

REPORT
OF THE
POST-GRADUATE RE-ORGANISATION
COMMITTEE

APPOINTED BY THE SENATE

ON
27th September, 1924



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CHAPTER I.

METHOD OF ENQUIRY.

1. We, the members of the Committee appointed by the Senate on the 27th September, 1924, to enquire into the working of the Post-Graduate Departments in Arts and Science, beg to submit the following Report.

The Senate accepted on the 27th September, 1924, the following recommendation of the Syndicate:

"That in view of the fact that almost all the appointments to the teaching staff in the departments of Post-Graduate Studies in Arts and Science will expire on the 31st May, 1925, and in view of the immediate necessity for formulating a definite scheme for the stabilisation and development of Post-Graduate studies in Calcutta, a committee be appointed to enquire into and report to the Senate on the following and other relevant matters:

(a) Whether retrenchment is possible in the Post-Graduate departments concerned. If so, in what directions?

(b) Whether the pay and conditions of employment and service of the members of the teaching staff are satisfactory?

And what specific recommendations may be made for improving the same.

(c) Whether the members of the teaching staff have been given proper facilities for carrying on research work.

(d) Whether the rules relating to the Provident Fund of the teachers are satisfactory and, if not, on what lines the rules should be framed to afford the teachers greater security and larger amount of money in the Provident Fund either at the time of retirement or resignation."

2. The Committee was empowered to associate with itself the following gentlemen:

(a) Secretaries of the Post-Graduate Councils in Arts and Science when questions relating to the particular Council came up for discussion.

(b) The Chairman and two members of each of the Higher Boards of Studies when questions relating to it were considered.

3. The quorum for a meeting of the Committee was fixed at eleven. Extracts from the Proceedings of the Senate, dated the

27th September, 1924, appointing the Committee will be found in Appendix I.

4. The Committee held some seventy sittings in all. The following questionnaire was prepared by a sub-committee of its own consisting of Sir Nilratan Sircar, Dr. W. S. Urquhart, and the Secretary, Mr. Prámathanath Banerjee :

(i) How many subjects or sub-divisions of subjects does your Board teach?

(ii) Do you think all the subjects or sub-divisions of subjects are of equal importance? If not, can your Board drop some of these subjects? If so, what are they? How does your Board propose to solve the question of teaching subjects or groups of subjects of an allied nature under different Boards?

(iii) Would you differentiate between "popular" subjects and "academic" subjects? If so, what are the "academic" subjects your Board proposes to take up?

(iv) How many teachers would you require after any changes have been made as proposed by you in connection with Questions 2 and 3 in your Department?

(v) What in the opinion of your Board should be the qualifications of these teachers?

(vi) Do you advocate a regular gradation of appointments? If so, what should be the nomenclature of each? What should be the salary attached to each such post when paid entirely by the University? What in your opinion should be the basis on which the number in each grade should be determined?

(vii) Does your Board carry out the mandatory provisions of Section 35, Chapter XI of the Regulations? If not, is your existing staff sufficient to carry out such provisions?

(viii) Has your Board obtained the maximum of co-operation with the staffs of the Colleges affiliated to the University? If not, how could we best secure such co-operation?

(ix) If your Board decides upon having a regular gradation of the teaching staff, do you anticipate any difficulties in connection with "part-time Lecturers," i.e., Lecturers appointed under Section 3, clause (b) or clause (c) or clause (d).

(x) How many members of your staff have published original work or are engaged in carrying out original work? Does your Board think sufficient facilities for such work are given to them? If not, on what lines would you advocate changes?

(xi) Does your Board advocate the system of granting a limited number of stipends to specially deserving students to

encourage original research? How many stipends would your Board in this event desire to establish?

(xii) Are the Provident Fund rules satisfactory? If not, how would you improve them? What in your opinion should be the proportion of contribution by the teachers in the event of the University being in a position to pay 8½%?

(xiii) Do you find the working of the constitution satisfactory? If not, on what lines would you advocate changes, if any, in the (i) constitution or functions of the Post-Graduate Councils, (ii) constitution or functions of the Executive Committees, (iii) constitution or functions of the Boards of Higher Studies in their relations with each other and with the Syndicate and the Senate?

(xiv) What is the nature of the work that the Secretary does? Is his relationship with the Boards satisfactory?"

The questionnaire was circulated to all the members of the Post-Graduate Councils; and the associated members from the different Boards of Higher Studies appeared before the Committee submitted in general the views of their respective Boards and were examined by the members of the Committee.

5. On the express desire of some of the members of the Committee, Mr. J. W. Holme, formerly of the Presidency College, Mr. Srikumar Banerjee of the Presidency College and Lecturer, Calcutta University, Mr. Rajanikanta Guha of the City College and Lecturer, Calcutta University, and Mr. A. Cameron of the Scottish Churches College were examined as witnesses and they made statements regarding the administration of the Board of Higher Studies in English. Mr. Praphullachandra Ghosh and Dr. Harendracoomar Mookerjee were also invited to give their evidence before the Committee, but they could not be examined. Mr. Stapleton desired the examination of other witnesses, in particular for the departments of Sanskrit, Pali, Arabic and Persian. An expression of opinion on the part of others, including gentlemen not necessarily engaged in the work of the Post-Graduate Studies, however desirable, would, it was felt by the majority of members, lead to the opening up of a large field of enquiry and render it impossible to finish the work of the Committee at an early date as enjoined by the Senate on the 27th September, 1924.

6. The thanks of the Committee are due to Mr. Stapleton for his presentation, on behalf of the Presidency College, of memoranda in English, History, Economics, Sanskrit, Pali, Philosophy, Arabic and Persian, which were examined by the Committee.

7. The Committee has in its report formulated an approximate estimate of the requirements of the various Boards of Higher Studies. The financial and academic aspects of the matter have been examined as carefully as possible within the time at its disposal.

8. A note based upon the following resolution of the Committee was circulated to all the First Grade Colleges in Calcutta:

"That, in order to obtain information as to the extent to which the Colleges are able to co-operate with the University, the Secretaries to the Post-Graduate Councils in Arts and Science be requested to send a circular letter to each of the Heads of all First Grade Colleges in Calcutta and suburbs affiliated to the University in the following form, with a request that their reply may reach the University before the 15th February (of every year) :

(i) How many teachers have you in your College who could be employed as lecturers in the Post-Graduate Department of this University? What are the academic qualifications and teaching experience of each? What subject or sub-division of a subject can each of them teach? Can he take charge of a substantial part of a paper in a subject? How many hours of lecture and tutorial work can he undertake per week?

(ii) What pay do you suggest for each teacher? What should be the tenure of appointment?

(iii) Would the authorities of your institution agree to keep a teacher in Calcutta appointed by the University for the period of his tenure? In case of transfer or of leave being granted to such a teacher, or a teacher leaving the college for any other reason, will the authorities of your College be prepared to consult the University before the teacher is relieved of his duties? And, in order to enable the University to consider the question of appointment of his successor in office, as a University lecturer, will the authorities of your College be prepared to consult the University in the matter of filling up such vacancies?

(iv) Would the teachers from your college agree to general supervision being exercised by the University? Would they agree to teach in the University Buildings?

(v) Do you require the services of any teacher, from the University, for your College? If so, what is the nature of the work you want to entrust him with? What remuneration would you give him?"

The replies have been received and the names and other details supplied are recorded in the Appendix.

CHAPTER II:

HISTORY OF POST-GRADUATE STUDIES IN CALCUTTA.

9. The problem of Post-Graduate teaching and research was considered by members of the Committee from different points of view. One view, urged upon their attention was that there should be mutual co-operation between the colleges and their staffs on one side and the whole-time staff of the University on the other, whereby specialists from colleges might take their legitimate part in the work of Post-Graduate teaching, and the colleges themselves might be strengthened by utilising the services of full-time members of the University staff. From a second point of view, the University might supplement the Post-Graduate instruction in different colleges. From a third point of view, the colleges might supplement the Post-Graduate teaching of the University by what Dr. Urquhart called *extra-mural* lectures. Fourthly, the Post-Graduate courses of the University might be made preparatory to research degrees open to candidates who have taken a three years' Honours Course based on a utilisation of the services of the whole-time men of the University and the members of the different colleges. Fifthly, it was suggested that some of the Post-Graduate departments should be devoted purely to research.

10. In order to appreciate the value and the feasibility of the different solutions proposed, it will be necessary to give a short history of the growth of higher teaching in Arts and Science under this University since its establishment in 1857.

(a) The regulations for the M.A. Degree in 1858 were as follows:

"Every person who, *immediately* after passing the B.A. Examination, obtains Honours in any one or more of the above-mentioned five branches* of knowledge, shall be entitled to the Degree of Master of Arts without further examination or fee. Any other graduate of this or any other Indian University, or of any of the Universities of the United Kingdom, may be admitted

* These five branches were (1) Languages, (2) History, (3) Mathematics and Natural Philosophy, (4) Natural History and the Physical Sciences and (5) the Mental and Moral Sciences. Any candidate who passed the B.A. Examination within four years from the date of his passing the Entrance was allowed to take one of these subjects at the Honours Examination next ensuing or in the following year.

to the Examination for the Degree of M.A. on payment of a fee of Fifty Rupees. No special examination will be held, but the candidate must pass the Honours Examination in at least one of the prescribed branches of knowledge."

The regulations did not require a candidate for the M.A. Degree to have studied in an affiliated institution. It will be interesting to note that during the period 1858-1864, 119 candidates passed the B.A. Examination of whom only 9 obtained the M.A. Degree.

(b) In 1865 the regulations were modified to a certain extent. The regulation of 1858 required that a candidate who had passed the B.A., provided he had not delayed proceeding to that Examination more than five years from the date of his passing the Entrance, might be examined for Honours in one or more of the prescribed branches. Before 1865 the Honours Examination was held two months after the B.A. The changes in 1865 made it possible for those who had taken their B.A. Degree within four years from the Entrance to appear at the Honours Examination and obtain the M.A. Degree within one year, instead of two months as before, from the time of graduation. This system was in operation for 20 years from 1865 to 1884.

During this period 2,251 passed the B.A. examination; of these 907 sought for the M.A. degree of whom 554 were successful.

(c) In 1885 a further alteration was introduced in the regulations. It was laid down that the names of all successful candidates at the M.A. examination should be arranged in order of merit, subject by subject, whatever the time that had elapsed between Matriculation and graduation or between graduation and admission to the M.A. examination. This system continued in force for 24 years—from 1885 to 1908. During this period 10,464 candidates took the B.A. degree and 60 took the B.Sc. degree (which was instituted in 1902 to secure proper recognition of those who studied scientific subjects). Of these 10,524 graduates, 4,180 appeared at the M.A. examination, of whom 1,804 were successful.

(d) In 1909 the new regulations framed under the Indian Universities Act of 1904 came into operation. Three changes of a vital character were then made regarding the M.A. examination :—

(i) No one was to be permitted to proceed to the M.A. examination in less than two years from graduation.

(ii) A candidate would be eligible for admission to the examination in two years, provided that he had,

since graduation, pursued a regular course of study during that time in an affiliated college or under University lecturers; if he had not done so, he could appear at the examination only at the end of not less than three years from graduation.

- (iii) The course of study in each subject was thoroughly remodelled and widened in scope, better provision being made for more specialised study. This system had, in 1915, been in operation for seven years. During that period 6,026 candidates took the B.A. degree and 1,165 the B.Sc. degree. Of these 7,191 graduates, 2,158 appeared at the M.A. examination and 407 at the M.Sc. examination (which was instituted in 1909), 1,171 being successful in the M.A. and 226 in the M.Sc. examination.

Increase in number of students taking the M.A. and M.Sc. examinations is in proportion to the increase in the number of graduates.

11. It is instructive to compare the average annual number of new graduates, the average number of candidates for the M.A. examination, and the average number of successful candidates in that examination during each of these stages and the period between 1916 and 1924.

Period.	Average annual number of graduates.	Average annual number of graduates appearing at the M.A. examination.	Percentage of figures in the preceding columns.	Percentage of successful candidates at the M.A. examination.
A. (1858 to 1864) ...	17	3	18	47
B. (1865 to 1884) ...	113	45	40	60
C. (1885 to 1908) ...	438	174	39	44
D. (1909 to 1915) ...	1,027	336	36	54
E. (1916 to 1924) ...	2,464	793	30	60.7

From these figures it will be seen that, omitting the first seven years when the condition of things was more or less experimental, since 1865, for a period of sixty years, the proportion of graduates who have sought admission to the higher examination has remained more or less steady, varying only from 30 to 40 per cent. It will be not unreasonable to infer that the number of candidates for the M.A. and M.Sc. examinations will continue to increase *pari passu* with that of the Arts and Science graduates, and

should, therefore, under present conditions, increase even more rapidly in the near future.

12. After the passing of the Indian Universities Act of 1904, it became quite clear that the University of Calcutta should transform itself from a mere examining body into a teaching and research organisation. Section 3 of the Act, is as follows:

“The University shall be and shall be deemed to have been incorporated for the purpose, among others, of making provisions for the instruction of students, with power to appoint University Professors and Lecturers, to hold and manage educational endowments, to erect, equip, and maintain University libraries, laboratories and museums, to make regulations relating to the residence and conduct of students, and to do all acts consistent with the Act of Incorporation and this Act, which tend to the *promotion of study and research.*”

Pursuant to the directions contained in the Act, the Regulations framed in 1906, made provisions for the appointment of University Professors (Chapter IX), University Readers (Chapter X), and University Lecturers (Chapter XI). Chapter IX contemplated, in connection with the foundation of University Chairs, provisions for lecture rooms, libraries, museums, laboratories, workshops and other facilities for the promotion of teaching and research. Chapter X contemplated the appointment of Readers mainly for the benefit of graduates engaged in research work, or of those who might wish to prosecute special studies. Chapter XI explicitly ordained “that the University *shall* provide for Post-Graduate teaching, study and research in the Faculties of Arts and Science.”

13. After the new Regulations under the Indian Universities Act of 1904 were framed, it was found that no College other than the Victoria College, Cooch-Bihar, had formal affiliation up to the M.A. standard, though several other Colleges had been sending up candidates to the examination. The names

of Colleges and the number of candidates sent up from 1907 to 1916, as mentioned below, will illustrate the point :

$\frac{B.A.}{B.Sc.}$ & $\frac{M.A.}{M.Sc.}$ Pass List, year by year, 1907-1916.

Year.	B.A.		B.Sc.		M.A.		M.Sc.	
	Candidates.	Passed.	Candidates.	Passed.	Candidates.	Passed.	Candidates.	Passed.
1907	1,929	426	17	9	286	97	...	...
1908	1,864	672	38	21	344	173	...	...
1908 (Supplementary)	1,149	451	...	...	...	...	...	...
1909	505	260	111	45	17	8	...	...
1910	904	432	186	75	141	74	14	11
1911	1,036	633	234	139	204	136	35	21
1912	1,265	758	284	168	276	165	56	35
1913	1,948	1,217	406	266	406	219	81	47
1914	2,602	1,298	425	231	523	317	94	55
1915	3,006	1,428	493	241	591	252	127	57
1916	3,338	1,728	528	366	655	309	165	88

14. Up to the year 1908, a system was in existence, according to which candidates were shown as having passed their M.A. Examination from Colleges from which they had taken their B.A. Degree, although they might never have received any M.A. teaching in these Colleges; in fact, some of these Colleges had no provision for M.A. teaching at all. This system of having unauthorised M.A. classes could not be permitted to continue under the new Regulations, and all the Colleges were called upon to apply for M.A. affiliation in due form, after satisfying the conditions imposed on them by the Regulations. The result was that the Presidency College applied for, and obtained affiliation in successive stages up to the M.A. standard in English, Group A, History, Political Economy, Philosophy, Mixed Mathematics, Physics, Chemistry, Geology, Physiology, and Botany. The Scottish Churches College obtained affiliation in Philosophy and Pure Mathematics. The Dacca College obtained affiliation in English, Group B, the Cotton College, Gauhati, in English Group A, and the Victoria College, Cooch-Bihar, in Philosophy.

15. In a letter, dated the 1st July, 1915, addressed by the Registrar to the Secretary to the Government of India, Education Department, the Vice-Chancellor and Syndicate pointed out to the Government the significant fact that the Sanskrit College was not affiliated up to the M.A. standard in Sanskrit, although the Presidency College had obtained affiliation up to the M.A. standard in eight different subjects. Prior to the year 1916, the Presidency College imposed a strict number-limit on admissions. In the year 1915-16, it could make provision for the following numbers in the different subjects :—

English	...	...	...	...	40
Philosophy	...	...	...	...	25
History	...	...	...	...	30
Politics	...	...	...	...	30
Mathematics—Mixed	...	...	...	...	25
Chemistry	...	...	...	...	13
Physics	...	...	...	...	18
Geology	...	...	...	...	16
Physiology	}	...	...	...	6
and					
Botany					

16. The University, upon which the Regulations imposed the duties of Post-graduate instruction, provided M.A. teaching

with the aid of University Lecturers. Thus they succeeded, to some extent, in supplementing the teaching in the colleges, thereby enabling the latter to concentrate their limited resources on under-graduate teaching. In the second stage of the growth of the system of Post-Graduate Teaching by the University, the University appointed Professors, whose chief duties were defined to be to carry out original investigations and to promote research by Post-Graduate students, to benefit a larger number of students in the wider sense of the word, and also to prevent the undesirable consequences of students being permitted to appear at the M.A. Examination, without having received adequate training. A system of lectures by University Professors was instituted. Subsequently, in accordance with the views laid down in paragraph 9 of the Proceedings of the Government of India, Home Department, dated the 10th August, 1906, permanent Professors on the staffs of affiliated colleges were asked to deliver courses of Post-graduate lectures on the subjects in which they had specialised. In the meantime, the number of students passing the B.A. and the B.Sc. Examination grew in number, and the limited accommodation in the Colleges was found unable to cope with the volume of M.A. teaching, as the following list will show :

Names of Colleges that taught M.A. and M.Sc.—subject by subject.

Name.	Subject.	Number limit (if any).
Presidency College	English	40
	Philosophy	25
	History	30
	Politics	30
	Mathematics (Mixed)	25
	Chemistry	13
	Physics	18
	Geology	16 Univ. Lectures
	Physiology & Botany (from this year).	6
Scottish Churches College	Philosophy	No limit.
Dacca College	English	"
University Lectures, Calcutta	English	"
	Mathematics (Pure)	"
	Philosophy	"
	History	"
	Economics	"
	Sanskrit	"
	Pali	"
University Lectures, Dacca	Arabic	"
	Persian	"
	Physics	"
	History	"
University Lectures, Patna	Chemistry	"
	Economics	"
	History	"
Cotton College, Gauhati	English	"

17. On the 16th March, 1912, Lord Hardinge, as Chancellor, made the following announcement at the Convocation :—

“ I cannot regard the present facilities for higher studies as at all sufficient, when not a few students who wish to take the Degree of Master of Arts have to be turned away for want of accommodation. That our students are capable of higher work I have no doubt. I am informed that three Research Studentships on the Premchand foundation have recently been awarded for theses on Mathematics, Chemistry and Indian Antiquities, all of which were pronounced by the examiners to evince special merit. The awards which have been made of the Coates Memorial Prize and the Darbhanga Memorial Scholarship indicate that there are capable men, able and willing, in the Medical

Faculty to carry on research work. In addition to this, the large number of essays submitted for the Griffith Memorial Prize makes it patent that many of our graduates are engaged in advanced study and research work. It is very important that we should turn out good M.A.'s in sufficient numbers; otherwise it will be difficult to find capable lecturers for our colleges, or to provide adequately for research.

"Impressed by these considerations, which are not peculiar to the Calcutta University, and remembering the stirring words which His Imperial Majesty addressed to the members of the Senate, the Government of India have decided to make a solid advance in the direction of teaching and residential Universities. They have allotted a recurring grant of 3 lakhs a year, of which the Calcutta University will receive Rs. 65,000 a year, for the appointment of University Professors and Lecturers in special subjects and for the encouragement in other ways of higher studies and research."

18. Thus, from 1912, a serious attempt was made by the University to adapt the courses of lectures to the prescribed M.A. and M.Sc. studies. That year is notable in the annals of this University, as it was in 1912, that Sir (then Mr.) Taraknath Palit executed his trust deeds and vested in the University lands and money to the value of fifteen lakhs of rupees in aid of the foundation of a University College of Science and Technology. Later on, on the 8th August, 1913, Sir (then Dr.) Kash Behary Ghose came forward with an offer of ten lakhs of rupees in furtherance of a scheme for the foundation of a University College of Science and Technology. The scope of the University College of Science was (1) to provide facilities for research work in Applied Mathematics, Physics, Chemistry, Botany, Zoology, and other branches of Natural Science; (2) to prepare a limited number of students for the M.A., M.Sc. and B.Sc. Honours Examinations in the branches of Science enumerated above.

19. In a letter to the Secretary to the Government of India, Education Department, dated the 26th June, 1915, the Registrar of the University pointed out in the following words that the existing Colleges, which were affiliated up to the M.A. and M.Sc. standards in Physics and Chemistry, had either not been able to provide accommodation for all the students seeking admission, or had been unable to supply sufficient means for Post-Graduate teaching in these subjects:

"The Presidency College (which has only B.Sc. affiliation in Botany, and not I.Sc.), has not yet sought affiliation to the M.Sc. standard in Botany, and even if it does so, and obtains

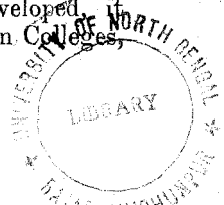
affiliation in the subject, it is not likely to obtain sanction to a staff numerous enough to teach all the branches of a large and growing science equally effectively. It is here where collaboration with the University College of Science will be most fruitful of results. Arrangements can easily be made for students to work for part of their course in the Presidency College and for the remaining part in the College of Science, thus rendering it possible for the Professors in both the institutions to specialise in certain branches of their subjects. The present arrangement for the teaching of Botany and Geology through University Lecturers is admittedly defective, and it is a matter of constant complaint from students that they get inadequate assistance for the M.A. and M.Sc. courses. Even in regard to the College, that is affiliated in science subjects up to the M.A. or M.Sc. standards, the accommodation is, on the whole, inadequate. The Presidency College, in spite of its recent addition, has room only for a total of 31 students in Chemistry and 36 students in Physics, the number of admissions to the 5th-year Class being restricted to 13 and 18 respectively. This is inadequate to meet the growing demand for higher teaching in Science. Moreover, the Presidency College makes provision for comparatively small sections of the courses prescribed. There are important alternative groups, for which no provision has been, and can be made." Thus, on the 1st of September, 1916, the University Post-Graduate Classes had on their rolls the following number of students:—

	5th-Year.	6th-Year.
English	239	142
Mathematics	209	71
Philosophy	119	75
History	101	67
Economics	72	41
Sanskrit	13	9
Pali	1	1
Arabic	2	4
Persian	4	3

20. The Officiating Secretary to the Government of India, Education Department, in a letter addressed to the Registrar, dated the 14th October, 1915, criticised the provision for Post-Graduate instruction made by the University in these words: "The Government of India are doubtful how far the lines hitherto followed are suitable as a permanent system, which appears already to have done more than supplement the teaching in constituent colleges. They think that further developed work would supplant rather than supplement higher work in Colleges,

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and are unwilling to see the better equipped Colleges thus crippled in the scope of their work and are doubtful of the wisdom of the policy whereby the University would appear to enter into permanent competition with its own institutions."

21. In 1916, a Committee was appointed by the Government of India, as has been previously stated, to review the arrangements for Post-Graduate Teaching in Calcutta. On the 12th December, 1916, the Committee presented a unanimous report to the Government, which forwarded it to the University for criticisms. The matter was discussed by the Senate on the 17th March, the 31st March, the 14th April, and the 16th April, 1917, and the Senate outlined a scheme for the consolidation of Post-Graduate studies in Calcutta.

22. The views of the University were communicated to the Government of India, in a letter, dated the 30th May, 1917, which will be found quoted in Appendix III. The Regulations thus adopted by the Senate were ultimately sanctioned by the Government of India on the 26th June, 1917.

23. The system of centralisation of the Post-Graduate studies in Calcutta introduced in 1917 came up for consideration by the Calcutta University Commission, and the Commission made a proposal for the unification of the resources of the University and the Colleges in regard to both Under-Graduate and Post-Graduate work in the Faculties of Arts and Science. In Chapter LI, paragraphs 54 and 55, the Commission observed as follows :

"The Post-Graduate scheme described in Chapter XV is carried on at a cost of more than 5 lakhs of Rupees, of which Rs. 1,25,000 is derived from lecture fees. The Government of India has contributed towards the cost first by founding three chairs and two readerships at an annual cost of Rs. 40,000; and secondly, by a grant for the post-graduate classes in general of Rs. 15,000. The balance, more than half of the total, is taken from the general funds of the University, which are in fact derived almost wholly from the profits on examinations. Fees at the Matriculation, Intermediate and B.A. examinations have been increased in order to meet these charges. The 138 full-time University lecturers who provide the bulk of instruction are paid salaries, varying in amount, which average Rs. 225 *per mensem* or £180 *per annum*. The funds do not permit these salaries to be increased, nor is any superannuation scheme provided; it is consequently difficult to retain the services of some of the abler teachers. It would demand an additional expenditure of about 1½ lakhs to increase the average salary to Rs. 300; which

is not excessive for the grade of work, seeing that we have suggested Rs. 200 as the average for those of the college teachers who are not heads of departments.

“If our proposals are carried into effect, and if the colleges are enabled to equip themselves on the scale proposed, a very large proportion, if not the whole body, of post-graduate students, would ultimately be members of the colleges and identified with their corporate life, and it may be asked whether this ought not to affect the question of making grants to a central teaching organisation which would then be no longer necessary on the same scale. But the existing post-graduate scheme will have to be continued until the new scheme is brought into working order, and help is needed for this purpose. Moreover, when the time for the change comes, and the system of co-operative teaching is established, the need for substantial funds at head-quarters will be not less than it now is, though these funds would then be used in a different way. To some extent they would have to be employed for paying supplementary allowances to college teachers for doing university work, or to the colleges themselves in order to enable them to obtain additional teaching strength. The teaching strength of the colleges by themselves, even on the scale we have defined, would be insufficient. We have allowed for only one teacher to every 25 students. It is a low proportion. The proportion suggested for Dacca is one to fifteen. And if the whole of the existing university staff were distributed among the Colleges in Calcutta, the proportion would still be only one to seventeen. The truth is that the teaching strength engaged in university work in the University and colleges taken together is not nearly great enough to do justice to the number of students; it will not be unduly great even if the existing university staff is maintained at full strength, and combined with college staffs planned on the scale we have suggested. We, therefore, recommend that the sum of $1\frac{1}{2}$ lakhs should be provided for the strengthening of the existing post-graduate staff, with a view to its being ultimately employed to strengthen the college staffs by means of University payments to ‘appointed’ teachers when the new system comes into operation.”

CHAPTER III.

PRESENT POSITION OF THE POST-GRADUATE DEPARTMENT.

24. In the foregoing pages of our report, we have given a survey of the organisation and development of the Post-Graduate Department from the passing of the Universities Act till the year 1917. In that year, as already observed, the Senate, on the recommendation of the Committee appointed to consider the question of the arrangements for Post-Graduate Teaching in the University of Calcutta, framed a set of regulations embodied in Chapter XI of the University Regulations, which received the sanction of the Government of India on the 26th June, 1917. According to these Regulations, Post-Graduate Teaching in Calcutta was henceforth to be conducted only in the name and under the control of the University. The control was to be exercised by two Councils, *viz.*, (1) Council of Post-Graduate Teaching in Arts, and (2) Council of Post-Graduate Teaching in Science. On these two Councils were to sit all teachers appointed under Section 3 as also those who, on the date of commencement of these Regulations, were engaged either under the University, or in an affiliated College in Calcutta, in Post-Graduate work in Arts or Science, as the case might be. On the Council would also sit all Heads of Colleges in Calcutta affiliated up to the B.A. or the B.Sc. standard. Besides these teachers, the Post-Graduate Councils in Arts and Science were also to include 4 Members annually appointed by the Senate and 2 Members annually appointed by the Faculty of Arts or the Faculty of Science, as the case might be. The Council was vested with authority subject to the ultimate control of the Senate to deal with all questions relating to the organisation and management of Post-Graduate Teaching in Calcutta. The President of each Council was to be annually elected by the Council concerned. Each of these bodies was to have an Executive Committee annually elected by the Teachers in the various branches of studies. On each of these were to sit two Members selected by the Senate from its nominees on the Council and one Member selected by the Faculty concerned from its nominees on the Council. The Executive Committee was to receive and consider the results of Examinations, reports from the Boards of Studies

as to the progress made in their respective subjects and was to exercise such supervision and give such directions as might be necessary to ensure regularity of work and maintenance of discipline among the students. The President of the Council concerned was to be the *ex-officio* President of the Executive Committee. Boards of Studies were to be constituted annually in the subjects mentioned in Section 8 of Chapter XI of the Regulations. On the Boards of Higher Studies were to sit all the Teachers as also three persons selected by the Councils from amongst their Members. Each Board of Higher Studies was authorised to co-opt two gentlemen engaged in Post-Graduate teaching in the subject concerned in places outside Calcutta. Each Board of Higher Studies was to elect its Chairman from year to year. It became the duty of the Chairman of each Board to supervise generally the teaching arrangements in that Department, and to ensure compliance with the resolutions of the Board, the Executive Committee, and the Council in that behalf. The duties of the Boards of Higher Studies in each subject were set out in Section 12 and Section 22 of Chapter XI of the Regulations. In Section 13 and Section 23, provision was made for the framing of the Budget for the Department concerned. Provision was also made for the appointment of two salaried and whole-time Secretaries to the Councils and their Executive Committees, the appointment to be made and the salary fixed by the Senate, upon the recommendation of the Councils through the Syndicate, with the remarks of the Syndicate, if any. According to these Regulations, the proceedings of the Boards of Higher Studies were to be subject to confirmation by the Executive Committees, of those the Executive Committees were to be subject to confirmation by the Councils, and those of the Councils were to be subject to confirmation by the Senate.

In Section 32 the powers of the Local Government over the appointments of the teaching staff were specifically indicated. According to Section 45 the expenses of the Post-Graduate Studies were to be met from a fund to be called the Post-Graduate Teaching Fund, to which annually were to be credited (a) grants from the Government and benefactions made specifically for this purpose by donors, (b) fees paid by students in Post-Graduate Classes, (c) one-third of the fees realised from the candidates for the Matriculation, the I.A., the I.Sc., the B.A., and the B.Sc. Examination, and (d) such other sums as the Senate might, from time to time, direct. In Section 46, the powers conferred on the Councils, the Executive Committees, and the Boards of Higher Studies were to be exercised by those Bodies

respectively, in the manner and subject to restrictions prescribed in Chapter XI, and such power was not to be exercised by any other bodies in the University.

25. Pursuant to these Regulations, Boards of Higher Studies have been constituted in Arts in the following subjects :—

(1) English, (2) Sanskrit, (3) Pali, (4) Arabic and Persian, (5) Comparative Philology, (6) Mental and Moral Philosophy, (7) Experimental Psychology, (8) History, (9) Political Economy and Political Philosophy, (10) Commerce, (11) Pure Mathematics, (12) Anthropology, (13) Indian Vernaculars.

Similarly, Boards of Higher Studies have been constituted in Science as follows :—

(1) Applied Mathematics, (2) Physics, including Applied Physics, (3) Chemistry, including Applied Chemistry, (4) Botany, (5) Physiology, (6) Zoology, (7) Geology.

26. A careful examination of the provisions of Chapter XI, concerning the organisation of the Post-Graduate Departments, will clearly establish the desire of the framers of these Regulations to leave all questions relating to study and research in the hands of persons actually engaged in teaching. Secondly, co-operation was to be established between the Colleges and the University, as the result of which not only did the members of the different Colleges in Calcutta, engaged in Post-Graduate work become *ipso facto* University Teachers, but also the Principals of all such Colleges were given a voice in the management and control of these Departments.

27. We have, it should be observed, already considered the question of amending Sections 12, 13, 22 and 23, of Chapter XI of the Regulations. They formed the subject matter of an *ad interim* report, which was sanctioned by the Government of Bengal on the 28th January, 1925, and ran as follows :

“ We, the members of the Committee appointed by the Senate to consider and report on the working of the Post-Graduate Department, beg to submit the following *interim* report :

I. We recommend that clause (d), Section 12 and clause (d), Section 22, Chapter XI of the Regulations be deleted and that a new section under the heading “ Appointments Board ” to be numbered as Section 23A, be added as follows :

“ All questions relating to appointments, tenure, pay, terms and conditions of service, regarding the teaching staff under Chapter XI shall be referred by the Executive Committee of the Post-Graduate Council concerned to an Appointments Board which shall hold office till 30th June, 1926, or for

such short period, after that date, as the Senate may think necessary. The Appointments Board shall be constituted as follows :

- (1) Vice-Chancellor, *President, ex-officio* ;
- (2) President of the Council concerned, *i.e.*, the President of the Post-Graduate Council in Arts in the case of an appointment in Arts Department and the President of the Post-Graduate Council in Science in the case of an appointment in the Science Department ;
- (3) Chairman of one of the Boards mentioned in Sections 8 and 18 in case of an appointment relating to that particular Board ;
- (4) One representative of the Board of Higher Studies concerned ;
- (5) & (6) Two representatives of the Executive Committee concerned ;
- (7) One representative of the Faculty of Arts in the case of an appointment in the Arts Department and one representative of the Faculty of Science in the case of an appointment in the Science Department ;
- (8) & (9) Two representatives of the Syndicate one of whom shall be the Head of or a Professor in an affiliated College ;
- (10) & (11) Two representatives of the Senate one of whom shall be the Head of or a Professor in an affiliated College ;

Provided that the two representatives of Affiliated Colleges, mentioned in the above two clauses, shall not be members of the staff of one and the same college ;

- (12) President of the Board of Accounts.

The quorum for a meeting of the Appointments Board shall be fixed at 8.

The Appointments Board shall, whenever possible, co-opt not more than two members, not being members of the Senate and not in receipt of any salary from the University, on the ground of their special knowledge of, or interest in, the subject or subjects in which appointments shall be made by the said Board. The function of such members shall be to give advice, but they shall not vote at meetings of the said Board.

The Board of Higher Studies concerned shall recommend not more than two names for each of the appointments under the Board, as sanctioned by the Senate, to the Executive

Committee of the Post-Graduate Council in Arts or Science, as the case may be, who shall thereupon consider such proposal and forward the name or names to the Appointments Board with its observations, if any :

Provided always that the Executive Committee shall have the right to propose one additional name for each appointment, if it deems necessary.

The final selection shall then be made by the Appointments Board whose choice shall not be limited by the recommendation or recommendations of the Board of Higher Studies or Executive Committee, but it shall be subject to confirmation by the Senate which shall have the power to send back the name or names proposed to the Appointments Board for review.

In case any Board of Higher Studies desires the creation of a new post not sanctioned by the Senate or not provided for in the Budget or in the case of abolition of any post, the Board of Higher Studies concerned shall make its recommendations to the Executive Committee who shall thereupon consider such proposal in consultation with the Board of Accounts and forward its recommendation to the Senate for necessary orders. Provided always that the Executive Committee of the Post-Graduate Council concerned may also recommend the creation of a new post in consultation with the Board of Higher Studies concerned."

II. We further recommend that Sections 12 and 22 be modified, as indicated below :—

(1) The word "initiate" will have to be replaced by "make."

(2) Proceedings of the Boards of Higher Studies shall be subject to confirmation, revision or modification by the Executive Committee which shall also have the power to send such proceedings back to the Board of Higher Studies for further consideration.

(3) Proceedings of the Executive Committee, except as otherwise provided for, shall be subject to confirmation, revision or modification by the Council which shall also have the power to send such proceedings back to the Executive Committee for further consideration.

III. Sections 13 and 23 should, in our opinion, be revised as follows :

Each Board of Higher Studies shall, not less than six months before the termination of the academic session, formulate the requirements of its special department during the ensuing

session, together with an estimate of the probable financial cost. The Executive Committee shall thereupon scrutinise the said requirements and elect a Committee called the Budget Committee consisting of the President and three members of the Executive Committee who shall in consultation with the University Board of Accounts prepare a consolidated Budget. The Budget shall then be placed before the Council for such observations as it may make. The Budget, thereafter, should be forwarded to the University Board of Accounts to be laid with their comments thereupon before the Senate.

SENATE HOUSE,

The 1st December, 1924.

W. E. Greaves (*Vice-Chancellor*).

Nilratan Sircar.

Herambachandra Maitra.

Upendranath Brahmachari.

Girishchandra Bose.

H. E. Stapleton.

S. C. Mahalanobis.

Paul Brühl.

Jnanachandra Ghosh.

J. R. Banerjee.

W. S. Urquhart.

B. C. Roy.

R. N. Gilchrist.

D. R. Bhandarkar.

P. N. Banerjee.

Pramathanath Banerjee.

Syamaprasad Mookerjee."

28. Ever since the undertaking of teaching work by the University and the development of education in this province, the number of students reading for various branches of studies in Arts and Science has gone up, and, during the present session we have on our rolls about 1,018 students reading for the Arts Degree, and 225 students reading for the Science Degree up to the M.A. and M.Sc. standards. Besides these students, the University has undertaken the teaching of Pali, Arabic and Persian, Experimental Psychology, Commerce and Anthropology in the Department of Arts, and Zoology and Physiology in the Department of Science up to the B.A. and B.Sc. standards respectively.

The following list of students in the two Post-Graduate Departments of Arts and Science will be instructive:

List of Students in the Post-Graduate Department.

ARTS.

	1920-21.			1921-22.		
	5th-year	6th-year	Total	5th-year	6th-year	Total
English ...	313	228	541	240	158	398
Sanskrit ...	25	25	50	12	16	28
Pali ...	5	3	8	4	2	6
Arabic ...	5	4	9	6	3	9
Persian ...	5	4	9	3	4	7
Comparative Philology ...	4	1	5	2	1	3
Indian Vernaculars ...	32	20	52	16	16	32
Philosophy ...	85	62	147	53	43	96
Experimental Psychology ...	11	4	15	3	2	5
History ...	109	54	163	57	59	116
Anthropology ...	20	...	20	19	9	28
Economics ...	104	68	172	51	63	114
Pure Mathematics ...	71	37	108	49	35	84
Ancient Indian History ...	26	21	47	18	17	35
Commerce ...	...	...	...	110	...	110
	515	531	1,346	643	428	1,071

List of Students in the Post-Graduate Department—contd.

ARTS—contd.

	1922-23.			1923-24.		
	5th-year	6th-year	Total	5th-year	6th-year	Total
English ...	198	185	383	209	164	373
Sanskrit ...	15	10	25	20	15	35
Pali ...	3	4	7	6	2	8
Comparative Philology ...	1	2	3	4	1	5
Arabic ...	5	4	9	6	3	9
Persian ...	2	4	6	3	2	5
Indian Vernaculars ...	16	15	31	18	14	32
Philosophy ...	25	38	63	44	20	64
Experimental Psychology	6	3	9	10	4	14
History ...	48	44	92	66	43	109
Ancient Indian History and Culture ...	9	18	27	32	6	38
Economics ...	72	52	124	75	59	134
Pure Mathematics ...	55	37	92	70	44	114
Anthropology ...	11	12	23	11	10	21
Commerce ...	65	90	155	85	58	143
	531	518	1,049	659	445	1,104

List of Students in the Post-Graduate Department—contd.

ARTS—concl'd.

	1924-1925.		
	5th-year	6th-year	Total.
English	147	128	275
Sanskrit	14	13	27
Pali	3	4	7
Comparative Philology	1	1	2
Arabic	8	5	13
Persian	4	1	5
Indian Vernaculars	19	7	26
Philosophy	31	34	65
Experimental Psychology	4	6	10
History	77	44	121
Ancient Indian History	28	22	50
Economics	93	53	146
Commerce	51	58	109
Pure Mathematics	82	54	136
Anthropology	20	6	26
	582	436	1,018

List of Students in the Post-Graduate Department—contd.

SCIENCE.

	1920-21.			1921-22.		
	5th-year	6th-year	Total	5th-year	6th-year	Total
Applied Mathematics ...	27	22	49	17	14	31
Physics ...	23	26	49	30	18	48
Chemistry ...	27	26	53	28	20	48
Botany ...	4	1	5	6	4	10
Physiology ...	6	6	12	7	6	13
Geology ...	6	3	9	6	6	12
Zoology ...	9	1	10	5	2	7
Applied Chemistry ...	12	2	14	16	10	26
	114	87	201	115	80	195

List of Students in the Post-Graduate Department—contd.

SCIENCE—contd.

		1922-23	1923-24	1924-25
Applied Mathematics.	Fifth-year	... 11	Fifth-year ... 19	Fifth-year ... 11
	Sixth-year	... 11	Sixth-year ... 8	Sixth-year ... 14
Physics.	Fifth-year	... 32	Fifth-year ... 32	Fifth-year ... 51
	Sixth-year	... 26	Sixth-year ... 23	Sixth-year ... 32
Chemistry.	Fifth-year	... 26	Fifth-year ... 27	Fifth-year ... 27
	Sixth-year	... 27	Sixth-year ... 21	Sixth-year ... 27
Applied Chemistry.	Fifth-year	... 19	Fifth-year ... 13	Fifth-year ... 13
	Sixth-year	... 16	Sixth-year ... 12	Sixth-year ... 10
Botany.	Fifth-year	... 6	Fifth-year ... 8	Fifth-year ... 3
	Sixth-year	... 4	Sixth-year ... 4	Sixth-year ... 5
Physiology.	Fifth-year	... 5	Fifth-year ... 7	Fifth-year ... 7
	Sixth-year	... 7	Sixth-year ... 4	Sixth-year ... 7
Geology.	Fifth-year	... 3	Fifth-year ... 5	Fifth-year ... 5
	Sixth-year	... 6	Sixth-year ... 3	Sixth-year ... 5
Zoology.	Fifth-year	... 5	Fifth-year ... 4	Fifth-year ... 4
	Sixth-year	... 3	Sixth-year ... 3	Sixth-year ... 4
Fifth-year		... 107	115	121
Sixth-year		... 100	78	104
TOTAL		... 207	193	

A consideration of these figures will make it absolutely clear that it is impossible for any individual college, with its existing resources, to meet all the requirements of this large number of students taking up various subjects of studies with their ramifications.

29. The Post-Graduate Department has undertaken the instruction and examination of subjects, which might roughly be subdivided into different papers, as indicated below :

(1) English, Groups A and B, includes 12 different papers, including the two papers on Essay.		
(2) Sanskrit, including Groups A-I	... 40	papers.
(3) Pali, including Groups A-D	... 20	"
(4) Arabic and Persian	... 16	"
(5) Comparative Philology	... 8	papers.
(6) Mental and Moral Philosophy	... 13	"
(7) Experimental Psychology	... 8	papers.
(8) History, including Ancient Indian History and Culture	... 56	different papers.
(9) Political Economy and Political Philosophy	... 19	papers.
(10) Commerce	... 40	papers (constituting 13 different subjects).
(11) Pure Mathematics	... 22	papers.
(12) Anthropology	... 10	"
(13) Indian Vernaculars	... 41	"
(14) Mathematics	... 18	"
(15) Chemistry	... 12	"
(16) Physics	...	.....
(17) Botany	...	.....
(18) Physiology	...	.....
(19) Zoology	...	.....
(20) Geology	...	.....

30. The list of text books, prescribed for 1925-26, in each of these subjects, for the M.A. and the M.Sc. Degrees will be found in the University Calendar.

31. These subjects, including sub-divisions of subjects, are taught by University Teachers, who have been appointed under Chapter XI of the Regulations, and University Professors either appointed under Chapter IX of the Regulations or appointed under the various Deeds of Trust, executed in favour of this University by its benefactors. In the Departments of Arts and Science we have 135 and 45 teachers respectively. The names of these teachers, subject by subject, their academic distinctions, previous educational experiences, the terms of service in the University, their salaries, and the list of the original papers and books produced by each of them, will be found in the Appendix.

CHAPTER IV.

• THE FINANCIAL POSITION.

32. A review of the financial position of the University of Calcutta and the amount of money actually spent upon the Post-Graduate Departments in Arts and Science will be found in the Report of the Government Grant Committee appointed by the Senate on the 9th September, 1922. The Senate adopted the report on the 2nd December, 1922. Between the years 1907 and 1912 the University spent roughly speaking a sum of Rs. 56,904-4-6 for the promotion of higher teaching. Besides this, between the years 1905 and 1912 the University spent Rs. 8,50,972 for the purpose of erecting the Darbhanga Building and for acquiring the site. This was made up as follows :—

Contribution by the Maharajah of Darbhanga ...	Rs. 2,76,662
Contribution by the Government ...	,, 4,32,977
Contribution from the University funds ...	,, 1,41,334

Again the University purchased books and furniture for the University Library for which the Government of India made a grant of a lakh of Rupees.

The actual amount of money spent during the years 1912 to 1925 over the two departments is shown here :—

Post-Graduate Teaching in Arts.

YEAR.	Minto Professor of Economics.	Hardinge Professor of Higher Mathematics.	George V Professor of Mental and Moral Philosophy.	Garnichael Professor of Ancient Indian History and Culture.	University Professors and Lecturers.	Administration.	Library.	Furniture.	Stationery and Contingencies.	Scholarship.	Electric Expenses.	Provident Fund.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1911-12	9,000	...	...	...	...	...	...	...	...	...	...	...
1912-13	5,250	...	...	2,032	46,141	...	...	...	...	...	...	...
1913-14	5,935	9,950	5,000	12,000	66,289	...	...	...	...	...	...	...
1914-15	15,428	15,000	12,000	4,645	1,23,521	...	...	...	...	...	2,804	...
1915-16	14,573	15,000	12,900	...	1,32,580	...	...	...	...	...	2,607	...
1916-17	15,009	6,250	12,000	...	1,34,994	...	...	...	...	...	2,982	...
1917-18	15,000	7,185	12,000	10,967	2,15,966	8,003	5,517	1,508	722	...	3,306	...
1918-19	9,032	16,200	12,006	12,000	3,24,472	19,730	18,724	2,211	1,499	925	3,209	...
1919-20	4,839	16,200	14,750	12,000	3,28,645	28,286	20,759	1,170	2,180	4,163	6,024	3,621
1920-21	12,000	16,200	15,935	16,145	3,88,215	25,453	18,302	1,967	2,637	7,520	3,449	12,082
1921-22	11,006	14,800	12,504	16,500	3,67,330	28,745	6,915	692	4,691	7,715	3,276	10,416
1922-23	13,000	10,365	14,371	16,250	3,17,705	27,370	10,817	262	732	9,030	3,106	13,230
1923-24	13,000	12,000	13,350	15,000	3,99,300	30,000	9,250	725	1,350	8,750	3,500	11,000
* 1924-25	12,000	12,000	13,350	15,000	3,50,000	31,600	9,000	2,000	1,500	10,500	3,500	13,000
TOTAL	1,55,057	1,51,200	1,44,260	1,32,539	32,25,158	1,99,187	99,285	10,535	15,311	48,603	37,763	63,349
GRAND TOTAL											...	42,82,837

The above statement shows that the total expenditure on Post-Graduate Teaching in Arts up to the 30th June, 1925, has been Rs. 42,82,837. This sum was contributed as follows :

	Rs.
1. Government grant for three Professorships ...	4,51,331
2. Government grant for University Lecturers ...	1,95,000
3. Tuition fees from students ...	10,43,091
4. University funds ...	25,93,415
TOTAL Rs.	42,82,837

* Based on Budget Estimates.

University College of Science.

