



वार्षिक प्रतिवेदन
ANNUAL REPORT
2017-18

01 अप्रैल 2017 - 31 मार्च 2018
(April 01, 2017 - March 31, 2018)

भारतीय अभियांत्रिकी विज्ञान और प्रौद्योगिकी
संस्थान, शिवपुर
**INDIAN INSTITUTE OF ENGINEERING SCIENCE AND
TECHNOLOGY, SHIBPUR**

VISION-MISSION STATEMENTS

VISION

The Vision of IEST, Shibpur is to become one of the best Institutes in the world in providing the state-of-the art multi-disciplinary research ambience that will usher innovative world-class technologies developed towards realizing the goal of Developed India, and thereby establish a unique identity for the institute amongst national and international academic and research organizations through knowledge creation, acquisition and dissemination for the benefit of society and humanity.

MISSION

The Mission of the Institute are as below:

- To generate high quality human and knowledge resources in our core areas of competence and emerging areas to make valuable contribution in technology for social and economic development of the nation.
- To make focused efforts towards identification, monitoring and control of objective attributes of quality for continuous enhancement of academic processes, infrastructure and ambience.
- To efficaciously enhance and expand, even beyond national boundaries, its contribution to the betterment of technical education and offer international programmes of teaching, consultancy and research.

GOALS

The Goals of the Institute are as below:

- (i) To provide the best educational infrastructure for imparting high class education in science and technology and a creative atmosphere for inter-disciplinary research both by the students and the faculty.
- (ii) To increase the student capacity to meet the growing demands for industry
- (iii) To maintain global standards in student-faculty ratio, research output, publications in journals and placement of students
- (iv) To participate in and contribute to nation building through various flagship schemes of the Government of India/State Governments requiring technological interventions thereby spurring economic growth for the welfare of the masses
- (v) To provide research and development consultancy, which will foster healthy industry-academia partnership, thereby providing a competitive edge to the indigenous manufacturing



An old painting of the Bishop's College (estd 1820) where the Institute moved in in 1880



The lush green campus of the Institute is located on the west bank of the river Hooghly

Contents

Vision Statements	i
Contents	iii
Annual Report 2017-18: At a Glance	vi
From the Desk of the Director	xii
The Year in Snapshots	xiii
1 Organisation and Administration	1
1.1 Framing and Amendment of Statutes	2
1.2 NITSER Council	2
1.3 The Board of Governors	4
1.4 The Senate	7
1.5 The Finance Committee	11
1.6 The Building and Works Committee	12
1.7 Important Functionaries	14
1.8 Administration	15
1.9 Wardens of Hostels/ Halls of Residence	17
1.10 Academic Departments/ Schools/ Centres, Centres of Excellence, Service Centres and Other Units	18
2 Academic and Non-Academic Staff	20
2.1 Academic Staff	20
2.2 Non-Academic Staff	21
2.3 Non-Teaching Officers	23
2.4 Faculty/ Officers/ Staff members Superannuated in 2017-18	24
3 Academic Programmes	25
3.1 Undergraduate Programmes	25
3.1.1 Four Year B.Tech Degree Programme	25
3.1.2 Five Year B.Arch degree Programme	25
3.1.3 Five Year Integrated Dual (B.Tech-M.Tech) Degree Programme	25
3.1.4 Eligibility for Admission	26
3.1.5 Selection for Admission	26
3.1.6 Admission	26
3.2 Two-Year Full-Time M. Tech/ MURP Degree Programme	28
3.2.1 Eligibility	28
3.2.2 GATE Scholarships	28
3.3 Two-Year Full Time MSc Degree Programme	30
3.3.1 Admission	30
3.3.2 Eligibility and Seat Matrix	30
3.4 Two Year Full Time MBA Programme	32
3.4.1 Eligibility for Admission	32
3.4.2 Selection Procedure	32

3.5	PhD programme	32
3.5.1	PhD Admissions	33
3.6	Reservations for SC/ST/PWD/OBC/Other categories of Candidates	34
3.7	Student Strength	34
3.7.1	Scholarship to Students	36
3.8	Institute Results	36
3.9	Annual Convocation 2018	38
4	Academic Departments, Schools and Centres	39
4.1	Aerospace Engineering and Applied Mechanics	39
4.2	Architecture, Town and Regional Planning	40
4.3	Chemistry	42
4.4	Civil Engineering	42
4.5	Community Science and Technology	44
4.6	Computer Science and Technology	45
4.7	Ecology, Infrastructure, and Human Settlement Management	47
4.8	Electrical Engineering	48
4.9	Electronics and Telecommunication Engineering	51
4.10	Centre of Excellence for Green Energy and Sensor Systems	53
4.11	Healthcare Science and Technology	54
4.12	Information Technology	56
4.13	Materials Science and Engineering	59
4.14	Mathematics	61
4.15	Mechanical Engineering	61
4.16	Mechatronics	62
4.17	Metallurgy and Materials Engineering	64
4.18	Mining Engineering	66
4.19	Physics	71
4.20	VLSI Technology	73
5	Academic Service Centres	76
5.1	Ramanujan Central Library	76
5.2	Tagore Centre for Green Technology Business Incubation (TCGTBI)	77
5.3	Computer Centre	79
5.4	Sophisticated Instrumentation Centre	79
5.5	Continuing Education Programme (CEP) CELL	80
5.6	Workshop	82
6	Sponsored Research and Industrial Consultancy	83
6.1	Sponsored Research and Industrial Consultancy Activities	83
6.2	Conference/ Symposia/ Seminars	98
6.3	Sponsored Research Projects	98
6.4	Industrial Consultancy/Testing	98
6.5	Academic and research collaboration	100

7 Students Amenities and Activities	102
7.1 General	102
7.2 Proctorial Board:	102
7.3 Students' Hostels	102
7.4 Sports and Games	102
7.5 Students Senate	104
7.5.1 Students' Societies	104
8 Training and Placement	109
8.1 On-Campus Recruitment	109
8.1.1 Placement Statistics for 2018 passout batch of IEST, Shibpur	110
8.1.2 Recruiters over recent years	110
8.1.3 Department wise Training and Placement	117
9 Campus facilities	121
9.1 Estate	121
9.2 Health Services	122
9.3 Banks	123
9.4 Campus Services and Management	123
9.5 Halls / Hostels of Students	123
9.6 Sports Grounds	125
9.6.1 Basketball Court	125
9.6.2 Alumni Swimming Pool	126
9.6.3 Gymnasium	126
9.7 Students' Amenity Centre	126
9.7.1 Students' Centre for Creative Expressions	126
9.7.2 Netaji Bhavan	127
9.7.3 Spiritual Development	127
9.8 Water Bodies	128
9.9 Institute Gates	128
9.10 Clocktower	129
9.11 The cemetery	129
9.12 Odyssey of the institute	129
10 Institute Accounts	130
10.1 Summary of Balance Sheet	131
10.2 Income and Expenditure Account	132
10.3 Receipts and Payments Accounts	133
Appendices	
Appendix-1	136
Appendix-2A	149
Appendix-2B	164
Appendix-2C	165
Appendix-2D	168
Appendix-2E	177
Appendix-3	178

Annual Report, 2017-18: At a Glance

INTRODUCTION

Way back in 1856 the Institute made a humble beginning as the Calcutta Civil Engineering College. After two changes in address and three changes in its name the Institute came to be known as Bengal Engineering College in 1921. The contributions made by the fine products of the College in advancing the human society are well known. Known for its academic finesse the Institute was first accorded the status of a Deemed University by the union ministry of Human Resources Development in the year 1993, subsequently in 2004, it became a full fledged university and its name changed to Bengal Engineering and Science University, Shibpur. Almost a decade later with the passage of the NITSER (Amendment) Bill 2014 the Institute has been rechristened as Indian Institute of Engineering Science and Technology, Shibpur. Ever since, the Institute has been making continual endeavours towards achieving excellence in all spheres of its activities involving teaching, research and extension services.

GLIMPSES OF ACADEMIC PURSUITS

A total of 799 students successfully completed their courses of study in the session 2017-18. While 439 students obtained bachelor's degree in nine different disciplines in Engineering and in Architecture, 277 scholars obtained postgraduate degrees in Engineering, Technology, Urban Planning, Science, and Management. PhD degree was conferred on 83 scholars. 30 students received Institute Medals for excelling in different branches of study. The President of India Gold Medal was awarded to Asmita Chakraborty, a student of Metallurgy & Materials Engineering Department who secured 1st position amongst all the undergraduates of all ten engineering/architecture disciplines taken together. Some endowment medals were also awarded to the students who have stood first in their respective disciplines or have secured highest marks in particular subjects.

A total of 592 Students took admission in BTech/ BArch programme of the Institute in July 2017. Year wise break up of undergraduate students in 2017-18 was as below

I Sem	592
III Sem	527
V Sem	587
VII Sem	446
IX Sem (B.Arch)	17
Total	2163

Strength of postgraduate students in 2017-18 session was 700. A programme wise break up of students strength is furnished below

MSc	I year	105
	II year	115
MTech	I year	253
	II year	211
MBA	I year	10
	II year	06
TOTAL		700
<hr/>		
PhD	Enrolled	166
	Registered	696
TOTAL		862

Statistics relating to admission in 2017-18 are furnished in the table below

Student admitted in the academic session 2017-18

Category	No. of student admitted in 2017-18			
	UG	PG	PhD	Total
General	282	211	130	623
SC	91	58	21	170
ST	46	11	1	58
OBC	162	116	14	292
PWD	8	1	0	9
Total	589	397	166	1152

Doctoral and Post-Doctoral Research Programs

In recent years, purposeful thrusts on research activities, have resulted in greater focus of the Institute faculty towards cutting edge top-notch research. During the year under review 502 papers in peer reviewed journals and 287 in conference proceedings have been published by the members of the Institute faculty. In recent years the doctoral programmes have steamed up and witnessed increasingly greater number of enrolment and registration; on March 31, 2018 there have been 341 Institute supported research scholars in the Institute, while the total number of scholars registered for PhD was 696.

HUMAN RESOURCES

Academic Staff

During the year under review, *i.e.* in 2017-18, the faculty strength of the Institute stood at 160. In addition to the regular academic staffs, the Institute also received services from 87 temporary academic staffs including 40 visiting professors and 21 adjunct professors. The strength of non academic staffs stood at 453.

The Institute has adopted the four-tier flexible faculty cadre structure, but since no automatic migration was possible the Academic staffs of BESU were mapped in the three tier structure pending completion of necessary formalities for pay mapping for migration to the four tier structure.

Non-Academic Staff

During the year under review, the strength of non academic staffs stood at 453. In addition to the regular technical, administrative and other staffs the Institute, in 2017-18, also received services from 56 contractual non-academic staffs. No of officers employed at the Institute in 2017-18 was nineteen.

SPONSORED RESEARCH AND CONSULTANCY

Research projects are the indices of the state of involvements of the faculty members and the scholars of the Institute in advanced research in the fields of Engineering and Science. on 31st March 2018 more than 150 sponsored research and industrial consultancy projects of worth more than 55 crores of rupees were running in the Institute. These projects have been funded by national and international funding agencies like DST, ICMR, SERI, SERB, CCRH, UK Innovate, UNICEF, Tata Steel, Murata, The Royal Society ISA (UK), DBT, BHEL, CSIR, IC-IMPACTS (Canada), Electro Steel, IEI etc. In 2017-18 the Institute received 27 major sponsored research projects and 65 major industrial consultancy projects.

Thrust areas of major research included Clean Energy, Power Electronics, Energy Storage, Supramolecular Aggregates, Cancer Risk Detection, Earth Sciences, Structural Materials, Material Characterization, Semiconductor Nanomaterials, Water Pollution, Sanitation, Solar Cells, Nucleosynthesis, Water Purification, Sediment Transport, River Basin management etc.

A mega project on “Assessment of effects of arsenic pollution on health in rural Bengal and development and implementation of sustainable technology solution.” funded by UKIERI, British Council, UK has been selected as one of the top ten projects from 1067 projects funded by UKIERI since 2006, and it was reported in the House of Commons, UK on 23rd January, 2018.

INFRASTRUCTURE DEVELOPMENT

Roof Top Solar and Biogas Microgrid

A unique microgrid system comprising 10 kW of Solar PV, 1 kW of Wind Generator and 15 kVA of Biogas Generator has been established by the Centre of Green Energy and Sensor

Systems under the sponsorship of Department of Power and NES, Government of West Bengal. About 1 tonne of kitchen wastes and table food wastes from the different hostels and residential quarters in IESTS Campus are utilized as the biomass input to the Biogas digester of 35 cum capacity and the generated gas drives a biogas generator yielding about 10 kW of electrical power for campus-consumption. This Microgrid System was inaugurated by Shri Pranab Mukherjee, the President of India on May 19, 2017.

Solar Energy Corporation of India (SECI), a Govt. of India Undertaking under the Ministry of New and Renewable Energy (MNRE), has been awarded a contract for design, construction and maintenance of Solar PV Roof Top Systems on the Rooftops of different buildings in IEST Campus. DPR has been prepared for construction of two Roof Top PV Power Plants of capacity 469 kW and 339 kW respectively. The work is under progress and is expected to be completed within this year.

ADVANCEMENT UNDER TEQIP-III

Based on the performance of TEQIP-I and TEQIP-II, National Project Implementation Unit (NPIU), New Delhi has assigned IEST Shibpur as the mentor institute of Bhagalpur College of Engineering (BCE), Bhagalpur, Bihar under the TEQIP-III twinning agreement between IEST, BCE and MHRD. IEST Shibpur will help BCE for its overall academic and administrative development for NBA, autonomy and introduction of post graduate programmes. Already, TEQIP has conducted several lecture series, workshops, meetings in this regard both at IEST and BCE.

NPIU has sanctioned a funding of Rs. 7 crores to IEST Shibpur for the project period 2017 to 2020. Out of this fund, 3.5 crores will be utilized for purchase of different sophisticated equipments in various laboratories. TEQIP-III is funding the fellowship for the research scholars of the Center of Excellence for Microstructurally Designed Advanced Materials Development set up during TEQIP-II. The UG & PG students and the research scholars have been given the most priority for research and development in IEST by encouraging them to attend different national/international workshop/seminar/conference etc. and providing expenses for consumable items required for research works. TEQIP-III is also funding minor research projects for the rural development. To increase the employability of the students of IEST, TEQIP has conducted SLA survey, induction training, start-up programme etc.

RAMANUJAN CENTRAL LIBRARY

The process of strengthening the infrastructure of the Ramanujan Central Library continued throughout the period under review. The storage capacity of books of the library has been increased by procuring 158 nos. double faced racks. A new reading corner has been setup for studying popular science books and magazines. For smooth publication of research papers of the members of the Institute library introduced plagiarism checking service. An Institutional Repository has been setup for archiving dissertations, research papers and other publications of the Institute. The library has strengthened its electronic surveillance system by integrating biometric attendance system with its existing library management software. Towards further

strengthening the system, the library is now implementing RFID based charging and discharging system.

