoological Survey of India, Indian Museum, Calcutta	VII, VIII, IX, X
Archbold, W. A J, M A., L L B, Principal, Muir Central College, Allahabad (late Principal, Dacca College, Ramna, Dacca).	VII, VIII, IX X
Association of University Women in India, Calcutta Branch, 1, Army and Navy Chambers, 41, Chowringhee, Calcutta	VIII, IX, X, XII
Ayurvedic Doctors of Calcutta— Chaudhury, Dakshina Ranjan Ray, L M S Goswami, Surendra Nath, B A, L M S Ray, Jamini Bhushan, Kaviratna, M A, M B, Fellow, Calcutta University, 46, Beadon Street, Calcutta Sen, Gananath, Mahamahopadhyaya, M A, L M S Sen, Nogendra Nath, V L M S Sen, Rakhal Chandra, L M S	VIII
Aziz, Maulvi Abdul, Lecturer in Arabic and Persian, Dacca College, Ramna, Dacca	VIII, IX, X
Bagchi, Dr Haridas, M A, Ph D, Lecturer in Pure Mathematics, Calcutta University, 5, Syamacharan De's Street, Calcutta	VIII, IX, X
Bakhsh, Khan Sahib Maulvi Kadir, B L, Pleader, Malda	XI, XII
Banerjea, Hariprosanna, B Sc, Lecturer in Pure Mathematics, Calcutta University, 26-B, Bhowani Charan Dutt Street, Calcutta	VIII
Banerjea, J R, M A, B L, Vice-Principal, Vidyasagar College, and Fellow, Calcutta University, 15, Ramkissen Das Lane, Calcutta	VII, VIII, IX, X
Banerjea, Dr Pramathanath, M A, D Sc, Bar-at-Law, Lecturer in Economics and Political Science, Calcutta University, 284, Upper Circular Road, Calcutta.	VIII, IX, X
Banerjea, Surendra Nath, M A, Professor of Chemistry, Ripon College, 14, Munshi Bazar Road, Beliaghata, Calcutta	VIII, X
Banerjee, Gauranganath, M A, F R A S, M R A S, Premchand Roychand Student, Lecturer in History, Calcutta University, 107-1, Mechua Bazar Street, Calcutta.	VIII, IX, X

Particulars of person consulted.	*Volumes in which contributions will be found*
Banerjee, Sir Gooroo Das, Kt., M A., D L., P. D., Fellow, Calcutta University, 28, Sastitala Road, Narikeldanga, Calcutta	VII, VIII, IX X
Banerjee, Jaygopal, M A., Lecturer in English, Calcutta University, 30-2, Beadon Row, Calcutta	VIII, IX, X
Banerjee, Rai Kumudini Kanta, Bahadur, M A., Principal, Rajshahi College, and Fellow, Calcutta University, Rajshahi	VIII, IX, X
Banerjee, M. N., B A., M R C S., Principal, Belgachia Medical College, and Fellow, Calcutta University, Belgachia, Calcutta	VII, VIII, IX, X.
Banerjee, Muraly Dhar, M A., Professor of Sanskrit, Sanskrit College, and Lecturer in Sanskrit, Calcutta University, 12, Fern Road, Ballygunge, Calcutta.	VIII, IX, X.
Banerjee, Ravaneswar, B A., B T., Head Master, Hooghly Branch School, Chinsura	VII, VIII, IX, X.
Banerjee, Sasi Sekhar, B A., Offg Principal, Krishnath College, Berhampur.	VIII, IX, X.
Banerjee, Sudhansukumar, M Sc., Lecturer in Applied Mathematics, Calcutta University, Dhakuria, Kasba, 24-Parganas.	VIII, X.
Banerjee, The Hon'ble Mr Surendranath, Editor, *The Bengalee*, and Additional Member, Imperial Legislative Council, 126, Bow Bazar Street, Calcutta	VII
Banerjee, Upendra Nath, Member, British Indian Association, 2-2-1, Chandra Nath Chatterjee's Street, Bhowanipur, Calcutta.	VIII, IX, X
Banerji, Hridaya Chandra, M A., Professor of Physics, Presidency College, Calcutta	
Banerji, Manmathanath, M Sc., Lecturer in Experimental Psychology, University College of Science, 30, Tarak Chatterji's Lane, Calcutta	VIII, IX, X.
Banerji, The Hon'ble Justice Sir Pramada Charan, Kt., B A., B L., Puisne Judge, High Court, and Vice-Chancellor, University of Allahabad, Allahabad	VIII, IX X
Banerji, Surendra Chandra, M A., B Sc. Professor of Botany, Presidency College, and Lecturer in Botany, Calcutta University, 30, Sastitala Road, Narikeldanga, Calcutta	IX, X.
Banerji, Umacharan, M A., Principal and Professor of Sanskrit and English, Burdwan Raj College, Joint Editor, *Sanskrita Bharati* and *Sanskrita Bharati Supplement*, and Vice-President, Bangiya Sahitya Parishad, Burdwan.	VIII, IX,
Bangabasi College, Calcutta.	VII.

Particulars of person consulted	*Volumes in which contributions will be found*
Baptist Missionary Society, Standing Committee of — Carey, Rev. William, Superintendent, Baptist Mission, Barisal Drake, Rev J., B A , B D , Vice-Principal and Professor of Philosophy, Serampore College, Serampore Noble, Rev P., Baptist Mission, Dacca	IX
Bardaloi, N. C , Vakil, Calcutta High Court, Ujan Bazar, Gauhati	VIII, IX, X
Barrow, J. R , B A , Offg Principal, Presidency College, and Fellow, Calcutta University, Calcutta	VII, VIII, IX, X
Basak, Krishnaprasad, B A , Lecturer on Methods of Teaching, and Teacher in English, Brahmo Balika Shikshalaya (Brahmo Girls' High School), and Principal, Calcutta Training Institution, 105, Upper Circular Road, Calcutta	VII.
Basu, Nalinimohan, M Sc , Lecturer in Applied Mathematics, University College of Science, 11, Brindaban Mullick Lane, Calcutta	IX, X
Basu, P , Professor of Economics, Holkar College, Indore	VIII, IX, X
Basu, Rai P K , Bahadur, M A , Second Inspector of Schools, Dacca Division, Dacca	VIII, X
Basu, Satyendra Nath, M A , Principal, Victoria College, Comilla	VIII, IX, X
Bengal Chamber of Commerce, Calcutta, Representatives of— Cameron, Alastair, Partner, Messrs Mackinnon, Mackenzie and Co , 16, Strand Road, Calcutta Crum, W E , Partner, Messrs Graham and Co , 9, Clive Street, Calcutta	VII
Bengal Landholders' Association, 10, Old Post Office Street, Calcutta	VIII, IX, X
Bengal National Chamber of Commerce, 233, Old China Bazar Street, Calcutta	VIII, IX, X
Bengal Presidency Muhammadan Educational Association, Council of the, 9, Halsi Bagan Road, Calcutta	VII
Bentley, Dr C A , M B , D P H , D T M & H , Sanitary Commissioner with the Government of Bengal, Writers' Buildings, Calcutta	VI
Bethune College, Calcutta— Staff— Banerjee, Miss Marie, M A , Lecturer in History and Political Economy Bhattacharya, Krishnachandra, M A , Premchand Roychand Student, Professor of Philosophy and Logic Chatterjee, Kumud Bandab, M A., Additional Lecturer in Sanskrit. Chowdhuri, Benoy Kumar, M A., Lecturer in History and Political Economy Janau, Miss A. L , B Sc , Principal Mukerjee, Bijoy Gopal, M A , Professor of English.	VIII, IX, X.

Particulars of person consulted.	*Volumes in which contributions will be found.*
Bethune College, Calcutta—*contd.* Staff—*contd.* Roy, Debendra Nath, M.A., Lecturer in Sanskrit. Sen, Pares Nath, B A., Professor of English. Sen, Probodh Chandra, M.A., B.T., Temporary Lecturer in Mathematics. Students— Bandyapadhyaya, Chitralekha, Third year prefect Das, Kamala, Second year deputy prefect. De, Hiran, Representative, Second year Dutta, Sudha, First year prefect Gupta, Sunıti Bala, Fourth year prefect. Rao, Shakuntala, Representative, Third year. Roy, Subodhbala, Representative, First year Sen Gupta, Torubala, Representative, Fourth year.	
Bhaduri, Rai Indu Bhusan, Bahadur, B L, Pleader, Krishnagar.	VIII, X
Bhaduri, Jyotibhushan, M A, F C S, Premchand Roychand Student, Professor of Chemistry, Presidency College, 1, Bhubanmohan Sarkar Lane, Calcutta	VIII, IX, X.
Bhandarkar, D R, M A, Carmichael Professor of Ancient Indian History and Culture, and Fellow, Calcutta University, 16, Lansdowne Road, Calcutta	VII, VIII, X
Bhandarkar, Sir R G, M A, Ph D, LL D, K C I E, Sangam, Poona	VIII, IX, X.
Bhattacharjee, Mohini Mohan, M A, Lecturer in English, Calcutta University, 37, Shibnaram Das Lane, Calcutta	VIII, IX, X.
Bhattacharya, Brindaban, C, M A., Professor of Bengali, Carmichael College, Rangpur.	VII, VIII
Bhattacharya, Jogendranath, M A, B T, Head Master, Hooghly Collegiate School, Chinsura	VIII, IX, X
Bhattacharya, Krishnachandra, M A, Premchand Roychand Student, Professor of Philosophy and Logic, Bethune College, and Lecturer in Mental and Moral Philosophy, Calcutta University, 4, Panchanantola Lane, Serampore.	VIII, IX, X.
Bhattacharya, Nibaranchandra, M A, Professor of Physiology, Presidency College, and Lecturer in Physiology, Calcutta University. 10, Crouch Lane, Nebutala, Calcutta.	VIII, X.
Bhattacharyya, Baikuntha Nath, B.A., Head Master, Government High School, Sylhet.	VIII, IX, X.
Bhattacharyya, Dibakar, B A., Offg. Head Master, Burdwan Raj Collegiate School, Burdwan	X.

Particulars of person consulted.	*Volumes in which contributions will be found.*
Bhattacharyya, Haridas, M A , B L , Lecturer in Philosophy and Experimental Psychology, Calcutta University, and Honorary Professor of Philosophy and Logic, Scottish Churches College, 36, Amherst Row, Calcutta.	VIII, IX, X.
Bhattacharyya, Mahamahopadhyaya Kalıprasanna, M A., Lecturer in Sanskrit, Calcutta University, 28, Akhil Mistry Lane, Calcutta	VIII, IX, X.
Bhowal, Govinda Chandra, B.L., Vakil, Judge's Court, 129, Laksam Bazar, Dacca	VIII, IX, X
Birley, L , C I E , I C S , Secretary to the Government of Bengal, Revenue Department, Writers' Buildings, Calcutta	VI.
Biss, E E , Inspector of Schools, Dacca Division, and Fellow, Calcutta University, Ramna, Dacca.	VII, VIII, IX, X
Bisvas, Rai Dinanath, Bahadur, B L , Pleader, and Secretary, Edward College, Pabna	VIII, IX, X
Biswas, Charu Chandra, M A , B L , Vakil, High Court, Professor of Hindu Law, University Law College, Joint Secretary, Governing Body, South Suburban College, and Fellow, Calcutta University, 58, Puddopukur Road, Bhowanipur, Calcutta.	[illegible]
Biswas, Saratlal, M S , Assistant Professor of Geology, Calcutta University, 4, Duff Lane, Calcutta.	VIII, IX, X
Bolpur School, Staff of— Ghosh, Promoda Ranjan Majumdar, Santosh Cumar Roy, Jagadananda Roy, Nepal Chandra	
Bompas, The Hon'ble Mr C H , B A , Bar-at-Law, I C S , J P , Chairman, Calcutta Improvement Trust, and Additional Member, Bengal Legislative Council, 3, Loudon Street, Calcutta.	VIII, IX, X.
Borooah, Jnanadabhiram. Bar-at-Law, Principal, Earle Law College, Gauhati	VIII, IX X.
Bose, B C , M A , Professor of English, Presidency College, 27-3, Hari Ghose Street, Calcutta.	VIII, IX, X
Bose, Rai Chunilal, Bahadur, I S O , M B , F C S , Offg. Chemical Examiner to the Government of Bengal, Professor of Chemistry, Medical College, and Fellow, Calcutta University, 25, Mahendra Bose Lane, Syambazar, Calcutta	VIII, IX, X.
Bose, G. C , M A., M R.A C., M R A S , F.H.A S , Principal, Bangabasi College, and Fellow, Calcutta University, 25-1, Scott's Lane, Calcutta	VII, VIII, IX, X

Particulars of person consulted	*Volumes in which contributions will be found.*
Bose, Miss H. B., M A., Offg. Inspectress of Schools, Presidency and Burdwan Divisions, 2, Norton Buildings, Old Court House Corner, Calcutta.	XII.
Bose, Harakanta, B.A., Head Master, Hare School, Calcutta	VIII, IX, X
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	VII
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Khan, Maulvi Mustafiz-ur-Rahman, M.A., Deputy Magistrate and Deputy Collector, Chittagong	
Sattar, Abdus, B.L., Junior Government Pleader, Chittagong	VII
Comilla	VII
Midnapore	
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Ahmed, Kabiruddin, Pleader, and Municipal Commissioner, Midnapore	
Ali, Maulvi Saiyid Amjad, B.L., Munsiff, Midnapore	
Alum, Maulvi Azizul, B.A., B.L., Pleader, Midnapore.	
Mehdi, S. A., B.A.	
Reza, Maulvi Ali, B.A., Deputy Magistrate and Deputy Collector, Midnapore	
Suhrawardy, Mahmood, Rais, Sub-Registrar and Municipal Commissioner, Midnapore	
Suhrawardy, Sajjadul Karim, Medical Practitioner, Midnapore.	VII
Rajshahi	

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Payne, The Hon'ble Mr. C F, I C S, Chairman, Calcutta Corporation, and Additional Member, Bengal Legislative Council, Calcutta	VII, IX
Peake, C W, M.A., Government Meteorologist, Calcutta	VII, IX, X.
People's Association, Dacca.	IX
People's Association, Khulna.	VIII, IX, X
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Particulars of person consulted.	*Volumes in which contributions will be found.*
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Rahim, The Hon'ble Mr. Justice Abdur, M.A., Bar-at-Law, Puisne Judge, High Court, and Fellow, Madras University College, 'Bridge House,' Egmore, Madras	VII, VIII, IX, X
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Rajshahi Association, Rajshahi	VII.
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Ray, Baikuntha Chandra, M A , Professor of Mathematics, Krishnath College, Berhampur.	VIII, IX, X
Ray, Dr Bidhan Chandra, B A , M D , F R C S , M R C P , Teacher of Materia Medica, Campbell Medical School, and Fellow, Calcutta University, 36, Wellington Street, Calcutta	VIII IX, X
Ray, Rai Biswambar, Bahadur, B L , Government Pleader, Vice-Chairman, District Board, Nadia, and Chairman, Krishnagar Municipality, Krishnagar	X
Ray, Joges Chandra, M A , Professor of Botany, Ravenshaw College, Cuttack	VIII, IX, X
Ray, Maharaja Kshaunish Chandra, Bahadur, of Krishnagar, Nadia, The Palace, Krishnagar	VIII, IX, X.
Ray, Manmathanath, M A , B L , Vakil, High Court, Professor of Real Property and Contracts and Torts, University Law College, and Fellow, Calcutta University, 2, Bolaram Bose 1st Lane, Bhowampur, Calcutta	VIII, IX, X
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Particulars of person consulted	*Volumes in which contributions will be found.*
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Reyazuddin, Syed, Quazi, B L , Secretary, National Muhammadan Association, Bogra	VIII, X
Rhoda, Sister, of the Oxford Sisters' Mission, Dacca	I
Richardson, Thomas, H , M A , B A I , M I C E , Professor of Civil Engineering, Civil Engineering College, and Fellow, Calcutta University, Sibpur	VII, VIII, IX, X
Richey, The Hon'ble Mr J A , M A , Director of Public Instruction, the Punjab, Additional Member, Punjab Legislative Council, and Fellow, Punjab University, Lahore	VIII, IX, X
Ripon College, Calcutta	VII
Roberts, David E, M Sc , Fellow, University of Wales, and Professor of Physics, Cotton College, Gauhati.	VIII, IX, X
Rogers, Lt.-Col Sir Leonard, Kt , C I E , F R S , M D , B S , F.R.C S , F R C P , I M S , Professor of Pathology, Medical College, Calcutta	VII
Roy, Hira Lal, B A., Professor of Chemistry, Bengal Technical Institute, Panchabati Villa, Manicktolla, Calcutta.	VII, VIII, IX, X
Roy, Munindranath, B A , Head Master, Coronation High English School, Raigunje, Dinajpur.	VII VIII, IX, X
Roy, The Hon'ble Rai Sri Nath, Bahadur, Additional Member, Bengal Legislative Council, Mymensingh.	VIII, IX, X
Roy, The Hon'ble Babu Surendra Nath, Additional Member, Bengal Legislative Council, Behala, 24-Parganas	VII, VIII, IX, X
Rudra, S. K , M A., Principal and Professor of Economics, St Stephen's College, Delhi	VIII, IX, X
Saha, Meghnad, M.Sc., Lecturer in Mathematical Physics, University College of Science, 151-1 A, Jhamapukur Lane, Calcutta	VIII, IX, X
Sahay, Rai Bahadur Bhagvati, M A , B L., F.A S B , Offg. Inspector of Schools, Bhagalpur Division, Bhagalpur.	VII, VIII, IX, X
Sanyal, Nisikanta, M A., Professor of History, Ravenshaw College, Cuttack.	VIII, IX, X

Particulars of person consulted.	*Volumes in which contributions will be found.*
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Sarkar, Akshaykumar, M A., Professor of History, Chittagong College, Chittagong	VIII, IX, X
Sarkar, Bejoy Kumar, B.A., Lecturer in Economics, Calcutta University, 63, Amherst Row, Calcutta.	VII, VIII, IX, X
Sarkar, Gopal Chandra, B.A., Second Inspector of Schools, Dacca Division, Dacca	VIII, IX, X
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Sastri, Rai Rajendra Chandra, Bahadur, M A , Bengali Translator to the Government of Bengal, and Lecturer in Sanskrit, Calcutta University, 30, Tarak Chatterjee's Lane, Calcutta.	VII, VIII, IX, X
Satiar, Radhika Lal, B L , Secretary, Malda Association, Malda.	VII, VIII, X.
Sayied, Abdullah Abu, M.A., Professor of Arabic and Persian, Cotton College, Gauhati	VIII, IX, X
Scottish Churches College Senatus, 4, Cornwallis Square, Calcutta. Cameron, A., M A , Professor of English. Ewan, Rev G., M.A , Professor of Philosophy. Kydd, J C , M A., Professor of Political Philosophy and Economics Urquhart, Rev. Dr. W. S , M A , D.Phil., Vice-Principal and Professor of Philosophy, and Fellow, Calcutta University. Warren, Rev A , B A., Professor of English. Watt, Rev Dr J. M A , D D., F.C S , Principal and Professor of Chemistry, and Fellow, Calcutta University Alexander, W , M.A , Head Master, Scottish Churches Collegiate School	VII, VIII, IX, X.
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Particulars of person consulted.	*Volumes in which contributions will be found.*
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Sen, Raj Mohan, M A., Professor of Mathematics, Rajshahi College, Rajshahi.	VIII, IX, X.
Sen, Dr. S K, L R C P., L.R C S, L R F P S, Burdwan	VIII, IX, X
Sen, Rai Satis Chandra, Bahadur, B L, Senior Government Pleader, Chittagong.	VIII, IX, X.
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Smith, W. Owston, M.A., Principal, Holkar College, Indore.	VII, VIII, IX, X.
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Tagore, Sir Rabindranath, Kt , LL D , Bolpore.	I.
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Thomson, Dr David, M A , B Sc , Ph.D , Offg Inspector of Schools, Surma Valley and Hill Districts, and Fellow, Calcutta University, Silchar, Assam	VIII, IX, X
Tipple, E. F , B.A , Professor of Mathematics, Thomason Civil Engineering College, Roorkee.	VII, VIII, IX, X.
Towle, J. H , M A , Principal, Muhammadan Anglo-Oriental College, and Fellow, University of Allahabad, Aligarh.	XII
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Particulars of person consulted.	*Volumes in which contributions will be found.*
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Waheed, Shams-ul-Ulama Abu Nasr, M A., Principal, Dacca Madrassah, and Fellow, Calcutta University, Dacca.	VIII, IX, X
Walker, Dr. Gilbert T., C.S.I., M.A, F.R.S, Sc D., Director-General of Observatories, Meteorological Department, Government of India, Simla	VII, VIII, IX, X.
Wathen, G A., M.A., Principal, Khalsa College, Amritsar.	VIII, IX, X.
Watkins, Rev. Dr C. H., M.A, D Th., Principal, Carmichael College, Rangpur.	VII, VIII, IX, X.
Webb, The Hon'ble Mr. C. M., I C S, Secretary to the Government of Burma, Educational Department, Rangoon.	VIII, IX, X.
West, M. P., B.A., Officer on Deputation, Survey of Primary Education, Bengal, 6, Old Post Office Street, Calcutta.	VIII, IX X.
Western, Miss M. P., Honorary Secretary, Queen Mary College, Lahore.	XII
Whitehead, The Right Rev. H., M.A., D.D, Bishop of Madras, Madras.	VIII, IX X
Wilkinson, A.C L, M A., Professor of Mathematics, Elphinstone College, Bombay.	III
Williams, Rev. Garfield, M.A., Principal, St. Andrew's College, Gorakhpur.	VII, VIII, IX, X.

Particulars of person consulted	*Volumes in which contributions will be found*
Williams, L. F., Rushbrook, B.A., B.Litt., F.R., Hist.S., M.R A.S., etc., Fellow of All Souls, Professor of Modern Indian History, and Fellow, University of Allahabad, No. 10, Elgin Road, Allahabad.	VII, VIII, X
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Wilson, Lt.-Col R. P., I M.S , Superintendent, Campbell Medical School, and Fellow, Calcutta University, Calcutta.	VII
Wood, The Hon'ble Mr. W. H H. Arden, C.I E , Principal, La Martiniere College, and Additional Member, Bengal Legislative Council, 11, Loudon Street, Calcutta.	VII.
Wood, W G , C.S I , Principal, Thomason Civil Engineering College, Roorkee	IX
Woodroffe, The Hon'ble Sir John, Kt., M.A., B.C.L., Puisne Judge, High Court, Calcutta	VII
Wordsworth, The Hon'ble Mr. W. C., M A., Offg. Director of Public Instruction, Bengal, Additional Member, Bengal Legislative Council, and Fellow, Calcutta University, Writers' Buildings, Calcutta	VII, VIII, X
Yusuf, Khan Sahib Maulvi Mohammad, M.A , Head Master, Anglo-Persian Department, Calcutta Madrassah, and Superintendent, Baker Madrassah Hostel, Calcutta	X
Zachariah, K., B A., Professor of History, Presidency College, and Lecturer in History, Calcutta University, 33, Amherst Street, Calcutta	VIII, IX, X.

APPENDIX XXXII.

List of Institutions and Places visited.

Assam.

Gauhati.

Cotton College.
Earle Law College.

The Bengal Presidency.

Agoya.

Lower Primary School.

Bankura.

Wesleyan Mission College.
Guru Training School.
Kuch Kuchia High English School.
Middle English School for Boys.
Upper Primary School for Girls.
Weaving School.
Zilla School.

Barisal.

Broja Mohan College.
Zilla School.

Berhampur.

Krishnath College.
Krishnath Collegiate School.
Sericulture School and Farm.

Bikna.

Lower Primary School.

Bogra.

Lower Primary School.

Bolpur.

Shantiniketan.

Burdwan.

Burdwan Raj College and Hostel.
High School for Boys.
Hospital.
Two Municipal High Schools.
Public Library.
Sanskrit School of old pattern.

The Bengal Presidency—*contd*

Burdwan—contd
School for Girls conducted in Vernacular.
Technical School.

Calcutta and Suburbs
Calcutta University.
Bangabasi College
Belgachia Medical College.
Bethune College
Central College.
City College
David Hare Training College.
Diocesan College
Indian Association for the Cultivation of Science.
London Missionary Society's College.
Loreto House
Medical College
Presidency College
Ripon College
Sanskrit College
Scottish Churches College.
South Suburban College.
St. Paul's Cathedral Mission College and School.
St Xavier's College.
University College of Science.
University Law College.
Vidyasagar College (late Metropolitan Institution).
Astanga Ayurbeda Vidyalaya (College of Hindu Medicine)
Baker Hostel
Bangiya Sahitya Parishad.
Bengal Asiatic Society.
Bengal Technical Institute.
Baniapukur Junior Madrassah.
Botanical Library.
Boy's Own Home
Calcutta Training Academy.
Calcutta High School.
Calcutta Madrassah.
Campbell Medical School.
Carmichael Hostel.
Cotton Institution.
Darbhanga Library.
Eden Hindu Hostels.
Elliot Hostel.
Manicktolla Institute.

The Bengal Presidency—*contd*

Calcutta and Suburbs—contd.

Garden Reach (C. M. S) School.
Government Commercial Institute
Hardinge Hostel.
Hare School.
Hindu School.
Imperial Library.
Indian Museum.
Jorasanko High School
Kalighat High English School
Kidderpore Academy.
Laik Jubilee Institution.
London Missionary School.
Marwari School.
Mitra Institution (Main and Branch)
Number of Attached and Unattached Messes
Oriental Seminary
Ripon Collegiate School.
South Suburban School.
Sri Krishna Pathsala.
Taylor School
Town School
Commercial Institute.

Chinsura

Hooghly College
Branch School
Collegiate School
First Grade Training School
Government Experimental Farm.
Hooghly Madrassah

Chittagong

Chittagong College.
Dr Khastagir's High School for Girls.
Jamieson Institute
Madrassah
Municipal High English School.
Muslim High English School.
Normal School for Training Teachers for Primary Schools
Number of Unlicensed Messes.
Oriental Academy.

Comilla.

Victoria College.
Ishwar Pathsala.

The Bengal Presidency—*contd.*

Comilla—contd.
Junior Madrassah.
Victoria Collegiate School.
Yusuf High English School.
Zilla School.

Dacca.
Dacca College and Hostels for Hindus and Musalmans.
Dacca Law College.
Jagannath College.
Training College.
Baptist Hostel.
Dacca Collegiate School.
Dacca Madrassah
Eden High School.
Government Agricultural Research Laboratories.
Government Experimental Farm.
Imperial Academy.
Junior Madrassah
Kishorilal Jubilee School.
Medical School
Mitford Hospital.
Normal School.
Oxford Mission Hostel.
Pogose School.
School of Engineering.
Ukil's Institution.