Year.	Palit Professors, Asst. Professors, and Assistants.	Ghose Professors, Demonstrators, and Draughtsmen.	Palit Research Scholars.	Ghose Research Scholars.	Professors, Lecturers, Laboratory Assistants, and Menials.	Books and furniture.	Physics Department.	Chemistry Department.	Applied Mathematics Department.	Botany Department.	Zoology Department.	Experimental Psychology Department.	Bio-Chemistry Department.	Workshop.	Gas and Electricity.	Buildings.	TOTAL.	Khaira Research Scholars.	Agriculture Department.	App. Physics Department.	App. Chem. Department.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1912-13 ...	...	...	...	...	1,977	...	...	...	...	...	...	...	...	...	...	...	1,977	...	...	...	...	...
1913-14 ...	...	2,829	...	...	3,600	567	...	11,130	...	...	...	...	...	...	...	29,135	47,261	...	...	...	...	...
1914-15 ...	...	22,080	...	1,575	3,600	...	...	1,575	...	...	...	...	...	...	...	2,32,621	2,61,451	...	...	...	...	...
1915-16 ...	...	25,200	5,525	3,675	1,986	...	...	23,030	...	...	...	...	...	...	...	34,201	93,617	...	...	...	...	...
1916-17 ...	13,573	25,200	11,750	6,600	9,844	6,995	23,375	11,261	10	...	...	3,041	2,988	...	968	33,966	1,49,571	...	...	...	...	...
1917-18 ...	28,106	25,200	4,525	5,475	39,590	2,293	51,375	47,016	10	23,374	6,000	3,639	1,366	13,352	1,818	52,518	3,05,657	...	...	...	...	...
1918-19 ...	29,917	24,074	4,791	5,591	81,866	8,303	12,863	23,420	156	30,500	12,132	1,463	11	665	2,275	11,263	2,49,290	...	...	...	...	...
1919-20 ...	32,940	24,000	5,725	4,836	71,012	12,235	18,910	14,688	62	9,018	16,153	2,161	2,532	121	2,389	2,836	2,19,618	...	...	...	...	...
1920-21 ...	34,947	41,658	5,425	4,875	1,00,460	8,472	17,207	26,171	1,384	14,678	6,845	4,268	1,245	5,045	3,527	4,400	2,80,623	...	...	...	...	...
1921-22 ...	37,921	44,663	3,950	7,682	86,083	4,597	6,267	21,926	96	21,149	1,312	10,580	52	1,438	3,971	1,403	2,53,090	...	...	...	...	...
1922-23 ...	38,117	43,650	4,675	6,938	88,296	8,360	5,093	15,226	5	3,453	7,291	3,660	997	1,415	4,598	8,668	2,40,442	1,575	1,484	3,935	9,768	2,57,204
1923-24 ...	39,420	45,721	5,375	8,260	74,089	3,925	6,865	9,233	64	3,249	6,320	2,162	2,514	1,952	5,063	2,718	2,16,950	525	545	9,585	5,998	2,33,608
Budget figures 1924-25 ...	36,500	49,896	5,550	10,800	90,194	9,630	7,000	7,000	100	3,645	6,000	3,500	2,000	4,900	4,000	30,000	2,70,715	1,800	869	6,500	6,000	2,85,884
TOTAL ...	2,91,441	3,74,171	57,291	66,307	6,52,597	65,377	1,48,955	2,11,676	1,887	1,09,066	62,053	34,490	13,705	28,888	28,629	4,43,729	25,90,262	3,900	2,898	20,020	21,766	26,38,846

The above statement shows that the total expenditure on the University College of Science and Technology up to the 30th June, 1925 has been Rs. 26,38,486. This sum was contributed as follows :

	Rs.
1. Contribution from the annual Government of India Grant of Rs. 65,000 . . .	1,56,000
2. Contribution from Sir Taraknath Palit Fund	4,27,732
3. Contribution from Sir Rashbehary Ghose Fund	6,33,338
4. Tuition fees from students	1,50,784
5. Contribution from the Fee Fund of the University	12,03,858
6. Contribution from Khaira Fund	66,774
TOTAL	Rs. . . 26,38,486

The two foregoing statements show that the total expenditure on Post-Graduate Teaching in Arts up to 30th June, 1925, will come to a figure of Rs. 42,82,837 and the total expenditure on the University College of Science and Technology up to the 30th June, 1925, comes up to Rs. 26,38,486. These sums were contributed as follows :

ARTS

Contribution from the Fee Fund or the University.	Contribution from the Government.	Contribution from Sir Taraknath Palit Fund.	Contribution from Sir Rashbehari Ghosh Fund.	Contribution from the Khaira Fund.	Tuition fee from students.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
25,93,415	6,46,331	...	...	...	10,43,091

SCIENCE

Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
12,03,858	1,56,000	4,27,732	6,33,338	66,774	1,50,784

33. There are 135 teachers in the Department of Post-Graduate Teaching in Arts. These include 10 University Professors, three of whom hold Chairs endowed by the Government and 48 part-time Lecturers of whom 25 are recruited from affiliated Colleges. The average monthly salary of a Professor is Rs. 675 per month and that of a whole-time Lecturer is Rs. 222.

There are 53 teachers in the Department of Post-Graduate Teaching in Science. These include 11 Professors, the average monthly salary of whom is Rs. 666. Among the rest there are 20 part-time Lecturers coming from affiliated Colleges. The average monthly salary of a whole-time lecturer in this Department is Rs. 207.

34. One conclusion which may be drawn from a study of these figures is that at present the Post-Graduate lecturers are, in general, paid much less than gentlemen of the same rank and position in the educational service of the Government, not to speak of other spheres of life. To quote a few concrete instances:

A gentleman (No. 51, page 336-37 of the Bengal Civil List for the period ending March, 1925) who passed his M.A. in 1912 is at present drawing a salary of Rs. 500 and has been put on the grade Rs. $250-300-\frac{40}{2}$ -500- $\frac{50}{2}$ -800.

Another gentleman (No. 56 of the same list) draws Rs. 460 and has similar prospects.

Another gentleman (No. 75 of the same list) who is at present officiating in the Indian Educational Service is getting Rs. 420 plus some allowances with equal prospects.

Gentlemen serving in the Post-Graduate Departments of the University with at least similar academic distinctions are getting on an average Rs. 300 with practically no prospects. The terms and conditions of service are far from encouraging. The appointments are renewable in many cases from year to year, seldom going beyond a term of 5 years. The result has been that a large number of men from these departments have not been able to resist attractive offers from other Universities, largely maintained out of public funds. A few facts will illustrate the point:

Dr. Rameshchandra Majumdar who was getting a salary of Rs. 425 in the year 1921 was appointed University Professor at Dacca on a salary of Rs. 600-1,000.

Mr. Mohitkumar Ghosh who was getting a salary of Rs. 350 was appointed University Reader at Allahabad on a salary of Rs. 500-40-800.

Dr. Juanendrachandra Ghosh who was getting a salary of Rs. 225 was appointed University Professor of Dacca on Rs. 1,000.

Mr. Satyendranath Bose who was getting a salary of Rs. 225 was appointed Reader of the University of Dacca on Rs. 600.

Dr. Meghnad Saha who was getting a salary of Rs. 600 was appointed University Professor at Allahabad on a salary of Rs. 800-50-1,250.

Dr. Radhakamal Mookerjee who was getting a salary of Rs. 350 was appointed University Professor at Lucknow on a salary of Rs. 1,250.

Dr. V. S. Ram who was getting a salary of Rs. 350 was appointed Reader in the Lucknow University on a salary Rs. 500-50-800.

Mr. Haridas Bhattacharjee who was getting a salary Rs. 250 was appointed Reader at Dacca on a salary of Rs. 700.

Dr. Sudhansu Kumar Banerjee who was getting Rs. 600 a month here, was appointed Director of the Kolaba Observatory (Bombay) on a salary of Rs. 1,200.

Mr. Bhujanga Bhushan Mookerjee who was sometime Assistant to the Minto Professor on a salary of Rs. 200 was appointed Reader at Lucknow on a grade of Rs. 500-50-800.

Examples could be multiplied, but those given above are sufficient to illustrate the point that unless some efforts are made for the stabilisation of the Departments, the University will find it difficult to maintain an efficient staff of teachers in future.

35. Ever since the year 1919, the University has been making strenuous efforts to meet its recurring liabilities by increasing examination fees. The decision of the Senate, dated the 14th June, 1919, reaffirmed on the 19th March, 1921, which formed the subject-matter of lengthy correspondence between the University on the one hand and the Government of India and Government of Bengal on the other, was followed by the ultimate rejection of the proposals for raising the fees for the Matriculation and Intermediate Examinations; thus the University has been obliged to go up to the Government for grants from the public funds at their disposal.

CHAPTER V.

RECOMMENDATIONS.

36. We have in our report considered very carefully the existing staff, its uncertainty of tenure and of prospects, and its difficulties. We have also considered the question of a closer co-operation between the College staffs and the whole-time teachers of the University and we have come to the following general conclusions :

(1) A fundamental principle of procedure should be that whenever there is a vacancy in the staff in any department, the University should make enquiries from the authorities of the different Colleges in Calcutta and its neighbourhood as to whether the work can be undertaken by one or more members of their staffs under conditions indicated by the University. Enquiries should also be made whether such work can be undertaken either wholly or in part by others.

(2) The University teachers shall be graded as follows :

(i) University Professors, excluding holders of endowed Chairs, should draw a salary of Rs. 600- $\frac{5}{2}$ -1,000.

(ii) University Lecturers should draw a salary of Rs. 200-25-500. A limited number of Special Grade University Lecturers should also be appointed on a salary of Rs. 500-25-700; no department will, however, have more than two such appointments.

(iii) Assistant Lecturers and Demonstrators to draw a salary of Rs. 125-15-200.

In special cases the Board of Appointments may appoint a Professor or a Lecturer or an Assistant Lecturer or a Demonstrator on a salary higher than the initial salary mentioned above.

(3) The whole-time Lecturers shall be divided into two classes, namely, whole-time officers in grade and whole-time officers outside the graded service. After any cases of inefficiency have been considered and disposed of by the Appointments Board, the graded whole-time officers, already in service, should, as a rule, be appointed for a further term of five years for the present, and they shall be eligible for re-appointment. Whole-time officers not included in the grade should be appointed for a period of not less than one and not more than five years, at the discretion of the Appointments Board.

Those of the whole-time teachers of the University, already employed, whose services the Board of Appointments is unable to recommend for continuance, may be given a gratuity not exceeding the salary for twelve months, the exact amount to be determined in each case by the Appointments Board, due regard being had to the length of service and general competency of such incumbents.

(4) The part-time men from Colleges should be appointed for a period of two years, on an honorarium varying from Rs. 50 to Rs. 250 at the discretion of the Appointments Board.

(5) Those who during their tenure of office are irregular in attendance or inefficient in work or guilty of conduct incompatible with their position as University teachers, will be liable to have their services dispensed with or their increments stopped. Some provision to this effect should be embodied in the letter of appointment.

37. In cases of new appointments to the whole-time staff other than a Professor, a person should ordinarily be on probation for a period of two years and Assistant Lecturers should not at the time of their first appointment to Post-graduate work be appointed for a period extending beyond two years. Such Assistant Lecturers may be reappointed for a further term.

38. In special cases the designation of a University Professor may be conferred by the Senate, on the recommendation of the Executive Committee concerned, upon a University Lecturer, whole-time or part-time, irrespective of the salary or the honorarium which he might receive from the University.

39. Excepting in cases where a University Professor is Chairman of the Board of Studies, each subject should be placed under a Professor or a senior University Lecturer for the purposes of organising teaching work.

40. We desire to make recommendations with a view to the establishment of a class of extra-mural lecturers. In doing so we have taken into account the considerable body of opinion which has been found to exist amongst some of the members of the Committee, and especially amongst those more closely associated with the Colleges in Calcutta, in favour of a fuller participation by the Colleges in the Post-Graduate work of the University. They feel that without more effective participation the Colleges can hardly have that important place in the University to which they legitimately aspire.

Some of the members here desire to point out that, although the Committee appointed by the Government of India in 1916 presented a unanimous Report in favour of the abolition of the

post-graduate work of the different colleges in Calcutta, these Colleges, with the exception of the Presidency College, were unrepresented on the Committee.

We have been impressed by the desirability of maintaining a close connection between under-graduate and post-graduate work. This point of view was also strongly emphasized by the Sadler Commission, who deprecated any breach of continuity in the association between master and pupil from the time the latter joins the College until he completes his academic career. The Report of the Commission (Vol. IV, p. 244) contains the remark, "It is unhealthy that any sharp line of division should be drawn between the higher and the lower teaching work of the University. It is equally disadvantageous that a system of more advanced instruction should be built up at the expense of under-graduate teaching which is the foundation of nearly all advanced work."

We recognise that it is neither desirable nor practicable that fully equipped and independent centres for post-graduate work should be set up in the different Colleges, and they further recognise that the Colleges, for the most part, have not at present the resources which would enable them to provide such centres. But we feel that it should be possible to make arrangements in connection with the present system under which there will be both a closer association with the Colleges and a fuller employment of their resources.

Further, although we have recommended at the beginning of the Chapter that whenever there is a vacancy in the staff in any department, the University should make enquiries from the authorities of the different colleges in Calcutta and its neighbourhood as to whether the work can be undertaken by one or more members of their staffs under conditions indicated by the University, yet, we feel, if fitting treatment is, as ought to be the case, given to the holders of existing appointments, the process of introducing those who may be available as part time lecturers will necessarily be slow; in any case such a method will not absorb all the members of College staffs who are capable of taking part in Post-graduate instruction.

Further, it may also be difficult for the Colleges to permit a man to undertake so much of the Post-graduate work as would justify his appointment as a Post-graduate lecturer under Section 3 (c), Chapter XI, whereas such a person may be available for, and anxious to undertake a lesser quantity of work. Moreover, on the one hand it might be inconvenient for him to lecture outside his own College and on the other hand it might not be possible to

arrange for students' attendance at compulsory classes away from the University buildings. But the plan we suggest will enable lecturers who are specially qualified in some branch of a subject and who are approved by the University to deliver a certain number of lectures in their own College. Those lectures would be open both to their own Post-graduate students and also to other Post-graduate students who may care to attend. The arrangements we propose would make such lectures effective for percentage purposes, and the safeguards we suggest would secure that they would not supersede or render nugatory lectures delivered at the University.

The proposed scheme will apply to such Post-graduate studies, as English, History, Philosophy, Sanskrit and Economics. In these subjects the number of students is sufficiently large to permit of a certain amount of independent work, which will introduce a healthy stimulus. At the same time there will be no danger of any such unhealthy rivalry between self-contained institutions as was occasionally a feature of the situation as it existed before 1917. In this connection we may observe that in some of the foremost Universities of the world it is a recognised principle that the student should have a large amount of choice as to the lectures he will attend.

41. We therefore propose that the existing regulations should be amended by the insertion of the following clause in Chapter XI, Section 3 after existing clause (c).

"Teachers in Colleges whose attainments specially qualify them for Post-graduate work, and who shall be recognised by the University as Extra-Mural lecturers."

We suggest that the following explanatory clause be added to follow Section 3 :—

"Extra-mural lecturers shall be recommended annually by their Colleges for recognition by the University. Such recommendations, along with a statement, showing, at the time of the first recognition, their qualifications, and outlining the proposed course of lectures for the ensuing session, shall reach the University not later than February 1st in each year. Such proposals shall be placed before the Board of Higher Studies and the Executive Committee concerned, the selection to be finally made by the Board of Appointments. Lecturers thus recognised by the University shall undertake to deliver in their own Colleges a minimum of 20 lectures in each session, and such lectures shall be open both to the Post-graduate students of the College concerned and to such other Post-graduate students as may desire to attend. Attendance at such lectures shall not be obligatory but shall be reckoned as alternative to not more than

20 per cent. of the total number of lectures delivered by the University professors or lecturers appointed under Section 3 (a), (b) (c) and (d) and to this extent shall be regarded as constituting part of the regular course of study qualifying for admission to the M.A. or M.Sc. Examination. The question of remuneration of such lecturers and tuition fees to be paid by students who attend such lectures, shall be settled by the Executive Committee in consultation with the Colleges."

42. Our recommendations, in respect of the requirements of the different departments, it should be noted here, will not prevent the Board of Appointments from appointing any lecturer, who is working under one Board and is being paid under it, to deliver lectures on cognate subjects in another department, provided the University has not thereby to incur any additional financial liability.

43. Pursuant to a request from the Government of Bengal, we held a joint meeting with the Presidency College Re-organisation Committee; the following resolutions were arrived at, as indicating the future relationship to be established gradually between the staff of the Presidency College, and the Post-Graduate Department :

(i) That in regard to science subjects, the principle of alternative attendance should be fully recognised, so as to make it possible to recognise individual teachers in the Presidency College as extra-mural lecturers who are regarded as fully qualified by the University and for whom no room on the University staff is at present available.

(ii) That the University accept the collaboration of the Presidency College with Post-graduate work, as vacancies occur, to the extent of the work of a whole-time lecturer in the subjects of English, Sanskrit, Arabic, Philosophy, History, Mixed Mathematics and Economics, due regard being had to proper qualifications and to the claims of other colleges.

44. The Committee has been impressed by the volume of opinion which exists amongst some of its members in favour of the method of teaching in which the chief initiative for acquiring knowledge should largely rest with the students themselves; so far as teaching is concerned the teacher's work will be not so much to lecture as to guide, help and advise the students in their work. This should be the ideal to be aimed at; although some of the members feel that unless and until the system of study which sometimes prevails at present in the under-graduate classes, is thoroughly reorganised, this ideal cannot fully be realised.

45. As regards the question of under-graduate instruction in the University, we adopted the following resolution :

“ While there must be subjects more appropriately taught in a central institution the University should in general regard under-graduate work as of a temporary character and as supplementary to the work of Colleges. It is also necessary to make proper arrangements for the organisation and supervision of the under-graduate classes.

46. As regards the Provident Fund instituted for the benefit of whole-time University teachers, we recommend that the contribution of the University and of the University teachers will be $8\frac{1}{2}$ per cent. in each case. We further propose Government should be approached with a request that necessary steps may be taken so that the contributions to the Fund are exempted from the Income Tax.

47. We considered the cases of each of the Higher Boards of Studies separately ; and our recommendation on the number of appointments to be attached for the present to each Board is set out below :

English.

48. The department of English claims the largest number of students in the scheme of Post-graduate studies. “ It is not necessary for our present purpose to speculate on the psychology of what appears to be an undesirable fact, *viz.*, the intense desire of no less than two-fifths of such of our graduates as find it practicable to undertake a course of Post-graduate studies, to secure a deeper and wider acquaintance with English literature than they had found possible in their undergraduate days.” (Statement on the Post-graduate studies by Sir Asutosh Mookerjee, October, 1920.)

The scheme of studies in the department of English has been set out on pages 186-87 of the Regulations, and pages 740-41 of the University Calendar. In this subject there are two groups known as (A) and (B), one predominantly literary, the other chiefly linguistic. The Regulations prescribe that eight papers are to be set in each subject for the M.A. and M.Sc. Examinations. In the case of English, four of these papers have to be taken up by all candidates. The four others to be taken up by candidates for group A are fundamentally distinct from those specially designed for B group candidates. Provision has consequently to be made for imparting instruction in subjects covered by twelve papers.

The following table will show the number of students taking up English in the Post-graduate department from 1917 to 1925. Column 2 shows the budget grants per month :

		Budget grant p.m. Rs.
1917-18	V—301 } VI—172 }	4,775
1918-19	V—300 } VI—221 }	4,425
1919-20	V—322 } VI—249 }	4,750
1920-21	V—241 } VI—208 }	4,300
1921-22	V—258 } VI—203 }	4,450
1922-23	V—198 } VI—185 }	3,450
1923-24	V—209 } VI—164 }	3,400
1924-25	V—147 } VI—138 }	3,750

The staff employed for the teaching of these students is seventeen, including the University Professor and the Khaira Professor of Indian Phonetics. The latter takes part in the work of this Department without any additional remuneration. Thus in English, besides these two Professors, we have eight whole-time lecturers, and seven part-time lecturers, of whom four are members of the staffs of Colleges affiliated to the University.

The representatives of the Board appeared before us and suggested the creation of a new group of three more papers consisting of (i) Comparative Literature, (ii) Literary Criticism, and (iii) Social History of England. This, the Board thought was necessary from an academic point of view. The undertaking of further responsibilities, the Board frankly admitted, involved the appointment of a fresh batch of teachers. In view of the present financial condition of the University, we regret we are unable to give effect to the suggestions made by the Board in this matter.

With regard to the adequacy of the staff, it was pointed out to us by some of the witnesses that the staff might be reduced (i) if the number of lectures was cut down and if more attention was paid to the Tutorial System. The Board, however, was of opinion that if the number of lectures was reduced to fifteen lectures per week, instead of eighteen to twenty as at present and if tutorial batches of ten students for

each were arranged, the number of teachers required would instead of being reduced go up to thirty. The staff of the Presidency College through Mr. Stapleton presented a memorandum, and one witness from that college put forward before us the view that eleven lectures for group A and nine for group B, instead of twenty-one for group A and eighteen for group B as at present per student, in addition to tutorial exercises once a fortnight, in batches of fifteen, would necessitate the appointment of a teaching staff of fifteen members.

(ii) It was also suggested before us that the staff might be reduced if the admission to the Post-graduate classes was limited to (a) Honours students or to (b) students who had read up to the Honours standard, or (c) students who passed a preliminary qualifying test. This view found its chief support from the staff of the Presidency College, which before 1917 limited the number of admissions owing to various reasons to about thirty students for the fifth year and the same for the sixth year classes. The following list of graduates who passed the B.A. Examination with Honours in English year by year will throw some light on this question :

1917	...	...	...	...	134
1918	...	...	...	...	96
1919	...	...	...	...	163
1920	...	...	...	...	109
1921	...	...	...	...	200
1922	...	...	...	...	135
1923	...	...	...	...	126
1924	...	...	...	...	105

It must be remembered that many of the colleges in Bengal and in particular the mofussil colleges are not affiliated up to the B.A. (Hon.) standard in English. Experience as to the adequacy of the knowledge of English on the part of Pass students apparently varies, and one of the witnesses stated before us that sometimes Pass students excel Honours students. With regard to the imposition of a qualifying test, we do not know whether it will be academically sound to impose further tests upon a candidate already harassed by examination tests prescribed in this University.

On a consideration of the evidence on the point, the requirements of the department, the existence of a whole-time staff, and the inadequacy of the training of the students, as also the necessity for having a fairly large number of men adequately trained in English for nearly a thousand schools within the jurisdiction of this University, we beg to recommend that the strength of the teaching staff in English should, for the present,

be the equivalent of eleven whole-time men, to be distributed as follows:—

Eight whole-time men excluding the University Professor of English, plus at least seven part-time men of whom not less than five shall be recruited from the staffs of the affiliated colleges.

A minority of the committee think that the department could be worked with six whole-time teachers and the part time staff suggested above.

Pali.

49. We have to consider next the question of teaching arrangements for the department of Pali. In this department the University has made provision for instruction in subjects covered by 20 papers in the M.A. Course including 4 different groups. Group A is mainly literary. Group B deals with Pali Philosophy, Group C with Epigraphy and History, and Group D is devoted to Mahayana Literature and Philosophy. Besides this, the University has undertaken the teaching of Pali to the undergraduate classes. Thus though we have 3 students in the Fifth Year Class and 5 in the Sixth Year Class, we have made teaching arrangements for 158 undergraduate students. This work is, at present, done by six whole-time Lecturers, two part-time Lecturers, and one Assistant; these include two Lecturers who are Buddhist monks. The work of the department is also aided by three part-time Lecturers co-operating from the other departments of study who deliver only a limited number of lectures. Out of this list of eleven teachers, seven Lecturers co-operate in the working of other departments of study in the University.

The Board of Higher Studies asked for the services of 8 full-time men and 2 Instructors and desired co-operation from the departments of Sanskrit, Ancient Indian History and Culture and Philosophy. Each of the whole-time Lecturers does more than 12 hours work a week in the various classes.

We are fully convinced of the importance of Pali as a link between diverse cultures in Asia. It does indeed cover a vast field in Indian culture, and the importance of the subject must not be judged by its belated recognition by the Indian Universities resulting in the attraction of fewer students than in the other departments.

Mr. Nilmani Chakravarti of the Presidency College submitted through Mr. Stapleton a memorandum in which a re-grouping of various subjects in Pali was advocated, and after

the re-grouping had been made, the Presidency College memorandum suggested that the work of the department could be carried on with 3 whole-time men only. Mr. Chakravarti did not take into consideration the undergraduate needs of the department. The salary for whole-time teachers, he suggested, should be Rs. 300-25-500.

The number of students in the department with the annual allotment of the budget grant is given below :—

	A	B	C	D	Total.	Budget grant p.m.
1917-18	V 1	...	2	...	3	400
	VI 1	...	...	...	1	
1918-19	V 1	1	1	1	4	1,450
	VI 1	...	2	...	3	
1919-20	V 1	1	1	1	4	1,550
	VI 1	1	1	1	5	
1920-21	V 2	2	...	...	4	1,675
	VI ...	...	1	1	2	
1921-22	V ...	1	...	1	2	1,925
	VI 2	2	...	...	4	
1922-23	V 2	...	1	...	3	1,825
	VI 1	1	...	2	4	
1923-24	V 2	1	2	1	6	1,725
	VI 1	...	1	...	2	
1924-25	V 1	1	1	...	3	1,625
	VI 1	1	2	1	5	

1924-25 Undergraduate 158

We have given our best consideration to the needs of the Board and we have come to the conclusion that in this department the following arrangements should be made :

(1) 3 whole-time men in the graded service to be appointed for a period of 5 years.

(2) 1 whole-time man outside the graded service for a period of 2 years at present.

(3) 2 whole-time Assistant Lecturers in grade, for a period of 2 years.

Some of these lecturers will continue to work in the undergraduate classes.

A minority was of opinion that there should be at least five whole-time Lecturers in this Department.

Arabic and Persian.

50. We considered the claims of the department of Arabic and Persian studies in this University. We have at present teaching arrangements for Post-Graduate as also the

undergraduate classes. The whole of the work of this department is carried on by four gentlemen, three of whom are part-time Lecturers, at a monthly cost of Rs. 500 only.

The list of students with the budget grant per year is given below :

		Budget grant p.m.
		Rs.
1917-18	{ V.— 6 VI.— 3	600
1918-19	{ V.— 4 VI.— 5	700
1919-20	{ V.— 12 VI.— 2	600
1920-21	{ V.— 10 VI.— 6	650
1921-22	{ V.— 9 VI.— 7	1,150
1922-23	{ V.— 7 VI.— 6	1,150
1923-24	{ V.— 9 VI.— 5	500
1924-25	{ V.— 12 VI.— 6	500

Under-graduate—

PERSIAN	... I.A.	38
	B.A.	8
ARABIC	... I.A.	12
	B.A.	7

The Presidency College staff through Mr. Stapleton presented a memorandum on this subject. Both the representatives of the Board of Higher Studies in Arabic and Persian and the Presidency College memorandum propose a re-grouping of the subjects. This Board is called upon to teach subjects covered by 24 different papers. According to the Presidency College memorandum, the work of this department should be entrusted to six Lecturers. The Board of Higher Studies asked for the appointment of 8 Lecturers. We have considered the claims of Arabic and Persian and recommend that the following arrangements be made for this department :

(1) It is eminently desirable that a Professorship should be founded for this subject if funds allow. The attention of the Government of Bengal should be invited to the desirability of the establishment of a Chair of Islamic Culture in the University of Calcutta.

(2) There should be 2 whole-time Lecturers in the graded service; and two part-time Lecturers from Colleges or from outside.

(3) There should also be 3 Assistant Lecturers in the usual grade for this department.

Instead of retrenchment of the staff we consider that the department of Arabic and Persian should be further strengthened.

History.

51. The Department of History has undertaken to impart instruction in two different branches of History—one may be called General History and the second may be called Ancient Indian History and Culture. In the department of General History the University has made provision for 5 compulsory subjects including the History of England, a selected period of Indian History, General History of the Ancient East including the History of Egypt, Babylonia, Assyria, Persia, Constitutional History of England, beginning from the earliest time till quite recent times, and International Law. Besides these, the candidates are allowed an option of selecting two papers from one of the following groups:—

(1) The History of Islam including the History of Islam in India as also outside India.

(2) A special period of Indian History which includes—

(a) History of Bengal—Political, administrative, social and economic—from 1757-93.

(b) History of the Rajputs from the advent of the Mahomedans in India to the treaty with the English in 1818.

(c) History of the Marhattas.

(d) History of the Sikhs.

(3) Comparative Politics.

(4) Economic History of England and India.

(5) A special period of European History or such other special subjects as may, from time to time, be prescribed by the Syndicate. Within this clause is included the study of

(a) The Constitutional History of British India and British Dominions.

(b) Modern History of China and Japan.

(c) Democracy and Nationalism in Europe.—1815-78.

(d) Anthropology.

Thus the candidates are offered a large choice of two papers to be taken from a variety of subjects comprised within 22 optional papers.

In the Department of Ancient Indian History and Culture candidates are expected to read 4 compulsory papers.

- (1) General History of Vedic and Epic India.
- (2) & (3) Political History of Post-Epic period.
- (4) Historical Geography of Ancient India.

Besides these 4 compulsory papers, candidates have been given a choice of 4 papers to be selected from among five optional subjects as indicated below:—

- (a) *ARCHAEOLOGY.*
 - (i) Epigraphy.
 - (ii) Numismatics.
 - (iii) Fine Arts, and Iconography.
 - (iv) Ancient Architecture.
- (b) *Social and Constitutional History.*
 - (i) to (iii) Social and Economic Life and Administration.
 - (iv) Ethnography.
- (c) *Religious History.*
 - (i) Vedic Religion.
 - (ii) Epic and Pauranic Religions.
 - (iii) Buddhism.
 - (iv) Jainism.
- (d) *Indian Astronomy and Mathematics.*
 - (i) & (ii) Mathematics.
 - (iii) & (iv) Astronomy.
- (e) *Anthropology.*
 - (i) Physical Anthropology including origin and antiquity of man.
 - (ii) Social Anthropology.
 - (iii) Pre-historic Archaeology and Technology.
 - (iv) Indian Ethnography with reference to Bengal and Assam.

The number of students in the year 1924-25 in the Fifth Year Class is 105 and in the Sixth Year Class 66. The

distribution of students in the various groups of study together with the budget grant will be found below :

		Islam.	Modern India.	Eco. Hist. of England and India.	Comp. Politics.	Archeology.	Social & Constitutional Hist.	Religious Hist.	Mathematical Hist.
1917-18	V	31	45	5	18	...	...	...	...
	VI	29	25	2	13	...	...	...	...
1918-19	V	32	36	2	8	8	8	7	4
	VI	18	33	3	14	...	...	...	...
1919-20	V	22	23	3	16	16	3	10	3
	VI	27	29	1	7	5	5	6	4
1920-21	V	23	8	1	11	8	9	5	1
	VI	11	12	2	9	15	1	9	1
1921-22	V	20	3	1	4	4	5	4	3
	VI	17	5	1	5	5	6	3	1
1922-23	V	14	...	1	8	3	2	2	1
	VI	16	...	1	4	4	5	4	2
1923-24	V	7	...	1	12	15	5	3	1
	VI	12	...	1	8	2	2	1	1
1924-25	V	15	...	...	7	11	7	4	1
	VI	4	...	6	11	12	2	5	1

Spl. period of European Hist.	Rajput Hist.	Mahratta Hist.	Sikh Hist.	History of Bengal.	Anthropology.	China and Japan.	Indian Constitution	Total.	Budget grant p.m.
26								125	3,750
15								84	
22								127	5,770
21								89	
25								120	5,975
11								95	
6	9	9	13		2 2			10	6,590
12								72	
8	3	2	5	7	3 4	2		75	6,325
6	5	5	10		2 2			76	
3	3	5	3	7	2 1	2		57	5,075
5	2	2	3	5	2 3	2		62	
3	9	6	13	7	2 3	4	5	98	4,956
	2	4	2	7	2 2	2		49	
1	5	9	17	10	1 5	5	3	105	5,575
	5	2	10	4	2 2	4	4	66	

In the department of General History we have 6 whole-time Lecturers and two part-time Lecturers from outside; of these 2 co-operate in the work of other departments for which they do not receive any extra remuneration, and one is at present on leave. The number of part-time Lecturers from affiliated Colleges is 5. Lecturers of other departments co-operating in the work of this Board number 4, one of whom only gets an extra remuneration of Rs. 25 per month. Besides these, the present Secretary to the Post-Graduate Council in Arts also has kindly lent his helping hand to this department, although under the Regulations he is a whole-time officer of the University.

In the department of Ancient Indian History and Culture we have besides the Carmichael Professor 15 teachers 6 of whom co-operate in the work of other departments in the University for which 2 receive small sums of Rs. 50 and Rs. 100 as extra remuneration. Besides these, we have one part-time Lecturer from an affiliated College. This department is also assisted by 7 Lecturers who are attached to other Boards, one of whom only gets an extra remuneration of Rs. 100. We have in addition two Honorary Lecturers one of whom delivers a limited course of lectures.

The representatives of the Board of Higher Studies in History appeared before us and justified the retention of the big staff on various grounds. The importance of the study of a comprehensive course in History, both of the East and of the West, in an oriental University from a cultural as well as from a national and political point of view, cannot be overestimated.

The Board of Higher Studies are of opinion that they are unable to undertake financial responsibilities for the teaching of Indian Mathematics and Astronomy and Anthropology in the two courses of General History and Ancient Indian History and Culture. What they suggested was that the study of these two subjects might very well be taken up by the departments of Mathematics and Anthropology. We might here observe that this department labours under a disadvantage because, generally speaking, Lecturers in the department of General History and in the department of Ancient Indian History and Culture are not mutually interchangeable. The courses of study are also highly specialised and a specialist appointed, say for the teaching of Numismatics, or for the decipherment of Indian Inscriptions, cannot possibly be asked to undertake instruction in other subdivisions of subjects included in History. This department offers boundless prospects for advanced study

and research, and the output of original work in this department is considerable.

Having taken into account the needs and requirements of this department, and forming an approximate idea of a student receiving 10 lectures a week and tutorial assistance and guidance in advanced study from the Lecturers, we have come to the following conclusions with regard to the staff that will be required for this department :

(1) General History—That there should be 6 whole-time men in grade, 4 part-time Lecturers from the Colleges, and 2 part-time Lecturers from outside.

(2) For Ancient Indian History and Culture there should be 7 whole-time Lecturers, 1 part-time Lecturer from an affiliated College, 3 whole-time Lecturers outside the graded service, and 1 Research Assistant. We are in agreement with the views of the Board that the financial responsibility for the study of Anthropology and Ancient Indian Mathematics should be transferred to the departments of Anthropology and Mathematics; it should be noted that those Lecturers who will undertake the teaching of these subjects will continue to be members of the History Board.

A minority is of opinion that the department can be worked by a smaller number of whole-time men.*

Philosophy.

52. The course in Mental and Moral Philosophy includes 3 compulsory papers—

- (1) History of Ancient European Philosophy.
- (2) History of Mediaeval and Modern European Philosophy.
- (3) Outlines of Indian Philosophy.

Besides these, candidates have been given a choice to take up 4 papers from out of a list of 5 different optional subjects each having to its credit two different papers :

- (a) Psychology,
- (b) Logic,
- (c) Ethics and Social Philosophy,
- (d) Philosophy of Religion,

* In this connection the majority desire to point out that some whole-time men also work in other departments and that one whole-time Lecturer, instead of three as at present, has been recommended for International Law in both History and Political Economy; they have further recommended one set of Lecturers for Comparative Politics for the departments of History and Economics.

- (e) Some branch of Indian Philosophy which includes—
- (i) The Nyaya Sutra of Gautama with the Bhasya of Vatsayana.
 - (ii) The Sankhya Sutra and Yoga Sutra.
 - (iii) The Vedanta Paribhasa and the Sutras.
 - (iv) The Sutras of Kanada.
 - (v) Sankara.

The number of students and the Budget Grant allotted during the last 9 years will be found below :

		Theology.	Psychology.	Ethics and Sociology.	Logic	Indian Philosophy (Special Branches).	Total.	Budget grant p.m.
1917-18	V	69	53	42	21	21	103	Rs. 3,800
	VI	60	51	27	13	5	78-13	
1918-19	V	76	51	30	29	11	100	3,350
	VI	57	39	29	14	11	75	
1919-20	V	74	20	46	27	23	95	3,800
	VI	51	38	29	12	8	77	
1920-21	V	36	20	41	21	14	61	3,075
	VI	45	11	28	15	11	55	
1921-22	V	39	13	30	15	9	53	3,200
	VI	31	11	29	14	1	43	
1922-23	V	15	10	13	7	7	25	2,405
	VI	25	10	21	13	7	38	
1923-24	V	22	10	24	18	8	44	2,625
	VI	11	8	9	7	5	20	
1924-25	V	20	4	21	10	7	31	2,700
	VI	18	7	20	16	7	34	

The work of this department is carried on by the George V. Professor, 1 University Professor, 6 whole-time Lecturers and 9 part-time Lecturers of whom 5 are from the affiliated Colleges and 4 co-operate from the other departments of the University.

The Presidency College memorandum regards all the subjects as important and holds that none of them can be dropped. They

think it desirable to increase the number of subjects by the inclusion of Buddhist and Jain Philosophy. We are in agreement with the proposal made by the Presidency College that whole-time officers of the University should be called upon to do lecture and tutorial work varying between 7 to 12 hours a week. Some of us are also in agreement with the view put forward by Dr. Urquhart that too many sub-divisions in the department of Philosophy, and in particular Theology, should not be encouraged. The actual preparation of routine is not in our hands; we therefore recommend for the consideration of the Board of Higher Studies whether the number of lectures in Theology should not be cut down to 2.

We are of opinion that the work of the department could be carried on by the following staff:—

- (1) 1 University Professor,
- (2) 4 whole-time Lecturers in grade,
- (3) 1 whole-time Lecturer outside the graded service,
- (4) 5 Lecturers from the Colleges.
- (5) 2 part-time Lecturers outside the graded service; these posts are to be sanctioned for not more than two years for the present.

Political Economy and Political Philosophy and Commerce.

53. We next take up together, for convenience of treatment, the subjects of Political Economy and Political Philosophy, and Commerce, as also the courses of study for the Degree of Bachelor of Commerce instruction on which has lately been undertaken by the University. In Political Economy and Political Philosophy there are 2 groups, the first four papers being common to both, namely, for Groups A and B there are Papers I and II (General Economics), Paper III (General Principles of Political Philosophy, and Paper IV (Public Administration). Besides these compulsory subjects, students for Group A, *i.e.*, Political Economy, are to take up Paper V (General History of Economics) and are allowed the option of selecting one of the following subjects, each of which has 2 papers to its credit:

- (a) the history, theory and present systems of Banking and Currency,
- (b) The history, theory and present Organisation of International Trade,
- (c) the theory and practice of Statistics including Demography, and
- (d) the mathematical principles of Political Economy or such other special subjects as may from time to time be prescribed by the Board of Studies concerned.

For Group B, *i.e.*, Political Philosophy, Paper V which includes study of General History of Political Philosophy is compulsory. Besides this, the students in Political Philosophy are required to choose one of the following subjects, each comprising two papers:

- (a) Comparative Study of Political Institutions.
- (b) Comparative Study of Social Institutions.
- (c) International Law with reference to existing Political and Economic Institutions.

N.B.—The course in Commerce for the M.A. Degree includes the following subjects:—

- (1) Realistic Economics.
- (2) Business Organisation.
- (3) English and Foreign Trade and Industrial Structure and Development.
- (4) Accounting.
- (5) Commercial Law.
- (6) Economic History.
- (7) Economic Geography.
- (8) Currency.
- (9) Banking.
- (10) Insurance.
- (11) Transport.
- (12) Tariff.
- (13) Public Finance.
- (14) Statistics.
- (15) Mathematical Economics.
- (16) Agricultural Economics.

Besides these, the course for B. Com. includes the following subjects:

- (1) Composition in an Indian Vernacular other than the Vernacular of the candidate, or French or German or Chinese or Japanese.

The Syndicate specified the following Vernacular languages:—Bengali, Hindi, Oriya, Assamese, Urdu, Burmese, Modern Armenian, Modern Tibetan, Khasi, Nepali, Telegu, Marathi, Gujrathi, Maithili, Tamil, Kanarese, Malayalam, Sinhalese. The Syndicate may add to the list.

- (2) General Economics.
- (3) Indian Economics.
- (4) Modern Economic History.
- (5) Economic Geography.
- (6) Business Organisation.
- (7) Inland or Foreign Trade.
- (8) Elementary Commercial Law.
- (9) One of the following subjects:

- (i) Accounting.
- (ii) Banking and Currency.
- (iii) Industrial Organisation.
- (iv) Agricultural Economics.
- (v) Economics of Transport.
- (vi) Public Administration.
- (vii) Public Finance.
- (viii) Statistics.
- (ix) Tariffs.
- (x) Such other subject, or subjects as may be prescribed by the Syndicate, from time to time, on the recommendation of the Board of Studies concerned.

The number of students in the Economics class in the year 1924-25 is 93 for the Fifth year and 53 for the Sixth year.

In Commerce for the year 1924-25 there are 51 students in the Fifth Year and 58 students for the Sixth year.

For the B. Com. classes for the year 1924-25 there are 92 students for the Third year Class and 74 for the Fourth year Class.

The number of students in both the courses for the Post-Graduate classes with the Budget Grant per month will be found below :

Economics.

		Banking and Currency.	Mathematics and Economics.	Statistics.	International Law.	Sociology.	Comp. Politics.	International Trade.	Total.	Budget Grant p. m.
1917-18	V	13	15	6	19	5	6	3	86	2,575
	VI								80	
1918-19	V	16	7	4	12	4	6	14	73	3,900
	VI								61	
1919-20	V	14	4	5	15	4	5	12	95	3,950
	VI								60	
1920-21	V	5	2	7	16	12	4	11	83	3,725
	VI								55	
1921-22	V	10	3	10	11	6	4	11	51	3,850
	VI								63	
1922-23	V	10	2	8	14	4	6	10	72	2,900
	VI								52	
1923-24	V	12	9	9	3	8	5	14	75	2,900
	VI								59	
1924-25	V	10	8	5	12	7	17	11	93	2,800
	VI								53	

Commerce.

	Industrial Structure and Development.	Statistics.	Economic Geography.	Tariff.	Agricultural Economics.	Currency.	Public Finance.	Auditing.	Business Organisation.	Transport.	Total number of students	Budget grant p.m.
1921-22—V ...	...	...	...	...	...	...	...	...	...	...	100	...
1922-23 V } VI }	30	20	71	54	28	20	12	With general Class.	59	66	65 } 90 }	...
1923-24 V } VI }	11	28	50	42	...	14	9	19	42	17	85 } 58 }	400
1924-25 V } VI }	...	...	...	...	...	...	...	...	...	...	51 } 58 }	400

The work of these two Departments is carried on by the Minto Professor, 9 whole-time Lecturers, 12 part-time Lecturers of whom 6 are from the affiliated Colleges, 2 co-operate from the other departments of the University, and 4 part-time Lecturers from outside. It will be observed that the whole department of Commerce is run by part-time men alone.

The Board of Higher Studies in Economics made a number of valuable suggestions regarding co-operation with the Colleges, co-operation with the various departments of the University, co-operation with the Government on questions of policy as also on the question of establishment of connection with trading, banking and financial centres.

We recommend that no duplication should be permitted, as at present, in the teaching of Comparative Politics. We have also recommended, while dealing with History, that one Lecturer should be appointed to deal with International Law in History and Economics. We further recommend that for the work of this department the following staff should be provided:—

(1) 1 Professor. In view of the distinguished services rendered by Mr. S. C. Roy, the status of University Professor should be conferred on him; but if the University is unable to

secure a continuance of his services for any reason, we recommend that the Professorship should revert to a Lectureship.

- (2) 6 whole-time Lecturers in grade.
- (3) 4 Lecturers from the affiliated Colleges, and
- (4) 1 Lecturer outside the graded service.

In Commerce there should be

- (1) 2 whole-time Lecturers in grade, and
- (2) 4 part-time Lecturers recruited either from the Colleges or from outside.

We are not unmindful of the fact that 3 persons serving the University under different Boards lend their assistance to this department which is however very small in amount. They do not get any extra remuneration for this work, and we recommend that their services be requisitioned for such limited purposes.

It was suggested that the University might abolish the Commerce Department and leave the teaching of Commerce to be carried on and developed at the Government Commercial School. We consider that this question should receive careful attention, should the present school ever be developed into a College of Commerce. In the meantime the University must undertake the responsibility.

If necessary the course might be made more practical, and we consider it certainly desirable that the University should have a Commercial Museum attached to it, now that the Commercial Museum of the Government has been closed for about two years. We accordingly consider it desirable that a capital grant of Rs. 5,000 should be made by the Senate for this purpose and proper arrangements be made for its upkeep. We need hardly point out that if the income and expenditure of this department alone is taken into consideration, it will be quite clear that the department is self-supporting; its claims for a Commercial Museum should not therefore be lightly dealt with.

Sanskrit.

54. We have considered the claims of the department of Sanskrit. In this subject the course includes 4 general papers and 4 papers in any one of 9 optional groups. Group A deals with literature, Group B with the Vedas, Group C with Mimamsa and Smriti, Group D with Vedanta, Group E with Sankhya and Yoga, Group F with Nyaya and Vaisesika, Group G is devoted to General Philosophy, Group H to Prakrit, and Group I to Epigraphy and History.

In Sanskrit, the number of students distributed into various groups is set out below. The annual Budget Grant per month is indicated in the second column :

	A.	B.	C.	D.	E.	F.	G.	H.	I.	TOTAL.	Budget grant P. M.
1917-18 { V	12	1	4	3				2	4	26	2,300
{ VI	8	3							2	13	
1918-19 { V	4	1	1	1	1			1	2	11	2,370
{ VI	9	1	3	3				2	4	22	
1919-20 { V	16	2	1	3	1			2	4	29	2,615
{ VI	3	1	1	1	1			1	2	10	
1920-21 { V	8	3	2	1	2	1	1	2	3	23	2,975
{ VI	12	1	1	3				1	3	21	
1921-22 { V	5	1	1	1		1			3	12	2,950
{ VI	6	2	1	1	2	1	1	1	1	15	
1922-23 { V	6	1	2	1		1		1	3	15	2,350
{ VI	4	1	1	1					3	10	
1923-24 { V	5	2	2	2	2	1		2	4	20	2,650
{ VI	6	1	2	1		1		1	3	15	
1924-25 { V	3	3	1	1	2	1		3	3	14	2,675
{ VI	3	2	1	2	2	1		1	1	13	

The importance of the study of Sanskrit in its diverse branches in an Oriental University cannot possibly be over-estimated. The number of students attracted by this department is not commensurate with its importance and various factors have contributed to this.

The staff in Sanskrit includes 9 whole-time men, and 2 part-time men paid out of the University funds, 3 part-time men from affiliated Colleges, 5 Lecturers from other departments of the University who do not receive any additional remuneration for this extra work. Three Lecturers, of whom 2 are whole-time men, are on leave.

Mr. Stapleton presented a memorandum suggesting a re-organisation of the course of studies in Sanskrit, which he stated was largely based on a memorandum drawn up by Professor Macdonell in 1908. The memorandum presented by the Presidency College made a suggestion that if the teaching of these subjects was arranged on the lines mentioned therein which included special attention to tutorial work, the total number of lecturers required would be 13. We trust that the

recommendations contained in the Presidency College memorandum will be duly considered by the Board of Higher Studies in Sanskrit.

We might here point out that in a memorandum submitted to the Hon'ble the Vice-Chancellor and Syndicate of this University in 1913, some of the members of the Presidency College under the distinguished Principalship of Mr. H. R. James, criticised the organisation of Post-Graduate Teaching in this University on the ground that there was no adequate staff for the increasingly growing number of students. The following passage from that memorandum which will be found in the Appendix may be of interest :

“There is one other subject which appears to be not merely adequately, but amply, provided with staff, namely, Sanskrit. For Sanskrit there is enumerated a staff of seventeen, and though only one of these, the Carmichael Professor of Ancient Indian History and Culture, belongs wholly to the University, Post-Graduate students of this subject are in every sense well provided for. If all other subjects showed the same, or somewhat the same proportion, not a word of criticism need be passed on the arrangements made by the University. But what a contrast between 17 teachers and 28 students in Sanskrit, 199 students and 7 teachers for Philosophy, 156 students and 5 teachers for Political Economy and Political Philosophy and 5 teachers and 203 students for English.”