During the period under review 5,661 books were added to the library collection. The number of books issued to the members in the above period is 45,352. The access of full text scholarly resources including ASCE Journals, ASME Digital Library, ACS Journals, AIP Journals, IEL Online, JSTOR, RSC Journals, Springer's LINK and Taylor & Francis Journals available through E-SHODH SINDHU Consortium was continued. The library has been subscribing seven subject collections of Elsevier's Science Direct and three bibliographical databases.

STUDENTS AMENITIES AND ACTIVITIES

Extracurricular activities of the students are intertwined with the academic schedule and, as such, round-the-year activities are undertaken to engage the students creatively to hone their soft skills. Day-to-day management of the 18 Hostels/ Halls of Residence, including the three women's hostels, is looked after by a hall management committee headed by the Chief Warden. Every hostel is looked after by a superintendent appointed from amongst the members of the faculty/ officers.

Sports and Games

The students, under the auspices of the Institute's athletic club, participated in a variety of physical activities during their time beyond academic hours. The Campus has two play grounds, - The 'Lords' in the east and the 'Oval' towards the west. Sport facilities available at the Institute include volleyball ground, badminton court (concrete), basketball (hard court), swimming pool and a well equipped gymnasium. A Students' Amenity Centre and a Yogic practice arena has recently been added to the facilities. Activities under the National Service Scheme (NSS) included offering of tuition to local destitute children, organisation of a garment distribution programme and holding a Blood Donation camp.

Students Senate

The principal objective of the Students' Senate is to empower the students so that they can express themselves and act creatively in diverse areas of academics, culture, sports and games with a sense of fraternity. While the 'Senate General Council' oversaw the general affairs of the Senate and held the annual social 'REBECA, the departmental Students' Societies and the various clubs formed under the 'Students' Centre for Creative Expressions' looked after activities in the realm of culture, soft skill, and hobbies involving (i) artistic expressions, (ii) music and dance, (iii) debate and quiz, (iv) drama and literature, (v) modelling and robotics etc.

INSTITUTE ACCOUNTS

The Institute is mainly financed by the Central Government. In 2017-18, the Institute had an opening balance of grants as Rs. (-)17.64 crore. Grants-in-aids sanctioned for and received by Institute were Rs.130 crore. Out of a total available grant of Rs.112.36 crore, the Institute

utilised Rs.119.58 crore (Revenue Rs.100.24 crore and Capital Rs.19.34 crore) leaving an excess expenditure of Rs.7.22 crore.

Further, during the year 2017-18, the Institute received a grant of Rs.95.52 lakh from Government of West Bengal and there was an opening balance of Rs.1.73 lakh (Schedule-10). Out of the total available grants (Rs.97.25 lakh), the Institute made revenue expenditure of Rs.96.78 lakh leaving an unspent grant of Rs.0.47 lakh.

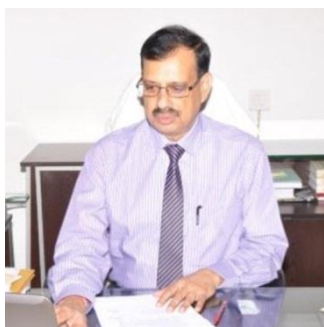
The annual accounts of the Institute for the year 2017-18 were audited under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 read with Section 22(2) National Institutes of Technology, Science Education and Research Act, 2007.

THE WAY FORWARD

Just a little less than five years ago the Institute added the latest feather, - the INI tag, to its cap. This called for a renewed commitment towards excellence and an appropriate revision of its quality-strategy in the light of the changed role in the national and international landscapes. In order to achieve new heights within a reasonable time span the Institute proposes to carry out a so called 'visioning exercise' to update its vision mission statement and to delineate a strategic plans to achieve the identified goals and objectives. Other tasks to be accomplished will include, *inter-alia*, the following.

- Development and modernisation of administrative and management system of the Institute and, accordingly restructuring of the administration.
- Developing a master-plan and a detailed project report (DPR) for the Institute's (a) academic and (ii) infrastructure planning
- Implementation of the four tier cadre structure and completion of pay mapping exercise Drawing up time-scaled strategy for cadre restructuring and right sizing of non-teaching employees and officers.
- Developing, adopting and implementing various Ordinances for the academic programmes and examinations.
- Developing, adopting and implementing various Rules and Regulations in conformity with the provisions of the IEST Statutes.
- Forming various standing committees and sub-committees in conformity with the IEST Statutes.

From the Desk of the Director



Professor Parthasarathi Chakrabarti

I took charge on 10th of May 2018 and, as such, preparation of annual report for the period April 2017 to March 2018, provided me an opportunity to take stock of the situation. Ever since its conversion to a centrally funded technical institute (CFTI) in 2014, the Institute has been making strides towards aligning its organisational structure with similarly placed institutes. Just before the period under review, on 24th March 2017 to be precise, The IEST Statutes came into force. Consequential actions have been initiated, though much remains to be done to bring the transition to its logical end.

The Institute has made significant all round progress in 2017-18. For the second successive year the NIRF rank of the Institute has been impressive. While in 2016 the rank was 20th, in 2017 it improved to 17th. But a cause of worry is that while in 2016 the overall score was 70.35 in 2017 it reduced to 54.42. The Institute will engage in serious retrospection and chart out a development strategy to attain higher niveau and ensure continual upsurge in quality education.

I would like to thank the team which has given its full effort to bring out this Annual report.

(Parthasarathi Chakrabarti)
Director

The Year in Snapshots

Views of Some Advanced Engineering Laboratories / Experimental Set-ups at various Academic Units of IEST Shibpur:



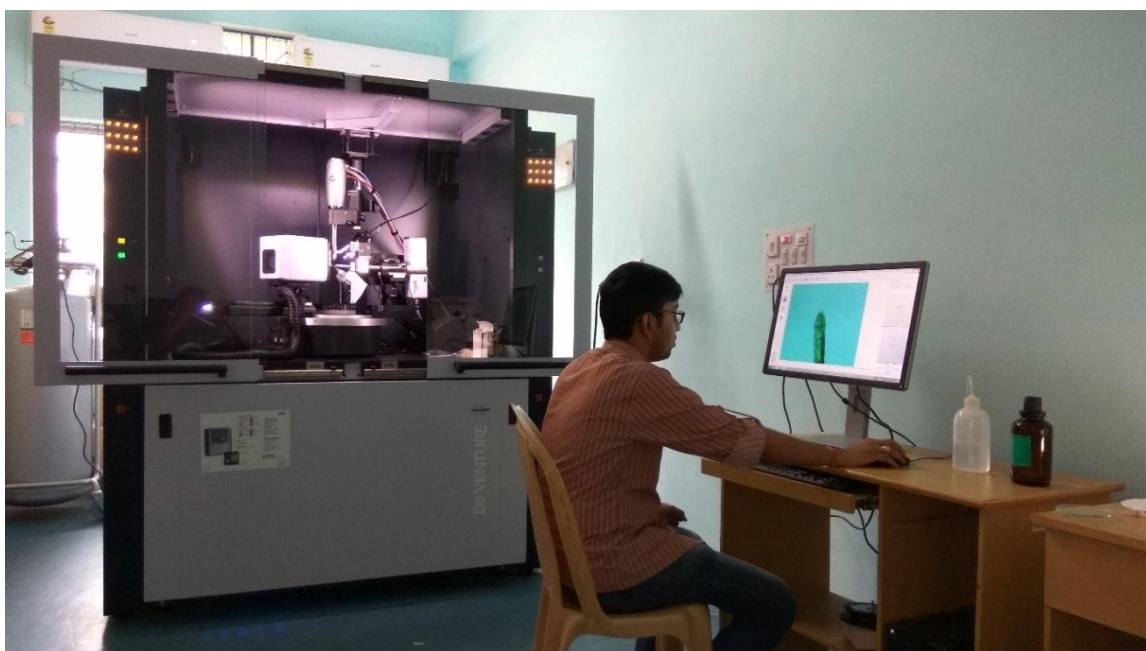
The VTOL aircraft, designed and developed as an experimental set-up for students at the Department of Aerospace and Applied Mechanics



Test set-ups for experiments on solar radiation and micro grids at CEGESS



Multifunctional TCSPC Lifetime Fluorescence Spectrophotometer at the Department of Chemistry



Single Crystal X-ray Diffractometer with microfocus molybdenum source at Sophisticated Analytical Instrument Facility (SAIF), IEST Shibpur



The smart water quality monitoring system, developed at the WSN and IoT Laboratory of the Department of Information Technology



A view of the KUKA industrial robot (foreground) and the CNC machines (background) at the School of Mechatronics and Robotics



Semi-Automatic Jute Fibre Extraction Machine, development in progress, at the School of Mechatronics and Robotics



Plasma Enhanced Chemical Vapor Deposition (PECVD) Cluster Tool at DST-IIEST Solar PV-Hub



Oxidation-Diffusion Furnace (left) and Lifetime Measurement Unit (right) at the DST-IIEST Solar PV Hub

Some Glimpses of Fourth Annual Convocation of IEST Shibpur



The president of India at the convocation



The President of India delivering the Convocation Address



Student receiving the President's Gold Medal at the Fourth Annual Convocation



Degree recipients at the Fourth Annual Convocation of IEST Shibpur

IEST Shibpur

§1. Organisation and Administration



2017-18

1 ORGANISATION AND ADMINISTRATION

Established as the Calcutta Civil Engineering College in November 1856, this pioneering Institute, after several changes in its name at three different addresses, was lastly converted to an Indian Institute of Engineering Science and University by an amendment of the NITSER Act 2007. Today the Institute is an '*Institute of National Importance*' and its organizational and governing structure are on the lines of National Institutes of Technology (NITs). The Institute has four authorities, namely:

- | | |
|-------------------------------------|--|
| 1. The Board of Governors | Authorities under the NITSER Act 2007 |
| 2. The Senate | |
| 3. The Finance Committee | Authorities under the IEST Statutes 2017 |
| 4. The Building and Works Committee | |

The NITSER Council co-ordinates the activities of the Institute and other Institutes governed under the same Act.

The governing structure of the Institute is as below.

- The President on India is the Visitor of IEST, Shibpur. As provided in the NITSER Act, 2007, the Visitor appoints the Chairperson and the Director of the Institute
- The Council of NITSER is the apex decision making body. The Council is headed by the Hon'ble Union Minister of Human Resource Development and it comprises the Chairpersons and the Directors of the NITs, the IISERs and the ISET Shibpur, beside other members including three Members of Parliament.
- The Board of Governors is responsible for the general superintendence, direction and control of the affairs of the Institute.
- The Senate of the Institute has the control and general regulation, and is responsible for the maintenance of standards of instruction, education and examination in the Institute. The Senate is empowered to frame and revise curricula and syllabi for the course of studies for various departments and to promote research in academic development activities.
- The Finance Committee is empowered to examine and scrutinise the annual budget of the Institute and make recommendations on any financial proposal to the Board.
- The Building and Works Committee undertakes construction of all major works after obtaining necessary administrative approval and expenditure sanction from the Board; it also enjoys the power to give the necessary administrative approval and expenditure sanction for minor works and to undertake the same.
- During the year under review the Institute authorities initiated actions towards framing of the Institute are in the process of framing of a large number of rules, regulations, ordinance, etc.

1.1 Framing and Amendment of Statutes

With the passage of the NITSER (Amendment) Act, 2014 the Institute was converted to a CFTI. Sub-section (1) of section 26, of the NITSER Act, 2007 provides that ‘the first Statutes of each Institute shall be framed by the Central Government with the prior approval of the Visitor’. As such, the Central Government framed the “Indian Institute of Engineering Science and Technology, Shibpur Statutes, 2017”. The Statutes came into force from Friday, the 24th March, 2017. The MHRD, under the cover of its letter F.No.33-10/2014-TS.III dated 7th April, 2017 sent a copy of the Statutes to the Institute and the same has been adopted for implementation at the Institute by the Board in its 7th meeting held on 25th April, 2017.

Subsequently, through framing of the Indian Institute of Engineering Science and Technology, Shibpur (Amendment) Statutes, 2017, a few provisions of the IEST Statutes, relating mostly to appointment and recruitment, were amended. The amendments came into force from Monday, the 24th July, 2017. The matter was communicated to the Institute *vide* MHRD letter F.No.35-5/2017-TS(III) dated July 31, 2017.

1.2 NITSER Council

As stipulated in Section 30 of the NITSER Act, 2007, the Council of NITSER is the apex body of the Institute. The Council is chaired by the Union HRD Minister and the Secretary, Department of Higher Education is its Vice-Chairperson. *Ex-officio* members of the Council include the Chairperson, Board of Governors, and Director of the Institutes. The Council co-ordinates the activities of all the Institutes governed under the NITSER Act, 2007.

During the period under review the composition of the NITSER Council was as below.

Sl. No	Members	Position
1	Minister in charge, Ministry of Human Resource Development, Govt. of India	Chairman (ex-officio)
2	Secretary to the Govt. of India, Deptt. of Higher Education, Ministry of Human Resource Development	Vice-Chairman (ex-officio)
3	The Chairperson of all National Institutes of Technology	Member (ex-officio)
4	Director of every National Institute of Technology	Member (ex-officio)
5	The Chairman, University Grant Commission	Member (ex-officio)
6	The Director General, Council for Scientific & Industrial Research	Member (ex-officio)
7	Secretary, Department of Bio-Technology, Govt. of India	Member (ex-officio)
8	Secretary, Department of Atomic Energy, Govt. of India	Member (ex-officio)
9	Secretary, Department of Information Technology, Govt. of India	Member (ex-officio)
10	Secretary, Department of Space, Govt. of India	Member (ex-officio)
11	The Chairman, All India Council for Technical Education	Member (ex-officio)
12	Not less than three, but not more than five persons to be nominated by the Visitor, at least one of whom shall be a women, having special knowledge or practical experience in respect of education, industry, science or technology	Member
13	Three Members of parliament, of whom two shall be chosen by the House of People and one by the Council of States	Member
14	Two Secretaries to the State Govt. of Maharashtra, from amongst the Ministries or departments of that government dealing with technical education	Member (ex-officio)

15	The Financial Advisor, Ministry of Human Resource Development, Govt. of India	Member-Secretary (ex-officio)
16	Joint Secretary to the Govt. of India (Technical)/Additional Secretary (Technical)/ Department of Higher Education, Ministry of Human Resource Development	Member(ex-officio)

A Standing Committee of the NITSER Council has been constituted with the following terms of reference.

- (i) To examine and submit its Report to the Council on all those subject matters/ issues/ references including broad policy formulations in achieving the long term goals (academic excellence including research) by NITs/ IISERs/ IEST duly referred/ entrusted by the Council of NITSER;
- (ii) To advise the Chairperson of the Council of NITSER on specific items; and
- (iii) To provide the necessary guidance and inputs on the specific issues as desired by the Council from time to time.

