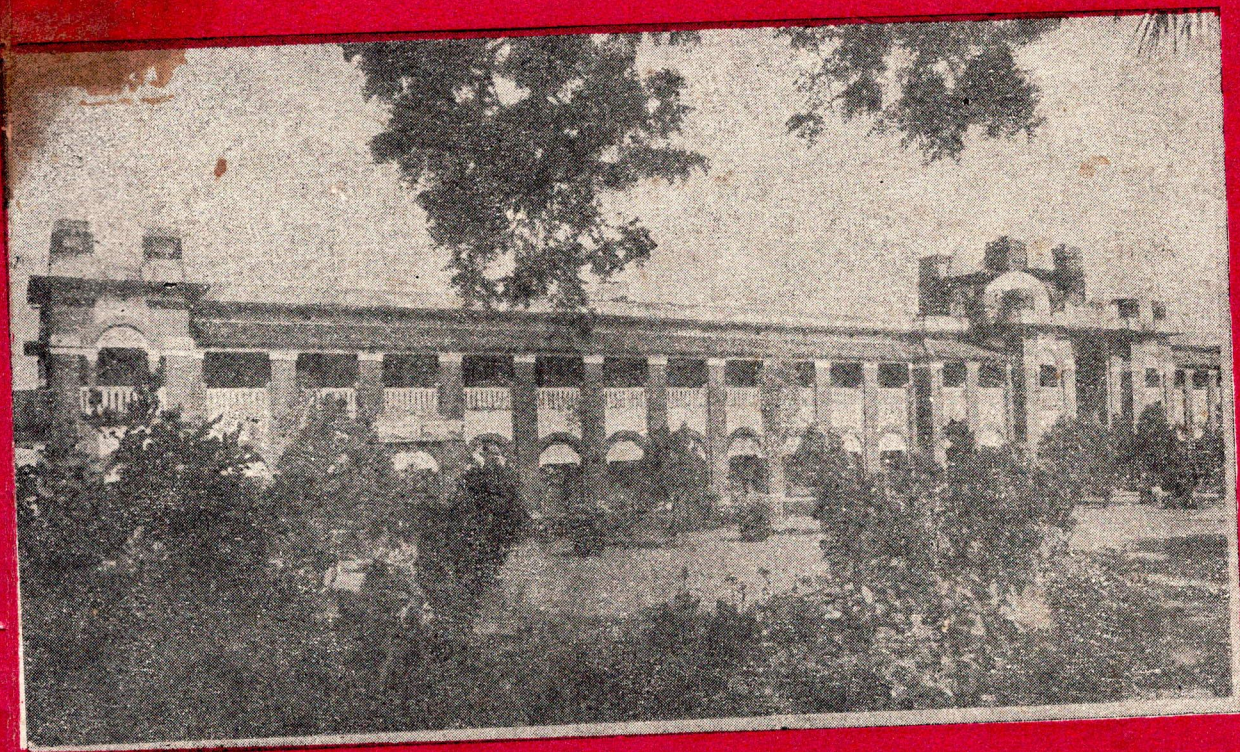


THE FIRST HUNDRED YEARS



প্রাচুর্য্য আনুক শতবর্ষের ধারা



A CENTENARY SOUVENIR
DACCA SURVEY SCHOOL 1876
BANGLADESH UNIVERSITY OF
ENGINEERING & TECHNOLOGY 1976

THE FIRST HUNDRED YEARS

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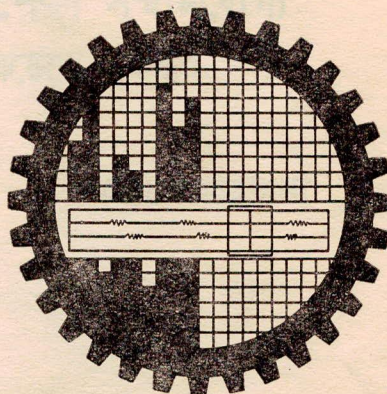
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বাংলাদেশ প্রকৌশল বিশ্ববিদ্যালয়
ঢাকা

DACCA SURVEY SCHOOL-1876

BAHANGLADESH UNIVERSITY
OF ENGINEERING &

1876

আল্লাহর দৃষ্টিতে

তোমাদের মধ্যে তিনিই সর্বাপেক্ষা সম্মানযোগ্য
যার কতবোয় প্রতি নিষ্ঠা সবচেয়ে বেশী।

—আল কোরআন

মহাত্মা স্বাধীনতা আন্দোলন তীক্ষ্ণবাহী তীক্ষ্ণবাহী তীক্ষ্ণবাহী

Design

KARIM

Printed by : Bangladesh University of Engineering & Technology, Dhaka

Printed at : Power Printing Press, (Munir Nagar) Dhaka, Pakistan & Dhaka



মহামান্য রাষ্ট্রপতি বিচারপতি আবুসাদাত মোহাম্মদ সায়েম



রাষ্ট্রপতির বাণী

বাংলাদেশে কারিগরী ও প্রকৌশল শিক্ষার শতবর্ষ পূর্তি অনুষ্ঠান উদযাপিত হতে যাচ্ছে জেনে আমি আনন্দিত। এই উপলক্ষে প্রকৌশলীদের আমি জানাচ্ছি আমার আন্তরিক শুভেচ্ছা।

১৮৭৬ সালে ছোট একটি ভূমি জরিপের স্কুল হিসেবে প্রতিষ্ঠিত হওয়ার পর থেকে যে সব জ্ঞানী, গুণী ও কর্মঠ পুরুষের ঐকান্তিক সাধনায় আজকের এই প্রকৌশল বিশ্ববিদ্যালয় গড়ে উঠেছে জাতি সব সময়ই তাঁদের স্মরণ করবে। আমার দৃঢ় বিশ্বাস বর্তমানে যাঁরা এই বিশ্ববিদ্যালয়ের সাথে জড়িত আছেন তাঁরা সবাই মিলে অতীতের উজ্জ্বল ঐতিহ্যের আলোকে এই শিক্ষার ধারাকে দিন দিন উৎকর্ষের পথে এগিয়ে নিয়ে যাবেন।

সহজলভ্য কিন্তু প্রচুর সম্ভাবনাময় বহুবিধ উপাদান দেশের সর্বত্র ছড়ানো রয়েছে। আমি আশা করবো যে, আমাদের প্রকৌশলী ও স্থপতিরা এগুলো খুঁজে বের করবেন এবং সম্ভাব্য সকল উপায়ে আমাদের নিজেদের অজানা সম্পদকে অগ্রাধিকার দিয়ে দেশের কাজে লাগানোর ব্যাপারে আত্মনিয়োগ করবেন। সারা বাংলাদেশের জনগণের অর্থনৈতিক অগ্রগতি ও জাতীয় জীবনের সর্বক্ষেত্রে উন্নতি ও সমৃদ্ধি সাধনের মহান প্রতিজ্ঞা এই শতবর্ষ পূর্তি অনুষ্ঠানকে অর্থবহ করে তুলুক এই আমার আন্তরিক কামনা।

স্বাঃ/ আবুসাদাত মোহাম্মদ সায়ের

PREFACE

Bangladesh University of Engineering and Technology, Dacca, celebrates the centenary of its foundation this year with a deep sense of pride and joy. History of development of technological education in this region is the history of this institution.

Bangladesh University of Engineering and Technology, Dacca, the highest seat of engineering education in Bangladesh, had developed from the old "Dacca Survey School" established in 1876 to offer a 2 year course in Surveying. Government funds plus a generous gift from the then Nawab of Dacca, Sir Ahsanullah Bahadur led to the move from the location at old Dacca to Curzon Hall compound in 1906 when its name was changed to "Ahsanullah School of Engineering." The school continued to grow and was relocated at its present site in 1920. Through the years, the status of the school was raised, by stages, to that of a college, and Ahsanullah Engineering College came into being in July, 1947.

To meet the demand for larger number of engineers and to foster research and post-graduate education in Engineering, Architecture and allied fields, the National Commission on education and the Planning Commission recommended to raise the status and upgrade the college into an University. In 1962, the college was transformed into East Pakistan University of Engineering and Technology, an autonomous institution. Academic programmes in Architecture and Post-graduate programme at Master's level in different branches of Engineering were introduced at that time.

With the emergence of Bangladesh in 1971, the institution was renamed as Bangladesh University of Engineering & Technology, Dacca (Prokaushal Bishawbidyalaya, Dacca, Bangladesh).

Arrangements for introduction of Post-graduate work at the Ph.D. level are being finalised to offer the programme from the current session.



1876

Survey School at Nolgola (West of Sir Salimullah Medical College)

History of The Bangladesh University of Engineering And Technology, Dacca.

HERITAGE :

The last quarter of the nineteenth century unfolded the first chapter in the history of technical education in this part of the subcontinent. It was in the year 1876 that the nucleus of the Bangladesh University of Engineering and Technology of to-day was first originated with the establishment of a survey school named "Dacca Survey School". The school initiated a survey course of two years' duration with a view to producing men sufficiently qualified to serve as Land Surveyors in Government departments as well as in private organisations. The school gradually gained its popularity and in the session 1895-96, its total number of students rose to about 400. The status of the school was raised in the year 1897 with the addition of a Sub-overseer course of three years' duration. It was a Civil Engineering course aiming at qualifying students for employment as Sub-overseers in the Public Works Department, District Board, Municipalities and private enterprises. The status of the school was further upgraded in the year 1905 with the addition of an Overseer course of four years' duration in Civil Engineering for employment of the successful students as Overseers under the above mentioned employers. At that stage the Nawabs of Dacca took keen interest in the advancement of Muslim education and His Excellency Nawab Ahsanullah donated a sum of Rs. 1.12 lacs for improvement and development of this institution. As a recognition of his great contribution for the upliftment of the institution, it was renamed as "Ahsanullah School of Engineering" in the year 1908. In the same year, the Government sanctioned the affiliation of the school to the Joint Technical Education Board (the then Overseer Examination Board of Bengal).

Originally the Dacca Survey School was housed in a rented building in the old part of Dacca town, at Nalgola. In the year 1906, it was shifted to a larger and specially designed building constructed by the Government near the old Railway Station by the side of the present Shahidullah Hall of Dacca University. The tall chimney there still bears the memory of the Ahsanullah School of Engineering of these days. The one-storied building near the chimney, which was later made the Air-Force Recruitment Head Quarter, was the workshop of the school. Accommodation of the students was arranged in the ground and the first floor of the present Fazlul Haque Hall. This campus was occupied upto 1920. Then the school was reconstructed and shifted to a larger area with spacious buildings which were originally built for accommodating the Government Press of the then East Bengal Government created by Lord Curzon in 1905. This is the location where the institution got its permanent place and where the University is situated today.

The Ahsanullah School of Engineering was a professional one and designed primarily to train men for all the subordinate grades of Civil Engineering profession. Duration of the Sub

-overseer course was reduced to two years. The Overseer course was of additional two years' duration followed by one year's practical training on works approved by the Overseer Examination Board. Examinations in the sessional subjects and the promotion-examinations in these courses were controlled by the authorities of the institution. The examinations to qualify for the final certificate were conducted and controlled by the Overseer Examination Board of Bengal. Apart from these courses, there were Artisan courses in the workshops in different trades.

In 1909, an Industrial Conference was held at Dacca. The conference, presided over by Mr. Nethan, the then Commissioner of Dacca Division, recommended the establishment of an Industrial Institute and Diploma courses in Mechanical and Electrical Engineering. In view of these recommendations, Diploma courses in Mechanical and Electrical Engineering were started in 1913. The already existing Overseer courses in Civil Engineering continued. All the students of these three disciplines had common courses in the first two years and were given option of choosing any one of the three branches at the beginning of the third year. Considerable improvements were made in the Laboratories and Workshops to meet the requirements of the Mechanical and Electrical courses. The courses in Mechanical and Electrical Engineering, however, existed for only three sessions. In 1916, the authorities came to the conclusion that teaching of the same courses in two institutions, one at Dacca and another at Shibpur (now in West Bengal, India) was unnecessary for the province. Consequently, the Bengal Engineering College at Shibpur terminated their Overseer course in Civil Engineering retaining only the degree course in Civil Engineering and Diploma courses in Mechanical and Electrical Engineering. The Ahsanullah School of Engineering retained the Overseer courses in Civil Engineering. The Diploma courses in Mechanical and Electrical Engineering were dropped from here.