Daulatpur.
Hindu Academy.

Dishergarh.

Hoerha.
Upper Primary School.

Itachuni.
Series of institutions organised by Rai Bahadur Bijoy Narain Kundu

Kadmaghati.
Upper Primary School.

Krishnagar.
Krishnagar College.
Church Missionary Society's Training College.
Collegiate School.
Private School.

Malda.
Government Silk Farm, Piyasbiri.
Hindustan Fruit Preserving Company.

The Bengal Presidency—*contd.*

Malda—contd
- Okramani School.
- Silk Weaving Factories.
- Various schools.

Midnapore.
- Midnapore College and Hostel.
- Collegiate School and Hostel.
- Hindu School
- Town School

Mung-pu (Darjeeling).
- Government Cinchona Plantations and Quinine Factory.

Mymensingh.
- Ananda Mohan College.
- City Collegiate School.
- Mrityunjoy School.
- Vidyamoyee Girls' School.
- Zilla School

Raisulpur.
- Middle School.

Rajshahi
- Rajshahi College and Hostels for Hindus and Musalmans.
- Attached and Unattached Messes.
- Bholanath Academy.
- Collegiate School
- Fuller Hostel
- Government Experimental Farm.
- Madrassah.
- Museum
- Sanskrit School.
- Sericultural School.
- Technical School
- Varendra Research Institute
- Zilla School.

Rangpur.
- Carmichael College.
- Government Dairy Farm.
- Government Demonstration Farm.
- Technical School.
- Zilla School.

Serampore.
- Serampore College.
- Government Weaving School.
- Serampore Collegiate School.

The Bengal Presidency—*concld.*

Sibpur.
Civil Engineering College.

Uttarpara
Uttarpara College.

Bihar and Orissa.

Dhanbaid.
Various coal mines.

Giridih
Industrial School
Kurherbari Lower Primary School
Kurherbari Upper Primary School

Jamalpur.
Apprentice Technical School
Railway Workshop

Jheria

Patna
Patna University
Behar National College
Patna College.
College Hostels for Hindus and Musalmans.

Pusa
Agricultural Research Institute

Ranchi
Girls' High School
St John's High School
Zillah High School

Sakchi

The Bombay Presidency.

Bombay
University of Bombay.
Elphinstone College
Grant Medical College
St Xavier's College
Sydenham College of Commerce and Economics
Training College for Secondary Teachers
Victoria Jubilee Technical Institute
Elphinstone High School.
Observatory
Sir J. J. School of Art.
Y. M. C. A. Hostel

The Bombay Presidency—*contd.*

Poona.

Agricultural College.
College of Engineering.
Deccan College.
Fergusson College.
New English School.

The Central Provinces.

Nagpur.

Agricultural College
Morris College
Engineering School.
Government School of Handicrafts.
Museum

Cooch Behar.

Cooch Behar.

Victoria College.
Jenkins School.

Delhi.

Delhi.

St Stephen's College
Lady Hardinge Medical College
Arabic High School

Hyderabad (Deccan).

Hyderabad.

Dar-ul-ulloom
Nizam College
Hostel for well-to-do classes.
Translation Bureau

The Madras Presidency.

Madras.

University of Madras
Law College.
Madras Christian College.
Madras Women's Christian College.
Medical College.
Pachaiyappa's College and School.
Presidency College.
Queen Mary College for Women.
Buckingham Mills and Attached Schools.
Hindu High School.
Madrassah Azam.
Muslim Hostel.
Mrs. Annie Besant's Hostel for Law Students.

The Madras Presidency—*contd.*

Conjeevaram.
Pachaiyappa's High School.
Girls' School.

Saidapet.
Teachers' College.

Trichinopoly.
S P. G College.
St Joseph's College.
Town High School.

Mysore.

Bangalore.
Central College and Hostels for Brahmins and Non-Brahmins.
Indian Institute of Science.
Government High School.

Mysore.
University of Mysore.
Maharajah's College.
Maharajah's School.

The Punjab.

Dehra Dun.
Forest Research Institute and College

Lahore
The Punjab University.
Central Training College.
D A. V College.
Dyal Singh College
Forman Christian College.
Government College.
Islamia College
Medical College.
Oriental College.
School of Art.
University Library.

The United Provinces.

Agra.
St John's College.
Agra College.

Aligarh.
Muhammadan Anglo-Oriental College.
Muhammadan Anglo-Oriental School.

The United Provinces—*contd.*

Allahabad.

University of Allahabad.
Ewing Christian College and Jumma Farm.
Government Training College and School.
Muir Central College.
Kyastha Pathsala
City A. V. High School.
Government Hostel.
Hindu Hostel.
Law Hostel.
Modern High School.
Muslim Hostel
Oxford and Cambridge Mission Hostel.

Benares

Benares Hindu University.
Central Hindu College
Queen's College
Collegiate School
Harish Chandra High School.
Harish Chandra Primary School.
Hostels

Cawnpore

Agricultural College and Hostels.
Christ Church College.
Cawnpore Woollen Mills.
Emporium.
Government Dyeing and Leather Working Schools.
North Western Tannery.

Hardwar.

Gurukul.

Lucknow.

Canning College and Hostels.
Government Training College.
Isabella Thoburn College.
King George's Medical College.
Reid Christian College and Hostels.
Colvin Taluqdar's School.
Government Technical School.
School of Arts and Crafts.

Roorkee.

Civil Engineering College, Hostel and Works.

APPENDIX XXXIII.

List of Persons Consulted by the Commission.

Assam.

Gauhati.

Assamese Deputation :—

Bardaloi, Nabin Chandra.

Barua, The Hon'ble Rai Bahadur Ghansyam.

Bora, Satya Nath

Chaliha, The Hon'ble Rai Phanindhar, Bahadur.

Cunningham, The Hon'ble Mr. J R., M A., Director of Public Instruction, Assam, Fellow, Calcutta University, and Additional Member, Assam Legislative Council

Gurdon, The Hon'ble Lieutenant-Colonel P R T, C S I, I A, Commissioner, Assam Valley Districts, and Additional Member, Assam Legislative Council.

Muslim Deputation :—

Hazarika, Mahomed Tafazzul Hussain, Jorhat.

Mujmodar, The Hon'ble Muhammad Bakht, Sylhet.

Saadulla, The Hon'ble Syed M., Gauhati.

Sudmersen, F W., B A., Principal, Cotton College, and Fellow, Calcutta University, and staff, Cotton College.

Assamese Deputation

Sylhet.

Dutta, Rai Promode Chandra, Bahadur, B.L., Government Pleader.

Murarichand College, Representative of

The Bengal Presidency.

Asansol.

Goswamy, Haridas, Head Master, East Indian Railway High English School.

Bankura

Banerji, Abinash Chandra, District Deputy Inspector of Schools.

Banerji, Purna Chandra, Assistant Sub-Inspector of Schools.

Brown, Rev. A. E, M A., B.Sc., Principal, Wesleyan College, and Superintendent, Boys' Technical School.

Chatterji, Harinath, Retired Deputy Inspector of Schools.

Chaudhuri, Siva Ram, Inspecting Pandit.

Johnston, J., I.C.S, District and Sessions Judge.

Nandi, Mathura Kanta, M.A., Head Master, Zilla School.

The Bengal Presidency—*contd.*

Bankura—contd.

Neogi, Rai Basanta Kumar, Bahadur, M A., B L., Government Pleader, and Chairman, Local Board

Rahim, Maulvi Zahadur, B L., Pleader and Vice-Chairman, Local Board.

Roy, Ananda Nath, Deputy Inspector of Schools

Roy, Rai Sahib Bamacharan, B.L , Pleader, and Vice-Chairman, District Board

Sikdar, Jyoti Chandra, Sub-Inspector of Schools.

Vas, J , I C S , Magistrate and Collector.

Barisal

Ahmed, Khan Bahadur Maulvi Hemayetuddin, Pleader, Member, Broja Mohan College Council, and Secretary, Anjuman Islamia.

Basu, Hemanta Kumar, M A , Professor of Philosophy and Logic, and Member of College Council, Broja Mohan College.

Das Gupta, Ganesh Chandra, Senior Government Pleader.

Das Gupta, Nibaran Chandra

Guha, Kali Prasanna, Secretary, Landholders' Association.

Guha, Sarat Chandra, Member, Broja Mohan College Council.

Mookerji, Nritya Lal, M A , Principal, Broja Mohan College.

Mukerjee, Jagadish Chandra, Head Master, Broja Mohan School.

Sen, Kirode Chandra, Head Master, Zilla School

Sen, Rai Mathura Nath, Bahadur, Joint-Secretary, Landholders' Association.

Berhampur.

Banerjee, Sasi Sekhar, B A., Offg. Principal, Krishnath College.

Chatterjee, Shyamapada, Head Master, Yangipur High School.

Das, Bhusan Chandra, M A , Professor of English, Krishnath College.

Ghosh, Bamapada, Head Master, Kandi High School.

Hati, Asutosh, Head Master, Baldanga High School.

Hazra, Charn Chandra, Head Master, Saktipur High School.

Muslim Deputation —

Burr, Abdul.

Huq, Maulvi Ekramul, B L , Pleader and Honorary Secretary, Muhammadan Association.

Samad, Maulvi Abdus, B L , Pleader.

Shirazi, Maulvi Mirza Yahya, B A , Circle Officer.

Naik, K. G., Professor of Chemistry, Krishnath College.

Roy, Baikuntha Chandra, M A , Professor of Mathematics, Krishnath College.

Sen, Adhinath, M A , B.Sc , Professor of Physics, Krishnath College.

Sen Gupta, Charn Chandra, Head Master, Saidabad High School.

Sericultural farm and Laboratory, Head of the.

Stursberg, Rev. Otto, D Ph., Head of the London Missionary Society's High School.

The Bengal Presidency—*contd*

Bolpur.

Santiniketan, Staff of the :—

Ghosh, Promoda Ranjan, Teacher in English.

Majumdar, Santosh C., Teacher in Natural Scien

Roy, Jagadananda, Teacher in Mathematics.

Roy, Nepal Chandra, Teacher in History.

Tagore, Sir Rabindranath, Kt., LL.D.

Burdwan.

Banerji, Umacharan, M.A., Principal and Professor of Sanskrit and English, Burdwan Raj College, Joint Editor, *Sanskrita Bharati*, and *Sanskrita Bharati Supplement*, and Vice-President, Bangiya Sahitya Parisad.

Bhattacharyya, Dibakar, B.A., Offg. Head Master, Burdwan Raj Collegiate School.

Bose, S. B , Head Master, Municipal School.

Chatterjee, Hrishikesh, B.L., Senior Assistant Manager, Burdwan Agency.

Das, Rai Sahib Aswini Kumar, M.A., Offg. Deputy Inspector of Schools.

Hati, Rai Banwarilal, Bahadur, B.A., B.L., Vakil, High Court, and Vice-Chairman, District Board.

Mahtab, The Hon'ble Sir Bijay Chand, K C.S.I., K.C.I.E., I.O.M., Maharajadhiraja Bahadur of Burdwan.

Mitra, Rai Rasamay, Bahadur, late Head Master, Hindu School, Calcutta.

Calcutta

Ahsanullah, Khan Bahadur Maulvi, M.A., M.R S A., Additional Inspector of Schools, Presidency Division.

Alum, Sahebzadah Mahomed Sultan, B.A., LL B., Member of the Mysore Family, and Attorney-at-Law, High Court.

Annandale, Dr. N , B A., D.Sc , F L S., F.A S B , C M Z S., Director, Zoological Survey of India.

Association of University Women in India, Representatives of :—

Jackson, Miss.

Raymond, Miss.

Rhoda, Sister.

Sorabji, Miss Cornelia

Baksh, S. Khuda, M.A., B C.L., Professor, University Law College, and Lecturer in History and Fellow, Calcutta University.

Banerjea, J. R., M A., B.L., Vice-Principal, Vidyasagar College, and Fellow, Calcutta University.

Banerjee, the late Sir Gooroo Dass, Kt., M.A., D.L., Ph.D.

Bangya Parishad Sabha, Representatives of :—

Bose, Sir J. C., Kt., C.S.I., C.I.E.

and others.

The Bengal Presidency—*contd.*

Calcutta—contd.

Barrow, J. R., B.A., Offg. Principal, Presidency College, and Fellow, Calcutta University.

Bengal Chamber of Commerce, Representatives of —

Cameron Alastair, Partner, Messrs. Mackinnon, Mackenzie and Co.

Crum, W E, Partner, Messrs Graham and Co.

Bentley, Dr. C. A., M B., D.P H, Sanitary Commissioner for Bengal

Bhandarkar, D. R, M.A., Carmichael Professor of Ancient Indian History and Culture and Fellow, Calcutta University

Birley, L., C.I.E., I.C.S., Secretary to the Government of Bengal, Revenue Department.

Bompas, The Hon'ble Mr. C. H., B.A, BAR-AT-LAW, I C S, J.P, Chairman, Calcutta Improvement Trust, and Additional Member, Bengal Legislative Council.

Bose, G C, M A, M R A.C., M R A S., F H A S., Principal, Bangabasi College, and Fellow, Calcutta University.

Bose, J. M., M A, B.Sc., BAR-AT-LAW, Professor of Mathematics, Presidency College.

Calvert, Lt.-Colonel, C.I.E., I.M.S., Principal of the Calcutta Medical College.

Chakravarti, Chinta Haran, M A, B T, Offg Principal, David Hare Training College.

Clarke, The Hon'ble Mr. G. R., I C S., Director-General of Posts and Telegraphs, Simla (late Postmaster-General, Bengal).

Church of England, Representatives of :—

Davies, Rev. Canon A. W., M A, Church Missionary Society, Agra

Douglas, Rev. M. S, M.A., Principal, Christ Church College, and Fellow, Allahabad University, Cawnpore.

Holmes, Rev. W. H. G, of the Oxford University Mission to Calcutta, Superintendent, Oxford Mission Hostel of St. Luke, Calcutta.

Johnston, Rev. A. B., M A., Vice-Principal, St. Paul's Cathedral Mission College, Calcutta.

Rudra, S. K, M.A., Principal and Professor of Economics, St. Stephen's College, Delhi.

Shore, Rev T. E T, Oxford Mission, Dacca.

Westcott, The Right Rev. Foss, M A, Lord Bishop of Chota Nagpur.

Williams, Rev. Garfield, M.A, Principal, St Andrew's College, Gorakhpur

Young, Rev. P. N. F., M.A., Vice-Principal and Professor of English, St. Stephen's College, Delhi.

Colleges (in Calcutta), Representatives of Private Indian .—

Bangabasi College.—

Banerji, Lalit Kumar, M.A, Professor.

The Bengal Presidency—*contd*

Calcutta—contd.

Colleges (in Calcutta), Representatives of Private Indian—*contd.*

Bangabasi College—*contd.*

Bose, G C., M A , M R A.C , M R A.S., F H A S., Principal, and Fellow, Calcutta University.

Central College —

Bose, Khudi Ram, B A., Principal.

Sarbadhikari, Dr S P., C.I.E., B.A., M D , President, Governing Body, and Fellow, Calcutta University.

City College —

Maitra, Herambachandra, M A , Principal, and Lecturer in English, and Fellow, Calcutta University.

Ripon College —

Trivedi, Ramendra Sunder, M A , Principal, and Fellow, Calcutta University

South Suburban College —

Biswas, Charu Chandra, M A , B L , Joint Secretary, Governing Body, Vakil, High Court, Professor of Hindu Law, University Law College, and Fellow, Calcutta University

Sinha, Panchanan, M A , B L , Principal

Vidyasagar College —

Banerjea, J R , M A , B L , Vice-Principal, and Fellow, Calcutta University.

Colleges (in the Mufassal), Representatives of Private Indian —

Ananda Mohan College, Mymensingh —

Ghosh, Dr Jajneswar, M A , Ph D , Principal.

Burdwan Raj College, Burdwan —

Banerji, Umacharan, M A , Principal, and Professor of English and Sanskrit, Joint Editor, *Sanskrita Bharati*, and *Sanskrita Bharati Supplement*, and Vice-President, Bangiya Sahitya Parishad

Chatterjee, Hrishikesh, B L , Senior Assistant Manager, Burdwan Agency

Carmichael College, Rangpur —

Gupta, J. N , M A , I C S , President, Governing Body, and Magistrate and Collector.

Watkins, Rev Dr C H., M A , D Th., Principal.

Edward College, Pabna —

Bisvas, Raj Dinanath, Bahadur, B L , Secretary, Governing Body, and Pleader.

Bose, Radhikanath, M A., Principal.

Chowdhuri, Dhirendranath, M A., Professor of Logic.

Hindu Academy, Daulatpur —

Banerjee, Dwijapada, M A., Principal.

Chakravarti, Brajalal, M A , B.L , Secretary, Governing Body.

The Bengal Presidency—*contd.*

Calcutta—contd.

Colleges (in the Mufassal), Representatives of Private Indian—*contd.*

Krishna Chandra College, Hetampur.—

Dutt, D , M A., Principal and Professor of English Literature.

Krishnath College, Berhampur —

Sen, Adhinath, M A , B Sc , Professor of Physics.

Midnapur College, Midnapur —

Hazra, Jogendra Nath, M A , Principal.

Uttarpara College, Uttarpara —

Mitra, Jogendranath, M.A., Principal and Professor of Logic and History.

Victoria College, Comilla —

Basu, Satyendra Nath, M A , Principal

Victoria College, Narail —

Maitra, Gopal Chandra, M A , Principal

Coyajee, J C , B A , LL B , Professor of Economics, Presidency College, and Lecturer, Calcutta University

Cowley, The Hon'ble Mr F. A A , Chief Engineer, Public Works Department, Bengal, and Secretary to Government of Bengal in Irrigation and Marine Branches, Additional Member, Bengal Legislative Council, and Fellow, Calcutta University

Crohan, Rev Father, F , S J , Rector, St Xavier's College, and Fellow, Calcutta University.

Crouch, H. A , B A , F R I B A , Consulting Architect to the Government of Bengal, and Fellow, Calcutta University

Das Gupta, J. N., B A , Bar-at-Law, Professor of History, Presidency College, and Lecturer in History and Fellow, Calcutta University

Dey, N. N., M A., B Sc , Professor of Physics, Ripon College, and Editor, *The Collegian.*

Dunn, T O D., M A., Inspector of Schools, Presidency Division, and Fellow, Calcutta University.

Elton, Oliver, Professor of English Literature, Liverpool University, (Liverpool)

George, Glen, Chief Mining Engineer, Bengal Coal Company, Ltd., Disherbagh.

Ghosh, B C., Professor of Physiology, Belgachia Medical College, etc.

Gilchrist, R. N , M A., F.R E.S , Principal, Krishnagar College, and Fellow, Calcutta University.

Gray, Dr J. Henry, M D , M P.E., Secretary to Physical Department of National Council, Young Men's Christian Association (India and Ceylon).

Hamilton, Sir Daniel.

Hamilton, C. J., M.A., Minto Professor of Economics, and Fellow, Calcutta University.

Harley, A. H., M.A., Principal, the Madrassah, and Fellow, Calcutta University.

The Bengal Presidency—*contd*

Calcutta—contd.

Hayden, Dr. H H., C I E, B A, B S I, D Sc, F R S., F.G S, F.A S B, Director-General, Geological Survey of India

Highet, Sir Robert, Agent, East Indian Railway Company.

Holland, Rev W E S, M A, Principal, St Paul's Cathedral Mission College, and Fellow, Calcutta University

Holme, James W., M A., Professor of English, Presidency College, and Lecturer in English, Calcutta University

Huda, The Hon'ble Nawab Sir Syed Shamsul, Puisne Judge, High Court.

Huq, The Hon'ble Maulvi A K Fazlul, M A., B L, Additional Member, Bengal Legislative Council, Vakil, High Court, and President, Bengal Presidency Muslim League

Karim, Maulvi Abdul, B A, Retired Inspector of Schools, Bengal, and Honorary Fellow, Calcutta University

Kerr, The Hon'ble Mr. J H, C S I, C I E, Chief Secretary, Government of Bengal.

Leventon, Lieutenant-Colonel A, I.M.S, Superintendent of the Campbell Hospital Medical School.

Mahalanobis, Prasanta Chandra, B A, Professor of Physics, Presidency College, and Lecturer in Physics, Calcutta University

Maitra, Herambachandra, M A, Principal, City College, and Lecturer in English, and Fellow, Calcutta University

Mallik, Dr. D. N, B A, D Sc, F R S E, Professor of Mathematics, Presidency College, and Lecturer in Applied Mathematics, and Fellow, Calcutta University.

Meek, D. B, M A., B Sc, Professor of Physics, Presidency College, and Lecturer in Physics, and Fellow, Calcutta University

Milligan, S, M A, B Sc, Director of Agriculture, Bengal

Mirza, Moinuddin, of Murshidabad Family, Zamindar

Muslim Deputation—

Akram, Prince, of Oudh Family

Ali, Mirza Ahmad, Honorary Presidency Magistrate, and Secretary, Calcutta Muhammadan Orphanage

Ali, Nawab Nasirul Mamalek, Mirza Sujaat, Khan Bahadur, Persian Vice-Consul.

Chaudhury, The Hon'ble Mr Ashraf Ali Khan, BAR.-AT-LAW, Zamindar, and Additional Member, Bengal Legislative Council

Islam, Khan Bahadur Maulvi Aminul, B A, Personal Assistant to the Commissioner, Presidency Division.

Karim, Maulvi Abdul, B A, Retired Inspector of Schools, and Honorary Fellow, Calcutta University

Rahman, The Hon'ble Mr Aminur, Zamindar, Tea Planter, and Additional Member, Bengal Legislative Council.

Newson, P. W., Partner, Messrs. Jardine, Skinner and Co.

The Bengal Presidency—*contd.*

Calcutta—contd.

Payne, The Hon'ble Mr. C. F., I.C.S., Chairman, Calcutta Corporation, and Additional Member, Bengal Legislative Council.

Rahman, Nawab A. F M. Abdur, Khan Bahadur, late Judge, Small, Cause Court.

Raman, C. V, M A., Sir Taraknath Palit Professor of Physics, University College of Science.

Ray, Jamini Bhushan, M A, M B., Ayurvedic Doctor, and Fellow, Calcutta University.

Ray, Sir. P C, Kt, C I E, D Sc, Ph D, F S C, Sir Taraknath Palit Professor of Chemistry, University College of Science, and Fellow, Calcutta University.

Ray, Dr Rames Chandra, L M S, Medical Practitioner and Member, Governing Body, Belgachia Medical College.

Rogers, Lieutenant-Colonel Sir Leonard, Kt, C I E, M D, B S, F R C S, F R C P, F R S., I M S, Professor of Pathology, Medical College of Bengal

Roman Catholic Church, Representatives of —

Crahan, Rev Father F, S J, Rector, St Xavier's College, and Fellow, Calcutta University

Dandoy, Rev. Father G, S J., Professor, St Mary's College, Kurseong

Hoeck, Rev Father L Van, S J, Rector, Manresa House, Ranchi.

O'Neill, Rev Father E, S J, North Point College, Darjeeling.

Sarbadhikari, The Hon'ble Sir Devaprasad, Kt., M A, LL.D, C.I E., Additional Member, Bengal Legislative Council (late Vice-Chancellor, Calcutta University)

Scottish Churches and English Free Church, Representatives of :—

Brown, Rev. A. E, M.A., B.Sc., Principal, Wesleyan College, Bankura.

Carey, Rev William, Superintendent, Baptist Mission, Barisal.

Graham, Rev Dr J A, D D, C I.E, Honorary Superintendent, St. Andrew's Colonial Homes, Kalimpong

Howells, Rev. Dr. G., M A, B.D., B Litt, Ph D, Principal and Professor of English and History, Serampore College, and Fellow, Calcutta University.

Janvier, Rev. Dr. C. A. R., M.A., D D., Principal and Professor of English and Philosophy, Ewing Christian College, and Fellow, Allahabad University, Allahabad.

Macphail, Rev. E. M., M A., B D., Professor of History and Economics, Madras Christian College, and Fellow, Madras University Madras.

Noble, Rev. P., Baptist Missionary Society, Dacca.

The Bengal Presidency—*contd.*

Calcutta—concld.

Scottish Churches and English Free Church, Representatives of—*contd.*

Robertson, Rev. Dr. A., M B, C M, Principal and Professor of Biology, Hislop College, Nagpur.

Urquhart, Rev. Dr. W. S, M.A, D.Phil, Vice-Principal and Professor of Philosophy, Scottish Churches College, and Lecturer in Philosophy and Fellow, Calcutta University, Calcutta

Watt, Rev Dr. J, M A., D D, F C S, Principal and Professor of Chemistry, Scottish Churches College, and Fellow, Calcutta University, Calcutta.

Saleem, Nawab Abdul

Seal, Dr. Brajendranath, M A., Ph D, King George V Professor of Mental and Moral Science and Fellow, Calcutta University

Segard, Dr. C. P, M D, Adviser to the Department of Public Instruction, Bengal, in Physical Education, Young Men's Christian Association, (India and Ceylon)

Sircar, the Hon'ble Sir Nilratan, Kt., M.A., M D, Medical Practitioner, Fellow, Calcutta University, and Additional Member, Bengal Legislative Council

Sorabji, Miss Cornelia, B.A., LL B., B C L, Lady Adviser to the Court of Wards, Bengal, Bihar and Orissa and Assam.

Sterling, T. S, M A, Professor of English, Presidency College, and Lecturer in English, Calcutta University

Suhrawardy, The Hon'ble Dr Abdulla-al-Mamun, Advocate, High Court, Additional Member, Bengal Legislative Council, and Lecturer in Arabic and Persian and Fellow, Calcutta University

Tonki, Shams-ul-Ulama Maulvi Muhammad Abdullah, Head Maulvi, The Madrassah

Urquhart, Rev Dr W. S, M A, D Phil, Vice-Principal and Professor of Philosophy, Scottish Churches College, and Lecturer in Philosophy and Fellow, Calcutta University

Victoria, Sister Mary, C J, S B, Principal, Diocesan College for Girls.

Vredenburg, E, M A., B-es-L, B-es-Sc, A R S M, A E C S, F.G.S., Superintendent, Geological Survey of India, and Lecturer in Geology, Calcutta University.

Watt, Rev. Dr. J., M.A, D D, F C.S, Principal and Professor of Chemistry, Scottish Churches College, and Fellow, Calcutta University

Wilson, Lieutenant-Colonel R P, I M S, Superintendent, Campbell Medical School.

Wood, The Hon'ble Mr. W. H. H. Arden, C.I E., Principal, La Martiniere College, Additional Member, Bengal Legislative Council, and Fellow, Calcutta University.