We have considered the importance of the subject and also the principle which animated the University in appointing wherever possible two sets of Lecturers—one set representing the orthodox Pundits like those we find in indigenous institutions such as *Tols* and the other persons qualified to undertake instruction in accordance with western methods. We have come to the conclusion that the work of this department could be carried on by the following staff :—

- (1) 8 whole-time Lecturers in grade.
- (2) 4 Lecturers outside the grade.
- (3) 3 part-time Lecturers from the Colleges.

Some of the members were of opinion that no vacancies should be considered to have arisen in the list of 8 whole-time Lecturers in grade until the number is reduced to 5. When the first three vacancies occur it should be considered whether the places may not be filled up by the appointment of Lecturers outside the grade or of assistant Lecturers.

Indian Vernaculars.

55. In this department candidates are examined in any one of the three following principal subjects:—

- (1) Bengali,
- (2) Oriya,
- (3) Maithili,

each of which is divided into four papers. Besides these four papers, candidates have been given an option of choosing a second Indian Vernacular as a subsidiary subject which is divided into two papers. There are at present 13 such subsidiary subjects taught by the University:—

- (1) Bengali,
- (2) Oriya,
- (3) Maithili,
- (4) Assamese,
- (5) Hindi,
- (6) Gujarathi,
- (7) Tamil,
- (8) Telegu,
- (9) Marathi,
- (10) Malayalam,
- (11) Kanarese,
- (12) Sinhalese,
- (13) Urdu.

Besides these, candidates have to select two of the following languages, to be studied with special reference to their influence on the Vernaculars chosen as principal and subsidiary subjects. One paper is devoted to such subject:—

- (1) Prakrit,
- (2) Pali,
- (3) Persian,
- (4) Pashtu.

Further, candidates are required to study 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 and one paper is devoted to such study.

The four compulsory papers on the three principal subjects, namely, Bengali, Oriya or Maithili, are distributed as follows:—

- Paper I—History of the literature of the principal language taken up.
 „ II—Old texts and unseens.

- Paper III—Mediæval and Modern texts and unseens.
 „ IV—(a) A prescribed period of literary or
 „ linguistic history, and
 „ (b) A selected movement—literary, scientific,
 „ social or religious.

The Department of Indian Vernaculars was started in the year 1919, and we are constrained to observe that it has not become as popular as might have been expected.

The following list will indicate the number of students taking up one of the following as Principal subject :

1. Bengali.
2. Hindi.
3. Oriya.
4. Gujrathi.

	Bengali.	Hindi.	Oriya.	Gujrathi.
1920-21 ...	32	...	...	...
1921-22 ...	15	1	...	1
1922-23 ...	12	3	1	...
1923-24 ...	16	1	1	...
1924-25 ...	17	2	...	...

The following list will show the number of students taking up the different subsidiary subjects as also the Budget allotment year by year :—

	Maithili.	Assamese.	Bengali.	Marathi.	Hindi.	Guzrathi.	Urdu.	Tamil.	Telugu.	Malayalam.	Kanarese.	Sinhalese.	Oriya.	Total.	Budget grant per month.
1919-20 V ...	8	4	...	2	6	1	2	1	1	2	1	...	4	32	Rs. 650
1920-21 {	V ...	3	2	...	1	6	1	1	1	2	1	2	1	22	} 925
	VI ...	5	2	...	1	2	...	1	1	1	1	...	1	16	
1921-22 {	V ...	1	1	1	1	2	1	1	1	1	1	2	2	16	} 1,025
	VI ...	1	2	...	...	5	...	1	1	1	1	2	1	16	
1922-23 {	V ...	1	1	2	1	2	1	1	1	1	1	1	2	16	} 925
	VI ...	1	1	1	1	2	1	1	1	1	1	2	1	15	
1923-24 {	V ...	2	1	2	1	3	1	1	1	1	1	2	1	18	} 1,450
	VI ...	1	1	1	1	2	1	1	1	1	1	1	1	14	
1924-25 {	V ...	1	1	...	1	3	1	2	2	1	1	1	3	19	} 1,450
	VI ...	1	1	...	...	1	...	1	1	...	...	1	1	7	

In this department we have 5 whole-time University Lecturers including the Ramtanu Lahiri Research Fellow, 6 part-time Lecturers co-operating in the work from other departments of the University, of whom 3 are for Bengali alone and 12 are teachers of subsidiary subjects, all of these being part-time men, excepting one. Besides these, we have in this department an Honorary Lecturer.

This department has recently received donations from the public. Besides the Ramtanu Lahiri Research Fellowship, a Chair has been established for Maithili by the Raja of Banaili, another for Bengali has been established by Mr. Gopaldas Chaudhuri, and a third for Maithili by Mr. Tankanath Chaudhuri. Besides these, we understand, that Maharaja Holkar has made a donation of Rs. 3,000 and the Maharaja of Sonapur has promised a donation of Rs. 30,000 for the establishment of a Chair in Oriya.

Some of us were of opinion that the teaching of such subsidiary subjects as have no distinct bearing upon the development of Bengali might be dropped with advantage; and in this list were included Tamil, Telegu, Malayalam and Kanarese. The actual amount of money spent, however, in the teaching of these 4 different languages is roughly about Rs. 200 a month; most of us, therefore, feel that the study of these Southern languages need not be discouraged for such a small financial gain. Besides, a study of these languages is helpful for research in the domains of Indian History, Comparative Philology, and Indian Culture, apart from the value that these languages have in a well regulated course on Commerce which, we have already shown, includes a study of all these languages. It may not be out of place to note here the number of languages taught by the School of Oriental Studies in London is forty-five.

We regret that the funds of the University do not allow us to make adequate provision for the teachers in this department. We trust the time is not far distant when public-spirited and patriotic citizens of this country will come forward to the assistance of this department.

For the present, we recommend the following staff for this department :

(1) 1 Professorship, as a personal distinction to Dr. Dineschandra Sen in view of his special attainments. We regret financial difficulties make it impossible for us to recommend that the appointment should carry the usual scale of pay laid down for a University Professor.

(2) 6 whole-time Lecturers outside the graded service including the holders of endowed chairs.

(3) 11 part-time Lecturers whose services might be requisitioned from other departments of the University or from the affiliated Colleges in Calcutta or from outside.

The part-time Lecturers from the other departments taking up the teaching of one of the vernaculars may hold a substantive post in a subject which may not be allied to one in this department; we therefore recommend that a small honorarium of Rs. 50 per mensem should be paid to such part-time men.

Comparative Philology.

56. The subject of Comparative Philology covers 8 papers. For Paper VII the University teaches two alternative subjects—one is Avesta and the other is the Philology of Non-Aryan Indian languages. The University has also laid down courses in Dravidian and in Teutonic Philology.

This department unfortunately is not popular and it was pointed out to us by Dr. Taraporewalla that the subject cannot be expected to be popular in the sense that English or Economics or Commerce is popular. "This is, no doubt, due to the fact that it is not exactly what might be a bread-and-butter subject. In the second place, many students think that it is very difficult and very dry. In the third place, there is a general impression even among the better educated people that any one with a knowledge of classical languages is capable of teaching Comparative Philology. This class of students hardly think it worth their while to study such a subject and this opinion is responsible for the present market value of this subject."

The following list will indicate the number of students in this subject and the annual budget grant per month :

		Budget grant p.m.
		Rs.
1917-18	{ V.—2 VI.—	500
1918-19	{ V.—1 VI.—2	950
1919-20	{ V.—1 VI.—1	950
1920-21	{ V.—4 VI.—1	975

		Budget grant p.m. Rs.
1921-22	{ V.—2 VI.—1	1,050
1922-23	{ V.—1 VI.—2	1,050
1923-24	{ V.—4 VI.—1	1,050
1924-25	{ V.—1 VI.—1	1,100

This subject is now taught by one University Professor who, in addition to his work in this department, devotes his time to the departments of Sanskrit, Indian Vernaculars, Arabic and Persian. The Khaira Professor of Indian Phonetics also assists in the working of this department in addition to his lectures in English, Sanskrit and the Indian Vernaculars. Besides these, we have two whole-time University Lecturers, one of whom delivers lectures in the departments of Ancient Indian History and Culture, Anthropology and Indian Vernaculars, and the other deals with Sanskrit. We have also one part-time Lecturer from the Department of Indian Vernaculars who is not paid for his extra work here.

It will thus be clear that the teachers in this department, in addition to their lectures here, devote a large part of their time to work in other departments of the University. The University has recently introduced Linguistics as one of the subjects for the B.A. Examination both Pass and Honours. No arrangements for the teaching of Linguistics exist in any of the affiliated Colleges and the introduction of Comparative Philology as one of the subjects for the Bengal Civil Service Examination might tend to make it more popular in future.

We are of opinion that the work of this department should be carried on in the present financial condition of the University by the University Professor with the assistance of one whole-time Lecturer outside the grade.

Pure Mathematics.

57. In the Department of Pure Mathematics candidates are examined in 6 compulsory papers and 2 optional papers. as described below :

Paper I—Higher Algebra, Higher Plane Trigonometry and Spherical Trigonometry.

Paper II—Theory of Equations and Algebra of Quantics.

Paper III—Plane Analytical Geometry including Higher Plane Curves.

Paper IV—Geometry of Surfaces.

Paper V—Differential Calculus and Integral Calculus.

Paper VI—Differential Equations and Calculus of Variations.

• Papers VII and VIII—one subject to be selected by the candidates from the following groups :—

- (i) (ii) Theory of Functions. (Real and variable).
 (iii) Theory of Groups.
 (iv) Finite Differences and Calculus of Functions.
 (v) Vector Analysis and Quaternions.
 (vi) (vii) Projective Geometry. (Groups A and B).
 (viii) Theory of Numbers.

Differential Geometry has also been added to Paper IV.

The number of students and the budget grant are shown below :

	Fin. Difference.	Groups.	Theo. of Numbers.	Quaternions.	Func-tions		Geo-metry.		Total.	Budget grant p. m.
					Real.	Compl.	Proj.	Non-Euc.		
1917-18 { V	...	...	...	...	...	...	...	131	} 2,575
{ VI	17	9	16	4	18		68	132		
1918-19 { V	17	5	16	5	11	5	28	11	} 2,775	
{ VI	29	7	17	3	9		29	94		
1919-20 { V	18	9	12	9	6	8	9	4	} 2,775	
{ VI	12	3	12	3	8	3	23	11		75
1920-21 { V	8	3	16	4	9	3	6	5	} 3,050	
{ VI	7	3	7	6	3	4	3	1		34
1921-22 { V	11	11	13	7	2	1	3	1	} 3,275	
{ VI	4	2	11	2	7	2	3	4		35
1922-23 { V	11	4	9	5	13	6	3	4	} 3,275	
{ VI	7	9	8	6	2	1	3	1		37
1923-24 { V	25		9	14	4	3	6	9	} 3,125	
{ VI	9	3	9	4	10	5	2	2		44
1924-25 { V	25	11	12	4	8	3	12	7	} 3,225	
{ VI	19		6	13	3	3	2	8		54

The teachers now engaged in the work of this department besides the Hardinge Professor are 1 University Professor, 8 whole-time Lecturers and 1 part-time Lecturer from an affiliated College. The representatives of the Board suggested that certain other subjects should be added to enable this department to come up to the standard of mathematical training in the more advanced seats of learning. In the existing financial condition of the University we do not think it advisable to

introduce the study of additional subjects which would necessarily mean additional costs.

We have carefully considered the claims of this department and we are of opinion that the work of this department must, for the present, be conducted by

- (1) 1 University Professor,
- (2) 8 whole-time Lecturers, and
- (3) 1 part-time Lecturer.

The Committee think it desirable that in this Department there should be a large measure of co-operation from the colleges whenever opportunity presents itself.

Anthropology.

58. The course of Anthropology includes both Physical and Cultural Anthropology. Physical Anthropology is studied from the Zoological, Palæontological, Physiological, Psychological and Ethnological points of view. Cultural Anthropology has to be studied from the Archæological, Technological, Sociological, Linguistic and Ethnological points of view. According to the Regulations the entire subject is treated with special reference to Indian conditions and problems past and present. Candidates are also expected to possess a general knowledge of such subsidiary subjects as Archæology, Human Anatomy, Geography, Psychology, Zoology, Physiology, Statistics with special reference to Biometrics in so far as such acquaintance is necessary for the proper understanding of Anthropology proper. For the 6 theoretical papers the following subjects have been recommended by the Board of Higher Studies concerned :—

- (1) The antiquity of man and the place of man in Nature.
- (2) Distribution of the various races—Comparative Physiology and Psychology of the various races.
- (3) Archæology.
- (4) Social Customs and Manners.
- (5) & (6) (a) Physical character of certain races.
(b) Social Customs of Indian Primitive Tribes.
(c) The developments of Hindu Religion in all its aspects
- (7) & (8) A practical test in Physical Anthropology and Cultural Anthropology.

Anthropology is a comparatively new subject in this University, having been started in the year 1920. The number

of students in the subject in the Post-Graduate Department is given below :

	Budget grant per month.
1920-21. V— 9	Rs. 1,000
1921-22. { V—19 { VI—9	„ 1,425
1922-23. { V—11 { VI—12	„ 1,350
1923-24. { V—11 { VI—10	„ 1,625
1924-25. { V—20 { VI— 6	„ 1,650

Besides these Post-Graduate students, the Department of Anthropology has also provided for instruction in the B.A. Pass and the Honours Courses, the subject not being taught in any of the Colleges affiliated to the University; the number of students for the year 1924-1925 in the Third Year Class is 85 and that in the Fourth Year Class is 50. A special fee of Rs. 8 for a combination of three of the subjects, namely, Anthropology, Experimental Psychology, Physiology and Zoology, is charged from each student going in for the B.A. or the B.Sc. Degree. Of these 135 students in the undergraduate classes, roughly speaking, about a third belong to the Medical Colleges in Bengal.

We think it desirable that proper arrangements should be made for imparting instruction in and holding Examination on the above subject for the B.Sc. So that they may be brought up to the level of the other science subjects.

The work of this department is carried on by 7 Lecturers and 2 Assistants paid wholly out of the University funds. Besides these persons, the work of the department is helped by 2 Lecturers from the other departments of the University, who do not get any additional remuneration for this work.

The importance of the study of a subject like Anthropology has been recognised quite recently. Most of the British Universities as also the Continental and American Universities have undertaken to impart instruction in Anthropology. The University of Cambridge confers the Tripos Degree in Anthropology. The subject finds a place in the list of subjects recommended for the Indian Civil Service as also the Provincial Civil Service Examination in this Province.

The representatives of the Board of Higher Studies in Anthropology appeared before us and pressed for the appointment of 2 Professors—one for Physical Anthropology and the other for Cultural Anthropology.

We have considered the special needs of this department, and we are of opinion that lectures on Development of Hindu Religion in all its aspects may be undertaken by the Department of History. The following staff should be able to carry on the work, both Post-Graduate and under-graduate for the present :

- (1) 2 whole-time Lecturers in grade one to be in charge of the Department.
- (2) 2 part-time Lecturers outside the grade.
- (3) 2 Assistant Lecturers, and
- (4) 2 Lecturers for one year to be placed outside the graded service.

Mr. G. C. Bose was of opinion that it would be desirable to have in this department, for Post-graduate work only, 1 University Professor and 2 whole-time Lecturers who will mainly devote their time to research work and will give necessary guidance and instruction to Post-graduate students. He was further of opinion that unless and until the services of a well-qualified Professor are secured and the teaching requirements improved, no fresh admission should be made to the Third-Year and Fifth-Year Classes at the beginning of next session and the work of the Fourth-Year and Sixth-Year Classes should be conducted during the next year by those members of the existing Staff who may be selected by the Board of Appointments on the recommendation of the Executive Committee.

Some of the members of the committee felt that this department should be transferred to the control of the Post-graduate Council in Science.

Experimental Psychology.

59. The Department of Experimental Psychology came into existence in the year 1917 with the initiation of the Post-Graduate scheme. It is a subject which certainly lies in the border land of Arts and Science, and perhaps it appertains more to the domain of Science than to the province of Arts. The examination in this subject consists of two parts (1) Theoretical and (2) Practical. The theoretical part includes 4 papers :

(a) Physiological Psychology including general instruction in Physiology, the Nervous system, the Sense organs and the General Principles of Psychology.

(b) Mental Pathology which is studied from two points of view, Physical and Mental.

(c) Animal Psychology which includes Biological introduction, the Behaviour of organisms and the Mental evolution in Animal Kingdom.

(d) Child Psychology with Mental evolution in the Individual.

Besides these 4 theoretical papers, the candidates are examined in a Practical Test in the following subjects :—

- (1) Sensation.
- (2) Perception, Ideation, Association of Ideas and Attention.
- (3) & (4) Time relations of Mental Phenomena, affective states and their influence on motion.

The number of Post-Graduate students in this department is given below :—

Experimental Psychology.

No. of Students.		Budget grant per month.
		Rs.
1917-18	V—9	
	VI—9	650
1918-19	V—15	
	VI—7	1,250
1919-20	V—8	
	VI—13	1,300
1920-21	V—5	
	VI—4	1,575
1921-22	V—3	
	VI—2	1,825
1922-23	V—6	
	VI—3	1,775
1923-24	V—10	
	VI—4	1,875
1924-25	V—4	
	VI—6	1,985

Besides the subjects for the M.Sc Examination, the University has undertaken the instruction of candidates preparing for B.Sc., Pass and Honours, in Experimental Psychology. The Pass Course consists of 2 theoretical papers including (1) General Psychology, the syllabus of which is identical with the syllabus in Psychology Pass Course for the B.A. Examination ; (2) Experimental Psychology, which deals with Sensation, Perception, Attention, Ideas, Association of Ideas and its

conditions. The Honours Course in Experimental Psychology consists of (1) General Psychology, the syllabus being identical with the syllabus in Psychology Honours Course for the B.A. Examination; (2) Physiological and Comparative Psychology; (3) Experimental Psychology; (4) a practical examination in Experimental Psychology.

The actual limits of the subjects will be found on page 248-251 of the Regulations.

The number of students taking up the subject of Experimental Psychology in the undergraduate course is for the Third Year Class 54 and the Fourth Year Class 50.

As already observed, a special fee of Rs. 8 per candidate is levied in the combination of three out of the four subjects, namely, Experimental Psychology, Anthropology, Zoology and Physiology taken up by each candidate.

The work of this department is carried on by 9 Lecturers and 1 Demonstrator. We have been told that the whole-time Lecturers in this department work from 12 to 19 hours a week, including undergraduate work. The representatives of the Board of Higher Studies in Experimental Psychology appeared before us and pressed the view that the subject, as taught in this University, was not keeping pace with recent developments in the scientific world. They wanted to add Physiological Psychology and also to direct their activities towards Psycho-ethnic studies, Post-war Psychology and Experimental Education. They asked for co-operation with the mental hospitals in this country and they held that they should have separate representation on the Executive Committee as contrasted with the present system of a joint representation from the Board of Higher Studies in Experimental Psychology and Philosophy; they further wanted to be transferred to the control of the Post-Graduate Council in Science from the Post-Graduate Council in Arts.

The importance of the study of Experimental Psychology was seriously challenged by Dr. Urquhart who put forward his view that the present emphasis on Experimental Psychology was altogether disproportionate to its actual importance.

Experimental Psychology we might however point out, is one of the subjects included for the Indian Civil Service Examination, and, along with Physical Anthropology and Social Anthropology, the Civil Service Commissioners require a candidate, who desire to offer this, to satisfy them that he has undergone a course of training in an approved institution.

The Committee accepted the view of Dr. Urquhart that the question whether Experimental Psychology should rank as a

separate subject for the M.A. and the M.Sc. Degree should be considered by the University at an early date. We are, further, of opinion that this subject should be transferred, as has been urged by the Board of Higher Studies, to the control of the Post-Graduate Council in Science.

We have considered the needs of the department and we recommend that the work of the Post-Graduate and undergraduate classes should be carried on for the present with

- (1) 3 Whole-time Lecturers in the graded service, one Lecturer to be in charge of the department.
- (2) 2 Assistant Lecturers,
- (3) 1 Part-time Lecturer from the Colleges, and
- (4) 3 Part-time Lecturers for two years outside the graded service.

Mr. G. C. Bose was of opinion that unless and until the services of a well-qualified Professor are secured and the teaching requirements improved, no fresh admission should be made to the Third-Year and Fifth-Year Classes at the beginning of next session and the work of the Fourth-Year and Sixth-Year Classes should be conducted during the next year by those members of the existing Staff who may be selected by the Board of Appointments on the recommendation of the Executive Committee.

Chapter VI.

COLLEGE OF SCIENCE.

60. The history of the foundation of the University College of Science and Technology and its struggle with the general financial embarrassment of the University has been told in the Report of the Grant Committee adopted by the Senate on the 2nd December, 1922:—

“ Between the 16th March, 1912, when Lord Hardinge made his announcement at the Convocation, and the 18th September, 1912, when the Government of India sanctioned the distribution of the promised grant of Rs. 65,000, a notable event had happened which, at the time, had no parallel in the history of University education in India. On the 15th June, 1912, Mr. Taraknath Palit, executed a Trust Deed in favour of the University, which was supplemented by another Trust Deed on the 18th October, 1912. The effect of the two Trust Deeds was to vest in the University lands and money of the aggregate value of fifteen lacs of rupees in aid of the foundation of a University College of Science and Technology. Two Chairs, one of Chemistry and the other of Physics, were to be maintained out of the income of the endowment. The Trust Deed imposed, among others, two fundamental conditions, namely (1) that the object of the Founder being the promotion and diffusion of scientific and technical education and the cultivation and advancement of Science, pure and applied, amongst his countrymen, by and through indigenous agencies, the Chairs shall always be filled by Indians; and (2) that the University shall, from its own funds, provide suitable lecture-rooms, libraries, museums, laboratories, workshops and other facilities for teaching and research and shall, out of its own funds, ear-mark and set apart a sum of two lacs and fifty thousand rupees and apply the same to and towards the construction, on the site given by the Founder, of permanent and substantial structures for use as lecture-rooms, laboratories and like purposes. The Senate accepted this magnificent gift and set apart from the University funds Rs. 3,00,000 invested in $3\frac{1}{2}$ per cent. Government Securities.

14. On the 30th December, 1912, the Vice-Chancellor and Syndicate forwarded an application to the Government of India for financial assistance, supplementing the unique gift of

Mr. Palit, in order to enable them to establish a residential College of Science and Technology and also for other purposes, which are set out in full in the letter of the Registrar* and may be conveniently summarised here as follows :

Non-recurring Grant.

	Rs.
(1) For the Residential College of Science, supplementing the gift of Mr. Palit ...	15 lakhs
(2) (a) For the acquisition of the Fish Market	8 „
(b) For the erection of a hostel for Post-Graduate Students and for additional lecture rooms and seminars for advanced work and research ...	7 „
(3) For the completion and equipment of the University Law College Hostel Building ...	1 lakh
(4) For the University Library ...	1 „
TOTAL ...	32 lakhs

Recurring Grant.

(1) Professorship of Applied Mathematics ...	15,000
(2) Professorship of Modern History ...	15,000
(3) Professorship of Comparative Philology ...	15,000
TOTAL ...	45,000

The reply of the Government of India was prompt, and was contained in their letter, dated the 14th January, 1913, which was in the following terms :

‘ The Government of India are not yet aware what grants, if any, they will be able to assign for education during the ensuing financial year. The requests of the Calcutta University will receive consideration in conjunction with the claims of other Universities and of other branches of education.’

* * * Well-wishers of the University, however, at that time waited and watched, and it is needless to say, how disappointed they felt when they found that the Budget Estimates of the Government of India for 1913-14 made no provision whatsoever to supplement in a befitting manner the princely endowment created by Mr. Taraknath Palit. The Budget Estimates, on the other hand, included a grant of eight lacs for acquisition of the Fish Market site.

* Appendix 5.

* If the sum of eight lacs had been granted for the purposes of the University College of Science and Technology, a decisive step forward might have been taken towards the promotion of higher scientific and technological studies. On the other hand, if sufficient funds had been granted not only for acquisition of the Fish Market site but also for construction of a building thereon,—and for the latter purpose, indeed, the University pressed for a grant of seven lacs—additional accommodation would forthwith have been made available for the instruction and residence of University students.

* * Later on, in the same year, on the 8th August, 1913, Dr. Rashbehary Ghose, as he then was, came forward with an offer of ten lacs of rupees in furtherance of the scheme for the foundation of the University College of Science and Technology. Four Chairs were to be created out of the income of this splendid endowment, one for each of the subjects, Applied Mathematics, Physics, Chemistry, and Botany with special reference to Agriculture. The two conditions we have already mentioned in connection with the Palit Trust were also imposed on the University by Dr. Rashbehary Ghose. The Vice-Chancellor and Syndicate were greatly encouraged by this munificent gift, and * * * * *

* * * * * again addressed a letter on the 4th October, 1913, to the Government of India, asking for a substantial grant in aid of the University College of Science and Technology. The reply was prompt, and a letter dated the 27th November, 1913, informed the Registrar that the Imperial funds, available for education that year, had already been allotted. The Registrar hastened to point out on the 4th December, 1913, that no grant was expected during the then current financial year, and that the Vice-Chancellor and Syndicate only desired to give early intimation of their pressing needs, so that they might be taken into consideration by the Government when the Budget Estimates for the following year should be framed. On the 23rd December, 1913, the Government of India replied in the following terms :

‘When funds are available, the request of the University for further grants for higher teaching will be considered in conjunction with other demands.’

“When, however, the Budget Estimates of the Government of India for 1914-15 were published, no provision could be traced for a grant to supplement the splendid gifts of Mr. Taraknath Palit and Dr. Rashbehary Ghosh. .

* * * * *

The University, however, had made its decision to establish a College of Science and Technology ; it could not very well disavow the gifts accepted from Mr. Palit and Dr. Ghose and retrace the steps. The foundation-stone of the building designed for the College was accordingly laid on the 27th March, 1914, and the University proceeded to meet the cost of erection and equipment from the surplus of examination fees, realised from candidates of all grades in different stations of life hailing from every corner of the province. Unforeseen difficulties, however, soon arose. The outbreak of the Great War led to a phenomenal depreciation of the Government securities in which the University funds had been invested. On the 1st December, 1914, the Syndicate accordingly applied to the Government of India for a temporary loan against those securities ; on the 16th March, 1915, the application was refused. The result was that the securities had to be sold, the University lost a sum of Rs. 34,990 and the total cost of erection, which came up to Rs. 3,89,427, was paid by the University out of its own funds. This letter also intimated to the University, for the first time, that the Government of India felt themselves 'unable to consider that or any other request, unless they received a clear statement of the general policy of the University and of the proposed College of Science, in particular.' Three days before the letter was received, the Syndicate, *

* * * * * had sent up a letter asking for financial assistance. A reply reached the University on the 19th June, 1915 *

* * * * * The Syndicate were made to realise for the first time that notwithstanding their letters of the 30th December, 1912, and the 4th October, 1913, the scope and the purpose of the University College of Science and Technology were still a mystery to a distant Government. The Syndicate, however, * * * * * transmitted, for the enlightenment of the Government of India, statement after statement, pressing, on the attention of the authorities, the claims of the University College of Science and Technology and of the other Teaching departments of the University. These appeals proved fruitless."

The Government of India addressed two communications to the University on the 19th June, 1915, and the 14th October, 1915, which contained the following passages :

(i) "The Government of India were not consulted before the terms of the bequests were settled, or, again, before the building was commenced."

(ii) "As regards the College of Science, it appears that two public-spirited citizens came to the assistance of the University with endowments to which certain conditions were attached; the University accepted these endowments and now finds that it is unable without assistance, to comply with the terms involved in them."

After this, * * on the 9th August, 1917, the following intimation reached the University:

"The Government of India propose to defer consideration of the question of granting financial assistance in this connection to the University, pending receipt of the recommendations of the proposed Calcutta University Commission."

"While negotiations were in progress for the transfer of the University from the jurisdiction of the Government of India to that of the Government of Bengal, Sir Nilratan Sircar, at that time Vice-Chancellor, felt so encouraged by a conversation he had with the Minister in charge of Education that on the 5th February, 1921, he instructed the Registrar to forward to the Government of Bengal two letters asking for financial assistance. These letters are of considerable importance and are set out in the Appendix.

The last paragraph of the second letter was as follows:

"The Vice-Chancellor and Syndicate, accordingly, request that provision may be made for a capital grant of Rupees Ten Lakhs for the development of technological studies in connection with the University College of Science, in addition to the grant of Rupees One Lakh and Twenty-five Thousand for the salary of Post-Graduate Teachers."

"The action thus taken by the Vice-Chancellor was approved by the Syndicate on the 11th February, 1921. The first letter, it will be seen, deals with the question of construction of a suitable building on the Fish Market site, which had been acquired in 1913 for the benefit of the University. The second letter dwells on the problem of maintenance and development of higher teaching, specially in the direction of technological and agricultural instruction. * * *

* * * On the 15th November, 1921, the following reply to the second letter was received:

From the Deputy Secretary to the Government of Bengal to the Registrar, Calcutta University, No. 2388 Edn., dated the 15th November, 1921.

"I am directed to refer to your letter No. G-345, dated the 5th February, 1921, in which you ask for a grant of Rs. 1,25,000 for improvement of the Post-Graduate Department of the

Calcutta University and a capital grant of Rs. 10,00,000 for extension of technological studies. Both these proposals are based on the recommendations of the Calcutta University Commission's Report.

2. "The present financial condition of the Government of Bengal is well-known to the Calcutta University. The University is, no doubt aware that representations were made by this Government to the Government of India about the need of improving the finances of the Province. It was not possible to reply to your letter until the Government of India had considered these representations, and the relief since granted by the Government of India is so inadequate, that unless fresh sources of revenue are made available, very drastic retrenchments will have to be undertaken in all Departments. The University will, therefore, realise that there is no immediate prospect of carrying into effect the recommendations of the Sadler Commission. The Government of Bengal, however, propose shortly to address the Government of India protesting against the inadequacy of financial relief, as, among other consequences, inevitably leading to the postponement of University reforms on the lines of the Sadler Commission's Report. The Government of Bengal in the Ministry of Education regret to say that, as in their present financial position, reforms on the lines of the Sadler Commission's Report cannot possibly be contemplated, they are unable to grant either of the request contained in the letter under reply. Government further desire to take this opportunity of suggesting that in the present critical financial position both of the University and of the Government, the University may find it desirable not to try to expand its activities till fresh sources of revenue are made available to it.

3. "I am to add that, although the Calcutta University has made no representation to Government about the necessity of relief for its immediate needs, the attention of Government has been drawn to its critical and embarrassing financial position from the published proceedings and reports. Under certain conditions and subject to certain contingencies, the Government of Bengal are willing to help the Calcutta University to extricate itself from its more immediate financial embarrassments, and any representation for assistance on a modest scale which the Calcutta University desires to place before the Government will be sympathetically considered.

4. "Finally, I am to say that, although for the reason stated above, no formal reply could be earlier given to the letter under reply, the provisional views of Government were verbally communicated to responsible authorities of the University."

* * * * *

In 1921 Kumar Guruprasad Singh of Khaira left the University a magnificent gift of five and a half lacs of rupees, which, it was decided, should be utilised to stimulate Post-Graduate studies, in the Departments of Letters and Science, by the creation of five Chairs in Physics, Chemistry, Agriculture, Indian Fine Arts and Indian Linguistics and Phonetics."

Chapter VII.

RECOMMENDATIONS.

Applied Mathematics.

61. The subjects in Mixed Mathematics include :—

- (1) Advanced Statistics including Theory of Potential.
- (2) Dynamics of a Particle.
- (3) Rigid Dynamics.
- (4) Hydrostatics including Capillarity.
- (5) Hydrodynamics.
- (6) Spherical Astronomy.
- (7) One subject to be selected by the candidate from the following groups :—

- A. Theory of Elasticity.
- B. Advanced Dynamics.
- C. Higher Parts of Spherical Astronomy.
- D. Lunar and Planetary Theories.
- E. Figure of the Planets.
- F. Theory of the Tides.

One four-hour paper is set upon each of the compulsory subjects, and two papers on the additional subject included in No. 7.

A candidate who has taken his B.Sc. degree with Honours in Mathematics is allowed to offer a piece of research work in any portion of the subject he has been studying in lieu of examination in two papers in the remaining portion of the examination.

The number of students taking up the subject in different years is as follows :—

1920-1921.	1921-1922.	1922-1923.	1923-1924.	1924-1925.
V—27 ...	17	11	19	11
VI—22 ...	14	11	8	14

The number of teachers engaged in the work is 1 University Ghose Professor and 7 Lecturers, 5 of whom are attached to affiliated colleges in Calcutta.

It was pointed out to us by the representatives of the Board that in 1917 when the department started its work it had under it 5 whole-time teachers and 7 part-time teachers and that consequently the department is at present understaffed.

We have considered the imperative needs of this department and we have come to the conclusion that in the present financial condition of the University, the work of the department should be carried on by

One Ghose Professor.

Two Whole-time lecturers in the graded service

and

Five Part-time lecturers.

Physics.

62. The curriculum of Studies for the Master's degree in Physics includes Electricity and Magnetism and one of the following subjects :—

General Physics and Sound.

Light.

Heat.

Candidates who have taken the B.Sc. degree with Honours in Physics are allowed to offer a piece of research work in Electricity and Magnetism in lieu of examination in another subject.

The number of the students in this department is as follows :—

1920-21	1921-22	1922-23	1923-24	1924-25
V-23	30	32	32	51
		Light—18 } Heat—12 } Sound—2 }	Light—18 } Heat—11 } Sound—3 }	
VI-26	18	26	23	32
		Light—19 } Heat—6 } Sound—1 }	Light—13 } Heat—8 } Sound—2 }	Light—19 } Heat—10 } Sound—3 }

The work of this department is carried by four University Professors holding Chairs established by munificence of Sir Rashbehary Ghose, Sir Taraknath Palit and Kumar Guru Prasad Singh of Kaira. Besides these, we have five whole-time University Lecturers and four part-time University Lecturers attached to the Presidency College.

The representatives of the Board appeared before us and pointed out that they had neither Laboratory equipments nor a Library for Applied Physics. It was emphatically stated that under such conditions, the Professor of Applied Physics was not in a position to carry on his work properly.

We have come to the conclusion that capital grant of 52,000 rupees, for the improvement of the library and the laboratory should be made and an annual recurring grant of 20,000 rupees should be provided. This capital expenditure will include Rs. 12,000 for steady voltage plant Rs. 10,000, for liquid air machine, Rs. 5,000 for high voltage installation, Rs. 10,000 for the optical and other general laboratory equipments, Rs. 15,000 for wireless apparatus.

We have been told that a high percentage of students in Physics get employment of a kind for which their study is a direct preparation. It is therefore obvious that the University will be amply justified in spending a considerable amount of money for the development of technological education.

As regards the teaching staff we recommend, that in addition to the four Endowed Professorships, the five University Lecturers should be placed on the regular grade and that an additional Demonstrator on the grade of Rs. 125-15-200 should be appointed for the Department of Applied Physics. The strength of the Department will therefore be

- (1) Four Endowed Professors.
- (2) Five University Lecturers in the regular grade.
- (3) Four part-time Lecturers from the colleges.
- (4) One Demonstrator on the grade of Assistant Lecturer.

Chemistry.

63. The subjects for the Master's Degree in Chemistry will be found on page 259 of the Regulations and include:—

- (A) Physical Chemistry—General and Special.
- (B) Inorganic Chemistry.
- (C) Organic Chemistry.

The syllabus in Applied Chemistry includes a special course of lectures in Physical, Inorganic and Organic Chemistry, a

theoretical course on Fermentation and Ceramic Industries and a practical course in the following subjects :—

- (i) A special course of Organic and Inorganic Analysis including standard commercial methods of analysis.
- (ii) A special course in Physical Chemistry.
- (iii) Elements of Chemical Engineering including Drawing.
- (iv) Workshop practice.

The number of students taking up the subject will be found from the following list :—

1920-21		1921-22	1922-23	1923-24	1924-25
Chemistry	V—27	28	26	27	27
	VI—26	20	27	21	27
Applied Chemistry	V—12	16	19	13	13
	VI—9	10	16	12	10

The work of the department is carried on by the following staff:—

Pure Chemistry—5 University Professors (one Ghose Professor, one Palit Professor, one Khaira Professor).

4 whole-time University Lecturers.

4 part-time lecturers attached to the staff of the Presidency College.

1 part-time lecturer who is the Industrial Chemist to the Government of Bengal.

Applied Chemistry—1 University Professor (Ghosh Professor).

1 Demonstrator.

There is co-operation between the two departments. The representatives of the Board appeared before us and asked for an additional laboratory assistant on the grade for Assistant Lecturers for Pure Chemistry and two additional lecturers, 1 laboratory assistant and 1 Store-keeper for the department of Applied Chemistry. The representatives of the Board suggested before us that there should be a central library for the Science College and they asked for a non-recurring grant of Rs. 30,000 for Pure Chemistry and a non-recurring

grant of Rs. 80,000 for Applied Chemistry. They placed before us their requirements which run as follows :

	Approximate cost.
1. A complete set of grinders for the manufacture of paints and varnishes.	7,000
2. Vacuum Evaporators	5,000
3. Filter Presses	1,600
4. Alcohol still	3,500
5. Equipments for Bacteriological Laboratory	4,000
6. A complete set of lathes, drilling machines and tools.	6,000
7. Foundry and Smithy	6,000
8. Dynamometers	2,500
9. Set Illustrating Typical Processes	25,000
10. Step-down generators	4,500
11. General arrangement for accumulation of plants.	7,000
12. 1 Kestner's film evaporator	6,000
13. High temperature measuring instruments	1,500
14. General Organic Technical Laboratory including dyeing vats.	10,000
15. Liquid air plant	7,000

We were told the department of Applied Chemistry has the following apparatus—10 H. P. oil engine, 1 compressor, second-hand steam boiler, 1 second-hand ball-mill, 1 incomplete Electroplating set, 2 furnaces. We are clearly of opinion that an important and a growing department like Chemistry which will ultimately help materially the development of Indian Industries should not be left to starve and that a capital grant of Rs. 10,000 should be made for the purchase of apparatus and for the improvement of the Library and a larger recurring grant than the present annual grant of Rs. 10,000 for Pure Chemistry and Rs. 10,000 for the department of Applied Chemistry should be made.

In the present financial condition of the University, we are not prepared to recommend an additional staff excepting the employment of an Additional Store-keeper. We therefore recommend that for this department the following staff be sanctioned :—

- (i) 4 endowed Professors.
- (ii) 4 whole-time University Lecturers in grade.
- (iii) 4 part-time lecturers from the Colleges.
- (iv) 1 honorary lecturer from outside.
- (v) 1 demonstrator in the grade of Assistant lecturers.

Mr. Stapleton of the Presidency College made the following suggestion :—

That it would be an improvement on the present system of Post-Graduate teaching in the college if there could be more co-operation between this College and the University College of Science, as for example by utilising the unendowed posts in Inorganic Chemistry of the latter Institution by transferring the present University teachers to this Laboratory. The present incumbents Babu Priyadarajan Roy and Pulinbihary Sircar would in that case continue to be officers of the University, but they would be attached to the College and work here in their special subjects in the Post-Graduate classes of this College. The arrangement would relieve the University of a portion of its responsibility and at the same time it would enable this College to reduce the suggested staff for Inorganic Chemistry. All students who would take up Inorganic Chemistry in their Post-Graduate studies would work in this Laboratory and there would be no necessity on the part of the University to maintain the Department of Inorganic Chemistry in the College of Science.

We recommend that the suggestion contained in Mr. Stapleton's letter be considered by the Board of Higher studies in Chemistry and by the Executive Committee of the Post-Graduate Council in Science.

Geology.

64. Candidates who offer themselves for examination in Geology for the Master's degree may elect to specialise in either :—

- (a) The Mineralogical and Petrological branch, or
- (b) The stratigraphical and Paleontological branch.

Candidates who have taken their B.Sc. degree with Honours in this subject are allowed to offer a piece of research work in the branch in which they have specialised in lieu of a portion of the examination in the other part, not carrying more than 200 marks.

The number of students in this department may be gathered from the following list:

	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
Geology—V —6	6	3	5	5	
„ VI—3	6	6	3	5	

The work of this department is at present carried on by 1 whole-time lecturer and 2 part-time lecturers, one of whom is attached to the Presidency College and the other delivers a course of lectures on receipt of an annual honorarium of Rs. 500 only.

The representatives of the Board appeared before us and pressed for the appointment of an additional lecturer in the regular graded service of the University. All work of this department is done in the laboratory of the Presidency College. The representatives of the Board were of opinion that students specialising in fossils should have a practical knowledge of Botany, and in the Paleontological branch also a knowledge of practical work in Botany should be insisted on. We are of opinion that these views might very well be considered by the Board of Higher Studies in Geology.

We have considered the claims of this department and having regard to the limited financial resources at the disposal of the University we are of opinion that the work of the department should be carried on by—

1. Whole-time lecturer in the regular graded service of the University, and
3. Part-time lecturers one of whom at least shall be from the colleges.

Physiology.

65. Candidates for the Master's degree in Physiology are required to submit themselves to four theoretical papers in Physiology to be distributed so as to cover the following subjects:

1. Circulation, Respiration, Alimentation, Metabolism and Reproduction (compulsory to all candidates).
2. Nervous System and Muscular System.

3. Organs of Sense.
4. The branch of Physiology professed by the candidate for special study.

The Practical Examination in Physiology includes—(i) Chemical Physiology, (ii) Histology and (iii) Experimental Physiology. Candidates who have taken their B.Sc. degree with Honours in this subject are allowed to offer a piece of re-earch work in the branch in which they have specialised in lieu of a portion of the examination in the other part not carrying more than 200 marks.

The number of candidates in the post-graduate classes in Physiology year by year, is as follows :—

1920-21	1921-22	1922-23	1923-24	1924-25
V-6	7	5	7	7
VI-6	6	7	4	7

Presidency College is the only institution where the subject is taught. The work of the department is at present carried on by 3 University lecturers attached to the Presidency College.

The representatives of the Board appeared before us and pointed out to us emphatically the need for organic connection between Post-graduate work and Honours work for the Bachelor's degree. In the Presidency College, we were told, the work done by B.Sc. Honours students covers a portion of M.Sc. work and that is the reason why the post-graduate work of this department is managed by a small staff. It was further pointed out to us that as they have to undertake both lecture and practical work for about 60 students in the B.Sc. classes and about 150 students for the I.Sc. classes, the lecturers in the department have not been able to do much research work.

We have considered the needs of the department and we are of opinion that the work of the department should for the present be carried on by—

3 lecturers attached to the Presidency College (for the purposes of classification they shall be treated as part-time lecturers).

1 whole-time lecturer in the graded service.

Botany.

66. Candidates in Botany for the Master's Degree are examined in—

- (i) General Morphology,
- (ii) Special Morphology including Classification,
- (iii) Histology,
- (iv) Physiology including Phyto-dynamics,
- (v) Distribution of Plants in Space,
- (vi) Distribution of Plants in Time and its bearing on the Theory of Descent.

Candidates are expected to show a detailed knowledge of either General Morphology and Special Morphology or Histology and Physiology including Phyto-dynamics.

The Practical Examination includes—

- (a) The making of microscopic sections of plants or parts of plants including staining and application of micro-chemical re-agents.
- (b) Examination, description and identification of microscopic preparations provided by the examiners or made by the candidates.
- (c) Examination, description, systematic determination and identification of plants.
- (d) The performance of Physical or Chemical experiments or the setting up and description of apparatus relating to the Physiology of Plants.

Candidates who have taken their B.Sc. Degrees with Honours in Botany are allowed to offer a piece of research work in the branch which they have selected for special study in lieu of examination in distribution of plants in space and distribution of plants in time and the practical work under Examination, Description, systematic determination and identification of plants or parts of plants.

The number of candidates taking up this subject year by year is as follows:

	1920-21	1921-22	1922-23	1923-24	1924-25
5th Year	4	6	6	8	3
6th „	1	4	4	4	5

Besides the M.Sc. students, there are 5 Research Scholars under the tuition of the University Teachers.

The work of the department is at present carried on by the University Professor of Botany, the Ghose Professor of Botany and two Lecturers attached to the staff of the Presidency College.

The representatives of the Board appeared before us and asked for the services of an additional Lecturer. It was also pointed out to us by them that the department has no Demonstrator. Some of the members of the Committee asked the representatives of the Board whether it would be feasible and practicable to remove the Botanical Department from the Ballygunge House to the Science College building in Lower Circular Road. On this point there appeared to be a difference of opinion between the University Professor of Botany and the University Lecturer who represented the point of view of the Presidency College. We consider this question should be further investigated and explored.

In this Department we recommend that the existing staff should be retained; but on the retirement of the University Professor of Botany a whole-time Lecturer in the regular grade should be appointed in his place.

The Ghose Professor of Botany, pointed out to us that the University has not been able to make any provision for Applied Botany and he asked for an initial grant of Rs. 35,500 and a recurring grant of Rs. 11,500. His letter is set out in the Appendix. In the present financial condition of the University we are unable to make any recommendation.

Zoologg.

67. Candidates in Zoology are called upon to name a group of animals of which they have made a special study and in respect of which the examination will be more searching than in the rest.

The number of candidates in the Post-Graduate classes is as follows :—

	1920-21	1921-22	1922-23	1923-24	1924-25
5th-year ...	9	5	5	4	4
6th „ ...	1	2	3	3	4

Besides these the Department takes charge of the following B.Sc. Students?—

• • • Third-year—49

Fourth-year—44.

The work of this department is carried on by 2 whole-time Lecturers and 3 part-time Lecturers one of whom is attached to the Medical College and gets an annual honorarium of Rs. 1,000 only and holds classes for three months in the year, *i.e.*, from January to April. There is one Professorship attached to this department and the Senate has sanctioned the necessary salary but the post is at present lying vacant.

The representatives of the Board appeared before us and they were of opinion that the staff could not be reduced even if admission to the Post-Graduate classes was restricted to candidates who had passed the B.Sc. or B.A. Examination with Zoology, but for purposes of greater co-ordination they suggest that Palaeontology might go to Zoology and animal behaviour might be taught by common lectures in Zoology as well as Experimental Psychology. They were further of opinion that the Laboratory should be removed to a central locality. They also asked for a properly equipped museum for Comparative Anatomy. They also stated that the management of the B.Sc. Classes was not satisfactory.

We have considered the views expressed by the members of the Board and we are of opinion that the equipments in Zoology are unsatisfactory and the teaching staff is inadequate; we recommend that the department be re-organised with the following staff:

- (1) 1 University Professor.
- (2) 1 whole-time Lecturer in the usual grade.
- (3) 2 part-time Lecturers or the equivalent in men from the Colleges or outside (*e.g.*, from the Zoological Survey).
- (4) 2 Demonstrators in the grade of Assistant Lecturers.

Mr. Stapleton was of opinion that the Professorship in Zoology need not be continued, but that a senior lecturer would be sufficient to organise the department. Mr. G. C. Bose was of opinion that unless and until the services of a well-qualified Professor are secured and the teaching requirements improved, no fresh admission should be made to the Third-Year and Fifth-Year Classes at the beginning of next session and the work of the Fourth-year and Sixth-year Classes should be conducted during the next year by those members of the existing staff who may be selected by the Board of Appointments on the recommendation of the Executive Committee.

CHAPTER VIII

ENDOWED PROFESSORSHIPS; AND FINANCIAL EFFECT OF OUR RECOMMENDATIONS.

Endowed Professorships.

68. We have considered the cases of the Ghose and Khaira Professors who, under the terms of the trusts creating the appointments, are paid Rs. 500 monthly.

By the terms of the Ghose Trust it is provided that the Senate may supplement the stipends from other funds at their disposal; the Khaira Trust contains a similar provision. There are in all eleven of these Professors appointed on different dates and the Senate has supplemented their stipends by the grant of a House Allowance of Rs. 100 monthly except in one case where the incumbent is in England.

The Committee regret that in the present state of the finances of the University they are unable to recommend that these Professors should now be placed in the grade recommended in their report for Professors, although they hope that this may be possible subsequently.