The Ahsanullah School of Engineering was initially attached to the Dacca College. The head of this school was known as the Headmaster. Later, the post of Headmaster was upgraded to the rank of Principal and was placed directly under the control of the Director of Public Instructions of Bengal. Mr. Anderson was the first Principal of the institution. Mr. B.C. Gupta replaced Mr. Anderson in 1932. Mr. Gupta held the office of the Principal for the period 1932—38. In 1938, Sher-e-Bangla A.K. Fazlul Haque, the then Chief Minister of Bengal, appointed Mr. Hakim Ali as the Principal. Matriculation was the prerequisite qualification for admission in the Overseer and Diploma courses. The Muslim students were given priority in the admission to encourage and accelerate advancement of the Muslim community.

After the Second World War, a comprehensive programme was undertaken by the Government of undivided Bengal for the industrial development of the province. The need for technically educated persons to run different industries was keenly felt. Extensive education and training in technical subjects such as Mechanical Technology, Electrical Technology, Workshop Practice etc. were the crying needs of the hour. It was expected that persons with intensive vocational and practical training and experienced and educated in technical and engineering subjects would also be able to start small scale industries independently. With these aims in view, new experimental facilities were incorporated in the Laboratories and Workshops of the Ahsanullah School of Engineering. The necessity of establishing an Engineering College was also very keenly felt at that stage. Accordingly, the Government set up a Committee to study and evaluate the requirements and suggest appropriate actions in respect of higher technical education.

The Committee of Higher Technical Education recommended the starting of an Engineering College in the premises of the Ahsanullah School of Engineering. The school was to be shifted to the premises of the Plassey Barracks. New buildings for accommodation of the school, workshops and hostels were to be constructed. The proposed Engineering College was to admit 120 students to a four years' degree course in Civil, Mechanical, Electrical, Chemical, Agricultural and Textile Engineering. The school was to offer admission to 480 students to a three years' Diploma course in Civil, Mechanical and Electrical Engineering. The recommendations relating to reorganisation at Diploma level received Government sanction in July 1946 and the authorities of Ahsanullah School of Engineering decided to admit a total of 240 students in the first year Diploma course in the session 1946-47. However, 190 students applied and all of them were admitted.

In May 1947, the then Government of Bengal decided to open a new College of Engineering at Dacca from July 1947, and admission tests for the degree courses were consequently held both at the Engineering School at Dacca and at the Bengal Engineering College at Shibpur, the candidates being given the option of choosing their institution. However, before any staff could be recruited to teach at the degree level in the new College, the country was partitioned. At this stage, nearly all the staff of the Ahsanullah School of Engineering, excepting the Principal, three Lecturers in Civil Engineering and four Assistant Foremen in the workshops left for India. On the other hand only four teachers and one Workshop Forman of the Bengal Engineering College opted for Pakistan and came over to join the Ahsanullah School of Engineering. The prodigious task of maintaining teaching of the diploma classes and inauguration of the classes of the degree courses, which could not be delayed in view of the pressing need for engineers in the development of the newly established country fell on this small band. The session was started in August 1947 and the Ahsanullah School of Engineering was renamed as Ahsanullah Engineering College, Dacca. Mr. Hakim Ali was appointed the first Principal of the Ahsanullah Engineering College.

In February, 1948, the Government of East Pakistan sanctioned and approved the conversion of the Ahsanullah School of Engineering into the Ahsanullah Engineering College, offering both degree course in Civil, Mechanical, Electrical, Chemical, Agricultural and Textile Engineering and Diploma courses in Civil, Mechanical, and Electrical Engineering. The college was to accommodate 120 students in the degree level. The already existing Diploma programme continued. During this period, there was little addition to the staff strength and consequently the teachers were saddled with excessive teaching loads.

The first batch of degree students completed their common courses of the initial two years in December, 1949. Three teachers joined the Electrical Engineering Department in early 1950. The staff position further improved in the same year and the students of the third year degree courses were allowed to choose any one of the Civil, Mechanical, Electrical and Chemical Engineering branches. Courses in Textile and Agricultural Engineering were not offered as no demand was forthcoming for graduates in these fields; instead the Government sanctioned the opening of a degree course in Metallurgical Engineering in lieu of Agricultural Engineering and students were taken into the third year Metallurgy course in the session 1952-53. However, in view of lack of prospects for graduates in Metallurgical Engineering, the Governing Body of the College had recommended to discontinue the course in this field.

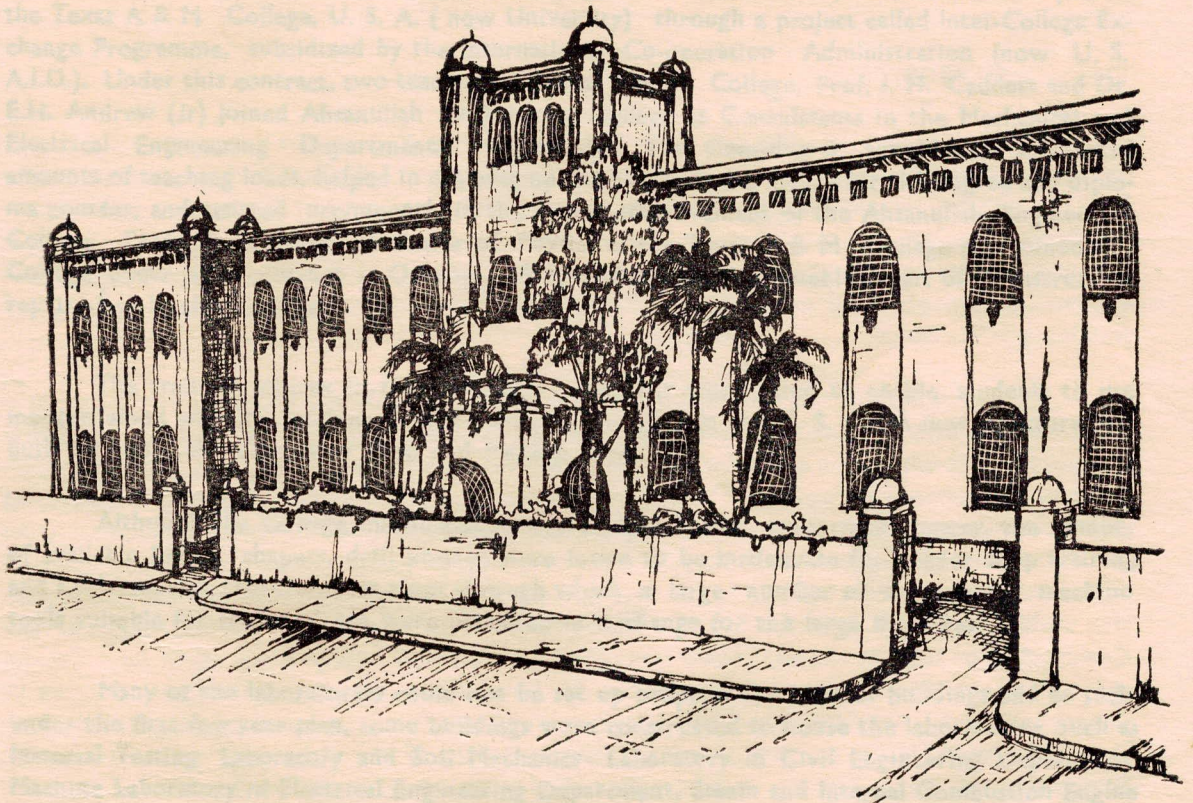
Before 1946, the Overseer course in Civil Engineering at the Ahsanullah School of Engineering was of four years' duration, and on an average 60 percent of the students admitted passed without repeating at any stage. The Overseers passing this course acquired adequate knowledge for the supervisory duties they were expected to shoulder in service. In 1946, on recommendations of the Committee for Higher Technical Education, the duration of the Diploma course was reduced to three years and the intake was raised from 120 to 240. With this augmented number of new admission, a large number of students matriculating in second and third divisions were included in the rolls of this institution. Also, with the introduction of three papers in Mathematics, the majority of the students were unable to assimilate these subjects rapidly and this resulted in a large number of failure of students in the first year. Further, the provision of a two-year common course left only one year in which the students had to learn all the fundamentals of the chosen branch of engineering. This duration proved inadequate and accordingly the syllabi for the Diploma courses were thoroughly revised and were given effect from the session 1955-56. In the revised curriculum, after one year of preparatory common course, a student was to pursue two more years' of study in the selected branch of engineering.

The Government of East Pakistan, as mentioned earlier, sanctioned the establishment of the Ahsanullah Engineering College offering degree courses of four years' duration. On the other hand, the Punjab College of Engineering and Technology was offering degree courses of three years' duration. A Technical Education Committee, set up by the Government of Pakistan, recommended in its report published in 1950, that the degree course in engineering should be of three years' duration. Consequently, a Committee of Courses was set up in this College to explore the possibilities of reducing the contents of the courses to three years and to revise details of the syllabi. The curricula and syllabi were, in due course, drawn up and placed for approval before the meeting of the Principals of the Engineering Colleges of Pakistan, set up by the Inter University Board of Pakistan. The Principals' Committee, however, recommended that all the Engineering Colleges in Pakistan should have degree courses of four years' duration. The three years' course and syllabi were dropped and new curricula and syllabi for a four years' degree course were prepared.

The College was affiliated to the University of Dacca. The new syllabi were approved by the University of Dacca and came into force in 1956. The salient feature of this new system was that the entire four years' courses were divided into 8 sessions called semesters. In any one semester, a student of a particular class studied subjects allotted to that semester. His continuance of study of new subjects in the following semester was to be regulated by the proficiency shown by the student in the previous semester at his home tasks, laboratory works periodical tests and semester examinations.

It was expected that in this new semester system, a student would be induced to be more regular in his studies throughout the year. Previously the students used to leave everything to the months before the annual examinations and the results in most cases used to be unsatisfactory. In the new system, the University examinations used to be held at the end of the first year and fourth year i.e. at the end of the second and the eighth semesters.

In 1957, the number of students admitted to the first year degree courses was raised from 120 to 240 and the diploma course was discontinued at this College in the year 1958. Although the



1947

Ahsanullah Engineering College.

College was running short of the requisite number of teachers, the position went on improving each year with a concomitant improvement in examination results. To bring the staff upto the requisite strength, the best graduates of this College were offered temporary Lecturership in the College. These new Lecturers were sent to Texas A & M College, U. S. A., for postgraduate studies for one year. On their return they were required to serve this College for a minimum period of five years. In the meantime, in 1951, Mr. T.H. Mathewman replaced Mr. Hakim Ali as Principal. Mr. Mathewman was replaced by Dr. M.A. Rashid as Principal in 1954.

In 1954, the Ahsanullah Engineering College established a co-operative relationship with the Texas A & M College, U. S. A. (now University) through a project called Inter-College Exchange Programme, subsidized by the International Co-operation Administration (now U. S. A.I.D.). Under this contract, two teachers of Texas A & M College, Prof. J. H. Caddess and Dr. E.H. Andrew (Jr) joined Ahsanullah Engineering College as Consultants in the Mechanical and Electrical Engineering Departments respectively. The Consultants shouldered substantial amounts of teaching loads, helped in drawing up the curricula and syllabi for the degree and diploma courses, and assisted prominently in the overall improvement of the Ahsanullah Engineering College. Prof. E. E. Vezey Professor of Physics at the Texas A & M College also joined this College under this contract in October, 1955, and initiated the establishment of an instrument repair shop in this College.

The training scheme in the Carpentry shop was reorganised to enable students to use modern wood working machinery which were procured from the U. S. A. A new structure was built to house the Carpentry Shop and Pattern Shop.

Although the College machine-shop was equipped with modern machinery, the number of available lathes, shapers, drill presses were found to be inadequate for proper shop training and a scheme was, therefore, set afoot through which a large number of these small machine tools suitable for students' use were procured in exchange for the large machines.

Many of the laboratories could not be set up properly for want of buildings and as such, under the first five year plan, some buildings were constructed to house the laboratories, such as Material Testing Laboratory and Soil Mechanics Laboratory in Civil Engineering Department, Machine Laboratory in Electrical Engineering Department, Steam and Internal Combustion Engine Laboratory, Hydraulics and Fluid Mechanics Laboratory, Metrology Laboratory and Fuel Testing Laboratory in Mechanical Engineering Department. These laboratories were equipped properly when a good consignment of instruments and equipments arrived from the U.S.A. under the Inter-College Exchange Programme.

The Library facilities were also not very adequate; only 7000 technical books could be procured by that time. The Asia Foundation then came forward with a gift of some useful text books which were issued to the students for a whole session on cheap rental charge. This system still in practice.

The present Administrative Building, the then Main Hostel, which was built in 1930, and the South Hostel (now Nazrul Islam Hall) used to serve for the accommodation of the students in addition to the barracks at Plassey area. A new hostel, (the present Ahsanullah Hall), was built to meet the accommodation requirements. The College then was a residential one and all the students were required to stay in the hostels.

