

From

The Principal, Presidency College, Calcutta,

To

The Director of Public Instruction, Bengal.

No. 2176, Calcutta, the 18th July, 1946.

Sir,

I have the honour to submit herewith a scheme for the development of the Presidency College, which has become very pressing. It has been waiting for quite a long time and can no longer be left like this.

1. An important portion of our Chemical Laboratory is housed in a tin shed. This was constructed as a temporary measure but has stood as a disgrace for the Premier College of Bengal for the last forty years. The place is very unsuitable for work specially during the summer months and needs replacement at the earliest opportunity. Another portion of the Chemical laboratory is housed in a one storied structure which was condemned about eight or nine years ago as being unsuitable to exist being an old and dilapidated building. Other laboratories have become unsuitable because with the growth of the different subjects we find our activities restricted due to limited accommodations. This consideration is applicable to Geology, Botany, Physiology, Zoology, Geography and Library also. The requirements of the different departments are as follows :-

Chemistry, as the activities of the College are expanding we are getting much larger number of students to study this subject which is a compulsory subject for science students. The importance of this subject is very well known, it is therefore not surprising that largest numbers of students should be reading this subject. We have only Pure Chemistry Section here at present. This should be supplemented by a Technological Section also, which is much more necessary for the Industrial development of the country. The scheme was considered by a Special College Committee in 1937, and accordingly the Calcutta University framed new syllabuses of study for the subject in 1938, but due to breaking out of the war nothing in this direction could be done. As we need a re-organisation of the different departments which involve erection of new buildings also, I feel our programme of arranging for Technological Chemistry that we considered so long ago should be incorporated into this programme. Besides the tin shed laboratory other buildings that house our Chemistry department have not only become insufficient in space and inadequate in equipment but have also become antiquated. There have been so many improvements lately in the subject that it is essential for us to implement modern equipments and bring our laboratories upto date. I should therefore request you to take immediate steps to provide building accommodation with the provision for the different class rooms as detailed in Appendix A. To minimise ground space a four storied building may be erected to include these different sections. The number of rooms shown in Appendix A represent the entire requirement of both Pure and Technological Chemistry for which I have shown only the minimum of our requirements which will include teachings in Electro Decomposition Technique, Manufacture of soap, Fermentation, Plastics, Pharmaceutical industries and different analytical methods used in industries. We may add to these subjects others in future for which additional arrangements will be necessary.

The dimensions of the rooms shown are only approximate but they roughly represent our requirements when planning the buildings exact dimensions will be determined.

It is essential to have some air conditioned and cool rooms in any modern chemical laboratory built in the country for carrying on all types of chemical reactions. The extensive Government Technological laboratories of Cawnpore are completely air conditioned. When we are going to build new sets of laboratories I feel it very necessary to have at least some air conditioned rooms. With this idea air conditioning system has been shown as necessary item in this proposal.

GEOLOGY: When arrangements were made for the teaching of Geology in this College the number of students was very small and at that pioneering stage no one expected that in some future date study of Geology will be so popular and such a heavy demand for trained Geologists will be made by the Geological Survey of India as it is done at present. Consequently for Post Graduate and Honours Classes a limited accommodation was provided. There is no other college in the province to teach this subject and even the Calcutta University has to depend entirely on our resources for the training of their Post Graduate students as they have not got a separate Department of their own. For sometime to come this college will be occupying this unique position so far as teaching of Geology is concerned. With the expansion of the Geological Survey of India there has already been made a heavy demand for admission into all our classes for the study of Geology and where we had only 15 to 20 students only a few years ago, we are now having about 200 students to be trained in Geology alone. It will therefore be easily seen that our Geology Department needs an immediate expansion. Such eminent Geologists as Sir Cyril Fox made similar remarks regarding expansion of our activities in view of this college being the only institution of its kind to teach Geology in both undergraduate and post-graduate stages, so that we shall be able to continue to supply trained Geologists to the Geological Survey as it goes on expanding. This heavy demand will be very difficult to meet unless we apply our mind forthwith to the expansion of our Geology Department. The additional floor space necessary for this department has been shown in Appendix B. This can be provided in an extended wing of the Baker Laboratory.