Wordsworth, The Hon'ble Mr. W. C., M A., Offg. Director of Public Instruction, Bengal, Additional Member, Bengal Legislative Council, and Fellow, Calcutta University.

The Bengal Presidency—*contd.*

Chinsurah

Ahmad, Khabiruddin, B.A., Second Inspector of Schools, Burdwan Division

Ahmed, Maulvi Tassadduq, B.A, B T., Assistant Inspector of Schools for Muhammadan Education, Burdwan Division

Banerjee, Ravaneswar, B A, B T, Head Master, Hooghly Branch School

Basu, Abinash Chandra, M.A., Professor of English, Hooghly College

Bhattacherjee, Purnachandra, M A, Professor of Physics, Hooghly College

Biswas, Kshirode Krishna, B L, Vice-Chairman, District Board, Hooghly.

Bottomley, J. M., B.A, Principal, Hooghly College, and Fellow, Calcutta University

Chatterjee, Pramathanath, M A, Second Inspector of Schools, Burdwan Division.

Chowdhury, Jatindra Mohan, Pleader

Chowdhury, Jogendra Lal, B L, Vakil

Chowdhury, Maulvi Mazahar-ul-Anwar, Government Pleader, and Public Prosecutor.

Dutta, Nripendra Kumar, M A., Professor of History, Hooghly College.

Griffith, W E, M A, Inspector of Schools, Burdwan Division, and Fellow Calcutta University

Lees, D H, I C S, J P, Commissioner, Burdwan Division

Mitra, Rai Bahadur Mahendra Chandra, M A, B L, Chairman, Hooghly Municipality, and President, Bar Library.

Mukherji, Rash Behari, M A, B L, Munsif

Mustafi, C. L., Superintendent, Government Experimental Farm

Chittagong

Aziz, Khan Sahib Maulvi Abdul, B.A, Offg Second Inspector of Schools, Chittagong Division.

Chaudhuri, Bipin Chandra, Head Master, Oriental Academy.

Clayton, A H, I.C S, Magistrate and Collector

Das Gupta, Surendranath, M.A, Professor of Sanskrit, Chittagong College

De, K C, I C S, Offg. Commissioner, Chittagong Division

Gosain, Jagadish Chandra, B L, Sub-Judge

Guha, Durga Mohan, B A, Head Master, Municipal High School.

Kundu, Purnachandra, M A, Offg. Principal, Chittagong College

Martin, The Hon'ble Mr. E. A, Manager, Messrs. Bullock Brothers and Co., Ltd, and Additional Member, Bengal Legislative Council.

Muslim Deputation.—

Ahmed, Chaudhuri Nazir, Merchant

Ahmed, Maulvi Jalaluddin, B.L., Pleader, and Secretary, Anjuman-i-Islamia.

Alum, Maulvi Mobarik, Head Master, High English School.

Halim, Abdul, B.L., Pleader.

The Bengal Presidency—*contd.*

Chittagong—contd.

Muslim Deputation—*contd.*

Hossain, Maqbul, B L., Pleader.
Hossain, Maulvi Mohammad, Offg. Principal, The Madrassah.
Rahman, Maulvi Mustafizur, Deputy Magistrate and Deputy Collector.
Suttar, Abdus, B.L., Senior Government Pleader.

Mukerji, Haripada, Head Master, Collegiate School.
Percival, J. R , B L , Vakil, High Court.
Ray, Basantakumar, M A., Professor of English, Chittagong College.
Ray, Kshitischandra, M A., Professor of Chemistry, Chittagong College
Roy, Rai Upendra Lal, Bahadur, President, Indian Merchants' Association
Sanaullah, Maulvi Mohammad, M A , Professor of Arabic and Persian, Chittagong College.
Sarkar, Akshay Kumar, M A , Professor of History, Chittagong College
Sarkar, Kalipada, M A , Assistant Inspector of Schools, Chittagong Division.
Sen, Jatra Mohan, B L., President, Chittagong Association, Vakil, High Court, and President, Bar Association.
Sen, Rai Satis Chandra, Bahadur, B L , Senior Government Pleader
Sen, Suresh Chandra, M A , Deputy Magistrate and Deputy Collector
Sen, Surya Kumar, B A , Head Master, Patiya High School

Comilla

Anjuman Deputation .—

Ahmad, Maulvi Ali, Honorary Magistrate
Ahmad, Maulvi Mohammad Ghyasuddin
Chaudhuri, Nawab Saiyid Hossain Haider.
Karim, Maulvi Abdul, Public Prosecutor
Rahman, Maulvi Saddique, Pleader
Rahman, Sayed Fazlur.

B A College Committee :—

Das, Prokash Chandra, B L , Secretary and Pleader
Mitra, Jatindra Mohan, B L , Pleader, and Joint Secretary, Bar Association
Mitter, Upendra Mohan, B L , Pleader, and Chairman, Comilla Municipality.
Nandi, Rajani Nath, B L , Pleader, Member, District Board, and Member, Agricultural Association
Roy, Kshetra Mohan, B L., Pleader, Zamindar, and Member, District Board and Comilla Municipality.

Basu, Satyendra Nath, M A , Principal, Victoria College
Emerson, T., I C S , Magistrate and Collector.
Ishaque, Maulvi Mohammad, Head Master, Victoria Collegiate School.
Kar, Basanta Kumar, Head Master, Yusuf School
Nabi, Mohamed Wahidun, B A , Head Master, Zilla School.
Sircar, Janaki Nath, Head Master, Iswar Patasala.

The Bengal Presidency—*contd.*

Cooch-Behar.

Milligan, J. A, M A, I C S, Vice-President, State Council.
Sen, Narendranath, BAR.-AT-LAW, Dewan, Cooch-Behar State.
Victoria College, Principal and Staff of.

Dacca.

Ahmed, Maulvi Khabiruddin, B A., B T., Assistant Inspector of Schools for Muhammadan Education, Dacca Division.
Archbold, W. A J, M A, Principal, Muir Central College, Allahabad (late Principal, Dacca College)
Baptist Mission, Representatives of :—
Carey, Rev. William, Superintendent, Baptist Mission, Barisal.
Drake, Rev. J, B A, B D, Vice-Principal and Professor of Philosophy, Serampore College, Serampore.
Noble, Rev. P, Baptist Mission, Dacca.
Bhadra, Satyendra Nath, Secretary, Sahitya Samaj
Biss, E E, Inspector of Schools, Dacca Division, and Fellow, Calcutta University.
Bose, P K, BAR.-AT-LAW.
Chatterjee, Rai Lalit Mohan, Bahadur, M A, Principal, Jagannath College, and Fellow, Calcutta University.
Chatterjee, Sris Chandra, B L, Pleader
Das, Rai Bhupatinath, Bahadur, M A, B Sc, Professor of Chemistry, Dacca College, and Fellow, Calcutta University.
De, Satischandra, M A, Offg. Senior Professor of English Literature, Dacca College
Finlow, R S., Fibre Expert, Agricultural Farm.
Irons, Miss M V, M A (T C D), Inspectress of Schools, Dacca Circle.
Ghosh, Rai Shashanka Kumar, Bahadur, Government Pleader
Goswami, Rai Sahib Bidhubhusan, M A, Professor of Sanskrit, Dacca College, Superintendent, Dacca College Hostel, Fellow, Calcutta University, and Secretary, Eastern Bengal Saraswat Samaj.
Gupta, Abinas Chandra, Editor, *The Shiksha*, and *The Samachar*; and Proprietor, Naba Kumar Institution.
Hector, G. P., Economic Botanist.
Jagannath College, Representatives of the Governing Body of :—
Chaudhury, Sarad Lal Ray
Datta, Rai Chandrakumar, Bahadur, Secretary and Trustee.
Roy, Anandachandra, B L, Trustee and Pleader.
Sarkar, Satischandra, M A
Jenkins, Walter A., M.A, Professor of Physics, Dacca College.
Langley, G. H., M A., Professor of Philosophy, Dacca College.
Mazumdar, Rai Sahib Bidhu Bhusan, B.A., Inspector of Residence of Students in the town of Dacca.

The Bengal Presidency—*contd.*

Dacca—contd.

Muslim Deputation :—

Ahmed, Khan Bahadur Maulvi Naziruddin, M A , Personal Assistant to the Commissioner, Dacca Division.

Azam, Khan Bahadur Khwaja Muhammad

Chaudhury, The Hon'ble Nawab Syed Nawabaly, Khan Bahadur, C I.E., Additional Member, Imperial Legislative Council, and Fellow, Calcutta University.

Hasan, Khan Bahadur Saiyid Aulad, late Inspector of Registration.

Huk, M. Musharraful

Latif, Khan Bahadur Saiyid Abdul, B L , Deputy Magistrate and Deputy Collector.

Waheed, Shams-ul-Ulama Abu Nasr, M A., Principal, Dacca Madrassah, and Fellow, Calcutta University

Yusuf, Nawab Khwaja Mohammad, Khan Bahadur, Zamindar

Newman, Lieutenant-Colonel E A R , M D , I M S , Civil Surgeon, and Superintendent, Medical School, and staff of the Medical School

Oxford Mission, Representatives of .—

Brown, Rev. Canon E. F , Superintendent, Oxford Mission, Calcutta

Shore, Rev T E T , Oxford Mission, Dacca

Roy, Lalit Mohan, B L , Pleader

Sarkar, Gopal Chandra, B A., Second Inspector of Schools

Sen, B M , M Sc , Professor of Mathematics, Dacca College

Sen, P N , Editor, *The Herald*

Sen Gupta, Dr. Nares Chandra, M A , D L., Vice-Principal, Law College

Smritibhusan, Baikunta Nath, President, Eastern Bengal Saraswat Samaj

Sorabji, Miss L , Principal, Eden High School for Girls

Stark, H A , B A , Principal, Training College

Williams, T. T , M A , B Sc , Professor of Economics, Dacca College, and Fellow, Calcutta University.

Daulatpur

Banerjee, Dwijapada, M A , Principal, Hindu Academy

Chakravarti, Brajlal, M A , B L , Secretary, Governing Body, Hindu Academy.

Dhanbad

Adams, C. F., M I.C E , Chief Inspector of Mines in India

Hooghly.

Ali, Nawab Nasirul Mamalek, Mirza Shujaat, Khan Bahadur, Persian Vice-Consul, President, Hooghly Imambara Committee

Anwar, Maulvi M Zahiral, Vakil.

Head Master of the Collegiate School.

Musa, Maulvi Syed, Superintendent of Madrassah.

The Bengal Presidency—*contd*

Hooghly—contd.

Principal and staff of Hooghly College.

Rezi, Maulvi Syed Muhammad, Mutwalli Imambara.

Howrah.

Gupta, Satyendranath, BA, B.T, Offg. Head Master, Howrah Zilla School

Itachoona.

Kundu, Rai Bijay Narain, Bahadur

Krishnagar.

Bhaduri, Rai Indu Bhusan, Bahadur, BL, Pleader

Gilchrist, R N., MA, F.R.E.S, Principal, Krishnagar College, and Fellow, Calcutta University

Huque, M Azizul, B.L., Pleader, and Joint Secretary, Bengal Presidency Muhammadan Educational Association.

Lahiri, Becharam, BA., BL, Pleader, Judge's Court, and Secretary, Nadia District Association

Noakes, Rev. E. T, Director, Church Missionary Society's Training College

Roy, Rai B[illegible]bar, Bahadur, BL, Government Pleader, and Vice-Chairman, District Board, Nadia, and Chairman, Krishnagar Municipality

Malda

Lindsay, J H, ICS, Magistrate and Collector.

Malda Educational Conference, Members of*.

Midnapur

Hazra, Jogendranath, MA, Principal, Midnapur College

Marr, W. A, ICS, District Magistrate and Collector

Midnapur College, Members of the Governing Body of —

Chandra, Upendra Nath, BA, Head Master, Midnapore Collegiate School

Hazra, Kali Podo, BL., Vice-President, Governing Body, Pleader, and Vice-Chairman, Midnapur Municipality

Maiti, Upendranath, BL, Chairman, Governing Body, Pleader, and Chairman, Municipality

Sinha, Atal Behari, BL, Member, Governing Body, Pleader, Law Lecturer, Chairman, Suddar Local Board, and Vice-Chairman, District Board

Muslim Deputation :—

Ahmed, Kabiruddin, BL, Pleader.

Ahmed, Saiyed Ali, Deputy Superintendent of Police.

Alam, Azizul, Pleader.

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* Many of the leading citizens of Malda were present at the Conference, among them being Mr. A. L. Banerji, Excise Superintendent, and Mr Panchanan Muzumdar, B.L, Pleader and Secretary, Akrumani Coronation High English School

The Bengal Presidency—*contd*

Midnapur—contd.

Muslim Deputation—*contd.*

Ali, Maulvi Saiyed Amgad, B L, Munsif.

Mehdi, S. A.

Reza, Maulvi Ali, Probationary Deputy Magistrate and Deputy Collector.

Suhrawardy, Maulvi Mahmood, Rais, and Sub-Registrar.

Suhrawardy, Sayadul Karim, Rais, and Medical Practitioner.

Mymensingh

Ghose, Dr. Jajneswar, M.A, Ph D., Principal, Ananda Mohan College.

Rajshahi

Banerji, Rai Kumudini Kanta Bahadur, M A., Principal, Rajshahi College, and Fellow, Calcutta University

Maitra, Akshay Kumar, B L, Member, Asiatic Society, Bengal, Pleader, and Director, Varendra Research Institute

Maitra, D N, L Ag, Superintendent, and Staff, Government Sericultural Depôt

Majundar, Gosta Vehari, B A, Head Master, Rajshahi Bholanath Academy and staff

Muslim Deputation —

Ahmad, Emaduddin, B L, Vice-Chairman, District Board, and Secretary, Muhammadan Association

Ahmad, Sheikh, Vice-Chairman, Local Board

Yusuf, Mirza Mahomed

Rajshahi Association, Representatives of —

Acharya, Dr Kedareswar, M B, Vice-President.

Ahmad, Emaduddin, B L, Vice-Chairman, District Board and Secretary, Muhammadan Association

Bhaya, Surendra Nath, Pleader

Chaudhuri, The Hon'ble Babu Kishori Mohan, M A, B L, Honorary Secretary, and Additional Member, Bengal Legislative Council.

Chowdhury, Bhawani Govinda, B L, Pleader

Maitra, Akshay Kumar, B L, Member, Asiatic Society, Bengal, Pleader, and Director, Varendra Research Institute

Maitra, Kritanta Nath, B L, Pleader.

Maitra, Surendra Mohan, B L, Pleader

Ray, Ramchandra, B L, Government Pleader.

Rajshahi College Staff —

Banerji, Nripendra Chandra, M A, Professor of English

Bhattacharya, Griya Sanker, M A., Lecturer.

Bhattacharyya, Kausikanath, M A., Lecturer in Economics and Political Philosophy

Chatterjee, Santosh Kumar, M A., Professor of History and Politics.

De, Hemchandra, M.A., Professor of Philosophy and Logic.

The Bengal Presidency—*contd.*

Rajshahi—contd.

Rajshahi College Staff—*contd.*

Guha, Jatindra Chandra, M A, Professor of English

Hakim, Abdul, M A, Professor of Arabic and Persian

Neogi, Dr. P., Professor of Chemistry.

Sen, Raj Mohan, M A, Professor of Mathematics

Ray, Kali Das, Superintendent, Government Farm, and staff

Rangpur.

Ahmed Aftabuddin, B A, B T, District Deputy Inspector of Schools.

Bhattacharya, Brindaban C, M A, Professor of Bengali, Carmichael College

Chakrabatti, Jatindra Nath, B A, M S A (CORNELL, U S A), Director, Government Dairy Farm and Demonstration Farm

Chatterjee, P K, B.Sc, B A, Vice-Principal and Professor of Economics, Carmichael College

Chatterjee, Rai Sarat Chandra, Bahadur, B L, Government Pleader

Gupta, J N, M A, I C S, Magistrate and Collector and President, Governing Body, Carmichael College

Gupta, Dr Rajendra Mohan, Superintendent, Rangpur Normal School.

Haldar, Umeshchandra, M A, B T, Head Master, Zilla School

Mallick, S C, I C S, District and Sessions Judge

Muslim Association Deputation —

Ahmed, Taslimuddin, B L, Pleader

Ali, Maulvi Mohammad, M A, B L

Ali, Tabarak

Allum, Talimuddin Ahmad Tariqual, M A, B L, Deputy Magistrate and Deputy Collector

Khan, Muhammad Asaf, B L, Secretary, Pleaders' Library

Mansoor, Syed Abul

Mozammal, Mohammad

Rawoof, Abdur

Tahar, Mohammad

Watkins, Rev Dr C. H, M A, D Th, Principal, Carmichael College

Serampore.

Bhattacharyy, Madhusudan, B A, Assistant, Serampore Collegiate School

Carpenter, Rev. G. C, B A, B D, Head Master, Serampore Collegiate School.

Dey, Baroda Prasaud, B L, Chairman, Serampore Municipality, and Honorary Secretary, Serampore Union Institution

Drake, Rev J., M A, B D, Vice-Principal and Professor of English, Philosophy and Hebrew, Serampore College

Howells, Rev Dr, G, M A, B D, B Litt, Ph D, Principal and Professor of English History, and Fellow, Calcutta University.

The Bengal Presidency—*concld.*

Sibpur

Civil Engineering College —

Gupta, B. C, Offg Professor of Electrical Engineering

Heaton, B, Principal, and Fellow, Calcutta University

King, C A, A R C S, B Sc, Professor of Mechanical Engineering, and Fellow, Calcutta University

Maitra, Surendra Nath, M A., A R S C, Offg Professor of Mathematics and Physics

Richardson, Thomas H, M A, B.A, M I C E, Professor of Civil Engineering, and Fellow, Calcutta University

Robertson, E. H, B A, M Sc, M I M E., F.G S, Professor of Mining Engineering

Sen, Rajendra Nath, M A, M Sc., F C S, Professor of Chemistry

Uttarpara

Mitra, Jogendranath, M A, Principal and Professor of Logic and History, Uttarpara College

Mukerjee, Pannalal, M Sc, Professor of Chemistry, Uttarpara College

Mukharji, Raja Payari Mohan, C S I, Zamindar

Bihar and Orissa.

Jamalpur

Wedderburn, D, Locomotive Superintendent, East Indian Railway

Patna

Fawcus, G E, M A., Director of Public Instruction, Bihar and Orissa.

Imam, The Hon'ble Justice Sir Ali, K C S I, Bar.-at-Law, Puisne Judge, High Court.

Imam, Saiyed Hassan, Bar.-at-Law, Advocate, High Court

Jennings, The Hon'ble Mr J G, M A, Vice-Chancellor, Patna University.

Jackson, V H, M A, Offg Principal, Patna College.

Shaw, R. W. F., Registrar, Patna University.

Pusa

Agricultural Research Institute.—

Butler, E J, M B, F L S., Imperial Mycologist.

Davies, W. A., B A, A C G I, F C S, F Z S, Imperial Entomologist.

Harrison, W. H, Imperial Agricultural Chemist.

Henderson, G S, N D A, N.D.D, Imperial Agriculturist

Howard, A, C I E, M A, A R C S, F L S, Imperial Economic Botanist.

Howard, Mrs G L C, M A, Second Imperial Economic Botanist.

Howlet, F. M., B A, F E S., Imperial Pathological Entomologist.

Hutchinson, C. M, B A, M A.E B., Imperial Agricultural Bacteriologist.

Sayer, M. Wynne, B A., Assistant to the Director of Agricultural Research Institute.

Bombay Presidency.

Bombay

Anstey, Percy, B.Sc., F.R.E.S., Principal, Sydenham College of Commerce, and Fellow, Bombay University

Burns, C. L, Principal, Sir Jamsetjee Jejeebhoy School of Art, and staff.

Chandavarkar, Sir Narayan G, Kt, B.A., LL.B, Fellow, Bombay University.

Covernton, A. L, M.A, Principal and Professor of English, Elphinstone College, and Fellow, Bombay University.

Covernton, The Hon'ble Mr J. G, M.A, C.I.E, Director of Public Instruction, Bombay Presidency, Fellow, Bombay University, and Additional Member, Bombay Legislative Council.

Dastur, Fardunji M, M.A, Registrar, Bombay University.

Fraser, the late J. Nelson, M.A (Principal, Secondary Training College).

Hurst, A R Burnett, B.Sc, Vice-Principal and Professor of Statistics, Sydenham College of Commerce

Moos, N A F, D.C, L.C.E, F.R.S.E, J.P, Director of Bombay and Alibag Observatories.

Reed, Sir Stanley, Kt, LL.D, Editor, *The Times of India*, and Fellow Bombay University

Rahimtoola, The Hon'ble Sir Ibrahim, Kt, C.I.E, Member, Bombay Executive Council.

Rafiuddin, The Hon'ble Mr, Additional Member, Bombay Legislative Council

Rose, Dr. J, Hutchinson Professor of Physiology, Grant Medical College.

Setalvad, Sir C H Kt., B.A, LL.B, Vice-Chancellor, Bombay University.

Street, Lieutenant-Colonel A, F.R.C.S, I.M.S., J.P, Principal and Professor of Surgery and Clinical Surgery, Grant Medical College, and Fellow, Bombay University

Students' Brotherhood, Committee of.

Victoria Jubilee Technical Institute —

Canham, G E, M.R (Sam), J.R.P.C, Head of Sanitary Engineering and Plumbing Department

Mous, S A

Pomfret, W T, Ag Principal and Head of Textile Department.

Poona.

Allen, Dr H N, B.Sc, Ph.D, Principal, Civil Engineering College, and Fellow, Bombay University

Bain, F W, M.A., Principal and Professor of History and Political Economy, Deccan College, and Staff

Bhandarkar, Sir R. G, K.C.I.E, M.A, Ph.D., LL.D.

Fergusson College, Staff of—

Ibrahim, The Hon'ble Mr. Fakir Mahomed Walad, Khan Pathan, Additional Member, Bombay Legislative Council.

Bombay Presidency—*contd*

Poona—contd.

Fergusson College, Staff of—*contd.*

Mann, Dr. Harold H., D Sc, Principal, Agricultural College, Agricultural Chemist to the Government of Bombay, and Fellow, Bombay University.

Paranjpye, The Hon'ble Mr R P., M A., B Sc., Principal, Fergusson College, Fellow, Bombay University, and Additional Member, Bombay Legislative Council

Central Provinces.

Nagpur.

Allen, R. G, M A., Principal, and staff, Agricultural College

Beckett, R H., B Sc, Principal and Professor of Chemistry, Victoria College of Science

Dick, The Hon'ble Mr. G P, C I E, Bar.-at-Law, Government Advocate

Gardiner, Rev. T. W., M A, Professor of English and History, Hislop College.

Mallak, Khan Bahadur K. M

Mayhew, The Hon'ble Mr. A. I., B.A., Director of Public Instruction, Central Provinces, Additional Member, Central Provinces Legislative Council, and Fellow, Allahabad University.

Robertson, Rev. Dr. A., M B., C.M, Principal and Professor of Biology, Hislop College.

Sly, The Hon'ble Sir Frank, K.C.S.I., I.C.S., Commissioner.

Delhi.

Delhi.

Maclagan, The Hon'ble Sir Edward, K C I E, C S I, Secretary, Government of India, Education Department, and Additional Member, Imperial Legislative Council

Nair, The Hon'ble Sir Sankaran, Kt, C I E., Member, Governor-General's Executive Council

Platt, Dr Miss Kate A, M D, B S, W M S, Principal and Professor of Medicine, and staff, Lady Hardinge Medical College and Hospital.

Rudra, S K, M A, Principal, St Stephen's College

Sharp, The Hon'ble Mr H, C S I, C I E, M A, Educational Commissioner with the Government of India, and Additional Member, Imperial Legislative Council, Simla

Hyderabad (Deccan).

Hyderabad.

Glancy, R I. R, C I E, I C S., Financial Secretary.

Hamiduddin, B A, Principal, and staff, Darul-Uloom College.

Hyderabad Deccan—*contd*

Hyderabad—contd.

Hydari, M A. N., B.A., Secretary to His Exalted Highness the Nizam's Government, Judicial, Police and General Department, and Member, Hyderabad Legislative Council.

Jung, Nizamat, Bahadur, M A , LL B., BAR.-AT-LAW, Chief Justice

Khan, Fakhruddin Ahmed, B.A , Accountant-General

Masood, Syed Ross, B A , BAR.-AT-LAW, Director of Public Instruction

Sturge, P H , M A , Principal, and staff, Nizam's College

Translation Bureau, Staff of.

Madras Presidency.

Madras

Aiyangar, Rao Sahib S. Krishnaswamy, M A , M R A S , F.R H S , Professor of Indian History and Archæology and Fellow, Madras University

Aiyer, Sir P S Sivaswamy, K C S.I., C I E , B A , B L , Vice-Chancellor, Benares University (late Vice-Chancellor, Madras University)

Aiyer, P V Seshu, B A , L.T , Professor of Mathematics, Presidency College, and Fellow, Madras University

Alexander, A., Manager, Buckingham Mills

Allen, H. J , M A , Principal and Professor of History, Presidency College, and Fellow, Madras University.

Appaswamy, Paul, M A., LL B., BAR.-AT-LAW, Professor, Law College, and Fellow, Madras University

Collins, Dr. Mark, B A , Ph D , Professor of Comparative Philology and Fellow, Madras University.

Corley, Ferrand E., M A., Professor of History, Madras Christian College, and Fellow, Madras University

Davies, Arthur, M.A , BAR.-AT-LAW, Principal, Law College, and Fellow, Madras University

de la Hey, Miss D , M A , Principal, Queen Mary's College for Women

Dewsbury, Francis, B.A., LL B , Registrar, Madras University

Hasan, The Hon'ble Mr. Yakub, Additional Member, Madras Legislative Council.

Hunter, Sir Bernard, Kt , Secretary and Treasurer, Bank of Madras

Hunter, Mark, M.A., Professor of English, Presidency College.

James, W. H , M Sc , Principal, Engineering College, and Fellow, Madras University

Jones, R LL , M A , Professor of Physics, Presidency College, and Fellow, Madras University.

Littlehailes, R., M A , Professor of Mathematics, Presidency College, and Fellow, Madras University.

Madrassah Azam, Principal and staff of

Menon, K. Ramunni, M.A., Professor of Zoology, Presidency College, and Fellow, Madras University.

Madras Presidency—*contd.*

Madras—contd.

Macphail, Rev. E. M., M.A., B D., Professor of History and Economics, Madras Christian College, and Fellow, Madras University.

Meston, Rev. William, M A, B D, Professor of Mental and Moral Science, Madras Christian College, and Fellow, Madras University.

Pittendrigh, The Hon'ble Rev. G., M A, Professor of English, Madras Christian College, Fellow, Madras University, and Additional Member, Madras Legislative Council.