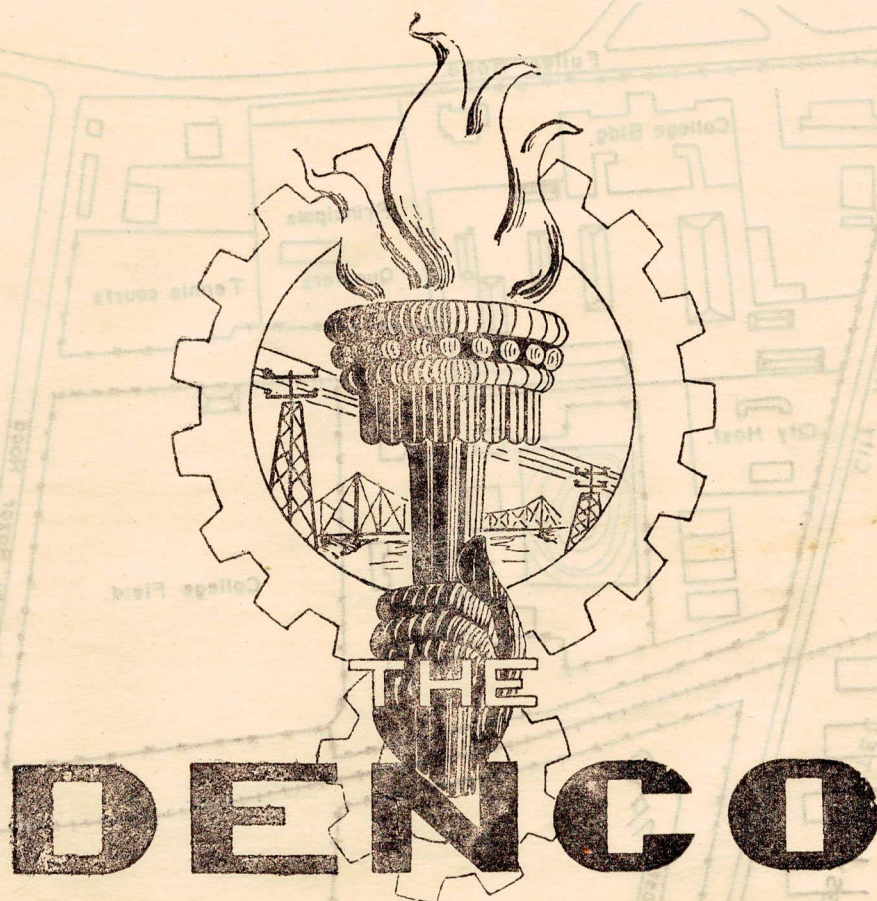
In 1961, Dr. M.A. Rashid left the College and joined as Director of Technical Education (DTE), Government of East Pakistan and Dr. Waquar Ahmad, the then Head of Electrical Engineering Department took over as the Principal.

THE UNIVERSITY :

On the 1st of June, 1962, the Ahsanullah Engineering College was upgraded to the Status of the East Pakistan University of Engineering and Technology by the East Pakistan Ordinance No. XXXVI of 1961, since it was felt expedient to establish a University of Engineering and Technology in East Pakistan to provide facilities for higher education and research in the field of Engineering and Technology. It was firmly believed that the University aimed at raising the quality of engineering education and providing research facilities would bring in economic prosperity and well being of the nation.

Dr. M.A. Rashid, the then Director of Technical Education was made the first Vice-Chancellor and the Principal Dr. Waquar Ahmad assumed the office of the Director of Technical Education. The University started with a strong footing under the able guidance, dynamic leadership and firm administration of Dr. M.A. Rashid. Professor A.M. Ahmed of Mechanical Engineering Department was the first Dean of the Faculty of Engineering. As a University its administrative space and jurisdiction increased considerably. The administration was initially accommodated in the old academic building. The Main Hostel was subsequently converted into the administrative building. Mr. M.A. Jabbar and Mr. Mamtazuddin were respectively the first Registrar and Comptroller of the University. Some immediate construction works were taken up. The tin sheds in Plassey Barracks were demolished to lay foundations for three new dormitories to be known as Quaid-e-Azam Hall (present Titumir Hall), Sher-e-Bangla Hall, and Liaquat Ali Hall (present Sohrawardy Hall). The first provosts of different halls of the University were Prof. K. Ali, Prof. Zahoorul Huq, Prof. M. Ibrahim, Prof. M. Haque. A new post of Director of Students' Welfare (D.S.W.) was created to supervise and to look after the welfare of the students and Prof. M. Kabiruddin, the then Head of Civil Engineering Department took over the charge of this post. Professor Wahiduddin Ahmad (present Vice-Chancellor) became the Head of Civil Engineering Department. Another new post of Director of Advisory, Extension and Research Services (DAERS) was created to organise research activities and to create facilities for advisory and consulting services. Dr. V.G. DeSa took over the charge of this new Directorate.

A new department "Department of Architecture" was also opened in 1962. A few American experts mainly from Texas A & M College under the leadership of Prof. Vrooman came here to organise this department. Some Civil Engineering graduates were sent to the U.S.A.



Monograms of Engineering College

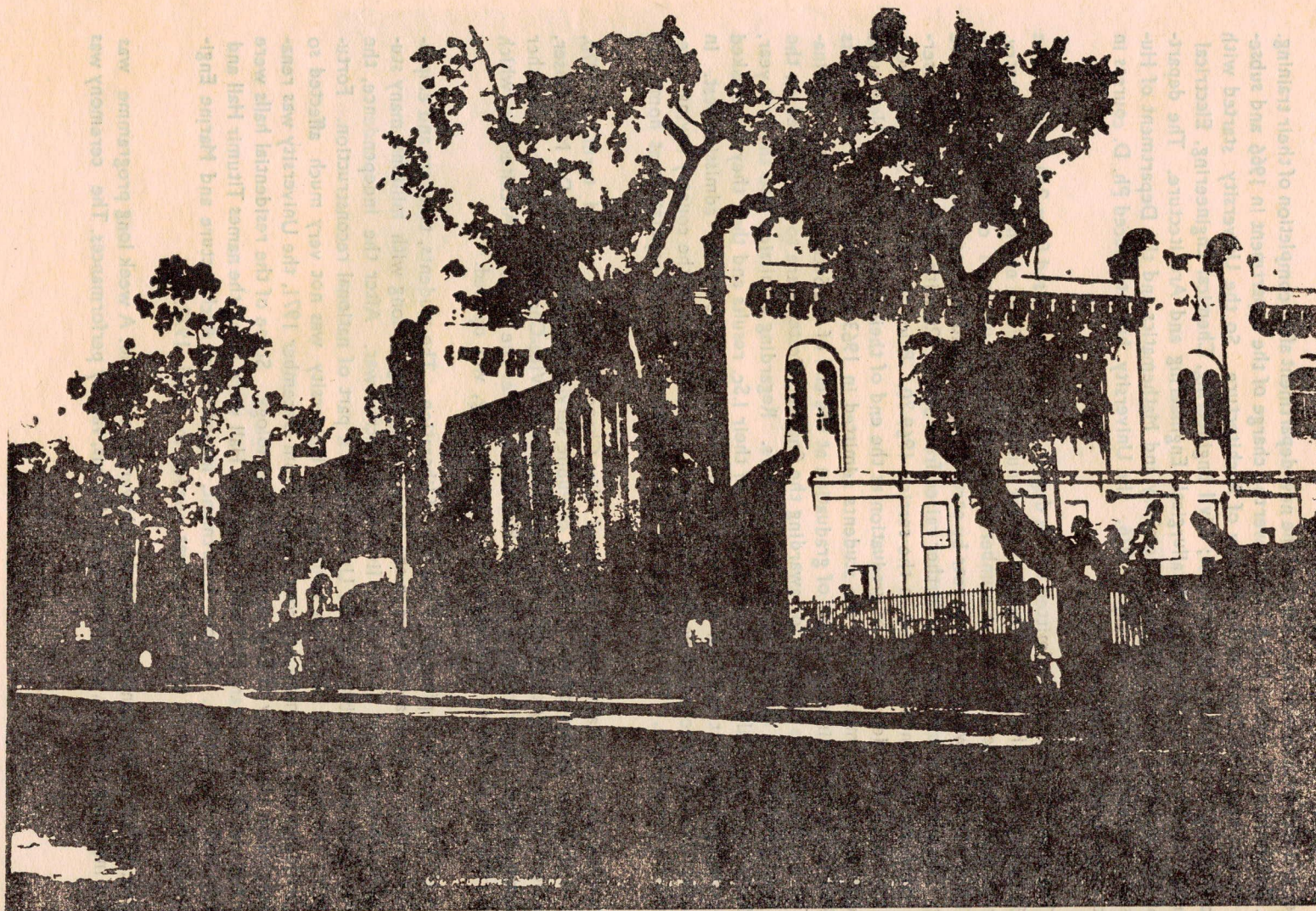
as teacher trainees to take over the charge of the new department after completion of their training. Mr. S.A. Zahiruddin (M. Arch., U.S.A.) took over the charge of the department in 1966 and subsequently he was made the Dean of the Faculty of Architecture. So the University started with the following degree awarding departments; Civil Engineering, Chemical Engineering, Electrical Engineering, Mechanical Engineering, Metallurgical Engineering and Architecture. The departments of basic sciences namely, Physics, Chemistry and Mathematics and the Department of Humanities were already present. To day in 1976, the University has introduced Ph. D. courses in different engineering disciplines.

The number of students admitted to the degree courses was raised from 240 to 360 in the year 1964 to cope with the growing need of larger number of graduate engineers in the country. To provide space facilities to a larger number of students, the foundation of a colossal six-storied building was laid down in the same year by earth filling the pond in front of the administrative building. The admission strength was further raised from 360 to 420 with a few seats kept reserved for tribal and Palestinian students in the session 1969-70. Prior to 1963, the students were allowed to choose their department of graduation at the end of their third semester. New rules and regulations were formulated for the students admitted in 1963 and onwards. The students were asked to choose their department of graduation at the end of the Second semester examination. The results of these students for awarding the final certificates were to be declared on the basis of total performance throughout all the semesters. Regarding admission into the first year, the students were primarily selected on the basis of their I.Sc. results and then they were asked to sit for an admission test and final selection was made on the basis of the admission test. In no time, the University proved to be the most disciplined institution in the country having excellent academic atmosphere. The graduates of this University earned reputation at home and abroad.

In 1966 Dr. M.A. Rashid was appointed Vice-Chancellor for a second term. In 1970, Dr. M.A. Rashid was appointed the Chairman of Public Service Commission and Dr. M.A. Naser, the then Dean of the Faculty of Engineering took over as the Vice-Chancellor. This year another new department, the "Department of Physical Planning", under the Faculty of Architecture, which was later renamed as Faculty of Architecture and Planning, was opened.