GEOGRAPHY: Together with Geology the case of our new Geography Department must be considered. When we obtained affiliation for teaching Geography in our I.A. and I.Sc. classes, we had to tag it on to Geology. The latter department with its insufficient space could ill afford to accommodate Geography classes. With the introduction of Geography classes in B.Sc. even this temporary arrangement became obviously impossible and we had to ask the Geography Department of the University to afford facility of study to our students in their B.A. and B.Sc. classes. The arrangement is only a temporary one and unfortunately not very suitable. It cannot therefore be continued for a long time, and specially when the University is contemplating shifting its Geography Department to a new site at Science College premises at an early date. We must therefore make immediate arrangements for our Honours and Pass B.Sc. classes together with the existing I.A. and I.Sc. classes within the College compound. For the entire department our requirements have been shown in Appendix C. These rooms can be provided in the extended Baker Laboratory building along with the Geology Department.

BOTANY: Our Botany Department has been crying for additional accommodation for a long time now. Soon after Sir Jagadis Bose retired, part of the Botany rooms were taken over by Mr. Mahalanobis for his Statistics works. The present Science Library Hall should have gone to this department for their normal work. But this was not done and the present result was that the department had to confine its activities within a very limited space. When the number of students was small the work could be carried on somehow but with difficulty. We are now getting many more students in the Honours and Post Graduate Classes. They cannot be taken in for want of working space. Year after year the University Inspectors of Colleges have pointed out that for such an important department as Botany no adequate accommodation has been provided by the College for the proper training of our students. They had recommended very strongly that immediate arrangements for expansion of the Department should be made. The continued heavy demand for seats have been increasing our difficulties. The matter is a very serious one and claims our immediate attention. Due to the war this has been made to wait long, it is now no longer possible to keep our eyes closed to the very urgent necessity of this department. It is now proposed that Science Library should be shifted and amalgamated with the General Section. The room thus vacated should be available to Botany Department. This alone will not solve its difficulties, the department wants more accommodation. Their requirements have been shown in Appendix D. This space can be provided in first and second floor of the proposed extension of the Baker Laboratory building.

PHYSIOLOGY AND ZOOLOGY: The Physiology Department is also very much handicapped for want of more space. Their work in the post graduate department is very much hampered for want of space. With the addition of the Department of Zoology for the under-graduate classes there has been particular difficulties for Physiology to accommodate the work of other sections. I feel that the College should have complete arrangements for the teaching of Zoology upto the post-graduate stage. The only institution that provided Honours training in Zoology at present is University College of Science. They have very limited accommodation and cannot take in all the applicants. Consequently every year we receive a few number of applications for admission into Zoology classes at the Honours stage. I feel as we have concentrated our attention in training up the students up to the Honours stage in all the different scientific subjects, we should include this one subject also into our curriculum in order to make our arrangements fuller and more complete. We must therefore provide additional accommodation to house this new department as also provide much needed room for expansion of Physiology Department.

The necessities of these two departments are shown in Appendix E and F.

LIBRARY: Needs for expansion of our Library are also very pressing. The limited space that we could assign to Library is no longer enough for the growing number of books. The management of the Library is becoming more difficult due to the limited number of staff working in it and because it has been divided into two sections Arts and Science. I therefore propose that the Science Library should be shifted to the main building and amalgamated with the Arts Library and two should be located together in the Eastern wing of the main building or better in some rooms built along with the College Hall. By this arrangement only a small addition to the Library staff will enable us to carry on the work fairly satisfactorily, at any rate, much better than what we are

doing at present. The system of keeping our books needs a change and we require additional shelves for our books. That will be dealt with separately together with the question of equipments.