Rahim, The Hon'ble Mr. Justice Abdur, M A., BAR.-AT-LAW, Puisne Judge, High Court, and Fellow, Madras University.

Ramanathan, Rao Bahadur K B, M A, B L, L.T, Professor of English, Pachaiyappa's College, and Fellow, Madras University.

Richards, F. J., I C S, J.P., Secretary, Revenue Department, Madras.

Rollo, J C, M A, Professor of English, Maharaja's College, Mysore (late Principal, Pachaiyappa's College).

Simonsen, Dr. J L, D Sc, Professor of Chemistry, Presidency College, and Fellow, Madras University

Skinner, Rev Dr William, C.I E, M A, D D, Principal, Madras Christian College, and Fellow, Madras University

Slater, Dr Gilbert, M A, D Sc, Professor of Indian Economics and Fellow, Madras University

Stone, Sir J H (late Director of Public Instruction, Madras)

Viyayaragavachari, S, Professor, Pachaiyappa's College

Saidapet

Duncan, H S, M A, Principal, Teachers' College and staff

Trichinopoly

Bertram, Father F, S J, Rector, Principal, Manager and Warden, St. Joseph's College

Gardiner, Rev Allan F, M A Principal and Warden, S P G College

Mysore.

Bangalore

Indian Institute of Science —

Bourne, Sir Alfred, K C I E, F R S, Director

Fowler, Dr G J, D Sc, Professor of Applied Chemistry.

Hay, Dr Alfred, D Sc, M I E E, Professor of Electrical Technology.

Iyer, V, Subramania, Secretary of Education Committee.

Sudborough, Dr J J, D Sc, Professor of Chemistry

Usher, F L, B Sc, Professor of Chemistry, Central College

Visvesvaraya, Sir M, B A., L C E, M INST, C E, K C I E, Dewan, Mysore State

Mysore

Denham, T, M A, Registrar, Mysore University

D'Souza, P. G, B A, B L., Secretary to the Government of His Highness the Maharaja of Mysore, Department of Education and Agriculture.

Mysore—*contd.*

Mysore—contd

Husain, Mir Muhammad Hamza, District and Sessions Judge.

Ismail, Mirza M, B A, Huzur Secretary, Palace Department

Maharaja's College, Rao, Subha, M A., Principal and staff of.

Nanjundayya, H. V, C I E, M A, M L, Vice-Chancellor, Mysore University

Reddi, C R, M A, Inspector-General of Education, Mysore State, and Fellow, Madras University

The Punjab.

Lahore.

Bishop of Lahore—

Dyal Singh College, Principal of.

Davanand Anglo-Vedic College, Principal, Governors and staff of

Heath, Lionel, Principal, Mayo School of Art

Husain, The Hon'ble Mian Muhammad Fazli, Khan Bahadur, BAR.-AT-LAW, Advocate, Chief Court, Fellow, Punjab University, and Additional Member, Punjab Legislative Council

Khan, The Hon'ble Mr. Haq Nawaz, Fellow of the Punjab University

Martinet, Henry, M A, Principal and Professor of English Literature and Economics, Islamia College, and Fellow, Punjab University, and staff, Islamia College

Maynard, The Hon'ble Mr H J, C S I, I C S, M A, Financial Commissioner to the Government of the Punjab and Vice-Chancellor, Punjab University

Rami, Rai Bahadur Lala Ruchi

Richey, The Hon'ble Mr J A, M A, Director of Public Instruction, the Punjab, Fellow, Punjab University, and Additional Member, Punjab Legislative Council

Shafi, The Hon'ble Mian Muhammad, Khan Bahadur, Additional Member, Imperial Legislative Council.

Stephenson, Lieutenant-Colonel J, D Sc, M B, F R C S, I M S, Principal, Government College, and Fellow, Punjab University

Sutherland, Lt.-Col. D W, and staff of Medical College

Tydeman, E, B A, Head Master, Central Model High School, and Fellow, Calcutta University

Western, Miss M P, Honorary Secretary, Queen Mary College

Woolner, A C, M A, Registrar, and Fellow, Punjab University

Wyatt, H G, M A, Principal, Central Training College.

The United Provinces.

Agra.

Davies, Rev. Canon A W, M A, Church Missionary Society, Principal of St. John's College.

The United Provinces—*contd*

Agra—contd.

Jones, T. Cuthbertson, B A., Principal and Professor of English Literature, Agra College, and Fellow, Allahabad University.

Khan, Munshi Hire, Khan Bahadur, District Engineer

Molony, E A., I C S , Commissioner, Agra Division

Aligarh.

Muhammadan Anglo-Oriental College, Trustees of.

Muhammadan Anglo-Oriental College, staff of :—

Auchterlonie, D , M A , Professor of Philosophy and Tutor.

Krall, H , B A , B Sc , Professor of Chemistry and Tutor

Mohammed, Dr Wali, M A , Ph D , Professor of Physics and Tutor, and Fellow, Allahabad University

Purves, S O , M A , Professor of English and Tutor

Rahman, A Fazlur, B A , Professor of History and Tutor

Reynell, D , M A , B C L , Professor of English and Tutor

Sharif, M. M

Towle, J H , M A Principal, and Fellow, Allahabad University

Allahabad

Ahmad, Syed Ibne, Bar-at-Law, Secretary, Muhammadan Boarding.

Bembower, William, M Sc., Professor of Horticulture, Allahabad Agricultural Institute

Cole, J. W., Registrar, Allahabad University.

Daniels, S R , J P , I C S , Legal Remembrancer, High Court, United Provinces, and Additional Member, United Provinces Legislative Council

de la Fosse, The Hon'ble Mr C F , M A , Director of Public Instruction, the United Provinces, Fellow, Allahabad University, and Additional Member, United Provinces Legislative Council

Janvier, Rev Dr C A R , M A , D D , Principal and Professor of English and Philosophy, Ewing Christian College, and Fellow, Allahabad University

Jevons, H. Stanley, M A , F S S , Professor of Economics, and Fellow, University of Allahabad

Kayasth Pathshala College, The Principal and staff of.

Khan, Sahebzada Dr Said-ud-Zafar, M.B., C.H B., D.T.M., Professor, Medical College

Kirton, W. F., Sessions Judge.

Kureshy, A. M., Professor of Mathematics, and Tutor

Lal, The late Sir Sundar, Kt., C I E., B A , LL.D (Vice-Chancellor, Hindu University).

Mackenzie, A H , M A , B Sc , A R C Sc., Principal, and staff, Government Training College

Nadwatul Ulama, The staff of.

Radford, E. A , M A , Principal and staff, Muir Central College,

The United Provinces—*contd.*

Allahabad—contd.

Weir, J. C., B A., LL D., Bar.-at-Law, Principal, University School of Law.

Williams, L F. Rushbrook, B A., B Litt., F R Hist S., M.R A.S., Fellow of All Souls' College, Oxford, and Professor of Modern Indian History, and Fellow, University of Allahabad

Willmott, The Hon'ble Mr. H. M., Chief Engineer, Roads and Buildings Branch.

Willoughby, R. W. D., B.A., I C S., Registrar, Co-operative Credit Societies, United Provinces.

Youngman, Wm., B Sc., Professor, Canning College.

Benares.

Burrell, P. S., Principal, and staff of Queen's College.

Nag, N C., M A., Professor of Chemistry, Benares Hindu University.

Pim, A. W., I.C S., Magistrate and Collector

Seshadri, P., M A., Vice-Principal and Professor of English, and staff, Benares Hindu University

Cawnpore.

Ahmad, S. F., Engineer, East Indian Railway.

Ali, Safdar, District Engineer

Christ Church College, Douglas, Rev. M. S., Principal and staff of.

Clarke, E. H., Assistant, Muir Mills Company.

Hailey, The Hon'ble Mr H. R. C., Director of Land Records and Agriculture, United Provinces.

Halim, Abdul

Leake, H. M., Principal, Agricultural College and Economic Botanist to the Government of the United Provinces.

McRobert, Sir Alexander.

Dehra Dun.

Forest Research Institute and College.—

Hole, R. S., F.C.H., F.L.S., Forest Botanist.

Marsden, R. E., Silviculturist.

Osmaston, B. B., Conservator of Forests, President, Forest Research Institute and College.

Pearson, R. S., Forest Economist, Imperial Forest College and Research Institute.

Lucknow.

Armour, W. S., Inspector of Schools.

Badley, Rev. T. C., B A., Principal, Christian College.

Beg, The Hon'ble Mr. Samiullah, Additional Member, United Provinces Legislative Council.

Cameron, M. B., M.A., B Sc., Principal, Canning College.

Cornelius, J J., M A., Professor of Philosophy, Christian College.

Gupta, Braj Mohan, M.Sc., Offg. Professor of Chemistry, Canning College.

The United Provinces—*concld*

Lucknow—contd.

Hadi, Mirza Mohammed, B A , Professor of Persian, Christian College.
Heard, N , Principal, School of Art.
Jopling, L. M., Deputy Commissioner.
Kempster, J. W , Principal, Lower grade Training College.
Lister, Major A. E. J., M B.B , B S F R C.S., I M.S , Professor, King George V Medical College.
Megaw, Major J. W. D , M.B , I M.S , Principal, King's Medical College.
Porter, The Hon'ble Mr. Ludovic, I.C.S., Commissioner, Lucknow
Rees, J. C , Colvin Taluqdars' School
Roy, F. T , M A , Assistant Professor of English, Canning College
Roy, M. C , Head Master, C M S High School
Roy, Satyendra Nath, M Sc , B A , Assistant Professor of Physics, Canning College
Sahib, S Nabi Ullah, M A , LL M , BAR.-AT-LAW, Chairman, Lucknow Municipal Board
Sahib, Pandit Sitala Prasad Bajpai, B A , Judge
Sahib, M Zahur Hussain, B A , LL B , Vakil, and Chairman Education Committee, Lucknow Municipal Board
Swinchatt, P., Principal, Technical School, Lucknow
Tiwari, Pandit Sukhdeo, B.A , Assistant Inspector of Schools, Lucknow Division.
Ward, The Hon'ble Dr A W., M.A , Professor, Canning College.

APPENDIX XXXIV.

NOTES ON THE STATISTICAL STATEMENTS PRINTED IN VOLUME XIII.

Statement I

1. *Number of institutions.*—In the session 1917-18 there were 51 institutions[1] affiliated or belonging to the Calcutta University counting the Post-Graduate Classes in Arts and the Post-Graduate Classes in Science, as separate institutions. Of these 2 are in Burma, 3 are in Assam and one is in Cooch Behar and the remaining 45 are in the Bengal Presidency, 23 of these being in Calcutta and 22 in the mufassal Of the 45 institutions in the Bengal Presidency, 13 are maintained by Government, 15 are aided institutions, 3 are maintained by the University, 1 is maintained by a municipal board and the rest (13) are private colleges. The Cooch Behar College is maintained by the Cooch Behar Darbar

In Bengal there are 8 missionary colleges of which 6 are in Calcutta.

The number of the women's colleges is 3, all in Calcutta

There are 12 professional colleges . 2 medical, 1 engineering, 5 training colleges for teachers and 3 law colleges in Bengal There is 1 law college in Assam ; there is no professional college in Burma.

2. *Number of students.*—The total number of students in the Calcutta University including all grades in 1917-18 was 27,290[2] The number was distributed as follows :—engineering 98 ; medicine, 1,205 , training college students, 117 , law, 2,824 , post-graduate students in arts, 1,479 ; post-graduate students in science, 199 , undergraduate students in arts and science in Calcutta colleges, 11,158 (of whom 4,095 were in the B A and B Sc classes) , including undergraduate students in arts and science in the mufassal colleges Cooch Behar, 9,488, of whom 1,737 were in the B.A. and B Sc. classes ; undergraduate students in Assam, 816 , undergraduate students in Burma, 708

3. *Number of students in Calcutta.*—In Calcutta there were altogether 15,853 students of whom 98 belonged to the Civil Engineering College, Sibpur, 1,205 to the two medical colleges, 54 to the training colleges and the remaining 14,496 students to arts, science and law. The number of the graduate students[2] was 3,338 and the number of undergraduate students was 11,158.

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[1] This note is based on the figures supplied for the year 1917-18 and consequently the two newly founded colleges at Faridpur and Khulna are not counted. On the other hand the London Missionary Society's Institution which was closed in July 1918 is included here. The University College of Science and the Palit Laboratories at Ballygunj are not included in the total number of institutions, but are included as separate institutions in the list given in Volume I.

[2] 48 *per cent.* of the post-graduate arts and science students also study law and this number is deducted in calculating the total of all the students.

The number of female students in Calcutta reading in women's colleges was 189. The number of intermediate students in Calcutta was 7,063.

4. *Calculation of the number of the students to be provided for in the reconstituted Teaching University of Calcutta.*—In calculating this number we have made no allowance for the rate of increase, our calculations are based on the figures of 1917-18. Of the 11,158 undergraduate students in arts and science in the Calcutta colleges 7,063 were in the intermediate and 4,095 in the B.A. and B.Sc. classes. We have recommended that the B A and B Sc Courses should ultimately be extended from 2 to 3 years which will increase the number of students by 50 *per cent*, the number of undergraduate students in the reconstituted University of Calcutta will therefore be 6,142. If we add the post-graduate students in arts and science, and the students in law, medicine, engineering and teaching, we obtain a total of 10,837 students.

b Number of students in the Mufassal Colleges after the separation of the Intermediate Colleges.—The number of students in the mufassal colleges, excluding Dacca, and by adding an extra year will be 2,605 This has been arrived at by increasing the number of students in the B A and B Sc. classes by 50 *per cent.* on account of the extension of the courses from 2 to 3 years

Statement II.

5. *Rejected or 'failed' candidates*—We have discussed in Chapters XVII, paras. 101-102, and XL, para. 34, the question whether the rejected candidates should be compelled to go through the whole course again. In this connexion it is interesting to note that 1,400 students rejoined the fourth year class after failing in the B A examination and 2,545 students rejoined the second year class after their failure in the intermediate examination. The largest numbers of rejected candidates are in Vidyasagar College, 669, Ripon College, 435, Bangabasi College, 394, and City College, 382. If candidates rejected at the B A. examination were entirely exempted from attendance, the number of the undergraduate students in Calcutta would be diminished by 925.

6. *Number of students to be provided for in the first year class of the proposed Intermediate Colleges*—The number of the students who joined the first year course of the Bengal colleges in 1917-18 was 6,634, excluding medicine and engineering. The number of students who passed the matriculation examination from the high schools of Bengal in 1916-17 was 8,349 In the year 1917-18, 79·4 *per cent.* of the students who passed the matriculation examination continued their studies in the intermediate classes We may safely conclude that a little over 75 *per cent* of the students who pass the matriculation or 'high school' examination will join the first year course of an intermediate college.[1] (Statements I and II)

[1] An independent calculation of this figure based on the number of candidates in five successive years yielded a result of a little over 75 *per cent.* In our calculation of the number of students for Intermediate Colleges we have assumed that 78 *per cent* of the successful candidates in the matriculation will join the Intermediate—*Vide* Appendix XXV above

Statement III.

7. *Distribution of students according to locality.*—Statement III which summarises the distribution of students according to their locality, indicates the migratory nature of the Bengal students. A little less than half the number of the students in nearly every college come from other districts The largest number of students come from Calcutta and its suburbs which contribute a total of 3,453. Dacca district contributes 2,968 students and Mymensingh district contributes 1,481 closely followed by Faridpur district with 1,472. In our scheme for the distribution of intermediate colleges,[1] we have considered the number of students who passed the matriculation examination of 1918 from the various districts as well as the number of the students drawn from each locality as indicated in Statement III.

Statement IV.

8. *Muslim students.*—The total number of Muslim students in all the colleges of the Calcutta University was 2,683, *i e.*, 9 5 *per cent.* of the total. The number in the professional and arts colleges is as follows .—

Courses	Number of Muslim students.	Ratio of the Muslim students to the total number expressed as a percentage.
Engineering	4	4 0
Medicine	47	3·9
Law	198	7 0
Teaching	23	19 7
Post-graduate and undergraduate 'arts' colleges	2,411	9 9
TOTAL	2,683	9 5

The percentage of the Muslim population is 52·7.

Statement V.

9. *Residence of students.*—The figures supplied to us by the principals of the colleges show that 6,585 students reside with their parents, 11,988 with approved guardians, 5,000 in hostels, 403 in non-collegiate hostels, 2,556 in

[1] See Appendix XXV of this Volume.

attached messes[1] and 1,750 in unattached messes.[2] Not a single student is entered in the column of 'unapproved guardians' and only 9 are shown as residing in unrecognised messes. These figures do not appear to be altogether accurate; it seems clear that the terms have been interpreted in different ways by different colleges. (See Report, Chapters XIX and XXXIX.)

10. *Hostel accommodation in Calcutta.*—In the Calcutta colleges there were in 1917-18 altogether 15,799 students (undergraduate and post-graduate in arts and science, law, engineering and medicine). The total available hostel accommodation[3] was as follows —

College or Hostel	Students
Scottish Churches College	224
St Xavier's College	60
St Paul's Cathedral Mission College	165
Vidyasagar College (late Metropolitan Institution)	194
Ripon College	139
Bangabasi College	194
City College	194
Hardinge Law Hostel for Hindu students	174
Elliot Hostel	45
Baker Hostel	196
Taylor Hostel	73
Carmichael Hostel	196
Eden Hostel	254
Medical College Hostel	20
Y. M. C. A. Hostel	79
Oxford Mission Hostel	50
TOTAL	2,257

In the collegiate and non-collegiate hostels there is a total hostel accommodation for 2,257 students in Calcutta

11 *Hostel accommodation which should be provided in the reconstituted University of Calcutta.*—In the reconstituted University there will be according to our figures about 6,142 undergraduates in arts and science It is difficult to estimate the number of graduate students, but taking the present figure the number is 3,338 (excluding those taking up teaching courses) Hostel accommodation is provided for engineering students in the Civil Engineering College but no accommodation is provided for medical students The total number of students in arts, science, law and medicine will be 10,685 The number of students who reside with their parents and *bonâ fide* guardians is about 40 *per cent* of this total. The number of students for whom hostel accommodation will be required in Calcutta will

[1] For the definition of attached, unattached and non-collegiate hostels, see Chapter XIX on student life.

[2] See Statements V (*a*) and (*b*).

[3] These figures also include newly built hostels which were not occupied in 1917-18

therefore be 60 *per cent.* of the total number or 6,411,[1] for 2,257 of whom hostel accommodation is available at present Additional hostel accommodation will therefore be required for 4,154[1] students.

It has already been stated in Chapter XIX the living in unattached messes is unsatisfactory, but that the attached messes, which are really miniature hostels, should be continued and gradually replaced by hostels. The number of the students now residing in the attached messes of Calcutta is 2,556. Hostel accommodation will therefore be immediately required in Calcutta for (4,154—2,556) or 1,598 students [1]

12. *Residence of students outside Calcutta and Dacca.*—The number of the B A. and B Sc. students in the mufassal colleges of Bengal excluding Dacca and Cooch Behar is 1,737. This number will be increased by 50 *per cent.* when the B A. and B Sc courses are extended from 2 to 3 years. Assuming that 40 *per cent* of the students would reside with their parents and *bonâ fide* guardians, we should require hostel accommodation for 1,563 students in the mufassal colleges.

Increased hostel accommodation will be required in the 'university colleges' and the accommodation now available in some of the mufassal colleges will be used by the students of the intermediate colleges

13 The hostel accommodation required in the mufassal must be estimated separately for each town in which the college is situated

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[1] This figure is calculated on the assumption that rejected candidates will continue to read in colleges If B A candidates who fail in the examination are not compelled to attend the colleges again, these numbers will be reduced by 555 This number is obtained by taking 60 *per cent* of the failed candidates (925) which is the proportion of the candidates who reside in hostels'

Hostel accommodation required in the mufassal

Name of College	Town in which it is situated	Total No of B A and B Sc students	Estimate of total No of students in the reconstituted University	Total hostel accommodation required (*a*)	Hostel accommodation now available	New accommodation required
Ananda Mohan College	Mymensingh	142	213	128	178	*Nil*
Broja Mohan College	Barisal	185	277	166	48	118
Carmichael College	Rangpur	115	172	103	162	*Nil*
Chittagong College	Chittagong	106	159	95	58	37
Hindu Academy	Daulatpur	99	148	88	337	*Nil*
Hooghly College	Chinsura	74	111	67	66	1
Krishnagar College	Krishnagar	51	76	46	81	*Nil*
Krishnath College	Berhampur	485	727	436	663	*Nil*
Rajshahi College	Rajshahi	307	460	276	144	132
Serampore College	Serampore	80	120	72	100	*Nil*
Victoria College	Comilla	(*b*)	(*b*)		48	.
Wesleyan Mission College	Bankura	93	140	84	88	*Nil*

(*a*) The accommodation required for students in the two classes in the intermediate stage is not taken into consideration

(*b*) As the college was not affiliated for the B A. course in 1917-18, figures are not available

Statement VI.

14. *Teaching staff.*—The particulars of the teaching staffs of the various colleges are given in Statement VI The following table shows the strength of the staff, the average salary of the teachers, including and excluding the principals, and also the number of students per teacher in each of the colleges affiliated to the University of Calcutta —

Salaries and other details regarding the teaching staff

Name of college	Town in which it is situated	No of teachers	Total of monthly salaries	Average salary per month including the principal	Average salary per month excluding the principal	No of students	No of students per teacher	Remarks
I Government Colleges								
1 Bethune College	Calcutta	10	2,870	287	250	89	8 9	
2 Chittagong College	Chittagong	17	3,050	179 4	159 37	328	19 3	
3. Civil Engineering College	Sibpur	23	9,490	412 6	399 5	98	4 3(*a*)	(*a*) This figure taken by itself is very misleading as there are a large number of students reading in the college diploma and other classes
4 Cotton College	Gauhati	23	7,478	325 1	296 7	359	15 6	
5 Dacca College	Dacca	37	11,685	315 8	296 8	995	26 9	
6 Dacca Law College	Do	3	1,150	(*b*)	383 3	255	85 0	(*b*) The Principal of Dacca College is *ex-officio* Principal of Dacca Law College but is not included in the staff in this table.
7 Dacca Training College	Do	8	1 521	190 1	117 4	63	7 9	
8 David Hare Training College	Calcutta	6	740	148 0(*c*)	110 4(*c*)	28	4 7	(*c*) The honorarium of one professor is not included in the average salary.

9	Earle Law College	Gauhati	4	1,100	275 0	200	55	13 8	
10	Hooghly College	Chinsura	14	3,400	242 8	173 0	249	17 8	
11	Krishnagar College	Krishnagar	15	4,000	266 6	255	243(*d*)	16 2	(*d*) There are in addition to these 54 military pupils.
12	Medical College of Bengal (Calcutta Medical College)	Calcutta	34	20,470	602 0	565 7	1,041	30 6	
13	Murarichand College	Sylhet	17	4 100	241 2	212 5	462	27 2	
14	Presidency College	Calcutta	94	18,200	337 0	324 5	1,036	19 5	
15	Rajshahi College	Rajshahi	27	6,125	226 9	212 5	779	28 8	
16	Rangoon College	Rangoon	29(*e*)	10,250	353 4	321 4	583	20 1	(*e*) Two professors on military duty are not counted for pay or work
17	Sanskrit College	Calcutta	15	2,800	186 6	171 4	200	13 3	
II	INSTITUTIONS UNDER THE UNIVERSITY								
18	University Law College	Calcutta	60	12,950	215 8	202 5	2,180	36 3	
19	University Post-Graduate Classes in Arts	Do	103	24,450		237 3	1,400	13 6	
20	University Post-Graduate Classes in Science.	Do	39	6,480		166 1	183	4 7	

Salaries and other details regarding the teaching staff—contd.

Name of college	Town in which it is situated	No of teachers.	Total of monthly salaries	Average salary per month including the principal	Average salary per month excluding the principal	No of students	No. of students per teacher	Remarks.
III. Institutions in Calcutta under Private Indian Management								
(a) Aided.								
21 Belgachia Medical College	Cossipore	18(*f*)	1,902		105 6	164	9 1	(*f*) The strength of the staff is 18 excluding the principal.
(b) Unaided								
22. Bangabasi College	Calcutta	32	4,830	150·9	133 2	1,431	44 7	
23. Central College	Do	10	840(*g*)		105	642	64 2	(*g*) The principal's pay is not included in total salary bill of the college; nor is the honorarium of Rs 20 paid to two members.
24 City College	Do	18(*h*)	5,590	151 0	138 6	1,684	44 3	(*h*) One professor is honorary worker and is not counted for pay average.
25. Ripon College	Do	38	5,700	150	141 2	1,881	49 5	
26. Ripon Law College	Do	11	1,815	165	146 5	374	34	

27 South Subarban College .	Bhowanipur .	16	[2,050	1,267 5	120]	537	33 5
28. Vidyasagar College (late Metropolitan Institution)	Calcutta .	34	7,365	21 6	202	1,805	53 0
IV INSTITUTIONS IN CALCUTTA UNDER MISSIONARY MANAGEMENT.							
(a) *Aided*							
29 Diocesan College for Girls	Calcutta	11	745(*i*)		74 5	76	7
30. London Missionary Society's College	Bhowanipur .	6	900(*j*)	150(*j*)	90 (*j*)	16	2 7
31. Scottish Churches College	Calcutta	32	3,760(*k*)		144 6(*k*)	1,142(*k*)	35 7
32. St Paul's Cathedral Mission College	Do	14	1,578(*k*)		143 4(*k*)	238(*k*)	17
33. St. Xavier's College .	Do .	19	790(*k*)		79 0(*k*)	701(*k*)	36 8
(b) *Unaided*							
34. Loreto House . .	Do	7				22	3 1
V. INSTITUTIONS OUTSIDE CALCUTTA UNDER PRIVATE INDIAN MANAGEMENT							
(a) *Aided.*							
35. Ananda Mohan College	Mymensingh .	20	2,897	144 8	131 8	607	30·3
36. Broja Mohan College	Barisal . .	17(*l*)	2,220	138 7	125 3	630	37 1

(*i*) The principal's pay is not included in the salary total or average

(*j*) The figures given here will not hold good for all months.

(*k*) Only the pay of the Indian members of the staff is given

(*l*) One professor is honorary and is not counted in calculating the average salary.

Salaries and other details regarding the teaching staff—concld.