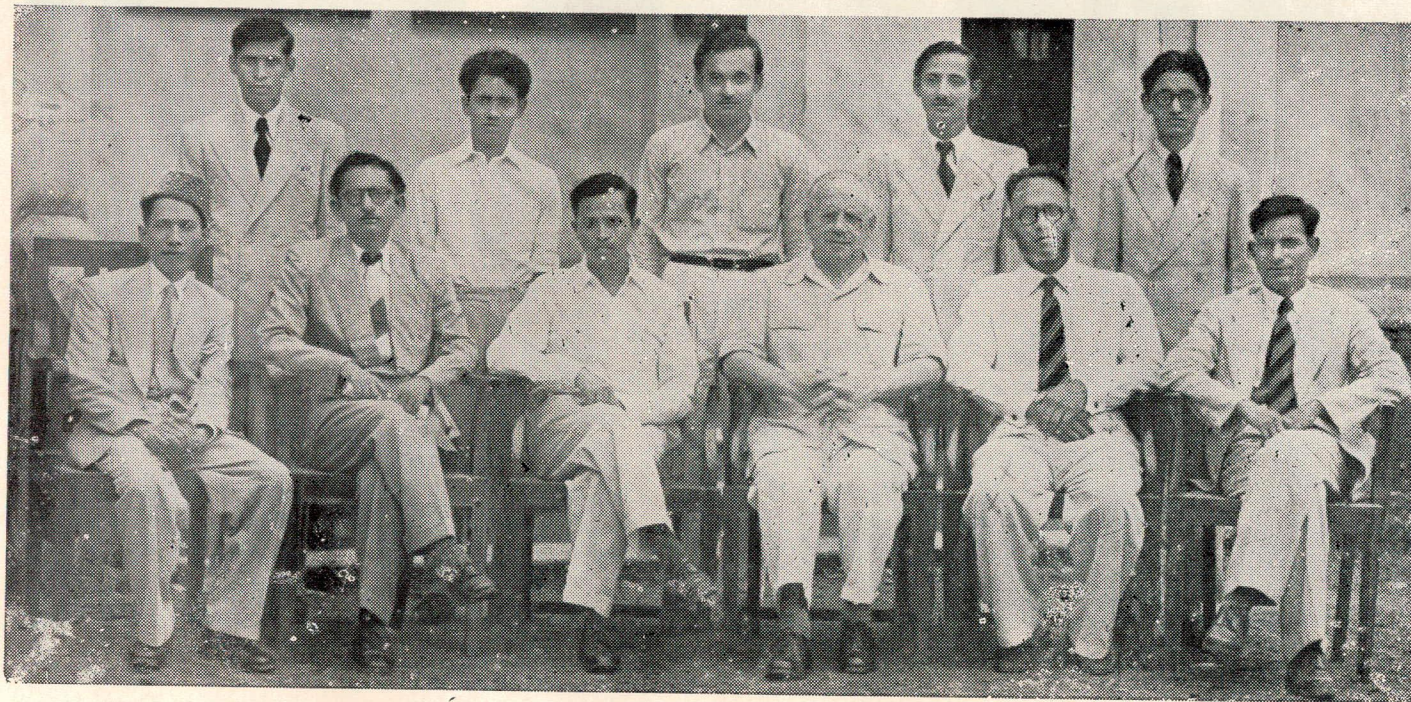
In 1971, the country plunged in the war of liberation. The students, teachers and employees of this institution took active part in the freedom fighting. Along with millions, many students of this University laid down their lives in the sacred war. After the independence, the staff and students started rebuilding the University as a part of national reconstruction. Fortunately during the period of liberation struggle, this University was not very much affected so far as its buildings and equipment are concerned. From December 1971, the University was renamed as Bangladesh University of Engineering and Technology. Some of the residential halls were also renamed viz. Qauid-e-Azam Hall and Liaquat Ali Hall were given the names Titumir Hall and Sohrawardy Hall respectively. A new department, named Naval Architecture and Marine Engineering under the Faculty of Engineering was opened in April, 1972.

In March, 1973, the first convocation of this University was held. A week long programme was chalked out including seminars, departmental exhibitions, variety performances. The ceremony was



Old Academic Building : Formerly of the Ahsanullah Engineering School and later of the College.

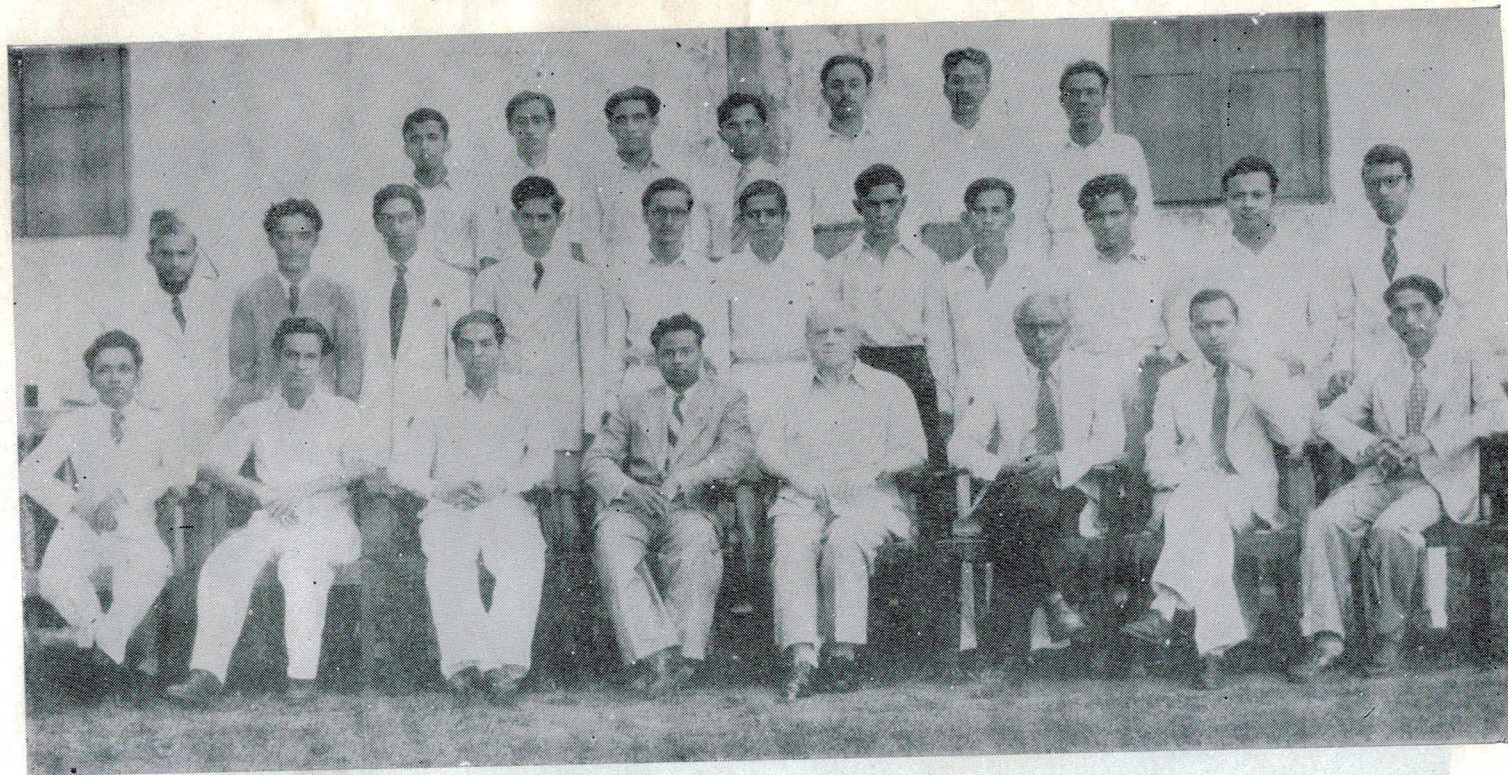
FIRST BATCH OF CHEMICAL ENGINEERS



Sitting (L to R)—Prof. A. Quadir Chowdhury, Prof. M. Haque, Prof. M.A. Naser, Principal T.H. Matthewman, Mr. Yunus, Dr. M. Ibrahim.

Standing (L to R)—Mr. A. Ghafoor, Mr. Rezaul Karim, Mr. Emdadul Haque, Mr. Mushfiqur Rahman Chowdhury, Mr. Abdul Malek.

FIRST BATCH OF CIVIL ENGINEERS



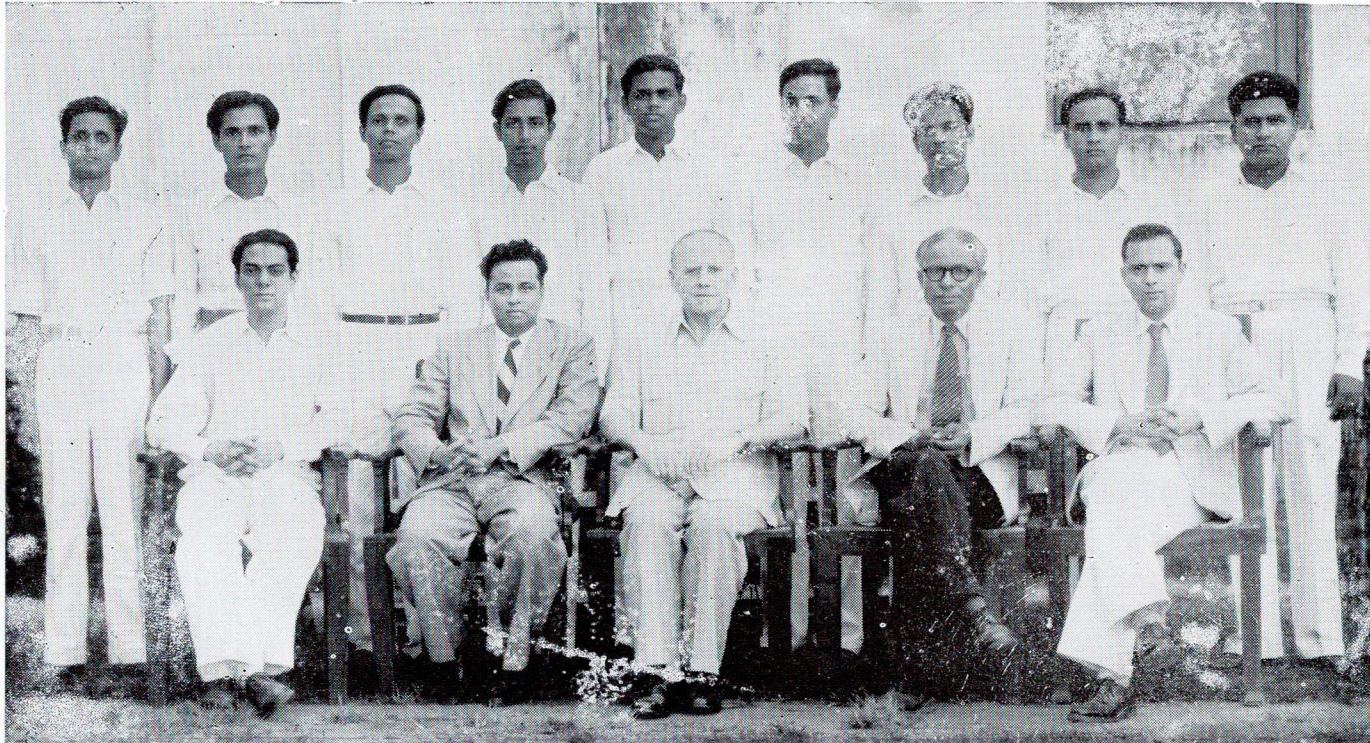
From left

Front Row—Mr. T. Islam, Mr. A. Haq., Prof. N. Haq., Prof. A. Rashid, Mr. T. H. Matthewman, (Principal),
Prof. M. Kabiruddin, Dr. W. Ahmad, Mr. A. Islam.

Middle Row—Mr. I. Quraishi, Mr. S. Choudhury, Mr. M. Hossain, Mr. H. Rahman, Mr. G. Mustafa, Mr. A. Rahman,
Mr. H. Bhuiyan, Mr. A. Quddus, Mr. M. Ahmed, Mr. M. Sukuruddin, Mr. M. Rahman.

Rear Row—Mr. A. Wahed. Mr. A. Mannan, Mr. S. Islam, Mr. A. Hossain, Mr. A. Ali, Mr. A. Karim, Mr. A. Ahmed.