COLLEGE HALL: Of the other requirements mention should be made of a College Hall. It has been a standing grievance of the students of the college who number now approximately 1,100 that they have no Assembly Hall where they can meet on ceremonial occasions. The grievance is a real one and has been felt by the generation of students who have gone out from year to year. Promises have been made by the Heads of the Department of Education of this province on more than one occasion to do something in this connection but as yet nothing has been done. The utility of such a hall is more than one. Our Periodical Examinations are held in lecture rooms and consequently arrangements of classes are disturbed and work suffers when only part of the classes sit for the Examination. It is indeed a crying need of the College that an Assembly Hall should be built at an early date. Along with this Hall a few rooms can be built to house the entire Library. This is a better proposal particularly because while planning the building we can take special needs of Library into consideration which is not possible in the existing building. I have not mentioned about Common Room which is also a great necessity because when Library vacates its existing home, those rooms can be used very well for the purposes of common room.

STATISTICS: Department of Statistics is our new addition. But I do not want to press for any accommodation for this department particularly because the rooms that are now being occupied by the Statistical Institute are expected to be vacated soon. The department should be removed from Presidency College without any further delay. Its presence here has caused the suffering of the Botany Department so long. The Department of Physics also is feeling the difficulty in the way of its normal work as well as its expansion. When the Statistical Institute is removed from here the rooms will be available for normal college work and I propose to part of the accommodation should be given over to Physics and some five rooms should be handed over to Statistics. If there is any difficulty in this matter, the Department of Statistics will be housed in the main building in the rooms vacated by the Chemistry Department.

PRINCIPAL'S QUARTERS: For such a big college it is essential that Free Quarters be provided for the Principal. Government has accepted in principle the necessity of such an accommodation. Only arrangements could not be made so long for such accommodation. Together with the different requirements of the College, in this Post War scheme of building additional accommodation for the College, this proposal should receive adequate consideration. I therefore desire to impress about the necessity of this Quarter and propose that a building provided for accommodation on the line of accommodation provided for the Principals of other colleges should be built up now.

Small buildings to provide quarters to some other members of the staff are also necessary with a view to make their services available for our students residing in the Hostels as Tutors on the same line as provided in residential colleges.

Building accommodation for menials and some ministerial officers must also be taken into consideration. These requirements are shown in the Appendix G.

MUSLIM HOSTEL: I have already represented to you, the necessity of a Muslim Hostel for this college has been a pressing one for the last forty years. It is really a disgrace that this Premier College of Bengal has not yet been able to find accommodation for living for a large section of its students. I feel that this necessity is as keen as the expansion of the College in many other departments, if not of greater importance.

I have proposed in connection with the building of a Muslim Hostel for the College that acquisition of land to the north of the college and to the south of the Bhowani Charan Dutt Lane be effected forthwith. Within this plot of land there are several buildings, some of which may be useful to us for some of our necessities. I feel that at least one or two of the buildings will be directly useful for Muslim Hostel purposes. Some may be of use as quarters for the menials and Ministerial officers of the College. Perhaps one or two buildings can be used for quarters for members of the staff. But we must erect new buildings to house the Chemistry laboratories and laboratories for other subjects also. A new building will also be necessary for our College Hall.

For the Chemistry Department we shall require a total of 84,932 sq. ft. This may be conveniently spread over a four storied building on a plinth area of 21,233 sq.ft and an additional structure for the Technological department on a plinth area of 8,160 sq.ft. I also propose that the Baker Laboratory building be extended to the West upto the Western boundary wall of the College. A three storied building corresponding with the present building will be adequate to provide 44,112 sq.ft. of accommodation, for the departments of Geology, Geography, Botany, Physiology and Zoology. This may be spread over three stories on a plinth area of 14,704 sq.ft. The College Hall can be erected on the newly acquired site as well as the Principal's quarters. In all for these laboratories two separate structures I feel about Rs 16,00,000/- will be necessary. In view of the immediate and urgent necessity for the expansion of the departments as well as of the ultimate good that the college is bound to offer to the country at large, I should consider this expenditure a comparatively small one. In the Post War Schemes, this educational necessity should receive the first and foremost consideration particularly because such an Institution will produce the desired result in the Technological, Intellectual, Medical, Agricultural and all other developments of the country.