The Council normally meets once in a year and take steps conducive for maximum growth of the institutes within its ambit. In 2017-18 the Council met at the Indian Institute of Advanced Study, Shimla on 26th May 2017, to hold its 10th meeting. Important decisions taken at the meeting included the following.

- It was desired that the Institutes, particularly those with below-average record of placement, may bring out action plan for improvement in placement.
- The recommendations of the Oversight Committee constituted to look into the anomalies of the non-teaching staff in NITs/ IESTS were accepted.
- The Guidelines for proper utilization of Cumulative Professional Development Allowance (CPDA),- as prepared by the Standing Committee of NITs and duly examined by the HRD Ministry, were accepted.
- Recommendations of the Curricula Review Committee, headed by Dr. V.K. Saraswat, were adopted as model guidelines to be followed by the NITs and the IEST, Shibpur. It was also desired that the NITs/ IESTS should review its curricula every year and revise the same every year, by adding latest topics in consultation with the industry.
- A working group was constituted to look into the various aspects of tuition fees in respect of the Children of Indian Workers in Gulf Countries (CIWG) who are admitted under the scheme for Direct Admission of Students Abroad (DASA)
- While expressing concern for lowering of ranks by some NITS in NIRF 2017 in comparison to the same in 2016, the NITSER Council appreciated, amongst others, IEST Shibpur for standing in the top-25 in the country.
- The final report of the Prof. Asok De Committee regarding 'Recruitment Rules for Faculty in National Institutes of Technology in Engineering, Science, Humanities and Architecture' was accepted and the Rules were adopted.
- The amendment in the Statutes 17(1) of First Statutes pertaining to the Selection Committee for selection of Directors in NITs and IEST Shibpur was accepted. The Council desired that necessary resolutions may be passed by the Boards of NITs and of IEST Shibpur with 30 days.

1.3 Board of Governors

The Board of Governors of the Institute is constituted as per provisions of Section 11 of the NITSER Act, 2007. During 2017-18 the composition of the Board was as below:

Dr. Kopillil Radhakrishnan Former Secretary, Department of Space and Advisor ISRO Former Chairman, ISRO e-mail : radhkr272@gmail.com	Chairperson
Shri R. Subrahmanyam, IAS Additional Secretary (TE) Additional Secretary to the Government of India Ministry of Human Resource Development Shastri Bhawan New Delhi – 110 001 e-mail : subrahyd@gmail.com	ex-officio Member
Prof. Ajoy Kumar Ray Director, IESTS Shibpur Howrah 711103 e-mail : director@iests.ac.in	ex-officio Member
Prof. Anurag Kumar Director, IISc., Bangalore Sir C.V. Raman Avenue Bangalore – 560 012 e-mail : anurag@ece.iisc.ernet.in	ex-officio Member
Prof. Indranil Manna Director, IIT Kanpur P.O. IIT Kanpur Kanpur – 208 016 e-mail : director@iitk.ac.in	Member
Prof. Ashutosh Sharma Secretary Dept. of Science and Technology Technology Bhavan New Mehrauli Road New Delhi – 110 016 e-mail : dstsec@nic.in	Member
Prof. N. Bala Krishnan Professor Supercomputer Education and Research Centre, IISc. Bangalore Sir C.V. Raman Avenue Bangalore – 560 012 e-mail:balki@serc.iisc.in	Member
Prof. Sneh Anand Professor Centre for Biomedical Engineering Indian Institute of Technology Delhi	Member

Hauz Khas, New Delhi – 110 016
e-mail : snehanand.iitd@gmail.com

Smt. Darshana M Dabral ex-officio Member
Joint Secretary and Financial Advisor to the Government of India
Ministry of Human Resource Development
Shastri Bhawan, New Delhi – 110 001
e-mail : jsfa.edu@gov.in

Shri Ramesh Abhishek Member
Secretary to the Government of India
Ministry of Commerce and Industry
Department of Industrial Policy and Promotion
Udyog Bhavan, New Delhi – 110 011
e-mail : secy-ipp@nic.in

Sri Vivek Kumar, IAS ex-officio Member
Principal Secretary
Department of Higher Education
Government of West Bengal
Bikash Bhavan, Salt Lake,
Kolkata – 700091
e-mail : pshe@wb.nic.in

Prof. Gautam Bandyopadhyay Member
Professor
Department of Electrical Engineering
IEST Shibpur
e-mail: gautamkabi@hotmail.com

Prof. Shyamal Kumar Chattopadhyay Member
(Senate Nominee)
Professor, Department of Chemistry
IEST Shibpur
Ph. 033-26684561 to 63 (ext- 500)
e-mail: shch20@hotmail.com

Dr. Biman Bandyopadhyay Secretary
Registrar
IIE S T Shibpur
Howrah -711103
e-mail : regis@iiests.ac.in

Important resolutions adopted by the Board in 2017-18, included the following

1.3.1 7th meeting held on 25th April, 2017 in New Delhi

- The Board adopted the First Statutes of the Institute, viz., 'the Indian Institute of Engineering Science and Technology, Shibpur Statute, 2017' for implementation at the Institute.
- It was resolved that with effect from the academic session 2017-18 the Institute would admit students, at the undergraduate level, only to the four year integrated BTech programmes and the five year integrated BArch programme. The practice of direct admission of students to first year of the dual BTech-MTech degree programme would be discontinued.

- The Committee for Financial Affairs recommended the following on the basis of the recommendation of the Building and Infrastructure Development Committee:
 - construction of the remaining 5th, 6th and 7th floors of the new multi-storied Ladies Hostel at an estimated cost of Rs.5,25,43,000/-.
 - approval of the enabling estimates of (i) Rs.77 lakh for 1000 capacity single seated boys' hostel and (ii) Rs. 72 Lakhs for 600 capacity single seated girls' hostel.
 - construction of the first, second and third floor of the Students Amenities Centre at an estimated cost of Rs.1,33,79, 608/-.

The Board accepted the recommendations and approved the proposed constructions

1.3.2 8th meeting held on 14th June, 2017 in New Delhi

- The NITSER Council in its 10th meeting, held on May 25, 2017 at Simla, proposed certain amendments to the IEST Statutes and desired that necessary resolutions may be passed by the Board of IEST Shibpur within 30 days. As such, the recommendations were placed before the Board and the Board accepted and recommended the proposed modifications.
- The Board also considered the modifications proposed by the Institute in Section 29 of its Statutes relating to pensionary benefits of the Institute employees. The Board desired that the proposal be sent to MHRD seeking its guidance on the issue.
- The Board considered the following recommendations of the Committee for Financial Affairs and stipulated that all expenditures may be following the provisions under the GFR 2017 and the CVC Guidelines on procurement.
 - campus cleaning project of annual value of Rs. 67,83,073/-.
 - campus garbage disposal project of annual value of Rs. 40,03,860/-.
 - purchase of 400 MHz FT-NMR Spectrometer and High resolution Mass Spectrometer at an estimated cost of Rs 4,00,00,000/- from the fund released by the DST, Government of India for setting up a new Sophisticated Analytical Instrument Centre (SAIF) at the Institute.

1.3.3 9th meeting held on 25th November, 2017 at IEST, Shibpur

- The BOG adopted the Office Memorandum No.28/30/2004-P and PW(B), of the Ministry of Personnel Grievances and Pension, Government of India regarding mobility of personnel amongst Central/State and Autonomous Bodies while working under Pensionable establishments, so that the process of such counting of past service for employees of all categories of IEST, Shibpur may be processed in accordance with this order.
- The BOG adopted the Government Memorandum No. F.No.33-9/2011-TS.III, Govt. of India, MHRD, Dept. of Higher Education dt. 06.10.2017 and subsequent Memorandum No. F. No.33-9/2011-TS.III dated 17th November 2017 regarding recommendations of the Anomaly Committee on new Recruitment Rules for Faculty at IEST Shibpur.

- The BOG resolved that the faculty members will be get telephone allowance/bill reimbursement as per the Central Government rules in this regard by considering the appeals made by teachers' association.
- The BoG considered the following recommendations made by the Finance Committee in its second meeting subject to the stipulation all expenditures may be made following the provisions under the GFR 2017 and the CVC Guidelines on procurement.
 - purchase of custom fabricated PECVD Reactor (RF and MW) from project fund with an estimated cost of Rs. 1.3 crore for CEGESS, IEST, Shibpur.
 - renewal of two e-resources for Ramanujan Central Library, IEST, Shibpur for renewal the same with an estimated cost of Rs. 1.44 Crore.
 - procurement of equipments amounting Rs. 60 lakh for two laboratories of School of Mechatronics and Robotics.
 - procurement of two new spectrophotometers namely UV-vis-NIR spectrophotometer and IR spectrophotometer for Department of Chemistry at an estimated cost of Rs. 36,00,000/-.
- The Registrar submitted a note proposing sanction and administrative approval for incurring an expenditure of one crore rupees (Rs 1,00,00,000/- only) towards application fee to be paid along with its application for its being considered for selection by the UGC as an 'Institution of Eminence'. The Board considered and approved the proposal but desired that the Institute may also consider the chances of selection before submission of its and keep in view the fact that a sizeable amount from the application fee shall be forfeited in the event of non-selection.

1.4 The Senate

Constituted under Section 14 of the NITSER Act 2007, The Senate of the Institute is its principal academic authority. Subject to the provisions of the Act, the Statutes and the Ordinances, the Institute Senate controls and general regulates, and is responsible for the maintenance of standards of instruction, education and examination in the Institute. During the period under review the composition of the IEST Senate was as below.

Chairperson, Senate

Prof. Ajoy Kumar Ray
Director

Department of Aerospace Engineering and Applied Mechanics

Prof. Amit Roychowdhury
Prof. Koustuv Debnath
Prof. Rana Roy
Prof. Salil Halder
Prof. Santanu Majumder
Prof. Subhasis Bhaumik
Prof. Sujay Kumar Mukherjea

Department of Architecture Town and Regional Planning

Prof. Aditya Bandyopadhyay
Prof. Souvanic Roy
Prof. Arup Sarkar
Prof. Swati Saha
Prof. Keya Mitra
Prof. Partha Sarathi Mukhopadhyay

Department of Civil Engineering

Prof. Ambarish Ghosh
Prof. Anirban Gupta
Prof. Aparna (Dey)Ghosh
Prof. Chaitali Ray
Prof. Debabrata Mazumder
Prof. Kalyan Kr. Chattopadhyay
Prof. Kalyan Kumar Bhar
Prof. Subrata Chakraborty
Prof. Sudip Kr. Roy

Department of Chemistry

Prof. Ajit Kumar
Prof. Anup Mondal
Prof. Bibhutoosh Adhikary
Prof. Binaykrishna Ghorai
Prof. Prasanta Kumar Nandi
Prof. Shyamal Kumar Chattopadhyay
Prof. Sudip Kumar Chattopadhyay

Department of Computer Science and Technology

Prof. Amit Kumar Das
Prof. Biplab Kr Sikdar
Prof. Jaya Sil
Prof. Sipra Das (Bit)
Prof. Sulata Mitra
Prof. Susanta Chakraborty

Prof. Uma Bhattacharya

Department of Earth Science

Prof. Bhabani Prasad Mukhopadhyay

Department of Electrical Engineering

Prof. Abdur Rouf
Prof. Aparajita Sengupta
Prof. Ashoke Sutradhar
Prof. Avijit Chakraborty
Prof. Biswarup Basak
Prof. Chandan Kumar Chanda
Prof. Debabrata Roy
Prof. Debasis Sarkar
Prof. Gautam Bandyopadhyay
Prof. Jagadish Pal
Prof. Konika Das (Bhattacharya)
Prof. Mainak Sengupta
Prof. Prasad Syam

Department of Electronics and Telecommunication Engineering

Prof. Bidyanath Roy
Prof. Monojit Mitra
Prof. Santanu Das

Department of Humanities and Social Sciences

Prof. Madhumanti Dutta

Department of Human Resource Management

Prof. Manas Kumar Sanyal

Department of Information Technology

Prof. Hafizur Rahaman
Prof. Santi Prasad Maity

Department of Mathematics

Prof. Asoke Kumar Dhar
Prof. Basudeb Mukhopadhyay
Prof. Binayak Samaddar Choudhury
Prof. Guruprasad Samanta
Prof. Jagabandhu De
Prof. Murari Mitra
Prof. Parbati Saha
Prof. Sanat Kr. Majumder
Prof. Tapan Kr. Kar
Prof. Tapan Kr. Roy

Department of Mechanical Engineering

Prof. Apurba Kishore Dutta
Prof. Bijan Kumar Mandal
Prof. Debasish Dutta
Prof. Santanu Kumar Karmakar
Prof. Shyamal Chatterjee
Prof. Sisir Kumar Guha
Prof. Somnath Chakrabarti
Prof. Sujoy Kumar Saha

Department of Metallurgy and Materials Engineering

Prof. Amitava Basu Mallick
Prof. Subrata Chatterjee
Prof. Swarup Kumar Ghosh

Department of Mining Engineering

Prof. Indranath Sinha
Prof. Netai Chandra Dey
Prof. Prabir Kr. Paul
Prof. Pratik Dutta
Prof. Suranjan Sinha

Department of Physics

Prof. Bichita Kr. Guha
Prof. Dipali Banerjee
Prof. Mousumi Basu
Prof. Sukhendu Sekhar Sarkar

School of Material Science and Engineering

Prof. Nil Ratan Bandyopadhyay

Secretary

Dr. Biman Bandyopadhyay
Registrar

During the academic year 2017-18 the Senate met on four occasions. Important resolutions adopted by it are summed up below.

1.4.1 Twelfth meeting of the Senate held on Wednesday, May 17, 2017

- Boards of studies were requested to finalise revision of the course structures and design of the syllabi of (i) the 4 year B.Tech. programme and (ii) the integrated 5 year B.Tech-M.Tech dual degree programme urgently
- The Committee constituted for looking into various aspects of introducing 'industry-specific three year MTech programme', was requested to submit its report before the next meeting of the Senate.
- Having considered the recommendation of the Departmental Academic Committee of Civil Engineering Department the name of the "Centre for Advanced Research on Water" was changed to the "Centre for Water and Environment Research".

1.4.2 Emergency meeting held on Wednesday, September 20, 2017

- Noted the Board resolution to allow the students admitted to the dual BTech-MTech degree programme to exercise an exit option to opt for the BTech degree programme only subject to the condition that such an option is exercised after completion of the Fifth Semester (i.e. in the VI semester) of the study.
- It was noted that with effect from the academic session 2017-18 admission to first degree programme in engineering/ technology would only be for four year BTech courses.