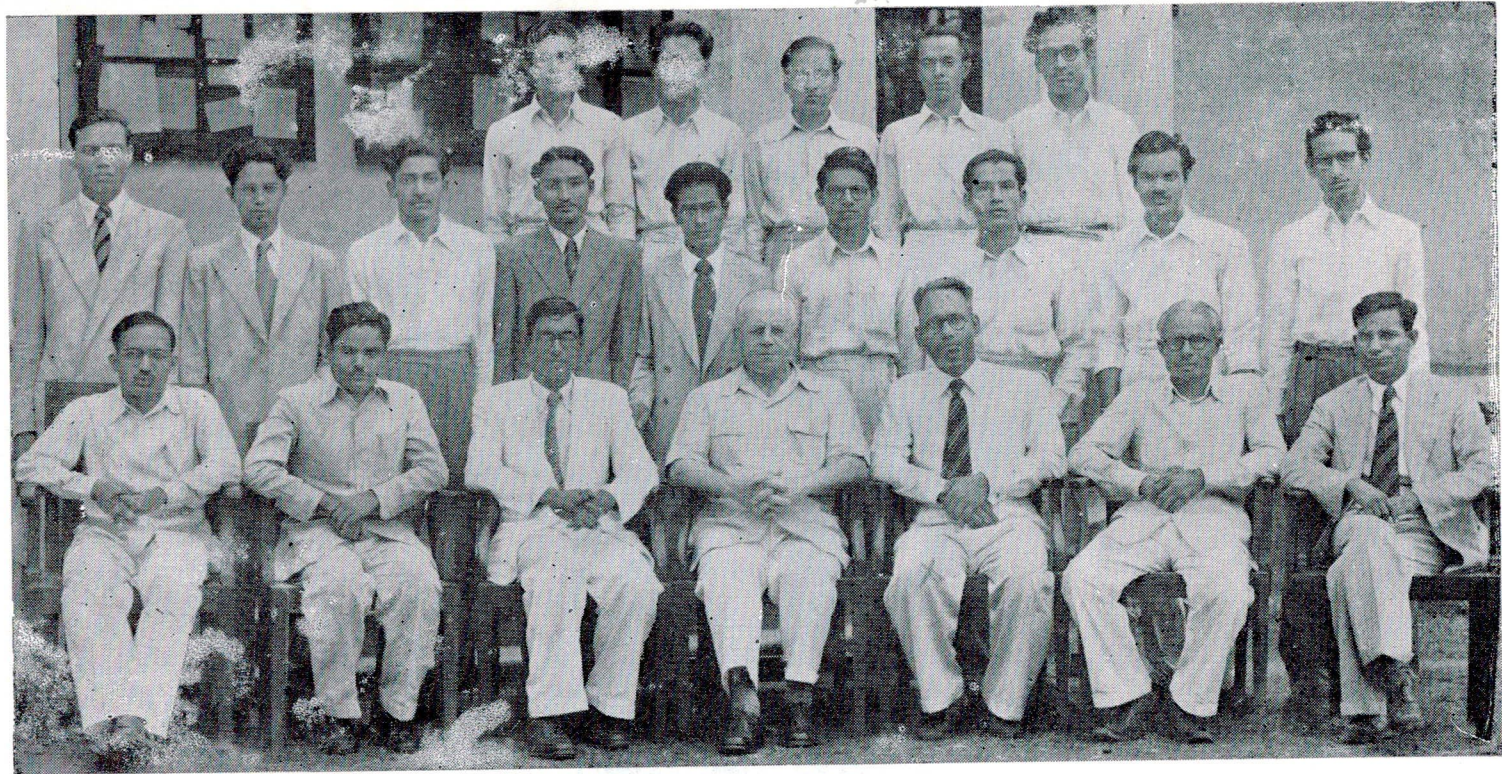
FIRST BATCH OF ELECTRICAL ENGINEERS



Sitting (L to R)—Prof. S. M. Najmul Huq, Prof. Abdur Rashid, Principal T. H. Matthewman, Prof. M. Kabiruddin, Dr. Waquar Ahmed.

Standing (L to R)—Mr. Nazrul Islam, Mr. A. T. M. Nurul Mahmood, Mr. Majibur Rahman, Mr. Shamsuddin, Mr. Abdul Bari, Mr. M. Haque Chowdhury, Mr. Ataur Rahman, Mr. Mahfuzur Rahman, Mr. Abdul Jalil.

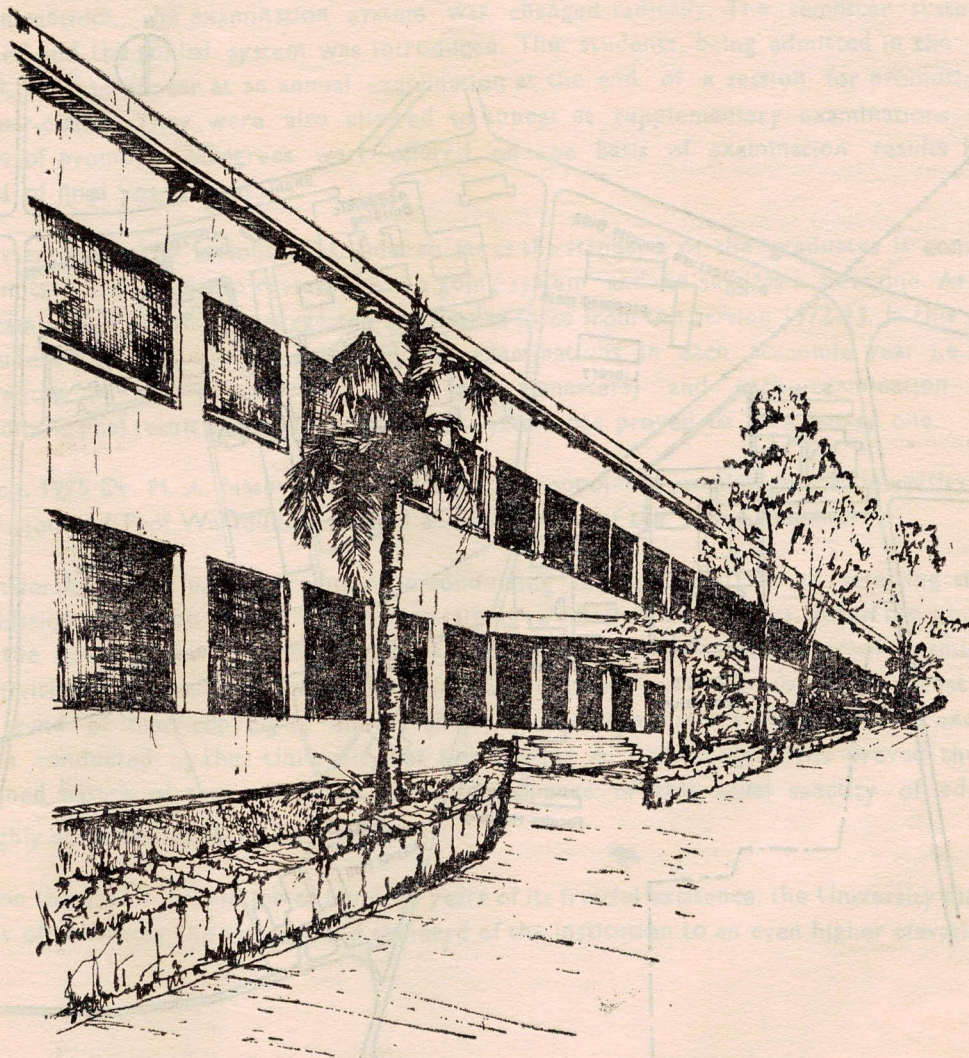
FIRST BATCH OF MECHANICAL ENGINEERS



(Sitting (L to R)—Mr. Arif Hossain Siddiqui, Prof. Ahmadullah, Dr. V. G. Desa, Principal T. H. Matthewman, Mr. Yunus, Prof. M. Kabiruddin, Dr. M. Ibrahim.

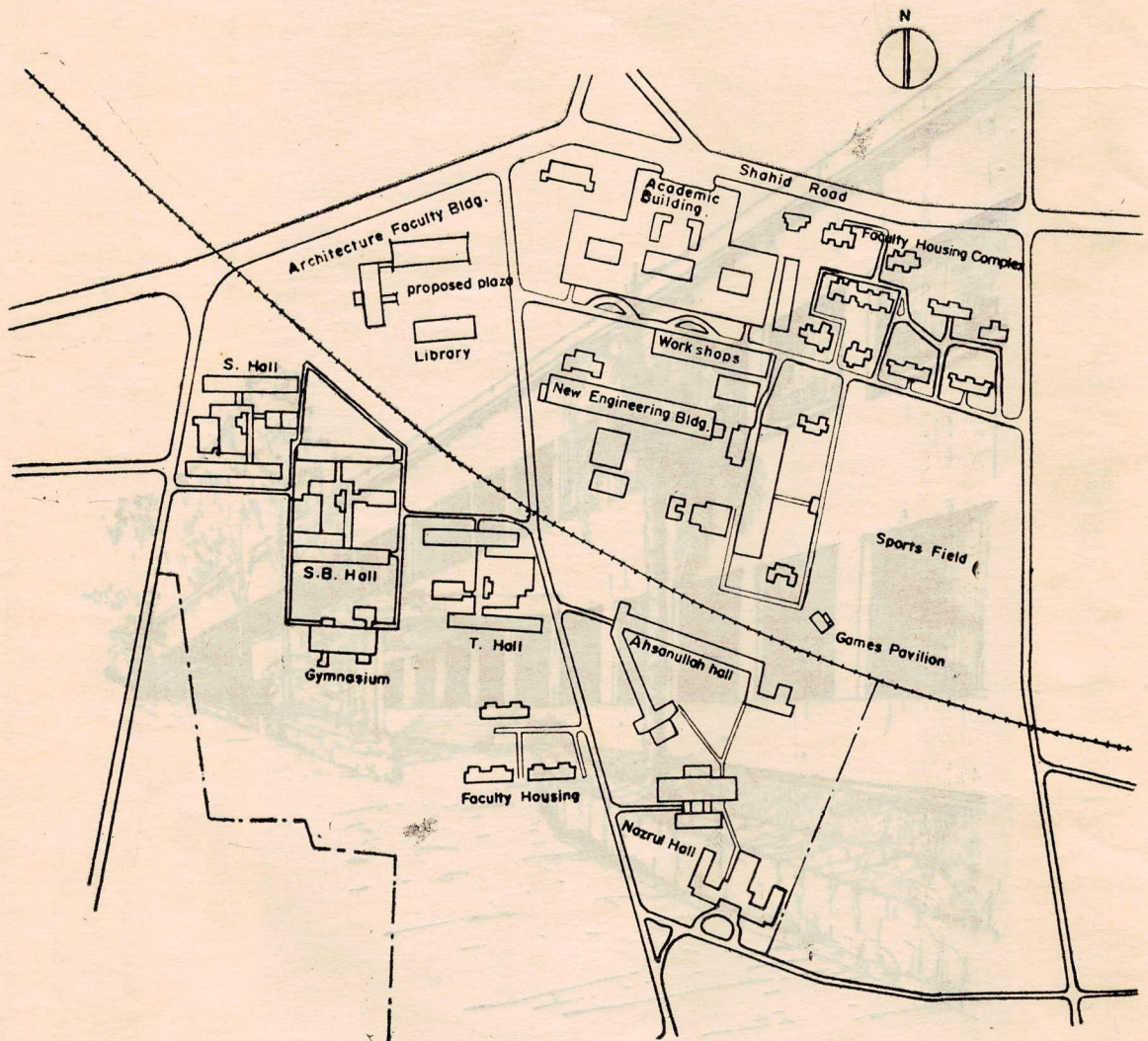
1st Row—Mr. Masoodur Rahman, Mr. Abu Hossain Khan, Mr. Baderuddin Ahmed, Mr. Moazam Hossain Khan, Mr. A. F. M. Abdul Aziz, Mr. Raihan Ali, Mr. Sufi Mohd. Anwarul Quadir, Mr. Wahidur Rahman, Mr. Mohd. Fazle Hossain.

2nd Row—Mr. Rasiuddin Ahmed, Mr. Abdul Hamid Mian, Mr. Kabiruddin Ahmed, Mr. Khursheduddin Ahmed, Mr. Mohd. Yusuf.



1962

East Pakistan University of Engineering & Technology



1968

East Pakistan University of Engineering & Technology Campus.

inaugurated by the Prime Minister Late Shiekh Mujibur Rahman and the degrees were awarded by the then President and Chancellor Mr. Justice Abu Sayeed Chowdhury. That was a memorable occasion in the history of this institution. On 1st January, 1974 another new department "Water Resources Engineering" was inaugurated, the importance of which was long-felt in order to develop, control and use the vast water resources of the country.

In the meantime, the examination system was changed radically. The semester system was abolished and the annual system was introduced. The students, being admitted in the session 1967-68, were to appear at an annual examination at the end of a session for promotion into next year classes. They were also allowed to appear at supplementary examinations for the purpose of promotion. Degrees were offered on the basis of examination results held at the end of final year classes.

This system yielded to various dark sides so far as the standard of the graduates is concerned. A committee was set up to review the on going system and to suggest a new one. As such a new examination system was suggested and was in force from the session 1972-73. In this system, the students are to sit for two terminal examinations in each academic year i.e., eight examinations in the 4 years of study (not semesters) and each examination having bearing on the final result of a student. So far this system has proved to be a better one.

In March, 1975 Dr. M. A. Naser, Vice-Chancellor, was appointed member of the University Grants Commission and Prof. Wahiduddin Ahmed assumed office of the Vice-Chancellor.

The University has an unique tradition in conducting fair examinations in selecting students for admission purely on merit and in maintaining a disciplined campus. After the liberation, when the country was in complete chaos and confusion, the usual norms of examinations and activities in educational institutions fell apart. It was very sad to observe that there was a trend of mass-copying in almost all the public examinations, with the only exception of those conducted by the University of Engineering & Technology. This proved the very disciplined nature of this institution. The maintenance of this usual sanctity of education was highly acclaimed at home and abroad.

Today on the day of completion of hundred years of its fruitful existence, the University maintains the vow of enhancing the prestige and standard of the institution to an even higher elevation.

FACULTIES OF THE UNIVERSITY

FACULTY OF ENGINEERING :

Department of Chemical Engineering

Department of Civil Engineering

Department of Electrical Engineering

Department of Mechanical Engineering

Department of Metallurgical Engineering

Department of Naval Architecture & Marine Engineering

Department of Water Resources Engineering

Department of Chemistry

Department of Mathematics

Department of Physics.