Together with the allotment for buildings, which we start without any delay on our present site and only a part of the project can be made to wait till the acquisition of the new land is complete, we shall require an additional amount of money to fit up the laboratories and to purchase newer equipments. Our existing equipments will all be utilised and for the technological Chemistry Section only we shall require some additional equipments. There will of course be the necessity of some very recent instruments without which the laboratories can never be complete. But for these additional new equipments our requirements may not be very much. I expect a sum of about Rs 3,00,000/- will be able to see us through the difficulty. This amount might have been less but the trend of the market does not show any tendency to return to the pre-war level, I am therefore of opinion that the amount of three lacs may suffice for our purpose.

The total funds necessary for the entire scheme will therefore come to about nine lacs of rupees. Of this amount only a part need be allotted this year. The construction of the building will perhaps extend over two years and therefore the annual allotment of Rs. 3,00,000/- for three years may be found adequate for the purpose.

The estimates are of course very tentative now. When the scheme goes before the Communications and Works Department a more accurate estimate will be prepared. But estimates of the cost of equipments, I expect, will not change very much.

In view of the urgent necessity both for providing laboratories for Chemistry in place of the Tin Shed and accommodation for the expansion of Geology, Botany and other subjects I feel it very essential to request you to place this entire scheme before the Government and ask for a sanction of Rs. 3,00,000 per year for three years from now to enable us to start at the building work immediately. The acquisition of land to the north of the college compound will enable us to get several buildings which will be directly useful for Muslim Hostel, Menials' quarters, and several other buildings that may be suitable for quarters for the members of the staff of the College. Pending the completion of the acquisition I should like to consult the Government Architect and Engineer of the Communications and Works Department regarding plans and estimates of the necessary buildings. I am therefore to request you to kindly let me know at a very early date how soon I can start this work.

I have the honour to be,
Sir,
Your most obedient servant,

M. K. Khanna

Principal, Presidency College.

Appendix.

Requirements of the Chemistry Section are tabulated into four different sections to show the approximate distribution of the laboratories. The sections I, II, III and IV represent the four stories of the building and V is a separate annex for the boiler and work shops.

I. Ground floor, contemplated to be starting three or four feet below the ground level.

1. Stores, five rooms 37' x (27' + 28' + 48' + 23' + 52')	or	6,771 sqft
2. Air conditioning system 66' x 100	or	6,600 do
3. Balance Room Base		600 do
4. Metallurgical Laboratory 39' x 28'	or	1,122 do
5. Furnace Room 39' x 28'	or	1,122 do
6. Unit Process Laboratory 48' x 39'	or	1,872 do
7. Small Technological Laboratory 22' x 39'	or	858 do
8. Pilot Plant Laboratory 54' x 39'	or	2,106 do
9. Lavatories 2' x 8' x 12'	or	192 do
		<u>21,233 do</u>

II. First floor to contain the following laboratories

1. Stores, two rooms 37' x (27' + 28')	or	29035 sq ft
2. P.G.Laboratory 5th Yr. 48' x 37'	or	1,776
3. P.G.Laboratory 6th Yr. 52' x 37'	or	1,926 do.
4. Preparation Room 21' x 37'	or	757 do.
5. Cold Stores 30' x 28'	or	840 do.
6. Prof. Private Lab. 33' x 28'	or	924 do.
7. Research Laboratory 37' x 28'	or	1,036 do.
8. Office Records and Microanalytical room 38' x 51'	or	1,938 do.
9. Physico Chemical Research Lab. 38' x 49'	or	1,862 do.
10. Tech. Sp. Laboratory (1) 39' x 28'	or	1,122 do.
11. do. do. (2) 39' x 28'	or	1,122 do.
12. Laboratory Supply Room 22' x 39'	or	858 do.
13. Technological Advanced Lab. 48' x 39'	or	1,872 do.
14. do. do. do. 54' x 39'	or	2,106 do.
15. Lavatory 2' x 8' x 12'	or	192 do.
16. Balance Room		600 do.
		<u>21,233 do.</u>