1.4.3 Thirteenth meeting of the Senate held on Wednesday, the November 08, 2017

- Introduction of 'Three year MTech programme for working professionals' was approved and it was resolved to start the programme in 2018-19 academic session in a few selected specialisations of Civil and Electrical Engineering. Proposed course structures for these programmes were approved as proposed.
- Approval was accorded for a contingency grant of Rs 20,000/- per year for every PhD fellow of the Institute subject to certain stipulated terms and conditions. It was also decided that, subject to certain stipulated conditions, every PhD fellow, once during the tenure of his fellowship, would also be eligible for a grant of maximum Rs. 50,000/- only for attending conferences abroad.
- Approval was accorded for implementation of the National Academic Depository Scheme at the Institute.

1.4.4 Fourteenth meeting of the Senate held in two sessions on Wednesday, the 10th January, 2018 and on Wednesday, the 31st January, 2018

- A five member committee was constituted to assess the number of Research Associates/ Post Doctoral Fellows at various departments, schools and centres of the Institute.
- It was desired that the Institute may take all necessary steps to adopt and implement the guidelines issued by the MHRD (*vide* its letter F.No.35-8/2017-TS.III, dated 30th

October, 2017) for increasing female enrolment in the first degree programmes offered by the Institute.

1.5 Finance Committee

Soon after framing of the IEST Statutes, 2017, the Finance committee of the Institute was constituted as per provisions laid down in Section 10 of the Statutes. During the period under review the Finance Committee for the Institute consisted of the following members, namely:-

- | | | |
|-----------|--|---|
| (i) | The Chairperson of the Board of Governors
Dr.Koppillil Radhakrishnan | Chairman (<i>ex-officio</i>) |
| (ii) | the Director
Prof.Ajoy Kumar Ray | Member (<i>ex-officio</i>) |
| (iii) (a) | Joint Secretary, MHRD, dealing with the Institute or his nominee | Member (<i>ex-officio</i>) |
| (iii) (b) | Financial Advisor, MHRD, or his nominee | Member (<i>ex-officio</i>) |
| (iv) | Two persons nominated by the Board from amongst its members | |
| | (a) Prof. S.K. Chattopadhyay
Professor in Chemistry
IEST Shibpur | Member |
| | (b) Prof.Subrata Chakraborty
Professor in Civil Engineering
IEST, Shibpur | Member |
| (v) | The Registrar
Dr.Biman Bandyopadhyay | Member-Secretary
(<i>ex-officio</i>) |

Time to time, the Chairperson, in consultation with the Director, invites an expert as special invitee. All financial proposals are placed before the Finance Committee before placing it to the Board for consideration and approval.

The first meeting of the Finance Committee was held on June 14, 2017 in New Delhi. Important outcome of the meeting were as below.

- The Chairperson put emphasis on the following.
 - The EFC note for conversion of the Institute to a CFTI was approved by the union cabinet. It is therefore imperative that a comprehensive development plan should be prepared. It was further emphasised that the Institute should consider the EFC note as the basic documents for preparation of comprehensive development plan;
 - The fund received by the Institute from MHRD and other government funding agencies, research and consultancy, Institute's own fund generated from tuition fees, endowment funds, etc. and the fund received from the Alumni should be utilised appropriately and reported in the Finance Committee.
- The final Audit Report in respect of the Institute's accounts for the financial year 2015-16, as received from the Office of the Principal Director of Audit, Indian Audit and Accounts Department, Kolkata, was placed before the Finance Committee and the Finance Committee considered and accepted the Audit Report. It was noted that the BOG in its 7th meeting adopted the Audit Report with a note that Institute should

comply with the observation of the Audit Report and submit a compliance report to the BOG. It was resolved that a compliance report would be placed in the next meeting of the Finance Committee

- A note from the Coordinator, Sophisticated Analytical Instrument Centre (SAIF) requesting approval of the BoG to procure one unit of 400 MHz Fourier-Transform Nuclear Magnetic Resonance (FT-NMR) Spectrometer and a High resolution Mass Spectrometer at an estimated cost of four crore rupees (Rs 4,00,00,000/-) from the fund sanctioned by the Department of Science and Technology, Government of India for setting up a new Sophisticated Analytical Instrument Centre (SAIF) at the Institute. The Finance Committee considered the note and recommended that approval be granted by the Board for procuring the items indented.
- The Finance Committee recommended that the proposal of the Head of the Department of Electrical Engineering of the Institute for procuring a campus license of the software 'NI Lab View Academy' at an estimated cost of Rs. 25 Lakh be considered for approval by the Board of Governors.
- In line with the provisions laid down in MHRD letter F.No. 33-6/2011-TSII dated 5th July 2012 the Dean (Administrative Affairs) put up a note regarding payment of special allowance to the to the Deputy Director, the Deans, the Associate Deans, the Chief Warden and the Wardens. The Finance Committee considered the note and recommended to the Board that the provisions laid down by MHRD be adopted and approved for implementation at the Institute with immediate effect.
- the Dean (Infrastructure Planning and Management) mooted two proposals; - one for taking up a drive for “Campus Cleaning” at an estimated annual cost of Rs. 67,83,073/- and the other for regular disposal of campus-garbage at an annual cost of Rs. 40,03,860/-. The proposals were put up before the Finance Committee, which recommended that the proposal be approved by the Board.
- Purchase proposals made by the Head of the Centre for Health Care Science and Technology (CHST) for procurement of various instruments for the Centre at an estimated cost amounting to greater than 25 Lakhs were put up before the Finance Committee. The procurements were to be made for a project funded by the Central Council for Research in Homoeopathy (CCRH). The committee recommended that necessary approval and expenditure sanction may be accorded by the Board.

1.6 Building and Works Committee

The Board of Governors in its 7th meeting held on 25th April, 2017 constituted the Building and Works Committee for the Institute under Section 12 of the IEST Statutes.

The Building and Works Committee of the Institute is responsible for making technical scrutiny of the design, estimates and specifications of the material as may be considered necessary. It is also responsible for enlistment of suitable contractors and acceptance of tenders. it has the power to give directions for departmental works (where necessary) and to settle rates not covered by tender and settle claims and disputes with contractors.

The Committee undertakes construction of all major works after obtaining necessary administrative approval and expenditure sanction from the Board. It accords administrative

approval and expenditure sanction for minor works and works pertaining to repair and maintenance within the approved budgetary provision of the Institute. It arranges preparation of estimates of cost of buildings and other capital works, minor works, repairs, maintenance and the like and approves the cost estimates for minor works, minor repairs and maintenance.

In 2017-18 the Committee consisted of the following members:

(i)	The Director Prof.Ajoy Kumar Ray	Chairman
(ii)(a)	Director or Deputy Secretary or his nominee dealing with the Institute in the Ministry	Member
(ii)(b)	Director or Deputy Secretary or his nominee dealing with Finance of the Institute in the Ministry	Member
(iii)	One member nominated by the Board of Governors Prof. Sriman Bhattacharya Deputy Director IIT Kharagpur	Member
(iv)	Registrar Dr.Biman Bandyopadhyay	Member-Secretary
(v)	Dean, planning and development or similar position Prof Aditya Bandyopadhyay	Member
(vi)	One expert each from Civil and Electrical Engineering Wing of Central or State Government or any autonomous body of repute	
	(a) Chief Engineer (Civil), CPWD, Eastern Zone or his nominee	Member
	(b) Chief Engineer, Electrical, CPWD, Easter Zone or his nominee	Member

During the year under review the Committee held one meeting on December 29, 2017. While the major works were referred to the Board of Governors, the Committee approved a significant number of proposals for construction, repair and maintenance that came under the class of minor works. Important resolutions adopted by the committee are given in Appendix 1A.

1.7 Important Functionaries

Chairman, Council of NITSER
Shri Prakash Javadekar
Minister of Human Resource Development
Government of India

Chairman, Board of Governors
Dr K Rashakrishnan

Director
Prof. Ajoy K Ray

Deans

Academic Affairs :	Prof. Amit Kumar Das <i>(up to September 26, 2017)</i> Prof Amitava Basu Mallik <i>(w.e.f. September 26, 2017)</i>
Administration :	Prof. P. K. Paul
Alumni Affairs and International Relations :	Prof. S. K. Karmakar
Faculty Affairs :	Prof. B. K. Guha
Sponsored Research and Industrial Consultancy :	Prof. K K Bhar
Students' Welfare :	Prof. N. C. Dey

Registrar
Dr Biman Bandyopadhyay

1.8 Administration

Director

Prof. Ajoy Kumar Ray
Ph. No. + 91-33-2668-2674
Cell: +919434004711
Fax : 2668 7575
e-mail: director@iiests.ac.in

email: sharma_hp@hotmail.com
M: 9432365566

Deputy Registrar (R and C)

Dr. Devasis Datta
Ph. No. + 913326684561 * 355
email: dr.rc@iiests.ac.in
M: +919830566666

Registrar

Dr. Biman Bondopadhyay
Ph. No. - 91-33-26681503
M: 9874222228
e-mail address : regis@iiests.ac.in

Deputy Registrar (Audit)

Shri Alokkr. Maity
Ph. No. + 913326684561 * 206
email: auditofficer@iiests.ac.in
M : 9433153452

Finance Officer (Atcg.)

Shri Sambhunath Datta
Ph. No.- 91-33-2668- 1064
e-mail address: dr@iiests.ac.in,
dattasn@gmail.com
M : 9433768194

Accounts Officer

Shri Tapan Kumar De
Email: tapande37@gmail.com
Ph.No. + 913326684561 * 232
M: 9432380141

Controller of Examinations (Acting)

Dr. Nirmalaya Bhattacharya
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e-mail address: controller@iiests.ac.in

Assistant Training Officer

Shri Usha Shankar Bhattacharyya
Ph.No. - 91-33-2668-4561 * 258
M : 8017752397

Librarian (Acting)

Dr. Hari Prasad Sharma
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Assistant Proctor

Shri Alok K. Mitra
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e-mail: akmitra7077@yahoo.co.in
Mob. No.: 9830519575

Deputy Registrar

Shri Sambhunath Datta
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Assistant Registrar

Shri ShibSankarBasak.
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University Engineer

Shri Subrata Kar
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Assistant Registrar

Shri Bivore Das
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arbd@iiests.ac.in
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Assistant Controller

Sri Dipankar Chakraborty
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Assistant Librarian

Shri Sushil Kumar Barman
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M : 9833681616

Assistant Librarian

Sri AbaniOraon
Ph. No.- - 91-33-2668-4561 * 725
email: abani.oraon@yahoo.co.in
M : 9874608764

Workshop Superintendent

Dr.Dibyendu Chatterjee
e-mail: dibyendu_660@rediffmail.com
M : 9433284629

Physical Instructor

Dr. Zia-Ul-Alam
email: alamzia2002@yahoo.com
M: 9433128404

Physical Instructor

Sri Sandip Chatterjee
email: c.sandip2010@gmail.com
M: 432835933

Public Information Officer

Prof. Sanjay Sadhukban
Associate Professor

Department of Metallurgy and
Materials Engineering
Email: skhan_besus@yahoo.co.in
M: 9883054104

**Appellate Authority
(under the RTI Act 2005)**

Prof.Bichitra Kumar Guha
Professor
Department of Physics
email: bkg_phys123@yahoo.co.in
M: 9830155316

Chief Warden

Dr SudiptoMukhopadhyay
Associate Professor
Department of Mining Engineering
email id: sudiptaiest@gmail.com
cell no. +919433965705

Vigilance Officer

Prof.Prabir Kumar Paul
Professor
Department of Mining Engineering
email: prabirpaul59@gmail.com
M: 9830306490

Medical Officer

Dr. Rubi Golder
Ph no. +91 33 2668 4561 * 332
M: 9433805865
e-mail : rubigolder@gmail.com

1.9 Wardens of Hostels/ Halls of Residence

A.C. Roy Hall

Dr. Pritam Saha
Assistant Professor, Civil Engineering
Mob.: 9831942049

Mob.: 9674889808

Hostel No. 14

Sri.Alok Mitra
Assistant Proctor,
Mob.: 9830519575

A. K. Seal Hall H10

Dr. Nillohit Mukherjee
Assistant Professor
Centre for Green Energy & Sensor
Systems (CEGESS)
Mob.: 9432926929

Hostel No. 15

Dr.SudiptaMukhopadhyay
Associate Professor, Mining
Engineering
Mob.: 9433965705

B.Sen Hall

Sri S.N. Datta
Deputy Registrar
Mob.: 9433768194

Hostel No. 16

Dr. Subbash Ch. Mondal
Associate Professor, Mechanical
Engineering
Mob.: 9732652968

D4 block

Dr.SudiptaMukhopadhyay
Associate Professor, Mining
Engineering
Mob.: 9433965705

Lt William Hall of Residence

Dr. Sujata Biswas
Assistant Professor, Civil Engineering
Mob. : 9831027042

D6 block

Dr. Subbash Ch. Mondal
Associate Professor, Mechanical
Engineering
Mob.: 9732652968

Macdonald Hall

Dr. Soumen Mitra
Assistant Professor,
Architecture (T & RP)
Mob: 9831443101

D. Banerjee Hall

Prof. Santanu Kumar Karmakar
Professor, Mechanical Engineering
Mob.: 9831145516

Pandya Hall

Dr. Chaitalli Roy
Professor, Civil Engineering
Mob.: 9433262156

Downing Hall and A39

Dr.Nillohit Mukherjee
Assistant Professor
Centre for Green Energy & Sensor
Systems (CEGESS)
Mob.: 9432926929

Richardson Hall

Dr. Chanchal Majumder
Assist. Professor, Civil Engineering
Mob.: 9007761448

Hostel No. 11

Dr. Debdulal Das
Associate Professor, Metallurgy &
Materials Engineering
Mob.: 9163547794

Sen Hall

Dr. Sukumar Kundu
Assistant Professor, Metallurgy &
Materials Engineering
Mob.: 8334043609

Hostel 13 (PG Hostel)

Dr Tapendu Mandal
Assistant Professor, Metallurgy &
Materials Engineering

Sengupta Hall

Dr. Tapas Roy
Assistant Professor, Civil Engineering
Mob.: 9433089861

Sister Nivedita Hall

Dr. Ananya Barui
Assistant Professor, Centre For Health
Care I
Science & Technology (CHST)
Mob.: 9432083954