They think however that some of these Professors should have their stipends increased and after considering their cases individually, they recommend that the Ghose Professors of Chemistry and Physics should receive an additional Rs. 150 monthly; the Ghose Professor of Applied Chemistry and the Guruprasad Singh Professor of Chemistry, an additional Rs. 100 monthly; and the Ghose Professors of Applied Mathematics and Applied Physics, and the Guruprasad Singh Professors of Physics and Indian Linguistics and Phonetics, an additional Rs. 50 monthly.

The recommendation will involve an additional financial obligation of Rs. 700 monthly, or Rs. 8,400 annually.

Financial Effect.

69. We finally proceed to calculate the approximate financial effect of our recommendations contained in the foregoing chapters. We desire to draw attention to the fact that we have recommended re-appointment of lecturers for a period of five years and we therefore propose to indicate the cost which will be incurred each year, during the next five years, in accordance with the scheme proposed by us.

70. We may here indicate the total amount of income, including the additional contribution from the Fee Fund, and

expenditure in the Post-Graduate Department for the last four years.

	<i>Income</i>	<i>Expenditure.</i>
	Rs.	Rs.
1921-22	6,11,167	5,11,313
1922-23	4,11,937	4,77,555
1923-24	5,75,995	5,36,205
1924-25	5,20,081	5,16,126

71. It will be useful now to state the estimated income, excluding any additional contribution from the fee fund, of the Post-graduate department for 1925-26, which, unless any thing unforeseen happens, may be expected to be more or less constant during the next few years :

	Rs.
Government Grant	15,000
Fees from students	1,28,000
One-third share of Examination Fees	2,35,500
	3,78,500

72. If our proposals be accepted, the expenditure for the whole Post-Graduate department for the next five years will be as follows :

	Rs.
1925-26	6,27,517
1926-27	6,29,157
1927-28	6,50,377
1928-29	6,74,677
1929-30	7,00,357

It will thus be observed that the deficit for each of these years is likely to be as below :

	Rs.
1925-26	2,49,017
1926-27	2,50,657
1927-28	2,71,877
1928-29	2,96,177
1929-30	3,21,857

There are two points in this connection to which we desire to refer. Firstly, the deficit for 1925-26 will not come up to Rs. 2,49,017, because of the fact that the Post-Graduate fund for the year 1924-25 is expected to close with a balance of a little over Rs. 50,000.

Secondly, the figures for each of the five years include the sum of Rs. 1,42,757 for Library, Office Establishment, Provident Fund and Contingencies.

73. We desire to state here that the deficit in the Post-Graduate department has in past years been met by additional

contributions from the Fee Fund, as the following figures for the last four years will show :

	Rs.
1921-22	2,65,945
1922-23	61,356
1923-24	2,08,500
1924-25	1,30,755

During these periods, it should be noted, the University received grants from the Government to the extent of Rs. 7,83,250, which enabled the Fee Fund to meet the deficit, as indicated above.

74. Finally, we desire to mention below the capital expenditure already recommended by us for 1925-26 :

	Rs.
Museum for the Commerce Department ...	5,000
Science College (Physics and Chemistry) ...	62,000
TOTAL ...	<u>67,000</u>

W. E. GREAVES.

*E. F. OATEN.

NILRATAN SIRCAR.

HERAMBA CHANDRA MAITRA.

*UPENDRANATH BRAHMACHARI.

G. C. BOSE.

*H. E. STAPLETON.

PAUL BRÜHL.

P. C. RAY.

†JNANCHANDRA GHOSH.

J. R. BANERJEA.

B. C. RAY.

*W. S. URQUHART.

D. R. BHANDARKAR.

A. SUHRAWARDY.

P. N. BANERJEE.

PRAMATHANATH BANERJEA.

SYAMA PRASAD MOOKERJEE.

The 9th May 1925.

* Our signature to the main Report only concerns such portions of the Report as are not at variance with the Joint Note over our signatures (to be circulated with the main Report) and in any case is contingent on the assumption that no action will be taken by the University to increase liabilities except after (a) a full discussion in the Senate of both the main Report and the Minority Note; (b) exploration of all available University resources; and (c) application to Government for the necessary funds and their inclusion in the Budget.

E. F. OATEN.

UPENDRANATH BRAHMACHARI.

H. E. STAPLETON.

W. S. URQUHART.

† I sign the report subject to the following observations.

JNANCHANDRA GHOSH.

Mr. J. C. Ghosh's Note

I sign this report subject to the following observations :

1. I am strongly of opinion that if we are to formulate "a definite scheme for stabilisation and development of Post-graduate studies," we must change the present loose system to some extent and try to consolidate each subject more or less in a way it has been done in the new Universities of Dacca, Allahabad and Lucknow. The University must further try to retain the best of its Lecturers in its service. It is well known that during the last five years some of the best men have left the University and joined other Universities because of the insecurity of tenure of service and of the low pay. They have obtained double and in some cases treble of what they were getting here. They have become Professors and Readers elsewhere, while they had no position here. If the University is to retain the services of the able men still left to us, we should not grudge them increased salary and in the case of some of them the status of Reader. This will also act as an incentive to other Lecturers to do good work and induce them to stay on.

2. It is necessary that for every subject where there is no endowed Chair, there should be a Professor. It is to be regretted that such important subjects as Modern History, Sanskrit, Arabic and Persian are without a Professor. Moreover we have a large number of teachers for every subject whose work is not co-ordinated under a Departmental Head. This is not as it should be. Each Department represented by a Board of Higher Study should be placed under a Professor. He should be the Head of the Department and be responsible for seeing that the decisions of his Board are carried out. I suggest therefore, that where there is no endowed Chair, a Professor should be appointed and his salary met from the General Funds of the University. If for lack of funds or for any other reason, a Professor cannot be appointed, the Department should be placed under the charge of a Senior Lecturer called the Reader.

3. For efficient teaching and research, I suggest that the Teaching Staff should be composed of four grades.

(a) Professors on a salary of	Rs. 600-40-1000
(b) Readers	Do. Rs. 500-25-700.
(c) Lecturers	Do. Rs. 200-25-500
(d) Asst. Lecturers & Demonstrators	Do. Rs. 150-15-300.

The appointing authorities should be at liberty to appoint in special cases a distinguished person on a higher initial salary than the minimum proposed here, if they consider it desirable in the interest of the University.

4. I think, therefore, that for each Department of study represented by a Board of Higher Study, there should be one Professor, two Readers in the case of the more important subjects like English, History, Economics (including Commerce), Mathematics, Physics and Chemistry and one Reader for the remaining subjects and a number of Lecturers, Assistant Lecturers and Demonstrators as may be determined by the necessities of each subject.

5. I have proposed a higher pay for Assistant Lecturers and Demonstrators than that proposed in the Report for the very obvious reason that we should try to attract the very best of our young graduates to the University service who should in time fill the posts of Lecturers if they proved efficient.

6. The Professors should be appointed mainly on the ground of research work done by them and the Readers and Lecturers on the ground of high academical distinctions and experience in teaching.

7. Each Professor (excluding endowed chair holders who are appointed on special terms) should be expected to do ten periods of teaching work per week and each Reader, Lecturer and Assistant Lecturer twelve periods including lectures and tutorials. The work proposed is not excessive if we look to the work done by the Professors, Readers and Lecturers in the Universities of Dacca, Allahabad and Lucknow. At Dacca the work done varies from 10 to 26 periods per week. At Allahabad the Heads of Departments do 12 periods, Readers and Lecturers 15 periods. At Lucknow, the Professors and Readers do 12 periods and Lecturers 18 periods.

8. It should be accepted in principle that the University should give up under-graduate teaching in subjects if and when they are taken up by the affiliated Colleges in Calcutta.

9. Distinguished teachers from the affiliated Colleges in Calcutta and gentlemen eminently qualified from other avocations in life should be asked as hitherto to help in the teaching of the Post-graduate Departments. But as they cannot be reasonably expected to do more than four hours' work per week no Department can be run by part-time teachers alone. For then the number of Lecturers in a subject will be unduly large and it will be found impossible to frame a routine of work so as to suit the convenience of all. Moreover homogeneity of work

which is so desirable will be greatly impaired. We must therefore have a permanent body of teachers for each subject, who should be responsible for the bulk of the work. But at the same time we should make every effort to satisfy the natural desire of the eminent men in our affiliated Colleges to take part in Post-graduate work. I therefore suggest that the number of teachers in a subject taken from Colleges and from outside should whenever possible be equal to the number of whole-time teachers in the subject. This would give about one-fourth of the teaching work of a subject to part-time men.

9. It may be urged that the financial effect of my proposals will be increase of cost. But it will not be really so, as it would be evident from the detailed statement I placed before the Committee for their consideration. For if my proposals as regards the number of lectures to be delivered by the Professors, Readers, Lecturers and Assistant Lecturers be accepted and a larger number of Assistant Lecturers appointed, it will be found that the number of Lecturers may be considerably diminished and the saving thus effected will be found sufficient to meet the extra expenditure involved in my proposals.

10. In determining the number of teachers in each subject we should look only to the requirements of the subject. The number so fixed should be steadily kept in view in regulating appointments in future. At the same time we should see that the present incumbents who have served so long be not affected. The curtailment decided on should be given effect to gradually as opportunities arise. When posts become vacant they should be abolished until the numerical strength of the staff reaches down to the level of retrenchment decided on. The best men among the existing staff in every subject should be given the graded appointments up to the number fixed for the future and the remaining members of the staff should be allowed to continue for the present on their present salary till they are superannuated or find employment elsewhere.

11. To bring the work of the different departments together, I think there should be a Director of Studies for each of the Post-graduate Departments, whose duties will be analogous to those of the Principal of a College. One of the Professors may be so appointed on a suitable allowance. Where this is not possible a gentleman from the outside with suitable qualifications may be appointed.

12. The term of appointment proposed for the staff, *i.e.*, five years is not fair to them. Moreover it is not adequate to attract the type of men we want or to retain them in service. In the interest of efficient teaching, it is imperative that they

should be given permanent appointments. The existing members have been acting temporarily for an unduly long time. Those whose services we want to retain should no longer be kept in suspense.

SENATE HOUSE,
CALCUTA,
The 9th May, 1925.

JNAN CHANDRA GHOSH

Joint Minority Note

by

Messrs. Oaten, Brahmachari, Stapleton and Urquhart.

While we are in general agreement with many of the recommendations of our colleagues we wish to refer to certain important points in regard to which we are unable to agree with the views of the Majority. We are of opinion that further definite advances might have been made in the direction of a more economical distribution of the resources of the University; and, while we welcome the recognition of the principle of co-operation with the Colleges, which has found a place in the Report, we consider that there has been altogether insufficient exploration of the possibilities of applying this principle. In discussions and recommendations we feel that we have been constantly hampered by what seemed to us a confusion of ideas. Changes in the existing system have been opposed on the ground that they would involve unjust treatment of those who are at present employed on the University full-time staff, whereas we are of opinion that it would have been possible to have combined more definite changes of system with the most courteous and careful consideration of the claims of individual incumbents. To as full an extent as the members of the Majority, we desire that no injustice or harshness to individuals should result from the recommendations of the Committee, and, had our arguments been accepted, we should have been insistent upon all possible consideration in this respect. But we contend that the two questions of improvements of the system and just treatment of individuals should have been more carefully separated, and we are afraid that there is a good deal of vagueness as to the functions and powers of the Appointments Board in relation to their obligations to existing incumbents. We fully recognise, as we have been so often reminded, that we are not dealing with a "clean slate," but we fail to understand why this reminder should be transformed into an argument for making, in many instances, the writing on the slate practically indelible.

Before proceeding to comment on certain detailed recommendations with regard to particular Post-Graduate Departments, we may briefly touch upon one or two points of a more general character.

(1) We are of opinion that the replies from the Colleges called for in the Note given on page 3 of the Report, instead of being relegated to a position in the Appendix, should have been

considered, so that the Appointments Board might have some definite recommendations of the Post-Graduate Committee as a guide to their procedure in determining the future staff. This point of view was pressed upon the Committee, but was definitely rejected by them for reasons that were described by some members of the Committee as insuperable difficulties. We are not impressed by the magnitude of these difficulties, and we think that failure to consider these statements as to the resources of the Colleges amounted to a neglect of a body of evidence of primary importance. Surely the consideration of statements made by the Colleges as to their own resources ought to have been regarded as one of the important functions of the Committee; and even though there might be some disagreement with the estimate of the value of these resources as given by a particular College, we feel that it was the duty of the Committee to make a judicial scrutiny of these statements, and that they should, after such study, have been able to come to certain average conclusions as to the degree of participation in the work of different departments which might be expected from the Colleges. Had such a study been undertaken, the conclusions of the Committee would have had a broader factual basis, and would, in our opinion, have carried greater weight than they are likely now to do. We are under no illusions as to the resources of the Colleges, and have no desire to exaggerate these resources. We quite recognise the limitations of the Colleges in many directions; but we contend that both resources and limitations should have been more fully considered.

Again, while we welcome the general principle that whenever vacancies occur, whole-time lecturers should be replaced by part-time lecturers, drawn mainly from Colleges, and while, we repeat, we are as anxious as any to avoid any harshness or injustice to the present holders of whole-time appointments, we think that it was not necessary for the Committee to commit themselves as fully as they have done to the maintenance of the *status-quo* for a period of five years. In cases where posts were recommended to be continued mainly on the ground that we are not starting with the "clean slate," it should have been clearly indicated in all such instances (as has been done in some) that the posts themselves were temporary, and that a vacancy created by the retirement of a permanent incumbent would not constitute a vacancy calling for a fresh appointment. As it is, we are afraid that in several cases, at the termination of the five years' term, we shall be no nearer re-adjustment than we are at present. Further, we are of opinion that there should have been further differentiation as regards

the appointment for five years of the graded whole-time officers (recommended on page 25), para. 36 (3). We think that re-appointment for five years should only be given in connection with appointments where no part-time lecturers are, or are likely to be, available, or, where a necessary minimum of whole-time posts has already been reached, or where whole-time incumbents have, on account of their long service or outstanding ability, special claims on the University. In other cases, when, *e.g.*, part-time men are obviously available to take the place of the present whole-time incumbents, or except where such incumbents are men of long service and considerable distinction, we consider that appointments should be for a shorter period than five years. We feel strongly that, in general, the recommendations of the Majority in this relation will have the effect of practically *stereotyping* the existing arrangements.

(2) Further we consider that in the estimation of the staff necessary for the various departments more consideration should have been given to the number of hours of lecture work which are normally necessary in each department, especially in English, and the staff required should have been estimated in relation to this. Comparisons should also have been instituted between this University and other leading Universities in India giving instruction equivalent in nature to our post-graduate teaching, and perhaps with British Universities as well, regarding the staff which is considered necessary as a rule in any given department. It is rather disconcerting, *e.g.*, to find that in certain departments the staff considered necessary in Calcutta University is far in excess of that which is maintained in other leading Universities. This leads to the inevitable conclusion that our excess in one direction is of necessity accompanied by a starvation policy in other directions. We are no advocates of any cramping economy, and we sincerely hope that the total resources of the University will be increased whenever required. But we consider it rather unfortunate that a Committee, one of whose main duties was to consider "whether retrenchment is possible in the Post-Graduate Departments," should have found it necessary to advocate an increased expenditure in almost every branch of study in the Arts Department.

We admit, of course, that in some instances increased expenditure is justified, but we consider that we should have deserved better of our constituents if we have recommended a definite redistribution of expenditure rather than an increase in the total amount necessary for the Post-Graduate Department. We hold that such redistribution is both possible and desirable,

and we now proceed to explain more fully particular points where the opinion of the Minority differs from that of the Majority.

Before doing so, we may give here a statement of the number of lectures delivered per week in other Indian Universities where there is post-graduate work :—

1. *Dacca University*.—Shown separately under each subject.
2. *Allahabad University*.—The minimum number of periods of teaching work per week (including formal lectures and tutorial or practical work) is as follows :—

12 for Heads of Departments, and 15 for those who take post-graduate classes.

3. *Lucknow University*.—The minima are laid down as follows :

Professors and Readers.—12 teaching or tutorial periods each week.

Lecturers.—18 teaching or tutorial periods each week.

I

English.

It is stated in the report that a minority are of opinion that six whole-time lecturers would be sufficient. Even six might appear to be a liberal estimate. On the basis of existing lecture arrangements it appears more than sufficient.

A comparison of the number of whole-time teachers for the teaching of English in the Dacca, Allahabad and Lucknow Universities and that proposed for Calcutta University in the Report will make this point clear.

1. *Dacca*.—7 teachers, and an assistant, working 146 hours per week. (If there were no under-graduate teaching, the number of teachers could be reduced.) The teachers in the University of Dacca thus, with only 7 teachers and an assistant, delivered, on an average last year, 18 lectures, the Professor himself delivering 15 lectures per week.

2. The teachers in the University of *Allahabad* deliver a minimum of 15 lectures in the Post-Graduate Classes, the Professor or Head of the Department delivering a minimum of 12 per week.

3. In the University of *Lucknow* the minimum of lectures is 12 per week for the Professors and the Readers, and 18 for the lecturers.

The average number of lecturing hours in these three Indian Universities is therefore at least *fifteen*.

4. *Calcutta University* (as recommended in the Report)—
 (a) 1 Professor, (b) 8 whole-time men, and (c) 7 part-time men
 from the Colleges and outside.

The total number of lectures (including tutorials) delivered in this subject at Calcutta is 88. Deducting from this 30 lectures delivered by part-time lecturers from Colleges and from outside the Colleges and by the Professor of Phonetics, 58 lectures are delivered by whole-time teachers of the University. This amount of work at other Indian Universities would be covered by 4 whole-time men. Considering the fact that the whole-time teachers of other Indian Universities deliver considerably more than 12 lectures per week, we might expect the whole-time teachers of our University to deliver at least that number. Calculated even on the basis of 10 lectures per week for each whole-time teacher and 8 for the University Professor, the number of teachers in grade need not be more than 6, including the University Professor (instead of 9 as recommended by the Majority). The adoption of this total of 6 would reduce the expenditure by the pay of 3 whole-time lecturers in grade.

We note that Mr. J. C. Ghosh, the Registrar, has suggested 7 whole-time men, including the Professor, as well as an Assistant Lecturer—a total which corresponds more closely to ours than to that of the main Report. This remark holds good in the case of several other subjects.

For the Post-Graduate English Staff we, therefore, recommend that the following staff be maintained :

- (1) 1 Professor
- (2) 5 whole-time teachers, and
- (3) 7 part-time men, at least 6 of whom should be from Colleges.

Philosophy.

Of the total number of 62 lectures delivered in the subject, 25 lectures are delivered by one teacher from outside, as well as part-time lecturers from the Colleges and other Departments of the University including the Department of Experimental Psychology. This leaves 37 lectures to be dealt with by whole-time lecturers of the University in grade and the King George University Professor. The latter delivers 6 lectures per week.

Our recommendation as regards the whole-time lecturers is 3 whole-time lecturers in grade delivering 12 lectures per week excluding the King George University Professor. We emphasise the provision that the posts of 2 part-time lecturers outside the

graded service are to come to an end after two years. We consider that one University Professor should be ordinarily sufficient for the department.

A comparison between the teaching staff of Dacca University and that proposed for Calcutta University is given below :—

Dacca.—4 teachers and 2 assistants working 83 hours per week. The average number of lectures delivered by each teacher is 16 per week. The Head of the Department devotes 14 hours to Post-Graduate and Honours teaching. (If there were no under-graduate teaching the number of teachers could be reduced.)

Calcutta University (as recommended by the Majority).—In addition to the King George Professor (a) 1 Professor, (b) 4 whole-time lecturers in grade, (c) 1 whole-time lecturer outside the grade, (d) 2 part-time lecturers outside the grade, and (e) 5 lecturers from Colleges.

The saving, according to our recommendations, over the Majority recommendations will be the pay of 2 whole-time teachers in grade, plus the pay of 1 whole-time lecturer outside the graded service.

Sanskrit.

The question of Sanskrit is somewhat different from that of the other Departments. At present there are six gentlemen, four of whom are on a 5 years' graded appointment of Rs. 200-300, one on Rs. 200-250, while the sixth draws Rs. 400 per month. There are three gentlemen on 5 years' graded appointment of varying grades, the highest pay being Rs. 200. Two of these posts fairly correspond to the grade of assistant lecturers as recommended by the Committee, and one is on a grade lower than this. *The first point that strikes us in the recommendations of the Majority is the creation of eight posts in the grade of Rs. 200—500, while the two posts corresponding to those of assistant lecturers cease to exist.*

The total number of lectures delivered in Sanskrit is 113. Out of these 77 lectures are delivered by graded whole-time men, and 11 by a gentleman on a non-graded appointment of Rs. 150 per month.

Our recommendation is—7 whole-time men, delivering about 12 lectures per week. Out of these 7, (i) 5 should be whole-time lecturers in grade, (ii) 2 men in the grade of assistant lecturers, (iii) 4 part-time lecturers from Colleges, and outside if necessary, who may take up the teaching of some of the special groups in the

subject, and (iv) part-timers from other Departments of the University as at present.

A comparison between the teaching staff of Dacca University and that proposed for Calcutta University is given below :—

Dacca (Sanskrit including Bengali).—(i) 5 whole-time teachers, (ii) 2 assistants. (These gentlemen have to take classes in Bengali in Pass under-graduate work, in addition to Post-graduate and Honours teaching.) Each lecturer delivers, on an average, 17 lectures, the Head of the Department delivering 14.

Calcutta University (as recommended in the Report).—(i) 8 whole-time teachers in grade, (ii) 4 lecturers outside the grade, (iii) 3 part-time lecturers from Colleges.

The minimum saving, according to our recommendations, over the recommendations of the Majority is the difference between the pay of 3 whole-time lecturers in grade and that of 2 assistant lecturers, plus the pay of 3 lecturers outside the grade.

Another point in connection with Sanskrit is that there are certain groups in which there are very few or no students in the Post-Graduate classes from the very beginning of the introduction of the New Regulations. If these groups were dropped a still further reduction could be effected. The Macdonnell Report will also form a useful basis for discussing what groups should be retained in future. The question of reducing the number of lectures for very small classes in some of the groups should be seriously considered.

General History.

In the Report it is stated that the Minority are of opinion that the department could be run by a smaller number of whole-time men in grade. The total number of lectures (including tutorial) delivered in the subject is 91. Deducting from this 16 lectures from other Departments of the University (including 12 lectures delivered by teachers in Anthropology) 4 honorary lectures, 16 lectures from affiliated Colleges and 14 by gentlemen outside the grade, 41 lectures are delivered by whole-time teachers of the University.

Our recommendation is—(i) 4 whole-time men in grade, including the lecturer in International Law, delivering 12 lectures per week, (ii) 2 part-time lecturers outside the grade, and (iii) 4 part-time lecturers from Colleges.

A comparison between the teaching staff of Dacca University and that proposed for Calcutta University is given below :—

Dacca—5 teachers and 2 assistants working 80 hours per week. (This includes under-graduate pass and honours teaching.) The Professor devotes 10 hours, and other teachers (excluding the assistants) devote 61 hours, *i.e.*, 12 lectures on an average per lecturer.

Calcutta University (as recommended in the Report) —(a) 6 whole-time men in grade against 4 whole-time men as at present, (b) 2 part-time men outside the grade, (c) 4 part-time lecturers from Colleges.

The saving according to our recommendations over the Majority recommendations will be the pay of 2 whole-time lecturers in grade.

Ancient History and Culture.

The total number of lectures (including tutorials) delivered in the subject is 121. Deducting the lectures delivered by teachers from affiliated Colleges, and other Departments of the University as well as by honorary lecturers, the total number of lectures delivered by the remaining members of the teaching staff is 87. Assuming (a) that the Carmichael Professor of Indian History delivers 6 lectures which is less than the number delivered by Dr. Rameshchandra Mazumdar at Dacca; and (b) that the subjects taught by the teachers, from the Departments of Anthropology and Ancient Indian Mathematics are transferred to the Departments of Anthropology and Mathematics as suggested in the Report, 75 lectures are delivered by whole-time men in grade.

Our recommendation is—In addition to the Carmichael Professor of Indian History, there should be (i) 5 whole-time teachers delivering 12 lectures per week, (ii) 2 lecturers outside the graded service (or 2 Assistant lecturers), (iii) 1 part-time lecturer from an affiliated College, and (iv) 1 research student.

Recommendations of the Majority.—(i) 7 whole-time lecturers, (ii) 3 whole-time lecturers outside the graded service, (iii) 1 part-time lecturer from an affiliated College, and (iv) 1 research student.

The minimum saving according to our recommendations over the Majority recommendation will be the pay of 2 whole-time lecturers in grade and 1 lecturer outside the graded service (or 1 Assistant Lecturer).

Economics and Commerce.

The total number of lectures (including tutorials and under-graduate lectures) delivered in those subjects is 118, which includes 14 hours, under-graduate work. The total number of lectures delivered by whole-time teachers of the University in the Post-graduate and under-graduate classes (excluding the Minto Professor) is 73.

Our recommendation is—Besides the Minto Professor (i) 5 whole-time lecturers in grade delivering 12 lectures per week, aided by the lecturer in International Law from the Department of History, (ii) 1 Assistant lecturer, (iii) 10 lecturers from affiliated Colleges and outside, if necessary.

The amount of work of whole-time teachers for the teaching of Political Economy in Dacca University is as follows:—

The Head of the Department devotes 12 hours to Post-Graduate and Honours teaching, and the average number of hours per lecturer is $12\frac{1}{2}$ per week.

Calcutta University (as recommended in the Report) for the Department of Economics and Commerce.—In addition to the Minto Professor (i) 1 Professor (Mr. S. C. Ray), (ii) 8 whole-time lecturers, (iii) 9 lecturers, either from affiliated Colleges or from outside.

The minimum saving according to our recommendations over the recommendations of the Majority will be the pay of 4 whole-time lecturers (including 1 Professor) *minus* the pay of 1 Assistant lecturer.

A comparative list of teachers, for the teaching of Political Economy only in Dacca University, of teachers of Political Economy and Sociology in Bombay University, and that proposed for Calcutta University in the Report is given here. No comparison has been made with regard to Commerce, as there are no Post-Graduate Departments of Commerce in the Universities of Bombay and Dacca.

(1) *Dacca University*.—5 whole-time teachers and 2 assistants working 87 hours. (These include under-graduate and Honours teaching).

(2) *Bombay University*.—Political Economy and Sociology. 2 Professors and 2 Assistant Professors.

(3) *Calcutta University* (as recommended in the Report.—(i) 2 Professors (including (1) The Minto Professor (2) Mr. S. C. Ray); (ii) 6 whole-time lecturers; in grade; (iii) 1 lecturer outside the graded service; and (iv) 4 lecturers from affiliated Colleges.

Anthropology.

We consider that it is extremely doubtful whether the subject should rank as a separate subject for the Master's degree. While in the University of Cambridge there is no doubt a Tripos examination in Anthropology in addition to a diploma, other important Universities have not yet introduced this subject in their advanced course of studies. Should not Calcutta be content for the present with the B.A. and B.Sc. classes in Anthropology—along with higher research work in the subject—so that the University may be saved the expense of an elaborate scheme for the teaching of the subject for the Master's degree?

A consideration of the staff existing at present in the University for the teaching of the subject shows that in the Post-Graduate Department 40 lectures are delivered. Two lecturers in grade and two assistant lecturers should be sufficient for both post-graduate and under-graduate work. The assistant lecturers should be mostly employed for under-graduate teaching, and work as part-time lecturers in the Post-Graduate Department.

A list of teachers in the two leading British Universities which give exceptional attention to this subject as well as that proposed for Calcutta University in the Report is given below:—

Cambridge University—1 Reader,

Oxford University—1 Reader, 1 Lecturer and 1 Demonstrator.

Calcutta University (as recommended in the Report).—(i) 2 whole-time lecturers in grade, (ii) 2 part-time lecturers outside the grade, (iii) 2 assistant lecturers, and (iv) 2 lecturers for one year, to be placed outside the graded service.

It will be seen that the reduced staff suggested by us is still largely in excess of that of the British Universities mentioned above, including the University of Cambridge where there is a Tripos examination in the subject. It is evident therefore that the number of lecturers in Calcutta University could be even further reduced.

The minimum saving according to our recommendations over the recommendations of the Majority is the pay of 2 part-time lecturers outside the grade plus the pay of 2 lecturers for one year, to be placed outside the graded service.

Experimental Psychology.

We consider that the question of the study of Experimental Psychology as a separate subject for the Master's Degree is

even more debateable than in the case of Anthropology. As far as our knowledge goes, in none of the British Universities does this form a separate subject for the Bachelor's or Master's Degree. It is said in the Report that the representatives of the Higher Board of Studies in this subject stated that "the subject as taught in the University (Calcutta) was not keeping pace with recent developments in the scientific world" and they desired to direct their activities towards subjects such as "Post-war Psychology" (among others). If this were the case, then the British Universities which have not yet introduced it as a separate subject, even for the Bachelor's Degree, are still lagging far behind the times. To drop it from the course of studies for the Master's Degree will therefore be to err in company with the best British Universities. Experimental Psychology does not seem to us to have developed to such an extent as to be rightly regarded as a separate subject for the Bachelor's or Master's Degrees. In British Universities where it is taught it is regarded as only a part of Psychology. Why should a different procedure be followed in Calcutta? On the other hand, a small number of workers may be kept in this department for the purpose of research.

We may compare the staff for the teaching of the subject in two of the leading British Universities which give special attention to this subject with that proposed for Calcutta University.

University of Cambridge.—Two men, one of whom is a Demonstrator. Both of these men are evidently part-time teachers, as they also take part in the teaching of Medical Psychology.

University of London.—Possibly three half-time men.

University of Calcutta (as recommended in the Report).—
(i) 3 whole-time lecturers in the graded service, (ii) 2 Assistant lecturers, (iii) 1 part-time lecturer from a College, and (iv) 3 part-time lecturers for two years, outside the graded service.

Our recommendation is—(i) 2 whole-time lecturers, (ii) 2 Assistant lecturers, and (iii) 1 lecturer from a College.

Even this recommendation involves a larger staff than in either of the abovementioned British Universities, both of which give special attention to this subject, and there is therefore no reason why the number should not be still further reduced in the case of Calcutta University. The number of lectures delivered is 91, which is more than is necessary and should be reduced. We consider that this point should be investigated.

In connection with the recommendations in the Report for 3 part-time lecturers for two years outside the graded service, it should be clearly indicated that the posts themselves are temporary.

We understand that in the University of Dacca Experimental Psychology has been recently introduced as a subject for study, but it is not treated there as a separate subject.

The minimum saving according to our recommendations over the recommendations of the Majority will be the pay of 1 whole-time lecturer *plus* the pay of 3 part-time lecturers for two years, outside the graded service.

Indian Vernaculars.

In our opinion it is open to argument whether the number of lecturers could not be reduced. We are quite agreeable to the idea of special recognition being given to the attainments and services of Dr. Dineshchandra Sen. But we consider that the title of Professor should be in reference to Bengali alone and not to Indian Vernaculars in general.

Comparative Philology.

The question of maintaining a separate Department for this subject was seriously debated in the Committee, but no reference to the debate appears in the Report. Several members were inclined to recommend that the separate existence of the department should cease and that it should be considered as ancillary to other departments. The work which is required could easily be conducted by the Professor of Comparative Philology without any separate department being necessary.

The minimum saving according to our recommendations over the recommendations of the Majority is the pay of 1 whole-time lecturer.

II

It was frequently urged upon us in the Committee that retrenchment would be effected at the expiry of the term of appointment of many of the lecturers outside the grade. While we recognise that some of the posts outside the grade should be permanent, the great majority may properly be regarded as temporary, and this should have been clearly stated. Even where their temporary character is indicated in the Report, *e.g.*, in Philosophy, the qualifying phrase "for the present" again renders the situation indefinite. In view of what has been just stated we are of opinion that the average final cost may be greater than the figures given in the chapter on the financial aspect of the scheme included in the Report.

Concluding observations,

(1) We have carefully considered the various subjects of study in the Post-Graduate Departments in Arts and are of opinion that economy is possible in almost every department without the slightest loss of efficiency. Under the scheme put forward by the Majority, it is possible that a teacher on the permanent staff may be drawing Rs. 12,000 per annum for only 100 lectures, which, we think, is a higher figure than our limited resources justify. We are forced to the conclusion that the economic aspect of the scheme should have been far more seriously considered than it has been by the Majority.

(2) The financial gain, if our suggestions are adopted, is summed up below :—

The saving in the initial expenditure in the Arts Department on our suggestions, as compared with the proposed scheme of the Majority, will be Rs. 83,700 per annum, and in the average final expenditure Rs. 98,550. It will also be seen that by adopting our scheme there will be a saving of Rs. 43,584 per annum as compared with the present expenditure of the Post-Graduate Department in Arts.

(3) We have not had sufficient time given us for detailed consideration of the proposals regarding the Science Departments. We would only remark that we consider more care should have been given to the details of the capital expenditure stated to be necessary, and to express our opinion that the matter requires further investigation before sanction is finally given.

(4) We desire to make our position on the financial issue absolutely clear. As we understand it, the Government of Bengal are prepared to make the University of Calcutta an annual recurring grant sufficient to meet its ascertained needs, and, from time to time, to increase that grant as the needs of the University expand. We are of opinion, as shown above, that the increase as recommended by the Majority is not at present justifiable. Should the Senate, however, after mature deliberation and discussion of both the Majority Report and the Minority Note ultimately come to the conclusion that some increase over the present scale of expenditure on the Post-Graduate Departments is desirable, we are of opinion that in such a case the application for the necessary grant to enable the increase to be made should be forwarded to the Government of Bengal for opinion and necessary action before the University puts its resolutions into operation. We are totally opposed to any increase in the present scale of expenditure, which will have to be met from Government sources, being given

effect to immediately, and consider that a more proper course would be to renew for one year all appointments in the Post-Graduate Departments; and thereafter, when the Senate has decided what the University's immediate and ultimate needs in the Post-Graduate Departments are, to make an application to Government for the necessary increase of grant-in-aid. The Majority of the Committee have, throughout our proceedings, more or less tacitly assumed that the increased expenditure, whatever sum may be ultimately decided upon, should be met by Government. We believe this will only turn out to be a correct assumption, provided that the additional expenditure, if any, can be clearly shown to be justifiable and that the University does not commit itself irrevocably to increased expenditure before obtaining the assurance of Government that funds will be provided; for it cannot be safely assumed, nor is it reasonable to expect, that any Government will willingly accept financial burdens, in the creation of which it has had no say.

(5) Our signature to the main Report only covers such portions of the Report as are not at variance with the present note, and in any case, is contingent on the assumption that no action will be taken by the University to increase its liabilities except after (a) a full discussion in the Senate of both the main Report and the Minority Note; (b) exploration of all available sources of University revenues; and (c) application to Government for the provision of necessary funds (if any), and their inclusion in the Budget.

E. F. OATEN.

UPENDRANATH BRAHMACHARI.

H. E. STAPLETON.

W. S. URQUHART.

Consideration of the Report by the Senate.

I

The report of the Post-Graduate Re-organisation Committee came up for consideration by the Senate on the 16th May, 1925. The Majority Report of the Committee was finally adopted by the Senate on the 21st May by a majority of 35 to 5, after a discussion which lasted for five afternoons occupying some 15½ hours.

Mr. Pramathanath Banerjee moved that the Majority Report of the Committee appointed by the Senate on the 27th September, 1924, to enquire into the working of the Post-Graduate Departments of the University with a view to formulate a definite scheme for the stabilisation and development of Post-Graduate Studies in Calcutta be adopted.

The following motions and amendments were also moved with the results indicated below:—

(1) Mr. E. F. Oatens' motion "that the discussion be adjourned till Saturday, July 18th" was negatived, 42 voting against and 25 for it, and 8 remaining neutral.

(2) Rev. Dr. W. S. Urquhart's motion "that the report be accepted except in so far as it is inconsistent with the Minority note" was negatived, 41 voting against and 12 for the motion.

(3) The amendments of Mr. H. E. Stapleton, Rev. Dr. W. S. Urquhart, Rai Bahadur Dr. Upendranath Brahmachari, Mahamahopadhyay Haraprasad Sastri and of the Hon'ble Mr. Khagendranath Mitra to reduce the staff proposed by the Committee, in English, Economics and Commerce, Anthropology, Comparative Philology, Experimental Psychology, Sanskrit, Pali, Ancient Indian History and Culture, General History and Philosophy were all negatived after full discussion, about 30 voting against and 10 to 12 voting for the amendments in each case.

(4) The amendment of Mr. Ramaprasad Mookerjee "that the salary of the Assistant Lecturers be fixed in the grade Rs. 150-15-300" was carried 21 voting for and 15 against it.

(5) Another amendment of Mr. Ramaprasad Mookerjee "that the salary of the Demonstrators mentioned in the Majority Report be fixed in the grade Rs. 150-15-300" was also carried 22 voting for and 10 against the amendment.

(6) The following amendments of Prof. C. V. Raman were, after full discussion, accepted by the mover, Mr. Pramathanath Banerjee:—

(i) That the question of the grant of the allowances recommended on page 59 of the report to certain holders of endowed chairs be deferred for the present.

(ii) That the question of the relation between the holders of endowed chairs and the work of Post-Graduate lecturing, and of the stipends, if any, to be paid to them from the general funds of the University be referred for enquiry and report to a Committee composed of the following members of the Senate:—

1. The Hon'ble the Vice-Chancellor.
2. E. F. Oaten, Esq., M.A., J.L.B., M.L.C.
3. Sir Nilratan Sircar, Kt., M.A., M.D., LL.D., D.C.L.
4. The Hon'ble Sir Devaprasad Sarvadhikary, Kt., C.I.E., M.A., LL.D.
5. Rai Chunilal Bose, Bahadur, C.I.E., I.S.O., M.B., F.C.S.
6. Mr. Girishchandra Bose, M.A., M.R.A.S.
7. Prof. P. Brühl, D.Sc., I.S.O., F.C.S., F.G.S.
8. Sir Praphullachandra Ray, Kt., C.I.E., Ph.D., D.Sc., F.C.S.
9. Mr. Jnanchandra Ghosh, M.A.
10. Mr. Ramaprasad Mookerjee, M.A., B.L.
11. Prof. C. V. Raman, M.A., D.Sc., F.R.S.
12. „ Ganesh Prasad, M.A., D.Sc., M.L.C.
13. Mr. Pramathanath Banerjee, M.A., B.L., *Secretary*.

The original motion for the adoption of the Majority Report, as amended, was then carried 35 voting for the motion and 5 against it.

To the motion of Mr. Jyotishchandra Mitra "that the financial aspect of the proposals contained in the Post-Graduate Re-organisation Committee's report be referred to a Committee consisting of five members" the following amendment was moved by Mr. Syamaprasad Mookerjee:—

That the financial effect of the recommendations of the Committee, as they are finally adopted by the Senate, be scrutinised in detail by the Board of Accounts before the proposals are submitted to Government, the results of such scrutiny to be embodied in the letter which will be addressed by the University to Government.

The amendment of Mr. Syamaprasad Mookerjee was carried by a majority of 35 to 1. It was then placed before the Senate as a substantive motion and was carried.

- The following motion of Mr. Syamaprasad Mookerjee was then accepted by the Senate *nemine contradicente* :—

“That it be an instruction to the Appointments Board that the existing appointments in the Post-Graduate Departments which will expire on the 31st May, 1925, be renewed for four months with effect from 1st June, 1925, it being clearly understood that when appointments are made subsequently in accordance with the recommendations of the Report, such increments as may be decided upon will be given effect to as from the 1st June, 1925.”

Another motion of Mr. Syamaprasad Mookerjee was unanimously accepted by the Senate which was as follows :—

“That no appointments involving increased expenditure in terms of the Report be made for a period of four months from this date so as to give Government sufficient time to come to a decision with regard to the question of financial assistance to the University.”

The motion of Prof. Pramathanath Banerjee “that a copy of the Report of the Post-Graduate Re-organisation Committee as adopted by the Senate be forwarded to Government with the request that early steps be taken to make a recurring grant of Rs. 3 lakhs to the University in order to enable it to carry on Post-Graduate work” was also carried *nem con* after an amendment to reduce the amount to Rs. 2,50,000 had been defeated.

II

The Committee appointed by the Senate on the 21st May, 1925, to enquire and report on the question of the relation between the holders of the endowed chairs and the work of Post-Graduate lecturing and of the stipends, if any, to be paid to them from the General Funds of the University, submitted the following report on the 6th June, 1925 :—

REPORT

The following was referred to us by the Senate on the 21st May, 1925, for enquiry and report, namely “The question of the relation between the holders of endowed chairs and the work of Post-Graduate lecturing and of the stipends, if any, to be paid to them from the general funds of the University” and we report as follows :—We regret that in the present state of the finances of the University we are unable to recommend that the Ghose and Khaira Professors should be paid according to the scale recommended for University Professors in the report of the

Post-graduate Committee although we hope that this may be possible subsequently.

We think however that, as a temporary measure, these Professors (other than the Khaira Professor of Fine Arts and the Khaira Professor of Agriculture) should have their stipends increased and we accordingly recommend that in place of the Rs. 100 monthly now allowed to these Professors as House allowance they should receive a monthly allowance of Rs. 250. The House allowance now paid to the Khaira Professor of Fine Arts should be continued.

W. E. GREAVES.

*NILRATAN SIRCAR,
DEVAPRASAD SARVADHIKARY.
CHUNILAL ROSE.

*G. C. BOSE.

P. BRÜHL.

*P. C. RAY.

*JNANCHANDRA GHOSH.

RAMAPRASAD MOOKERJEE.

C. V. RAMAN.

GANESH PRASAD.

6th June, 1925,

MINORITY NOTE

We are of opinion that the holders of the endowed chairs should be given the same status and pay as the University Professors as recommended by the Senate. But we accept the proposal that each of them should be given an additional honorarium of Rs. 250 per month as a temporary measure.

P. C. ROY.

NILRATAN SIRCAR.

GIRISCHANDRA BOSE.

JNANCHANDRA GHOSH.

The report was placed before the Senate on the 6th June, 1925, when the Majority Report was adopted after an amendment of Mr. Girischandra Bose "that the pay of the holders of endowed Chairs be graded from Rs. 600 to Rs. 1,000" had been negatived.

Those whose names are marked thus () sign subject to the observations contained in their minority note.

APPENDICES

TO

The Report of the Post-Graduate
Re-organisation Committee
1924-1925



CALCUTTA UNIVERSITY PRESS

1925

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Appendix I

*Extracts from the Minutes of the Senate, dated the 27th
September, 1924.*

2. Mr. Pramathanath Banerjee moved :

(A) That in view of the fact that almost all the appointments to the teaching staff in the department of Post-Graduate Studies in Arts and Science expire on the 31st May, 1925, and in view of the immediate necessity for formulating a definite scheme for the stabilisation and development of Post-Graduate Studies in Calcutta the following Committee be appointed to enquire into the working of the Post-Graduate departments in the University and submit a report to the Senate at an early date :—

1. The Hon'ble Justice Sir William Ewart Greaves, Kt., M.A., *Vice-Chancellor, Chairman.*
2. E. F. Oaten, Esq., M.A., LL.B.
3. Sir Nilratan Sircar, Kt., M.A., M.D., LL.D., D.C.L.
4. Herambachandra Maitra, Esq., M.A.
5. Girischandra Bose, Esq., M.A., M.R.A.S.
6. Subodhchandra Mahalanobis, Esq., B.Sc., F.R.S.E.
7. Prof. P. Brühl, D.Sc., I.S.O., F.C.S., F.G.S.
8. Sir Praphullachandra Ray, Kt., C.I.E., Ph.D., D.Sc., F.C.S.
9. Jnanchandra Ghosh, Esq., M.A.
10. Jnanranjan Banerjee, Esq., M.A., B.L.
11. Bidhanchandra Ray, Esq., B.A., M.D., F.R.C.S., M.R.C.P., M.L.C.
12. Rev. W.S. Urquhart, M.A., D. Litt.
13. R. N. Gilchrist, Esq., M.A.
14. Abdulla-al-Mamun Suhrawardy, Esq., M.A., D.Litt., Ph.D., M.L.C.
15. Pramathanath Banerjee, Esq., M.A., B.L.
16. Prof. Pramathanath Banerjee, M.A., D.Sc., M.L.C.
17. Syamaprasad Mookerjee, Esq., M.A., B.L.

(B) That the Committee associate with itself the following Gentlemen :—

(a) Secretaries of the Post-Graduate Councils in Arts and Science when questions relating to the particular Council come up for discussion.

(b) The Chairman and two Members of each of the Higher Boards of Studies when questions relating to it will be considered.

(C) That the Committee shall enquire into and report to the Senate on the following and other relevant matters :—

(a) Whether retrenchment is possible in the Post-Graduate departments concerned. If so, in what directions ?

(b) Whether the pay and conditions of employment and service of the members of the teaching staff are satisfactory ?

And what specific recommendations may be made for improving the same.

(c) Whether the members of the teaching staff have been given proper facilities for carrying on research work.

(d) Whether the rules relating to the Provident Fund of the Teachers are satisfactory and, if not, on what lines the rules should be framed to afford the teachers greater security and larger amount of money in the Provident Fund either at the time of retirement or resignation.

(D) That the quorum for a meeting of the Committee be fixed at 9.

Khan Bahadur Maulvi Hedayet Hossain seconded the motion.

With the leave of the Senate, the names of the following gentlemen were added to the Committee and the quorum was fixed at 11 :—

Rai Bahadur Dr. Upendranath Brahmachari, M.A., M.D., Ph. D.

H. E. Stapleton, Esq., M.A., B.Sc.

Prof. D. R. Bhandarkar, M.A., Ph. D.

The motion of Mr. Pramathanath Banerjee as altered, was then put to the vote and carried.

APPENDIX II

Report of the Committee appointed to consider arrangements for Post-Graduate Teaching in the University of Calcutta, 1916.

We, the members of the Committee appointed by the Government of India to consider the question of Post-Graduate Studies in the Calcutta University and its constituent Colleges, have the honour to submit our report.

It is desirable to commence with a precise statement of the scope of the enquiry entrusted to the Committee. This is best described in the following extract from the letter addressed by the Secretary to the Government of India to the Private Secretary to His Excellency the Rector of the University :—

“The Committee should review the existing facilities in the University of Calcutta for instruction beyond the Bachelorship degrees (Chapters XXXIII and the XXXVII of Calcutta University Regulations) and should make suggestions whereby the existing expenditure and available resources for such teaching may be put to the best use. The Committee should be asked to examine the points referred to it with special reference to the quality of the teaching given, the recommendations made by the Universities Commission, the economic employment of the resources of the University and the Colleges in men and money (including the grants now given by the Imperial Government), remuneration of the teachers and fees paid by the students, the relation of the University as a teaching body to its affiliated colleges and the maintenance of suitable relations between teachers and students in the University. The Committee should frame its recommendations merely with a view to the best expenditure of existing funds and it should understand that further grants for Post-Graduate Education cannot be expected in the near future.”

Short description of the arrangements made from time to time for higher teaching.

2. It is convenient, first of all, to give a short description of the arrangements made from time to time for the M.A. and M.Sc. courses.

There have been four distinct periods in the history of the higher teaching of Calcutta University—

(a) In the first regulations framed in 1858 provision was made for the institution of an examination for the degree of Master of Arts. It was contemplated that the degree of Bachelor of Arts

1858—1864.

should ordinarily be taken at the end of four years from the date of Matriculation, and it was laid down specifically that the candidate should carry out the prescribed courses of study at a college affiliated to the University. The regulations, however, did not require a candidate for the M.A. degree to have studied in an affiliated institution since the date of graduation, as any graduate either of the University or any other university of India or of the United Kingdom was entitled to be admitted to the M.A. Examination on payment of the prescribed fee. It was also provided that if a candidate passed the B.A. Examination at the end of four years from Matriculation and the M.A. Examination a month later he was deemed to have taken honours; and the names of such candidates were to be published in order of merit in lists classified according to subjects. The names of all other successful candidates at the M.A. Examination were arranged in alphabetical order without specification of class or subject. During this period, 119 candidates passed the B.A. Examination; of these 19 appeared for the M.A. Examination, 9 of whom were successful, but none obtained honours.