Name of college	Town in which it is situated	No of teachers	Total of monthly salaries	Average salary per month including the principal	Average salary per month excluding the principal	No of students	No of students per teacher	Remarks
V Institutions outside Calcutta under private Indian Management—contd								
37 Edward College .	Pabna	12	1,450	120 8	109 0	398	33 2	
38. Hindu Academy . .	Daulatpur	17(*m*)	1,460	91 2	89 3	489	28 8	(*m*) The Acharya (included in the number of teachers) is an honorary worker and is not counted for pay average 2 posts were vacant at the time when the returns were made to us.
39. Jagannath College	Dacca	21	3,175	151 2	131 2	843	40 1	
40. Victoria College	Comilla	10	1,965	196 5		604	60 4	
41. Victoria College	Narail .	7	740	105 5	81 6	161	23 0	
(*b*) *Unaided*								
42 Burdwan Raj College .	Burdwan .	6	805	134 2	101 0	171	28 5	

43 Carmichael College .	Rangpur .	15	2,950(*n*)	210 7(*n*)	180 8 (*n*)	402	26·6	(*n*) The pay of one of the professors is not given and he is not counted for pay average
44 Krishna Chandra College	Hetampur .	5	635	127 0	115 0	80	16	
45 Krishnath College .	Berhampur	37	5,575	(*o*)	150 7	1,203	32 5	(*o*) The principal's post was vacant
46. Uttarpara College	Uttarpara	8	500(*p*)	62 5(*p*)	54 3 (*p*)	165	20 6	(*p*) One professor who is honorary is not counted for pay average.
VI Aided Institutions outside Calcutta under Missionary Management								
47 Baptist College . .	Rangoon	16	4,192	262 6	253 8	125	7 9	
48 Serampore College	Serampore	19	1,185(*q*)		107 7 (*q*)	240	12 5	(*q*) Only the pay of the Indian staff is given.
49 Wesleyan College . .	Bankura	14	1,260(*q*)		114 5 (*q*)	380	27 1	
VII Miscellaneous								
50 Midnapore College .	Midnapore	10(*r*)	1,410	141	123 3	210	21	(*r*) One professor on leave included for pay, not for work
51. Victoria College .	Cooch Behar	14	2,245	160 3	142	401	28 6	

Statement VII.

15 *Conditions of service in non-Government colleges.*—It will be seen that in non-Government colleges there is no security of tenure in the legal sense, although in many colleges the position of the teachers may be regarded as reasonably assured, in others it is precarious We have recommended in Chapter XXXIV that teachers should be engaged in accordance with the terms of a legal contract

16 *Superannuation schemes* —There are already superannuation schemes or provident funds in some colleges We have recommended in Chapter XXXIV that the practice should be made universal

Statement VIII

17. *List of publications of members of the teaching staffs, 1913-17* —This list has been included in the statistics in order to furnish an indication of the amount and nature of the original work now being carried on in the University and its colleges

Statements IX-A and IX-B.

18 *Number of working days in the year* —The number of working days in the year varies, not only from college to college but from class to class in a remarkable manner The session 1917-18 was disturbed for first year students owing to the postponement of the matriculation and this may have given rise to some of the irregularities shown in the table But the following figures for the second year classes in the different faculties illustrate the difference in the working years of the different colleges

Second year	Maximum number of working days	Minimum number of working days
Arts	198	78
Science	198	48
Law	200	157
Medicine (*a*)	194	
Engineering (*b*)	164	
Teaching	195	108

(*a*) In the year 1917-18, Belgachia Medical College had no second year class

(*b*) There is only one engineering college in Bengal

Statement X.

19. *Periods which elapse between the first day of the session in the first and third years and the actual beginning of the teaching work for students in those years, respectively* —The session 1916-17 was exceptional owing to the postponement of the matriculation examination But this postponement did not affect the work of the third year The delay in beginning work in certain colleges appears to be due to the time taken in registering students Taking the third year only, we find that the delay in beginning work amounted to as much as 6 weeks in some instances, while other colleges found it practicable to begin work immediately or almost immediately after the commencement of term Long delays involve a grave waste of the students' time.

Statement XI

This statement shows the non-University courses offered by the colleges of Calcutta University Some of the colleges do offer some subjects of study which belong to this category but they are mostly religious in character or else such as are necessary for certain specific, though non-University, examinations, as Pleadership or State Medical Faculty examinations A college or two provided for lectures in subjects like physical education or hygiene

Statement XII

In the great majority of western universities the classes are attended not only by persons following a regular degree course but by considerable numbers of other persons who desire to attend them for various purposes The practice of allowing persons other than examination candidates to attend university courses is very rare in India

NAME INDEX.

NOTE —*Roman figures refer to volumes and Arabic figures to pages*

A

Abdullah, Shams-ul-ulama Mufti Muhammad · University and madrassah students, v 66

Abdurrahman, Dr admission to university, i 251, relation between school and college education, i 310, examination system, ii 207, 210, 341, site of University, ii 370, recruitment for public service, iii 284.

Acharya, Dr Kedareswar mufassal universities, i 380

Ahmed, Sir Syed western education for Musalmans, i 145, ii 115, 315

Ahmed, Aftabuddin secondary education, i. 203

Ahmed, Khan Bahadur Maulvi Hemayetuddin educational facilities, i, 200

Ahmed, Shams ul-ulama Kamaluddin English in senior madrassahs, ii 122

Ahmed, Maulvi Khabiruddin physical test, i 273, medium of instruction, i 282, ii 277, new universities, iv. 136

Ahmed, Maulvi Tassaduq matriculation standard, i 255, intermediate education, i 334, 348, 392, medium of instruction, ii 276, v 36, light reading, ii 302, v 45

Ahsanullah, Maulvi undenominational hostels, i 178, correlation of geography and history, i 269, medium of examination, i 280, ii 275, 285, 302, recognition of schools, i 303

Aiyer, Sir P S Sivaswamy *see under* Sivaswamy Aiyer

Ali, Altaf communal representation, i 185, matriculation standard, i 255, technology, iii 179

Ali, Ameer Mahammadan education, i 145, evidence before Indian Education Commission, 1882, ii 114, 115

Ali, Mohammed degrees in Islamic studies, iv 181

Ali, Nawab Nasirul Mamalek, Mirza, Shujaat medium of instruction, ii 276

Ali, Saiyad Muhsin 'Bengal University,' iv 342

Alum, Sahebzadah Mohamed Sultan. Board of Education, iii 256

Alum, Maulvi Abdul Quasim Mohammad Nurul Sahib secular education, ii 356

Animananda, Rewachand Boys' Own Home, i 231—237

Annandale, Dr. N. Calcutta and zoological study, ii 370, university and technology, iii 176

Archbold, W A J communal representation, i 183, medium of instruction, ii 250, Dacca University, iv 234

Arnold, Mathew · State and education, i. 94

Aziz, Maulvi Abdul medium of instruction, ii 276, religious teaching, ii 366, site of University, ii 372

B

Bagchi, Dr Haridas medium of instruction, ii 266

Banerjea, Hariprosanna university education, i 357

Banerjea, J R alternative questions, i 278, ii 165, domination of examinations, ii 144

Banerjea, Dr Pramathanath communal bias in courses, i 178, marking of papers, i 277, medium of instruction, ii 226

Banerjea, Surendranath, The Hon'ble Mr ancient endowments and education, i 364, v 256, university and Bengal Government, iii 229

Banerjea, Surendra Nath (of Ripon College) · security of tenure, i 376

Banerjeea, Gauranganath manual training, i 272, history of fine arts, ii 217, Government and university, iii 235-236

Banerjee, Sir Goroo Dass. communal representation, i 179, school education, i 198, matriculation course, i 256, 268, teaching of English and grammar, i 261, ii 300, matriculation age limit, i 288, the university and schools, i 312, 313, second-grade college, i 344, Libraries, i 408, 409, the zanana, ii 5, marking of papers, ii 168, 173, compartmental system, ii 181, 183, medium of instruction, ii 288, v 38, text books, ii 309, student messes, ii 326, western educational system, ii. 366, iv 268, Calcutta as a seat of learning, ii 369, 370, 378, indigenous systems of medicine, iii 58, caste, iii 145, 161, senate, iii 189, 190, 195, powers of disaffiliation, iii 215, residential university, iv 146, 147, agricultural education, iv 189

Banerjee, Jaygopal system of marking, ii, 169, non examinational subjects, ii 215, history, ii 289, compulsory English, ii 308, student corporate life, ii 350, site of university, ii 378, 379

Banerjee, Rai Kumudini Kanta, Bahadur matriculation standard, i 253, non-examination subjects, i 276; domination of examinations, ii 146, 'notes,' ii 150, home influence, ii 380; recruitment to public service, iii. 281.

Banerjee, M. N : communal representation, i 180, history, ii 289, training of English teachers, ii 298, health, ii 342, vernacular medical schools, iii 55, 56, 57, v 115, Belgachia Medical College, iii 71

Banerjee, Miss Marie Board of Women's Education, ii 35

Banerjee, Muraly Dhar compartmental system, i 277

Banerjee, Ravaneswar teachers and examinerships, ii 194, European teachers in schools, ii 298

Banerjee, Sasi Sekhar : communal representation, i 180, medium of instruction, ii 266, discipline, ii 363, caste and industries, iii 161

Banerjee, Sudhansukumar school final examination, i 310, site of university, ii 378, caste and industrial organisation, iii 162

Banerjee, Upendra Nath religious instruction, i 273, alternative questions, i 278, matriculation age limit, i. 291.

Banerjee, Manmathanath compartmental system, ii 183, medium of instruction, ii 264, student environment, ii 358, indigenous systems of medicine, iii 58, university and technology, iii 184

Banerji, Umacharan course work and examinations, i 275, hostel finance, ii 327, site of university, ii 371

Bardaloi, N C communal representation, i 182

Barrow, J R matriculation standard, i 252, 305, ii 154, financing collegiate education, i 361, English, i 405, ii 300, 304, examination system, ii 143, 153, non-examinational subjects, ii 215, medium of instruction, ii 269, 291, 302, 307, v 28, light reading, v 45

Basu, B K, popular faith in education, i 207

Basu, P communal representation, i 179, technical institutions, iii 168, 186, university and technology, iii 184

Basu, Bhupendranath agricultural education, iii 132

Basu, Satyendra Nath existing system of education, i 357, site of university, ii 380

Bengal Landholders' Association matriculation standard, i 255, aim of secondary education, i 348, site of university, ii 379, technological training, iii 185

Bentinck, Lord William (Government of) medium of instruction, i 35, ii 241; western literature and science, i 84, indigenous medical institutions, iii 50

Bentley, Dr C A Women doctors, ii. 27, site of Civil Engineering College, iii 99, v 132, 133, research laboratories, v 104

Bhaduri, Jyotibhushan high school education, i 303, rigidity of examinations, ii 143, M A and M Sc examinations, ii 191, English literature in schools, ii 304, university and technology, iii 182

Bhandarkar, D R : ancient Indian history and culture, v 54

Bhandarkar, Sir R G communal representation, i 180, medium of instruction, ii 267, site of Bombay University, ii 373, 374, traditional morality, ii 357, 362, higher technological training, iii 179, college teachers and the senate, iii 192, Government and senate, iii 195, deterioration in education, iv 268

Bhattacherjee, Mohini Mohon students and degrees, i 357, isolation of colleges, i 359, choice of subjects, i 385, examination strain, ii 207, importance of English, ii 244, 246, religious faith of students, ii 359, university and public life, ii 378, Government and university, iii 259

Bhattacharya, Jogendranath lack of trained teachers, i 211, teacher and pupil, i 359, medium of instruction, ii 269

Bhattacharya, Krishnachandra, medium of instruction, ii 246.

Bhattacharyya, Boikuntha Nath *viva voce* test, ii 188, English, ii 304, university and technology, iii 185

Bhattacharyya, Dibakar medium of instruction, ii 244

Bhattacharyya, Haridas matriculation course, i 268, 273, 'test' examination, i 277, ii 209, appointment of examiners, i 278, multiplication of intermediate colleges, i 354, university for women, ii 34, roll numbers, ii 205, medium of instruction, ii 262, home influence, ii 357, European professors, ii 365, site of university, ii 378, 379

Bhattacharyya, Mahamahopadhyaya Kahprasanna residential university, ii 379

Bhowal, Govinda Chandra time of matriculation examination, i 277, corporate university life, ii 378, caste and technological training, iii 161

Birdwood, Sir George western education and Indian literature, i 127

Birley, L openings for men trained in agriculture, iii 139

Biss, E E external degrees, ii 221, medium of instruction, ii 250, v 32, location of arts colleges outside Calcutta, ii 376; training of teachers, iii 16, 17, 19, prospects of teachers, iii 20, 22

Biswas, Rai Dinanth, Bahadur medium of instruction, ii 288, 289, v 39, science students and English, ii 309

Biswas, Charu Chandra matriculation age-limit, i 290, matriculation standard, i 334, marking of papers, ii 169, test examinations, ii 209

Biswas, Saratlal communal representation, i 182, *viva voce* test, ii 188

Bompas, C H mufassal universities, ii 382, technological instruction, iii 176, recruitment of clerks, iii 281.

Borooah, Jnanadabhiram history, ii 289, indigenous systems of medicine, iii 58

Bose, Miss, purdah teaching, i 167, scarcity of women teachers, ii 12, girls and matriculation, ii 14

Bose, B C medium of examination, I 281; pay of teachers, II 297, new universities, IV 337.
Bose, Rai Chuni Lal, Bahadur history, II 288
Bose, G C scope of secondary education, I 252, 304, rigidity of examinations, I 381, Daulatpur Hindu Academy, I 434, system of marking, II 167, *viva voce* test, II 188, lecture attendance, II 221, site of university, II 377
Bose, Harakanta matriculation examination, I 253, influence of western education, II 359, recruitment to Government service, III 287
Bose, Sir J C. typical Bengali student, II 361, higher technological training, III 183,
Bose, J M English in matriculation, I 259, II 270, matriculation age-limit, I 293, importance of examination, II 145, external examiners, II 195
Bose, Khudi Ram subordination of teaching to examination, II 144, interval between course and examination, II 211, poverty of students, II 353
Bose, P K agricultural college at Dacca, IV 189
Bose, Radhikanath matriculation course and standard, I 253, 260, 269; lack of able teachers, I 377, medium of instruction, II. 257, 258, grammar study, II 300, text books, II 301, recruitment to Government service, III 287
Bottomley, J M lecture system, I 390
Bourne, Sir Alfred Government educational service, III 273
Brewer, Justice entrance to legal profession, III 41
Brown, Rev A E medium of instruction, II 248
Brown, Arthur site of university, II 377, inter-university relations, III 294, university development, III 304
Brown, Dr Harold indigenous drugs, V 57
Brown, Percy Government School of Art, Calcutta, III 157
Bruhl, Dr P J, roll-numbers, II 204, registrar and staff, III 201, 204
Burdwan, Maharajadhiraj Bahadur of, see under Mahtab, Sir Bijay Chand
Burton, Col Sir Richard educational system in Egypt in the fifteen, I 172
Butler, E J university and agricultural education, III 136, 137
Butler, Sir Harcourt medium of instruction, II 240

C

Calvert, Lt Col J T, I M S III 61, 62, V 99, science teaching for medical students, V 100-102, medical college principalship, V 111
Cameron, Alastair (with Crum, W E) commercial training, III 167, commercial employment, III 170
Cameron, M B English, II 308; Commercial training, III 176, recruitment for public service, III 279, 287
Chaki, Rai Sahib Nritya Gopal representation of interest, I 182
Chakravarti, Brajalal women education, II 5, religious instruction, II 366, university and technology, III 179
Chakravarti, Chinta Haran course work and examination, I 275, medium of instruction, II 287, chair of education, III 18, training of teachers, III 19
Chakravarti, Rai Mon Mohan, Bahadur school final examination, I 276
Chanda, Kamini Kumar matriculation standard, I 256
Chandavarkar, Sir Narayan Education in tols, IV 268
Chatterjee, A C reappearance at examinations, II 187, non examinational subjects, II 215, medium of instruction, II, 267, site of university, II 376, mufassal colleges, IV 339
Chatterjee, Rai Lalitmohon, Bahadur equipment of matriculates, I 253, 269, teaching of Bengali, I 259, education in tols, I 358, women's education, II 31, 33, IV 365; 'keys,' II 154, medium of instruction, II 265, V 29, guardianship, II 332, IV 145, 146, education and character, II. 346, IV 14
Chatterjee, P K study of economics, I 270, training in English, II 305
Chatterjee, Pramathanath examinations as the goal, I 382, medium of instruction, II 269, V 38
Chatterjee, Ramananda secondary education, I 208, 270, examination system, I 277, school final examination, I 310, pay of women teachers, II 9, women's education, II 30, thesis, II 191, non-collegiate students, II 221, medium of instruction, II 256, 296, university and civic life, II 378, 381, agricultural college at Dacca, IV 189
Chatterjee, Santosh Kumar medium of instruction, II 247
Chatterjee, Sris Chandra examination system, II 153, agricultural university at Dacca, IV 189
Chatterjee, Sunit Kumar proportion of teachers and pupils, I 374, alternative questions, II 165, examiners' fees, II 197, site of university, II 381
Chaterji, Mohini Mohon university and technology, III 179
Chatterji, R N medical inspection, II 340, IV 450
Chaubal, Sir Mahadev educational reform, III 270
Chaudhuri, Sir Ashutosh educational ideals, I 285, secondary education, I 348, health, II 342, Bengali student, II 362
Chaudhuri, Kishori Mohan university and technology, III 179
Chaudhury, Brojendra Kishore Roy denominational hostels, I 177, medium of instruction and examination, II 243.

Chaudhury, Nawab Syed Nawabalv, Khan Bahadur Board of Secondary Education, i 153, v 360, accommodation for muslim students, i 158, Muslims and examinerships, i 176, matriculation standard, i 256, libraries, i 410, examination system, ii 143, 203, medium of instruction, ii 274, v 35, site of university, ii 372, 373, recruitment to Government service, iii 281, Dacca University, iv 128, 137, 138
Chelmsford, Lord secondary education, ii 240, students' residence, ii 319
Chirol, Sir Valentine Government educational services, iii 270
Choudhury, Rai Yatindra Nath communal representation, i 180, school inspection, i 316, medium of instruction, ii 257, engineering and technological colleges, ii 376
Chowdhuri, Dhirendranath examination goal, i 383
Clarke, G R geography, i 269, recruitment to Postal Department, iii 278, 279, 280, 289
Cocks, S W medium of instruction, ii 281, university and technology, iii 182
Cotton, J S technical education, iii 153
Covernton, A L Bombay Government and senate, iii 195
Covernton, J G examinations and teaching, ii 144, medium of instruction, ii 289, attractions of public service, iii 276
Cowly, F A A equipment in English, v 136
Coyajee, J C educational reform, i 123, iv 14, school course and examination, i 286, 350, Indian students abroad, iii 309, agricultural experts, iv 109, intermediate courses, iv 115
Crohan, Rev Father F matriculation standard, i 252, 257, admission to university, i 279, Anglo-Indian education, i 321, examination and teaching, ii 146, appointment of examiners, ii 195, medium of instruction, ii 268
Croft, Sir Alfred Calcutta Madrassah, i 168, the second grade college, i 343, teacher and student, ii 348, 349, discipline, ii 356, 365, mechanical and engineering education, iii 82
Crouch, H A 'School of Architecture,' v 151, 152
Crum, W E (see under Cameron, Alastair)
Cullis, Dr C E alternative questions, ii 164, autonomy of university, iii 255, recruitment to public service, iii 287
Cumming, J G Civil Engineering College, iii 89, industries of Bengal, iii 96, 160, technological education, iii 171, Government and university, iii 228
Cunningham, J R communal representation, i 184, intermediate course, i 345, Islamic studies, ii 131, medium of instruction, ii 281, 299, v 37, idustrial employment, iii 165, Dacca University, iv 137, undergraduate period, iv 138, standard of examination, v 401
Curzon, Lord secondary education, i 199, agricultural policy, iii 122, State and education, iii 230, 233, v 74.

D

Das, Rai Bhupatinath, Bahadur tutorial system, i 393, science students and English, ii 309
Das, Dr Kedarnath matriculation examination, i 261
Das Gupta, Hem Chandra matriculation vernacular, i 258, library, ii 189, interval between course and examination, ii 211
Das Gupta, Karuna Kanta matriculation, i. 254, 260, 266, v 403
Das Gupta, Surendranath medium of instruction, i 282, 283, ii 256, higher education, i 363, examination as the goal, i 382, ii 146, 147, the "able" student, i 393, site of university, ii 379, Government and university, iii 256
Datta, A C examination and teaching, ii 143, technological university, iii 183
Datta, Bibhutibhusen medium of instruction, ii 244, cost of education, ii 342
Datta, Birendra Kumar medium of instruction, ii 245
De, Har Mohan matriculation age-limit, i 292
De, Satischandra notes, ii 150
De, Sushil Kumar geography and history, i 270, mother tongue, i 331, attendance at lectures, i 390, medium of instruction, ii 255
De la Fosse, C F Director of Public Instruction, iii 244
Deb, Onauthnath endowments, ii 74, 75, iii 46
Dewey, John manual training, i 272
Dey, Dr B B rigidity of examinations, ii 143, English in school, ii 304
Dey, Baroda Prosaud university and technology, iii 184
Dey, N N education of girls, i 137, school period, i 349
Duke, W V examiners' fees, ii 197
Dunn, S G denominational universities, i 183, medium of instruction, ii 295, study of English, ii 304, v 42
Dunn, T O D matriculation standard, i 255, recognition of schools, i 307, medium of instruction, ii 285, 288, English literature in schools, ii 305, v 43
Dunnliff, Horace B M A and M Sc degrees, v 421
Dutt, Bamapada university and technology, iii 179
Dutt, P N employment for middle classes, iii 163
Dutt, Rebati Raman Religious instruction, i 273, district educational council, i. 316
Dutta, Bidhu Bhusan rigidity of examinations, ii 143, study of English, ii 304
Dutta, Rai Promode Chandra, Bahadur school work, i 261, teachers and examinerships, ii 195, Presidency College, ii 376, professors and fellowships, iii 193
Dutta, Rabindra Mohan women's education, ii 1, 6, Indian games, ii 343, narrowness of training, ii 346

E

Earle, Sir Archdale Muslim education, i 168, 170, ii 117, 121, Madrassah course, ii 118, 120; Urdu, ii 120, Director of Public Instruction, iii. 245

F

Fawcus, G E technological education, iii 177, Director of Public Instruction, iii 244
Finucane, M Civil Engineering College, iii 85
Fisher, H A L Government educational service, iii 270
Forrester, Rev J C Government service, ii 177, history, ii 289

G

Ganguli, Surendra Mohan teaching, ii 151, non-examinational subjects, ii 215, English grammar, ii 300
Ganguli, Syamacharan Cramming, ii 167, text-books, ii 301
Geddes, Patrick narrowness of training, i 210, ii 346, examination system, i 275, ii 353, thesis, ii 188, site of university, ii 382, technological education, iii 183, Dacca University, iv 170
Ghosa, Pratapchandra women's education, ii 31
Ghosal, D health, ii 340, iv 450
Ghose, Rai Debendra Chunder, Bahadu site of university, ii 381
Ghosh, Jogendra Chandra comparative Indian law, ii 75, iii 45
Ghose, Sir Rash Behary Dacca University, i 151, iv 122, English in matriculation, i 261, matriculation age-limit, i 290, research, ii 74, technical education, ii 78, iii 159, v 288, 377, examinations, ii. 215, hostel superintendents, ii 330, site of university, ii 380
Ghosh, Bimal Chandra, attendance at lectures, i. 390, appointment of examiners, ii 195, examination strain, ii 207, 341, test examinations, ii 209, science students and English, ii 309, site of university, ii 376, medical course, iii 63
Ghosh, Devaprasad English grammar, ii 301, mufassal colleges, ii 382, Government and university, iii 255
Ghosh, Rai Hari Nath, Bahadur women's education, ii 8, history, ii 289
Ghosh, Dr Jajneswar matriculation course, i 267, present education system, i 389, cram, ii 152, medium of instruction, ii 266
Ghosh, Jnanchandra women's university, ii. 34, English, ii 300
Ghosh, Rai Bahadur Nisi Kanta high schools, i 200, English text books, ii 301, site of university, ii 376
Ghosh, Promoda Ranjan. University and Schools, i 229
Gilchrist, R N communal representation, i 183, admission to university, i 314, post-graduate teaching, ii 59, text-books, ii. 151, teachers and examinerships, ii. 195, 196, medium of instruction, ii. 269; English, ii 304, hostels, ii 326, 329, 336, 338, University development, ii 377
Godley, J C Director of Public Instruction, iii 244, Government educational service, iii 271
Gokhale, G K teachers and senate, iii. 192, western education system, iv 462
Goswami, Rai Sahib Bidhubhusan Bengali, i 259, examination system, ii. 168, appointment of examiners, ii 195
Goswamy, Haridas matriculation standard, i 254, 327, 348, manual training, i 272; present education system, i 357, ii 152, 284, western education and women, ii 6, medium of instruction, ii 300, teacher and student, ii 350
Grant, Charles western system of education, i 32 ii 227
Gray, Dr J Henry examination strain, ii. 207, 340, guardianship, ii 332, games, ii 343, student environment, ii 344, physical education, ii 345
Griffith, W E medium of instruction, i 281, ii 285, training of teachers, iii 17, 19
Guha, Jatindra Chandra matriculation examination, i 314, present system of education, i 357, 388, examination system, ii 143, 153, medium of instruction, ii 258, direct method, ii 299, English grammar, ii 300, technological institutions, iii 179
Guha, Jites Chandra site of university, ii 379
Guha, Rajanikanta matriculation course, i 269, history, ii 289, English grammar, ii 300, site of university, ii 381
Gupta, Amrita Lal appointment of examiners, ii 195
Gupta, Bipin Behari present system of education, i 357, alternative questions, ii 165, marking of papers, ii 169, educational wastage, ii 210
Gupta, B C engineering, iii 105, v 143, 156
Gupta, J N secondary education, i 199, 203, 293, educational control, i 316, agricultural education, iii 139, 146, v 189
Gupta Sen, Dr Narendra Nath pay of teachers, i 375, student activity, ii 347
Gunn, J W matriculation examination, i 254, 267, non-examinational subjects, ii 215, 216, iv 65, v 421
Gurdon, Col P R T Assamese Fellows, iii 194

H

Haldar Dr Hiralal libraries, i 407; medium of instruction, ii 263, election of fellows, iii, 196, Government and university, iii. 255, recruitment to Government service, iii 282, Dacca university, iv 135
Haldar, Umes Chandra school leaving certificate, i 275, matriculation age-limit for girls, ii 14, site of university, ii 377