Wolfenden Hall

Prof. Aditya Bandyopadhyay
Professor, Architecture (T &RP)
Mob. 9433817067

**1.10 Academic Departments/ Schools/ Centres, Centres of Excellence,
Service Centres and Other Units**

Heads of the Departments

**Aerospace Engineering and Applied
Mechanics**

Prof.KoustavDebnath

**Architecture, Town and Regional
Planning**

Prof. Keya Mitra

Chemistry

Prof.Binay Krishna Ghorai

Civil Engineering

Prof.Sudip Roy

Computer Science and Technology

Prof.Biplab Kumar Sikdar

Electrical Engineering

Prof.Jagadish Pal

**Electronics and Tele Communication
Engineering**

Prof.ManojitMitra

Earth Sciences

Prof. Tapas Gangopadhyay

Humanities and Social Sciences

Prof.Subhasis Bandyopadhyay

Human Resource Management

Prof.Manas Kumar Sanyal

Information Technology

Prof.Arindam Biswas

Mathematics

Prof. Amit Das

Mechanical Engineering

Prof.Bijan Kumar Mondal

Metallurgy and Materials Engineering

Prof.Swarup Kumar Ghosh

Mining Engineering

Prof.Indranath Sinha

Physics

Prof. Samar Jana

Heads of Schools

Purabi Das School of Information Technology

Prof.Arindam Biswas

School of Materials Science and Engineering

Prof.Nil Ratan Bandyopadhyay

School of Management Sciences

Prof.Prabir Kumar Paul

School of Community Science and Technology

Prof.SujayMukherjea

School of Disaster Mitigation Engineering

Prof.Ambarish Ghosh

School of Ecology, Infrastructure and Human Settlement Management

Prof.Souvanic Ray

School of Mechatronics and Robotics

Prof.DebjaniGanguly

School of Safety and Occupational Health Engineering

Prof.B.K.Bhattacharya

School of VLSI Technology

Prof.Hafizur Rahman

Heads of Centres

Centre of Excellence for Green Energy and Sensor Systems (CEGESS)

Prof.AnupMondal

Centre for Health Science and Technology (CHST)

Prof. Amit Roy Chowdhury

Co-ordinator, TEQIP – III

Dr Gopal Chandra Roy

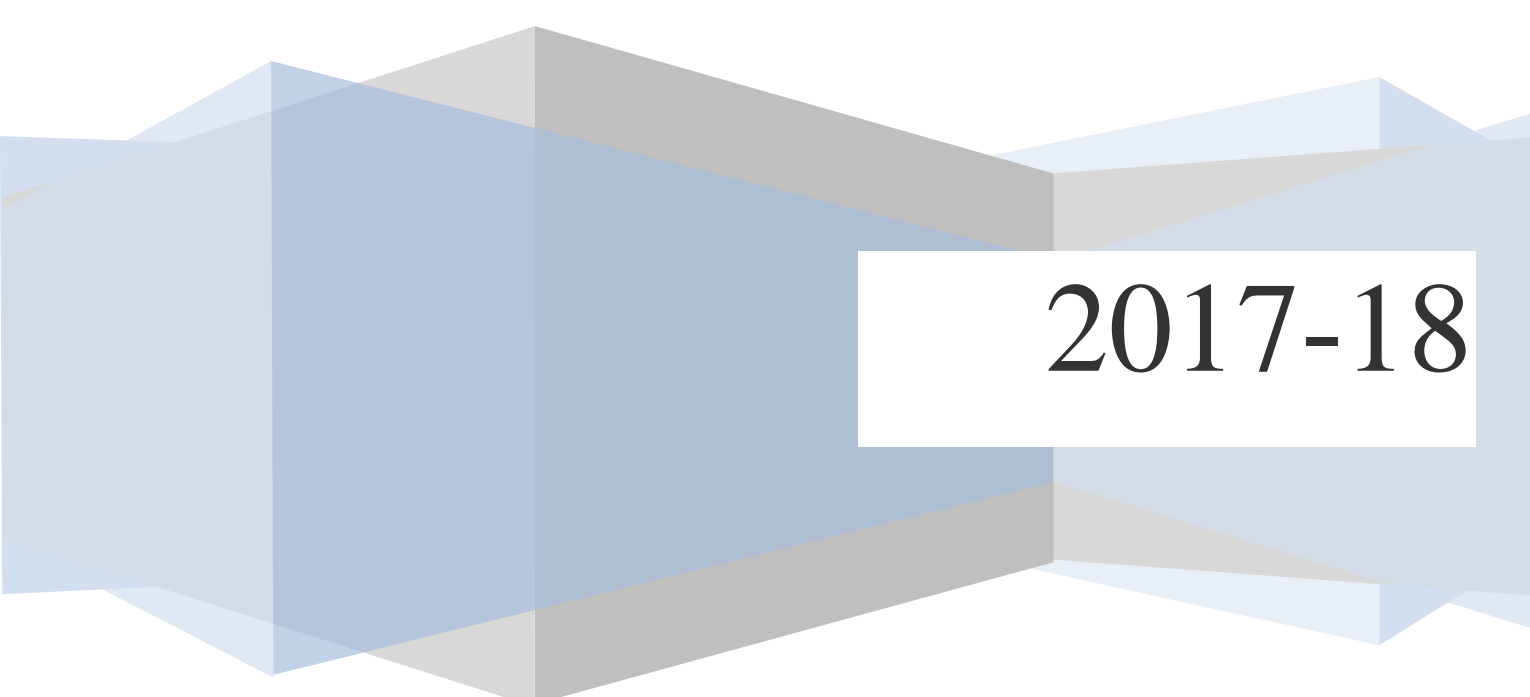
Assistant Professor

Department of Mining Engineering

Professors-in-Charge

- i. Computer Networking: Dr. Manas Hira
- ii. Library: Dr. Sudip Kumar Chattopadhyay
- iii. Furniture: Dr. Sudipta Mukhopadhyay

§2. Human Resources



2017-18

2 ACADEMIC AND NON-ACADEMIC STAFF

As is true with the other CFTIs, sanctioned posts for both teaching and non-teaching posts are hinged to approved student intake of the Institute. Except in the case of employees paid from contingencies, the members of staff of the Institute are classified as under:-

- (i) **Academic staff:** Director, Deputy Director, Professor, Associate Professor, Assistant Professor, Professor Training and Placement, and such other academic posts as may be decided by the Board from time to time;
- (ii) **Technical staff:** System Manager, Workshop Superintendent, Librarian, Scientific Officers, Research Engineers, Deputy Librarian, Assistant Workshop Superintendent, System Analyst, Programmer, Foreman, Technician, Instructor, Laboratory Assistant, Mechanic, Overseer, Technical Assistant, Draftsman, and such other technical posts as may be decided by the Board from time to time; and
- (iii) **Administrative and others staff:** Registrar, Deputy Registrar and Assistant Registrar, Accounts Officer, Audit Officer, Estate Officer, Executive Engineer, Assistant Engineer, Junior Engineer, Medical Officer, Medical Assistant, Horticultural Assistant or Officer, Office Superintendent, Security Officer, Stores Officer, Store Keeper, Office Assistants, Data Entry Operators and such other Administrative and other staff as may be decided by the Board from time to time.

Conversion of this institute from a State University to a CFTI was realized through enactment of the NITSER (Amendment) Act 2014. The Act provides for certain safeguards for the teachers and staffs employed at BESU at the time of its conversion.

The pay scale enjoyed by the employees are at par with that in other CFTIs and, as provided in the IEST Statutes, the employees of the Institute are entitled to allowances as admissible to the Central Government Employees. The employees of the Institute are governed by the Central Civil Services (Conduct) Rules, 1964.

The Institute is yet to frame the code of conduct for employees and, as such, the Institute follows the Central Civil Services (Classification, Control and Appeal) Rules, 1965 as per provisions laid down in Section 25 of the IEST Statutes. The leave for all the employees of the Institute is governed by the Central Civil Services (Leave) Rules 1972.

As per MHRD Guidelines the ratio of academic and non-academic staffs at the Institute should be around 1:1.1. But at the time of its conversion in 2014 the staff position was significantly skewed towards non-academic staffs and right sizing will require some time.

During the year under review the Institute continued its efforts towards filling up the vacant posts. While the revised recruitment rules framed by MHRD for the CFTIs were adopted, a standing advertisement no. JL/D(AA)/17/45(EMPF) were published and webcasted on July 21, 2017.

2.1 ACADEMIC STAFF

The Academic staff scenario in 2017-18 is shown in Table 2.1. In addition to the regular academic staffs the Institute, in 2017-18, also received services from temporary academic staffs for which the details are provided in Table 2.2. As may be seen, while the total strength

of academic staff, including temporary faculty is 282, the corresponding figure for non academic staff is 453.

Table 2.1: Academic Staff in position in July 2017

Sanctioned Faculty Strength	In position					Vacant	Vacancy percentage
	General	SC	ST	OBC	Total		
305	160	25	1	9	195	108	35.64

Table 2.2: Temporary Faculty in position in July 2017

Visiting	Adjunct	On Contract	Trainee Teachers	Others	Total	TOTAL(permanent +Temporary)
40	21	--	--	26	87	282

Last few years' vacancy situations in respect of academic staffs at the Institute are shown in Table 2.3.

Details of Academic staffs in various academic departments, schools and centres are furnished in Appendix 2A.

The Institute has adopted the four-tier flexible faculty cadre structure, but since no automatic migration was possible the Academic staffs of BESU were mapped in the three tier structure pending completion of necessary formalities for pay mapping for migration to the four tier structure.

2.2 NON-ACADEMIC STAFF

At the time of its conversion to IEST the sanctioned strength of non-teaching employees at the Institute was 616. At a Student : Faculty ratio of 12:1 the faculty strength approved by MHRD has been 305. That makes the desirable strength of non-teaching staff equal to 336. The right sizing of non teaching staff strength would take considerable time. Details of non-teaching staff in position in 2017-18 are shown in Table 2.4.

In addition to the regular technical, administrative and other staffs the Institute, in 2017-18, also received services from contractual non-academic staffs of which the details are provided in Table 2.5. As may be seen, while the total strength of academic staff, including temporary faculty is 282, the corresponding figure for non academic staff is 453. That is, the ratio of Academic to non-academic staff stood at 1:2.04. If the temporary employees are taken into account the ratio betters to 1:1.61, while ideally the ratio ought to be close to 1:1.1.

A list of non teaching employees along with their pre-mapped designations is provided in the appendices. While Appendix-2B provides the list of Institute Officers, Appendix 2C provides the list of Technical Staffs; the list of administrative and other staffs are provided in Appendix-2D.

Table 2.3: Faculty details from 2014-15 to 2017-18

Year	No. of sanctioned posts						Faculty in position						Vacancy					
	Gen	SC	ST	OBC	PwD	Total	Gen	SC	ST	OBC	PwD	Total	Gen	SC	ST	OBC	PwD	Total
2014-15	142	41	20	74	0	277	167	23	1	8	0	199	39	12	7	20	0	78
2015-16	142	41	20	74	0	277	170	25	1	9	0	205	36	10	7	19	0	72
2016-17	142	41	20	74	0	277	169	25	1	9	0	204	36	10	8	19	0	73
2017-18	155	45	22	81	0	303	160	25	1	9	0	195	54	15	10	29	0	108

Table 2.4: Technical, Administrative and Other Staffs in position in July 2017

Faculty Strength sanctioned by MHRD	Faculty Strength in position (only regular)	Non - Faculty strength As per MHRD norms	In position (non faculty)					
			Permanent					
			General	SC	ST	OBC	PH	Total
305	195	336	322	57	8	8	2	397

Table 2.5: Detail of Temporary Staffs in July 2017

Temporary			TOTAL(permanent +Temporary)
On Contract	Others	Total	
56	--	56	453

2.3 NON-TEACHING OFFICERS

At the time of its conversion to IEST, the Institute had the following seventeen sanctioned posts of Officers

Table 2.6: Details of Administrative Posts

Designation	Situation on March 04, 2014
1. Registrar	In position
2. Finance Officer	Vacant
3. Controller of Examinations	Vacant
4. Deputy Registrar	In position
5. Development Officer	Vacant
6. Secretary Faculty Council-I	Vacant
7. Secretary Faculty Council-II	Vacant
8. Secretary Faculty Council-III	Vacant
9. Deputy Controller of Examinations	In position
10. Assistant Registrar – I	In position
11. Assistant Registrar – II	In position
12. Assistant Controller of Examinations	In position
13. Assistant Training Officer	In position
14. Assistant Proctor	In position
15. Accounts Officer	Vacant
16. Audit Officer	In position
17. Secretary to Vice Chancellor	In position

At the time of its conversion from a government engineering college to a deemed university under an autonomous society, the institute had two more posts, viz., Registrar (B E College)

and Deputy Registrar (B E College), but these posts were not redesignated to a suitable posts in university system. Apart from the posts listed in Table-2.6 above, the job functions discharged by (i) the PICSA were essentially administrative in nature.

Apart from these administrative posts, there are other non-academic posts related to Health Services (medical facilities), Campus Planning and Maintenance, Computer Centre, Works division etc.

During the year under review the Institute continued the process of pay mapping and redesignation of the posts against which incumbents were in position. Meanwhile the promotee officers retained the designations of the post to which they were promoted. Details of incumbent officers have been provided in Chapter-1 (Organisation and Administration).

2.4 FACULTY/ OFFICERS/ STAFF SUPERANNUATED

As the Institute was transformed from a State University to a Centrally Funded Technical Institute the age of Superannuation of teachers changed from 60 to 65. As such no teacher retired during the year under review. The same was true for officers. The list of staff members who retired during the year is furnished in Table 2.7 and Table 2.8.