(b) The University authorities speedily realised that it was impossible for even the best prepared candidates to qualify themselves for the M.A. Examination within four years of

1865—1884.

Matriculation. Arrangements were made, therefore, whereby those who had taken their B.A. degree within four years from Matriculation were deemed to have taken honours at the M.A. Examination, if they took the M.A. degree within one year (instead of one month, as before) from the time of graduation. This system continued in operation for 20 years from 1865 to 1884. During this period, 2,251

passed the B.A. Examination; of these 907 appeared at the M.A. Examination, of whom 554 were successful and 392 took honours.

(c) In 1885 a further alteration was introduced into the regulations. It was laid down that all successful candidates at the M.A. Examination should be arranged in order of merit, subject by subject, whatever the time that had elapsed between Matriculation and graduation or between graduation and admission to the M.A. Examination. This system continued in force for 24 years—from 1885 to 1908. During this period, 10,464 candidates took the B.A. degree and 60 took the B.Sc. degree (which was instituted in 1902 to secure proper recognition of those who studied scientific subjects). Of these 10,524 graduates, 4,180 appeared at the M.A. Examination, of whom 1,804 were successful.

(d) In 1909 the new regulations framed under the Indian Universities Act of 1904 came into operation. Three changes of vital character were then made regarding the M.A. Examination.

- (i) No one was to be permitted to proceed to the M.A. Examination in less than two years from graduation.
- (ii) A candidate would be eligible for admission to the Examination in two years, provided that he had, since graduation, pursued a regular course of study during that time in an affiliated college or under University Lecturers; if he had not done so, he could appear at the examination only at the end of not less than three years from graduation.
- (iii) The course of study in each subject was thoroughly remodelled and widened in scope, better provision being made for more specialised study. This system had, in 1915, been in operation for seven years. During that period 6,026 candidates have taken the B.A. degree and 1,165 the B.Sc. degree. Of these 7,191 graduates, 2,158 appeared at the M.A. Examination and 407 at the M.Sc. Examination (which was instituted in 1909), 1,171 being successful in the M.A. and 226 in the M.Sc. Examinations.

3. It is instructive to compare during each of these periods the average number of new graduates each year, the average number of candidates for the M.A. Examination, and the average number of successful candidates in that examination.

Increase in number of students taking the M.A. and M.Sc. Examinations is in proportion to the increase in the number of graduates.

Period.	Average annual number of graduates.	Average annual number of graduates appearing at the M.A. Examination.	Percentage of figures in the preceding columns.	Percentage of successful candidates at the M.A. Examination.
A. (1858 to 1864) ...	17	3	18	47
B. (1865 to 1884) ...	113	45	40	60
C. (1885 to 1908) ...	438	174	39	44
D. (1909 to 1915) ...	1,027	366	36	54

From these figures it will be seen that, omitting that first seven years when the condition of things was more or less experimental, since 1865 for a period of half a century the proportion of graduates who have sought admission to the higher examination has remained very steady, varying only from 36 to 40 per cent.; and the proportion of successful candidates at the M.A. Examination has remained almost equally steady, varying only between 44 and 60 per cent. It is therefore reasonable to deduce that the number of candidates for the M.A. and M.Sc. Examinations will continue to increase *pari passu* with that of the successful graduates, and should, therefore, under present conditions, increase even more rapidly in the near future.

4. Under such a system, by which until very recently the University has been content to leave the entire teaching of all its courses to the affiliated colleges, while keeping to itself the duties of examining students and prescribing course and curricula, there were two grave defects, in particular, which still remain to some extent in spite of such improvements as have been made in recent years:—

Defects of the system.

(a) There was a complete divorce of teaching from examination, which defect under existing conditions it has not been possible to remedy. The teachers are still expected to teach in accordance with the courses and curricula laid down by the several University Faculties and Boards of Studies of which they are not necessarily members; and the students had to submit, in many cases, to examination by those who were not their teachers. Indeed, at one time, the teachers were actually debarred by resolution of the Syndicate from setting papers on the ground that otherwise it would be a serious embarrassment to the teacher, who would have to keep secret the questions he had set as examiner, and as teacher would have to emphasise what he considered most useful or important; such a system, it was found, also demoralised the students who sedulously set themselves to secure and study the lecture notes of teachers who had been appointed examiners. In consequence, pupils and teachers alike tend to pay a slavish regard to the precise limits of a syllabus and of the particular books recommended.

(b) The higher branches of study were neglected or, more correctly, were rarely attempted. Few, if any, of the affiliated colleges were sufficiently staffed or equipped to prepare for the M.A. and M.Sc. courses in addition to their under-graduate work. It is a remarkable fact, first discovered while the Indian Universities Bill was before the Council in 1903, that no college (except one which is not now within the jurisdiction of the University), had ever been affiliated up to the M.A. standard. In practice, a college would submit candidates for the M.A. examination in a course in which there were on the staff one or more professors willing to assist the students in their spare time.

5. The Universities Commission were fully aware of the defects referred to above, and in paragraph 24 of their report recorded the following opinion:—“We think it expedient that *undergraduate* students should be left, in the main, to the colleges, but we suggest

↑ Recommendation of the Universities Commission and subsequent development.

* that the universities may justify their existence as teaching bodies by making further and better provision for advanced

courses of study. The University may appoint its own lecturers, and provide libraries and laboratories; it would also be proper that the University should see that residential quarters are provided for students from a distance. Colleges co-operating in such a scheme would, we assume, be willing to contribute, by means of scholarships or otherwise, to the maintenance of those students who take advantage of the university courses. In this way central schools of advanced study may in time be formed. One advantage of the plan is that it can be worked out gradually without the great initial expense which the creation of a complete professoriate would involve."

In consequence of this recommendation, the Universities Act of 1857 was amended by that of 1904, which enacted that the universities shall be, and shall be deemed to have been, incorporated for the purpose (among others) of making provision for the instruction of students with power to appoint university professors and lecturers, to hold and manage educational endowments, to erect, equip and maintain university libraries, laboratories and museums, to make regulations relating to the residence and conduct of students, and to do all acts, consistent with the Act, for the promotion of study and research. The regulations were then changed in conformity with this section of the Act to regularise the appointment and remuneration of the university staff.

For a time very little was done to carry out the recommendations of the Universities Commission. Lack of funds was the chief obstacle and the number of M.A. and M.Sc. candidates being comparatively small, there was little incentive for the University to undertake teaching responsibilities. In the course of time, however, it was noticed that a large number of M.A. and M.Sc. candidates came up for the examinations without adequate instruction, which was permitted under the regulations, and arrangements were made by the University authorities whereby some assistance was given to these and other students. This participation by the University in the teaching of graduates was rendered possible by the co-operation of certain college professors who undertook to deal with particular branches according to their special qualifications and the time at their disposal after the performance of their work in their colleges. We wish to record our sincerest appreciation of the efforts of these gentlemen, the majority of whom worked in an honorary capacity. A few of a colleges still continued to prepare candidates for the M.A. and M.Sc. Examinations, but, owing to the largely increased number of undergraduates, found themselves less and less able to cope with the M.A. and M.Sc. work.

7. In 1912 it was found essential to systematise the arrangements made by the University and fortunately what had become essential was also to some extent rendered possible through the generosity of the Government of India and of certain individuals. In September of that year the Government of India put the following sums at the disposal of the University—

Financial assistance and endowments in 1912.

<i>Non-recurring—</i>	Rs.
Examination halls and law hostels ...	3,00,000
Books and furniture for University library ...	1,00,000
TOTAL ...	4,00,000

Recurring—

Professorship of Mental and Moral Science ...	12,000
" " Mathematics ...	12,000
Additional grant to University Law College ...	10,000
Two University Readers ...	4,000
University Lecturers ...	15,000
Maintenance of a laboratory in connection with Mr. Palit's benefaction ...	12,000

TOTAL ... 65,000

From the sale proceeds of Sanskrit publications the University instituted the Carmichael Professorship of Ancient Indian History and Culture. The University, out of its current income, also maintained three other chairs—two for English Literature and one for Comparative Philology. Sir Taraknath Palit also made a generous gift of money and land to the extent of 15 lakhs of rupees, to which the University has since added four lakhs from its reserve fund towards the establishment of a University College of Science for the promotion of higher teaching in different branches of Physical and Natural Sciences. A little later Sir Rashbehary Ghose made a gift of 10 lakhs of rupees for the foundation of professorships and studentships in connection with the proposed University College of Science.

8. With the assistance referred to in the previous paragraph and the receipts from fees, etc., the University has been enabled to make the appointments summarised in an appendix to this report. It soon became evident that

Organisation of a University staff and its necessity.

competent scholars would not accept whole-time appointments as university teachers, unless assured security of office for a

longer term than two years (the maximum term for which a lecturer could be appointed under Chapter XI). The University accordingly instituted certain assistant professorships under Section 3 of Chapter IX of the regulations for various terms, ranging from three to ten years. The following table gives the number of students in the University classes in each subject during the current session :—

Subject.	5th-year Class.	6th-year Class.	TOTAL.
English	254	153	407
Philosophy	127	90	217
History	111	77	188
Economics	74	41	115
Pure Mathematics	220	74	294
Sanskrit	14	9	23
Arabic	1	4	5
Persian	4	3	7
Pali	1	1	2
	806	452	1,258

9. In 1908, the Presidency College obtained affiliation in English, Mixed Mathematics, History and Economics; and subsequently in Physics, Chemistry, Botany and Physiology. The Scottish Churches College also is affiliated in Philosophy. No other college in Calcutta is affiliated in any subject for M.A. or M.Sc. teaching. The staffs of these two colleges are given in the appendix to this report. The numbers in each subject in these colleges are as follows :—

Presidency College.

Subject.	5th-year Class.	6th-year Class.	TOTAL.
English	42	34	76
History	18	20	38
Economics	36	27	63
Philosophy	11	15	26
Mathematics	20	34	54
Physics	18	18	36
Chemistry	7	7	14
Geology	2	2	4
Physiology	5	3	8
Botany	6	1	7
	165	161	326

Scottish Churches College.

Subject.	5th-year Class.	6th-year Class.	TOTAL.
Philosophy	18	5	23

10. From the information given above it can be seen that neither an individual college nor even a group of colleges working in co-operation could have provided for the needs of some 1,600 graduates. It is also worthy of mention that in some of the subjects, such as Pure Mathematics, Comparative Philology, Pali, Persian, and Arabic, for which provision is made by the University, no arrangements exist in any affiliated institution. We are therefore agreed that the appointment of a full-time University staff was essential. Without it, the number of private students receiving no instruction and subject to no control whatever would have reached at least a thousand, with disastrous consequences to themselves and to the cause of higher education.

11. According to the terms of our reference, we are concerned chiefly with the latter defect referred to in paragraph 4 of this report and the consequent necessity of recommending better facilities for higher studies, but we hope that our proposals will result also in a closer connection between examination, the arrangement of courses and curricula, and the work of teaching, so far at least as the higher courses are concerned. In view of the probable institution of the new Universities at Dacca and Patna we would prefer to leave as they are such arrangements as may exist outside Calcutta, and therefore have confined our attention as far as possible to the urgent needs of Calcutta and its students. We have also refrained from making proposals which would entail additional expenditure at the present time when funds are not readily available. It is our desire therefore to make recommendations whereby the best possible instruction may be given to all students in Calcutta who are capable of deriving benefit therefrom by the utilization of the combined resources of the University and its colleges. We also hope that our proposed scheme may be capable of expansion in the future as soon as funds are forthcoming.

12. It is highly desirable that there should be no spirit of rivalry between the University and its colleges, and that all the teachers should be imbued solely with the desire of furthering higher education. We are of the opinion, however, that such harmful rivalry and

The control of higher teaching should be placed under the University.

competition do exist, and result in a lack of co-operation. We have no desire to impute any blame to either the University or the affiliated colleges; both have done their best under very difficult and trying circumstances to provide such instruction as was possible. But it is plain that the lack of a central organization whereby the University and its colleges could be brought into contact with each other has rendered concerted action between them almost impossible. We have therefore considered and rejected certain suggestions which, though attractive in some ways, seem to us inadvisable for the reasons given in the course of this report. It is impossible to return to the old system by which certain colleges had each its separate organization for the higher teaching. It is again impossible to suggest arrangements whereby these colleges could institute a form of inter-collegiate lectures which would meet present requirements. Nor has the University sufficient funds to institute a separate and complete organization, nor would it be advisable for it to do so for reasons given in the next paragraph. Nor, finally, would it be feasible except in connection with certain sciences to sort out the prescribed subjects between the University and the colleges as, in addition to the difficulty of carrying out such an arrangement, it is advisable that the students and teachers of one subject should be in intimate contact with those engaged in another. We recommend, therefore, that the affiliation of colleges in Calcutta for M.A. and M.Sc. work should cease and that the organization of post-graduate instruction of all kinds be considered to be the duty of the University.

13. While recommending that the control of higher teaching shall be vested in the University,

The necessity of associating the colleges with the higher teaching of the University.

we do not desire to suggest that the staffs of the colleges should confine their attention to undergraduate work. Indeed, we would go so far as to say that the association of the colleges not only in the actual teaching but also in the work of our organizing the higher teaching of the University is an essential factor of scheme, and that we have tried to reconcile the legitimate claims of the colleges with the concentration of higher teaching under the control of the University. In coming to this conclusion we have been influenced by many vital considerations.

Necessity of increasing the scope of the college professor.

(a) In paragraph 26 of their report the Universities Commission recorded the following opinion:—

“Our plan (*i.e.*, the appointment of a university staff) has been met with an objection which demands careful consideration. If students are drawn from their own colleges to a central school, it is said that teachers in colleges will be limited to the routine of the under-graduate classes and that their teaching will suffer in consequence. We sympathise entirely with the teachers who have placed their view of the matter before us; but we may point out that if the scheme we recommend restricts the opportunities of a college teacher in one direction, *it may also open a wider field in another*. In working a central school of science or philosophy, or literature, the University will naturally endeavour to utilise, as far as possible, the services of the best teachers in its own colleges. If a professor has to part with some of his students when they begin their advanced work, he may cherish the hope of being appointed to deliver a course of University lectures, or in some other way to take part in the work of the central school. We do not forget that the staff of a college is usually not more than equal to the work imposed upon it; but means may perhaps be found to relieve a professor of part of his ordinary college duty, if he is required to give some portion of his time to advanced work elsewhere.”

We would draw attention in particular to the words which we have italicised. It is our desire in making our recommendations that the scope of the experienced and capable college professor shall be increased and that his influence shall be brought to bear on a larger number of graduates than at present. It is a grave weakness in the present system that the scholarship and the influence of the best college professors are limited to those few M.A. or M.Sc. students who attend their own college, and still more so that the scholarship and influence of all professors of colleges which are not affiliated for this form of instruction are often lost altogether. Not only is it right that competent college professors should be associated as intimately as possible with the higher work, but the elimination of these men from such work would have a most unwholesome influence on the undergraduate teaching, for it is by doing original work himself and by co-operation with the advanced students that a teacher s

encouraged to keep abreast of modern developments and maintain a high standard of scholarship. The way to influence students most powerfully is to advance in scholarship, and therefore to hand over the undergraduate work to men who have no part or lot with the higher work would be disastrous to the best interests of the University and its students.

- (b) It is equally essential that those engaged in the higher work should have an intimate connection with the lives and the work of the undergraduates. We would again express our meaning in the words of the London University report:—“It is essential that the higher work of the University should be closely associated with the undergraduate work.....No one suggests that research shall be divorced from teaching, but for various reasons proposals are made for organising the higher and more advanced work of the University separately from the undergraduate work in a way which must tend in this direction. We agree with the view expressed in the report of the Professorial Board of University College that ‘any hard and fast line between undergraduate and post-graduate work must be artificial, must be to the disadvantage of the undergraduate, and must tend to diminish the supply of students who undertake postgraduate and research work.’ Even in those cases where it is necessary to provide for research departments which, because of their specialised work, are unsuited for the admission of undergraduates, they will be stronger and more effective if they are in close proximity to departments where undergraduate work is done. Teaching will, of course, predominate in the early work, and research will predominate in the advanced work; but it is in the best interests of the University that the most distinguished of its professors should take part in the teaching of the undergraduates from the beginning of their university career. It is only by coming into contact with the junior students that a teacher can direct their minds to his own methods, and hence obtain the double advantage of selecting the best men for

research and getting the best work out of them."

We agree with this opinion and would like to see all those engaged in M.A. and M.Sc. work taking also some part in the undergraduate instruction, at least in its higher stages. Unfortunately, the conditions that prevail here are somewhat different from those obtaining in London and render the realisation of such an ideal impracticable at present. As we have stated above, it is extremely difficult for an affiliated college, however well-staffed and equipped, to undertake the M.A. or M.Sc. instruction, even in a few subjects, in addition to the undergraduate courses; and it is almost as difficult for a group of colleges acting together to provide the necessary facilities. We therefore feel that the appointment of a whole-time and salaried university staff is necessary. We should be glad if arrangements could be made whereby members of that staff were brought into contact with the more advanced undergraduates of the colleges, but refrain from making any recommendation, as the discussion of undergraduate instruction is beyond our terms of reference. It is all the more essential, therefore, that under the present constitution, the whole-time university staff should be associated intimately in their work with certain number of college professors also engaged in undergraduate teaching. It has been brought to our notice that in the past certain college professors have been appointed permanently to the university staff. There is no objection to such a practice, if not carried to excess. We would only point out that the presence of such professors on the university staff will not prevent the divorce of post-graduate from undergraduate work, for it is not past experience of undergraduate work but present contact with junior students that can effect that intimate and desirable connection between the various grades of teaching. In making provision for the higher studies, therefore, the University would be well advised not to deplete to any serious extent the ranks of the college staffs, but rather to associate them from time to time with the instruction of the M.A. and the M.Sc. students, by inviting them to deliver courses of lectures or take such a part in the higher work as may appear advisable to the Council proposed below.

- (c) We would also suggest that the University should not be restricted in the matter of appointments to the members of its own staff or to those of the colleges, but should if advisable appoint from time to time as lecturers men who are recognised authorities in a subject which is included in the university courses. Such action should result not only in widening the horizon of the students, but also in interesting members of the general public in the affairs of the university by giving them an actual share in its responsibilities.

Association of the general public with the higher work of the University.

- (d) We also attach considerable importance to the necessity of providing a variety of treatment in the instruction offered to graduates, and of affording opportunities of specialisation on the part of the teachers; and this is all the more necessary owing to the very great

Variety of treatment essential.

latitude allowed to students in the choice of subjects. Students engaged in the higher courses should draw inspiration and knowledge from a number of teachers and thus learn to study their subject from many points of view. It is also impossible for one or two teachers, however learned and experienced, to traverse the whole field to their subject. We have therefore recommended a system by which a student will be brought into contact with a number of teachers each with his own point of view and his own special subject, and a teacher will not be excepted, as now, to diffuse his energy but, so far as the higher teaching is concerned, will confine his attention to making himself master of some portion of his work.

- (e) It is one of the defects of an affiliating university that the teachers and students are confined too much to the limits of their own particular college and have far too little inter-course with those working elsewhere. We realise only too well that all students of a university should be able to work "in intimate and constant association with their fellow students not only of the same but of different faculties, and also in close contact with their teachers." It is therefore essential that at some stage of their academic career, teachers and students of all the colleges of Calcutta, engaged in many and widely differing courses of study, should be brought into association one with

Necessity of inter-course between students and teachers.

another and be encouraged to take their place in the common life of a university. Every possible effort should be made to foster the idea that Calcutta University as a teaching university is made up of the sum of its colleges and of its own teaching staff. All the teachers, whether university professors engaged principally in the work of research or college lecturers whose work is mainly with the junior undergraduates are alike doing the work of the university. We trust that our proposals, however, limited in scope, may result in a stronger union between the scattered fragments which to-day compose the university and in a closer sympathy between those working to different standards and in different institutions.

Recommendations
for the provision of
staff for the higher
teaching.

14. For these reasons, therefore, we recommend that the teachers for this work should be recruited in the following ways :—

- (a) Teachers appointed and paid by the University.
- (b) Teachers whose services have, on the application of the University been lent by the Local or Imperial Government or by a private institution, and who, during the time they continue to work under the University will be university officers precisely in the same way as those under (a). It should also be possible for the University to make arrangements whereby these officers will be able to deliver lectures to B.A. honours students of the colleges with whom they were previously connected, provided that this were possible without detriment to their University work.
- (c) Professors of colleges, whose high attainments specially qualify them for post-graduate instruction and who are willing for a remuneration decided on by the University to undertake to deliver a course of lectures on special subjects in the University.
- (d) Persons engaged in other than educational work, who are prepared for a remuneration decided on by the University to deal with special subjects in which they are authorities.

15. We attach very great importance to the necessity of constituting a suitable organising body for the carrying out of this work, in which all connected with the higher teaching whether as temporary or permanent officers,

The organization of
the higher teaching.

will take a part. Without such an organization, the scheme which we propose cannot even be initiated, much less carried out. It is not only necessary to provide the means by which the best teaching capacity available in Calcutta will be recruited, but also to ensure a proper control over the teaching arrangements. Teacher will have to be appointed in accordance with the requirements of each session and the scale of remuneration for temporary officers will have to be decided. Time-tables will need careful consideration, and we would also suggest that syllabuses for each course of lectures should be drawn up by the lecturer before the course begins. Arrangements for the proper attendance of lecturers and students will also be imperative. There will further be a mass of administrative detail which, if it is not in proper hands and under satisfactory control, will render the best of teaching ineffective. The existing Governing Body for post-graduate studies has been constituted solely for the organization of the University classes and has no connection with the work of colleges; moreover, it has not been possible as yet to associate more than a very small number of the teachers with that body. The administrative work has devolved mainly upon the Vice-Chancellor and the Registrar, whose time and energy are already fully occupied with departments of University's work other than post-graduate teaching.

16. We therefore recommend that a Council of Post-graduate Teaching in Arts be constituted, which will include every teacher appointed by the University to carry on post-graduate instruction, *i. e.*, all those mentioned in classes (a), (b), (c), (d) above, will have, *ex-officio*, a seat on the Council. The Council will contain also a limited number of additional members not exceeding six to be appointed annually by the Senate; these should be men competent to take a useful part in discussions relating to post-graduate studies. The Council will elect its own president from year to year. For the first year, we recommend that the Council consist of all those who at the time of the formation of the Council are engaged either under the University or in an affiliated Calcutta college in post-graduate work, with the additional members elected by the Senate. The Council will draw up its own procedure for the conduct of its business.

17. We also recommend that an Executive Committee of the Council be constituted which will consist of two representatives of each of the following branches of study—English, History, Economics, Philosophy, Pure Mathematics,

Sanskritic languages and Semitic languages. The teaching staff of each branch will elect their representatives, and the Senate will appoint annually three members to the Executive Committee from their nominees on the Council. The president of the Council shall be the president of the Executive Committee. There shall be a secretary to the Council and to the Committee who should receive a remuneration decided upon by the Council and approved by the Senate.

18. We feel the necessity of associating all those engaged in the higher teaching with the general organization of the University. This is impossible under present condition. The Senate is by statute limited to a hundred members, and must be constituted into the five faculties of Arts, Science, Law, Medicine and Engineering. Every important college affiliated to the University also ex-

pects naturally to be represented on the Senate. The consequence is that only a small proportion of those engaged into higher teaching can find a seat on the Senate, a result which causes a not unnatural disappointment to those who are inevitably excluded. Our proposal that all who are taking part in the higher teaching shall be members of the Council of Post-graduate Teaching in Arts should remedy this defect to some extent. We feel, however, that it is necessary to go further in the matter. The present Boards of Studies consist very largely either of those who are teachers only of undergraduates or of men who are taking no active part of any kind in teaching. The arrangement of the post-graduate courses and curricula and the publication of prescribed or recommended books can only be done satisfactorily by those who are actually teaching and have the necessary knowledge and experience of the work concerned. It is also desirable that those with whom the responsibility lies should have abundant opportunity of discussing among themselves and of making the best arrangements for the development of the study in which they are interested. We recommend, therefore, the creation of Boards of Higher Studies for each of the subjects in which post-graduate teaching is imparted in Calcutta. The Board in each subject will consist of all the instructors in that subject and also of such others (not exceeding three in number) as may be appointed thereto by the members of the Council from amongst themselves. With these additional members on each Board, the several subjects would not be regarded as separate compartments of knowledge to be developed without regard to each other. The organization

of studies as a whole would thereby contemplate a definite object and common method of progress. Each Board may also be authorised to co-opt not more than two members from amongst those engaged in post-graduate teaching in the subject concerned outside Calcutta. Each Board will elect its own Chairman. The resolutions of each Board will be subject to confirmation by the Council.

We are of the opinion also that the work of teaching should be connected closely with that of examination. In awarding an M.A. degree, attention should be paid not only to the examination record of each candidate, but also to his work during the whole of his course. It is also necessary that there should grow up an examination tradition in regard to the length of a paper, the type of questions, and the methods required from the examinees, which will give the student some confidence in the system and will protect him from the wiles and eccentricities of inexperienced examiners. We therefore recommend that each Board of Studies be regarded also as the Examination Board for the M.A. in that subject.

We realise that it is impossible to press these principles to their fullest extent, but we are hopeful that by discussion among themselves the members of each Board, with the assistance of the Council, may evolve a system which will meet to some extent the requirements mentioned above. It is necessary in our opinion to associate external examiners with the teachers of the subject.

19. The Boards of Studies will each submit to the Council their resolutions regarding courses of study, standards and conduct of examinations and like matters. They will also, within a date prescribed by the Executive Committee, submit to that body the teaching requirements of their subject for the coming year and proposals regarding appointments to the teaching staff. The Executive Committee will consider these proposals of the Boards and, after further consultation, if necessary, will lay the final proposals including proposals for the remuneration of the teachers to be employed, if that has not already been decided, before the Council. The same procedure should be adopted also in the appointment of examiners. The resolutions of the Council will be submitted to the Senate for final approval. We consider it of great importance that each Board should take a large part in the teaching arrangements and the appointment of teachers and examiners. It will be necessary to pay proper regard to the actual requirements of the students in each subject and to provide that the

Functions of the post-graduate authorities.

most suitable teachers and examiners are appointed to meet any particular needs that may arise. It will be the duty of the Committee rather to consider the financial aspects of the proposals submitted and to ensure that one Board is not unduly extravagant at the expense of another. It will be the duty of the Council to check abuse of the arrangements, if this were ever threatened. It will be the duty of the Executive Committee to receive and consider reports from the Boards as to the progress made in their respective subjects and the results of the examinations, and exercise such supervision and give such directions as may be necessary to ensure regularity of work and maintenance of discipline among the students. The proceedings of the Executive Committee will be periodically reported to the Council and may be reviewed by them. The actual carrying out of the teaching arrangements in each subject should be placed under the control of the Chairman of the Board of that subject, who would act in accordance with such resolutions of his Board as have been approved by the Council. The clerical work, the publication of time tables, syllabuses, the checking of registers, should be performed by the Secretary.

To meet the danger that the conduct of this important work might fall into the hands of inexperienced people, we would recommend that only graduates of not less than seven years' standing should be eligible for election to the Executive Committee, or the Chairmanship of a Board of Studies except in the case of a University professor. We have reason to hope that when the teachers find themselves associated so intimately with the organization of the higher teaching, they will learn that that work will be best carried out by loyal co-operation. Each authority will have its own part to play. The Boards should be responsible mainly for the enunciation of proper principles and the arrangements for teaching and examining the courses prescribed by themselves; the Committee for the carrying out of these arrangements, the discipline of students and the financial organization; and the Council should enable all engaged in the work to discuss some definite development of policy and to exercise a general control over the higher teaching.

20. In considering the organization of higher teaching in science subjects we have been faced by two difficulties. In the first place, the post graduate teaching in the University classes has been organised on the basis of the two endowments created expressly for that purpose by Sir Tarak Nath Palit and Sir Rash Behary Ghose. The funds are held on specific trusts; they must be administered in strict accord with the directions given by the founders and

Constitution of post-graduate authorities and teaching arrangements in science.

through the machinery of the Governing Bodies created by them. Further, the primary object of these two bequests is to further the cause of scientific research and therefore it is not actually incumbent on the Palit and Ghose professors to do more than supervise generally the arrangements for M.A. and M.Sc. teaching. In the second place, the laboratories of the Presidency College and of the University are located in separate buildings about a mile apart, and consequently amalgamation is more difficult than in the case of arts subjects. We have discussed these problems at some length, and have come to the conclusion that they are by no means insuperable, provided that the principle of University control is accepted and teachers are recruited as in (a) (b) (c) (d) of paragraph 14. We therefore recommend, subject to the exceptions made below, the constitution of post-graduate authorities in science similar to those proposed for arts, and with similar powers, *i.e.*, a Council consisting of all those engaged in the higher teaching with additional members not exceeding six in number, elected by the Senate, an Executive Committee, and Boards of Studies in each subject consisting of all engaged in the higher teaching with additional and co-opted members, not exceeding three and two respectively on each Board. The modifications that appear to us necessary are as follows :—

(a) The Executive Committee shall consist of the President of the Council, two representatives of each of the following branches of study, Physics, Chemistry, Applied Mathematics, and Botany, and one representative each of Physiology and Experimental Psychology, and three additional members elected by the Senate from among their nominees on the Council.

(b) In order to safeguard the interests of the Presidency College and the Palit and Ghose Trusts, in electing representatives in Physics, Chemistry and Botany for which teaching provision has been already made in both institutions, the united body of teachers in each subject shall elect one representative from the Presidency College and one from the University Staff.

(c) Should arrangements be made at any time for subjects other than those mentioned above, as for example, Zoology or Geology, that subject will be represented on the Executive Committee by two members to be elected by the teachers in that subject.

(d) It will also be necessary clearly to define a teacher, as it would be desirable that only those who hold independent teaching posts should find places on the Council.

When once the governing authorities have been constituted as proposed, we have every hope that the difficulties in making

teaching arrangements owing to the distance between the University College of Science and the Presidency College will be surmounted. It should be remembered that in the M.Sc. there are in each course compulsory and optional subjects. It may be necessary for the compulsory subjects to be taught in both places, but there should be a sorting out of the optional subjects at least between the two institutions by the Executive Committee in order to avoid costly duplication. A certain amount of give and take between Government and the University in the use of equipment will also be necessary, as every effort should be made to prevent unnecessary purchase of duplicate material. It should also be clearly laid down that while working in laboratories belonging to separate institutions, such as the Presidency College or the Geological or Zoological Survey, University students will be subject to such disciplinary rules as may be enforced by the authorities of those institutions.

21. The mere recruitment of a staff of teachers and the constitution of authorities for controlling the work, however, will not necessarily, in themselves render the teaching effective. There are other factors in the situation to which we would now refer :—

(a) It is essential to have some clear ideas of what is meant by the term post-graduate instruction and what are its objects. This is particularly essential as there has been some misunderstanding in the matter in the past. Some

Objects of the M.A. and M.Sc. teaching.

have urged that it is the duty of the University to confine its activities entirely to the work of research ; others contend that the M.A. and M.Sc. courses should take the form merely of a more thorough undergraduate course conducted on very similar lines and methods. We hold that neither view is correct. In regard to the former we are inclined to adopt the opinion laid down by the London University Commission in paragraph 73 of their report :—“ Institutes of the type, *i.e.*, for research, do not, and in our view should not, form a part of the University organization, and certainly do not justify the establishment by the University itself of institutes at a distance from, and without close connexion with, its other activities. Research work which is carried out with little reference to the other work of the University cannot introduce new vigour and life into the organization to which it is so loosely and externally attached.” We therefore suggest that those teachers whose work lies in the direction of research should take some active part in advanced instruction and not regard themselves as entirely

detached from the main work of the institution. On the other hand, it is necessary that graduates should receive instruction of a university type and of a kind different from each ordinarily given to undergraduates. At present a student is inclined to approach the M.A. and M.Sc. courses by a further study or more advanced text-books with the assistance of a teacher, whereas M.A. courses of lectures should stimulate a student and give him some idea of the wide field of investigation open to him and finally lead him to consult not the text-book but the original authorities. The following description of University teaching which was supplied a few years ago by the inspectors of the Board of Education in reporting on the work of the Workers Educational Association classes held by the universities of England, expresses very clearly the ideals at which, in our opinion, this University should aim in its M.A. and M.Sc. instruction. "We may assume that University teaching is teaching suited to adults; that it is scientific, detached, and impartial in character; that it aims not so much at filling the mind of the student with facts and theories as at calling forth his own individuality, and stimulating him to mental effort; that it accustoms him to the critical study of the leading authorities, with, perhaps, occasional references to first-hand sources of information, and that it implants in his mind a standard of thoroughness, and gives him a sense of the difficulty as well as of the value of truth. The student so trained to distinguish between what may fairly be called matter of fact, and what is certainly mere matter of opinion, between the white light and the coloured. He becomes accustomed to distinguish issues, and to look at separate questions each on its own merits and without an eye to their bearing on some cherished theory. He learns to state fairly, and even sympathetically, the position of those to whose practical conclusions he is most stoutly opposed. He becomes able to examine a suggested idea, and see what comes of it, before accepting it or rejecting it. Finally, without necessarily becoming an original student, he gains insight into the conditions under which original research is carried on. He is able to weigh evidence, to follow and criticise argument, and put his own value on authorities."

It is beyond our terms of reference to discuss how far under the standards imposed at present by the B.A. and B.Sc. Examinations and the type of undergraduate teaching imparted in the colleges it is possible to produce a number of graduates fitted for such instruction as we have proposed above, but, judging from the number of lectures which the M.A. students, in particular, are expected to attend, we fear that an appreciable proportion of the students have not attained the requisite preliminary

standard. It is not within our scope to advocate sweeping changes; but we are constrained for the present to trust to the gradual improvement likely to result from improved conditions. The post-graduate authorities should have the power to make regulations regarding the admission of students to their classes, and it is essential that they should also have power to cause the withdrawal of a student who is either manifestly unfitted for the work or through negligence is not benefiting by the instruction. It would also be well if a standard of efficiency in teaching equipments etc., were contemplated, as free as possible from the cramping restrictions imposed by the present rules for affiliating colleges for M.A. and M.Sc. teaching, especially in scientific subjects.

(b) We trust that the economies which may be rendered possible by an improved organization and an effective co-operation between the colleges and the University will be the means of liberating a certain amount of teaching effort which may be used for giving tutorial guidance to the students. At present, in the university classes, it has not been possible to do much more than give additional lectures to a smaller number of students whereby some discussion and explanation of difficulties is possible. Such a practice, undoubtedly, has its uses, but we would wish to go further. All students gain inestimably from an intimate association with a teacher of ripe experience and scholarly habits who will not only assist him in solving difficulties but also inculcate in him the proper habits of study and thought. We would yet again express our meaning in the words of the London University Commission's report:—"It is the personal influence of the man doing original work in his subject which inspires belief in it, awakens enthusiasm, gains disciples..... 'Anyone,' says Helmholtz, 'who has once come into contact with one or more men of the first rank must have had his whole mental standard altered for the rest of his life.' Lectures have not lost their use, and books can never fully take the place of the living spoken word. Still less can they take the place of the most intimate teaching in laboratory and seminar which ought not to be beyond the range of the ordinary course of a University education, and in which the student learns not only conclusions and the reasons supporting them, all of which he might get from books, but the actual process of developing thought, the working of a highly trained and original mind." Every possible effort therefore should be made to provide arrangements by which all students will receive, at least, some individual attention.

(c) We would say a word on the subject of libraries which form so large a part in the proper equipment of a University but, unfortunately, Libraries. are a source of very considerable expense. We suspect that in the purchase of expensive publications and scientific periodicals there is a large amount of overlapping between the various libraries in Calcutta. There is rarely need for more than one copy of such publications within the city, but it should be easily accessible to the scholar who requires it. We would suggest, therefore, that the University might consult other libraries in Calcutta to discover how far a spirit of co-operation is possible in this direction and also consider the relationship between its own library and those of the affiliated colleges.

(d) We have experienced very great difficulty in discussing the thorny question of residence for Residence. students. The Act of 1904 entrusted the Senate to draw up regulations regarding the residence and conduct of students. The regulations of the University provide that 'every student reading in an affiliated college with the object of appearing at University examination, who does not reside with his parents or other legal guardian, or guardian approved by the principal of his college shall reside either in his college, or in lodgings approved by his college.' The following classes of lodgings may be approved by a college:—

- (i) Non-collegiate hostels, that is, hostels under external management.
- (ii) Messes attached or unattached.
- (iii) Private lodgings.

A Committee of the Senate, called the Students Residence Committee, is appointed to deal in accordance with the regulations with questions relating to the residence of students in non-collegiate hostels, messes and private lodgings. This Committee is not empowered to interfere with the internal management of a hostel or mess, or with the control of a principal over his students. But if the Committee is satisfied, upon the report of one or more of its members, or of an inspector, that a hostel or mess is maintained or conducted in a manner contravening the regulations, the Committee shall report the matter to the Syndicate.

From this it will be seen that the real responsibility rests with the college authorities and that the Students' Residence Committee merely advises the Syndicate whether or not a hostel or mess is conducted in accordance with the regulations. A college principal, however, is usually powerless in the matter. Owing to the fact that the examination results are not usually

published until the middle or end of June, principals find it impossible to make previous arrangements for residence of their students and have, in most cases, to accept such arrangements as are made by the students themselves. Moreover, the Students' Residence Committee can only say that this or that hostel or mess is unsatisfactory; it is not empowered to tell a student that he must leave his place of residence and go to another, for the very simple reason that such accommodation does not exist in Calcutta. It will be observed also that the regulations apply only to students in the affiliated colleges and not to those attending the university classes. It should also be remembered that the post-graduate students have all attained their majority, have consequently no legal guardians, and most of them are married. We could easily recommend that the governing authorities of the post-graduate teaching should make it their business to see that suitable rules are drawn up for the purpose and that an effective body be constituted to see that the rules are carried out, but we fear that the problem is far too grave to be settled by the mere issue of rules and regulations which would soon prove unworkable, as have those provided for under-graduates. It would also be within our scope to offer a pious hope that some day suitable residences would be provided for the post-graduate students, but again it is a matter of funds and, when funds are forthcoming, it is clear that the under-graduates should have the preference. Besides, even if there were large funds, it is difficult to suggest how suitable residences could be provided. We have paid earnest attention to what seems to us an insoluble problem under present conditions, and we are agreed that the only practical remedy lies in the removal of the University. Naturally, we have not had the opportunity of considering such a proposal, except as a mere suggestion, and we should be going beyond our terms of reference in offering any definite recommendation.

We have discussed also whether or not a student attending the University classes, should be permitted to remain attached to his college for the purpose of residence and for such other benefits as he may derive therefrom. In the case of the Presidency College and the Scottish Churches College, which are now affiliated for post-graduate teaching in certain subjects, we should recommend that students who have graduated from either of these colleges would be entitled, with the permission of the college authorities, to remain on the roll of their old college. The college should inform the post-graduate authorities and agree to accept responsibility for such students, except in those matters in which they will come under the

supervision and discipline of the post-graduate authorities. Students should, with the permission of the college authorities, be permitted to reside in the hostels of other colleges, but their names would not appear on the college rolls. Such residence would be merely in the nature of a private arrangement and would not be reported to the post-graduate authorities.

(e) We fully realise that the proposed concentration of teaching will entail additional lecture rooms, etc., and accordingly recommend that the scanty accommodation at present available be supplemented as soon as funds are forthcoming. The Fish Market site may be used temporarily for the development of arts teaching. For the present, it may be possible for some of the colleges to assist the University by lending for certain periods of time a modicum of accommodation for the use of a member of their staff who may be delivering a course of lectures for the University.

22. In discussing the financial aspect of our proposals, it will be convenient first to record the following extracts from the budget for 1916-17, as passed by the Senate.

Finance.

POST-GRADUATE TEACHING.

<i>Receipts.</i>		<i>Payments.</i>	
	Rs.		Rs.
Contribution from the Minto Professorship Fund ...	15,000	Salary of the Minto Professor	15,000
Contribution from the Hardinge Professorship Fund ...	13,000	" Hardinge "	13,000
Contribution from the George V Professorship Fund ...	12,000	" George V "	12,000
Contribution from the Carmichael Professorship Fund ...	12,000	" Carmichael "	12,000
Fees (1,000 students) ...	84,000	" Professors, Assitant Professors, Assistants, and University Lecturers (unendowed)	1,37,400
Government grant for University Lecturers ...	15,000	Pension contribution of Assistant Professors ...	2,250
Contribution from the Fee Fund ...	44,650	Proportion of electric expenses	4,000
Total ...	1,95,650	Total ...	1,95,650

It will be observed that Rs. 1,95,650 will be spent on post-graduate teaching during the year. Out of this sum, Rs. 40,000 represents the Government of India grant for three professorships (the annual grant for these chairs is really Rs. 37,000, the

difference Rs. 3,000 representing the unspent balance of previous years). Rupees 15,000 represents the Government of India grant for salaries of lecturers. Consequently, about 24 per cent. of the expenditure is met from Government grant. The fees paid by the students produce an income of Rs. 84,000, *i.e.*, 45 per cent. of the actual expenditure. The remaining 30 per cent., *i.e.*, Rs. 56,650, represents the contribution of the University; Rs. 12,000, contributed by the University for the Carmichael Professorship comes from the sale-proceeds of Sanskrit publications; and the balance comes from the current fee income.

UNIVERSITY SCIENCE COLLEGE.

BUDGET FOR 1916-17.

<i>Receipts.</i>	Rs.	<i>Payments.</i>	Rs.
Contribution from the Palit Fund—First Trust ...	41,420	Salary—	
" Second Trust ...	49,100	Palit Professor of Physics ...	9,600
Contribution from the Ghose Fund ...	61,200	" " Chemistry ...	9,600
Contribution from the Fee Fund towards salary of Ghose Professor of Mathematics ...	1,200	Ghose Professor of Applied Mathematics ...	7,200
Contribution from the India Government Laboratory Grant Fund ...	37,000	Ghose Professor of Physics ...	6,000
Contribution from the Fee Fund towards equipment of Laboratory, etc. ...	46,860	" " Chemistry ...	6,000
Balance of contribution from the Fee Fund, 1915-16 ...	2,000	" " Botany ...	6,000
Fees from students—		Assistant Professors and Assistants ...	11,100
Chemistry (16 students at Rs. 10 each per month) ...	1,920	Pension contribution—	
Physics (10 students at Rs. 10 each per month) ...	1,200	Palit Professor of Chemistry ...	2,100
Applied Mathematics (50 students at Rs. 7 each per month) ...	4,200	House allowance to Palit Professor of Physics ...	1,500
		Stipends—	
		Palit Research Scholars ...	18,600
		Ghose " " ...	7,200
		Salary—	
		Staff—	
		(a) General—	
		Menials ...	816
		(b) Chemistry Dept.—	
		Menials ...	1,056
		Laboratory Assistant, Storekeeper and Compounder ...	1,284
		(c) Physics Department—	
		Menials ...	1,128
		Laboratory Assistant, Mechanic Carpenter, etc. ...	2,000
		(d) Psycho-Physics Department—	
		Menials ...	120
		Laboratory Assistant and Clerk ...	1,260

Receipts.	Rs.	Payments.	Rs.
		(e) Mathematics Department—	
		Menials ...	240
		Staff ...	6,900
		Clerk ...	480
		(f) Bio-Chemistry Department—	
		Menials ...	120
		Recurring Expenditure—	
		(a) Chemistry Department—	
		Chemicals and Contingencies ...	5,686
		Gas and Electric current... ..	800
		(b) Physics Department—	
		Research grant ...	3,000
		Contingencies ...	360
		Gas and Electric current ...	1,200
		(c) Psycho-Physics Department—	
		Electricity and Laboratory Contingencies ...	500
		(d) Bio-Chemistry Department—	
		Laboratory Contingencies ...	800
		Equipment—	
		(a) Physics Department ...	30,000
		Ditto (1915-16) ...	30,000
		(b) Chemistry Department ...	24,000
		Ditto (1915-16) ...	22,000
		(c) Psycho-Physics Department ...	3,000
		(d) Bio-Chemistry Department ...	5,000
		(e) Furniture ...	2,000
		(f) Books ...	5,000
		(g) Journal ...	2,500
		Workshop—	
		(a) Room }	10,000
		(b) Appliances }	
Total	...	2,46,100	2,46,100

The science programme submitted above shows that the University intends to spend, during the session, Rs. 2,46,000 on science teaching. Towards this expenditure Rs. 37,000 will be taken from the Government of India's grant of previous years, Rs. 46,860 from the current University fund, and the rest will be drawn from the Palit and Ghose funds.

From the financial statements which have been reproduced above it is clear that the University has at its disposal a fairly

large sum of money for the development of post-graduate instruction, and it may also be hoped that our proposals will result certain economies through the elimination of unnecessary duplication. On the other hand, it is obvious that if post-graduate teaching is to be carried on in Calcutta in a manner worthy of a large university, more money is required. The library should be extended, the staff increased and liberally paid, and provision made, if not for pension, at least for a provident fund. Much also will have to be done even to bring the higher teaching in natural science up to a level with the arrangements made at Allahabad, Bombay and Lahore for that work. We desire to record our appreciation of the valuable assistance rendered to students in the past by the Geological and Zoological Surveys, but at the same time some provision at least should be made by the University for the needs of these subjects. In making such provision, care should always be taken to ensure a healthy co-operation between all engaged in similar work, and therefore we would suggest that the University would do well, before embarking on any new scheme, to consult the authorities of the Geological and Zoological Surveys. We understand clearly that there is little or no hope of any additional grants being made by Government for some time, but recommend that the University should consider the possibility of raising its resources by an increase in the examination and teaching fees paid by its students provided that no undue hardship is imposed on the students. It is reasonable to expect that the University authorities will be prepared to accept an additional burden, when it is realised that such increased revenue as may be effected will be put at the disposal of the post-graduate authorities for the development of higher teaching which has been declared by the Act of 1904 to be a part of the functions of the University and which should appeal to all who are interested in its welfare.

It has been stated already in this report that the initial proposals for carrying out the teaching requirements should first be considered carefully by the Boards of Studies in each subject and that these proposals should then be submitted to the Executive Committees and Councils but, according to the constitution of the University, financial control must rest ultimately with the Senate. It would be convenient, however, if the Executive Committees discussed their proposals with the University Board of Accounts before submitting them to the Councils and the Senate. The work of these bodies will thereby be lightened considerably by the assurance that the proposals for the conduct of higher teaching had already been adjusted to the financial position of the University.

23. It is obvious that our proposals will entail considerable expedition in the matter of making appointments, and especially in the case of those which will be temporary or consist merely in the delivery of a course of lectures for the university. Delay in this respect will be fatal to the scheme. For instance, a lecturer may be appointed, not necessarily because of his scholarship in his subject as a whole, but because he is considered to be the most suitable man to deliver lectures on a small branch of his subject in which he has taken particular interest. Any cumbrous system by which it will be necessary to submit detailed information of a lecturer's record will quickly prove unworkable. Besides under our proposals, each appointment will have been made on the recommendation of the teachers themselves and with special reference to the actual requirements of the course. Little safeguard therefore will be necessary to ensure the propriety of appointments on academic grounds. It is right that in the case of those posts which have been endowed by Government, the fullest information should be submitted and that the sanction of the Government should be necessary. In the case of other appointments, however, we would suggest that a notification should be sent, within a prescribed limit of time, to Government for their information. If for other than academic reasons the Government of India have objection to any appointment, their orders should be binding on the University, but apart from this safeguard, it would be harmful to the interests of the post-graduate teaching if the definite sanction of Government were required before any appointment could take effect.