III. Second floor to contain the following :-

1. Teachers' Meeting Room 37' x 27'	or	999 sq.ft
2. Lecture Room 28' x 37'	or	1,036 sq.ft
3. Hons.Laboratory 3rd Yr. 48' x 37'	or	1,776 do.
4. do. 4th Yr. 52' x 37'	or	1,926 do.
5. Preparation Room 21' x 37'	or	757 do.
6. Lecture Room 30' x 28'	or	840 do.
7. Prep. Room 33' x 28'	or	924 do.
8. Lecture Room 37' x 28'	or	1,036 do.
9. Lecture Theatre (1) 38' x 51'	or	1,938 do.
10. Lecture Theatre (2) 38' x 49'	or	1,862 do.
11. Seminar 39' x 28'	or	1,122 do.
12. Reading Room 39' x 28'	or	1,122 do.
13. Pass Lab. 3rd Year 48' x 39'	or	1,872 do.
14. Prep. Room 22' x 39'	or	858 do.
15. Pass Lab. 4th Year 54' x 39'	or	2,106 do.
16. Balance Rooms		600 do.
17. Lavatories 2' x 8' x 12'	or	192 do.
		<u>21,233 sq.ft</u>

IV. Third floor to contain the following :-

1. Spectroscopic and ultra microscopic room	37' x 27'	or	999 sq.ft.
2. Polarimeter Room	28' x 37'	or	1,036 do.
3. PhysicoChemical Measurements special	48' x 37'	or	1,776 do.
4. Private Advanced Laboratory	21' x 37'	or	757 do.
5. Physico Chemical Lab. Genl.	52' x 37'	or	1,926 do.
6. Electrical Research Room	39' x 28'	or	840 do.
7. Dark Room	33' x 28'	or	924 do.
8. Optical Experimental Room	37' x 28'	or	1,038 do.
9. Hons. Physico Chem. Lab.	51' x 38'	or	1,938 do.
10. Electrical Research Lab.	38' x 49'	or	1,862 do.
11. Electroplating Room	39' x 28'	or	1,122 do.
12. Electrometallurgy Room	39' x 28'	or	1,122 do.
13. Intermediate Lab. I	48' x 39'	or	1,872 do.
14. Prep. Room	22' x 39'	or	858 do.
15. Intermediate Lab. II	54' x 39'	or	2,106 do.
16. Balance Rooms			600 do.
17. Lavatories	2' x 8' x 12'	or	192 do.
			<u>21,233 sq.ft.</u>

V. Separate Block to contain -

1. Boiler Room	48' x 20'	or	960 do.
2. Lathe Work shop	48' x 30'	or	1,440 do.
3. Machinery workshop	48' x 30'	or	1,440 do.
4. Fermentation workshop	48' x 30'	or	1,440 do.
5. Soap Tech. workshop	48' x 30'	or	1,440 do.
6. Plastics Tech. Workshop	48' x 30'	or	1,440 do.
		Total	<u>8,160 do.</u>

B. Requirements for Geology are as follows :-

1. Lecture Rooms 20	30' x 20'	or	600 sq.ft.
2. Lecture Theatre	30' x 40'	or	1,200 do.
3. Balance Room for Jolly, La Touche	20' x 20'	or	400 do.
4. Balance Room for P.G. class	20' x 10'	or	200 do.
5. Room for Map work	20' x 10'	or	200 do.
6. Section cutting & Grinding Room	20' x 15'	or	300 do.
7. Dark Room	20' x 10'	or	200 do.
8. Optical work Room for P.G. classes	40' x 30'	or	1,200 do.
9. Chemical Lab. for ore analysis	40' x 30'	or	1,200 do.
10. Furnace Room for P.G.	20' x 15'	or	300 do.
11. Seminar Room	20' x 15'	or	300 do.
12. Research Lab. for staff	25' x 40'	or	1,000 do.
13. Store Room	20' x 20'	or	400 do.
14. Smaller Analytical Room U.G.	30' x 20'	or	600 do.
15. Professors' Sitting Room	30' x 60'	or	1,800 do.
16. I.Sc. Laboratory	60' x 30'	or	1,800 do.
17. Ore Dressing Room	30' x 30'	or	900 do.
18. Dark Room No. 2 P.G.	20' x 10'	or	200 do.
19. Special Laboratories for Coal, oil, current etc.	40' x 30'	or	1,200 do.
20. Lavatory	2' x 12' x 8	or	192 do.
			<u>14,192 do.</u>