Halliday, Sir Frederick · madrassah, II 113.
Hamilton, C. J. matriculation examination, I. 286, commercial training, III 169
Hamilton, Sir Daniel agriculture in rural schools, V 189
Haq, Khan Sahib Maulvi Kazi Zahirul recruitment to Government service, III 285
Hardinge, Lord (1844-48) recruitment to Government posts, I 37, 84
Hardinge, Lord (1910-1916) Dacca University, I 150, IV 122, 130, hostel grants, II 319
Hare, David pioneer of western education in India, I 33, 83, II 228, III 52, IV 322
Harley, A H the madrassah, I 170, II 128, 130, 131, V 65, denominational hostels, I 177, divisions in matriculation, I 278, value of examinations, II 145, roll-numbers, II 205, medium of instruction, II 276, V 36, mess management, II 326, site of university, II 376, Government and university, III 256, Islamic degrees, IV 181
Harris, Colonel I M S, III 61
Hastings, Warren Indian laws and literature, I 31, 32, Calcutta Madrassah, I 148, 169, II 82
Hay, Mr Alfred university and technology, III 192
Hazra, Jogendra Nath communal representation, I 183, vernacular teaching, I 259, history, II 289, training in English, II 308
Headland, C science teaching, I 223
Heaton, B engineering education, III 95, 102, Dacca Engineering School, IV 190, Sibpur Engineering College, V 153
Higginbottom, S control of agricultural education, III 242
Hill, Sir Claude agricultural education, III 129, 130, agricultural teachers, III 132, control of agricultural education, III 241
Hoernle, Dr R Calcutta Madrassah, I 168, indigenous system of medicine, V 56
Holland, Rev W E S western education system, I 123-124, hostels, I 178, intermediate students and course, I 329, 351, 353, 384, V 415, existing education system, I 357, II 152, post-graduate teaching, II 59, poverty and examination, II 148, 353, system of marking, II 169, choice of subjects, II 212, 218, medium of instruction, II 248, health, II 340, 363, site of university, II 373, Calcutta matriculation, V 401
Holmes, Rev W H G matriculation standard, I 260, V 403, teaching in schools, II 150, examination strain, II 207, test-examinations, II. 209, medium of instruction, II 286, study of English literature, II. 305, messes, II 323, 325, 327, health, II 340, 342, 343
Hoogewerf, E Serampore Weaving Institute, III 155.156
Hopkinson, Sir Alfred research work, III 297
Hossain, Wahed communal representation, I 186, English in matriculation, I 260, trained teachers, I. 304, applied sciences, III 182
Howard, Mrs G D C agricultural education and university, III 135
Howlett, F M. · agricultural experts, III. 135
Hunter, M, affiliating system, I 381
Hunter, Mark communal needs and university, I 183, English, I 262, II 305, non-examinational subjects, II 216, nomination of fellows, III 196, residential universities, III 306, 307
Hunter, Sir W W private effort in education, I 91, Mussalmans and western education, I 147
Huq, Maulvi A K Fazlul medium of instruction, II 275, 286
Huque, Maulvi Azizul tutorial system, I 391, madrassah and university, II 112
Huque, Kazi Imdadul matriculation standard, I 254, drawing and music, I 273, importance of examination II 152, course-work and examination, II 189, medium of instruction, II 277, V 36, teachers of English, II 297, text books, II 302
Hussain, Fazl-i medium of instruction, II 277
Hussain, Shams ul-ulama Vilayat madrassah and university, II 130, V 66
Hydari, M A N Islamic history, I. 179, communal needs and university, I 186, entrance test, I 274, medium of instruction, I 278, site of university, II 380

I

Ibrahim, Khan Bahadur, Muhammad · roll-numbers, II 203
Imam, Sir Ali communal representation I. 184-185, matriculation standard, I 256, matriculation age-limit, I 290, medium of instruction, II 279, training for industries, III 163, travelling agricultural lectureships, V 188
Indian Association site of university, II 380
Irfan, Maulvi Mohammad matriculation standard, I 261, religious instruction, I 273, medium of instruction, II 275
Irons, Miss M V women's education, I 204, IV 191, matriculation standard, I 255, women teachers, II 12
Islam, Khan Bahadur Aminul denominational hostels, I 177, reformed madrassah, II 128
Ismail, Khan Bahadur Mohammad communal representation, I 185, matriculation examination, I 276, II 154
Iyer, Justice T V Seshagiri *see under* Seshagiri Iyer

J

Jahl, Abdul secondary education, I 304, alternative questions, II 165, medium of instruction, II 277, industrial development, III 164

Jamal, Abdul Karim Abdul Shakur teachers and subjects, III 219
James, H R post-graduate teaching, II 59
Janau Miss A L matriculation course, I 16, women teachers, II 18, higher education and girls, II 21, 23, women's university, II 35, domination of examinations, II 147, 152, medium of instruction, II 250, site of University, II 374
Jenkins, O F study of English, I 403
Jenkins, Walter A attendance at lectures, I 390
Jennings, J G recognition of schools, I 315
Johnston, Rev A B matriculation examination, I 277-278, inter-collegiate lectures, V 387
Johnston, Mrs A B domestic science, II 19-20
Jones, C E W university admission test, I 317, medium of instruction, II 294, English, II 308
Jones, Cuthbertson text-books, II 302, English, II 305, 308, V 43, student messes, II 327, recruitment to Government service, III 282

K

Kadir, A F M Abdul medium of instruction, II 277.
Kar, Sites Chandra site of university, II 379
Karim, Maulvi Abdul madrassah education, I 143, 148, 169, II 127, 131, election of fellows, I 174, university and madrassah, II 133, medium of instruction, II 277, 278, V 35, text-books, II 301-302, training in English, II 310 (f n 3)
Kasimbazar, Maharajah of *See under* Nandy, Maharaja Sir Manindra Chandra
Kerr, J H recruitment to Government service, III 277, 280
Khan, Abdul Hassen medium of instruction, II 277
Khan, H M Ajmal, Haziq-ul-Mulk indigenous systems of medicine, III 59
Khan, Maulvi Mohamed Habibur Rahman communal representation, I 185, medium of instruction, II 276
Khan, Nawab Abdul Latif madrassah education, II 115
Khastgir, Karunamay examination system, II 151, 202, medium of instruction, II 289
Kirkhan, J A Bengali boy scout, I 110
Ko, Taw Sein medium of instruction, II 281
Krishnagar, Maharaja of *See under* Ray, Maharaja Kshaunish Chunder, Bahadur
Kundu, Rai Bejoy Narayan, Bahadur his model form, I 201, history, II 289
Kundu, Purnachandra matriculation standard, I 260, domination of examination, I 388, II 145, recruitment to Government service, II 149, reappearance at examinations, II 187, medium of instruction, II 245

L

Lahiri, Becharam obstacles to progress, III 164
Lahiri, Sarat Kumar research-fellowship in Bengali, II. 73, 103
Langley, G H communities and courses, I 178, communal representation, I 184, Government educational service, IV 154
Lansdowne, Lord election of fellows, III 188
Latif, Syed Abdul, Khan Bahadur medium of instruction, II 275, teaching of English, II 299
Law, Rajah Reshee Case technology and university, III 185
Lukis, Sir Pardey, medical help, III 56, V 116, Belgachia Medical College, III. 72.

M

Macaulay, Lord minute of 1835, I 35, II 109, 229, V 59
MacDonnell, Lord Bengal industrial schools, III 152
Mackenna, J agricultural education, III 128-129, 132, 135
Mackenzie, A H medium of instruction, II 287, pay of teachers, II 297, training of English teachers, II 297, III 13, training in English, II 308, 310 (f n 3); recruitment to Government service, III 285
Mackichan, Dr secondary education, I 347-348, Government and Bombay University, III 195, 272
Macnaghtan, C effect of western education, II 356, teacher and student, IV 457
Mahalanobis, Prasanta Chandra western education and social life, I 124, high school course, I 286, matriculation standard, I 351, mufassal colleges, 380, lecture attendance, I 390, compartmental system, II 180, grammar, II 300, poverty of students, II 353, traditional morality, II 354, site of university, II 377, post-graduate course, IV 251
Mahasai, Rai Kumar Kshitindradeb medium of instruction, II 265, Dacca University, IV 140
Mahtab, Sir Bijay Chand, The Maharajadhiraja Bahadur of Burdwan grammar, II 300, site of university, II 372 373, 380, university and agricultural education, III 146, caste and commerce, III 161, Government and university, III 255
Maitra, Akshay Kumar Bengali, I 259
Maitra, Dr D N social service, I 128
Maitra, Gopal Chandra 'reference,' II 183, delay in publication of results, II 211
Maitra, Heramba Chandra . matriculation age-limit, I 292, recognition of schools, I 311, medium of instruction, II 289, English II 310, effect of Western education, II 359, site of university, II 375
Majumdar, Biraj Mohan site of university, II 380, technical education, III 180
Majumdar, Narendra Kumar: English, II 310

Majumdar, Panchanan · site of university, II. 379
Majumdar, Ramesh Chandra system of marking, II. 174, examiners' fees, II 197, site of university, II 382
Majumdar, Santosh C secondary education and university, I 229
Mallet, Sir Charles Indian students abroad, III 308, 316
Mallik, Dr D N · matriculation standard, I 261, non-examinational subjects, I 275, Dacca University, IV 140
Mann, Dr Harold university and agricultural education, III 133
Marwari Community matriculation standard, I 255, matriculation course, I 270, commercial training, IV 113
Masood, Syed Ross medium of instruction, II 276
Mayhew, A I recruitment to Government service, III 284
Maynard, H J recognition of schools, I 311, recruitment to Government service, III 285, V 236-237
Mazumdar, Amarnath orthdox life, I 124-127, 137-138
Mazumdar, Amvica Charan traditional morality, II 358
McDougall, Miss Eleanor, entrance age, I 293, women's education, II 4, 20, non-examinational subject, II 166, V 421
Meek, D B rigidity of examinations, II 147, 217, university development, IV 248, 342
Milligan, S agricultural education, III 138, 146, V 181-185
Mitra, Chandi C, present university teaching, I 388
Mitra, Rai Mohendra Chandra, Bahadur communal representation, I 182, matriculation science, I 271, women's university, II 34, English literature, II 308, site of university, II 382, indigenous systems of medicine, III 58, Government and university, III 253
Mitra, Raj Narayan research, II 73
Mitter, Provash Chunder education of girls II 12, site of university, II 377
Mohammad, Dr Wali science teaching, I 270, teachers and pupils, II 348, university and technology, III 181, Government and university, III 235, matriculation standard, V 400
Monahan, F J medium of instruction, II 252, 269, recruitment to Government service, III 283, 284
Mookerji, Nritya Lal pay of teachers, I 211
Mukerjee, Adhar Chandra rigidity of examinations, II 215, training in English, II 310
Mukerjee, Dr Adityanath Bengali girls, I, 132, course work and examination, II 190, rigidity of examination, II 215
Mukerjee, Radhakamal defects of present system of education, II 154, site of university, II 382, university and technology, III. 185, recruitment to Government service, III 287
Mukerji, Satish Chandra: training of English teachers, II 297
Mukherjee, B site of university, II. 372; agricultural education, III 144
Mukherjee, Jnanendranath · compartmental system, II 182-183, divisions in examinations, II 202
Mukherji, Dr Girindranath surgery in ancient India, III 48, V 56
Mukerji, Panchanandas communal bias in courses, I 178, physical training, I 210, library, I 410
Mukhopadhyaya, Dr Syamadas site of university, II 372

N

Nag, P N communal representation, I. 182, science teaching, I 271
Naik, K G technological institute, III 168
Nair, Sir Sankaran Government and university, III 230, Dacca University, IV 128 129, indigenous system of medicine, V 106
Nandi, Mathura Kanta school course, I 275, teachers and examinership, I 278, training of English teachers, II 297
Nandy, Maharajah Sir Manindra Chandra, of Kasimbazar communal representation, I 181, research, II 74, site of university, II 380, Ethora Mining School, III 115
Nanjundayya, H V direct method, II 299, English grammar, II 300, training in English, II 310, technical education, III 153
Nataranjan, K women's education, II 1, 2
Nathan, R intermediate course, I 71, reformed madrassahs, I 171, medium of instruction, II 236
Neogi, Dr P school final examination, I 310, examination strain, II 207, medium of instruction, II 261, 295, V 28, 34, technological institute, III 184
Neuberger, Dr indigenous systems of medicine, V 56
Newman, Cardinal university idea, IV 149.
Newman, Lt Col E A R medical education, III 57, Dacca Medical School, III 76, IV 188
Newson, P W Indians and commerce, III 170
North Bengal Zamindar's Association. satisfaction with existing system, I 251

O

Orange, Sir H W · Muslim leaders and education, I 146, department of public instruction and secretariat, III 244.

P

Paranjpye, R P. communal representation, I 181, medium of instruction, II 267, English literature, II 309, V. 42, university and technology, III 179, election of fellows, III. 197

Payne, C F Bengalis and technical education, i 109, architects, v 151
Peacock, Sir Barnes · Bengal: lawyer, iii. 23
Peake, C W · secondary education, i. 305, intermediate classes, i. 351, post-graduate teaching, ii 60
Pedler, Sir Alexander. technical education, iii 154
Pentland, Lord medical systems and science, v. 106
People's Association, Khulna · matriculation standard, i. 255, matriculation course, i. 269; agricultural education, iii 145

R

Rahim, Justice Sir Abdur communal representation, i. 261, rigidity of examination, ii. 215, medium of instruction, ii 279, health site of university, ii 372-373, present system of education, i. 210, ii 346, iv. 14
Rahamn, Hakim Masihur · Unani system, iii 59
Ram, Rai Bahadur Ganga engineering education, v 136
Rama Rayaningar medium of instruction, ii 239
Raman, C V · teachers and senate, iii 193
Ray, Dr. Bidhan Chandra examinations and girls, ii. 22, university and women's colleges, ii 34; English, ii 310
Ray, Rai Biswamber, Bahadur medium of instruction, ii. 289 „English grammar, ii 300
Ray, Kaviraj Jamini Bhushan development of Ayurvedic system, iii 58.
Ray, Joges Chandra: English grammar, ii 300, university development, iv 338
Ray, Maharaj Kshaunish Chandra Bahadur · medium of instruction, ii 271.
Ray, Manmathanath drawing and music, i 273; medium of instruction, ii 259, English grammar, ii. 300, site of university, ii 375
Ray, Sir P C site of university, ii 379; Hindu system of chemistry, v. 55
Ray, Dr P K.: second grade colleges, i 345, Daulatpur Hindu Academy, i 434
Ray, Raja Pramada Nath of Dighapatia matriculation standard, i 255
Ray, Dr Rames Chandra health, i 107, 273, ii. 340, 341, 342, 343, 344, 345, iv 450, messes, ii. 326, 342
Ray, Satis Chandra university autonomy, iii 255, recruitment to Government service, iii. 279, 281.
Rhoda, Sister women education, i 204.
Richardson, T. H.. university and technology, v 156
Richey, J A.: medium of instruction, ii 292, 307, v. 29; training of English teachers, ii 297
Ripon, Lord · i 51
Rogers, Sir Leonard. the senate, iii. 64, i 198, Tropical school of medicine, iii. 65; Calcutta Medical College, iii. 70; science teaching for medical students, v. 103; medical professors, and practice, v. 114.
Ronaldshay, Lord · university reform, iii. 270
Ross, Sir Denison. Calcutta Madrassah, i. 168, English in madrassahs, ii. 119
Ray, Brojendra Kishore importance of examination, ii 147.
Roy, D N site of university, ii. 374
Roy, Hira Lal social service, i 128, 'notes,' ii 150, divisions in examination, ii 202
Roy, Jagadananda. high schools and university, i 229
Roy, Lalit Mohan Agricultural College at Dacca, iv 189
Roy, Nepal Chandra · High schools and university, i 229
Roy Ram Mohan pioneer of western learning in India, i 33, 83, ii 109, 228.
Roy, Rai Sri Nath, Bahadur satisfaction with existing system, i. 251; history, ii. 289, residence, iv 145
Roy Surendra Nath. communal grievances, i 179, secondary education, i 304, 316; Civil Engineering College, iii 94
Rudra, S K importance of examination, ii 144, system of marking, ii 169, Indian students abroad, iii 309
Russel, Charles students residence, ii 317

S

Saha, Meghnad School Courses secondary education, i 243, 267, medium of instruction, ii 259, site of university, ii 381
Sahay, Rai Bahadur Bhagvati English literature, ii 306, university and technology, iii 179, recruitment to Government service, iii. 283
Sapru, Dr Tej Bahadur communal representation, i 181, importance of examination, ii '144, medium of instruction, ii 267, grammar, ii 300, Home influence, ii 359, Government and university, iii. 256, recruitment to Government service, iii 281
Sarbadhikari, Sir Deva Prasad backward classes, i 193, agricultural education, iii. 145, vice chancellor, iii. 200
Sarkar, Akshaykumar matriculation standard, i 260, domination of examination, i 267, statues of teachers, i 377
Sarkar, Miss Ashbati girls' education, i 142
Sarkar, Bejoy Kumar · text-books, ii 212.
Sarkar, Gopal Chandra secondary education, i 199
Sarkar, Kalipada matriculation examination, i 255, education systems, i. 395; study of science, v 421
Sarma, Mr · university developments, iii 304
Sastri, Kokileswar: university development, iv 342
Sastri, Rai Rajendra Chandra, Bahadur. matriculation standard, i 255; alternative questions, i. 278; secondary schools, i 303
Sayied, Maulvi Abdullah Abu: communal representation, i. 186.

Schuster, Dr Arthur · divisions in examination, II. 202
Seal, Dr. Brajendranath features of Bengali student, I 107-108, 115, social service, I 128, II 352, secondary education, I. 198, 256, 257, 267, 272, pay of teachers, I 212, science teaching, I 271, 272, educational gradation, I. 329, lecture system, I. 386, tutorial system, I 391, medium of instruction, II 155, examination problems, II 162, 172, non-examination subjects, II 215-216, IV 65, V 421, training in English, II 260, 299, 310, hostel management, II 326, college hours, II 341, traditional morality, II 358, 360, university area, II. 381; technological education, III. 186; control of university, III. 257, public service, III 289
Segard, Dr C. P. health, I 225, II 345
Sen, Atul Chandra matriculation examination, I. 286, secondary education, I 316, 349; intermediate course, I. 353, site of university, II 372, 375; poverty, III. 164, university and technology, III 184
Sen, Benoy Kumar alternative questions, I 278, II. 164, non examinational subjects, II 215, IV 65, V. 421, pay of teachers, II. 297; training of teachers, II 297, grammar, II 300-301, university development, II 377
Sen, Bimalananda English, I 260, medium of instruction, II 289, teachers of English, II 297
Sen, Rai Boikunt Nath, Bahadur: secondary education, I 202, health, I 273
Sen, Dines Chandra vernacular, II. 73, 103, 106
Sen, Girindra Kumar, commercial education, III 158, 171
Sen, Pran Hari religious instruction, I. 273; recognition of schools, I 304, examination system, II 149, English, II 310.
Sen, R N university and technical education, III 97, V 156
Sen, Raj Mohan matriculation standard, I 256, secondary education, I 329, IV 65, lecture attendance, I 390, tutorial system, V 415, science teaching, V 421
Sen, Dr S K women education, II. 6
Sen, Rai Satis Chandra, Bahadur university commerce, III 179
Sen, Satish Chandra admission to university, I 254, course work, I 278, system of marking, II 169, teachers of English, II 297, text-books, II 302
Sen, Surya Kumar matriculation examination, I 251
Sen Gupta, Dr Nares Chandra communal representation, I 180, educational system, I 285, Board of Education, I 317, pay of teachers, I 377; co-ordination of studies, I 385, II. 218, marking papers, II 169, reappearance at examination, II. 186; library, II. 259, 285, grammar, II. 300; study of English, II 302, education and character, II. 359, site of university, II. 381; university and technology, III. 180; Dacca University, IV 160, 185, mufassal universities, IV. 339, 341.
Sen Gupta, Surendra Mohan: people and education, I. 199.
Senatus of the Scottish Churches College: secondary education, I. 305; domination of examination, II. 146, appearance at examinations, II 184, medium of instruction, II. 285; grammar, II 300; Bengali students, II. 362; technological training, III. 177.
Serampore College, the Principal and Staff: secondary education, I. 305, rigidity of examination, II 146, 168, examiner's fees, II 197, medium of instruction, II. 292; discipline, II. 362, site of university, II. 372
Government and university, III. 236; intermediate colleges, IV. 118; University of Dacca, IV. 144, 147.
Sethi, D. R. · Sabour College students, III. 128
Seshagiri Iyer, Justice T. V. · English, I 263, industrial development, III. 164; recruitment to Government service, III. 281
Sharp, Mr H. Madrassah, I 171; denominational hostels, I 177, communal representation, I 184, matriculation course, I. 268, 272, school-leaving certificate, I 317, private colleges, I 361, 375, college courses, I 381, women education, II. 15, 34; system of marking, II 169, 174; *viva voce* test, II. 188, importance of examination, II. 216; medium of instruction, II 290, V 33, direct method, II. 299; grammar, II. 300; text-books, II 301; economic position in Bengal, III. 164; research, III 178, Government and universities, III. 232 251, 253, 257 recruitment to Government service, III 288, standardising agencies, III. 302; admission to university, IV. 228, university development, IV 342; post-graduate system, V 383; Government Educational Service, III 272
Shastri, Pashupatinath matriculation examination, I 277, health, II 342; education and environment, II. 357
Shastri, Dr Probhu Dutt drawing and music, I 273, oral test, I 277; 'notes,' II 150, thesis, II 191; teachers of English, II 297, grammar, II 300, English, II. 310. university development, IV. 342
Sheth, Pandit Hargovind Das, T.: thesis, II 191
Shirras, G Findlay school leaving certificate, I 317
Shore, Rev T E T grammar, II. 300; residence, II 328, 358; Dacca University, IV 161, 195
Sidgwick, Alfred examination system, II. 162
Sing, Sir Lachmeswar, Maharaja of Durbhanga benefactions for higher studies, I. 365, II. 75
Singh, P. C: medium of instruction, II. 288; English, II. 310
Sinha, Anandakrishana: grammar, II. 300; English, II. 310, V 48
Sinha, Kumar Manindra Chandra, Paikpara Raj: communal representation, I. 182;

school course, I 276, intermediate course, I. 334, teacher of English, II 298
Sinha, Panchanan · teachers, I 211; matriculation examination, I 251; teachers of English, II 297
Sinha, U N medium of instruction, II 289, text-books, II 302
Sircar, Sir Nilratan communal interests, I 181, secondary education, I 255, 348, Bethune College, II 28, university site, II 370, 380, medical education, III 63, 81, university and technology III. 181, university government, III 197
Sivaswamy Aiyer, Sir P S English in matriculation, I 262, course-work and examination, I 276, II 216, medium of instruction, II 226, traditional morality, II 354, site of university, II 380, Government grants, III 255
Slater, Dr Gilbert teachers of English, II 298; grammar, II 300
Sly, Sir Frank agricultural education, III 132, veterinary science, III 151
Sorabji, Miss L secondary education for girls, I 204, II 16, IV 192, medium of instruction, II 267 288, 298, teachers of English, II 297, direct method, II 299
Spring, F J E Sibpur Engineering College, III 8 4
Stark, H A training of teachers, III 18-19
Stone, Mr second grade colleges, I 346
Stursberg, Rev Otto vernacular, I 259
Sudmersen, F W matriculation standard, I 257, domination of examination, II 146, non examinational subjects, II 215, medium of instruction, II 268, 285, English II 310, technology, III 180, Government and university, III 235, inter-university relation, III 299, university development, IV 342, M A, M Sc, degrees, V 421
Suhrawardy, Dr Abdul-al-Mamun Islamic studies, II 139, V 70
Suhrawardy, Dr Hassan course work and examinations health of students, II 341, 190
Suhrawardy, Begum Khajesta Bano training of Muslim women teachers, I 167
Suhrawardy, Z R Zahid communal representation, I 185, alternative questions, II 165
Sutherland, Colonel D W staffing of medical college, III 70, teaching of science to medical students, V 101, 102
Sutton, Rev Hedley backward classes, I 192, students residence, II 332

T

Tagore, Maharajah Sir Jatindra Mohan gift to university, III 45
Tagore, Prasanna Kumar Tagore Law Professorship, III 44
Tagore, Maharajah Sir Prodyot Kumar gift to Law College, III 45.
Tagore, Sir Rabindranath; manual work, I. 107, secondary education and Bolpur School, I 226-229, English, I 244, mother tongue, V 30
Trkabhushana, Mahamahopadhyaya Pramathanath. system of marking, II. 168, 'reference,' II 183, *viva, voce* test, II 187, medium of instruction, II 246, students and new ideas, II 360
Taylor, J Hardy. teaching of dentistry, III 78-80
Tawney, Charles Henry. university and industrial education, I 222
Telang, Justice Kashinath Trimbak primary *vs.* higher education, I 93, western studies, I 239.
Thomson, Dr David direct method, II 299, technological education, III 162, 181, 183
Thomson, Sir J J. Committee on Natural Science in Education. II 175, IV 65, V. 20, 422
Tipple, E F technical education III 186, V 149, recruitment to public service, III 283
Trevelyan, Sir C orientalists *vs* Anglicists, II 228-229, 231, early medical instruction, III 50, vernaculars technical terms, V. 39, aim of English education, V 59
Trivedi, Ramendra Sunder educational system, I 358, II 361, IV 19-21, 23
Turner, F C matriculation standard, I 252, 257, examinations, I 276, wastage at intermediate, I 329, lecture system, I 338, II 213, cost of 'arts college,' I 362, medium of instruction, II 268, 290, English, II 297, university autonomy, III 255, Dacca University, IV 160, 195

U

Urquhart, Rev W S post-graduate system, II 59

V

Vachaspati, Siti Kantha external degrees, II 221, medium of instruction, II 269
Victoria, Sister Mary professional education for women, I 204, II 29, IV 371, secondary education for music, II 20, girls and examinations, II 22-23, women II. 15-16, V 420, suggestions for women's education, II 32-33, IV 365-366, control of women's education, II 34, non-examinational subjects, II 215, medium of instruction, II 268, 286, teachers of English, II 297; affiliation of women's colleges, II. 220.
Vidyabhusana, Mahamahopadhyaya Dr Satis Chandra entrance of qualification, I. 251, Tibetan studies, II. 100.
Vidyasagar, Pandit Iswar Chandra. Metropolitan Institution, I 43, III 28, Saskrit College, II 86
Vredenburg, E music, I 273, site of university, II 380, university and technology, III 175