24. In making these proposals we are aware of the fact that other Indian universities also have been improving their arrangements for higher teaching, and there are, in addition, a number of Government institutions and learned societies keenly interested in the work of research. In the course of this report we have laid emphasis on the necessity for co-operation and sympathy between all those who are engaged under the University. We would now go further and suggest that scholars living in different parts of the Indian Empire should be brought into close relationship with one another. It may be hoped that the bonds of union that result from a common pursuit of knowledge, may be the means of bringing races and people into harmony with each other. In this task the University of Calcutta should not be behindhand. If India is to add to the stock of human knowledge, she cannot afford to dissipate her energies or allow her scholars to work in isolation. No inter-university rivalry

Association with
other Universities and
learned Societies.

should be permitted to interfere with the prosecution of the work under the most favourable circumstances. If, for these reasons, Calcutta scholars may have to go far afield, so also should Calcutta be prepared to welcome from elsewhere scholars wishing to avail themselves of the facilities provided in this city. To effect this there should be frequent communication between the various universities, which communication might be encouraged by the employment, from time to time, of distinguished scholars from outside as temporary lecturers and examiners. Co-operation also is possible in the editing of journals and learned works. Advantage might also be taken of inviting men of practical experience not only from Calcutta but also from elsewhere to deliver courses of lectures under the terms of recruitment which we have proposed. It has been the practice of Calcutta and certain other Indian Universities to invite to India scholars of great distinction from Europe. If such a policy is continued, it offers another admirable opportunity for valuable co-operation between the universities. The higher teaching and research need money, favourable surroundings and an intimate association between scholars, and these factors should not be neglected in any discussion of this nature.

25. In conclusion, we would point out that in our deliberations we have taken things as they are and have tried to submit recommendations whereby the best use may be made of the existing resources of the University and of its colleges. Our proposals amount, in the main, to the acceptance of two fundamental principles :—

- (a) An intimate association and co-operation between the college and the university staffs is imperative in the interests of all concerned and of the development of higher teaching.
- (b) It is necessary to constitute a suitable organization within which these teachers will be enabled, by discussion among themselves, efficiently to conduct the teaching and examination of graduates.

Beyond this we have been unable to go, and have refrained from commenting on the wider problems which now confront the University. We have no illusions that our proposals will result in a perfectly satisfactory state of affairs, though it may be hoped that there will be some real improvement on existing conditions which seem to us degrading to the professional

status of the teacher. We believe our principles to be sound and that the acceptance of them will assist the work of more thorough reconstruction when the time for it arrives.

ASUTOSH MOOKERJEE.
 W. W. HORNELL.
 H. H. HAYDEN.
 G. ANDERSON.
 BRAJENDRANATH SEAL.
 GEORGE HOWELLS.
 P. C. RAY.
 C. J. HAMILTON.
 W. C. WORDSWORTH.

CALCUTTA :

The 12th December, 1916.

APPENDIX III

From the Registrar, Calcutta University,
to the Secretary, Government of India,
Education Department, through His
Excellency the Rector, No. 12142,
dated the 30th May, 1917.

I have the honour to address you on the subject of Post-graduate Studies in the University with reference to your letter No. 93, dated 26th January, 1917, forwarding copies of the Report of the Committee appointed by the Government of India to consider arrangements for Post-graduate teaching in the University. A copy of the Report mentioned was in due course sent to each Fellow of the University. Subsequently, a letter No. 89, dated 8th March, 1917, was received by me from Mr. W. R. Gourlay, C. I. E., Private Secretary to His Excellency the Governor of Bengal. A Copy of this letter marked (A) is annexed herewith. The letter was duly circulated to all members of the Senate. No copy of the letter of the Government of India mentioned in Mr. Gourlay's letter was sent to the University.

By order of the Hon'ble the Vice-Chancellor, a meeting of the Senate was held on the 16th March last to consider the Report of the Post-graduate Committee.

The Hon'ble Sir Asutosh Mookerjee had previously given notice of his intention to bring forward the following motion :—

1. That the Senate do take into consideration the Report of the Post-graduate Committee appointed by the Government of India ;

2. That the Senate do record its approval of the two principles enunciated in para. 25 of the report ;

3. That the Senate do appoint a Committee of four members to frame on the lines of the report, draft-regulations and proposals for alterations in the existing regulations ;

4. That the Committee be instructed to submit their report on a very early date, that the debate be meanwhile adjourned till 3 p. m. on Saturday, the 31st March next, and that the further consideration of this matter be taken up on that date along with the report of the Committee now appointed.

At the meeting, the Hon'ble Sir Asutosh Mookerjee moved this motion, which was seconded by Mr. S. Khuda Bukhsh. Thereupon, Rev. Dr. W. S. Urquhart moved an amendment in the following terms :—

That the words commencing with "do take into consideration" and ending with words "now appointed" be left out in order to insert the words : "having had before it for consideration the report of the Committee on Post-graduate Studies in Calcutta University express the opinion that no action should be taken on the lines indicated in the aforesaid report at least until the Commission announced by His Excellency the Chancellor in his Convocation Address on 6th January, 1917, shall have given in his report."

The amendment was seconded by Mr. W. A. J. Archbold. The matter was elaborately discussed and the debate lasted for over four hours. At the end of this period the amendment was put to the vote and lost, only six members voting for it. The motion of Sir Asutosh Mookerjee was thereupon carried.

Pursuant to this resolution, a Committee was appointed by the Senate consisting of the Hon'ble Sir Asutosh Mookerjee, the Hon'ble Mr. W. W. Hornell, Dr. Brajendranath Seal and Rev. Dr. George Howells to frame, on the lines of the report of the Post-graduate Committee, draft regulations and proposals for alterations in the existing regulations, to be submitted to the Senate for consideration at a meeting to be held on the 31st March.

The report of this Committee, together with the draft regulations proposed by them, are annexed herewith and marked (B).

The report was duly circulated to all members of the Senate, and notices of intended amendments were received from various members. These amendments are set out in full in the agenda paper of the meeting for the 31st March, 1917, copy whereof is annexed herewith and marked (C).

At the meeting on the 31st March, the Hon'ble Sir Asutosh Mookerjee, with the leave of the Senate, moved that the report of the Committee be adopted, subject to the modification that for section 32 of the draft regulations be substituted section 32 as contained in the annexed paper marked (D). This motion being duly seconded, Mr. Peake moved the following amendment:—

"That the word 'adopted' be left out, and there be added the words 'be modified' and referred for this purpose for further consideration to a Committee consisting of

eight members, the Senate being of opinion that nothing in the proposed regulations should interfere with colleges already affiliated up to the M. A. and M.Sc. standards under the present regulations, and that in view of the great importance of providing as far as possible for the tuition and control of post-graduate students, for the provision of library facilities, etc., affiliation should be facilitated by suitable alterations in the regulations, taking particularly into consideration the possibilities of co-operation for the purposes of lectures between the Colleges themselves and the University."

The amendment was seconded by Mahanahopadhyay Haraprasad Sastri. The matter was again elaborately discussed and the debate lasted for nearly five hours. At the end of this period, the amendment was put to the vote and declared lost, fourteen votes being recorded in favour of it and thirty-five against it. The meeting then adjourned till 12 noon on Saturday, the 14th April.

At this meeting, the amendments other than the one disposed of on the 31st March, as also other amendments which had meanwhile been notified and which will be found in annexure (E) (agenda paper of the meeting for the 14th April, 1917) were taken up for consideration. Sir Gooroo Dass Banerjee brought forward the following amendment:—

"That after the word 'adopted' there be added the words 'with the following alteration in the Draft regulations, namely, that word "mainly" be substituted for the word "only" in section 3 of those Regulations."

The amendment was seconded by Mr. Archbold and was discussed at great length. The amendment was ultimately rejected, there being sixteen votes in favour of it and thirty three against it. Various other amendments were taken up in the order decided on by the Hon'ble the Vice-Chancellor and debated upon. Some of the amendments were accepted by the Hon'ble Sir Asutosh Mookerjee and were carried. Others were rejected or withdrawn or abandoned. The debate at this meeting occupied six hours, namely, from 12 noon to 2-15 P.M. and from 3-15 to 7 P.M.

The meeting then adjourned till 5 P.M. on Monday, the 16th April. At this meeting the remaining amendments were discussed and disposed of.

I have now the honour to request that the changes in the Regulations recommended by the Senate may be sanctioned by

the Governor-General in Council under sub-section 1 of Section 25 of the Indian Universities Act, 1904.

The recommendations of the Senate may be grouped under two heads, namely, first, that for Chapter XI of the existing Regulations be substituted Chapter XI as contained in annexure (X) and, secondly, that changes as set out in annexure (Y) be made in some of the other chapters of the existing Regulations to enable the University to increase its income from examination fees paid by candidates for various examinations. It may be convenient to summarise very briefly the effect of the changes recommended by the Senate.

As regards the new Chapter XI as adopted by the Senate, it will be observed that it adheres very closely to the recommendations of the Committee appointed by the Government of India. The only points of departure worthy of mention are as follows :

The Government of India Committee recommended that there should be six representatives of the Senate on each of the two proposed Councils, namely, the Council of Post-graduate Teaching in Arts and the Council of Post-graduate Teaching in Science. The Senate have decided that these six representatives in each case should not be elected entirely by the Senate, but that four should in each case be elected by the Senate and that the other two should be elected in the case of the Arts Council by the present Faculty of Arts and in the case of the Science Council by the present Faculty of Science. The Senate un-animously adopted this alteration as a distinct improvement, because this would secure that at least two of the members in each case would be persons acquainted with the work of the respective Faculties. The Senate further decided that in addition to the Post-graduate Teachers and the four representatives of the Senate and the two representatives of the Faculty, the Heads of all Colleges in Calcutta affiliated up to the B.A. or B.Sc. standard should be ex-officio members of the respective Councils. This will tend to secure that close co-operation between the Colleges and the University which forms the chief basis of the recommendations of the Committee appointed by the Government of India. Most of these Principals will, perhaps, find a place on the Councils as Post-graduate Teachers, but the Senate thought it desirable to bring on the Councils such Heads of first grade Colleges in Calcutta as might not be able, for some reason or other, to take part in the actual work of teaching.

There is an incidental change in the constitution of the Executive Committees to which reference may be made here. The Committee appointed by the Government of India recommended

that three of the six representatives of the Senate on each Council should be members of the corresponding Executive Committee. The Senate recommend that two of the four representatives of the Senate and one of the two representatives of the Faculty should be on the Executive Committee. Subject to the alterations just explained, the scheme as approved by the Senate will be found to correspond substantially to that contained in the unanimous recommendations of the Committee appointed by the Government of India. As the reasons for the recommendations of that Committee are contained in their report, no additional reasons need be stated here.

As regards the changes proposed by the Senate in other Chapters of the Regulations, their purpose is to enable the University to increase its income which is derived principally from fees paid by candidates for examinations. It may be observed that the Committee appointed by the Government of India recommended in their report (page 17) that the University should consider the possibility of raising its resources by increasing examination fees paid by its students. The Senate now recommend that the fees for admission to some of the examinations be raised as follows :—

Matriculation Examination	from Rs. 12 to 15
I.A. and ISc. Examinations	„ „ 25 „ 30
B.A. Examination	„ „ 35 „ 40

It is anticipated that if this increase is sanctioned, the University will have an additional revenue of one lac twenty thousand rupees a year, the whole of which it is proposed to devote to Post-graduate Teaching. The University, during the current year, has budgetted Rs. 91,000 as its contribution from current funds to Post-graduate Teaching. It is proposed that this should be continued in addition to the grant which will be derived from the increased revenue. In this connection I may be permitted to draw your attention to Section 44 of the proposed new Chapter XI which makes it obligatory on the University to constitute a separate fund for the promotion of Post-graduate Studies, to be called the Post-graduate Teaching Fund, and to credit to such fund annually, besides tuition fees paid by students and sums derived from special grants, at least one-third of the fees realised from candidates for certain examinations. The object of this provision is to ensure the regular contribution, by the University, of a substantial sum annually for purposes of post-graduate teaching; this contribution, it has been worked out, will amount to at least two lacs of rupees a year. The financial security of the new scheme is, consequently, assured, as far as is practicable under existing conditions.

Copies of the Minutes of the Senate, dated the 17th and 31st March, and 14th and 16th April are annexed herewith, and marked P, Q, R, S. These Minutes set out in full the debate in the Senate and contain a statement of the arguments advanced for and against the scheme by the various speakers. I also enclose a protest recorded by Dr. Urquhart and a memorandum in answer thereto prepared under Section 66 of Chapter I of the Regulations.

I may add finally that if the recommendations of the Senate are accepted by the Government of India and orders are issued early, the new scheme may be set in operation from the commencement of the ensuing session in July.

APPENDIX IV.

MEMORANDUM ON POST-GRADUATE ORGANISATION FROM THE PRESIDENCY COLLEGE STAFF IN 1913.

To

THE HONOURABLE THE VICE-CHANCELLOR AND
SYNDICATE OF CALCUTTA UNIVERSITY.

The interest we naturally feel in post-graduate arts teaching in Calcutta University and our vivid realization of the great importance of the subject, are our reasons for addressing to the Hon'ble the Vice-Chancellor and Syndicate certain observations on the statement made by the Vice-Chancellor to the Senate on the 27th of September last.

In the first place we desire to congratulate the Vice-Chancellor and Syndicate on the very notable expansion of the University Classes in the last two years, and on the distinguished band of teachers whom the Hon'ble the Vice-Chancellor has secured for the M.A. lecture courses. It is, we should think, an achievement of a unique character. But while allowing a great deal to the shortness of the time and the acknowledged incompleteness of present arrangements, we cannot shut our eyes to the weaker aspects of the statement, nor to tendencies which we conceive to contain elements of danger.

Looking to the statement as a whole, the remarkable thing, to which the Vice-Chancellor not unnaturally points with satisfaction is the great increase in the number of students studying M.A. courses in University Classes. In 1912 the total was 520; in 1913, it is 1,005. This would be entirely a subject for congratulation, if we could be sure that these ten hundred post-graduate students were studying under entirely satisfactory conditions. As regards lectures it may be at once allowed that in most subjects, notably in Mathematics, Philosophy and History, the lectures are amply and satisfactorily provided for. But it was long ago agreed that a satisfactory education does not consist wholly of attending lectures, and this is not least true of the highest stages. When we look for the provision for guidance outside lectures, the result is not satisfactory. There is an almost total absence of personal guidance.

It has long been recognized that, failing a complete tutorial system, M.A. work should be organized in seminars. Besides this, M.A. students, if they are to study to any purpose, certainly require some personal guidance. They need practice in writing essays and to have their essays corrected.

Taking English, for example, there are 203 students in the two classes. They attend the lectures of five lecturers, all but one of whom are professors on the staffs of Colleges with duties to the College which absorb nearly the whole of their time. Three are Presidency College professors, whose main responsibility obviously lie to their own College; one is the distinguished Principal of the City College, who has not only his share of lecturing work at the City College, but the heavy responsibilities of the Principalship as well. It is plain that none of these can give personal attention to the 203 students of the University Classes. There remains only Mr. Roby Datta, who is also named in the Vice-Chancellor's statement as Professor of Comparative Philology.

Next year we are informed the staff will be strengthened by Professor Stephen as Professor and Mr. Knox as Assistant Professor, and this will, no doubt, be a great accession of strength. Even so it is doubtful whether the two professors will care to undertake the laborious responsibility of the tutorial work of 200, more probably (as it will be next) of 300 students.

For an aspect of the statement which demands very serious consideration is that in every case practically the 1st-year is

twice or three times as large as the 2nd-year. This means that the standard of the classes for the future is likely to be that of the 1st-year ; so that

in English there will be not 203 but $145 + 145 = 290$

„ Philosophy „ ... 199 „ $154 + 154 = 308$

„ Pol. Eco. & Pol. Phil. „ ... 156 „ $107 + 107 = 214$

„ History „ ... 183 „ $105 + 105 = 210$

„ Mathematics „ ... 211 „ $147 + 147 = 294$

It is at once seen how much more serious from this standpoint the problems are likely to be next year.

Our experience of Post-Graduate teaching convinces us that individual and personal guidance outside lectures is an indispensable condition of fruitful work in most cases. Our experience is that the average Calcutta graduate is not at present capable of sustained study of the right kind without the assistance and guidance of some form of tutorial work. We could give many painful illustrations of the inability of students to grasp the essential elements of independent study. We fear that for some time to come students here will continue to work on wrong lines, unless they have, more not less than heretofore, the support and spur of individual guidance. The truth, of course, goes further than that. Students everywhere, not in India only, require such stimulus except in comparatively rare cases and nearly always such stimulus is valuable. It ought undoubtedly to form an essential part of any system of University study: and in Calcutta University this was fully recognised and conceded at the time of the re-constitution of the Universities in 1904.

We cannot, therefore, but regard with some apprehension the growth on so large a scale a system of post-graduate study which is at present, and seems likely to remain, without any basis of regular tutorial guidance. It is not only that the two years' course of study without adequate control is likely in a high proportion of cases to be unprofitable, a mere squandering

of time, but that the ideal of University Post-Graduate study is itself at stake. Where it is most important to initiate and uphold a high standard, a low standard will be, not so much tolerated, as prescribed.

The only remedy with present numbers would be the enrolment of a staff of whole-time teachers exceeding in number the present staff of lecturers. We do not think that a professor or assistant-professor would be prepared to undertake personal responsibility—apart from lectures—of more than 40 to 50 students. Consequently even taking 50 as the standard, English would want a staff of six; Philosophy a staff of six; for Political Economy and Political Philosophy would be wanted a staff of five; for History a staff of five; for Mathematics a staff of six; in all twenty-eight; and these must *ex hypo.* be whole-time University teachers.

Now, at the present time the staff actually conducting the classes in these subjects appears from the statement to be :

For Mathematics 4 whole-time lecturers.

For English 1 whole-time lecturer + 4 College Professors = 5.

For Philosophy 1 whole-time lecturer + 6 Do. = 7.

For Pol. Eco. & Pol. Phil. 2 whole-time Asst. Professors
+ 3 College Professors = 5.

For History 2 whole-time lecturers + 6 other lecturers,
two being College Professors = 8.

This gives rather over the same total of 29 : or 30 counting the Hardinge Professor of Mathematics (who would not however necessarily take any share of the ordinary M.A. teaching), but out of that total only *ten* are whole-time teachers for the University or if you add two new professors of English—twelve. How inadequate that strength must be for the tutorial side

of the work of some 1,300 students is self-evident. But this is not the worst. For it is to be observed that the number of whole-time teachers is very unequally divided; four are attached to Mathematics, two are for Political Philosophy, two for History: *English and Philosophy have only one each.*

Thus it may be said that of these subjects Mathematics alone is equipped with anything approaching to an adequate University staff.

There is one other subject which appears to be not merely adequately, but amply, provided with staff, namely Sanskrit. For Sanskrit there is enumerated a staff of seventeen, and though only one of these, the Carmichael Professor of Ancient Indian History and Culture, belongs wholly to the University, post-graduate students of this subject are in every sense well provided for. If all other subjects showed the same, or somewhat the same, proportion, not a word of criticism need be passed on the arrangements made by the University. But what a contrast between 17 teachers and 28 students in Sanskrit, 199 students and 7 teachers for Philosophy, 156 students and 5 teachers for Political Economy and Political Philosophy, and 5 teachers and 203 students for English.

Failing the remedy of such an increase of staff as the conditions of efficient study call for, we would seriously ask the consideration of the Hon'ble the Vice-Chancellor and Syndicate whether measures of some other kind are not required to check this large predominance of numbers over teaching strength. Two measures are possible. One is to agree to a limit of numbers in the different classes proportionate to the actual teaching strength. The other is a raising of fees.

We are well aware that neither of these measures would be popular. But is that a worthy consideration, if it should clearly appear, as we have said above, that nothing less than the very ideal of post-graduate study is at stake. Can the University ensure with its present effective teaching strength that sound methods of study shall prevail among the thirteen or fourteen hundred students who are likely next year to be taking post-graduate courses in University Classes. Unless the answer is confidently affirmative the position is very grave indeed. We are faced with a menace of the permanent degradation of post-graduate study just when opportunity seems opening for the beginning of a new era. Undoubtedly there is hopeful promise of better things in the eagerness now shown for entering on courses of M.A. study under the most rigorous conditions imposed by the regulations of 1906. But it will be to no purpose, unless this eagerness is carefully guided under the influence of high aims and sound methods. The consequences will be

disastrous and irreparable if the primary importance of high aims and sound methods is lost sight of. We therefore venture to express a hope that the aspects of the Vice-Chancellor's recent statement to which attention is called in this note may be very seriously weighed by the Hon'ble the Vice-Chancellor and Syndicate and such steps be taken for safeguarding the standards of M.A. study as their wisdom and experience may dictate.

Sd. H. R. JAMES
 ,, EDWARD F. OATEN.
 ,, THOS. S. STERLING.
 ,, MANMOHAN GHOSH.
 ,, JEHANGIR C. COYAJEE.
 ,, R. N. GILCHRIST.
 ,, JAMES W. HOLME.
 ,, PRAPHULLA C. GHOSH.
 ,, A. N. MUKERJEE.
 ,, P. D. SHASTRI.
 ,, D. N. MALLIK.
 ,, J. N. DAS GUPTA.

Dated the 22nd December,
 1923.

CALCUTTA UNIVERSITY

Statement showing the Staff for Post-Graduate Teaching
 1916-17.

Names.	Present Salary. (Monthly.)	Increments due from.	Extra amount to be paid. in 1916-17.
ENGLISH.			
<i>Professors.</i>			
		Rs.	Rs. A. P.
Dr. H. Stephen ...		750 Nil	...
Mr. R. S. Knox ...		750 Nil	...
<i>Asst. Professors.</i>			
Mr. H. C. Mukerjee	375	1. 6. 16 @ Rs. 25 for 12 months.	300 0 0
Mr. S. K. Chatterjee	225	1. 6. 16 @ Rs. 25 for 12 months.	300 0 0
Mr. R. Datta ...	250	1. 6. 16 @ Rs. 25 for 12 months.	300 0 0

Names.	Present Salary (Monthly.)	Increments due from.	Extra amount to be paid in 1916-17.
<i>Lecturer.</i>			
	Rs.		Rs. A. P.
Mr. H. C. Maitra ...	250	<i>Nil</i>	...
COMP. PHILOLOGY.			
Mr. R. Datta ...	100	<i>Nil</i>	...
PHILOSOPHY.			
<i>Asst. Professors.</i>			
Dr. Hiralal Haldar ...	500	<i>Nil</i>	...
Dr. Ramdas Khan ...	500	<i>Nil</i>	...
Mr. Ambika C. Mitra ...	500	<i>Nil</i>	...
Dr. N. N. Sengupta...	250	<i>Nil</i>	...
Mr. K. C. Bhattacharyya	400	<i>Nil</i>	...
<i>Assistant.</i>			
Mr. Susil K. Maitra...	225	<i>Nil</i>	...
ECONOMICS.			
<i>Asst. Professors.</i>			
Mr. Satis C. Ray ...	550	22. 9. 16 @ Rs. 25 for 8 months and 9 days.	207 8 0
Mr. Manu Subedar	550	17. 8. 16 @ Rs. 50 for 9 months and 15 days.	474 3 1
Mr. S. C. Chakrabarti	200	<i>Nil</i>	...
<i>Assistants.</i>			
* Mr. Bhujanga B. Mukerjee	200	<i>Nil</i>	...
Mr. Jogish C. Sinha	200	<i>Nil</i>	...
Mr. D. Chattoraj	200	<i>Nil</i>	...
HISTORY.			
<i>Asst. Professors.</i>			
Mr. Bipinbihari Sen	425	1. 7. 16 @ Rs. 25 for 11 months.	275 0 0

* His case has been deferred.

Names.	Present Salary (Monthly.)	Increments due from.	Extra amount to be paid in 1916-17.	
			Rs.	A. P.
Mr. Ramesh C. Majumdar	325	1. 6. 16 @ for 12 months.	Rs. 25 300	0 0
Mr. Surendra N. Majumdar	300	1. 9. 16 @ for 9 months.	Rs. 25 225	0 0
Mr. Gauranga N. Banerjee	200	1. 6. 16 @ for 12 months.	Rs. 25 300	0 0
Mr. A. C. Datta	250	<i>Nil</i>		...

MATHEMATICS.

(*Asst. Professors*)

Dr. Syamadas Mukerjee	425	1. 6. 16 @ for 12 months.	Rs. 25 300	0 0
Dr. Haridas Bagehi	275	1. 6. 16 @ for 12 months.	Rs. 25 300	0 0
Mr. Narendra K. Majumdar	225	1. 6. 16 @ for 12 months.	Rs. 25 300	0 0
Mr. H. P. Banerjee	200	<i>Nil</i>		...
Mr. M. Gupta	200	<i>Nil</i>		...
Mr. Surendra M. Ganguli	225	1. 1. 17 @ for 5 months.	Rs. 25 125	0 0
Mr. Indu B. Brahmachari	300	<i>Nil</i>		...

SANSKRIT.

(*Lecturer.*)

Pandit Bhimsen Sastri	250	<i>Nil</i>		...
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PALI.

(*Lecturer.*)

Dr. S. C. Vidyabhushan	100	<i>Nil</i>	
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Names.	Present Salary (Monthly.)	Increments due from.	Extra amount to be paid in 1916-17.
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Rs.

Rs. A. P.

ARABIC AND PERSIAN.

(Lecturers.)

Shams-ul-Ulma S. M.			
Gilani ...	200	Nil	
Mr. Z. R. Zahid ...	200	Nil	
Aga Kazim Shirazi ...	100	Nil	

11,175 (monthly)	3,706 11 1
------------------	------------

= 1,34,100

HISTORY.

Mr. S. Khuda Buksh @	500
Rs. 500 per annum	

1,34,600 +	3,706 11 1
------------	------------

= 1,38,307

Annual
Expenditure.

Income
(expected.)

Rs.

Rs.

1915-16 ... 1,31,700		1915-16 ... 75,600
		<i>(Monthly average 900 students)</i>
1916-17 ... 1,38,307 (proposed)		1916-17 ... 1,00,800
		<i>(1,200 students)</i>

Deficit for 1915-16 to be met from a contribution from the Fee Fund of the University.

APPENDIX VII.
GOVERNMENT OF INDIA.
HOME DEPARTMENT.

NOTIFICATION.
ESTABLISHMENTS.

Simla, the 6th July, 1922.

No. F-531-II.—The following syllabus for the competitive examination for the Indian Civil Service to be held in India in January, 1923, is published for general information.

S. P. O'DONNELL,
Secretary to the Government of India.

**Indian Civil Service Competitive Examination to be
held in India in January, 1923.**

*Syllabus of the Examination in which the Civil Service
Commissioners give an indication of the lines on which
the subjects will be treated.*

1. *Essay.*—An essay to be written in English on one of several specified subjects.
2. *English.*—A paper of questions to test the understanding of English and the workmanlike use of words.
3. *Present day.*—Questions on contemporary subjects, social, economic and constitutional, mainly though not exclusively concerned with India. A liberal choice of questions will be given. Effective and skilful exposition will be rewarded.
4. *Everyday Science.*—In this subject such knowledge will be expected as a candidate will have who has studied science intelligently at school and has since then kept his eyes open. A liberal choice of questions will be given.
5. *Vernacular.*—The test will include translation from the vernacular, set composition in which an English passage is given

to be put into the vernacular and free composition in which the candidate writes in the vernacular in his own words on a prescribed subject.

6. *Viva Voce*.—The examination will be in matters of general interest, not in matters of academic interest; it is intended to test the candidate's alertness, intelligence and general outlook.

Languages with History and Literature.—Subjects 7-14. History and Literature will, as far as possible, be brought into close relation. The questions on literature will require first-hand knowledge of the author; and the authors dealt with will be those which candidates ought to have read. Passages of literature may be sent for comment on matters of social, political, legal, or other historical importance.

7. *Arabic Language*: translation, free composition and set composition in the classical language.

8. *Arabic History and Literature*.—The main stress in both history and literature will be on the period from the middle of the 6th century A.D. to the middle of the 13th century A.D.

9. *Persian Language*: translation, free composition and set composition in the classical language.

10. *Persian History and Literature*.—The main stress in both history and literature will be laid on the period 1000 A.D. to 1500 A.D. Candidates will be expected to have a general knowledge of Persia before 1000 A.D. and from 1500 A.D. to the present time.

11. *Sanskrit Language*: translation, set composition, questions on Vedic grammar relating to grammatical forms occurring in the passages set for translation or to general grammatical questions suggested by them. Both Vedic and Classical Sanskrit passages will be set for translation; composition will be required in Classical Sanskrit alone. A knowledge of the Prakrit used in plays will be expected.

12. *Sanskrit Literature and Civilization* will include the history of the civilization and thought of India from the Vedic period to 1200 A.D.

13. *Pali Language*: translation, free composition, set composition.

14. *Pali Literature and Civilization* will include the history of Buddhistic civilization in India from 600 B.C. to 1000 A.D.

English Literature.—Subjects 15-18. Candidates for any period should be prepared to show some first-hand knowledge of some of the works of the authors named below for the period and of their place in the history of their country. Questions may also

be asked about other writers. Questions will not be set on the history of the language.

Period 1. 1580-1680. Spenser, Shakespeare, Bacon, Milton, Hobbes.

Period 2. 1680-1744. Dryden, Bunyan, Swift, Addison, Defoe, Pope.

Period 3. 1744-1832. Fielding, Johnson, Goldsmith, Burke, Sheridan, Scott, Wordsworth, Byron, Lamb.

Period 4. 1832-1914. Macaulay, Pennyson, Dickens, Thackeray, Carlyle, Ruskin, Thomas Hardy, H. G. Wells.

19. *Vernacular Literature.*—The questions will be directed in the main to test a first-hand knowledge of the best-known works in the vernacular, but questions on works of lesser importance will not be excluded. Candidates should have such knowledge of history as is necessary to understand the literature in its relation to the activities of the people.

20. *Indian History.*—*Period 1.* Hindu India from the first Aryan immigration to the end of the 12th century; history and culture together with the history of Buddhism outside of India.

21. *Indian History.*—*Period 2.* Muhammadan India, from the beginning of the 11th century to 1707 (death of Aurangzeb); together with the contemporaneous history of the Moslem powers outside of India, the Saracens, the Turks.

22. *Indian History.*—*Period 3.* India during the British period from 1600 to the present day; together with the contemporaneous history of the British Empire.

23. *European History.*—The limits of time are 1600 and 1914. Although a fixed date is given for the beginning of the period, candidates will be expected to know in general outline how the initial position was reached. The history of countries closely associated with Europe will be included so far as it influences British history, especially in relation to India.

24. *British History.*—The limits of time are 1400 and 1914. British history will be taken as a whole; politics, economics, and constitution will be considered as mutually affecting each other and all together as the outcome of the common life of the nation. Candidates will be expected to know so much European history as will make the external action of this country fully intelligible and will explain those movements in Britain which had their beginnings elsewhere, e.g., the Renaissance, the Reformation and the reactions in this country of the French Revolution.

From 1750 onwards the outstanding incidents and movements in the history of British possessions will assume more importance.

25. *Economics*.—General Economics, including industrial history with special reference to India. The subject will be treated as a whole, and candidates should be prepared to illustrate the theory by the facts and to analyse the facts by the help of the theory. The history of economic thought will be included.

26. *Politics*.—This subject will include political theory and political organisation.

Candidates will be expected to show a knowledge of political theory and its history, political theory being understood to mean not only the theory of legislation, but also the general history of the State in connection with kindred studies such as Jurisprudence, Public International Law and Economics. Questions involving illustrations from Indian history may be set.

Political organisation will include Constitutional Forms (Representative Government, Federalism, etc.) and Public Administration, central and local. The history of institutions is not included, but candidates will be expected to know the earlier stages from which existing institutions have directly developed; and in this section also illustrations from Indian history may be expected.

27. *Law*.—Constitutional Law, Jurisprudence, equity, contracts, torts, easements, law of property with special reference to Transfer of Property Act, Hindu and Muhammadan Law as administered in British India, Indian Evidence Act, Civil Procedure Code, Indian Penal Code, Criminal Procedure Code.

Mathematics.—Subjects 32-33. The examination will be designed to test understanding of the subject and ability to apply it rather than ability to reproduce proofs of propositions. No great skill in manipulation will be expected.

Questions involving the use of mathematical instruments may be set at both stages.

32. *Lower Mathematics*.—Logarithms, numerical equations; graphs, approximation; infinite series; complex numbers; solution of triangles.

Geometry in two and three dimensions according to the method of Euclid. Analytical geometry in two dimensions (method of Descartes). The construction of plans, elevations and sections of solid bodies (method of Monge).

Differential co-efficient; maxima and minima; integrals; the application of the infinitesimal calculus to curves.

Projectiles; harmonic motion; momentum; energy; power. Equilibrium of rigid bodies in two dimensions; link polygons; virtual work. Simple machines, *e.g.*, tackle, cranes, engine governors, brakes. Fluid pressure; expansion of a perfect gas; air-pump.

33. *Higher Mathematics*.—Lower Mathematics together with:—

Uniform convergence; infinite products; exponential and trigonometric functions of a complex variable.

The elements of the geometry of surfaces.

Taylor's series; partial differentiation; areas and volumes of solids by integration; moments of inertia; the solution of differential equations occurring in elementary mechanics.

Centres; simple cases of linked mechanisms. Equilibrium of forces in three dimensions; loading of beams; elementary treatment of potential. The motion of rigid bodies in two dimensions. Stability of flotation.

34. *Astronomy*.—Celestial co-ordinates. Astronomical instruments descriptively treated; method of using them and of determining their principal errors. Orbit of the earth.

The Ecliptic. Time. Latitude and Longitude. Motion of the moon, simpler calculations, eclipses. Parallax. Refraction. Aberration. Precession and nutation.

Stellar maps and catalogues; the nautical almanac; the principal constellations. Descriptive discussion of planets, comets, double stars, nebulas. The simpler processes of computation; reduction of observations and of measurements made on photographic plates.

35. *Statistics*.—The questions to be set will cover:—

- (1) Elementary theory of statistics, not depending mainly on the theory of probability nor requiring a knowledge of the calculus—frequency distributions, averages, percentiles, and simple methods of measuring dispersion, graphic methods; elementary treatment of qualitative data, *e.g.*, investigation of association by comparison of ratios, consistency of data; the practice of the simplest graphic and algebraic methods of interpolation.
- (2) Practical methods used in the analysis and interpretation of statistics of prices, wages and incomes, trade, transport, production and consumption, education, etc., the more elementary methods of dealing with population and vital statistics; miscellaneous methods used in handling statistics of experiments of observations.

- (3) Elements of modern mathematical theory of statistics ; frequency curves and the mathematical representation of groups generally ; accuracy of simpling as affecting averages, percentages ; the standard deviation ; significance of observed differences between averages of groups, etc. ; the theory of correlation for two variables.

A considerable choice of questions will be given, especially as to paragraph 2, and it will be possible for a candidate without advanced mathematical knowledge to obtain full marks by answering questions under paragraphs 1 and 2.

Natural Sciences.—Subjects 36-47. The standard of the higher division of a science will be that which is required in the main subject for an honours degree at the universities. The standard for the lower division of a science will be that required in a subject subsidiary to the main subject whether required at the final degree examination or at a preceding examination.

40, 41. *Lower and Higher Botany.*—Vegetable Physiology will be included in each division.

42, 43. *Lower and Higher Geology.*—Mineralogy will be included in each division.

48. *Geography*, not excluding topics which concern geography jointly with other subjects such as economics, history, physics, botany and geology. There will be a practical test which will necessitate a knowledge of cartographical methods and notations, and for this test drawing instruments may be required.

51. *Physical Anthropology.*—The subject includes prehistoric archæology and technology. Candidates will be expected to have such knowledge as may be acquired by laboratory and museum work, consisting mainly in the handling and study of specimens and exhibits. The subject will be treated with special, but not exclusive, reference to peoples of rude culture, including prehistoric civilization.

52. *Social Anthropology.*—Candidates will not be expected to have an extensive experience of laboratory and museum work. The subject will be treated with special, but not exclusive, reference to peoples of rude culture, including prehistoric civilization.

53. *Engineering.*—Strength of materials ; theory of structures : mechanism and dynamics of machines ; heat and thermodynamics ; surveying ; hydraulics, including hydraulic machines ; electricity and magnetism.

The subject will be treated in a general manner and the questions will be confined to the more elementary parts of the

subject. The candidate will be expected to be familiar with graphical methods and to have some skill in mechanical drawing.

54. *Agriculture*.—The subject will be treated in relation to Indian conditions. Agricultural chemistry, agricultural botany, and agricultural zoology will be included.

Note 1.—From the marks assigned to candidates in each subject such deduction will be made as the Civil Service Commissioners may consider necessary in order to secure that no credit is allowed for merely superficial knowledge.

Note 2.—In view of the importance of legible handwriting on the public service, deductions which may be of considerable amount will be made from the marks of candidates whose handwriting is not easily legible.

Note 3.—In valuing the work of the candidates the Civil Service Commissioners will give credit for good English in all the 54 subjects of the examination, and not only in subjects 1 and 2 which are specially devoted to the language. Among the qualities of good English may be mentioned orderly, effective and exact expression, combined with due economy of words.

Note 4.—A pamphlet containing the question papers used at the examination held in Allahabad in 1922 is being published by His Majesty's Stationery Office, Imperial House, Kingsway, London, W. C. 2, and may be purchased either from that Office or in India from Messrs. Longmans, Green and Company, 6, Old Court House Street, Calcutta; 167, Mount Road, Madras, or 336, Hornby Road, Bombay. It will be on sale in India about 1st August, 1922.

Note 5.—Copies of the Syllabus may be obtained on application to the Chief Secretary to the Government of the province in which the applicant resides.

INDIAN CIVIL SERVICE.

Syllabus for the Open Competitive Examination of August, 1925, for appointments in the Indian Civil Service, and for any other competition that may be held in combination therewith.

The other competitions to which the same syllabus applies and which may, if required, be held simultaneously are:—

Junior Grade of the administrative class in the Home Civil Service.

Colonial Service: Eastern Cadetships.

Foreign Office and Diplomatic Service.

Consular Services (General, Levant, and Far East) and Intelligence Officer Grade in the Department of Overseas Trade.

Note.—Candidates who desire to offer any of the subjects 28, 30-44, 46, or 47 must send to the Secretary of the Civil Service Commission, so as to arrive not later than 15th May, 1925, the

evidence of training described below. Such evidence should be in the form of a certificate signed by a responsible officer of the Institution, and may be sent in advance of the Form of Application. In the case of an Institution not situated in the British Isles, the certificate must state that the Institution in which the work has been done is authorized to prepare candidates in that subject for a degree. When a candidate has been refused permission to take one of these subjects, he will be allowed to substitute another subject within the Regulations provided he does so within the time allowed for sending in Application Forms.

SECTION A.

1. *Essay*—An Essay to be written on one of several specified subjects.

2. *English*—A paper of questions to test the understanding of English and the workmanlike use of words. An optional exercise in the writing of verse will be included.

3. *Present Day*—Questions on contemporary subjects, social, economic, and political. A liberal choice of questions will be given. Effective and skilful exposition will be expected.

4. *Everyday Science*—In this subject such knowledge will be expected as a candidate will have who has studied science intelligently at school and has since then kept his eyes open. A liberal choice of questions will be given. Attention should be paid to orderly, effective, and exact expression.

5. *Auxiliary Language*—Passages dealing with history and politics may be set, but no technical matter. Verse is not excluded. Accuracy and skill in the use of English will be expected.

6. *Viva Voce*—The examination will be in matters of general interest, not in matters of academic interest; it is intended to test the candidate's alertness, intelligence, and intellectual outlook.

SECTION B.

HISTORY. *Subjects 7-10*—Candidates should know something of the original authorities, of the principles of historical criticism, and of the principles and the facts of geography in relation to history. They must be prepared to draw sketch maps.

7, 8. *English History to 1660, British History 1660-1914*—The history will be taken as a whole; politics, economics, and constitution will be considered as mutually affecting each other, and all together as the outcome of the common life of the nation. Literature will not be excluded. Candidates will be

expected to know so much of European history as will make the external action of this country fully intelligible and will explain those movements at home which had their beginnings abroad, e.g., the Renaissance, the Reformation, and the reactions in this country of the French Revolution. In subject 8 the outstanding incidents and movements in the history of British possessions will be included.

9, 10. *European History*—*Period 1*, from 400 to 1494; *Period 2*, from 1494 to 1763; *Period 3*, from 1763 to 1914.

Although a fixed date is given for the beginning of a period, candidates will be expected to know in general outline how the initial position was reached. The history of the American Continent, of India, and of the Far East, will be included in so far as it influences European fortunes in an important degree.

11. *General Economics*—The subject will be treated as a whole and candidates should be prepared to illustrate the theory by the facts and to analyse the facts by the help of the theory. The history of economic thought will be included.

12. *Economic History*—Candidates will be expected to have a general acquaintance with the early economic history of England; but special attention will be paid to the economic development of the British Isles and other portions of the Empire during the last two or three centuries, and so much knowledge of European and American conditions will be expected as is necessary for the understanding of British economic history.

13. *Public Economics*—The questions will deal with the main forms of State action, central and local, in the economic sphere, together with public finance.

14. *Political Theory*—Candidates will be expected to show a knowledge of political theory and its history, political theory being understood to mean not only the theory of legislation, but also the general history of the State and its connection with kindred studies such as Ethics, Psychology, Jurisprudence, Public International Law, and Economics. Candidates will be expected to show a knowledge of original authorities.

15. *Political Organization*—This will include Constitutional Forms (Representative Government, Federalism, etc.) and Public Administration, central and local. The history of institutions is not included, but candidates will be expected to know the earlier stages from which existing institutions have directly developed.

16. *Constitutional Law*—The Constitutional Law of the United Kingdom and of the British Empire, and the Law of English Local Government.

evidence of training described below. Such evidence should be in the form of a certificate signed by a responsible officer of the Institution, and may be sent in advance of the Form of Application. In the case of an Institution not situated in the British Isles, the certificate must state that the Institution in which the work has been done is authorized to prepare candidates in that subject for a degree. When a candidate has been refused permission to take one of these subjects, he will be allowed to substitute another subject within the Regulations provided he does so within the time allowed for sending in Application Forms.

SECTION A.

1. *Essay*—An Essay to be written on one of several specified subjects.

2. *English*—A paper of questions to test the understanding of English and the workmanlike use of words. An optional exercise in the writing of verse will be included.

3. *Present Day*—Questions on contemporary subjects, social, economic, and political. A liberal choice of questions will be given. Effective and skilful exposition will be expected.

4. *Everyday Science*—In this subject such knowledge will be expected as a candidate will have who has studied science intelligently at school and has since then kept his eyes open. A liberal choice of questions will be given. Attention should be paid to orderly, effective, and exact expression.

5. *Auxiliary Language*—Passages dealing with history and politics may be set, but no technical matter. Verse is not excluded. Accuracy and skill in the use of English will be expected.

6. *Viva Voce*—The examination will be in matters of general interest, not in matters of academic interest; it is intended to test the candidate's alertness, intelligence, and intellectual outlook.

SECTION B.

HISTORY. Subjects 7-10—Candidates should know something of the original authorities, of the principles of historical criticism, and of the principles and the facts of geography in relation to history. They must be prepared to draw sketch maps.

7, 8. *English History to 1660, British History 1660-1914*—The history will be taken as a whole; politics, economics, and constitution will be considered as mutually affecting each other, and all together as the outcome of the common life of the nation. Literature will not be excluded. Candidates will be

expected to know so much of European history as will make the external action of this country fully intelligible and will explain those movements at home which had their beginnings abroad, e.g., the Renaissance, the Reformation, and the reactions in this country of the French Revolution. In subject^s the outstanding incidents and movements in the history of British possessions will be included.

9, 10. *European History*—*Period 1*, from 400 to 1494; *Period 2*, from 1494 to 1763; *Period 3*, from 1763 to 1914.

Although a fixed date^s is given for the beginning of a period, candidates will be expected to know in general outline how the initial position was reached. The history of the American Continent, of India, and of the Far East, will be included in so far as it influences European fortunes in an important degree.

11. *General Economics*—The subject will be treated as a whole and candidates should be prepared to illustrate the theory by the facts and to analyse the facts by the help of the theory. The history of economic thought will be included.

12. *Economic History*—Candidates will be expected to have a general acquaintance with the early economic history of England; but special attention will be paid to the economic development of the British Isles and other portions of the Empire during the last two or three centuries, and so much knowledge of European and American conditions will be expected as is necessary for the understanding of British economic history.

13. *Public Economics*—The questions will deal with the main forms of State action, central and local, in the economic sphere, together with public finance.

14. *Political Theory*—Candidates will be expected to show a knowledge of political theory and its history, political theory being understood to mean not only the theory of legislation, but also the general history of the State and its connection with kindred studies such as Ethics, Psychology, Jurisprudence, Public International Law, and Economics. Candidates will be expected to show a knowledge of original authorities.

15. *Political Organization*—This will include Constitutional Forms (Representative Government, Federalism, etc.) and Public Administration, central and local. The history of institutions is not included, but candidates will be expected to know the earlier stages from which existing institutions have directly developed.

16. *Constitutional Law*—The Constitutional Law of the United Kingdom and of the British Empire, and the Law of English Local Government.

17. *Private Law*—The following branches of English Private Law:—the Law of Real and Personal Property (including the Law of Succession), Contracts, and Torts.

18. *Roman Law*—Passages will be set for translation and comment, but credit will not be given merely for capacity to translate the texts.

19. *International Law*—Public International Law and International Relations. Candidates will be expected to show a knowledge of the principal treaties which have affected international relations from 1815 inclusive to the present day.

20. *Moral Philosophy*—The history of the subject will be included. Candidates will have an opportunity of showing their strength either in Ancient Philosophy or in Modern Philosophy.

21. *Metaphysics*—As for Moral Philosophy.

22. *Logic*—The subject will be interpreted in a wide sense. Epistemology in its bearing on logical problems will be included, together with Formal Logic and Scientific Method. Questions may be set on Mathematical Logic, *i.e.*, on the Logic of Mathematics, Symbolic Logic, and the Logic of Probability; and also on the history of Logic. A considerable choice of questions will be allowed.

23. *Psychology*—Questions on the history of the subject may be included.

MATHEMATICS. *Subjects 24-27.*—The use of the side-rule and of mathematical tables will be allowed.

24. *Lower Pure Mathematics.*—Geometry of two and of three dimensions according to Euclid (synthetic geometry), to Descartes (analytical geometry), and to Monge (descriptive geometry), dealing with three-dimensional figures by the use of plan and elevation). The method of vectors including scalar and vector products, with applications. Only the main properties of conics and quadrics, including those of poles, polars and polar planes, are expected.

Algebra: Complex numbers; uniformly converging infinite series; the elements of the theory of equations, including the numerical solution of algebraic equations, but not including the formal solution of the cubic and quartic.

Infinitesimal calculus of real variables to partial differentiation and multiple integrals; with applications to geometry. Candidates should be able to deal with the types of differential equations occurring in elementary mechanics.

The proof of Taylor's series will not be required.

No great skill will be expected in solving complicated problems of an elementary nature. The questions will involve the use of mathematical instruments.

25. *Higher Pure Mathematics*.—The geometry of curves and surfaces. Tensor calculus.

Elementary analysis, including simple functions of a complex variable and contour integration.

Differential equations in one independent variable. Elementary treatment of partial differential equations, with special reference to the differential equations of mathematical physics. Existence theorems are excluded.

Mathematical theory of probability, including theory of errors, method of least squares, curve fitting, and correlation.

Calculus of finite differences, including numerical integration and summation and linear difference equations.

A considerable choice of questions will be allowed, so that full marks may be obtained by covering about half the range stated above.

26. *Lower Applied Mathematics*.—Statics, hydrostatics, dynamics, elementary theory of electricity and magnetism, including the induction of currents. Questions will be of an elementary character, but will not be confined to two dimensions; they will involve the use of the calculus. Candidates are free to use differential equations, but a knowledge thereof will not be necessary to answer the questions. Attention will be paid to problems which arise naturally and to general principles; artificial problems will be avoided. The questions will involve the use of mathematical instruments.

27. *Higher Applied Mathematics*.—Statics to a more advanced stage, including graphical treatment.

Dynamics to the equations of Euler and Lagrange and including the theory of the vibration of strings and other simple systems.

Hydrodynamics, including the elementary theory of the motion of solids through a liquid, surface waves, and vibrations in gases.

Elasticity, including the elements of the vibrations of rods, plates and bars.

Electricity and magnetism.

Thermodynamics, kinetic theory of gases, radiation.

Questions may involve the use of spherical and zonal harmonics. A considerable choice of questions will be allowed,

so that full marks may be obtained by covering about half the range stated.