FACULTY OF ARCHITECTURE & PLANNING :

Department of Architecture

Department of Urban and Regional Planning

Department of Humanities

DEPARTMENT OF CHEMICAL ENGINEERING

The Chemical Engineering Department of the Bangladesh University of Engineering & Technology, in the early days of the Ahsanullah Engineering College, was one of the smaller departments. It was small both in terms of space and laboratories as well as teachers and students. Not many students used to opt for this department since job opportunities were almost nil. The first batch of five Chemical Engineering graduates came out in 1952. Till 1955 only twelve chemical engineers graduated from this department. None graduated during the years 1957 and 1958. In 1959 there were seven graduates and from then onwards the department began to expand. More students began to opt for Chemical engineering. From 1959 to 1974 about 266 students graduated in Chemical engineering. The teaching of Chemical engineering was initiated here by a group of dedicated teachers who, despite their basic training in a different discipline, had sacrificed familiar subjects of great personal pride to undertake post-graduate education and research in Chemical engineering. They undertook the difficult task of introducing the new discipline to the employers, developing new courses and producing a corps of Chemical engineers who could convince the employers of their usefulness as well as uniqueness. Around 1957, Dr. O.P. Bergelin of the University of Delaware came to teach in this department under an exchange programme. He stayed in the department for about five years and his influence is still felt around through some of his students who are now teachers here.

The department now offers both B.Sc. Engineering and M.Sc. Engineering degrees in Chemical engineering. The courses offered in this department are designed within the modern concepts of Chemical engineering education and with due consideration to the industrial requirements in the country. The course contents are constantly reviewed by the board of studies. This is in line with the fact that today's Chemical engineer is expected to perform research, development and design works in addition to assuming production responsibilities. He must be capable of evaluating new projects, competitive bids and carrying out economic analysis at the advanced level. His responsibilities range from the evaluation of raw materials and supervision of plant operation to the competitive marketing of finished products. Hence, the syllabus is oriented to give students not only the fundamentals of modern Chemical engineering, but also instructions in a variety of subjects both technical and non-technical, so as to develop approach to industrial and organizational problems. They are also made aware of the problems facing the country and the world at large viz. food, energy and environment.

During the early days there was only one teaching laboratory namely Unit Operations Laboratory. New laboratories which have been set up lately are Corrosion Lab., Kinetics Lab., Petroleum Lab. and Mass Transfer Lab.

Research projects undertaken by teachers are mostly related to the problems and utilization of resources of Bangladesh. Projects such as methanol from natural gas, carbon black from natural gas, light weight synthetic aggregate for the building industry, bio-gas generation and utilization and resources from water hyacinth are all related to the economy of this country.

Teachers of this department have offered and are always ready to offer vital consultancy services to the growing chemical process industries in Bangladesh. Specially, advice in the field of corrosion, materials protection and energy have earned respect and reputation for the department.

Even now, although the Chemical engineering department is small in comparison to some departments, its activities in no way reflect that. Soon after liberation, in 1972, this department arranged a national seminar on Natural Resources and Industrial Prospects of Bangladesh. This was the first of its kind in the country and was a great success. The impact of this seminar and its recommendations are still felt by the policy makers.

Recently the department has opened its new library. This is a small but well-stocked library and it is fortunate to receive gifts of books from the department's ex-teachers.

DEPARTMENT OF CIVIL ENGINEERING

The Department of Civil engineering is the largest department of the University. Out of a total of 4,504 engineers who have graduated from this University, 2,105 are civil engineers. The department has thus successfully achieved its objectives by presenting such a large number of well-qualified civil engineers to the country, who are presently taking active part in nation building and the solution of challenging problems concerned with the national development. Besides, a large number of civil engineering graduates are working in other parts of the world, particularly in the Middle East and South-East Asia.

To cope with the advancement of science and technology and to accommodate the national demand, significant academic changes have taken place with time. Previously it was possible to make the content of the undergraduate courses comprehensive enough to enable a graduate to apply his knowledge directly in any of the branches of civil engineering immediately after graduation. However, recent advancement in engineering and technology have broadened the vistas of knowledge so much that it has become almost impossible to impart the same level of knowledge in all divisions of civil engineering in a four-year course. Consequently, specialization in the under-graduate level is being introduced very shortly.

At present, the department of civil engineering offers under-graduate and post-graduate courses leading to the B.Sc. Engineering (Civil) and M.Sc. Engineering degree in four major branches. The undergraduate curriculum in civil engineering is designed to educate young people to become creative members of the future technical community, able to interact with other engineers and other professionals in the solution of the problems of the human environment. Thus the curriculum provides a broad base of courses in civil engineering. It includes a thorough training in basic Sciences and Mathematics, as well as the professional subjects common to all branches of civil engineering. The undergraduate courses also includes a proportion of Humanities studies, in order to provide a combination of the fundamental scientific training with a broad human outlook. It is hoped that this will avoid technical narrowness on the one hand and broad superficiality on the other.

The BUET, post-graduate courses in Civil Engineering, which lead to the M.Sc. Engineering (Civil) Degree are now available in the following four major branches of study :

Structural Engineering & Concrete Technology
Environmental Engineering
Geotechnical Engineering
Transportation Engineering.

A wide range of subjects is offered in each of these branches and it is possible for students to choose a combination of subjects from these courses of study. Every student has to select to pursue one of the major branches of civil engineering. A student is required to successfully complete courses of at least 24 units in addition to a thesis. Of the 24 units, not less than 16 and not more than 18 units shall have to be from the group of his choice and the thesis shall be from this group. The remaining units shall be chosen from the other group or groups and Mathematics.

The minimum duration of the M.Sc. course is one academic year comprising two semesters. Under normal circumstances a part-time student is required to complete the course and qualify for the award of the degree of M.Sc. Engineering in the relevant branch in five years from the date of his first enrolment for the course.

The department is at present working on different research projects which are mainly concerned with civil engineering problem of vital national importance, e.g., the design of cyclone shelter, water pollution and its control, water supply and rural sanitation, evaluation of quality of ground and surface water resources, behaviour of available building and road materials, performance of flood embankment, engineering soil properties of various regions etc. Besides, some of the projects are of a more fundamental nature, e.g., behaviour of shear wall structures, optimum design of highway bridge, behaviour of composite materials.

The department also accepts research problems offered by the outside agencies which are of immediate national importance and of sufficient scientific and technological interest.

The department of Civil Engineering has five well equipped laboratories under four major branches.

Facilities for compression, tensile, bending, shear, and torsional tests, prestressing testing of structural models, photoelastic investigations, analysis of water, waste water, solid waste, testing of road materials and testing of soil properties are available in the five laboratories.

In addition to the normal teaching and research, the department offers expert advice to government departments and industries to overcome major problems and difficulties that they face in their projects. Research projects, sponsored by international agencies like UNESCO, UNICEF, and WHO are currently in progress. The teachers of the department through the Bureau of Research, Testing, and Consultation offer consulting services to outside agencies in civil engineering design problems. This interaction with industry and outside agencies provides the teachers an opportunity of acquiring first hand knowledge of the practical problems which helps in the improvement of the quality of teaching as well as research. The department also provides testing and standardisation facilities to outside agencies on agreed terms. The department thus extends its efforts beyond the University and directly participates in national development, simultaneously fulfilling its primary function of educating engineers of quality, comparable to best international standards.

ELECTRICAL ENGINEERING DEPARTMENT

Electrical engineering is one of the major departments of Bangladesh University of Engineering and Technology. Since its birth in 1947 as a department of Ahsanullah Engineering College, it has so far produced more than one thousand graduates, who are now working in various responsible positions both at home and abroad.

In 1962 when, the Ahsanullah Engineering College was raised to the status of a University to facilitate research work, the department of Electrical engineering gave special emphasis on post-graduate research and has so far conferred M.Sc. Engg. Degrees on about 30 candidates.

A recent venture to enhance research work in the deptt. is the opening of Ph. D. programme ; for which already a few students have registered. It is expected that in near future more and more students will take part in this programme.

To develop student's independent way of tackling problems, an undergraduate project work is given each year in the final year as a part of total requirement for the B.Sc. Engg. degree.

The laboratory facilities of the department includes electrical circuits, electronics, electrical machines, measurement and standards, telecommunication, control, high voltage, microwave, computer sciences, accoustics and illumination laboratories. Because of severe shortage of foreign currency, the department could neither replace all the damaged and dilapidated equipments nor procure new ones for research work for the last few years. All the laboratories, specially electronics, control and H. V. laboratories suffer heavily from acute shortage of equipment and apparatus. At present the number of students working for Postgraduate degree is around thirty. Following are some of the recently completed research works done under the guidance of teachers.

- i) Study of insulation level of the transmission system and possible causes of insulation failure.
- ii) Digital calculation of transmission loss coefficients for optimum scheduling of generation.
- iii) An investigation of dough nut antenna characteristics.
- iv) Computers aided net work Analysis using statespace approach.
- v) Information content of Bengali language
- vi) Power system stability determination by Liapunov Method etc.

The department of electrical engineering frequently arranges seminars and lectures to facilitate exchange of views between experts and research workers.

A few of the project works done by the final year students are as follows.

- Energy Survey for Bangladesh
- Study of Yagi type TV antenna
- Fractional H. P. vertical shaft motor
- Study of protective relaying practices in Bangladesh



MR. HAKIM ALI
FIRST PRINCIPAL OF ENGINEERING COLLEGE

Random Noise generator, its construction
Motor speed control, using SCR
Binary to digital converter
Proximity detector-analysis and design.

Each year the department conducts study tour sponsored by the University, for the 3rd year and final year students to let them acquire some idea about the areas where they will be working after graduation. In addition to that a training programme has recently been introduced, lasting for about one month. In this connection the cooperation of relevant organisations such as Bangladesh Power Development Board is commendable. A large number of problems existing in BPDB have been or are under investigation in the department. Problems faced by the Telephone and Telegraph Board are also being studied. Besides these, the various laboratories of the department have provided facilities for having numerous products of local industry tested according to relevant specifications, as well as for special operating conditions.

DEPARTMENT OF MECHANICAL ENGINEERING

The work of the Mechanical Engineers in Bangladesh is extremely varied and consists largely of design, construction, operation, maintenance and supervision in the following fields.

Factories of all types.

Machine tools which are used to produce other machines and parts, power generation units using steam and internal combustion engines and turbines.

Transportation equipment and installations ; marine, railway, roads and air.

The production processing and handling of engineering materials such as metals, wood, paper, petroleum products, plastics, chemicals, ceramics etc.

Equipments and installations associated with irrigation, city utilities, food preservation and many other commodities to modern civilized living.

The undergraduate courses for the degree of B.Sc. Engineering (Mech.), which is a four year degree course, has been framed to suit the above requirements and hence to suit the country's need. Of course, the syllabus is reviewed and reframed from time to time keeping in view the changing needs of the country as well as to keep pace with developments of technology.

At different stages of the 3 years of study in the department (1st year is common for all), the students are given a broad based idea of Thermodynamics, Fluid mechanics and machinery, Design of machine elements, Manufacturing process, Internal combustion engines, Power plants, Production planning, Industrial management, Automobile engineering, Refrigeration and Air conditioning, Aerodynamics etc.

Besides the above, some inter-disciplinary courses on Mathematics, Electrical machines, Metallurgy and Humanities are also offered. As the partial fulfillment for the degree of B.Sc. Engineering (Mech), a project work is to be completed and submitted in the form of a thesis in the final year.

From time to time, seminars, industrial tours are arranged. During vacations arrangements are there for the students to be attached with certain industries, power plants or factories.

The department of Mechanical engineering offers very nice laboratory facilities in the fields of Fluid mechanics and Applied thermodynamics. The Applied mechanics and Production laboratories are not very satisfactory but they are growing.

The department is endowed with well qualified and trained teachers. The department has a capacity of accommodating 120 students in each year of study.

Mechanical Engineering Department is carrying out many research projects through undergraduate and post-graduate students. The problems are mainly concerned with analysis and design of equipments, instrument or development of a manufacturing process with the available raw materials in the country. Construction of low-cost manually operated pump, design and construction of jute shearing machine, design of a gear shaper etc. and investigation of management practices to improve working conditions of various industries are some of the important projects.

The Mechanical Engineering Department offers post-graduate degrees and so far 21 students have been awarded M.Sc. Engineering (Mech) degree.

Courses are offered in the fields of Thermodynamics, Fluid Mechanics, Production process, Heat transfer, Theory of elasticity and plasticity and Industrial management, Air conditioning and Refrigeration.

Students are required to complete 24 credits of course work in addition to one original research work for a thesis. Some Mathematics courses are also to be taken.