W

Waheed, Shams-ul-ulama Abu Nasr Islamic studies, i. 179, intermediate course, i. 348, Madras course, ii 126, dominance of examination, ii 143, 151, non-examination subjects, ii 216, medium of instruction, ii 273, v 35, Islamic degrees, iv 181.
Walker, Dr Gilbert T. school course, i. 272, 273, setting of questions, ii 164, 166; course work, ii 189, university and technology, iii 181
Walsh, C P. engineering education, iv. 190
Wathen, G A. English in matriculation course, ii 295
Watkins, Rev Dr C H medium of instruction, ii 268
Watson, Dr E R percentage of passes, v 402
Webb, C. M medium of instruction, ii. 281
West, M P secondary schools, i 224; matriculation standard, i 255, science teaching, i 271, intermediate students, i 335, medium of instruction, ii 251, direct method, ii 299, training in English, ii 310, self-contained college system, v 414
Williams, Rev Garfield communities and courses, i 181, communal representation, i 183, unitary of educational system, i 199, leave before examinations, i 277, secondary education and examination, i 315, intermediate classes, i 352-353, reference, ii 182, health, ii 345, student life in Bengal, ii 353, site of university, ii 371, caste, iii 162, demand for technical education, iii 178, iv 460, Government and university, iii 236-237, matriculation standard, v 400
Williams, L F Rushbrook reform of school system, i 352, isolation of colleges, i 359, recruitment for public services, iii 282
Williams, T T medium of instruction, ii 251, autonomy of Dacca University, iv 160, control of schools, iv 227, intercollegiate lecturing, v 386
Wilkinson, A C L. Indian Mathematical society, iii 296
Willoughby, R W. D. hostels and co-operative system, iv. 448
Wilson, L-Col. R P. Campbell Medical School, iii. 75, v 118
Wood, W G development of Thomason Engineering College, iii 95
Wood, W. H H Arden Anglo-Indian Education, i 321
Woodroffe, Sir John influence of west, i 128; women education, ii 30, traditional morality ii. 359.
Wordsworth, W C: communities and university, i 184, health, i 225, matriculation standard, i 254, 334, elementary science teaching, i 270, control of secondary education, i 306, 314, relation between university and college, i 382, 416, training of women teacher, ii 21, post-graduate system, ii 62, grace marks, ii 174, confidence in university examination, ii 177, non-examinational subjects, ii 215, iv 65, medium of instruction, ii 249, English, ii. 310, student corporate life, ii 350, 352, site of university, ii 381, Government and university, iii 235, recruitment for Government service, iii 281, 284, presidency college, iv 248, 'University of Bengal'. iv 342

Y

Yusuf, Khan Sahib Mohammad religious instruction, i 179, medium of instruction, ii. 276, v 36

Z

Zachariah, K communal representation, i 181, training in geography, i 269, college isolation, i 360, dominance of examination, i 382, ii 143, examination boards, ii 196, 198, rank in examinations, ii 202, recreation, ii 344, student corporate life, ii. 351, site of university, ii 374

SUBJECT INDEX

NOTE —*Roman figures refer to volumes and Arabic figures to page*

A

Aborginese *see under* backward classes
Academic Council (Calcutta University) composition and functions, iv 394-400, v 4
Academic Council (Dacca University) importance, iv 166, composition, iv 220-221
Aeronautics v 286
Affiliating system meaning of, i 47, adoption in India and abandonment in London, i 45-46, early features and results, i 46-49, 63-64, Universities Commission on, i 65 66, reforms after 1904, i 72-73, present position and criticism, i 77-78, iii 213-220, and women's colleges, ii 18-19, recommendations *re* mufassal colleges, iv 353-354
Age limit (for matriculation) history of question, i 287-289, views of senate (1914), i 289-290, criticism, i 287, 290-293, recommendations, iv 60-61
Agra, colleges in i 360
Agricultural colleges *see under* Cawnpore, Coimbatore, Lyallpur, Nagpur, Poona, Pusa and Sabour respectively
Agricultural conferences proceedings, iii 129 135
Agricultural education development of, iii 119 141, relation to university, iii 121, 135 137, 144-149, demonstration farms, iii 138, 143, in Intermediate Colleges, iv. 109-110, in Dacca University, iv 169, 189-190, recommendations in Calcutta University, v 176-191, 286
Agricultural experts employment of, iii 139 143, v 187
Agricultural Research Institute (Pusa) founding, iii 123-124, teaching at, iii 124
Agriculturists and educational development, i 26-27, mixed schools, ii 11
Ananda Mohan College (Mymensingh) Musalmans and, i 164, hostel, ii 322
Anglicists *see under* orientalists
Anglo-Indians definition of, i. 318, educational progress of, i 318 321, urgency of problem, i 321, university education and, i 321-323, 325, secondary education, i 324, commercial education, i. 324-325, oriental languages, i 325, in university bodies, i 325 326, women teachers from, i 326, in School of Art, iii 157, in Dacca University, iv 206
Anthropology in Dacca University, iv, 175; in Calcutta University, iv. 285.
Applied science and technology, faculty: iii 185
Appeals procedure and disposal, iv. 418-419
Appointed Teacher recommendations, iv. 291-294, minority view, v 407, 410
Appointments Bureau iv 417.
Arabic *see under* classics
Archæology in Calcutta University, iv 285
Architectural education recommendations, v 150-153, 286; naval, v 286
Art schools in Bengal iii 157
Artizans classes for, iii 106, 155
Arts, Indian Graphic v 286
Assam colleges in, i 436-437, women students of, ii 17, medium of instruction, ii 280-282, and senate, iii 194, secondary education reform, iv 44, university development, iv 360-363
Assamese in Dacca University, iv 108
Assistant examiners marking by, ii 196-197
Astronomy in Calcutta University, iv 285, v 286
Ayurvedic (and Unani) system early teaching in, ii 82, 85 86, iii 48-51, correspondents on, iii 58-59, Punjab University and, iii 59-60, recommendations, v 55-58, 106

B

"B" classes prospects of, i 221-222
B A (and B Sc) course, duration of at Dacca University, iv, at Calcutta University, iv 256-259
B I (and M I) degrees nomenclature, iv. 181
Backward classes educational progress of, i 188-192, value of education, i 200, residence, i 192-193, general recommendations, i 193-194, vernaculars of, ii 102, Board of Secondary and Intermediate Education, iv 42, Dacca University, iv. 205
Bacteriology in Calcutta University, iv. 285, v 286, and medical education, v. 105, and agricultural education, v 180
Bangabasi College (Calcutta) organisation, i 422-425, residence, ii 321, 333, law, iii 29, failed students in, v 418
Bankura Zilla School i 220
Barristers privileges of, iii. 309
Belgachia Medical College entrance qualification, iii 63, no post-graduate work iii 64, organisation, iii. 71-73, as Constituent College, v. 115.

Benares Hindu University constitution, III 222, teaching staff, III. 295, significance, III 305
Benefactions I 364-365, IV 158; religious and racial test, IV 164
Bengal District Administration Committee political discontent, I 22-23, 120-121, industrial problem, III 96-97, agricultural occupations, III 144
Bengali endowment for, II 73, courses in, III 103-104, in Dacca University, IV 168, 175, chair in, V 285
Bengal Government scholarships of, II 75-76, relation to university, III 227-230, relation to Board of Secondary and Intermediate Education, IV 51-52
Bengali student (boy), characteristics of, I 105-122, influence of West and East on, I 122-128, (girl), capacities of, I 132, environment and discipline, I 133-135, educational aims, I 135-142, health, II 21-23
Bengal Technical Institute III 110
Bengal Veterinary College development of, III 152
Bethune College (Calcutta) origin, II 2, organisation, II 16-21, science teaching, II 28
Bhadralok classes composition, I 28, traditional education, I 28-29, progress in western education, I 29-30, 37-38, 48-50, educational finance, I 364, girls' education, II 13, earning occupation, III 113
Bible as text book, V 44
Bihar women students, II 17, Sanskrit Association, II 94-95
Bio-Chemistry in Dacca University, IV 171, in Calcutta University, IV 286, V 286
Biology Dacca University, IV 169
Board of Mufassal Colleges duration and justification for, IV 342-349, constitution and powers, IV 350, 352-353, 409 413, jurisdiction, IV 408-409, University Colleges, IV 357, residence, IV 446, meetings of, V 273, financial estimate, V 292, 293, minority view, V 372-374
Board of Students' welfare IV 416, 449-455, V 4
Boards of studies (*see also under* faculties) recommendations, IV 221 (Dacca University), IV 404-405 (Calcutta University)
Board of Women's Higher Education need for, IV 370, composition and duties, IV 413-415, finance, V 285
Board, Examinations, in Dacca University, IV 222, Calcutta University, IV 416 417, V. 2-6, finances of, V 285
Board, Muslim Advisory in Dacca University, IV 222, Calcutta University Board, IV 378, 415-416
Board, Residence, Health and Discipline: in Dacca University, IV 222
Board, University Extension IV 418, V 285
Bolpur School (Santiniketan) organisation and aims, I 226-230
Bombay University site of, II 375, government interference, III. 195, 272, development of, III. 297
Botany. Calcutta University, I 398, V. 286, Dacca University, IV 169, 171, 175; and agricultural education, V. 179
Boy's Own Home organisation and working, I 231-235
Boy scout movement success, I 110, 243
British Empire relation between universities in, V 245 251
Burdwan Raj College private effort, I. 364; aim of, I 342
Burma medium of instruction in, II 280-282, educational reform, IV 44-45.
Burma University Universities Commission on, I 66, suggestions, IV 358-360

C

Calcutta Madrassah objects, II 108-109, history, organisation and working, II. 110-113, 115-116, orthodox course, II 124-126, Islamic faculty, II 133-135, contrast with other Madrassahs, II. 138; recommendations, V 65-70
Calcutta Medical College history, III 50 53; entrance qualification, III 62-64, post-graduate work, III 64, organisation and working, III 65, women students, II 27-28, Muslim students in, I 161, proposed chairs for, V 104-109 *passim*, administration and teachers of, V 111-115
Calcutta Technical Night School III 110 111
Calcutta University genesis, I 84 85, Wood's despatch, I 40-41, relation to schools, I 43 294-326, IV 31, 35-37, 73-76, control over colleges, I 72-73, 378-384, 425 426, muslim complaints, I 174-176, jurisdiction of, I 176 177, Anglo-Indians, I 321 322, 325 326, organisation for women's education, II 33-36, post-graduate teaching, and research, II 37-80, rivalry between colleges and, II. 47 48, 59 63 69-71, non collegiate students, II 218-222, IV 275-276, V 21-22, site of, II 368 383, IV 422-434, relation to (*a*) engineering, III 110, V 153-167, (*b*) agriculture III 121, 135-137 144-149 V 185 189 191 (*c*) technology, I 222, III 166 171 174 186, governance and administration in 187-222 (present position), IV 374 421, V 404 405 (recommendations), relation to government, III 223 230, 250-265, V 218-251, criticism of, II 224, compensatory grant, IV 43, co-operation with Dacca, IV 171, organisation as a teaching university, IV 242 330, V 374-388, relation to proposed Mufassal Colleges, IV 331-348, employment of graduates, IV. 460 461, 417, organisation in medicine, V 109-110, proposed relation to government, V 218-251, financial estimate of, V 271 296
Cambridge University Indians in, III 308, 316
Caste and occupations, in 160-163
Cawnpore Agricultural College III. 121, 125-126.

Central College (Calcutta) low level of, i 343; pay average in, i 421
Chancellor: Calcutta University, iii 199, 226-227, (present position), iv 376, 382, v 219, 225-227 (recommendations), Dacca University, iv 210
Chemical industries recommendations, v 194-195, 286, 289
Chinese ii 101, 108, v 286
Chittagong College private munificence, i 364, features of, i 435, future development, iv 340
Church of England Zanana Mission Training School, ii 25
City College provident fund in, i 377, library, i 408, organisation and working, i 422-425, hostel, ii 321, iii 28, failed students of, v 418
Civil Engineering College history and description, iii 82-109, Muslim students, i 160-161, v 153, agricultural department, iii 121, 127, recommendations, v 132-170
Civil Service Commission correspondents on, iii 283-284, recommendations, v 234-235
Class activity *see under* clubs
Classics college provision, i 309-400, 402, v 413, position in secondary education, i 268, 332, recommendations regarding (*a*) high schools, iv 72, (*b*) Intermediate Colleges, iv 105-106, (*c*) Dacca University, iv 168, 175, (*d*) Calcutta University, v 49 70, 278, 286
Class-work and examinations, ii 189 190
Clubs, college Calcutta University, ii 347-348, Dacca University, iv 225
Coimbatore Agricultural College iii 126
Colleges dissatisfaction with teaching in, i 356-359, equipment of, i 360-361, fees in unaided, i 361-362, teacher-pupil ratio, i 365-366, 374, teachers in (*a*) Government colleges, i 365-372, (*b*) missionary colleges, i 372-374, (*c*) private colleges, i 374 378, provident fund, i. 374-377, occasional students, i 378-379, university control, i 378-383, drawbacks of, (*a*) finances, i 361-365, 374, 383, (*b*) ill-paid teachers, i 374-377, 383, (*c*) rigidity of university regulations, i 378-383, 425, (*d*) size of classes, i 384, (*e*) lack of coordination of subjects taught, i 384-385, (*f*) isolation, i 359-360, 394, 397-399, (*g*) intermediate students, v 415-416, lecture system, i 386-390, tutorial system, i 391, and the able student, i 393-397, courses taught, i 397-406, libraries of, i 406-410, tests of efficiency of, i 411-412, contrast between mufassal and Calcutta, i 412-413, 426, organisation and working of men's, i 413-437, organisation and working of women's, ii 16-21, rivalry between university and, ii 47-48, 59-63, and residence of students, ii 331-339, affiliation and disaffiliation of, iii. 214-220, over crowding in, iii 280-281, and suggested teaching university at Calcutta, iv. 242-330, v 274-282, 406-420, classification, iv 406-408
College, administration of separation from school, i. 70, teachers, i. 72, Musalmans, i 164; proprietorship and, i 423-424, of Constituent Colleges, iv 305
Colleges, Constituent privileges and obligations, iv 299-309, 406-407, v 275
Colleges, Incorporated iv 406
Colleges, mufassal university control, i 380, contrast with Calcutta colleges, i 412-413, 426, students of, i 426, organisation and working, i 427-436, post-graduate teaching, ii 56, recommendations, iv 331-363, 407-408, financial estimates of, v 290-292, minority view, v 366
Colleges, Board of Mufassal *see under* Boards
Colleges, Temporarily affiliated status in Calcutta University, iv 309-316, Board of Mufassal Colleges, iv 347-348, 407, minority proposals, v 397, 418-420
Colour Chemistry v 194-195, 286, 289
Columbia University admission rules, ii 166
Commerce, Calcutta School of working of, iii 157-158, university connexion for, iii 168-169
Commercial education Bengalis and commerce, i 24-26, "B" classes, i 221-222, in matriculation course, i 285-286, Anglo-Indians, i 324-325, university and, i 222, in proposed intermediate colleges, iv 112-115, recommendations, v 209-212
Commercial Institute, Government organisation and working, iii 158-158, university connexion for, iii 108-109
Committees Dacca University, iv 215, 222-223, 235, Calcutta University, iv 404-405 (of courses), iv 417 (of university Library and press)
Committee of Reference Dacca University, iv 215, Calcutta University, iv, 388-390
Communal interests (*a*) *general*, correspondents on representation of, i 179-186; limitations of principle of representation, i 187, legislation *re*, iv 380, appeals *re*, iv 418-419, (*b*) *Anglo-Indians* secondary education, i 324, iv 41, in university government, i 325-326, (*c*) *Muslim*, present complaints, i 174-175, residence, i 177-178, courses, i 178, Board of Secondary and Intermediate Education, iv 39-40, 41, Dacca University, iv 156-157, 166, university government, iv 386, 391, 392, 396, 410, 415-416
Conscience clause. dangers of, i 358-359, 361, iv 456
Continuation classes meaning and scope, iv 29
Constituent College *see* under Colleges, Constituent
Co-operative societies. and hostels, ii 326-327.
Corporate life, student. depressing conditions of, ii 349-352, development of, iv 455-459, and training colleges, v 96
Correspondents: number and range, i 3-4, value of, i 4, 10, iii 2-3
Cotton Colleges (Gauhati) tutorial system, i 410, graduate teaching, ii 56, residence, ii 322, 326 future of, iv. 360-363.

Courses *see under* secondary education *and* study
Course work and examinations, II 189-190, V 13.
Court (Calcutta University) character of, IV 281, composition, IV 384-387, functions of, IV 387-390
Court (Dacca University) functions, IV 166, composition, IV 214-219

D

Dacca as educational centre, I. 427-428, IV. 132
Dacca College pay average, I 366, equipment, I 427, library, I 408, post-graduate teaching, II 56, law, III 28, development, IV 200-202.
Dacca Hall IV 200 202
Dacca Law College, III 42
Dacca School of Engineering scope of, III 111, development of, IV 190-191
Dacca Training college organisation, III 8-9, connexion with old students, IV 194
Dacca University Committee hostels for backward classes, I 192, registration of graduates, III 197, general recommendations and criticism, IV 123-241, passim, IV 457, (teachers residence), V 62 (madrassah examination)
Dacca University relation to Board of Secondary and Intermediate Education, IV 41, 42, history of scheme, IV 121-131, need for, IV 131-133, commissions proposals, IV 131-241, financial estimate of, V 264-271
David Hare Training College (Calcutta) III 7, V 80-81
Degree course length of, IV 167, 256-259, courses and contents, IV 260-265
Demonstration farms III 138, 146
Dentistry plans for teaching of, III 78-81, V 108-109
Department of Public Instruction genesis, I 39 40, control over schools, I 42-43, 55, 69-70, IV 30-33, scope and limitations, III 240-247, minority view on reorganisation, V 355 360
Department (*i e*, of study) organisation and working, IV 176-177
Dermatology teaching in, V 108
Diocesan College for Girls (Calcutta) influence of matriculation examination, II 15, organisation and working, II 16-21, training department of, II 21, 24.
Director of Public Instruction as a fellow, III 229, position and powers, III 240-247, suggested changes in position and powers, IV 35, and Board of Secondary and Intermediate Education, IV 39, 50
Discipline maintenance at Dacca, IV 213, 222-225, in Constituent Colleges, IV 307-308, collegiate responsibility, IV 455
Dissection first operation by Hindu, I 37.
Durham University teaching organisation of, V 375
Dutch in Calcutta University, II 108
Dyeing: failure of classes in, III 154, manufacture of dyes, V 194-195, 289.

E

Ear diseases teaching in, V 108
East Bengal colleges in, I 435, university development, IV 430, affiliation of colleges in, IV 135-140, 349
Economics Intermediate Colleges, IV 105; Dacca university, IV 169-170, 175, Calcutta University, V 286
Eden High School (Dacca) training department, II 25, development, IV 192, 368, V. 77
Edinburgh University Indians in, III 308.
Education general principles of development, IV 3-18, English and Indian systems compared, IV 18-24, unity in, IV. 33 34
Education, Bureau of institution of, III. 232
Education (or teaching), department (and art) of in Dacca University, IV 169, 175, in Calcutta University, IV 262, 285, V 286, relation to university and scope, V 71-72, relation to training of teachers, V 77-84, pay and statues of professor, V 284
Education, director-generalship of III 230-231
Education Commission, 1882 its problems, I 50 52, on primary education, I 52, on secondary and college education, I 53, 'modern side,' I 56 57, co ordinating agency for education, I 57-58, second grade colleges, I 58-59, effects of western education, I 59, private efforts and grants in aid, I 91-94, backward classes, I 191, residence, II 316, estimate of, I 50, 59 62
Educational Commissioner functions of, III 232
Educational service (Government), financial position of teachers in, I 365-366, constitution and criticism of, I 366-372, III 265 275, IV 153-155, V 227-233, separation of teaching and administrative branches, I 371, position under changes suggested, IV 82-83, 319 322, minority view's, V 366 372
Education, minister (or member) of chief adviser to, IV 35
Electro therapy teaching in, V 108
Endowments (and scholarships) for research Bengal Government, II 75-76, Coate's committee, II 75, Onauthnath Deb, II 74-75, Durbhanga (Maharaja Sir Lachmeswar Sing of) committee, II 75, Jogendra Chandra Ghose, II 75, III 45-46, Sir Rash Behary Ghose II 74, 78-80, III 159, William Griffith II 72, Sarat Kumar Lahiri II 73, Maharaja of Kasimbazar II 74, 106, III 47, Rai Narayan Mitra, II 73, Sir Taraknath Palit II 74, 77 80, III 159, Premchand Roychand. II 70 72, Salehjee brothers, II 75, III 46-47, State Technical scholarships, III 159-160, University, II 73
Engineering, Dacca School of. *see under* Dacca.

Engineering education history, III 82-99, present position, III 99-112, preparation in intermediate colleges, IV 108-109, in Dacca University, IV 169, 190-191, future development of, V 132 170, 286, financial estimate, V 279
Engineering, Imperial College of (proposed), III 95-96
English supersession of Persian, and after, I 37 38, aloofness of Musalmans I 37 38, attractions of, I 54, 83, matriculation standard, I 259 264, 331, II 159-160, under-graduate course, I 403-406, post-graduate course, II 44, in Madrassahs, II 114 138, passim, teaching in, II 154-155, 296-311, (present position) V 40 48 (recommendations) medium of instruction in medicine, II 50, in proposed intermediate colleges, IV 102 103, in degree courses IV 168, 175, 262-265, diploma in spoken, V 1-2, requirements for engineering education, V 136
Entomology V 286
Entrance (*see also under* matriculation) for Dacca university, IV 227-228, candidates above normal age, V 20
Equipment laboratories, I 270 271, of private Calcutta Colleges, I 424 425
Ethnology Calcutta University, IV 285, V 286, Dacca University, IV 175
European languages (modern) Dacca University, IV 168, 175 Calcutta University, II 108, IV 285, V 286
Europeans *see under* Anglo-Indians
Examination, high school, (proposed) conduct of, IV 55 59, requirements of, IV 59-73.
Examination, Intermediate College conduct of, IV 62 65, 116
Examination, Matriculation *see under* matriculation
Examination (results of) classification and rank, II 198 203 publication, II 211-212, of high schools IV 72
Examinations fall in standard between 1882 and 1902, I 64, Government view of secondary, I 99 100, influence on (*a*) school curriculum, I 223, (L M S Institution), I 228, (Bolpur School) (*b*) teaching, II 13 16, 142 153, (*c*) health II 21-23 207-208, conduct of Madrassah, II 126-127, evils and courses of, II 141-142, 153-155, IV 12 13, functions and limitations of, II 155 164, 177-178 222 224, alternative questions, II 164-167, V 14, marks, II 167-174, 178, V 15, grace marks, II 174 176, V 14, compartmental, II 178-182, V 14, reference, II 182-184, frequency of, II 185, V 17-18, appearances at, II 186-187, V 17 reform of, II 187-191, 210, 213-217, classification, II 198 203, IV 72, V 14-15, anonymity, II 203-205, V 12 13, secrecy, II 205-206, wastage at, II 210, subjects exempt from, II 213 217, IV 64 68, V 420-423 V 19, in reorganised Calcutta University, IV 288; Superintendent of, IV 383
Examinations, standards of matriculation, I 250 273, 331-333, general, V 6 8
Examiners rules for appointment of, II 55, 192-194, external, II 194-196, V 11, 12, Boards of, II 196-197 (size of), V 9-11 (recommendations), remuneration of, II 197-198, marking by assistant, II, 196-197, matriculation, I 278, anonymity of, V 12
Executive Council (Calcutta University) composition and powers, IV 390-394, 443-444, V 4
Executive Council (Dacca University) powers, IV 166, 226, composition, IV 218-220
Executive Commission need for, IV 281, 329, secondary education, IV 44, temporarily affiliated colleges, IV 313, university colleges, IV 355 356, composition and scope of IV 419 421
External students *see under* non collegiate students

F

Faculties development of I 63 68, teachers and II 63 composition and criticism of work III 211 213, in Dacca University, IV 166, 221, reorganised Calcutta University IV 400-403
Failed students in Calcutta colleges I 422, V 418, reattendance of class, II 184-185
Family restraints hold on students II 354-361
Fees rate of college V 255
Fellows (*see also under* senate) number and composition of, III 191, nomination of, III 189, 194 196 election of, III 196-197
Finance collegiate I 361 363 possible sources I 363 365, IV 158, V 257, of university education, III 224, of Dacca University, IV 238 240, recommendation regarding distribution of grants IV 308-309, 354 446, 454, recommendations and liabilities V 252 296, V 393-395 (minority proposals)
Forest College and Research Institute, Imperial (Dehra Dun) III 149-150
Forestry III 149-150 V 286
French in Calcutta University, II 108, V 286, in Dacca University IV 168, 175

G

Games *see under* physical recreation
Geography present position, I 205, 208, 229, 230 267, 268, 269, 270, 398, recommendations re (*a*) schools, IV 61-62, 63, (*b*) intermediate colleges IV 105, 107, (*c*) Dacca University, IV 169, 175, (*d*) Calcutta University, V 286
Geology Calcutta University, IV 398, Dacca University IV 175, and agricultural education, V 181
German Calcutta University, II 108, V 286, Dacca University, IV 168, 175
Ghosh, Sir Rash Behary, Trust details of, II 74, 78-80, III 159, utilisation of, V 376-382
Government educational policy early phase, I 31-33, 83, western system of learning,

i 35-36, 84, ii. 229, Wood's despatch, i 39-49, 85-87, encouragement to local bodies, i 51, and private agencies, i 39, 52, 79-104, cheap education, i 90, freedom and variety in education, i 90-91, Muslim education, i 151-152, 156 160, backward classes, i 190-193, agriculture, iii 123-135, relation between government and universities, iii 222-290, v 218-251, and Dacca University, iv 121-131
Government Institutions establishment of early institutions, i 36, Education Commission's proposals, i 53, 60 61, importance iii 224-225, management by Board of Secondary Education, iv 47 48, 49, under reconstituted Calcutta University, v 224-225, minority view on control of, v 363-366
Government of India affiliation in 216, and university, iii 226 239, its educational organisation, iii 230 233, its present educational functions, iii 233 239, suggested functions *re* universities, v 238-245
Government of Bengal *see under* Bengal Government
Governor-General of India Calcutta University, iii 199-227, v 219, Dacca University, iv 209
Governor of Bengal Calcutta University, iii 199 200, 227, v 219, 225-227, Dacca University, iv 210
Grants prior to 1813, i 81, India Act, 1813, i 32, 81 82, ii 228, development of policy, i 39 40, 86 88, 97-99, effects on school education, i 42, college education, i 43, Education Commission on i 92, Muslims and, i 159, for hostels ii 319 to university, iii 224 duties of Board of Secondary and Intermediate Education, iv 46 47, 48, function of the university, iv 308-309
Greek v 286
Guardianship loose significance, ii 315, 332 333, evils of, iv 146 147