28. *Astronomy*.—Geometrical optics will be included.

A candidate who desires to offer this subject must produce evidence satisfactory to the Civil Service Commissioners of practical training in an observatory.

29. *Statistics*. 1.—Elementary theory of statistics, not depending mainly on the theory of probability nor requiring a knowledge of the calculus:—frequency distributions, averages, percentiles, and simple methods of measuring dispersion; graphic methods; elementary treatment of qualitative data, *e.g.*, investigation of association by comparison of ratios, consistency of data: the practice of the simplest graphic and algebraic methods of interpolation.

2. Practical methods used in the analysis and interpretation of statistics of prices, wages and incomes, trade transport, production and consumption, education, etc.; the more elementary methods of dealing with population and vital statistics; miscellaneous methods used in handling statistics of experiments or observations.

3. Elements of modern mathematical theory of statistics:—frequency curves and the mathematical representation of groups generally; accuracy of sampling as affecting averages, percentages, the standard deviation; significance of observed differences between averages of groups, etc.; the theory of correlation for two variables.

A considerable choice of questions will be given, especially as to paragraph 2, and it will be possible for a candidate without advanced mathematical knowledge to obtain full marks by answering questions under paragraphs 1 and 2.

NATURAL SCIENCE. *Subjects 30-41*.—The standard of the higher division of a science will be that which is required in the main subject for an honours degree at the universities. The standard for the lower division of a science will be that required in a subject subsidiary to the main subject whether required at the final degree examination or at a preceding examination.

A candidate who desires to offer a science must produce evidence satisfactory to the Civil Service Commissioners of laboratory training in that science in an institution of university rank; the length of such training must be at least two academic years for the higher division of a science and at least one academic year for the lower division.

34. <i>Lower Botany</i> .	} Vegetable Physiology will be included in each division.
35. <i>Higher Botany</i> .	
36. <i>Lower Geology</i> .	} Mineralogy will be included in each division.
37. <i>Higher Geology</i> .	

42. *Engineering*.—Strength of materials; theory of structures; mechanism and dynamics of machines; heat and thermodynamics; surveying; hydraulics, including hydraulic machines; electricity and magnetism.

The subject will be treated in a general manner and the questions will be confined to the more elementary parts of the subject. The candidate will be expected to be familiar with graphical methods and to have some skill in mechanical drawing.

A candidate who desires to offer Engineering must produce evidence satisfactory to the Civil Service Commissioners that he has undergone a course of training for at least one academic year in an institution of university rank.

43. *Geography*.—Geography as understood in the Universities, not excluding topics which concern geography jointly with other subjects such as economics, history, physics, botany, and geology. There will be a practical test which will necessitate a knowledge of cartographical methods and notations, and for this test drawing instruments may be required.

A candidate who desires to offer this subject must produce evidence satisfactory to the Civil Service Commissioners of training for at least one academic year in an institution of university rank.

44. *Physical Anthropology*.—Physical Anthropology, Prehistoric Archaeology and Technology. Candidates will be expected to have such knowledge as may be acquired by laboratory and museum work, consisting mainly in the handling and study of specimens and exhibits. The subject will be treated with special, but not exclusive, reference to peoples of rude culture, including prehistoric civilization.

A candidate who desires to offer this subject must produce evidence satisfactory to the Civil Service Commissioners that he has undergone a course of training in an institution of university rank.

45. *Social Anthropology*.—Candidates will not be expected to have an extensive experience of laboratory and museum work. The subject will be treated with special, but not exclusive, reference to peoples of rude culture, including prehistoric civilization.

46. *Agriculture*.—Agricultural chemistry, agricultural botany, and agricultural zoology will be included.

A candidate who desires to offer this subject must produce evidence satisfactory to the Civil Service Commissioners that he has undergone a course of training in an approved institution.

47. *Experimental Psychology*.—A candidate who desires to offer this subject must produce evidence satisfactory to the Civil Service Commissioners that he has undergone a course of laboratory training in an institution of university rank.

48, 49. *English Literature*.—*Period 1*, from 1350 to 1700; *Period 2*, from 1660 to 1914.

Candidates should be prepared to show a first-hand knowledge of some of the works of the following authors and of their place in the history of their country.—

PERIOD 1.

Chaucer	Bacon
Malory	Milton
Spenser	Bunyan
Shakespeare	

PERIOD 2.

Dryden	Pope	Burns	Shelley
Congreve	Fielding	Scott	Keats
Defoe	Johnson	Jane Austen	Dickens
Swift	Burke	Wordsworth	Carlyle
Addison	Goldsmith	Coleridge	Tennyson

Browning.

Questions on other writers will not be excluded, but on the whole, the questions will be directed to the best-known authors and their best-known works. Candidates should know so much of the history as is necessary to understand the literature in its relation to other activities of the nation.

Questions will not be set on the history of the language before Chaucer, nor, in general, on its morphological or phonological changes since his time; the history of workmanship, style, and prosody will not be excluded.

LANGUAGES WITH THE ASSOCIATED CIVILIZATIONS.—*Subjects 50-67*.—In these the civilization subject associated with a language can be taken only by candidates who also offer themselves for examination in the language itself.

In the questions on civilization, history and literature will, as far as possible, be brought into close relation. In history, candidates will be expected to show a knowledge of the original authorities. They must also be prepared to answer questions on historical geography, and to draw sketch maps. The questions on literature will require first-hand knowledge of the authors; and the authors dealt with will be those which candidates ought to have read. Passages of literature may be set

for comment on matters of social, political, legal, or other historical importance. Questions on philology and the older forms of the languages may be set, but will not be compulsory. In the question papers on civilization, candidates will not be required to write their answers in the foreign language.

In the conversation test importance is attached to pronunciation. The study of phonetics is an important aid to correctness of pronunciation, and candidates who take modern languages will be expected to have studied phonetics in connection with the language or languages taken.

50. *Latin Language*.—Translation, and prose or verse composition. The composition paper will be so arranged that a candidate may confine himself to prose composition or to verse composition or, if he prefers, may take some prose and some verse.

51. *Roman Civilization*.—Roman History and Latin Literature. The outlines of the history and development down to 180 A. D. should be known; but the main stress will be laid on the period 133 B.C. to 117 A.D.

52. *Greek Language*.—As for Latin.

53. *Greek Civilization*.—Greek History and Literature. In history the main stress will be on the period 510 B.C. to 323 B.C.

54. *French Language*.—Translation, free composition, set composition, and conversation.

55. *French Civilization*.—French History and Literature. The outlines of the history and development prior to 1589 should be known; the period from 1589 to 1660 in somewhat more detail; but the main stress will be on the period from 1660 to the present day.

56. *German Language*.—As for French.

57. *German Civilization*.—German History and Literature. Candidates should know in outline the history of the Mediaeval Empire, of the growth of the German cities, of the Reformation in Germany, and of the Thirty Years War; but the main stress will be on the period from the accession of Frederick the Great to the present day.

58. *Spanish, Italian, Language*.—As for French.

59. *Spanish Civilization*.—Spanish History and Literature. In history the main stress will be laid on the periods from the Union of Castile and Aragon under Ferdinand and Isabella to the liberation of the Netherlands, and again from 1800 to the present day.

Italian Civilization.—Italian History and Literature. In history the main stress will be on the 15th century and the first half of the 16th century, and again on the period from 1789 to the present day. Sufficient should be known of the earlier period to understand the position of the Pope and the Emperor in Italy, the rise of the towns, and the position of Dante in history.

60. *Russian Language.*—As for French.

61. *Russian Civilization.*—Russian History and Literature. Something should be known of the history since the accession of Peter the Great, but the main stress will be laid on the period from 1800 to the present day. Only the broadest outlines of the history prior to Peter the Great will be required.

62. *Arabic Language.*—Translation, free composition, set composition, conversation. The examination will be in the modern language.

63. *Arabic Civilization.*—Arabic History and Literature. The main stress in both history and literature will be on the period from the middle of the 6th century A.D. to the middle of the 13th century A.D.

64. *Persian Language.*—Translation, free composition, set composition, conversation. The examination will be in the modern language.

65. *Persian Civilization.*—Persian History and Literature. The main stress in both history and literature will be laid on the period 1000 A.D. to 1500 A.D. Candidates will be expected to have a general knowledge of the history of Persia before 1000 A.D. and from 1500 A.D. to the present time.

The following applies only to candidates for the Indian Civil Service:—

66. *Sanskrit Language.*—Translation, prose composition, and questions on Vedic and Sanskrit grammar. Both Vedic and classical Sanskrit passages will be set for translation; composition will be required in classical Sanskrit alone.

67. *Sanskrit Civilization.*—Sanskrit literature and the history of the civilization and thought of India from the Vedic period to A.D. 1200.

CIVIL SERVICE COMMISSION,
November, 1924.

APPENDIX VI . .

LETTERS TO GOVERNMENT FOR FINANCIAL ASSISTANCE IN 1921

- (I) *From the Registrar, Calcutta University, to the Secretary to the Government of Bengal, Education Department, No. G-344, dated the 5th February, 1921.*

I am directed by the Vice-Chancellor and Syndicate to request you to place before the Hon'ble the Minister in charge of Education this application for financial assistance towards the construction of a suitable building for University purposes on what is known as the Fish Market site.

It is not necessary to recapitulate the history of the acquisition of the site, which is well-known to the Government of Bengal. The following extract from the Report of the Calcutta University Commission, Chapter LI, paragraph 62, states the views of the University concisely and accurately :

“ But the University needs, for the proper conduct of its work, not only additional teaching strength but immediate capital expenditure for the provision of teaching accommodation and equipment. The Darbhanga Building, its only centre of teaching, has to find room for the very largely attended law classes and for the post-graduate classes which are frequented by 1,500 students, besides accommodating the Library, the Law Library and the administrative offices. It is impossible to carry on the steadily expanding work under these conditions ; and we have seen several classes being carried on simultaneously in the huge echoing Senate Hall. It will be impossible to carry on without additional accommodation the new system of co-operative teaching which we have advocated ; for though college lecture rooms can be used for this co-operative work, and we hope they will be used to the maximum possible extent, it is essential that there should be abundant accommodation at headquarters. And further demands upon accommodation will be made for the improvement of the administrative system and by the work of departments of education and of physical training. The need for additional accommodation has long been felt. The Government of India found the money for the purchase of the fish market site which is ready to be used ; and as a considerable economy was effected in the purchase of the site, a sum of about 4 lakhs is in hand for building.

Before the war the cost of building planned to fill the site was estimated at 10 lakhs. We think that in order to make the fullest use of the space, the building proposed should be a five-storied one; and in view of this, and of the increased cost of building, we think that 13 or 14 lakhs ought now to be allowed; while, the furnishing of a building on the scale would probably cost a lakh. For these purposes a capital sum of about 11 lakhs will have to be provided, and without this provision the new system which we propose will be crippled from the outset."

It is stated in the above extract that a sum of about 4 lakhs is in hand for building, and that the total cost of construction and furnishing is likely to amount to 15 lakhs. On this basis it is recommended that a capital sum of about 11 lakhs should be provided. Since the date of the Report, the amount in hand in the Fish Market Fund has increased, the position now being as follows :

4 per cent. Calcutta Municipal Debentures	...	Rs.	2,35,500
6 per cent. Ten Years Bond	...	"	7,100
4 per cent. Fixed Deposit	...	"	64,200
Treasury Bills	...	"	2,40,000
			Total Rs ... 5,56,800

On account of depreciation of securities, the actual value may be approximately taken to be about $4\frac{1}{2}$ lakhs. On the other hand, on account of the rise of prices of materials and cost of labour, the cost of construction and equipment is likely to exceed Rs. 15 lakhs. Consequently, the estimate of 11 lakhs made by the Commission may be taken as substantially correct at the present time.

The University authorities have during the last eight years prepared plans for the proposed building from time to time. The general scheme may be briefly described. The building, as stated by the Commission, is intended to be a five-storied one. The first, second and third floors will be used as class rooms, seminars, lecture-hall and library for the post-graduate students, whose number, as stated by the Commission, is nearly 1,500. Since the date of the report of the Commission, new departments have been opened, such as the departments of Indian Vernaculars, Ancient Indian History, and Anthropology and Ethnology. The number of teachers and classes has consequently increased. It has been estimated that the whole of the first, second and third floors will have to be utilised for teaching purposes. The top floor is intended to be used as residential quarters for post-graduate students and teachers. It is important to bear in mind that since the introduction of the Post-Graduate system,

the whole of the higher teaching within the jurisdiction of the University (excluding Dacca and Gauhati) is centralised in Calcutta, and it is absolutely essential that adequate provision should be made for residence of students who are required to come to Calcutta for higher teaching. As regards the ground floor, there has been some difference of opinion. The suggestion has been made that the rooms abutting on College Street and Colootola Street may be profitably let out as shops, specially shops for the sale of articles constantly required by students, such as books, papers, stationery and the like. It has been maintained, on the other hand, that such a use of University buildings is not consistent with its dignity as an academic institution. This consideration is not without weight, but may have to give way, when the University is faced with financial difficulties. In any view, it is clear that the major portion of the ground floor accommodation will be required for the extension of University Offices and the University Press, both of which are now very much congested. A copy of an outline sketch of the proposed distribution of rooms on the first, second and third floors is forwarded herewith.

It is obviously premature to work out detailed plans till it is known whether any, and, if any what, funds will be available. It is apprehended that if funds are made available, there will be no difficulty in the settlement of details by a Committee on which the University and the Government will be represented. It may be stated that when the balance of the Government of India grant was made over to the University, that Government expressed a wish that the amount should be funded till sanction had been obtained from Government for its utilisation. It is requested that the Government of Bengal, if it is in a position to grant the present application, should, if necessary, after communication with the Government of India, grant sanction for the expenditure of the sum now standing to the credit of the University in the Fish Market Fund.

I am directed, finally, to add that the whole of the eleven lakhs may not be actually required during the ensuing financial year. The sum of Rs. 4½ lakhs in the Fish Market Fund together with such sum as may be allotted by the Government of Bengal for the year 1921-22 will enable the University to commence work, and the balance may be paid in the following year."

(II) *From the Registrar, Calcutta University, to the Secretary to the Government of Bengal, Education Department, No. G-345, dated the 5th February, 1921.*

I am directed by the Vice-Chancellor and Syndicate to

request you to place before the Hon'ble the Minister in Charge of Education this application for financial assistance for the development of teaching work in accordance with the recommendations of the Calcutta University Commission.

Paragraph 54 of Chapter LI of the Report of the Commission (Vol. V, pages 282-83) is in these terms:

"The post-graduate scheme described in Chapter XV is carried on at a cost of more than 5 lakhs of rupees, of which Rs. 1,25,000 is derived from lecture fees. The Government of India has contributed towards the cost, first, by founding three chairs and two readerships at an annual cost of Rs. 40,000; and, secondly, by a grant for the post-graduate classes in general of Rs. 15,000. The balance, more than half of the total, is taken from the general funds of the University, which are, in fact, derived almost wholly from the profits on examinations. Fees at the Matriculation, Intermediate and B.A. Examinations have been increased in order to meet these charges. The 138 full-time University Lecturers who provide the bulk of the instruction are paid salaries, varying in amount, which average Rs. 225 per mensem or £180 per annum. The funds do not permit these salaries to be increased, nor is any superannuation scheme provided; it is, consequently, difficult to retain the services of some of the abler teachers. It would demand an additional expenditure of about $1\frac{1}{4}$ lakhs to increase the average salary to Rs. 300, which is not excessive for this grade of work, seeing that we have suggested Rs. 200 as the average for those of the College Teachers who are not Heads of Departments."

The recommendation of the Commission has received additional strength from recent events. It has been brought to the notice of the Vice-Chancellor that appointments in the Dacca University have been offered to members of the Calcutta University staff on much higher salaries than the Calcutta University has found it hitherto possible to pay them. To take one illustration, a member of the Post-Graduate staff in Philosophy, who is in receipt of a salary of Rs. 300, has been offered an appointment in the Dacca University on a minimum salary of Rs. 500 with periodical increments. The Vice-Chancellor and Syndicate are not able to appreciate the justification for placing public funds at the disposal of the Dacca University authorities, with the inevitable result that they are enabled to take away members of the Post-Graduate staff by offer of higher salaries. If public funds are available for development of higher teaching in Bengal, the Calcutta University is manifestly entitled to a fair share thereof. I am,

accordingly, directed to request that a grant of one and a quarter lakhs be made for salaries of the Post-Graduate staff during the session 1921-22, as recommended by the Commission.

I am, further, directed to request that a capital grant of Rupees Ten Lakhs may be made for extension of Technological studies, as recommended by the Commission in Paragraph 75 of Chapter LI of their Report. The Government of Bengal are, no doubt, aware of the organisation which exists in the University College of Science and Technology for teaching in Science, Pure and Applied. The College of Science owes its existence in the main to the munificence of the late Sir Taraknath Palit and the Hon'ble Sir Rashbehary Ghose. The gift made by the former (money and land) is worth 15 lakhs of rupees: the endowment created by the latter exceeds 20 lakhs of rupees. The income of the two endowments has to be applied principally in the maintenance of eight Chairs and sixteen Research students. The Chairs are now held by scholars of the highest academic distinction :

Palit Professor of Chemistry—Sir P. C. Ray, Kt., C.I.E., Ph.D., D.Sc., F.C.S.

Palit Professor of Physics—Mr. C. V. Raman, M.A.

Ghose Professor of Applied Mathematics—Dr. S. K. Banerjee, D.Sc.

Ghose Professor of Chemistry—Dr. P. C. Mitter, M.A., Ph.D. (Berlin).

Ghose Professor of Physics—Dr. D. M. Bose, M.A., B.Sc., Ph.D. (Berlin).

Ghose Professor of Agricultural Botany—Dr. S. P. Agharkar, M.A., Ph.D. (Berlin).

Ghose Professor of Applied Physics—Dr. P. N. Ghosh, M.A., Ph.D.

Ghose Professor of Applied Chemistry—Dr. H. K. Sen, M.A., D.Sc. (London).

The balance of the income of these endowments which is left after payment of the salaries of these Professors and of scholarships to the research students, is quite inadequate for equipment of the respective Laboratories. The University has, consequently, found it necessary to devote a large portion of its current income from year to year to the construction of the Laboratory Building, and the equipment of the Laboratories,

Some idea of the sums which have been spent by the University will be gained from the following statement:—

	Rs.
Cost of erection of Palit Laboratory Building at 92, Upper Circular Road ...	3,89,427
Equipment for the Laboratory (Physical, Chemical and Biological) ...	3,34,382
TOTAL ...	<u>7,23,809</u>

Besides this, the University maintains two Chairs, one for Botany and the other for Zoology. The former is held by Dr. P. Brühl, D.Sc., who is on the grade of Rs. 800-50-1,000, and the latter, by Mr. S. Maulik, M.A.(Cantab.), who is on the grade of Rs. 600-50-800. To carry on work in each Department, the University has found it necessary to employ a number of Assistant Professors, Lecturers and Demonstrators, whose aggregate salary amounts to Rs. 3,525 per month. Notwithstanding all these arrangements, the University has found it impossible to undertake instruction in Technology and Applied Science on anything approaching an adequate scale. This is a matter for deep regret, specially in view of the fact that the last gift of the Hon'ble Sir Rashbehary Ghose was made expressly for development of technological teaching, and the Chair of Botany first created by him was expressly intended for improvement of agricultural instruction. The authorities of the Science College have had ready for some time past a carefully prepared programme of work for the development of technological instruction, and its outline may be set forth here for information of Government:

(A) Applied Chemistry	Rs. 4,65,000
(B) Applied Physics	,, 2,10,000
(C) Applied Botany (including Agriculture) ..	,, 2,00,000
(D) Library of the Science College	,, 1,25,000
TOTAL Rs.	<u>10,00,000</u>

In Applied Chemistry (A), the most essential need is an adequate workshop; this, it is estimated, will cost Rs. 2,25,000, namely, Rs. 75,000 for building and Rs. 1,50,000 for appliances. It is proposed to undertake instruction in Chemistry of Leather and Chemistry of Dyes. Besides this, it is proposed to have arrangements for practical instruction in the manufacture of some of the following:

Sulphuric Acid, Glass, Paper and Pulp, Lime, Mortar and Cement, Sugar, Soap, Candle and Glycerine, Paints and

Pigments, Oils. Apart from these, factory appliances, like disintegrators, centrifugals, filter-presses, hydraulic presses, vacuum pans, etc., would be indispensable. These would require a grant of 2 lakhs of rupees, to enable the College authorities to make a good beginning. Finally, at least Rs. 40,000 would be needed for even a small laboratory for technical analysis. This brings up the figure for the Department of Chemistry to Rs. 4,65,000.

In the Department of Applied Physics (B), it is intended to undertake work in Applied Electricity, in the testing and standardisation of instruments, in Applied Optics (including Illumination Engineering), in Pyrometry and in Applied Thermo-Dynamics (including a study of the efficiency of different types of Heat Engines). An estimate of Rs. 2,10,000 is manifestly a very modest demand for so important a work.

In the Department of Botany (C), it is intended to undertake instruction in Agriculture. The most urgent need is an Experimental Farm, which need not be situated in the immediate neighbourhood of Calcutta. A site in some place easily accessible by rail will meet the needs of our students. The acquisition of land and the construction and equipment of a farm will cost at least a lakh of rupees. Another one lakh will enable the University Professors to complete the arrangements which have already been begun in the Palit House at 35, Balligunj Circular Road.

The remaining item (D) is the Library of the University College of Science. For purposes of instruction on the most modern lines in such subjects as Chemistry, Physics and Botany, it is absolutely essential to acquire the chief journals and standard works of reference. A sum of Rupees One Lakh and Twenty-five Thousand will enable the University to procure not all, but many, of the most pressing requisites.

It is obvious that a recurring grant would be needed for the purpose of carrying out efficiently the work of technological and agricultural instruction from year to year. The Vice-Chancellor and Syndicate do not, however, press for a recurring grant during the ensuing session, and they will be content to utilise the capital grant which may be placed at their disposal with the assistance of their present staff.

APPENDIX VII

REQUIREMENTS OF THE BOTANY DEPARTMENT

To

THE SECRETARY,

POST-GRADUATE REORGANISATION COMMITTEE,

DARBHANGA BUILDINGS, CALCUTTA.

SIR,

I have the honour to place before you the following Memorandum enumerating the needs of the Botany Department of the University which please place before the Committee:

I. *Staff* :

In order that Post-Graduate teaching in Botany be efficiently carried out the following staff is needed. Three whole-time officers are required as against two at present. I would assign the following duties to each of them. One of the whole-time officers—Dr. Brühl or his successor—shall devote himself mainly to Plant-physiology and Anatomy. This becomes necessary not only on account of the intrinsic importance of this branch of Botany but also on account of the fact, that none of the other three members of the present Post-Graduate staff (the two members attached to the Presidency College and myself) have specialised in this branch of Botany or conducted researches in it. The significance of this will be realised when a reference is made to the reply of the Board of Higher Studies in Botany to Question 5 of the Questionnaire, which lays down that only persons who by their previous work have shown themselves capable of doing and guiding research work should be appointed to the Post-Graduate staff.

The third whole-time officer should devote himself entirely to the study of General Mycology, Algology and Plant Diseases which are of such great importance to the economic life of Bengal. In this connection it may be useful to point out that there is no one in Bengal who is at present working in this branch.

I myself will continue to deal with the Systematic Botany of Phanerogams, Plant-Geography, Economic Botany and Genetics. The two University Lecturers in Botany attached to the Presidency College have a great deal of under-graduate work to do besides their share of Post-Graduate work. Under these

circumstances I do not consider it fair to expect them to devote more time than they do at present to post-graduate work without sacrificing the interests of the Undergraduate students. The significance of this fact will be clear if we bear in mind the poor quality of students we are compelled to admit under the present circumstances to the post-graduate classes.

Apart from the addition of a third whole-time officer to the teaching staff as mentioned above, we require for the efficient conduct of the classes, at least two and preferably three demonstrators on a salary of Rs. 150-5-200 p. m. The present system of the Professors being their own demonstrators cannot be continued for any length of time. One of the demonstrators shall assist in Physiological and Anatomical work. The other who should preferably be a Systematist shall assist in Systematic Botany and be in charge of the Herbarium attached to the department which has more than 20,000 Sheets in it. I might mention that there is some danger of the specimens being lost by the attack of insects and other pests, if they are not properly looked after. The 3rd demonstrator might assist in Mycology, Algology, and Plant-diseases.

There is also the necessity of a clerk and librarian for the department. At present the librarian's work is being done by my personal assistant, which means that I am rarely able to get any assistance from him in my research work. Owing to the want of a clerk I carry on all my correspondence, only occasionally getting casual outside assistance on payment. These practices cannot be continued indefinitely without seriously interfering with my legitimate work and I propose that a clerk and librarian be provided on a salary of Rs. 50-2-75 p. m.

II. *Equipment* :

Our needs as regards equipment can be divided into the following categories : (a) additional accommodation, (b) Laboratory, (c) Library and (d) Garden. Besides these which are strictly necessary for the work of post-graduate and Research Students, are my own needs for carrying on research in Applied Botany, for which purpose the Chair that I hold was founded. I intend summarising our requirements under each of these heads.

(a) *Additional Accommodation.*

The accommodation that we have at present, is hardly sufficient for our needs. We have no place for a research laboratory for the use of the research students (we have at present five of these), no place for a Botanical Museum, no reading room and

no students' common room. All these will necessitate in the near future additions to the existing premises or the erection of new ones. Although I have no plans ready at present, these could be got easily when required; for the present I only wish to point to a necessity which will soon have to be faced.

(b) *Laboratory.*

Our urgent requirements in this respect are for physiological apparatus. The equipment that we have at present is sufficient for experiments of the B.Sc. standard and there is very little more. It would be necessary to provide an initial grant of Rs. 10,000 (ten thousand rupees) for the purpose and a recurring grant of Rs. 2,000 per annum should be earmarked for it.

The present equipment grant of Rs. 3,500 per annum has proved to be insufficient and I desire that it should be raised to Rs. 5,000 (five thousand rupees) per annum at least.

(c) *Library.*

Although our library is a fair one there are many sets of periodicals which are not available in Calcutta libraries and which it is desirable to add. We have also to obtain several costly works of reference for which no provision can be made from the existing library grant. Our library grant which used to be Rs. 1,000 per annum has this year been reduced to Rs. 850. This has already necessitated the holding-up of several bills on account of books ordered before the reduction was known.

I therefore propose that our library grant be raised to Rs. 2,500 (two thousand five hundred rupees) per annum out of which Rs. 1,000 should be for current periodical and Rs. 1,500 for completing sets of Journals, purchase of works of reference, obtaining new text-books, charts, and for binding and replacement of old books.

(d) *Garden.*

That a Botanical Garden is necessary for providing the necessary material for demonstration and practical work may be taken to be axiomatic. The compound of 35 Ballyganj Circular Road is sufficiently large for the establishment of such a garden and we have a staff of Malis to look after it. We are, however, much handicapped in our work by the want of a properly trained overseer who shall be responsible for its supervision. The members of the teaching staff are usually absent during the vacations which often means the loss of valuable specimens owing to want of proper supervision during the

period, I recommend the appointment of a trained Garden-overseer to be in charge of this work. I think it would be possible to obtain a suitable person for the purpose on a salary of Rs. 60-2-80 per mensem.

The provision of suitable plant-houses for the cultivation of delicate and biologically interesting plants is a necessity. This would be an expenditure to be incurred once only and the total amount needed for the provision of two such houses of moderate dimensions will be Rs. 2,500. The initial expenditure on manuring and stocking the garden will be about Rs. 2,000, and a recurring grant of Rs. 1,000 per annum will have to be provided for the same purpose.

III. *Applied Botany Department:*

Lastly I wish to allude to my own personal needs. The greatest of my needs is the provision of a suitable plot of land for plant-breeding experiments. Such a one is available close to 35 Ballyganj Circular Road. It measures an area of nearly 5 Bighas and forms part of the late Sir T. Palit's property held in Trust by the University.

The difficulty in utilizing the plot is that it has three fairly large Jhils or Dobas on it which have to be filled in and the level of the plot raised to that of the road on which it lies before it can be used for experimental purposes. Estimates were obtained in 1922 and 1923 for the cost of this and other measures necessary such as draining the plot and enclosing it by a fence or wall. These estimates show that a sum of approximately Rs. 17,000 would be necessary for the purpose. Some extra money will have to be provided for the provision of Cooly lines, a farm office and quarters for the Superintendent, so that a sum of Rs. 20,000 (twenty thousand rupees) at least will have to be provided. On the other hand it will provide ample facilities for conducting research work in Plant-breeding very close to the laboratory at a very moderate expenditure of money.

To look to the work of the farm under my direct supervision a superintendent will have to be appointed. He should be a trained Agricultural graduate and I propose a salary of Rs. 150-10-250 p.m. for him.

In addition a sum of Rs. 1,000 (one thousand) will have to be provided for buying the necessary farm implements and a sum of Rs. 1,000 per annum will have to be provided for cooly wages.

IV. The proposals made above may be summarised as under :

I. *Staff* (additional to the existing 2 Professors).

- 1 Lecturer, @ 250-25-450 p.m.
- 3 Demonstrators, @ 150-5-200 p.m.
- 1 Clerk and Librarian, @ 50-2-75 p.m.
- 1 Garden overseer, @ 60-2-80 p.m.
- 1 Farm superintendent, @ 150-10-250 p.m.

II. *Equipment.*

		Non-recurring Rs.	Recurring Rs.
(a) Laboratory	{ Physiology General	10,000 ...	2,000 5,000 (instead of Rs. 3,500 at present)
(b) Library	...	...	{ Books, reference 1,500 works, etc. Periodicals 1,000
(c) Garden	{ Plant houses Manures	2,500 2,000	1,000 plants, etc.
(d) Farm	{ Levelling, etc. Implements	20,000 1,000	1,000 cooly wages.
TOTAL		35,500	11,500

I hope the Committee will carefully consider the above proposals and be able to adopt them. I will be able to give any additional information if necessary.

I have the honour, to be

SIR,

Your most obedient servant,

S. P. AGHARKAR,

Ghose Professor of Botany.

APPENDIX VIII

PRESIDENCY COLLEGE MEMORANDA.

Answers to Questionnaire regarding Economics.

The main subjects taught by the Board are—Economics and Political Philosophy. The following are the sub-divisions of these two subjects :—

Economics.	Political Philosophy.
(a) General Principles.	(a) General Principles.
(b) Economic History.	(b) Public Administration.
(c) International Trade.	(c) History of Political Thought.
(d) Banking and Currency.	(d) Comparative Politics.
(e) Statistics.	(e) International Law.
(f) Mathematical Economics.	(f) Sociology.

2. Both the two subjects—Economics and Political Philosophy are of equal importance. Each of these subjects has more sub-divisions than those that are taught. These sub-divisions are all, more or less, of equal importance and are taught in all good Universities.

International Law and Comparative Politics are common to Political Philosophy and History. Both these subjects are two-paper subjects in Political Philosophy; but in History, International Law is a one-paper subject and Comparative Politics is a two-paper subject. History students may attend the lectures on International Law under the Economics Board; there may be common lectures on Comparative Politics for History and Politic students.

3. No such differentiation is possible.

4. Before we can fix the number of teachers we should fix the number of lectures necessary for each sub-division of a subject and the minimum number of lectures that should be delivered by a lecturer.

Subject.	No. of lectures required per year (according to syllabuses).
General (Principles of Economics).	... 75
Economic History	... 75
International Trade	... 50
Banking and Currency	... 50
Statistics	... 50
Math. Economics	... 50
General Principles of Poli- tics.	... 75
Public Administration.	... 100
History of Political Thought	... 75
Comparative Politics	... 75
International Law	... 75
Sociology	... 75
TOTAL	<hr style="width: 100px; margin-left: auto; margin-right: 0;"/> 825 <hr style="width: 100px; margin-left: auto; margin-right: 0;"/>

Assuming twenty-five full working weeks in the year and six hours (leaving sufficient time for study and research) as the minimum number of lectures alone per week per lecturer we find that, theoretically speaking, six whole-time men or four whole-time and four part-time men are necessary for doing the work. We have, however, to take into consideration the fact that some of the subjects, *e.g.*, Statistics and Mathematical Economics are very specialised and require separate lecturers. Practically speaking, therefore, *eight whole-time* men or more preferably six whole-time men and four part-time are necessary for the efficient working of this Department: and these can very well also cope with the 19 or 20 hours per week which may also be required for tutorial and seminar work. The present staff contains ten whole-time men (including the Minto Professor) and six part-time men. This superfluity of men is, however, now employed in M. Com. and B. Com. teaching work. Taking the Department of Economics and Politics singly, the staff certainly appears to be more than what is necessary; but taking it along with the Commerce Department, it fulfils the requirements of both of them. For some years past the posts vacated by the departure of men to other Universities have not been filled up. This precedent might be followed in the case of the vacancy created by Mr. S. C. Roy's appointment elsewhere.

5. These teachers should be recruited from the ranks of First Class M.A.'s with a teaching experience of at least two years.

6. Yes. We should have the following gradation of appointments :

Professors	...	...	Rs. 600-50-1,000
Lecturers	...	...	„ 250-25-600
with efficiency bar at	...	...	„ 400

7. So far as we know our Board has not strictly followed the provisions of Sec. 35, Chapter XI of the Regulations, for the Board has never assigned students of the Post-Graduate Class to particular members of the staff as tutors. The spirit of the provisions has, however, been to some extent followed in the past for the lecturers meet the students now and then during the hour set apart for "tutorials" or at other times and advise them with regard to the lectures which they should attend and to their courses of reading, and assist them in any difficulties that they may encounter in their studies. We think the existing staff is sufficient to carry out such provisions.

8. So far as this College is concerned the maximum of co-operation has been obtained by the Board, for all three members of our staff take a prominent part in Post-Graduate instruction. But it cannot be said that the maximum of co-operation with the staff of other colleges affiliated to the University has been obtained. We believe that the staff of the S. C. College and the C. M. S. College which are affiliated up to the B.A. Honours standard in Economics, may be invited to co-operate.

8 (a). Some heart-burning may be felt by part-time lecturers if the scale proposed in para. 6 be introduced for whole-time men : but this may be obviated if the part-time also are paid on a graded scale, *e.g.*, Rs. 100-25-250. They should, however, be placed in complete charge of one whole sub-division of a subject.

9. So far as is known only four (including the Minto Professor) out of the ten whole-time teachers have published original work two of the members of the Presidency College staff have also published original work. It is not known if anybody else is engaged in carrying out original work. So far as library facilities are concerned, there are ample facilities in our subject, though the want of room is felt to be serious hindrance to quiet study at the University. The number of lectures should be reduced to a minimum, so that both teachers and students may have sufficient time for study and research. That is the only reason why the six hours per week for lectures alone has been accepted. Each subject should have a special room for study and research and seminar work.

10. We do not think that the period of Post-Graduate studies is exactly suited for research work. It is for the lecturers

Maximum number of Lectures necessary.

		5th-year	6th-year.
A Group & B Group	1st paper	2	2
	2nd "	1	1
	3rd "	2	1
	4th "	1	2
A Group	5th "	1	1
	6th "	2	2
	7th "	2	2
B Group	5th "	1	1
	6th "	1 } x	1 } x
	7th "	1 }	1 }
		A Group 11	11
		B " 9	9
Total No. of lectures		$(11 + 3 \times x) = 14$	14

Seminar Work.

About 250 students (<i>i.e.</i> , serious students <i>vide</i> Appendix A)	250 Essays a fortnight, <i>i.e.</i> , 250 hours in the month or 32 hours a week.
	Oral work and tutorial guidance (10 boys in each group for one hour a week).
	25 hours a week. <i>Total</i>
	87 hours a week.
Add hours of lectures	28

Grand total of hours to be taught 115 hours a week.

Suggested distribution of work among the 15 teachers.

Group A.	5th-year.	6th-year.
Paper I	1	0
A. S. Period	0	2
M. E. Period	} Z followed by } X (6 months each) }	
Paper II	1	0
	0	1
Paper III.	1	1
	1	0

Paper IV	{ G	1	0
	{ H	0	2
Paper V	{ X (Chaucer's text)	1	0
	{ Y (Hist. Eng. Gram.)	0	1
Paper VI	{ I	1	1
	{ K	1	1
Paper VII	{ L	1	1
	{ M	1	1
<i>Group B.</i>			
Paper V	Z (Anglo Saxon texts)	1	1
Paper VI	X (M. E. Texts)	1	1
Paper VII	Y	1	1
		14	14

5. Lecturers—1st Class M.A.'s—with at least 2 years' experience of under-graduate teaching in a College affiliated to the Honours standard.

6. Yes.

(1) Professors—Rs. 600-50-1,000.

(2) Readers (only if any lecturer shows special merit and has not already been promoted to a Professorship)
Rs. 400-25-600.

Lecturers Rs. 250-20-400.

Part-time Lecturers ,, 100.

Terms and conditions for all whole-time men should be the same, namely appointment for 5 or 7 years with prospect of reappointment but terminable on either side with due notice. All whole-time Lecturers should be compelled to subscribe to the Provident Fund.

7. It should be applied strictly and to all whole-time teachers up to a total maximum of 10 hours a week (lecturing and tutorial work combined). Part-time Lecturers attached to College should take charge of the tutorial work of their own boys only under Section 34 of Chapter XI.

8. In agreement with the principles on which the Report of the Committee appointed by Government in 1916-17 was based, whole-time Lecturers should be appointed by the University only *after* the existing resources of the constituent Colleges in Calcutta have been utilised to the full; but no College Professor should be invited to take part in the ordinary routine work of the Post-Graduate Department unless he is prepared to take charge of a substantial part of a paper, as too minute a

sub-division of work tends to weaken the sense of responsibility. Eminent College Professors whose College work is too heavy to allow them to be appointed by the University for part-time work may be invited to deliver special courses of lectures in subjects of which they have made a special study.

8(a). They should be appointed as Lecturers, but should any one show special merit, he might be appointed a Reader or Professor (though he need not necessarily draw the full pay of the post).

9. The question can hardly be said to arise in connexion with the subject of English Literature.

10. Yes. There is already one such stipend (the Upendra-nath Mitra research scholar).

11. The teachers should contribute the same amount as the University contribution, *viz.* (8 $\frac{1}{3}$ %).

12. The Post-Graduate Council is at present a most unwieldy Body. No Council to be effective should exceed 50 or 60, and the Council in future should be limited to Professors, Readers and Lecturers of 10 years' standing. The Board of Higher Studies may exercise its present functions, but it should be divested of its power of appointing teachers. For every appointment to be made, it should recommend a certain number of men to the Executive Committee. The Executive Committee after considering in particular the financial aspects of the case, should make its recommendations to the Appointment Board, which in turn should report its final selection of candidate to the Senate. Financial matters should go from the various Boards of Studies to the Executive Committee and then direct to the Senate. Academic matters should go from the Board to the Executive Committee (as a forwarding medium only) and then through the Post-Graduate Council to the Senate. In this respect real authority will be vested in the Council which will become a truly Academic Council.

CALCUTTA.

The 19th December, 1924.

H. E. STAPLETON,

Principal, Presidency College.

(Signed on behalf of the English staff of Presidency College.)

NOTES ON THE TEACHING OF PALI IN THE POST-GRADUATE
DEPARTMENT OF CALCUTTA UNIVERSITY.

1. There are four groups in Pali.
2. All the subdivisions are of certainly not of equal importance.

The Board may very well drop some of these subjects. Considering the scope and extent of Pali literature the division into four groups appears superfluous. With the exception of some Ceylonese chronicles the whole literature is essentially religious. The total extent of the literature including commentaries and compilations will be about a hundred volumes. Portions of it are recommended for the Matriculation, I.A. and B.A. Examinations. The rest of the literature can be conveniently reduced to one group instead of four as at present. Moreover the subject is popular with only a very small section of the population of Bengal, *viz.*, the Buddhists of Chittagong. With the rest it is only of academic interest. The number of students in the subject is very small. Under these circumstances four groups and a large staff of teachers is absolutely unnecessary.

As in Sanskrit the M.A. course is divided into 8 papers of which four are common to all the groups. Each of the three groups A, B and C has three special papers, Paper VIII being the same in these three Groups, while Group D has four special papers.

The four general papers as they stand require some modifications.

Paper 2 (c)—So-sor-thar-pa by Mahamahopadhyaya Dr. Satishandra Vidyabhusan should be omitted. It is a Tibetan work and has very little to do with Pali.

Paper 3 prescribes 8 works on Pali and Prakrit Grammar and Philology but no work on Sanskrit Grammar. It is essentially necessary that for the M.A. Examination students should make a comparative study of Sanskrit and Pali; and a general knowledge of Sanskrit Grammar and Sanskrit Language should be insisted upon. Instead of Morris's Notes and Queries on Pali words: (1) Satishandra Vidyabhusan—Grimm's Law, (2) Gene's Comparative Philology, (3) Whitney's Sanskrit Grammar may be recommended.

Paper 4. Rhys Davids—Buddhist India, should be omitted, as it is recommended for the B.A. Honours in Pali. The number of books recommended appears to be too many and their reading involves unnecessary repetition. Some of the

works may be safely omitted. On the other hand, a knowledge of the History and Geography of places connected with the History of Buddhism may be required of students.

Group A, Paper V prescribes—

- (a) Some selected Jataka stories.
- (b) All the Jatakas referred to in the Bharhut sculpture so far as they have been identified.
- (c) Peta Vatthu, pp. 1-43.

(d) Introduction to Rhys Davids' Buddhist Birth Stories. This paper appears to be too easy for the M.A. course. The Pali students of this University begin to read the Jataka stories from the Matriculation. They study the history of the Jataka stories in the B.A. Honours: so portions marked (a), (b) and (d) are unnecessary. The Peta Vatthu again is an easy work. Students preparing for the M.A. degree are expected to know the matter prescribed in the paper, so this paper may be omitted.

Group A Paper VI. The following six works have been recommended for this paper:—

1. Theri-gatha with Paramattha dipani (first half).
2. Thera-gatha (second half).
3. Sutta-nipata edited Fausbol, pp. 1-99.
4. Visuddhimagga.
5. Puggala Pannatti.
6. Milinda panho (Mendakapanho only).

A combination of the above six works in one paper is hardly desirable. The first three works belong to the Khuddaka Nikaya of the Sutta Pitaka and are in poetry. Nos. 4 and 6 strictly speaking are compilations from the sacred literature and No. 5 belongs to the Abhidhamma Pitaka. The first three works are very important in the History of Indian Literature and should be studied in their entirety by all students preparing for the M.A. degree in Pali, with such portions of the commentary as will be necessary for a knowledge of the History of the Theras and Theris and for the elucidation of the text. Portions of the Milindapanho are prescribed for the B.A. pass course and prescribing portions of the same work for the M.A. is unnecessary. The remaining works Nos. 4 and 5 should also be omitted.

Group A, Paper VII and Group C, Papers VI and VII relate to Indian Inscriptions. Of these Group C, Paper VII, prescribes the following:—

- (a) Inscriptions of the Kshaharata and Satavaham dynasties.
- (b) Inscriptions of the Imperial Guptas.

Neither of these bodies of inscriptions has any special bearing on the History of Buddhism in India. So this paper may be safely omitted.

Group A, Paper VII and Group C, Paper VI deal with very nearly the same matter and may be easily combined into *one*.

Group V has three special papers, all of which relate to Abhidhamma. These may be combined into one paper instead of constituting a group as has been done in the case of Vinaya and Suttanta. Much of the matter contained in the works recommended is the same. If any graduate wants to specialize in Abhidhamma, he may appear in the Title Examination in that subject which has been instituted by Government.

Group C, Paper V, prescribes some Ceylonese chronicles which are too easy for the M.A. course. The Matriculation students are required to read one such chronicle and portions of one recommended for the M.A. course form part of the Honours course in the B.A. The Chronicles generally are very easy works and M.A. students are expected to read them for themselves.

Paper VIII, Groups A, B and C prescribes Ancient Geography of India. Instead of this a knowledge of the History and Geography of the places connected with the History of Buddhism should be prescribed and this paper may be made a part of general paper IV.

Group D has three papers relating to Mahayana literature and Philosophy and one paper for Sanskrit Grammar. It has been pointed out that knowledge of Sanskrit Grammar is essential to all students of Pali and should be studied along with Pali Grammar as part of paper III. So it need not be kept as a part of Group D alone. The remaining three papers should be combined into one and form a part of the M.A. course in Pali as without a knowledge of Mahayana literature and Philosophy, knowledge of Buddhism becomes entirely one-sided.

The whole M.A. course in Pali may be thus reduced to *one* group only.

Paper I.—Select portions of Digha, Majjhima, Sanyutta and Anguttara Nikayas.

Paper II.—Select portions of the Khuddaka-nikaya, viz., Thera and Theri gatha and Sutta-nipata with portions of commentaries on these works.

Paper III.—Select portions of the Vinaya.

Paper IV.—Select portions of Abhidhamma.

Paper V.—Pali Grammar, General knowledge of Sanskrit Grammar and general principles of Comparative Philology as applied to the Indo-Aryan family of languages.

Paper VI.—History of Buddhism together with a knowledge of the History and Geography of the places connected with the History of Buddhism.

Paper VII.—Selected Mahayanic texts as would lead to a knowledge of the essential features of the Mahayana doctrine.

Paper VIII.—Indian Inscriptions from the earliest times down to the 1st Century A.D.

3. Pali literature has only an academic interest for the general body of students in Bengal. It is popular only with the small Buddhist community of Chittagong.

4.	Paper I ...	... 2	Lectures per week.
	” II ...	... 2	”
	” III ...	... 2	”
	” IV ...	... 3	”
	Paper V	2	lectures per week.
	” VI	2	”
	” VII	2	”

separate lectures for paper VIII will not be necessary, as it can be taken up along with the same subject in the Sanskrit course.

Thus the number of lectures that will be necessary for the 5th and 6th-year Classes will be 30 only. As the number of candidates is very limited, the lecture work and the necessary tutorial work may be done by 3 whole-time men only, instead of 7 men as at present.

As Pali is taught in two Colleges only in Calcutta and the staff is very small, little or no assistance from the Colleges can be expected.

5. Distinguished specialists with considerable experience in teaching should be appointed as Post-Graduate teachers.

6. No, there seems little need for different grades of appointments. The salary for whole-time teachers may be Rs. 300-25-500.

NILMANI CHAKRAVARTY,
Senior Professor of Sanskrit and Pali,
Presidency College.

28th December, 1924.

No. 9.

Dated the 3rd January, 1925.

Forwarded to the Secretary, Post-Graduate Reorganisation Committee for information in continuation of my No. 8 of the 3rd January, 1924, and favour of communication to Members of the Committee.

H. E. STAPLETON,
Offg. Principal, Presidency College.

Answer to Questionnaire regarding Arabic and Persian.

1. Arabic— (i) Literature.

(ii) Tafsir (Commentaries of Quran), and Hadis (Traditions of the Prophet).

(iii) Philosophy and History.

(iv) Grammar and Rhetoric.

Persian— (i) Poetry, Rhetoric and Prosody.

(ii) Prose and Muhammadan History.

(iii) Arabic Prose Text.

(iv) Philology and History of Persian Literature.

2. Yes.

3. No.

4. The number of whole-time teachers required by the University can only be finally decided when the amount of co-operation from the various Calcutta Colleges is known. Roughly speaking the minimum staff may be calculated as *three whole-time teachers and three part-time teachers.*

5. (i) Either Higher Madrasah qualifications (1st Division) with sufficient knowledge of English and teaching experience.

(ii) Or, 1st Class M.A.'s in Arabic or Persian with sufficient teaching experience.

6. Yes.

(i) 1 Professor on Rs. 600-50-1,000.

(ii) Lecturers on Rs. 250-20-400.

(iii) Part-time teachers on Rs. 100.

7. So far as we are aware, no tutorial work is done in the Post-Graduate Arabic and Persian Classes. The rule should be applied strictly to all whole-time teachers who should teach at least a total of 10 hours a week (lecture and tutorial work combined). Part-time teachers attached to Colleges should take charge of the tutorial work of their own College students only under Section 35 of Chapter XI.