Some of the research projects, completed by the graduate students and faculty members include study of effect of wind on roofs, optimisation of production process of an industries as well as some basic research in Fluid mechanics and Heat transfer.

Steps are being taken to renovate and improve various laboratories with sophisticated and modern equipments so that the research facilities can be expanded more.

DEPARTMENT OF METALLURGICAL ENGINEERING

The degree of B.Sc. Engineering (Met.) is a four year course. At this University of Engineering & Technology first year work is common and much of the work is done in later years. The Metallurgical engineering graduates from this University study as much of electrical engineering as the mechanical engineers and as much of mechanical engineering as the electrical engineers and receive similar instructions in maths, physics, chemistry, economics, management etc. like most of the students in other branches. Their specialized work in the department of Metallurgical engineering not only covers the main aspects of extractive industrial & physical metallurgy but also includes cognate subjects as refractories, furnaces & fuels. While the courses should make the metallurgical engineering graduates, particularly fitted for careers in extractive metallurgical industry, smelting & refining of metals including iron & steels, they

are also suited for employment in other branches of engineering where metals are the raw materials. Such branches include foundries, rolling mills, wire mills and manufacturers of wires & sheets, welded assemblies etc. In their connection a few of the functions which could be entrusted to them, are :

Control of materials & processes so as to attain standardisation of products at a high level.

"Trouble shooting"—investigation of plant malfunction, failures of products in service etc.

Research and development work, especially in establishing new production lines.

The department of Metallurgical engineering was started in the year 1952 with the following objectives:

To provide for instructions in Metallurgical engineering so as to meet the growing need of trained personnel in the field of Metallurgy and

To provide facilities for applied research in metallurgy keeping in view the special needs of the country.

The department is active in many areas of research viz.

Design & construction of gas fired melting furnaces, substitution of coke by natural gas in cupola furnaces, gas fired heat-treatment furnaces, production of lead from condemned storage batteries, making of Refractory bricks from locally available deposits, delayed solidifications, sound aluminium castings and design & construction of crucibleless melting furnace, centrifugal castings of small cylinders, electroforming deposition.

The Heat-treatment & Metallography laboratory has facilities for heat-treatment including high temperature SiC furnaces, micro & macro study of metals & alloys, facilities for cutting & preparation of metallographic specimen including those of hard metals & alloys. Facilities for micro & macro-photography are also available. Most of the mechanical properties can be studied by using the facilities available.

The foundry is equipped with various types of gas & coke fired & electrically operated furnaces to study melting & casting of metals and alloys. The chemical analysis Laboratory has facilities for the chemical analysis of ores, minerals, alloys, fuels & slags. The newly established Electro-metallurgy laboratory has facilities for electroplating. In near future, facilities for testing of deposits & refining can also be provided.

The Ore-dressing laboratory which is still in the erection stage will have facilities for crushing and magnetic separation of fuels & minerals. The department has plan for the commissioning of already installed Arc and Induction furnaces. When commissioned they will provide more facilities for making & melting of steel, high quality alloys etc.

During the stay in the department each student has to go for 4 week study training. Chittagong Steel Mills Ltd. has kindly made arrangements to provide the students an opportunity to gain practical experience & study the daily routine of the establishment.

The department has, since 1972, started to offer M.Sc. Engg. degrees. The syllabus of M.Sc. Engg. (Met.) is so constituted as to offer ample scope for specialization in Physical or Chemical Metallurgy.

DEPARTMENT OF NAVAL ARCHITECTURE & MARINE ENGINEERING

The Department of Naval Architecture & Marine Engineering was established in September, 1971 under the Faculty of Engineering. At present this department is offering only the undergraduate course which covers the entire engineering function for the design and construction of ships and their machinery. Two batches of 8 and 5 students respectively have already graduated from this department and all of them are provided with suitable jobs in and outside Bangladesh.

At present the department has 5 full-time and 3 part-time teachers. Out of the full-time teachers, two are out of the country for higher studies and they are expected to come back by the end of 1977. The number of students of this department at present is 6, 8 and 5 in the 2nd., 3rd. and 4th. year classes respectively.

Within the short period of 5 years the department has been able to establish the Ship Design Lab., the Ship Motion & Hydrodynamics Lab. and the Marine Engines Lab. out of the local resources and some foreign assistance. A land of 1.4 acres quite near from the University campus has been purchased to establish the Ship Model Testing Towing Basin and other necessary laboratories over there.

This department has so far undertaken two major research projects which are 'The Mechanization of Country Boats of Bangladesh' and 'Ferro-Cement Boat Building'. Both the projects are under progress and, by this time, encouraging results have been obtained.

DEPARTMENT OF WATER RESOURCES ENGINEERING

The importance of and the need for planned development of water resources in Bangladesh's can hardly be overemphasized. Problems of flood control and river training, water resources utilization for irrigation, sediment transport, estuarine water hydrology and land reclamation are some of the most vital problems destined to influence the economic emancipation of the country. Needless to say, a large number of trained engineers is essentially required to properly evaluate, design and implement schemes related to these and other allied areas.

It is with this requirement in mind that the Department of Water Resources Engineering was created on January 1, 1974 at the Bangladesh University of Engineering & Technology. Within this short period of time, the Department has made remarkable progress in all the spheres of its activities. Special mention must be made of the areas of curriculum and syllabus development, laboratory set-up, development of post-graduate study facilities and research. In the curriculum and syllabus area, active help and co-operation has been obtained from experts of different agencies in an attempt to make the student's background most pragmatic and problem orientated. The objective for the undergraduate curriculum and syllabus has been to produce a cadre of professionals with extensive and specialized background in all important aspects of water resources engineering and

and at the same time having enough know-how in other related fields of engineering. The Post-graduate curricula and syllabi are aimed at developing maximum skill of the student in his chosen area of interest and broaden his background in supportive areas also.

The first batch of undergraduate students of this department are expected to graduate at the end of 1976. The strength of first batch is 58.

At the post-graduate level, there are 15 students presently pursuing M.Sc. curricula. There are part-time students who are employed with various Government and autonomous agencies and private consulting enterprises.

The faculty consists of a group of well qualified teachers and an expansion in this area is expected soon. Besides, services of eminent professionals are acquired in the form of part-time teachers.

The on-going research activities in the Department include works in the fields of river morphology, irrigation efficiency studies, groundwater aquifer characterization, hydro-meteorologic study of haor areas, rain-fed agricultural systems etc.

Post-graduate research works have recently been completed in the fields of river bank protection with light-weight materials, river geometry studies and aquifer characterization.

It is expected that research activities of this department will have a tremendous boon with the full-fledged working of the newly established Institute of Flood Control, Irrigation and Drainage Research at this University.

A short-course in River Engineering for professional engineers was organised in October 1975 by the department of Water Resources Engg. in collaboration with the Institute. The department also organised a seminar on Water management and control at farm level in association with FAO in March 1976.

DEPARTMENT OF ARCHITECTURE

The Department of Architecture is performing an unique role in the national scene as the sole centre for architectural education in Bangladesh. The department began in 1961 with only one American teacher from the Texas A&M University and six local students. Soon, three more American teachers joined the department. These four teachers continued teaching in the department upto the end of 1965. In the mean while several local students, six of whom already held civil Engineering degrees, were sent to the USA to prepare themselves to become teachers of Architecture in Dacca by completing a Bachelor of Architecture programme. In 1966, six of these teacher trainees returned home and joined the department as teachers. From then on, talented graduates of the department continued to come to teaching and gradually the full teaching responsibility was taken over by the local teachers.

From the beginning of the department upto the current academic session (1974-75), altogether 373 students were admitted in the department of Architecture. Of them, a total of 140 students successfully completed the requirements for the degree of Bachelor of Architecture and 130 students are

currently enrolled in the various years of the 5 year B. Arch. programme. Some of the graduates of this department are currently pursuing higher studies abroad while some others are working in architectural firms in different countries. But the bulk of the graduates of this department are working within the country and taking part directly or indirectly in the nation's physical development efforts.

The architectural curriculum of the department incorporates Humanities and the Social Sciences in addition to the Arts, Physical Sciences, Engineering Sciences and other technical subjects. It is necessary that architectural education be broad based with knowledge in the various aspects of man, his society and his physical environment.

The current B. Arch. programme of the department runs continuously from the first to the fifth year. The first four years are devoted to a series of courses and design exercises meant for providing the basic knowledge and help develop the necessary skills for becoming a designer. In the fifth year, in addition to a few more courses, each student has to undertake a major design project. The projects are normally chosen from the proposed schemes of the various agencies and organisations in the country. Each student then undertakes a thorough investigation into the various aspects of his project under the supervision of a group of teachers. In about ten to twelve weeks a report is prepared on every project which forms a basis for the subsequent planning and design exercise. A final year design project must be based on adequate data with a real world approach and it is judged according to professional standards.

An idea about the nature and scope of the final year projects may be obtained from a brief description of some of the current projects of the fifth year class.

Cultural Institute for Tribal People, Rangamati.

The Tribal Habitat, Chittagong Hill Tracts; An investigation into the present form and possibilities for the future.

Urban Squatters; An investigation into the problem and search for an answer.

An Evaluation of the Performance of the Housing for Low Income Group at Mirpur and investigation into possible alternatives for similar projects.

Women's Welfare Centre.

Central Campus Area of Metropolitan Dacca; An approach to integrated development in relation to circulation, open space planning and land scaping.

The importance of new approaches to architecture in the local context is being increasingly felt. But to achieve this, research and investigation is needed on the various determinants of architecture. The undergraduate programme of the department can not incorporate that scope satisfactorily. It is hoped that a post graduate programme with emphasis on research can soon be started in the department.

DEPARTMENT OF URBAN AND REGIONAL PLANNING

Urban and Regional Planning applies intelligent foresight to the development of the physical environment of cities, regions, states and the nations. This encompasses both the understanding of urban environment, primarily known as city planning, as well as the recognition of economic and social forces of regional development. The design principles of architecture, landscape architecture and civil engineering are combined with the techniques of the social sciences such as geography, sociology, government and economics.

The department of Urban and Regional Planning (formerly Physical Planning) offers graduate studies leading to the Degree of Master in Urban and Regional Planning (M.U.R.P.). The Department does not offer an undergraduate degree programme at the moment. The graduate programme is structured to provide the students with those learning opportunities which focus attention principally on the study of large-scale physical environment and its interaction with our society. The curriculum aims primarily at training practitioners or staff men in the fields of city and Regional Planning; and it also offers special opportunities for students interested in teaching and research in these fields and also in other related fields like Housing, Village Planning and Urban Design.

The typical program leading to the degree of Master in Urban and Regional Planning requires two year's full-time study divided into four semesters. The course is open to students with varying backgrounds viz. Architecture, Civil Engineering, Economics, Sociology and Geography. The University offers quite a good number of Teaching Assistantships/Fellowships for full-time regular students.

The Department now has faculty of twelve, seven of whom are full-time members, three associate members (also holding full-time appointment in the Department of Architecture of this University) and the rest two from other institutions. Two foreign teachers through United Nations Development Programme are expected to join shortly.

In view of the acute shortage of trained Urban and Regional Planners to implement many schemes of national importance including the UNDP Projects, the Government of the People's Republic of Bangladesh decided to train some young graduates with UN financial assistance through a joint programme between the Department of Town and Regional Planning at the University of Sheffield (U.K.) and the Department of Urban and Regional Planning at Bangladesh University of Engineering & Technology, Dacca. It has been decided that the selected students in groups of nine students every year will undertake their first year courses in Sheffield. On successful completion of the first year courses, the students will undertake the 2nd. year courses at Bangladesh University of Engineering & Technology and will prepare an acceptable thesis on the basis of which a joint degree may be awarded by the University of Sheffield and Bangladesh University of Engineering & Technology. Accordingly, a group of students have already completed their first year courses at Sheffield, and the second group is now pursuing their courses at Sheffield. It is expected that Bangladesh University of Engineering & Technology will start the 2nd. year courses under the proposed programme in June, 1977.

DIFFERENT FACILITIES OFFERED BY THE UNIVERSITY LIBRARY

Library is the nerve center of any educational institution. The university is keen to develop its library.

The University library is housed in a four storied separate building. The library has four sections: general library, reference library, general section and rental library. The general section of the library is an issuing one, and at present has 51,430 volumes of books in her hold. The reference library is accommodated on the first floor of the library building and has 5,421 volumes of books and reference materials. The total number of current journals received by subscription and grants now stand at 10,000. The rental library issues text-books to students on payment of small fees.

The library is enriched by numerous special collections including a large group of proceedings of conferences on development of technical subjects. The library collects books by normal purchases and also receives donations at regular intervals from various donors e.g., Asia Foundation, different Embassies etc.