Table 2.7: List of Non-Teaching retired employees from April 2017 to March 2018

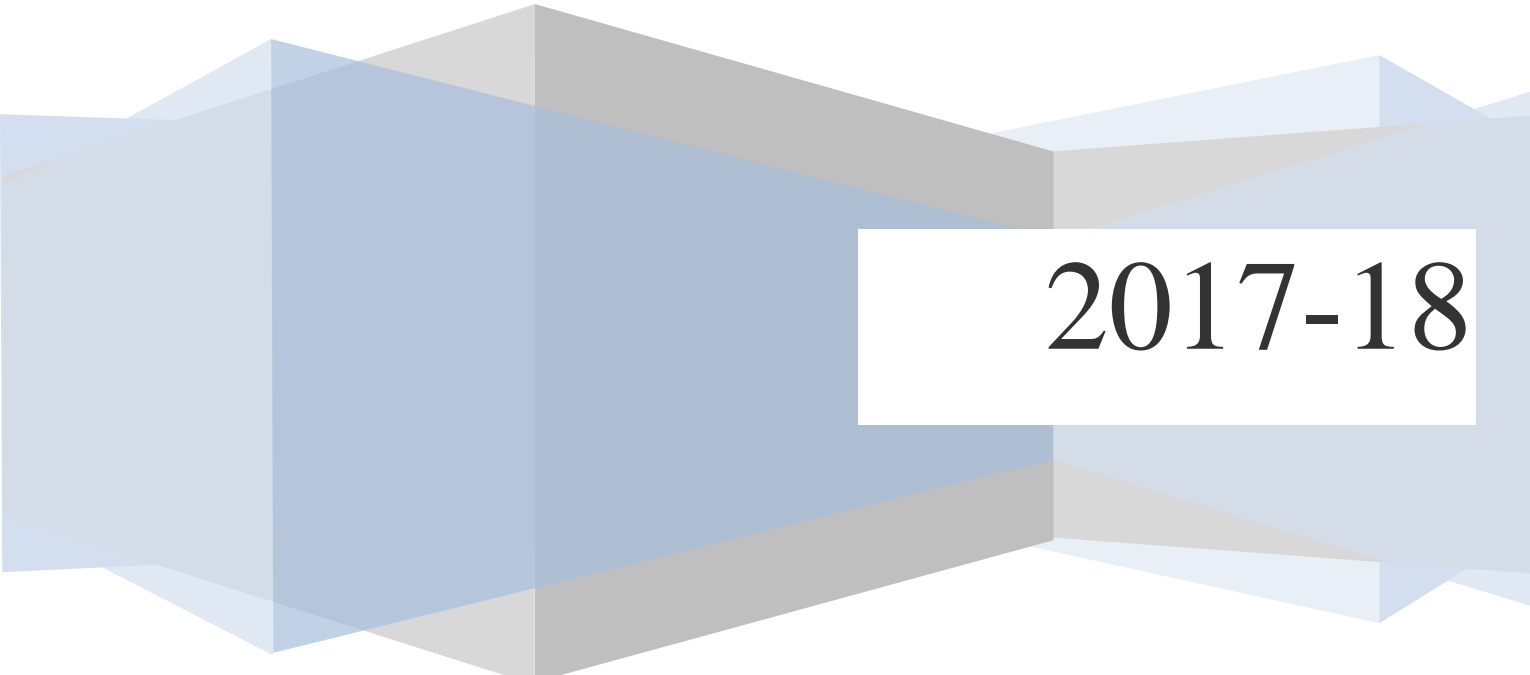
Sl. No.	Employee Name	Existing Designation	Date of retirement
1	Madan Gopal Mukherjee	Supdt. Tech.	30.06.2017
2	Ashok Kar	Mess Employee	31.08.2017
3	Sukumar Paul	Record Supplier	31.08.2017
4	Bimal Prasad Jana	Supdt. Tech.	31.12.2017
5	Sirish Chakraborty	Sr. Peon	31.12.2017
6	Hrishikesh Bera	Workshop Attnd. Gr-III	31.12.2017
7	Jagannath Chatterjee	Care Taker	31.01.2018
8	Surath Nayak	Record Supplier	31.03.2018

Table 2.8: List of Non-Teaching retired Govt. employees from April 2017 to March 2018

Sl. No.	Employee Name	Existing Designation	Date of retirement
1	Nitya Gopal Chowdhury	Stack Attendant	30.04.2017
2	Dwijendra Nath Mukherjee	Chief Store Keeper	31.12.2017

IEST Shibpur

§3. Academic Programmes



2017-18

3 ACADEMIC PROGRAMMES

The Institute offers the following academic programmes.

- Four-year BTech degree programme
- Five Year B.Arch degree Programme
- Five Year Integrated dual (B.Tech M.Tech) degree Programme
- Two-Year Full-Time M. Tech degree Programme
- Two-Year Full Time MSc Programme
- Two Year Full Time MBA Programme
- PhD programmes in (i) Architecture, (ii) Engineering, (ii) Science and (iii) Humanities and Social Sciences

3.1 UNDERGRADUATE PROGRAMMES

3.1.1 Four Year B.Tech Degree programme

The Institute offers **4-year full time** courses leading to **B.Tech degree** in the following nine disciplines

- (a) Aerospace Engineering
- (b) Civil Engineering
- (c) Computer Science and Technology
- (d) Electrical Engineering
- (e) Electronics and Telecommunication Engineering
- (f) Information Technology
- (g) Mechanical Engineering
- (h) Metallurgy and Materials Engineering
- (i) Mining Engineering

The programme offers two options on the basis of performance; i) Change of discipline at the end of 2nd semester and ii) Option, at the end of 6th semester, to switch over to dual BTech-MTech degree programme for completing M.Tech programme along with the B.Tech programme by studying for one more year.

3.1.2 Five Year B.Arch Degree Programme

The Institute offers a regular full time five year first degree programme in architecture leading to B.Arch degree.

3.1.3 Five Year Integrated Dual (B.Tech M.Tech) Degree Programme

Direct admission to the five year integrated dual (B.Tech M.Tech) degree programme has been discontinued. Instead this programme has been specifically designed to cater to the needs of those B.Tech students who wish to complete the M. Tech degree in continuation to the B.Tech degree by opting for the dual-degree programme at the end of the third year and graduate at the end of fifth year with dual degrees; B. Tech and M. Tech. These graduates are in demand in research oriented organisations including some of the specialised industries. They may also join doctoral research in order to choose an academic career or a research career.

3.1.4 Eligibility for Admission

For the academic session 2017-18, admission to the 4-year full time B. Tech degree (for nine disciplines) and 5 year B. Arch courses was done through JEE (Main)-2017- Paper I (for Engineering) and Paper II (for Architecture), examination conducted by the JEE Apex Board, under CBSE, for Admission to Undergraduate (B. Tech) Engineering Programmes in NITs, IITs and other Central Government funded Technical Institutions (GFTI).

At IEST, Shibpur 50% of the seats are reserved for candidates outside West Bengal and 50% are reserved for students domiciled in West Bengal as shown in the seat matrix (Table 3.1). Admission to a particular branch is based on the AIR (All India Rank) obtained by a student in the JEE (Main) only. Students seeking admission to the course are normally required to be citizens of India. They should have appeared/passed Higher Secondary (Class XII) Examination or equivalent and satisfying the following performance criteria (as specified by JOSAA).

Qualifying in JEE Main, however, is not mandatory for foreign students seeking admission either through inter-governmental collaborative programmes or under the 'Direct Admission of Students Abroad' (DASA) scheme of the Government of India.

3.1.5 Selection for Admission

Candidates who reach qualifying standard at the written test are offered admission by Joint Seat Allocation Authority (JoSAA) in order of merit through an on-line choice filling and multiple rounds of allocations.

3.1.6 Admission

The selected candidates reported to the resource centers for verification of the credentials and paid their fees. Each student also submitted, with his admission fee, three copies of his recent photograph (one passport size and two stamp size), attested copies of proof of age, educational qualification, SC/ST/PwD/OBC certificate etc.

Classes for the first semester BTech/ BArch programmes commenced on Monday, the 24th July, 2017.

Table 3.1: Seat Matrix followed for admission to BArch/ BTech programme at the Institute in 2017-18

No.	Branch Name	Open	Open PWD	SC	SC PWD	ST	ST PWD	OBC(NCL)	OBC(NCL) PWD	Total Seat	State /All India Seats
1	Architecture (B. Arch)	6	0	2	0	1	0	3	0	12	West Bengal
		6	0	2	0	1	0	3	0	12	Other than West Bengal
2	Aerospace Engineering	9	0	3	0	1	0	5	0	18	West Bengal
		8	1	2	0	2	0	5	0	18	Other than West Bengal
3	Civil Engineering	27	1	8	1	4	1	14	1	57	West Bengal
		28	1	8	0	4	0	15	0	56	Other than West Bengal
4	Computer Science and Technology	18	0	5	1	3	0	9	0	37	West Bengal
		18	1	6	0	3	0	11	0	37	Other than West Bengal
5	Electrical Engineering	18	1	5	0	3	0	10	0	37	West Bengal
		18	0	6	0	3	0	9	1	37	Other than West Bengal
6	Electronics and Telecommunication Engineering	11	1	4	0	2	0	7	0	25	West Bengal
		12	0	4	0	2	0	7	0	25	Other than West Bengal
7	Information Technology	18	1	5	1	2	0	9	1	37	West Bengal
		18	1	5	0	3	0	10	0	37	Other than West Bengal
8	Mechanical Engineering	18	1	5	0	3	0	10	0	37	West Bengal
		19	0	6	0	2	0	9	0	37	Other than West Bengal
9	Metallurgy and Materials Engineering	9	0	3	0	1	0	5	0	18	West Bengal
		10	0	2	0	1	0	5	0	18	Other than West Bengal
10	Mining Engineering	9	0	2	0	1	0	5	0	17	West Bengal
		9	0	3	0	1	0	5	0	18	Other than West Bengal
Total (column-wise)		289	9	86	3	43	1	154	5	590	

3.2 TWO-YEAR FULL-TIME M.TECH/ MURP DEGREE PROGRAMMES

The Institute offers **2-year full time** courses leading to M.Tech **degree** in the following thirteen disciplines

- a) Aerospace Engineering and Applied Mechanics
- b) Civil Engineering
- c) Computer Science and Technology
- d) Electrical Engineering
- e) Electronics and Telecommunication Engineering
- f) Green Energy and Sensor Systems
- g) Health Care Science and Technology
- h) Information Technology
- i) Materials Science and Engineering
- j) Mechanical Engineering
- k) Mechatronics
- l) Mining Engineering
- m) VLSI Technology

In addition the Department of Architecture, Town and Regional Planning offers a two-year fulltime postgraduate programme leading to the degree of Master of Urban and Regional Planning (MURP) degree of the Institute.

As has been the practice since 2015-16 session , in 2017-18 too, admission to all the above programmes was through **Centralized Counselling for M.Tech./M.Arch./M.Plan. Admissions** (CCMT), 2017, - an on-line admission process for all the National Institutes of Technologies (NITs) and several other institutes IEST Shibpur. Details of intake capacity for the courses are furnished in Table 3.2.

3.2.1 Eligibility

- a) A candidate who obtained the qualifying degree or has qualified or is due to appear in the qualifying degree examination may apply. A valid GATE score is mandatory for all the courses.
- b) All selected candidates who were otherwise eligible for admission but whose results were yet to be declared, were allowed provisional admission, on production of **Course Completion Certificate** from appropriate authorities. However such candidates were required to submit their results of the qualifying degree examinations by 30.09.2017 failing which their admission was liable to be treated as cancelled.
- c) Minimum 60%(or equivalent CGPA) for General candidates and 55% (or equivalent CGPA) marks was required for SC/ST/PH candidates in aggregate in the qualifying examination.

3.2.2 GATE Scholarships

GATE qualified candidates admitted to full time masters programmes in engineering/ technology/ architecture programme of the Institute are eligible for GATE scholarships. Creamy layer OBC candidates who had qualified under OBC category are not eligible for GATE scholarship. The scholarship is given from date of commencement of classes/date of admission (whichever is later) to completion of courses/date of submission of thesis and is disbursed for a maximum period of 24 month or till completion of courses/date of submission of thesis whichever is earlier.

Classes for first semester MTech/ MURP courses commenced on 17th of July, 2017.

Table 3.2: Details of Intake in ME/ MTech Programmes

Sl. No.	Department	Programme	OC	OBC	SC	ST	OCPWD	OBPWD	SCPWD	STPWD	Total
1	Civil Engineering	a) Structural Engineering	8	4	3	1	0	0	0	0	16
		b) Soil Mechanics and Foundation Engg.	6	3	2	1	0	0	0	0	12
		c) Water Resources Engg.	4	1	2	0	0	0	0	0	7
		d) Highway & Traffic Engg.	4	2	1	0	0	0	0	0	7
		e) Environment Engg.	4	2	1	0	0	0	0	0	7
2	Electrical Engineering	a) Electrical Machines	3	2	1	0	0	0	0	0	6
		b) Power Systems	3	2	1	0	0	0	0	0	6
		c) Power Electronics & Drives	3	2	1	0	0	0	0	0	6
3	Electronics & Telecommunication Engineering	d) Control Systems	3	2	1	0	0	0	0	0	6
		a) Digital Systems	4	2	1	1	0	0	0	0	8
		b) Microwave & Communication Engineering	4	2	1	1	0	0	0	0	8
		c) Communication Engg. & Signal Processing	9	5	3	1	0	0	0	0	18
4	Computer Science & Engineering	Computer Science & Engineering	9	4	2	1	0	0	0	0	16
		a) Mechanics of Solids	8	4	2	1	0	0	0	0	15
5	Aerospace Engineering and Applied Mechanics	b) Mechanics of Fluids	5	3	2	1	0	0	0	0	11
		a) Machine Design	5	2	1	1	0	0	0	0	9
6	Mechanical Engineering	b) Heat Power Engineering	5	2	1	1	0	0	0	0	9
		c) Production Engineering	5	2	1	1	0	0	0	0	9
7	Information Technology	Information Technology	9	5	3	1	0	0	0	0	18
		a) Iron and Steel Technology	4	2	1	1	0	0	0	0	8
8	Metallurgy & Materials Engineering	b) Surface Engineering	4	2	1	1	0	0	0	0	8
		a) Mining Engineering	9	5	3	1	0	0	0	0	18
9	Mining Engineering	b) Geo-informatics	9	5	3	1	0	0	0	0	18
		Master of Urban & Regional Planning	7	4	2	1	0	0	0	0	14
10	Architecture Town & Regional Planning	Material Sc. & Tech.	9	5	3	1	0	0	0	0	18
		VLSI Design	9	5	3	1	0	0	0	0	18
11	School of Material Sc. & Engineering	Renewable Energy Science & Technology	8	4	2	1	0	0	0	0	15
		Biomedical Engineering	9	5	3	1	0	0	0	0	18
12	School of VLSI Design	Centre for Healthcare Science and Technology	9	5	3	1	0	0	0	0	18
		Centre for Excellence for Green Energy & Sensor Systems	8	4	2	1	0	0	0	0	15
13	Center of Excellence for Green Energy & Sensor Systems	Biomedical Engineering	9	5	3	1	0	0	0	0	18
		Centre for Healthcare Science and Technology	9	5	3	1	0	0	0	0	18
14	Centre for Healthcare Science and Technology	Biomedical Engineering	9	5	3	1	0	0	0	0	18
		Centre for Excellence for Green Energy & Sensor Systems	8	4	2	1	0	0	0	0	15
15	Centre for Healthcare Science and Technology	Biomedical Engineering	9	5	3	1	0	0	0	0	18
		Centre for Excellence for Green Energy & Sensor Systems	8	4	2	1	0	0	0	0	15

3.3 TWO-YEAR FULL TIME MSc DEGREE PROGRAMME

The Institute offers **2-year full time** courses leading to MSc **degree** in the following five disciplines

- a) Chemistry
- b) Community Science and Technology
- c) Earth Science
- d) Mathematics
- e) Physics

These programmes are offered by the departments of Physics, Chemistry, Mathematics, Earth Sciences and by the School of Community Science and Technology (SOCSAT).

3.3.1 Admission

Fifty percent of the available seats to the MSc programmes are admitted through CCMN; the centralised counselling procedure for NITs and CFTIs with JAM as the mandatory requirement. The rest fifty percent are admitted through admission test conducted by the Institute. The seat matrix for the session 2017-18 is shown in Table 3.3.

3.3.2 Eligibility and Seat Matrix

A minimum of 60% (CGPA=6.5 on a 10 point scale) for OC/OBC and 55% (CGPA=6.0 on a 10 point scale) for SC/ST/PWD candidates in the Honours/ Major subject mentioned in the table. Note: 1) The same number of seats are available through CCMN.