8. In their Report of 1916 the Committee appointed to consider arrangements for Post-Graduate teaching in the University of Calcutta remarked "An intimate association and co-operation between the College and the University staffs is imperative in the interest of all concerned and of the development of higher studies"—*vide* para. 25 (a) of Appendix 21 of the Report of the Government Grant Committee appointed by the Senate in 1922. The teaching staff of Arabic and Persian of the Presidency and other Calcutta Colleges have, we believe, at present no share in the Post-Graduate teaching of Calcutta University. The co-operation may be achieved by appointing them part-time teachers and offering them charge of a paper or a substantial part of it.

8. (a) Part-time teachers should ordinarily be appointed as lecturers, but a specialist, who can spare sufficient time from his college work to take charge of a whole paper in the University, might be appointed Honorary Professor or 'Reader.'

9. This will presumably be dealt with by the Arabic and Persian Board. (It may be noted that of the three existing teachers of the Presidency College, two have already published, and are now engaged in carrying out original work.)

10. Yes; the establishment of two research scholarships—for students who have passed the M.A. is desirable—one for Arabic and one for Persian.

11. This is a matter for the Board to decide. Presumably whole-time teachers should also contribute $8\frac{1}{2}$ per cent. of their salaries.

12. The present constitution of the Board is unsatisfactory for the reason stated in para. 8. Until the College staffs are allowed to co-operate fully as unanimously recommended by the Government Committee of 1916, the Board is not likely to be able to fulfil its proper functions.

H. E. STAPLETON,
Offg. Principal.

19th December, 1924.

(Signed on behalf of the Arabic and Persian Staff of the Presidency College.)

Answer to Questionnaire regarding Arabic and Persian.

1. The subjects taught by our Board are (A) Arabic and (B) Persian. The subdivisions of the subjects are as follows :—

(A)

ARABIC.

- (i) Literature (Texts).
- (ii) Tafsir (Exegesis and Interpretation of the Quran).
- (iii) Hadis (Sayings and Traditions of the Prophet).
- (iv) Philosophy.
- (v) History of Islam.
- (vi) History of Arabic Literature.
- (vii) Grammar.
- (viii) Rhetoric and Prosody.

(B)

PERSIAN.

- (i) Literature.
 - (a) Prose Text.
 - (b) Poetry Texts.
- (ii) Arabic (Text and Grammar).
- (iii) Philology of the Persian Language.
- (iv) Rhetoric and Prosody.
- (v) History of Islam.
- (vi) History of Persian Language and Literature.

2. Yes.

3. No.

4. At least eight whole-time teachers, 4 for Arabic and 4 for Persian.

5. Maulavis of established reputation or distinguished graduates having considerable teaching experience.

6. Yes.

(i) Professor on Rs. 600-50-1,000.

(ii) Lecturers on Rs. 250-25-500-50-800.

(iii) Remuneration of part-time teachers should depend upon the type of persons available.

7. Some tutorial work is done at present. The present staff is not sufficient to carry out the provisions of Sec. 35, Chapter XI of the Regulations.

8. The Board considered from time to time the claims of persons working in different colleges, but could not avail itself of the services of any such professors as they were, in the opinion of the Board not competent to undertake Post-Graduate work. What the Board feels in this connection is that the principle of co-operation, particularly in such special subjects as Arabic and Persian, cannot be given effect to with success unless the colleges maintain competent teachers on the staff who could do Post-Graduate work.

(a) We anticipate difficulties in connection with part-time lecturers. Between 11 A.M. and 4-30 P.M. part-time lecturers are likely to be employed in the work of their respective colleges. Most of the students attend Law Classes after 4-30 P.M. It would be extremely difficult to prepare a time table to suit the convenience of students and of part-time lecturers from various colleges.

9. All the members. No facilities are given.

(a) Increase in the number of staff which will afford some relief to the overworked teachers and ensure leisure for research.

(b) Adequate provision for the purchase of books.

10. Yes. At least one for Arabic and one for Persian of Rs. 25 each for Post-Graduate students, and one in Arabic one in Persian of Rs. 50 each for those who have already taken their M.A. Degree.

11. No. Contribution by teachers $8\frac{1}{2}$ per cent. of their salaries and by the University $12\frac{1}{2}$ per cent.

12. Not in a position to answer.

Answer to Questionnaire, Department of Philosophy.

1. The Philosophy Board teaches altogether 7 subjects:—
 - (i) History of Philosophy, Ancient, Medieval and Modern—2 papers.
 - (ii) Outlines of Indian Philosophy—1 paper.
 - (iii) Special branches of Indian Philosophy—Samkhya and Yoga, Naya Vaisesika, Vedanta (Sankara and Ramanuja Systems) (original and translation).
 - (iv) Psychology.
 - (v) Ethics and Sociology.
 - (vi) Theology.
 - (vii) Logic.

Subjects *iii-vii* are optional with two papers each; only two can be taken out of these five.

2. The subjects are all important, and so none of them can be dropped. If a question not included in the questionnaire can be raised, it may be considered whether it is not desirable to increase the number of subjects under (ii) by the inclusion of Buddhist and Jain Philosophy.

In view of the fact that there are already arrangements for teaching Pali, the study of Buddhist and Jain Philosophy may be appropriately undertaken in the Calcutta University. As regards the teaching of subjects of an allied nature, more systematic co-operation is desirable in respect of Indian Philosophy. At present only one member of the Sanskrit Board is drafted to teach in the Philosophy department. This number may be increased, either from the Sanskrit Board, or better still, by enlisting greater assistance from the Colleges.

3. The question does not arise.

4. If the proposal made in Para. 2 would be accepted, one teacher to take charge of Buddhist Philosophy and one to take charge of Jain Philosophy would be needed in addition to the existing staff. Further co-operation from the Sanskrit and Pali Boards would also be required.

5. Lecturer—First Class M.A.'s with at least two-years' experience of undergraduate teaching in a College affiliated to the Honours standard or two-years' experience as assistant to a University Professor with some published original work to his credit.

6. Yes.

One Professor (in addition to King George Professor)
Rs. 600-50-1,000.

Lecturers—Rs. 250-20-400.

Part-time Lecturers—Rs. 50-100 according to qualification, seniority and amount of lecture-work.

The number of whole-time lecturers can only be decided after the question of maximum co-operation from Colleges has been disposed of.

7. The existing staff of the Philosophy Board is however sufficient to carry out the provisions of Sec. 35.

8. At present the Board consists of 16 members, including the King George Professor; and a member who belongs to both the Sanskrit and Philosophy Boards and two others who belong to the Science College (Experimental Psychology). The co-operation from the Colleges comes to 5 members who put in

between themselves 16 hours out of the aggregate lecture periods of 63 hours. The number of whole-time lecturers is thus seven including a gentleman who does only one hour's lecture work in the week.

The number of lectures delivered by the remaining 6 members of the whole-time staff varies from 3 to 7 hours per week. This will be substantially increased when tutorial work is placed on a satisfactory basis.

Tutorial and Seminar work.

About 50 students—50 Essays per month in three compulsory subjects, 30 essays in Theology and Ethics, 20 in each of the other subjects (1 essay per hour). The number of tutorial hours in a subject will thus vary from 20 to 50 per month according to subject.

If the tutorial work is mainly to devolve upon the whole-time officers of the University the total amount of work of each of these gentlemen will vary from 7 to 12 hours a week. In History of Philosophy for example the only whole-time men may have to do at least 30 out of 50 hours per month. In Logic, the bulk of tutorial work will fall on 2 members, *i.e.*, 8 hours a month or 2 hours a week for each member.

The number of students has ranged between 30 and 50 during the last four years but the range of selection of subjects by students being rather wide, the staff cannot be reduced much below its present strength.

The number of lecture-hours for any student varies at present from 16 to 18 hours a week in the 5th-year and from 18 to 23 hours in the 6th-year according to the combination he has taken up.

This amount of 3 or 4 hours lectures per diem is impossibly large and is a good example of the tendency in the Post-Graduate Department to permit an excessive amount of lecturing. The students are tired out by attendance at so many lectures and they are given little or no chance of working for themselves. This is a large question which is intimately bound up with the question of the fitness of the M.A. students for their course: but it is certainly desirable to insist on a higher standard of knowledge to begin with, so as to enable fewer lectures to be given, the students being left, as in other Universities, to do the greater part of their work by private reading.

The maximum co-operation from colleges has not been secured. Although the number of whole-timers cannot be said

to be unduly large, *there is still scope for increasing association of the members of the different colleges.* The system of University Extension Lectureships may be instituted on a larger scale.

9. Dr. Guha, Dr. Haldar, Prof. Radhakrishnan, Dr. Urquhart are among those who have published original work. There are a few others who are engaged on such work. So far as the whole-time members of the University are concerned, their pay and prospects should be placed on a sound basis. So far as the part-time lecturers are concerned, their work in the undergraduate department should be lightened. University Extension lectures should be encouraged so that the lecturers may get an opportunity of bringing before the public the outlines of the work they may be engaged on.

12. So far as the constitution of the Post-Graduate is concerned, there is one point which deserves consideration and that is the available financial resources. In the light of what has happened in the past, it seems desirable to modify Sec. 45 (c) of Chapter XI in such a way as to leave no room for future controversy or doubt. In Sec. 46 (d) the following words should be added:

“After meeting the expenses of working of the University in its other departments.”

H. E. STAPLETON,

Principal.

(Signed on behalf of the Philosophy)
Staff of Presidency College,
Calcutta.)

Notes on the present arrangements for teaching History in the Post-Graduate Department of Calcutta University.

1, 2. There is a very large number of special subjects in History. History itself is divided into two parts, General History and Ancient Indian History. In General History, besides the five compulsory papers, there are no fewer than eleven alternative special subjects; and in Ancient Indian History, there are four compulsory papers and five groups of special subjects, each of which is further sub-divided.

Many of these special subjects are taken by only a very small number of students; and *there is no reason why some of them should not be removed from the syllabus.* Thus, for instance, *the Modern History of China and Japan may well go. And there is scarcely any justification for courses on all the Indian special subjects in General History, Bengal 1757-1793, the Rajputs, the Mahrattas, the Sikhs.*

In view of the small number of students attracted to some of the groups, some of them should be given up.

Another point which may be urged in this connexion is this: that many of the students in the History post-graduate classes are, in my opinion, unfit to pursue the course of study which they have entered on. *The proportion of Honours to Pass graduates in the post-graduate History classes is not more than one to three; and a large proportion of the Pass students do not and cannot profit by post-graduate instruction.* Many of them are incapable of following a lecture intelligently and taking down notes for themselves. Some discrimination should be exercised in the admission of students to the post-graduate classes.

At present, also, there is a great deal of over-lecturing. There are some forty lecturers in History and they deliver, according to the time-table, about 200 lectures a week. Each student attends from 12-15 lectures a week. This seems excessive. As far as I can find out, very little tutorial work is done. At the post-graduate stage, on the contrary, the student should be encouraged to do most of his work for himself, under the guidance and supervision of his tutor. The number of lectures given should be cut down considerably; and more tutorial work should be done.

8. A small number of College teachers are recognised as post-graduate lecturers. *But I do not think that the maximum amount of co operation has been obtained.*

5. If the suggestions made above are accepted, I believe the following staff would be able to carry on the work: General History: 8 whole-time University teachers, with the help of part-time College teachers.

Ancient Indian History: 10 whole time University teachers, with part-time assistance.

K. ZACHARIAH,

Senior Professor of History, Presidency College.

No. 8.

Dated, the 3rd January, 1925.

Forwarded to the Secretary, Post-Graduate Reorganisation Committee for information in continuation of my letter No. 388 of 22nd December, 1924, and favour of distribution to Members of the Committee.

H. E. STAPLETON,

Offg. Principal, Presidency College.

ANSWERS TO QUESTIONNAIRE REGARDING
SANSKRIT.

1. There are nine groups in Sanskrit.
2. All the sub-divisions are certainly not of equal importance.

The Board may very well drop some of these subjects.

The M. A. course in Sanskrit consists of two parts, general and special. There are four general papers which are common to all the groups and four special papers are prescribed for each group. The aim of the general papers should be to test all candidates' general knowledge of the Sanskrit language and literature studied historically. The general papers as they now stand fail to satisfy the test. Moreover there are too many groups. No other subject has so many groups, there being, *e.g.*, only two groups in English. One candidate can appear nine times for the M. A. degree in Sanskrit and each time he will be examined in the same set of general papers, thus having an undue advantage over the candidates who appear for the first time. Moreover Government hold the Title Examinations in all the various branches of Sanskrit learning and graduates who wish to show their proficiency in those subjects may sit for those Examinations.

PAPER I.

(a) Paper I prescribes one selected *Astaka* of the *Rigveda* with *Sayana's* commentary. Here only one single phase of the Vedic literature, *viz.*, the *Mantras* has been represented. Instead of this all the other phases of the Vedic literature together with a general knowledge of Vedic Grammar should be introduced, the amount of Rigvedic text being proportionately reduced. For this purpose works from Group B may be included in the paper and that group may be dispensed with.

Instead of confining themselves to the interpretations of *Sayana* the students should familiarise themselves with different methods of interpretation including that of *Sayana*.

(b) *Sayana's* introduction does not help in the elucidation of Vedic texts. It is only helpful in the study of the *Purva-mimamsa*. It should, therefore, be omitted.

PAPER II.

The whole of the Siddhanta Kaumudi has been prescribed as a compulsory subject of study for candidates in all the groups, which is unnecessary. It should be prescribed to a limited extent, *e.g.*, Sandhi, Subanta and Tinanta. At present students preparing for Honours in Sanskrit read the portions on Karaka and Samasa. Those chapters as well as the chapters on Krit and Taddhita may be omitted. The whole of the work is too heavy to be thoroughly mastered in two years along with other subjects.

PAPER III.

Comparative Philology is already a special branch of the M. A. course. In Sanskrit it should be studied only to a limited extent.

(c) *Sabda Sakti Prakasika* should be altogether omitted as it is an extremely difficult work with no commensurate philological value. Instead of this a work on Sabdabodha may be prescribed along with Grammar.

Students should be required to study the intermediate stages of the Indian Languages from Classical Sanskrit down to the modern vernaculars. For this purpose Pali and Prakrit works may be prescribed.

PAPER IV.

A comprehensive study of the History of Sanskrit Literature should be insisted upon.

Groups.

Of the existing groups, Groups A, C, H & I may be retained with certain alterations suggested below. Groups D, E, F & G are devoted exclusively to Indian philosophy. There is great inequality among these groups in respect to their extent and difficulty. Paper VI of Group D of the present Regulations is greater in breadth and difficulty than the four papers of group E put together. **These four groups may very well be combined into one of General Philology. A total of Five Groups may thus be taught in future instead of Nine.**

Working on the above lines the four General papers would then stand as follows :

Paper I.

(a) Selected hymns from the Rigveda.

(b) Selected passages from the Brahmana literature including Upanishadas.

(c) Panini's Vaidika Prakriya: Macdonell's Vedic Grammar to be consulted; Yaska's Nirukta and the Pratisakhya for reference.

Paper II.

Grammar & Analysis.

(a) Siddhanta Kaumudi—Sandhi, Subanta and Tinanta with Principles of Sabdabodh.

(b) Chapter II of Kavyaprakasa.

Paper III.

(1st Alternative.)

(a) General principles of Comparative Philology as applied to Indo-Aryan languages from the time of the Vedas to the time of the Modern Vernaculars.

(b) Pali Texts:—Selected Jataka Stories.

(c) Prakrit Texts—One of the following Texts:

Uvasaga-dasao, Prasna-Vyakarana or Vipakasutra.

Either the Setubandha or the Hala-Saptasati.

(d) General knowledge of Prakrit and Pali Grammar.

Paper III. (2nd Alternative.)

Elementary Philosophy.

(a) Bhasa-Pariccheda.

(b) Artha Sangraha.

(c) Vedantasara.

Paper IV.

History of Sanskrit Literature with Essay.

As regard to Groups, the following 5 are desirable:—

GROUP A.

Paper V.

Kavyaprakasa, 1st six chapters of Bharata Natya-sastra and Chandomanjari.

Papers VI, VII, & VIII.

Courses of Sanskrit Literature: (a) Prose, (b) Poetry and (c) Drama.

GROUP B.

Philosophy (corresponding to Group C of the present Regulations).

Paper V.

Selected portions of the Brahmasutras with Sankarabhasya.

Paper VI.

- (a) Samkhya-Karikas with Tattva Kaumudi.
(b) Yoga-sutras with Bhoja Vritti.

Paper VII.

(a) Nyaya sutras of Gautamas with the Vritti of Visvanatha.

(b) Vaisesika Sutras of Kanada with the Bhasya of Prasastapada.

Paper VIII.

History of Indian Philosophy in detail.

GROUP C.

(Corresponding to Group C of the present Regulations.)

Paper V.

Mimansa-Sutras with Sabarabhasya, adhya 1 with selections from Kumarila's Sloka Varttika.

Paper VI.

Portions of Manusamhita with Kulluka's commentary.

Paper VII.

Dharma-sutras of Apastamba and Gautama with Haradatta's commentary.

Paper VIII.

Portions of Yajnavalkya's Institute with Vijnanesvara's Mitaksara. Portions of Dayabaga and Udvaha-tattva.

GROUP D.

(Corresponding to Group I of the present Regulations.)

Paper V.

Indian inscriptions from the earliest times down to the 1st century A.D.

Paper VI.

20 dated inscriptions from 2nd century A.D. to the 12th century A.D.

Paper VII.

Rapson, Ancient Indian coins.

V. Smith, Catalogue of Coins in the Indian Museum.
Elements of Iconography and Arts.

Paper VIII.

Ancient Geography of India.

GROUP E.

Paper V.—Portions of Jaina literature.

Paper VI.—Prakrit literature.

Paper VII.—Prakrit inscriptions.

Paper VIII.—Prakrit grammar and Pali grammar.

Detailed Explanations.

In the existing Regulations far too much attention has been paid to specialisation which is a great defect. Students must have first a wider outlook on the subject before they are allowed to specialise according to their own choice. If any such specialisation in the M.A. had to be considered, then the Sanskrit Honours course in the B.A. would first have to be enlarged. At present no Philosophical work is prescribed for the B.A. Honours. The students only begin to study Indian Philosophy in the M.A. course. And specialisation in any one of these within the short period of two years appears to be altogether undesirable. Again in some of the special groups as Sankhya, the number of books is very small. The really valuable and ancient work on the Sankhya Philosophy is the Sankhyakarika of Isvarakrishna. It has two commentaries, one by Gaudapada and the other by Vacaspati Misra. For want of books one commentary has been

prescribed in paper V and the other has been prescribed in paper VI. Paper VII prescribes three commentaries on the same work. In paper VIII Yogavasistha Ramayana and Sarvadarsana-Sangraha have been prescribed for want of books. The former has very little Philosophy in it and the latter is an abridgement of different Philosophical views current at the time of its composition.

In paper VIII Group A an excessive number of books on the same subject has been prescribed, *viz.*, Ekavali, Kavya-prakasa, Sarasvati-Kanthabharana and Sahitya-Darpana.

In paper VI (a) Group C Jaiminiya Nyayamala Vistara has been prescribed. The amount of matter contained in the work is very great. The length of the text is out of all proportion to the time at the disposal of the candidates.

The same remark applies to paper VIII (a).

Group D. Paper V (a) prescribes five works, which is an excessive amount and involves unnecessary repetition.

Paper VI. The whole of the Vadanta Sutras with Sankara Bhasya is also excessive.

Paper VII (b) prescribes passages from Anubhasya and Saivabhasya for translation. Instead of this, passages from Vedantic texts generally may be prescribed.

Group F. Paper V prescribes three Commentaries on the same body of Sutras which is entirely unnecessary. Papers VII and VIII are also excessive in their scope. Moreover, the works on Nyaya Philosophy are generally very abstruse and it is difficult to master so many works within the space of two years.

Group G. Paper V. Two works—the Sankhya Sutras of Kapila with the Vritti of Aniruddha and Sankhya-tattva-kaumadi—are unnecessary; one only and that the more ancient one should be retained. Two commentaries, *viz.*, Bhasya of Vyasa and the Vritti of Bhoja on the same work are unnecessary. The same remark applies to paper VI. In paper VIII Vedanta-sara appears to be superfluous. The Purva-mimamsa cannot be strictly called Philosophy. It has very little Philosophy in it. It is more connected with the Dharma-Sastras and should, therefore, be removed from paper VIII of this group.

Group I, paper V prescribes Rajtarangini and its continuation with Stein's introduction and commentary all of which are useless. A study of Indian numismatics will serve a more useful purpose and this subject is also intimately connected with Epigraphy.

Summing up, it will be seen that if the modifications in the existing regulations suggested above are adopted, the existing *Nine groups may be reduced to Five* without any appreciable

loss to scholarship. The five groups suggested above will, on the other hand, be more useful and will save much expenditure of time and energy on the part of the students as well as money on the part of the University, seeing that the number of lecturers and examiners may be correspondingly reduced.

Candidates who appear for the 1st time will be examined in the four general papers and in the special papers in any one of the five groups. If a candidate appears for a second time he will be examined in the special papers of two of the remaining groups and on the 3rd occasion he will be examined in the special papers of the remaining two groups. No candidate should be allowed to appear more than 3 times.

Subjects or groups of subjects of an allied nature under different boards should be taught by a superior officer of professorial rank and these lectures should be delivered to combined classes.

3. No. This question does not arise.

4.	<i>General.</i>	No. of Professor.	No. of Lectures a week.
	Paper I	1	3
	Paper II	1	3
	Paper III (a) & Group E (special paper)	2	6 (2 + 4)
	Paper III (b) & Group B (special paper)	2	8 (2 + 6)
	Paper IV	1	2
	<i>Special.</i>		
	Group A	2	6
	Group C	2	6
	Group D	2	6
		13	40

In the two years—the fifth and sixth—the number of lectures will be 80 or nearly an average of 6 hours' lecture work for every individual whole-time Professor. Along with this every whole-time Professor will be required to do tutorial work for 4 hours a week and thus the total amount of work for every Professor including lecture and tutorial will amount to 10 hours, a week.

The number of whole-time teachers that may be necessary can only be determined when the amount of assistance that can be obtained from the Colleges is known. Part-time teachers

should not be called upon to do more than 6 hours per week, half (or two-thirds) lecturing and the rest tutorial and seminar work.

5. Only distinguished specialists with considerable experience in teaching should be appointed as Post-Graduate teachers.

6. No; there seems little need for different grades of appointments. The salary for whole-time teachers should be Rs. 400-20-600 per mensem. Part-time Lecturers may be given Rs. 100 per month.

7. No; so far as can be ascertained from ex-students. It is most desirable that a proper system of seminar and tutorial work should be introduced at once.

8. No. Those Professors in the affiliated Colleges who have specialised in any subject may be appointed part-time Lecturers.

9-12. It does not seem necessary at present to enter into these questions.

19th December, 1924.

(Signed on behalf of Sanskrit
Staff of Presidency
College.)

H. E. STAPLETON,
Principal.

APPENDIX IX

Names of Teachers and other details supplied by different affiliated Colleges.

SANSKRIT COLLEGE.

College.	Name.	Qualifications.	Teaching experience.	Subject.	No. of hours per week.		Remuneration expected per month.	REMARKS.
					In Col-lege.	In Uni-versity Classes.		
Sanskrit College.	Dr. Adityanath Mookerjee, Principal, Sanskrit College.	B.A. with Honours in English and Philosophy. M.A. in Philosophy, First Class Gold Medalist. Premchand Roychand Student, 1897. Doctor of Philosophy.	Taking a substantial share of the M.A. Philosophy teaching for the past 20 years.	Philosophy	...	About 6 or 7 hours.	Rs. 100	
„	Mr. Krishnadhan Banerjee.	M.A., Class I, History, 1908.	He is delivering lectures in History, Paper I, for the last 4 years.	History, Paper I	...	4 hours	100	

College.	Name.	Qualifications.	Teaching experience.	Subjects.	No. of hours per week.		Remuneration expected per month.
					In College.	In University Classes.	
Sanskrit College.	Mr. Abinaschandra Bose.	M.A. in English, 1st Class, 1907, 3rd in order of merit with special proficiency in Historical English Grammar (Philology). Recently with a view to proceed to B.A. of London University.— (a) Passed Inter. Arts Examination of London University, Class II, Honours in English (besides Latin, Logic and Ethics). (b) Passed subsidiary subject for B.A. Honours of London. (c) Preparing for the principal subject, viz., English.	With over 16 years' teaching experience.	(a) Part paper, History of English Literature, Anglo-Saxon (period), Gr. A. or B. (b) Whole paper, English Historical Grammar and Teutonic Philology— Gr. A. or B. (c) Part paper, Shakespeare— (drama).	...	3 hours on any subject.	Rs. 100
	Dr. Mahendranath Sarkar.	M.A. in Philosophy, Class II, 1903. Ph.D. 1920.	.....	Logic as Epistemology. Ethics, Paper I. Indian Philosophy, General or Vedanta, Sankhya Group— special.	...	2 hours in July Sessions.	100

Mr. Shyamacharan Mookerjee.	B.A. Honours in Sanskrit. M.A. in English, Class II.	.....	Paper I on General History of English Literature. Paper VII in Gr. A. on "A selected period of prose."	4 hours	100
„ Surendranath Bhattacharjee.	M.A., Class II in Sanskrit.	.....	Sanskrit, Gr. A., Paper V, VI or VII.	4 hours	100
„ Sacchidananda Bhattacharji.	M.A., Class I, History	.....	(i) Indo-Muslim History. (ii) Political and Administrative History of Bengal from 1757-1793. (iii) Democracy and Nationalism in Europe from 1815-1898.	4 hours	100
Pandit Sitikantha Vachaspati.	A Sanskrit Scholar of the old School in Smriti and passed the Title Examination in Kavya.	(i) Has been teaching Smriti in the Tol Department and Smriti and Alankar in the College Department (I.A. & B.A. Classes) since 1911. (ii) Was engaged as University Lecturer in Smriti, Gr. C, for six years since 1911 and in Kavya, Gr. A, for one year during the session 1917-18	Any one of the following papers :— Kavya Gr. A, paper, V VI, VII or VIII. Smriti, Gr. C., paper VI, VII or VIII.	4 hours	100

College.	Name.	Qualifications.	Teaching experience.	Subjects.	Lecture hours per week.		Remuneration expected per month. Rs.	REMARKS
					In College	In University Classes.		
Sanskrit College.	Pandit Kunjabihari Tarkasiddhanta.	Passed the Government Title Examinations in Kavya and Naya in Gr. Ka. (Anumankhanda) and Kha (Sabākhanda).	He has successfully prepared many students for the Adya, Madhya and Title Examinations in Nyaya, Vedanta, Sankhya, Kavya and Vyakarana.	Sanskrit.— (i) Sabdasakti Prakasika, III (B). (ii) The first half (i.e. the Sanskrit Text) of any of the papers V-VIII of Sanskrit, Gr. A., Gr. D, Grs. E, F and G.	...	4 hours	100	
„	•Pandit Sakalnarayan Sarma.	Passed the Title Examinations of Kavya, Vyakarana and Sankhya.	Has been employed as a Teacher in Sanskrit College as well as in the University Classes for over 9 years.	Sanskrit—Paper II (Grammar).	...	2 hours	100	
„	Pandit Jogendranath Bagchi, Sankhya-Tarka-Vedantatirtha.	Passed the Sanskrit Title Examinations in Tarka, Sankhya and Vedanta.	Teaching 3 years in the Sanskrit College and 7 years in the Gurukul University both in the Oriental Dept. and College.	Sanskrit—Gr. A., V, VI, VII, VIII and III. „ Gr. B., Vedas V, VI, VII and & VIII. „ „ C, V & VI „ „ D, V, VI, VII & VIII.	...	4 hours	100	

" " E, V, VI,
 VII &
 VIII.
 " " F, V, VI,
 VII &
 VIII.
 " " G, V, VI,
 VII &
 VIII.
 General—I & III.

ASUTOSH COLLEGE.

Asutosh College, Bhowanipur.	Mr. Moheschandra Chatterjee.	M.A., in English, Class I, 1st, 1915, (Alla- habad Univ.).	.....	Shakespeare (Drama).	...	9 Hours	200
"	" Mohinimohan Mukherjee.	M.A., in English, 4th 1918.	Formerly Senior Prof. of English Literature, Midnapore College, Tem- porary Prof. of Presi- dency College.	Elizabeth— Drama. Sp. period in Prose. History of Bengali Lite- rature inclu- ding the Me- dieval and Modern periods. Bengali Drama and Prose.	...	8 Hours	150-200

College.	Names.	Qualifications.	Teaching experience.	Subject.	No. of hours per week		Remuneration expected per month.
					In Col-lege.	In Univer-sity Classes.	
Asutosh College, Bhowanipur.	Mr. Chandicharan Mitter.	B.A. with Honours in English, 1913 2nd. M.A. in English (Gr. A.) 1915, 2nd in the list.	Formerly Prof. of English St. Xavier's, Carmichael and Presidency Colleges.	History of English Lit. (Eliz). Drama of Shakespeare. Poetry (Modern). Prose (Modern.) Special period, Poetry. Special period, Prose.	... 2 Hours	4 8	60 100 200
"	" Bibhutibhushan Ghosal.	M.A. in English II Class, 1918, B.A. with Honours in English, Class II, 1916.	.....	Poetry and Drama. Modern Bengali.	... 8-10 Hrs.		200-250
"	" Sirdas Banerjee.	B.A. with Honours in Sanskrit 1911. Stood II Class 2nd. M.A. in 1913 in Gr. A, II Class, 1st. Got the Hemchandra Gossain Medal and the Sonamoni Prize.	Formerly, Professor of Sanskrit, Ripon and Rajshahi Colleges.	Sanskrit Gr. A. Papers V, VI or VII.	... 5-6 Hours		100-125

Gangadas Mukherjee. B.Sc. with Hons., 1911, Formerly Prof. of Mathematics, Cooch-Bihar College, 1913. Higher Math.— Algebra. Trigonometry (both plane and Spherical), Solid Geometry and differential Geometry. Differential Equations. ... 6-8 Hours 100-200

Bhupendra-chandra Das. M.Sc. in Mathematics I Class 1st, Gold Medalist, 1917. B.Sc. Hons. Class I, 4th.

Already working as part-time Lecturer in the Dept. of Applied Mathematics of the Univ. College of Science on Rs. 100 p.m. since 1921.

Amalapada Chatterjee. M.A. in Mixed Mathematics, 1st Class 1st (Gold Medalist), 1917. B.Sc., I Class with Hons. in Math. (1915).

Ethics or Hydrostatics (Mixed Mathematics). ... 8-10 Hours 150-200

Kalidas Sen ... M.A. in Philosophy, Class II, 1910.

Philosophy, Papers, I, II, III, & IV Psychology, Logic, Epistemology, Dialectic. ... As many Hours as the College can spare.

College.	Name.	Qualifications.	Teaching experience.	Subject.	No. of hours per week.		Remuneration expected.	REMARKS.
					In College.	In University classes.		
Asutosh College, Bhowanipur.	Mr. Harimohan Bhattacharji.	B.A. with II Class Hon. in Philosophy, 1913. M.A. in Philosophy (1915), 3rd in Class II; M.A. in Sanskrit, Gr. G., 1919, 1st in subject Gold Medalist, Kavyatirtha, 1907.	.....	Modern Philosophy (Bacon to Hegel) Recent Tendencies, Modern Logic and Epistemology, Outlines of Indian Philosophy.	...	...	Rs. 100-150	
"	" Bijoygopal Sircar.	M.A. in Philosophy, Class II, 1914.	.....	Ethics, History of Philosophy, Logic.	...	...	.....
"	" Abaninath Bose.	M.A. in Ancient Indian History and Culture, Gr. II, I Class 1st (Gold Medalist), 1921.	.....	Ancient Indian History and Culture, Gr. II, Papers V, VI, and VII.	...	6 Hours	100-125 p.m.	

RIPON COLLEGE.

Bipon College.	" N. N. Raye	B.A. with Honours in English and Philosophy 1893. M.A. in English, 1st Class 1894. (Medalist).	Double Lecturer at Hugli College (1894-95). Prof. Ripon College (1896-1903), Prof. Cotton College, (1904-5). Principal T. N. J. College 1905-1922). Principal, (Bipon College (since July, 1922).		
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„	R. N. Ghosh...	B.A. with double 1st Class Hons. in English & Philosophy 1904. Eshan Scholar, M.A. in English, 1st Class 1905 (Gold Medalist).	Prof. Ripon College, (1911-1914), Prof. Presidency College (1914-16), Prof. Krishnagore Collège (1916-17), Prof. and Vice-Principal at Ripon College (since, October 1917).	Remuneration will depend upon nature and Quantity of work.
„	D. P. Ghosh	M.A. in Mathematics, 1st Class 1st (Gold Medalist), 1924, stood First at all University Examinations.	Professor at Ripon College (since Sept., 1914).	.....	.....	.....
„	Dr. A. B. Datta	M.A. in Mathematics 1st Class 1st, 1917, P.R.S., 1922, Ph.D. in Mathematics, 1922.	Professor at Ripon College (since August, 1923).	.....	.....	.....

VIDYASAGAR COLLEGE.

Vidyasagar College.	Prof. J. R. Banerjea.	.....	At present University Lecturers,	.....	.....	.....	The teachers will accept any suitable remuneration.
„	Prof. S. C. Bose	.....	.....	.....	.....	.....
„	Pandit Radharamān Vidya-bhusan.	.....	A Professor of 20 years' Sanskrit Kavya standing.	.....	.....	.....

College.	Name.	Qualifications.	Teaching experience.	Subjects.	No. of hours per week.		Remuneration expected.	REMARKS.
					In Col-lege.	In Uni-versity. Class.		
Vidyasagar College.	Mr. Amulyachandra Aikat.	.....	A Professor of 13 years' standing.	English literature.	Liter- ...	...	...
"	Mr. Madhavdas Sankhyatirtha.	.....	A Professor of 8 years' standing.	Sanskrit literature Sankhya system of Philosophy.	Liter- ...	...	...
"	Mr. Achyutakumar Dutt.	.....	A Professor of 8 years' standing.	English literature.	Litera- ...	...	...
"	Mr. Vishnucharan Bhattacharyya.	A First Class M.A. in Bengal.	A Professor of 5 years' standing.	Bengali and Pali	...	...	...
"	Mr. Jnandakanta Ganguli.	.....	A Professor of 4 years' standing.	English literature.	Litera- ...	...	...
"	Mr. Nimaicharan Maitra.	.....	A Professor of 3 years' standing.	Do.	...	...	...

ST. XAVIER'S COLLEGE.

St. Xavier's College.	Rev. P. Johanns	S.J., B.Litt. (Oxon), Oriental Language and Literature. Studied Philosophy and Theology for	He taught for 2 years in Belgium and for last three years at St. Xavier's College as a Lecturer in Philoso-phy.	Mediaeval Philo-sophy or "Modern Scholastic Philosophy" "Hindu Philo-sophy."	...	2 hours	Not less than Rs. 100 per month.	
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10 years at Louvain. With special study of Kant and Hegel.

sophy," Sankara and Ramanuja or Vedic Grammar, translation of Vedic Hymns.

Mr. H. K. Sarkar	M.A. English Gr. A., 1911, II Class, 6th.	Serving as Prof. of English from 1912 up-to-date.	English Prose, Poetry, or Drama Text Books.	2 or 3 hours.	Do.
St. Xavier's College.	Mr. P. C. Banerjee B.A. (Hons. in English) 1917. M.A. (English A, Class II) 1919.	Professor of English, Uttarpara College, 1920. Professor of English, St. Xavier's College, since 1921. Teaching B.A. (Pass and Honours.)	Any paper in English, Gr. A. except Chaucer and Philology.	2 Hours.	Do.
Mr. N. N. Mukherjee	M. Sc. in Pure Mathematics in 1916, standing 5th in the 1st class.	Serving as a Professor of Mathematics in the college from 1919 and teaching B.A. & B.Sc. (Pass and Hons.) course since then.	Pure Mathematics (a) Plane or Spherical Trigonometry. (b) Theory of Equations. (c) Plane Analytical. (d) Calculus Geometry. (e) Differential Equations. (f) Projective Geometry.	2 Hours.	Do.

College.	Names.	Qualifications.	Teaching experience.	Subject.	No. of hours per week		Remuneration expected per month.	REMARKS.
					In Col-lege.	In Univer-sity Classes.		
St. Xavier's College.	Mr. B. N. Pal	... M.A. in Pure Mathematics, 1st Class 1st Gold Medalist. The Keshab Lal Mullick Gold Medal and Prize Holder. Sir B. B. Ghosh research Scholar at the University College of Science.	Serving as a Professor of Mathematics at the St. Xavier's College since 1922 and Teaching different classes up to B.A. and B.Sc. classes (Pass and Honours).	Pure Mathematics. (a) Algebra (b) Calculus. (c) Differential equations. (d) Theory of equations. (e) Plane Trigonometry. (f) Projective Geometry, etc.	2 Hours	...	Not less than Rs. 100 p.m.	

ST. PAUL'S COLLEGE.

St. Paul's College.	The Rev. P. G. Bridge, Offg. Principal.	Has specialised in Scholastic and Medieval Philosophy.	17 years' teaching experience.	Scholastic and Mediaeval Philosophy.	...	...	Will accept pay suggested.	
"	Mr. H. H. Crabtree	Has specialised in Plato & Aristotle.	4 years' experience	Plato and Aristotle	...	...	Do.	
"	Mr. P. B. Chatterjee.	First class M.A. in Sanskrit, Medalist.	9 years' experience	Sanskrit	...	...	Do.	
"	Mr. J. C. Mondol	Mathematics, 1st class	9 years' experience	Mathematics	...	...	Do.	
"	Mr. P. Mahanty...	Has specialised in Oriya History	7 years' experience.	History	...	...	Do.	

"	Mr. Subimalchan- dra Dutta, M.A.	...	6 years' experience	...	Rajput History	...	...	Do.	He is drawing Rs. 100 per month from the P.G. Arts Dept. as Lecturer.
"	Mr. Bejoykumar Bhattacharjee.	...	5 years' experience He is printing 3 books on Indian Economics.	...	Economics	...	...	Do.	

DIOCESAN COLLEGE.

Diocesan College.	Miss T. Wright ...	B.A. Hons. (London) London Teaching Diploma.	11 years' School and Col- lege experience in Eng- land and India.	European History	...	2 or 3 Hours.	Usual pay ^t
"	Miss B. M. W. Beatty, B.A.	B. A. Hon. (Dublin)— (Senr. Mod.) Diplo- ma in Teaching, Lon- don and Dublin.	24 years' experience in Teaching both in the School and College, England and India.	Honours English or Psychology or Economics.	...	2 or 3 hours.	Do.
"	Miss D. MacLaren	B.A. Birmingham Uny Board of Education Teaching Diploma.	8 years' Teaching experi- ence in England and India.	English	...	2 or 3 hours.	Do.
"	Miss Kinvig	... Hons. B.A. (Oxford) Oxford Diploma in Education.	.....	English	...	2 or 3 hours.	Do.
"	Mr. J. C. Ghatak	M.A.	6 years' teaching experi- ence in Calcutta.	Sanskrit, Economics, History.	...	...	Do.

BANGABASI COLLEGE.

College.	Name.	Qualifications.	Teaching experience.	Subjects.	No. of hours per week.		Remuneration expected per month.	REMARKS.
					In College.	In University Classes.		
Bangabasi College.	Mr. Lalitkumar Banerjee.	1st in 1st Class English 1888.	36 years' teaching experience.	.....	...	...	Rs.	Present health does not permit to take up the work at present.
"	Pulinbehri Kar	M.A. II Class English 1901. B.A. Hons. in English, Philosophy.	7th in 13 years' teaching experience.	English 3rd paper (Poetry) or 4th paper (Prose).	...	From July to Dec. 3 Hrs. From Jan. to Mar. 6 Hrs.	250	
"	Jitendranath Chakravarti.	First Class English 1918.	1st in 7 years' experience	Eng. Gr. B. Part of either 5th paper (Anglo-Saxon) or 6th paper (Mid. Eng.) Gr. A.—Part of 1st paper, 3rd paper (Poetry) or 5th paper (Chaucer and Philology).	...	Ditto	100	

	... philosophy, 1915.	beginning of 1916.	Poetry and Prose.	z n. 18	Nothing, if the University finances do not improve.
Jogindranath Bhattacharji.	M.A. Class II in Sanskrit (1899).	Teaching experience— 25 years.	Sanskrit Gr. A. Any of the papers from V-VIII.	3 hours	100
„ „ Bhababibhuti Bhattacharyya.	M.A. II Class in Sanskrit 1913.	10 years' teaching experience.	Sanskrit Gr. A. Paper on the Vedas and any of the papers from V-VIII.	4 hours	50
„ „ Nanigopal Mukherjee.	M.A. in English (Gr. B) Class II, 1915. Gr. A., II Class 1st in 1919.	7½ years' teaching experience.	English Gr. B.— Paper V or VI, English Gr. A. Paper I, III, IV or VI.	3 hours from July to Dec. & 5 hours Jan. to April.	100
„ „ Panchanan Ghosal	M.A. in Sanskrit, Gr. A., for Class II, 1913.	Teaching since 1919	Sanskrit Literature, Edicts of Asoka or Ancient Indian History Gr.	3 hours	100
„ „ B. C. Chaudhuri	... B.A. (Hons.) Cambridge 1912. [Formal M.A. in 1921].	Cam. Teaching since 1914	English— Paper I (18th Century), Paper III (Milton's poems), Paper V (Wordsworth.)	1-3 hours	250 a month or honorary if University finances do not permit.

College.	Name.	Qualifications.	Teaching experience.	Subjects.	No. of Lectures, hours per week.		Remuneration Ex-pected per month.	REMARKS.
					In Col-lege.	In Uni-versity Classes.		
Bangabasi College.	Mr. Mrinalkanti Bose.	M.A. in History, Class II, 6th, 1912.	6 years' teaching experience.	ex- History— (i) Taking (Constitutional History of India). (ii) Comparative Politics. (iii) Democracy and Nationalism in Europe.	...	3 hours	150	At present working in the History Dept. honorarily.
"	" Manikumar Mukherjee.	M.A. in English, Gr. A, Class I, 2nd (1920).	Teaching since 1922	English— Papers I, II, VI, and VII.	...	2 hours	100	
"	" Dhirendra-krishna Mookerji.	M.A. in English, Group A, Class II (1918). M.A. in Indian Vernaculars, Class I (1922).	Professor of English and Bengali since 1919.	and Indian Vernaculars Papers III & IV.	...	3 hours	100	
"	Debendranath Mukherjee.	M.A. in Economics, Group A, II Class (1913).	Teaching Economics since 1913.	Economics (Gr. A). Any paper or part thereof.	...	3 hours	100. at least.	

"	"	Siteshchandra Kar	M.A. in Applied Mathematics, Class I (1st) 1910. Ph.D. (1923).	Teaching since 1911; also at the Science College since 1917.	Anything in Applied Mathematics or Theoretical Physics.	... 3 Hours	.....	Drawing Rs. 100 per month from the Sciences Department.
"	"	Kaliprasad Banerjee.	M.Sc. in Pure Mathematics, Class I (3rd) 1914.	Teaching Mathematics since 1916.	Part of Paper III (Conic Section). Papers IV, V, VII, VIII (Projective Geometry).	... 3 Hours	100	

PRESIDENCY COLLEGE.

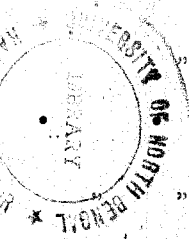
Presidency College.	Mr. B. G. Mookherjee.	B.A. Hons. English Class I and Sanskrit Class II 1895. M.A. First Class, I, 1896. I.E.S.	Was an University Lecturer during 1917-21. 26 years' teaching experience.	English. History of English Literature, Elizabethan and Post-Elizabethan.	... 6 hours	As regards remuneration the arrangement made by the Prof. recently will hold.	The names of 25 members of the college staff, already working in the University have been omitted.
	Mr. H. K. Banerjee	B.A., Hons. (Cal.) 1905. M.A. (Cal.) 1906. B.A. Hons. English (Oxon.) 1922. B.Litt (Oxon.) 1923.	English 14 years' teaching experience.	English. History of English Literature Middle English Poetry and Prose 18th Century Prose.	... 4 Hours	Do.	

College.	Name.	Qualifications.	Teaching experience.	Subjects.	No. of Hours per week.		Remuneration expected per month.	REMARKS.
					In Col-lege.	In Uni-versity Classes.		
Presidency College.	Mr. Nilmany Chakrabarti.	M.A. 1903 Class II (First), Govt. Research Scholar 1904-07.	Archæological Assistant in the Indian Museum, 1907-08. Professor of Sanskrit and Pali since 1908. He lectured to the Post-Graduate students before 1917.	Sanskrit. History of Sanskrit Literature. Indian Epigraphy. Ancient Indian History or the Ancient Geography of India.	...	3 Hours	As regards remuneration the arrangement made by the Prof. recently will hold.	
	„ Harihar Banerjee.	M.A., Class II,—1900.	Teaching for more than 20 years.	Sanskrit, Group (A) Any of the papers VI-VII.	...	3 Hours	Do.	
	„ Hidayat Hossain.	Final Madrasah Examination. Ph.D. by Thesis (Washington).	17 years' teaching experience.	Arabic—Hadith and Persian, Arabic Texts for Persian students.	...	4 Hours	Do.	
	„ Md. Sanullah	M.A. First Class I in Persian. First in Class II in Arabic.	10 years, teaching experience.	Persian Prose Texts	...	4 Hours	Do.	
	„ M. M. Huq.	M.A., First Class Ist in Persian.	Teaching for 2 years	Persian Poetry Texts.	...	4 Hours	Do.	

„ P. D. Shastri	M.A. (Phil.) and Sanskrit (Panjab) Ph.D. (Kiel), B.Sc. (Oxon.)	20 years' teaching experience. Was a P. G. Lecturer till 1920, when he proceeded on furlough.	Any subject under Philosophy or Sanskrit.	2 Hours	D
„ S. N. Dasgupta	M.A. (Cal.), Ph.D. (Cal & Cantab.)	Teaching for 14 years.	Indian Philosophy or other sections of Philosophy.	3 Hours	Do.
„ B. K. Dutta	M.A.	Teaching experience for 24 years.	Philosophy—Logic or Sociology.	3 Hours	Do.
„ J. M. Bose *	M.A. (Edin.)	Teaching for 16 years. Lectured to P. G. students in the College on Rigid Dynamics.	Mathematics—Rigid Dynamics or Hydrodynamics of which he has made a special Study.		
„ K. N. Chakravarti *	B.Sc. Hons. Class I, M.Sc., Class I.	6 years' teaching experience.	Astronomy.		
„ B. K. Sen	M.A. Cobden Medalist.	16 years' teaching experience. Was a Lecturer in the P.G. Department during 1916-17.	Either British History period or the European History special Subject.	2 hours 1 hour tutorial.	Do.
„ S. C. Mazumdar	M.A. First Class 1st B.L. Class I.	5 years' teaching experience.	Comparative Politics or International Law.	2 Hours 1 hour tutorial.	

* Co-operation of these two teachers subject to increase to present staff in mathematics.

Colleg.	Names.	Qualifications.	Teaching experience.	Subjects.	Number of hours per week.		Remuneration expected per month	REMARKS.
					In Col.	In University		
Presidency College.	Mr. K. C. Ray.	M.A., Class I.	6 years' teaching experience.	Inorganic Chemistry.	2 Hours	plus supervision of practical work.	Do.	
"	D. N. Wadia	M.A. Member of Geological Survey of India.	.....	Applied Geology or other portion of Geology by arrangement.	2 hours.		Do.	
"	B. N. Maitra	M.Sc. Class II	12 years' teaching experience.	Geology, Paper II Crystallography and Optical Mineralogy.	2 Hours	2 hours practical.	Do	Subject to appointment of assistant.
"	G. P. Mazumdar.	M.Sc. Class II.	10 years' teaching experience.	.....	2 hours	4 hours practical.		



SCOTTISH CHURCHES COLLEGE.

Scottish Churches College.	Dr. Scringéour ...	He was formerly a lecturer in the P. G. Arts Department.	Minimum Rs. 100 per month.
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