C. Requirements of Geography Department -

1. I.Sc. Laboratory	40' x 30'	or	1,200 sq.ft.
2. B.Sc. Pass do.	30' x 25'	or	750 do.
3. B.Sc. Hons. do.	40' x 30'	or	1,200 do.
4. Lecture Room	20' x 30'	or	600 do.
5. Lecture Theatre	40' x 30'	or	1,200 do.
6. Staff meeting room	25' x 20'	or	500 do.
7. Dark Room	15' x 20'	or	300 do.
8. M.Sc. Practical Class	30' x 40'	or	1,200 do.
9. Museum	30' x 60'	or	1,800 do.
10. Professors' Meeting Rooms	2' x 25' x 20'		1,000 do.
			<u>9,750 do.</u>

D. Requirements of Botany Department as shown here are in addition to the Science Library Hall.

1. Plant Physiology Room I	30' x 25'	or	750 sq.ft.
2. do. II	30' x 25'	or	750 do.
3. Plant Chemistry Room	30' x 25'	or	750 do.
4. Practical Room	40' x 30'	or	1,200 do.
5. Mycology & Bacteriology Room	40' x 30'	or	1,200 do.
6. Seminar	20' x 15'	or	300 do.
7. Specimen Room	20' x 25'	or	500 do.
8. Museum	30' x 40'	or	1,200 do.
9. Lecture Room	25' x 16'	or	400 do.
10. Research Rooms	3' x 20' x 15'	or	900 do.
11. Research Room for staff	3' x 20' x 15'	or	900 do.
12. Plant Culture Room (glass)	15' x 10'	or	150 do.
			<u>9,000 sq.ft.</u>

E. Requirements of Physiology Department -

1. Chemical Laboratory	30' x 20'	or	600 sq.ft.
2. Cold Room	16' x 20'	or	320 do.
3. Experimental Room	30' x 25'	or	750 do.
4. Nutrition Research room	30' x 25'	or	750 do.
5. Balance Room	20' x 15'	or	300 do.
6. Preparation Room	20' x 15'	or	300 do.
7. Lecture Theatre	40' x 25'	or	1,000 do.
8. Workshop	20' x 15'	or	300 do.
9. Animal Shed	30' x 20'	or	600 do.
			<u>4,920 do.</u>

F. Requirements of Zoology Department are as follows :-

1. Lecture Theatre	40' x 25'	or	1,000 sq.ft.
2. Laboratory Room for Hons.	30' x 25'	or	750 do.
3. do. for I.Sc.	30' x 25'	or	750 do.
4. do. for Pass B.Sc.	30' x 25'	or	750 do.
5. Preparation Room	2' x 20' x 15'	or	600 do.
6. Museum	50' x 30'	or	1,500 do.
7. Store Room	20' x 15'	or	300 do.
8. Animal Shed	30' x 20'	or	600 do.
			<u>6,250 sq.ft.</u>

G. For College Hall we require an area of approximately 100' x 80ft. or 8,000 sq.ft. The Hall will have accommodation for about 800 to 1,000 students. This will be useful for Examinations of the College also. In addition to the hall, I expect we can have several rooms of fairly large size to house our Library, which require four rooms of the size 60' x 40', two of them on the ground floor and two on the first floor with internal staircase connecting them.