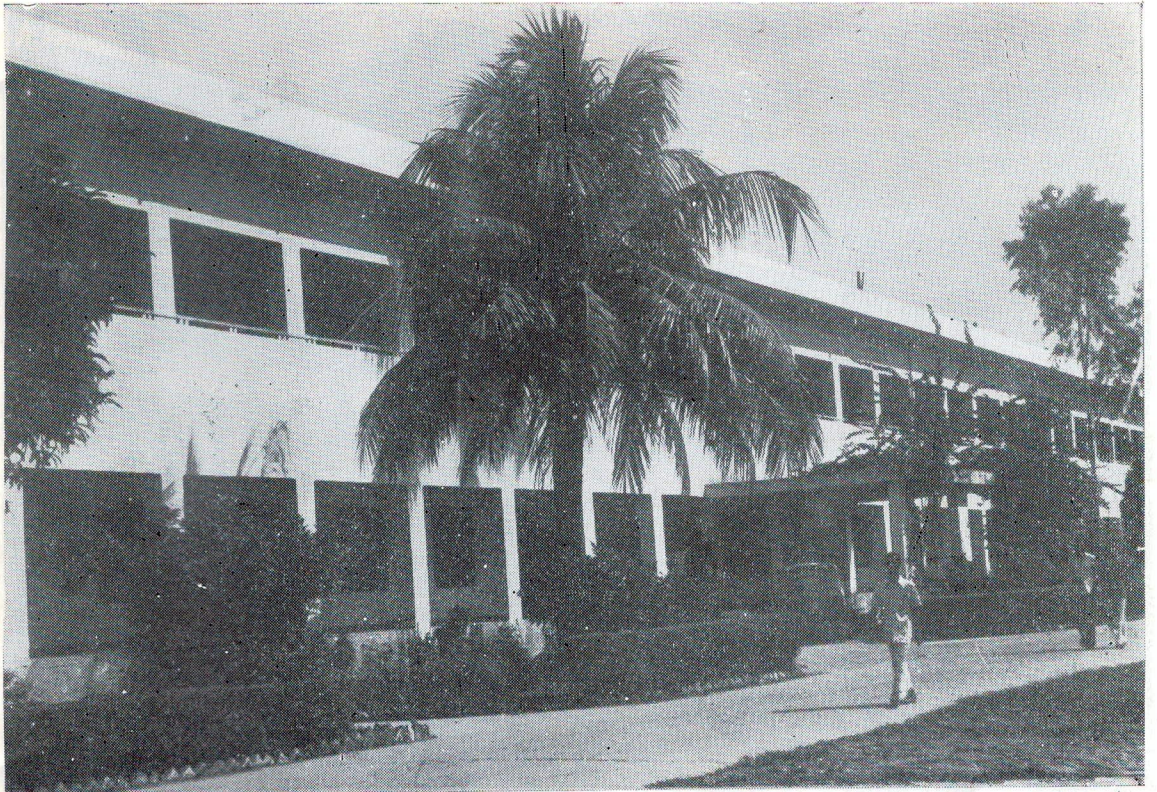
DIRECTORATE OF STUDENTS' WELFARE

The Directorate of students' Welfare is responsible for the following activities leading to the students' welfare.

- a. To make arrangement for the supervision of the hostels and halls of residence for the students.
- b. To supervise and arrange the programme of physical education, games and sports.
- c. To supervise the programme of extra-curricular activities of students through the students union of halls of residences and the Central Students Union.
- d. To provide health services to students by providing the medical facilities.
- e. To direct a programme of counselling and guidance for students.
- f. To arrange for the employment of students during vacation and placement of graduates of the University.
- g. To arrange the study tours of students during vacation.
- h. To organise and maintain contact with the alumni of the University.

HALLS OF RESIDENCE

Students of the University are provided with accommodation in five halls of residence. The Halls of residence are named after five renowned personalities of the country. The names of the Halls



ACADEMIC BUILDING



RESIDENTIAL HALLS FOR STUDENTS



RESIDENTIAL QUARTERS FOR TEACHERS

are Ahsanullah Hall, Nazrul Islam Hall, Sher-e-Bangla Hall, Sohrawardy Hall, and Titumir Hall. Out of the present enrolment of 2000 students, accommodations to about 1600 students are available. To enhance the accommodation capacity more halls are expected to be constructed very soon.

At present a meager facilities for accommodation of girl students are available. Out of about 50 girls, only 8 reside in a temporary location. A girls hostel is at planning and design stage. A new hostel for foreign students is also planned.

All the halls of residence are provided with adequate messing and recreational facilities. There is a prayer room in all the halls.

GAMES AND SPORTS

The Athletic Club of the University provides excellent facilities to students to acquire physical fitness indispensable to a professional engineer. The University maintains a beautiful play ground. Tennis lawns, Basket Ball courts and a well equipped modern gymnasium provide ample facilities for various types of physical activities to a large number of students at a time. At present a separate hockey field is under development and a new squash court is under construction.

For improvement of the standard of games and sports, regular arrangement of coaching by experts are arranged. At present the standard of games in this University is quite satisfactory in comparison with national standard.

MEDICAL FACILITIES

The students of the University are entitled to free attention of full-time medical practitioners. A hospital and an outdoor dispensary are maintained for the students. The out patient department is staffed with four full-time general practitioners. Serious cases of illness, if required, are referred for investigations and treatment by specialists outside.

Both the curative and the preventive aspects are attended by the medical section of the University. In the preventive side vaccination and inoculations are provided at regular intervals.

INSTITUTE OF FLOOD CONTROL, IRRIGATION AND DRAINAGE RESEARCH

In recognition of the great importance of research in flood control, irrigation and drainage in the country, Institute of Flood Control, Irrigation and Drainage Research was established in July 1974. The first five year plan of the country allocated appropriate funds for the institute. But as no fund has yet been made available, a few small-scale research and man power training schemes are presently being carried out by BUET funds.

The Institute is established with the propose of doing basic and applied research and providing professional training to young engineers and scientists in the fields of flood control, irrigation and drainage engineering.

The specific aims and objectives of the Institute are:

- a. to carry out basic research as applied to river mechanics, fluid mechanics, hydraulics, hydrology and pollution control.
- b. to undertake research relating to behaviour of rivers including problems in connection with flood control, river training, bank protection etc.
- c. to study problems relating to irrigation, drainage, ground-water, water distribution and management and agriculture.
- d. to study tidal and salinity problems.
- e. to provide teaching, training and research facilities at the post-graduate level (Diploma and Certificates) in Water Resources Engineering.
- f. to provide short courses for the professionals.
- g. to undertake studies and investigations sponsored by private organisations, Govt. and Semi-Govt. agencies and autonomous bodies.
- h. to provide advisory and consulting services in fields relating to water resources to different organizations, firms etc.
- i. to establish contact with organizations (both inside and abroad) working in the fields of irrigation, drainage and flood control and to organise and participate in seminars, symposia etc. for exchange of ideas and
- j. to take up other programme which help facilities for attainment of the aims and objectives of the Institute.

In view of the national importance of flood control and the pressing urgency for the development of efficient irrigation and drainage systems to agricultural lands for the increased production of food, emphasis in research for the first couple of years will include studies in the following areas:

- a. river behaviour studies for determining effective and suitable methods of flood control.
- b. expansion of irrigation in new areas and increasing irrigation efficiency of existing projects and
- c. evaluation of regional groundwater potential for long term supply to irrigation needs.

Most of the engineering graduates of different agencies in the country do not have formal academic background in subjects like River Mechanics, River Hydraulics, Advanced Irrigation & Drainage Engineering, Ground Water Engineering, etc. which constitute the very basis of engineering approaches to solve problems related to flood control, irrigation and drainage. This is because requisite facilities for training did not exist previously in the country. Only a selected number of engineers, fortunate to study in advanced foreign countries, do have the desired degree of acquaintance with these subjects. One of the Institute's main objectives is to provide the country's engineers with background and training in relevant discipline areas through on-the-job professional short courses and specialized training experiences and thus minimize, to great extent, the need for foreign training in these areas. One such activity sponsored jointly by the Institute and the Water Resources Engineering Department of BUET, was the post-graduate short course in River Engineering that took place during October 27—November 12, 1975, in which 35 professional engineers from concerned Government, Autonomous and Private agencies participated and obtained certificates.

DEPARTMENTS OF BASIC SCIENCES AND HUMANITIES

DEPARTMENT OF PHYSICS

The Department in the University provides the basic knowledge in physics to the undergraduate students of both engineering and architecture faculties. This is carried out through theoretical and experimental courses. This department also provides courses in Metal Physics to post-graduate students of Metallurgical Engineering Department.

The department is well-staffed and also maintains adequate laboratory facilities. The teachers of the department are engaged in many research projects. There is special collaboration in the field of solid state physics between the department and the Atomic Energy Commission and Dacca University. A research programme for the development of magnetic materials is now being pursued. Teachers of this department have published several standard text books.

DEPARTMENT OF CHEMISTRY

This department came into existence as a separate department detached from Chemical Engineering Department of the erstwhile Ahsanullah Engineering College when the college was upgraded to the status of the present University in 1962. The department offers courses in Chemistry to the first year Engineering students and also to the second year Chemical, Mechanical and Metallurgical students.

The topics of the first year Chemistry course have been so selected that the graduate engineer by going through the course can, besides discharging his professional duties effectively, also appreciate the significance of the properties of the materials he has to handle in the course of his professional life and hence, can employ the various materials efficiently and economically. It is expected that such a knowledge of fundamentals will also help the young engineer to correlate the data of his experimental work in a more sensible way and give a better explanation of his research results. Such a study will also enable him to get his curiosity regarding anomalies in the properties of matter satisfied.

The second year course of Chemistry for Mechanical and Metallurgy students comprises corrosion and properties of engineering materials.

The department maintains a good staff-strength. Besides doing teaching work, teachers of the department has been doing research work of national interest, for example a work on "Evaluation of Bangladesh Natural Water for Steam Generators and Heat Exchangers and its treatment has been completed. Other research works namely "Rosin Extraction" from Black Liquors of Paper Mills and Natural Rubber of Bangladesh are in progress.

DEPARTMENT OF MATHEMATICS

This department is functioning from the early days of this Institution. This department

imparted basic mathematical background to the Overseers, Sub-Overseers and Engineers who passed from this institution.

At present, this department is offering different courses in Mathematics in different branches of Engineering in the undergraduate classes. This department also offers courses in mathematics to the first year students of Architecture department.

The M.Sc. students of the departments of Civil, Mechanical, Chemical, Metallurgical and Water Resources Engineering are offered Advanced Mathematics courses consistent with their departmental requirements. The department also offers laboratory facilities in the fields of Numerical Analysis.

The Board of Studies in Mathematics of this University reviews the syllabi and the progress made in the classes from time to time.

The students studying abroad for higher degrees in Engineering find themselves well equipped so far as their mathematical backgrounds are concerned.

The department is well equipped with able teachers.

DEPARTMENT OF HUMANITIES

This department offers courses in English, Economics, Sociology, Accountancy, Industrial Management and Psychology in the undergraduate classes in both Engineering and Architecture faculties. When the students graduate and join professional life, this background imparted in different humanities subjects helps them to encounter various social and management problems.

This department, in addition to its staffs, often takes the help of eminent scholars through part-time teaching. The department of humanities is keen to expand and offer courses in other subjects if and when necessary.

ENGINEERS AND ARCHITECTS GRADUATED FROM THIS INSTITUTION

Year of Graduation	Civil Engrs.	Mech. Engrs.	Elect. Engrs.	Chem. Engrs.	Met. Engrs.	NAME	Architects	Total Yearly
1950	13	4	3		0			20
1951	20	2	8		0			30
1952	21	14	8	5	0			48
1953	20	9	11	2	0			42
1954	25	9	5	2	2			43
1955	30	11	14	2	1			58
1956	44	13	29	1	2			89
1957	23	12	38	0	2			75
1958	63	15	29	0	0			107
1959	92	25	28	7	0			152
1960	61	18	27	7	0			113
1961	102	41	33	13	0			189
1962	143	25	27	12	0			207
1963	161	39	16	13	0			229
1964	105	29	25	5	2			166
1965	137	33	26	3	2			201
1966	162	19	30	7	0		5	223
1967	132	24	29	16	0		14	215
1968	114	47	56	23	11		16	267
1969	63	116	135	27	4		14	359
1970	63	106	121	34	9		19	352
1971	76	116	102	21	3		17	335
1972	134	92	107	29	4		23	389
1973	121	80	91	22	7	8	17	346
1974	160	88	68	27	6	5	15	369
Total	2105	987	1066	278	55	13	140	4644