H

Hall meaning of, iv 135, organisation in Dacca University, iv 144-149, 165, 194-205
Hardinge Medical College, Lady ii 27, iv 372 373
Health of women students, ii 21 24, examination strain, ii 207-209, v 4, physical condition of students, ii 339, 343, medical supervision, ii 344-345, Board of Dacca University, iv 222, organisation, Calcutta University, iv 449-455
Hebrew v 286
High Schools (*see also under* secondary education) types of, i 212-235, proposed examinations for, iv 55-78
Hindu, life in orthodox home, i 124 128.
Hindu Academy (Daulatpur) features of, i 434, hostel system, ii 322
Hindu College (Calcutta) i 33, spread, ii 228.
Hindu Medical College (Ayurvedic) iii 59
Hindu School (Calcutta) defects, i 222
Hindu University, Benares. *see under* Benares
Hindu Widows, Training Class, Ballygunj, ii 26
History college teaching in, i 401, in secondary education, i 205, 208, 229, 230, 267, 268, 269, 270, 232, suggested developments, ii 102, recommendations *re* (*a*) schools, iv 69 71, (*b*) Intermediate Colleges, iv 105, (*c*) in Dacca University, iv 168-169, 170, 175, (*d*) in Calcutta University, v 286
Honorary degrees conferment of, iv 216, 388.
Honours courses special schools for, i 397, mechanical character, i 394, differentiation from pass course, iv 167, 260 262, 353 in English, iv 168, duration of, iv 256 259, subjects of, iv 262 265
Hooghly College Library, i 407 features of, i 433, law, iii 28 percentage of passes, v 417
Horticulture Dacca University, iv 171
Hostel history and present position, ii 312-339, value of, iv 147 149, place in Dacca University, iv 165, recommendations *re* Calcutta University, iv 435 449
House tutor duties, iv 196

I

Imperial Forest College and Research Institute, Dehra Dun iii 149-150
Indian Educational Service *see under* educational service
Indian Industrial Commission Bengalis and commerce i 25, mechanical engineering, v 138 142, electrical engineering, v 143, mining, v 145, staff of Civil Engineering College, v 161, development of engineering education, v 167 170, technology, v 209
Indian Mathematical Society, iii 296
Indian Universities Commission 1902, *see under* Universities Commission, 1902
Industrial education views of J G Cumming, iii 96 of Bengal District administration committee iii 96 97, relation with university, iii 97, 175 186, mining, iii 112-118, history and present position, iii 153 156 scholarships, iii 159-160, prospects and schemes for, iii 160-165
Inns of Court Indians in, iii 308
Inspection of schools, i 299 300 (present position), iv 76 80, (recommendations), of colleges, iii 217 218, (present position), iv 288-289, 354 (recommendations)
Inspector suggested method of recruiting, iv, 85-86
Instruction *see under* study, courses of and secondary education, courses in
Instruction, Department of Public *see under* Department
Inter-Collegiate instruction position in Calcutta, i 359-360 progress in India, i 360, under post-graduate system, ii 65 66, minority view, v 385-387, 413-415

Intermediate · part of school course, I 22, 58, 59, 71-72, 230, 329-330, 343-354; wastage of students, I 329-330; average entrant to, I 331-334; instruction in, I 335-340, financial help from, I 341, failed students, I 422; students in Mufassal Colleges, I 426-427, in Mufassal Colleges, IV 333-334
Intermediate Colleges: nomenclature, IV. 54, examination of, IV 52-55, 116, organisation of, IV. 94-99, purpose and features of, IV. 99-102, courses of, IV 102-107 (liberal), 107-115 (professional), 115-116, (alternative courses), non-academic sides of, IV 116-118, cost of, IV 118-120, effect on Calcutta University, IV 423, buildings in Calcutta, IV 431
Islamia College (proposed) I 169, IV 326-327, V 278
Islamic Studies in Calcutta University, II. 138 (present position), V 60-70 (recommendations), in Dacca University, IV 167, 175, 177-182
Itinerary (of Commission) I 10-12

J

Jagannath College (Dacca) I 428, provident fund in, I 377, library, I 408, development of, IV 202-205
Jagannath Hall IV 202-205
Japan, attraction for Indian students, III 309, admission to universities in, III 311
Japanese university provision in, II 101, 108, V 286
Junior assistants status and pay, IV 173-174
Jurisprudence V 286

K

Keys · popularity, I. 206, dependence of students on, II 154
Krishna Chandra College (Hetampur) number of students, I 355
Krishnagar College I 364, library, I 407, its features, I 433, law, III 28, percentage of passes, V 417
Krishnath College (Berhampur) I 364; organisation and working, I 428 429, law, III 28, future of, IV 340

L

Lahore colleges in, I 360
Latin V. 286
Law endowments for research in, II 75, III 44-47, regulations *re* practice of, III 24-26, development of education in, III 26-43, university regulations, III 34-36, in Dacca University, IV 169, 175, 183-185, general education and, V 120-121, duration, V 121-124, deficiencies in present system, V 124-127; combination with arts courses, V 127-131, 385
Law College, University Muslim teachers in, I 165, origin and working, III 33, 36-41
Leather industries. recommendations, V. 194, 286, 289.
Lectures criticism of system, I. 386-391; students' grasp of, II 213, students' view of, II 213., recommendations, IV 265-267, 271-276, taking of notes, IV. 330
Lectureship · status and pay, IV 173.
Leeds University · Indian technological students of, V 205
Legal Education *see under* law
Legislation (of universities) (*see also under* statutes, ordinances and regulations); Dacca University, IV 161-163, Calcutta University, IV 378-381
Legislative Council Board of Secondary and Intermediate Education, IV 39, 52
Libraries a hinderance, I 394, neglect of, I 406-410, 425, use during examinations, II 189, in Dacca University, IV 170, 177, 214, in Calcutta University, IV 283-284, 383, 417, in constituent colleges, IV 304
Logic in intermediate colleges, IV 105
London Missionary Society's Institution science teaching, I 223, training department of, III 9
London University influence on Indian university development, I 46, 64-65
Loreto House its organisation and working, II 16-21, training department of, II 21-25
Lyallpur Agricultural College scope of, III. 126

M

M A (and M Sc) duration of, IV 167, 256-259, course in M Sc, V 387-388
Madras Christian College I 360
Madrassah, Calcutta *see under* Calcutta Madrassah
Madrassahs under Muslim rule, I 148, 169, financing of, I 159, public service and, I 170, importance, I 172-173, history and reform of, II 108-135, and university, II 112-113, English in, II 114-115, 119-120, 138, junior course, II 118, senior course, II 118, title examination, II 118-119, examinations of, II 126-127, working of, II 135-136, recommendations, V 60-70
Madrassahs (reformed) history and scheme of, I 170-172, II 121-124, courses and examinations, II 135-138, recommendations, V 61-65
Manual work aptitude of Bengali, I 107-110; training in "B" classes, I 221-222, in secondary education, I 268, 272, 273, IV. II
Marking · rigidity of, II 167-174, by assistant examiners, II 196-197, correspondents on changes, I 277-278
Materia Medica teaching in, V 107
Mathematical Society, Indian III 296.
Mathematics college teaching, I 400-401; in secondary education, I 268, 332, recommendations *re* (*a*) schools, IV. 71, (*b*) colleges, IV 103-104, (*c*) Dacca University, IV 169, 175

Matriculation examination general position, I. 247; criticism as entrance examination, I. 250-273, V 399-404, course at Osmania University, I 274; suggestions for improvements, I. 275-280, 286, medium in, I 280-282; its two fold purpose, I 286; age limit for, I 287-293, practical working of, II 159-161
Medical College of Bengal · *see under* Calcutta Medical College
Medical profession. class of men required, III 55-56, 57, V 116-117
Medical Schools III 53, 73-76 (Campbell Medical School), III 53, 76-78, IV. 185-189 (Dacca Medical School), III 54 (private institutions), development of, y. 115-118
Medical Service, Indian appointments to Calcutta Medical College, V 112-114; position of, V 114-115
Medicine endowments for research in, II 74 75, board of studies in, III 64, history of education, III 48-60, university regulations, III 60-65, teaching institutions, III 65-78; dentistry, III 78-81, V 108-109, vernacular medium, III 55-56, V 115-116, preliminary science training, IV 107-108, V. 99-104, 279, 390-392, in Dacca University, IV 169, 185 189, V 388 390, proposed chairs in, V 104-109, financial estimate, V 279
Medicine, history of teaching, V 105-108, 286
Medicine, indigenous systems of. *see under* Ayurvedic
Medicine, teachers in recruitment of, V 112-114, consulting practice, V 114
Medicine, Tropical School of III 65
Mental diseases teaching in, V 108
Medium of instruction history and present position, II 226-241, correspondents' views, II 241-280 (university stage), II 280-296 (school stage), in medical teaching, III 55 56, V 115-116, recommendations, V 26-40
Messes, attached criticism, II 327 329, regulations, II 336, development of, IV 442
Messes, unattached criticism, II 323-325, popularity and supervision of, III 336-338
Metallurgy teaching, V 145, 148, 168, 286
Meteorology in Calcutta University, IV 287, V 286
Midnapore College I 364, site of, I 343, report on in 1908, I 345, law, III 29
Mining education early suggestions, III 87, present position, III 112-118, recommendations, V 144-150, 286
Minister of Education · *see under* Education
Missionaries early efforts, I 32, India Act of 1833, I 34, opening of St Xavier College, I 43, conflict between missionaries and government, I 84, teachers in missionary colleges, I 372 374, IV 458, working of missionary colleges, I 417-421, missionary girls' schools, II 3, 13, 16-21, 24-25, and spread of English, II 227, residence, II 316, religious teaching and importance, I 420-421, Dacca University, IV 206-209; Government of Constituent Colleges, IV. 305, importance of, IV 456
Mitra High Schools: organisation and working, I. 219-220.
Modern side. views of Education Commission, 1882, I 56, "B" classes, I. 221-222.
Mohsin Fund I 159, 434
Muhammadan Anglo-Oriental College. foundation, II 315, hostel system, II 322, IV 147
Muhammadans · *see under* Musalmans
Murarichand College (Sylhet) development of, IV 360-362.
Musalmans traditional system, I 28-29, 144, attitude to western education, I 30, 37-38, 144, 145, 148, distribution in Bengal, I 144, position in 1882 and since, I 145, 161-163, causes of backwardness, I 145-149, 151, II 112, 114, acceleration of education, I 152-161, 174, special institutions for, I 149, proportion of literates, I 161, numbers in schools and colleges, I 162-163, on governing bodies, I 163-164, 174-176, 179-186, Muslim teachers, I 164, schools for, I 165, courses of study and needs of, I 178-179, Hooghly College, I 434, and medium of instruction and examination, I 271-280, numbers in School of Art, III 157, position in Syndicate, III 207-208, Board of Secondary and Intermediate Education, IV 39-40, 41, V 359-360, Dacca University, IV 122, 136-137, 156-157, 222, general recommendations, V 213-217
Music in secondary education, I 220, 227, in collegiate education, V 286
Muslim Hall (Dacca) IV 199-200
Muslim University Bill religious test, IV. 163-164
Mutiny influence on education, I 87 88
Mysore University entrance qualification, I 352, senate, III 221, teaching staff, III 296; significance, III 306, expenditure of, V 271

N

Nagpur Agricultural College III 121, 126
Nagpur University Indian Universities Commission on, I 66
Naval architecture V 286
Nomination of fellows, III 189, 194-196, to public service, III 278-279
Non-collegiate students in post-graduate courses, II 45, position of and recommendations, II 218 222, IV 275-276, V 21-22, residence, IV 437
North Bengal *see under* Rajshahi and Rangpur
Nose diseases teaching in, V 108
Notes taking of, IV 330
Numbers (of students) recent increase in Bengal, I 19; comparison between Bengal and United Kingdom, I 19-21, 37, 45, 62, Muslim students, I 162-163, in intermediate, I 327, 329, arts and science students, I 355, failed students in Calcutta Colleges, I 422, in women's colleges, II

17; in training institutions for women, ii 21, 24-25, (women) in medical colleges, ii 27, in post-graduate courses, ii 37-40, 43, 44, 48
Numismatics. v 286

O

Oral Examination: in English, i 277
Ordinances scope, iv 162 (Dacca University), iv 380-381 (Calcutta University), Lectureships, and junior assistantships, iv 174, Mufassal Colleges, iv. 353
Oriental Department Punjab University, ii 116; Calcutta University and Islamic faculty, ii 133-135
Oriental Research Institute v 54-55
Orientalists controversy between Anglicists and ii 228 229

P

Pabna College provident fund in, i 377
Palæontology v 286
Pali ii 98-99, v 286
Palit Trust, Sir Taraknath details of, ii 74, 77-80, utilisation of, v 376 382
Patna University senate syndicate, iii 221, jurisdiction, iii 292, v 147
Persian (*see also under* classics) abolition as court language, i 37-38
Pharmacology Calcutta Medical College, 105 107
Philology, Comparative v 286
Philosophy college teaching, i 401, Dacca University, iv 175, expansion in, v 286
Phonetics Calcutta University, iv 285, v 285, 286
Physical education importance, iv 12, Dacca University, iv 226, Calcutta University, iv 451 453 v 286, pay of professor of, v. 284-285
Physical recreation in women's institutions, ii 23, present state, ii 343-344, iv 12, recommendations, iv 453
Physiology Calcutta University, i 398, v 286, Dacca University, iv 169, 175, medical research in, v 104
Pisciculture Dacca University, iv 11
Polytechnic Institute, Maharajah of Kasimbazar (Calcutta) i 108
Poona Agricultural Conference (1917) · iii 133-134
Post-graduate Committee origin and scope, ii 50-51, on inter-university relations, iii 295-297
Post-graduate teaching authorities of ii 52-55, 63 64, minority view, v 382-385
Poverty effects on education, ii 148-149, 153-154, site of University, ii 379, and occupation, ii 163-166
Practical examination ii 188-189, iv 53, 56, v 14
Presidency Chairs recruitment for, iv 322-324, salary, v 278 279
Presidency College, Calcutta i 392, equipment, i 356, average pay, i 366; library, i 407, seminar classes, i 410, instructions in, i 414, corporate life in, i 414, site, i 415, present relation to university, i. 416-417, post-graduate instruction ii 40-41, 43, 49-50, 60, 67, hostel, ii 321, law, iii 28-29, geology, i 398, development of sciences, iv. 286; position in teaching university of Calcutta, iv 316-324, v. 363-366 (minority view), science students of, v 418
Presidency College, Madras i 360, ii 322, iv. 457.
Primary education · government attitude in 1881-1882, i 42, Education Commission, 1882, i 51-53, ineffectiveness of grants-in-aid, i 88, value of, i 131-132, maktabs, ii 135, place in educational development, iv 7, relation to suggested Board of Secondary Education, iv 29, agricultural teaching, v 189-190
Private effort opening of schools, i 37, government policy in secondary education, i 39-44 79 80, freedom from Department of Public Instruction, i 43, Education Commission of, 1882 and after, i 52-54, 60-62, 91-92, 102, condition and number of private schools, i 79, 91-92, 97-99, 223 226, conditions of success i 92 93, limitations of, i 95-96, 103-104, 226, expert English opinion, i 100-104, 95 97, moral instruction, i 239 241, financial positions of unaided colleges i 361-363, private colleges, i 374-377, 421-426, 431, 434-435, in women's education, ii 3-4, government and, i 78, 104, inspection of unaided schools, iv 76-80, minority view, v 365
Private tution prohibited in Boy's own Home, i 231, prevalence of, i 206, 235-237
Proctor duties, iv 208, 213
Professorship status and pay, iv 172, v 266 (Dacca University), iv 290 291, 297 (Calcutta University)
Provident fund Scottish Churches Colleges, i 374, in private colleges, i 377
Provincial Educational Service, *see under* Educational service
Provost status and salary, iv 195, duties, iv 197, 223
Proxy attendance by, iii 30
Psychology, experimental in Calcutta University, iv 285, v 286
Public Health, Institute of v 104-105
Public Instruction, Department of *see under* Department
Public opinion educational reform, iv 6-7, control of secondary education, iv 30 40, physical education, iv 226, Mufassal Colleges, iv 334-335
Public service, recruitment to men trained in western system, i 37, criticism of present condition, iii 225, 275, 290, localities, iii 309-310, and training in intermediate colleges, iv 114-115, recommendations, v 233-238
Public Services Commission engineering education, iii 95, on teaching and research, iii 125; agricultural colleges, iii 128-129, veterinary teaching, iii 151, educational service, i 371, iii 269, 275, recruitment to public service, iii. 285-286, 309-310

Public Works Department Reorganisation Committee concentration of engineering education, II 95-96, civil engineering, V 134-138, staff of Civil Engineering College, V 161
Punjab University oriental department, II 116, indigenous system of medicine, III 59-60
Pusa Agricultural Conference (1916) III. 130-131
Pusa Agricultural Research Institute founding, III 123-124, teaching at, VI. 125

Q

Questionaire text of Commission's, I 4-9

R.

Rajshahi claims for a university, I 429 431, IV 338, 340
Rajshahi College I 366, law, III 28, future of, I 430-431, III 194
Rangoon Colleges I 436, III 29
Rangpur claims for a university, I 431 IV 340
Rangpur College I 364, salary scale, I 375, its future, I 431
Readership status and pay, IV 173 (Dacca University), IV 291, 297 (Calcutta University)
Recognised Assistant Calcutta University, IV 292
Recognised Teacher recommendations IV 291-294, minority views V 407, 413
Rector position of, III 199-200
Registered graduates numbers and privileges in Calcutta University, III 189, 196-197, privileges and enrolment at Dacca, IV 217-218
Registrar Calcutta University, III 201 204 (present position), IV 383 (recommendations), Dacca University, IV 212, 213
Regulations of University *see under* university regulations
Regulations meaning and scope, IV 162-163 (Dacca University), IV 381 (Calcutta University)
Religions, History of in Calcutta University, IV 285, V 286
Religious Communities work of, IV 456
Religious and moral instruction need and desire for, I 155-156, 179, II 365-367, and intellectual training, I 209, 242, character training in school, I 237-239, private effort, I 239 240, in school course I 210, 273, in missionary institutions, I 420, government view, I 156, freedom in, IV 456
Research funds and facilities for, II 70 80, relation to teaching, III 125 137, possible development, III 296 298, function and relation to teaching, III 125, IV 276-280, degrees for, V 21, medical, V 109
Reserved seats I 158 159, 160, V. 153, 187
Residence no arrangement prior to 1904, I 63, beginnings of a systematic policy, I 73-74, Hostels in East Bengal, I 150, Muslim students, I 157-158, 165, 177-178, history and present conditions, II 312-339; engineering students, III 106, V 153, in Dacca University, IV 194-209, 222, constituent colleges, IV 304, future development and organisation, IV 435-449, financial proposals, V 280 281
Residence Committee (of senate) II 318, 336, IV 450
Residential University estimate of IV 144-149, organisation at Dacca, IV 194-209
Ripon College its organisation and working, I 422-425, hostel, II 321, Law, III 28, 42, failed students, V 418
Roll-numbers in examination I 278, Muslim view, II 203, objections considered, II 204
Rural classes attitude to education, I 199-203

S

Sabour Agricultural College teaching and students of, III 127-128
Sanskrit Association Behar and Orissa, II 94-95
Sanskrit Association, Calcutta constitution, II 92 94
Sanskrit College growth organisation and working, II 85 89, I 417, post graduate teaching in, II 47, II 94, original English classes in, II 228, recommendations V 49 53, 278
Sanskrit Examination, Board of II 90 92
Sanskritic studies in Calcutta University, II 47 (present position) V 49 55 (recommendations) in Dacca University, IV 167, 175 182 183
Santiniketan organisation and aims, I 226-230
Scholarships in Dacca University, IV 223, principles IV 438, training of teachers, V 88, 92
School Community in Bolpur School, I 227, 241 place of a teacher in, I 241-242
Schools (defects and drawbacks) general, I 302 308 low salary scale, I 54 55 304, absence of modern side, I 55 56, size of classes I 206, matriculation examination, I 266 277, 304 proprietorship, I 303, lack of trained teachers, I 304, lack of finances I 304 305, types of bad schools, I 223 226
Schools (development of) grants-in aid to, I 39-40, 42, 86-90 progress since 1882, I 54, cost of education in, I 55, pupils of, I 78, organisation in India, England and Germany, I 214-216, for girls, II 12-16
Schools, government of Muslim representation, I 153-160, in proprietory institutions, I 224, 303
Schools (parents and) Mitra High Schools, I 219-220, Bankura Zilla School, I 220, Boy's Own Home, I 235
School (recognition of) procedure, I 295-299, criticism of present rules, I 55 56, 69-70, 299 303, 306 308, III 246 247, IV

Unitary University Dacca University, iv 135-140, prospects at Calcutta, iv 251-254
United Kingdom Indian students in, iii 308 318, v 248-250, number of students in India and, i 19-21, opinion on private effort and influence on India, i 79-80, 86, 95-97, 100-104
United Missionary Training College ii 25
Universities Act (of 1904) i 67, 76, senate, iii 190-191, syndicate, iii 206, college supervision, iii 217-218
Universities Bureau suggestions *re*, v 247-251
Universities Commission of 1902, conditions preceding appointment, i 63-65, scope of recommendations, i 67, senate, i 67-68, iii 188-190, faculties, i 68, and teachers on governing bodies, i 65, collegiate administration, i 70, second grade colleges, i 71-72, governing bodies of private colleges, i 72, residence, i 73-74, ii 316,
University teaching, i 75-76, iv 140-141, criticism, i 65 66, 74, 77, 78, examination by compartments, ii 178-179, agricultural education, iii 121, syndicate, iii 205 206, affiliation, iii 216-218, recognition of schools, iv 75, teachers' residence, iv 457-458
Universities, Indian jurisdiction, iii 291-294, 303, iv 233, co-operation between, iii 294 298, 317, migration of students, iii 298 302, 308, iv 233, coordination of, iii 302 303, relation with universities abroad, iii 308 318, creation of fresh, iii 303 308, 336 342, 354-358, v 239, relation with universities of British Empire, v 245-251
Universities service system, iv 153-154, government control *versus* autonomy, iii 258 265, iv 160 161, 163
University Assistant Professors origin, ii 45 46, tenure of, ii 47
University College of Science development of, v 376-382
University Colleges meaning and privileges, iv 355-358
University Corps development of, iv 459
University Institute, iv 444
University Law College *see under* Law College, University
University lecturers origin of, ii 42, drawbacks in early system, ii 42-44, tenure of, ii 45 47
University of Bengal proposal discussed, iv 342-347
University Professors number and tenure, ii 46, duties under Ghose-Palit trusts, ii 78-79
University Regulations i 67-76, recognition of schools, i 297-299, *re* matriculation examination, ii 159-160, 163, examiners, ii 192-194, syndicate, iii 206-207, affiliation, iii. 216-218
University teaching Universities Commission on, i 75-76, iv 140-141, organisation of, ii 37-57, Calcutta University significance, i 76, its drawbacks, i 77, ii. 68-70, effect on colleges, ii 47-48, 59-63, authorities of, ii 52-55, staff, ii 45-47, 55, finances of, ii 55 56, 58-59, in the Mufassal, ii 56, statistics relating to, ii 57-58, teachers and, ii 63-66, suggested organisation, iv 242-330, Dacca university, economy, iv 142-143, organisation, iv. 171-194
Unrecognised teachers in Calcutta University, iv 293-294
Unrest university education, i 22 23, 49-50, Bengali character and, i 119-122, ii 363-364, duties of State, iv 77, Causes of, iv 459-462.
Urdu and University, ii 105-106, as a medium of Instruction, ii 120, as second language, ii 120-123, alternative to classics, i 157, iv 72, 106, 166, in Dacca University, iv 166, 175
Uttarpara College Low salary scale in, i 343, 375

V

Vernaculars (*see also under* medium) neglect in colleges, i 402, provision in University, ii 103-107, endowments for, ii 73, recommendations, iv 103 (intermediate colleges), iv 168, 175 (Dacca University), iv 285, v 58-69, 286, (Calcutta University)
Veterinary College, Bengal iii 152
Veterinary science, teaching of iii 151-152
Vice-Chancellor Calcutta University, appointment and powers of, iii 200-201 (present position), iv 282, 382 (recommendations), Dacca University, duties and status, iv 210 211, pay of, v 268, 272
Victoria College (Cooch-Behar) estimate of, i 432, law, iii 29
Victoria College (Comilla) features of, i 435
Victoria College (Narail) report on, i 345
Vidyasagar College pay average, i 375, organisation and working, i 422-425, hostel, ii 321, law, iii 28, failed students, v 418
Visiting examiners duties and value of, iv 45-46, intermediate college examination, iv 52-53, high school examination, iv 55-58
Visitor Calcutta University, iv 376, 381, v 219, 239-240, Dacca University, iv 209
Viva-voce Examinations need for, ii 187-188, 205, v 13, in intermediate college examination, iv 53, in high school examination, iv 55-56, 69

W

Weaving, teaching at Serampore, iii. 155-156
Well-to-do classes, college for iv. 169
Wesleyan College, Bankura its scope, i 433, hostel, ii 322, iv. 147

Western Bengal university development in, iv 341, colleges in, i 433-434
Women Colleges arts, ii 16-21, in teaching Calcutta University, iv 407, v 420
Women doctors need for, ii 26, output of, ii 27, difficulties in providing, ii 27-28, training of, iv 369, 372-373
Women education Muslim demand for, i. 166-168, Anglo-Indian women teachers, i 326, old type of, i 133, urgency of, i 136-137, ii 1-2, aim of, i 138-142, ii 29-31, history of, i 2-4, difficulties and obstacles (*a*) early marriage, ii 4, 30, (*b*) purdah system, ii 4-5, 11, (*c*) family traditions, ii 5-6, (*d*) suspicion of western education, i 135-136, ii 6-8, (*e*) lack of trained teachers, ii 8-10, 26, (*f*) dominance of examinations, ii 13-15, (*g*) education among men, ii 31, secondary education ii 11-16, iv 42, collegiate education, ii 16-21, professional education, ii 24-29, defects of present system, ii 13-16, 21 24, 29, under zanana conditions, ii 11-12, 31-33, separate organisation for, ii 34-36, iv 370, 413-415, domestic course, ii 15, 19-20, at Dacca, iv 191-192, recommendations iv 364 373 v 397
Women teachers women colleges, ii 17-18; need for trained, ii 8-9; sources of, ii 9-10, 26, training institutions for, ii 21, 24-26, Muslim, i 167-168, ii 26, recommendations, iv 369, 371-372
Wood's Despatch main recommendations, i 39-41, grants in-aid, i 86-87, backward classes, i 191-192, oriental education, i 112

X

X-Rays teaching in, v 108

Z

Zanana influence on women's education, ii 4-6, 10, schemes for educating women in, ii 11-12, 31-33, iv 365-367, influence on health, ii 23
Zoology Calcutta University, i 398, iv 286, v 286, Dacca University, iv 169, 175 and agricultural education v 180

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