The seats left vacant after CCMN admission are filled in from the wait listed candidate of our admission process

§3. Academic Programmes

Table 3.3 Seat matrix for Admission to MSc Programme in the session 2017-18

Department/ School	Programme	Eligibility	JAM Subject	Number of Seats								Special Eligibility Criteria (if any)			
				OC	OB	SC	ST	OC PWD	OB PWD	SC PWD	ST PWD		Total		
Physics	M.Sc. (Physics)	Physics (Honours/Major)	PH	8	4	2	1	1	1	0	0	0	0	16	Nil
Chemistry	M. Sc. (Chemistry)	Chemistry (Honours/Major)	CY	8	4	2	1	1	1	0	0	0	0	16	Nil
Earth Science	M.Sc. (Applied Geology)	Geology/ Applied Geology (Honours/Major)	GG	8	4	2	1	1	0	0	0	0	0	16	Geology as one of the subsidiary subjects with a minimum of 60% (CGPA=6.5 on a 10 point scale) for OC/ OB and 55% (CGPA=6 on a 10 point scale) SC/ST/PWD
		Physics/Chemistry /Mathematics (Honours/Major)	PH/ CY/ MA	8	4	2	1	1	0	0	0	0	0	16	
Mathematics	M. Sc. (Applied Mathematics)	Mathematics (Honours/Major)	MA	8	4	2	1	1	1	0	0	0	0	16	Nil
School of Community Science and Technology (SOCSAT)	M.Sc. (Food Processing and Nutrition Science)	Chemistry (Honours/Major)	CY	8	4	2	1	1	1	0	0	0	0	16	Nil
		Biological Science (Honours/Major)	BL												

3.4 TWO YEAR FULL TIME MBA PROGRAMME

The Institute offers a two-Year full-time AICTE approved MBA programme in Management.

The number of seats available for admission to the MBA Programme in the academic year 2017-18, to different categories is shown in Table 3.4.

Table 3.4. Seat matrix for MBA Admission 2017-18

Open	PH	OBC	SC	ST	Total
30	02	16	08	04	60

3.4.1 Eligibility

- Bachelor's degree in any discipline from any recognized University/Institute with at least 55% marks in aggregate.
- A valid CAT/XAT/MAT/CMAT score. For, CAT/XAT the a minimum of 65percentile score was required. For MAT/CMAT the score was a minimum of 85 percentile.
- A consistent and good academic record.
- Students appearing for their final year graduation examination were also eligible to apply. However, if selected, they were provisionally admitted and the admission was liable to be cancelled if they failed to produce the result of their final examinations satisfying the eligibility criterion.

3.4.2 Selection Procedure

A three-tier selection process was followed. Initial screening was done based on academic record. The basis of weight-averaging is shown below.

- A. CAT/XAT/MAT/CMAT score (50%).
- B. Performance in the group discussion (20%).
- C. Performance in the Interview (30%).

The weights of the different components are shown under three different categories (A, B and C).

A. Performance in the national level test (CAT/XAT/MAT/CMAT)

Examination	Percentile			
	65 to <75	75 to <85	85 to <90	90 & above
CAT/XAT	20	30	40	50
MAT/CMAT	-	-	25	40

B. Relative weight of components of GD

Performance in GD	Component	Weight
	Knowledge on the topic	10
	Co-ordination skill	5
	Leadership skill	5
	Total	20

3.5 PHD PROGRAMME

The PhD programme is offered by all the Departments, Schools and Centre of this Institute under the three broad faculties, namely, Engineering, Basic and Applied Sciences and Social and Management Sciences. Usually, the admission is done in two cycles; one in July, referred

to as 1st cycle and the other in January, referred to as 2nd cycle, in a year. Corresponding admission calls are given in the media and our website in the month of May and November, respectively.

3.5.1 PhD Admissions

3.5.1.1 Eligibility:

Essential: Post Graduate Degree in basic Science with NET/GATE/SLET qualification or Graduate Degree in a Professional Course (Engineering/ Technology/ Architecture/ Medicine etc) with valid NET/GATE/SLET score or Post Graduate Degree in a Professional Course.

Minimum marks required in the qualifying degree examination is 60% or equivalent CGPA. A degree holder in a professional course may apply, in exceptional cases, for direct admission to the Institute's PhD programme but they will be required to take more courses to fulfil the prerequisite of registration. In order to be eligible for the Institute's post graduate scholarship a candidate must have a valid NET/GATE/SLET score.

Desirable: Matching specialization in the master degree as per the broad area of research as specified by the department/school/center is desired. For self sponsored candidates NET/GATE/SLET is not mandatory

Age: For Institute scholarship: 32 years.

No age bar for the candidates who wants to pursue the PhD programme without any scholarship as self sponsored candidate. They will not have any claim to institute scholarship.

[Note: For SC/ST/PwD and women candidates an overall minimum of 55% marks (or equivalent in the Grade point system) and an age relaxation up to 5 years are applicable]
Reservation for SC/ST/OBC etc is as per the central government rules.

Above eligibility is the minimum requirement only. Good academic career and higher qualification is preferred and mere eligibility does not ensure a call for admission test and/or Interview. A screening of applications is made to prepare a short list of candidates to be called for admission test and/or Interview. Further screening is done after the admission test to select the candidates for the interview.

Test: A common admission test for all candidates.

- Candidates applied for multiple units (dept./centre/school) need be appear in the common test and hand over all the drafts.
- 1½ hr MCQ type with two and a half marks for each correct answer and minus half marks for each wrong answer. Question will be based on Secondary+ level Arithmetic, logical reasoning and English.

Interview:

- Separate interviews were held at the unit level and candidates clearing the common test could appear multiple interviews if he/she has applied for those units.
- Interviews were held in the respective Department/School//Centers and interaction would be based on the general and broad area of research interest of the aspirants.

The broad areas of research offered by the units are given to help the aspirants choosing their field of research. These areas may be indicated at the time of interview by the selected candidate for a focused discussion and choice of supervisor.

3.6 RESERVATIONS FOR SC/ST/PwD/OBC/OTHER CATEGORIES

Reservations for the students of SC/ ST/ PwD/ OBC(NCL)/ Other categories are as per the Government rules. In addition to the normal intake, a limited number of foreign students, students from other States and Union Territories, and sons and wards of India-based staff posted abroad, may be admitted on the recommendation of MHRD, Govt. of India.

3.7 STUDENT STRENGTH

Table 3.5: Students admitted in the academic year 2017-18

Category	No. of student admitted in 2017-18			
	UG	PG	Ph.D	Total
General	282	211	130	623
SC	91	58	21	170
ST	46	11	1	58
OBC	162	116	14	292
PWD	8	1	0	9
Total	589	397	166	1152

Table 3.6: Ph.D. Students at IESTS

Ph.D Students	2014-15	2015-16	As on 07.09.2017	
			2016-17	2017-18
No. Admitted	259	131	71	166
Degree Awarded	52	57	74	83

§3. Academic Programmes

Table 3.7 Student Strength as on 07.09.2017

Name of the Institute	Category	UG				PG				PhD			Total SC, ST & OBC	Total Male	Total Female	%age Male	%age Female	Male: Female	
		Male		Female		Male		Female		Male		Female							
		NPH	PH	NPH	PH	NPH	PH	NPH	PH	NPH	PH	NPH							PH
	General	932	34	137	3	286	3	96		452		119		1707	355	46.64%	9.70%		
	SC	295		46		83		22		116		24		494	92	13.50%	2.51%		
	ST	135		21		16		6		4				155	27	4.23%	0.74%		
	OBC	489		54		168		40		68		11		725	105	19.81%	2.87%		
	Total	1851	34	258	3	553	3	164	0	640	0	154	0	3660	579	84.18%	15.82%	5.32 : 1	
	Total Male/Female (Course-wise)	1885		261		556		164		640		154	3081			579		15.82% 5.32 : 1	
	Total (UG/PG/Ph.D.)			2146				720				794							

UG Under Graduate
 PG Post Graduate
 Ph.D Doctor of Philosophy
 PH Physically Handicapped
 NPH Non Physically Handicapped
 SC Scheduled Cast
 ST Scheduled Tribe
 OBC Other Backward Class

3.7.1 Scholarship to Students

3.7.1.1 Undergraduate Level

The Institute offers a large number of scholarships to its students. Practically every meritorious and/or financially poor student may get scholarship. A number of scholarships offered by the Global Alumni Association of this Institute are also available to the students.

3.7.1.2 Dual Degree

The Institute offers a large number of scholarships to its students. Practically every meritorious and/or financially poor student may get scholarship. Full Scholarship for all students in the dual-degree courses will be available during 9th to 10th semester. A number of scholarships offered by the Global Alumni Association of this Institute are also available to the students.

3.7.1.3 Post Graduate Level

Besides the GATE scholarship for the M.Tech students, the Institute offers a large number of scholarships to its students. Practically every meritorious and/or financially poor student may get scholarship. Currently almost 50% of the students are getting scholarships. **No Tuition Fee is to be paid by the students belong to SC/ST/PwD category. There are also provisions of loan scholarships offered by various banks.** A number of scholarships offered by the Global Alumni Association of this Institute are also available to the students. For details, students are also advised to visit the website of the Global Alumni Association of this Institute.

3.8 INSTITUTE RESULTS

Statistics of Examination Year 2017.

Course	Appeared	Passed	Pass Percentage
Bachelor of Engineering in Mechanical Engineering	56	55	98.2
Bachelor of Engineering in Civil Engineering	91	90	98.9
Bachelor of Engineering in Electrical Engineering	53	53	100
Bachelor of Engineering in Electronics & Telecommunication Engineering	38	38	100
Bachelor of Engineering in Metallurgy & Materials Engineering	28	28	100
Bachelor of Engineering in Mining Engineering	24	24	100
Bachelor of Engineering in Computer Science & Technology	55	55	100

Course	Appeared	Passed	Pass Percentage
Bachelor of Engineering in Information Technology	52	52	100
Bachelor of Engineering in Aerospace Engineering	23	23	100
Bachelor of Architecture	21	21	100
Total (Under Graduate Degree)	441	439	99.5

Course	Appeared	Passed	Pass Percentage
Master of Technology in Mechanical Engineering	22	22	100
Master of Technology in Civil Engineering	26	26	100
Master of Technology in Electrical Engineering	13	13	100
Master of Technology in Electronics & Telecommunication Engineering	19	19	100
Master of Technology in Engineering Mechanics	10	10	100
Master of Technology in Mining Engineering	2	2	100
Master of Technology in Computer Science & Engineering	10	10	100
Master of Technology in Information Technology	11	11	100
Master of Urban and Regional Planning	4	4	100
Master of Technology in Geoinformatics	1	1	100
Master of Technology in Renewable Energy Science and Technology	6	6	100
Master of Technology in Safety and Occupational Health	4	4	100
Master of Technology in VLSI Design	13	13	100
Master of Technology in Materials Engineering	14	14	100
Master of Technology in Mechatronics	13	13	100

Course	Appeared	Passed	Pass Percentage
Master of Science in Chemistry	18	18	100
Master of Science in Applied Mathematics	21	21	100
Master of Science in Physics	17	16	94.1
Master of Science in Applied Geology	16	16	100
Master of Science in Food Processing & Nutrition Sciences	19	19	100
Master of Business Administration	20	18	90
Master of Technology in Information Technology (PDSIT)	1	1	100
Total (Post Graduate Degree)	280	277	98.9

3.9 ANNUAL CONVOCATION 2018

Total number of Degree recipients in the session 2017-18 was 799. While 439 students obtained BE/BArch degrees in 10 different courses, 277 postgraduate students obtained from different courses and 83 Ph.D Fellows who have completed their studies and passed the examinations during this period.

The Fourth Annual Convocation of the Institute was held on March 04, 2018. Prof. Ajoy Kumar Ray, Director, IEST, Shibpur presided over the Convocation. Dr. Jibamitra Ganguly, Professor Emeritus, Geoscience, The University of Arizona, USA delivered the Convocation Address as the Chief Guest.

Institute Medals were awarded to 30 candidates who have secured highest marks in different disciplines. The President of India Gold Medal was awarded to the student Asmita Chakraborty, Metallurgy & Materials Engineering Department who secured 1st position among the undergraduates of all ten engineering disciplines taken together. Some endowment medals also were awarded to the students who have stood first in their respective disciplines or have secured highest marks in particular subjects.

In this convocation, the Institute conferred **Honorary Doctorates**. While Shri Pranab Mukherjee was conferred the Doctor of Literature (honoris causa), the degree of Doctor of Science (Honoris Causa) was conferred on Dr. Sekhar Basu and on Dr. Lazar Mathew.

The Institute conferred **Distinguished Alumnus Award** to Dr. Amiya Kumar Basu, Dr. Prabir Kumar Neogi and Dr. Arup Bhattacharyya. **Distinguished Teacher Award** was conferred to Prof. Arun Kumar Deb, Prof. Sudhendu Saha, Prof. Bikash Ch. Chattopadhyay, Prof. Biswanath Dutta, Prof. Ajit Kumar Chattopadhyay, and Prof. Pabitra Kumar Ray

IEST Shibpur

§4. Academic Units

Departments, Schools and Centres



2017-18

4 ACADEMIC DEPARTMENTS, SCHOOLS AND CENTRES

When founding of the institute was contemplated in 1854, one of the principal objects of the proposed college was ‘to meet the very great demand in the department of public works of Bengal and the lower provinces’. It is also interesting to note that, while approving establishment of the college, the government of India put, - in unambiguous term, the condition that the college would ‘not be sub-divided into departments’. Much has changed ever since. As the clientele dimension expanded continually to cross-sector and cross-border areas, the internal constitution of the institute also underwent structural adjustments. New departments were opened; a few were widened while a few others were wound up. It would, be prudent to undertake a stock-taking exercise in the realm of academic resources and infrastructure.

The following paragraphs present very brief profiles of the departments and centres with which the institute, in its latest incarnation as IEST, launched itself up. A comprehensive list of publications by faculty members during the year 2017-18 is provided in Appendix -3.

4.1 AEROSPACE ENGINEERING AND APPLIED MECHANICS

Year of establishment: 1948

4.1.1 Details of Academic Programme

4.1.1.1 Bachelor's Level

- 4-year B. Tech Programme in Aerospace Engineering and Applied Mechanics

4.1.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters' Programme (M.Tech) in Aerospace Engineering and Applied Mechanics

4.1.2 Academic Research

- PhD awarded during the year: 06

4.1.3 Publications

- (SCI/SCOPUS) indexed Journals: 23
- Papers published in National and International Conferences: 08
- No. of Books/ Monographs published: 00

4.1.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

- Dr. Koustuv Debnath Received Young Faculty Research award
- Prof. Krishnendu Bhowmik, Won Best Paper Award in ICMMRE 2017

4.1.5 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- | | |
|-------------------------------------|--------------------------------|
| 1. Strength of Materials Lab | 5. Low Speed Aerodynamics Lab |
| 2. Fluid Mechanics & Hydraulics Lab | 6. Aerospace Structure Lab |
| 3. Biomechanics Lab | 7. Thermodynamics Lab |
| 4. CAD Lab | 8. High Speed Aerodynamics Lab |

- | | |
|-------------------------------|---|
| 9. Mechanical Vibration Lab | 14. Aero-structure Lab. |
| 10. Stability and Control Lab | 15. Propulsion Lab |
| 11. Fracture Mech. Lab | 16. Development of Propeller Test Ring |
| 12. Computational Lab | 17. Project on VTOL aircraft design and development |
| 13. Wind Tunnel | |

4.1.6 Details of Conferences, Seminars, Workshops and Symposia organized

Two days workshop on “Modeling of Helicopter Dynamics and Autonomous Mini Helicopter Development” from 15th February, 2018 to 16, February, 2018.

4.1.7 Students’ laurels in academic field:

Vibhav Singh, ME 2nd Yr. student won Best Paper Award in ICMMRE 2017

4.1.8 Academic Collaboration, if any:

MOU signed with Mc Gill University, Canada on 22nd February, 2018

4.2 ARCHITECTURE, TOWN AND REGIONAL PLANNING

Year of establishment : 1949

4.2.1 Details of Academic Programme

4.2.1.1 Bachelor's Level

- (i) 5-year Bachelor of Architecture (B. Arch)

4.2.1.2 Master's Level

- (ii) 2-Year Masters’ Programme (MURP) in Master of Urban and Regional Planning

4.2.2 Academic Research

The Department continued to put its research foci in the following Areas

- Architectural Design, Architectural/Urban Conservation, Urban Transportation, Transit Oriented Development
- Bamboo as a Design Element, Disaster Resistant Architecture, Urban Design, Energy Efficient Architecture, Theory of Architecture
- City and Regional Planning, Environmental Planning
- City Planning, Transportation Planning, GIS
- Energy and Architecture
- GIS, Urban and Regional Planning
- GIS, Urban and Regional Planning
- Mathematical Models in Urban Planning, Regional Planning
- Seismic Evaluation, Disaster Risk Mitigation and Management, Cultural Heritage Seismic Risk Mitigation, Urban Design
- Spatial and Environmental Planning, Alternative Technology and Green Building Techniques, Community Based Natural Resource Management
- Sustainable Urban Design, GIS
- Urban Design, Urban Conservation
- Urban Transformation, Urban Design

4.2.2.1 PhD Research

- | | |
|--|----|
| • Scholars enrolled during the year | 08 |
| • Scholars Registered during the year | 05 |
| • Scholars Continuing their doctoral research from previous Year | 10 |

4.2.3 Publications

- | | |
|---|----|
| • (SCI/SCOPUS) indexed Journals | 02 |
| • Papers published in National and International Conferences: | 02 |
| • No. of Books/ Monographs published: | 01 |

4.2.4 Details of Foreign Visits and Invited Lectures

- Mitra, K. (2017). Invited seminar presentation titled Earthquake resistant traditional construction typologies in the seismically hazardous areas of India. An example of sustainable approach towards masonry monuments in a seismically hazard prone area in India, held at the Department of Architecture, Sapienza University, May 4, 2017.
- Mitra, K. (2017). Invited seminar presentation titled Urban History of Kolkata from colonial to the contemporary, held at the Department of Architecture, Sapienza University, May 8, 2017.
- Mitra, K. (2017). Invited seminar presentation titled Cities of the developing world with emphasis on urbanization in India in general and Kolkata in particular, held at the Department of Architecture, Sapienza University, May 8, 2017.
- Mitra, K. (2017). Invited seminar presentation titled Evolution of building bye laws vis-a-vis seismic safety: the case of Kolkata, held at the Department of Architecture, Sapienza University, May 9, 2017.
- Mukhopadhyay, P. (2017). Invited introductory lecture for the training program on New Practices for Cement Finished Construction by Treated Bamboo, conducted by Forum of Scientists, Engineers and Technologists (FOSET), held on Jun 10, 2017 at Kolkata.
- Mukhopadhyay, P. (2017). Invited lecture on Bamboo – the Sustainable Versatile Building Material in the invitation of Samagam – the Creative Current, Kolkata Architecture Foundation on Sep 16, 2017 at Abin Design Studio Kolkata.

4.2.5 Name of important visitors to the Department/ School/ Centre:

- Dr. Anil Roy, Faculty of Planning, CEPT University, Ahmedabad
- Ms. Ahana Ghosh, Indian Institute of Human Settlements, Bangalore

4.2.6 New Academic/ Research Initiatives:

- Prof. P. Mukhopadhyay visited Industrial Design Centre (IDC), IIT Bombay on June 7-9, 2017, utilising CPDA grant, for reviewing possibilities of opening of Master of Design courses at IEST Shibpur and to undertake laboratory visit to Bamboo Studios to examine the possibilities of bamboo related collaborative research.
- DAC has taken initiatives to set-up a Built Environment Monitoring Laboratory.

4.2.7 Academic Collaboration, if any:

- Continued academic collaboration with Sapienza University, Rome. During the year under review a group of students from the Sapienza University visited IEST and

organized a joint collaborative workshop with the students pursuing study of Architecture at IEST Shibpur.

4.3 CHEMISTRY

Year of establishment: 1901

4.3.1 Details of Academic Programme

4.3.1.1 Master's Level

- 2-Year Masters' Programme (M.Sc) in Applied Chemistry

4.3.2 Academic Research

- PhD awarded during the year: 14

4.3.3 Publications

- (SCI/SCOPUS) indexed Journals: 95

4.3.4 Creation/Modernisation of Academic Laboratory and Research infrastructure, if any

- Single Crystal X-ray Diffractometer facility at SAIF

4.4 CIVIL ENGINEERING

Year of establishment: 1856

4.4.1 Details of Academic Programme

4.4.1.1 Bachelor's Level

- 4-year B. Tech. in Civil Engineering

4.4.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters' Programme (M.Tech) in Civil Engineering

4.4.2 Academic Research

- Scholars enrolled during the year: 13
- Scholars Registered during the year: 12
- Scholars Continuing their doctoral research from previous Year: 85

Total PhD Scholars

- PhD Thesis Submitted during the year: 05
- PhD awarded during the year: 02
- No of PhD to be awarded & submitted: 07

4.4.3 Publications

- (SCI/SCOPUS) indexed Journals: 43
- Papers published in National and International Conferences: 29
- No. of Books/ Monographs published: 03

4.4.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

A UKIERI funded Project “Assessment of effects of arsenic pollution on health in rural Bengal and development and implementation of sustainable technology solution” (PI Prof Kalyan Kumar Bhar) has been adjudged as one of the top ten projects from all projects funded by the agency since 2010; it found a mention in the House of Commons (UK) on 23rd January 2018.

4.4.5 Details of Foreign Visits and Invited Lectures

- Prof. Debabrata Mazumder delivered Lecture in International Workshop on Advanced Hybrid Separation Techniques in Industrial Wastewater Management, organized by Chemical Engineering Department, Jadavpur University on 9th December, 2017
- Prof. Debabrata Mazumder delivered Lecture in National Workshop on Environmental Priorities and Challenges with Special Focus on Eastern and North-Eastern Region, organized by Kolkata Zonal Laboratory, NEERI at The Stadel, Salt Lake Stadium on 29th November, 2017.
- Prof. Debabrata Mazumder delivered Lecture in Short Term Course on Research Methodology, organized by Human Resource Development Centre (HRDC), University of Calcutta on 25th November, 2017.
- Prof. Pritam Saha Delivered Lecture in UGC Sponsored Refresher Course, Recent Advances in Civil Engineering on ‘Road Infrastructure and Traffic Safety’ organized by Civil Engineering Department, Jadavpur University, on 3rd January, 2018.
- Prof. Pritam Saha Visited Washington, D.C. to present a paper, ‘Assessment of Safety Performance on Two-Lane Roads under Mixed Traffic: A Review of Recent Research and Future Research Needs’ in the 97th Annual Meeting of the Transportation Research Board (TRB) during January 7-11, 2018.
- Prof. Subrata Chakraborty delivered a keynote address on ‘Application of Meta-Modelling Approach in Seismic Reliability Analysis of Structures’ at the 13th International Conference on Vibration Problems (ICOVP-2017), 29th Nov - 2nd Dec, 2017. Organized jointly by IIT Guwahati, India and IŞIK University, Istanbul Turkey.
- Prof. Subrata Chakraborty delivered a keynote address on ‘Seismic Fragility Analysis of Structures using Support Vector Machine Based Meta-Modelling’ at the *International Conference on “Advances in Concrete, Structural, & Geotechnical Engineering*, 26 - 28th Feb. 2018, BITS Pilani, India.
- Prof. Subrata Chakraborty delivered an invited lecture on ‘*Various Metamodeling Approaches for Seismic Fragility Analysis of Structures in the Framework of Monte Carlo Simulation*’ on December 19, 2017 in a short course titled "Risk-based seismic design of structures - a new paradigm" under *Global Initiative of Academic Network (GIAN) scheme*, organized at IIT Guwahati from 18th -27th Dec 2017.
- Prof. Subrata Chakraborty delivered Invited Lecture on Numerical Analysis Based Seismic Fragility Analysis of Structures in the 3-Weeks UGC Sponsored Refresher Course on “Recent Advances in Civil Eng, 13th Jan. 2018, Dept of Civil Eng, Jadavpur University 02-24th January, 2018.

4.4.6 Details of Conferences, Seminars, Workshops and Symposia organized

National Conference on Sustainable Advanced Technologies for Environmental Management (SATEM-2017) during June 28 -June 30, 2017.

Conference on Water, Sanitation and Hygiene (WASH) for All – Sustainability Issues under Rural Indian Conditions, organised jointly with Rural Development Forum of the Institution of Engineers (India), March 17, 2018

National Workshop on ‘Recent Trend in Geomatics (RTG-2018)’ during 2nd-3rd Feb, 2018

Training Program on Rural Engineering Issues for Nirman Sahayaks from Gram Panchayats under ISGPP-II (Phase-I to Phase X) sponsored by Panchayat and Rural Development Department, Government of West Bengal during September - December, 2017.

Laboratory Personnel Training on Standard Operating procedures and Good Laboratory Practices, sponsored by Public Health Engineering Department, Government of West Bengal, June 13-15, 2017

4.4.7 Extension Activities and Social outreach:

Provided child-friendly group hand washing stations in 25 schools of Uttar Dinajpur district of West Bengal to maintain and promote hygienic practices along with awareness camps in those schools towards safe water and sanitation.

4.5 COMMUNITY SCIENCE AND TECHNOLOGY

Year of establishment: 2004

4.5.1 Details of Academic Programme

4.5.1.1 Master's Level

- 2-Year Masters’ Programme (M.Sc) in Food Processing and Nutrition Science

4.5.2 Academic Research

The School continued to put its research foci in the following areas.

- Technology developments for preparation of low cost non-dairy food product enriched in health-benefit ingredients
- Utilization of agricultural waste for the production of value added food ingredients
- Microbial fermentation process for production of valuable food ingredients
- Production of microbial enzymes, microbial colour, bio-flavours, structured lipids, single cell protein for food and feed application from waste fruits
- Studies on production and applications of Bioactive Peptide from microbial sources for health benefit
- Technology development for preparation of health beneficial spreads-peanut butter substitute, margarine and mayonnaise.
- Preparation of potentially valuable structured lipids.
- Technology development for low cost protein rich extruded breakfast cereal.

- Technology development for by-product Utilization from Vegetable oil Industries
- Extrusion Process Technology
- Technology for production of Oleogel, alternative of *Trans* fat.
- Technology for utilization of fish waste.
- New approach of bio-deodorization process of vegetable oil by microbial enzyme technology in place of conventional method.
- Food Nanotechnology

4.5.3 4.5.3 . Publications

- (SCI/SCOPUS) indexed Journals: 06
- Papers published in National and International Conferences: 15

4.5.4 Creation/ Modernisation of Academic Laboratory and Research infrastructure.

During the year under review the School augmented its facilities at the following laboratories.

- Food Processing Lab.
- Food Preservation Lab.
- Microbiology Lab.
- Unit Operation Lab.
- Chemical Analysis Lab.

4.5.5 important visitors to the School.

- Dr. Supratim Ghosh, Ph.D., Associate Professor, Department of Food& Bioproduct Sciences, College of Agriculture and Bioresources, University of Saskatchewan, Canada

4.5.6 Extension Activities and Social outreach

Two cycles of skill development/ vocational training programme has been arranged for the unemployed youth around the locality of Metiaburuz, Kolkata. The programmes were sponsored by the Garden Reach Shipbuilders and Engineers Limited (GRSE), Kolkata.

4.6 COMPUTER SCIENCE AND TECHNOLOGY

Year of establishment: 1982

4.6.1 Details of Academic Programme

4.6.1.1 Bachelor's Level

- 4-year Bachelor of Technology (B.Tech) Programme in Computer Science and Technology

4.6.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters' Programme (M.Tech) in Computer Science and Technology

4.6.2 Academic Research

The Department's principal research areas include the following.

- I. VLSI Design and Testing for Sub-micron Technology
- II. Theory and Applications of Cellular Automata in Diverse Fields
- III. Information System for Control and Management Applications
- IV. Mobile Computing
- V. Testing and synthesis of Quantum circuit, Reversible Circuit, Nano-Circuit and Digital Micro fluidic Bio-Chip
- VI. Broadband Computing
- VII. Image Processing including Document Image Processing and Content Based Image Retrieval
- VIII. Soft computing
- IX. Computational geometry
- X. Data mining and Big Data Analytic
- XI. Wireless sensor network

4.6.2.1 PhD Research

- | | |
|---|----|
| • Scholars enrolled during the year: | 10 |
| • Scholars Registered during the year: | 15 |
| • Scholars Continuing their doctoral research from previous Year: | 47 |
| • PhD awarded during the year: | 06 |

4.6.3 Publications

- | | |
|---|----|
| • (SCI/SCOPUS) indexed Journals: | 39 |
| • Papers published in National and International Conferences: | 55 |

4.6.4 Creation/Modernisation of Academic Laboratory and Research infrastructure, if any

- GPU based workstation and Rack mounted server are added in the laboratory

4.6.5 Details of Foreign Visits and Invited Lectures

- Prof. Sipra DasBit, Served as Visiting Professor at Asian Institute of Technology (AIT), Bangkok for one semester (July-Dec, 2017)
- Prof. Surajeet Ghosh, Acted as session chairperson and presented paper at TENCON 2017 - IEEE Region 10 Conference, 5th-8th Nov. 2017, Penang, Malaysia

4.6.6 Details of Conferences, Seminars, Workshops and Symposia organized

- Workshop on "Theory, Algorithms and Applications" January 08-12, 2018
- Workshop on "FPGA Based Digital System Design" January 15-19, 2018
- International conference "EAIT 2018", January 12-13, 2018

4.6.7 Details of recent graduates pursuing higher studies/ post doctoral research in reputed institutes:

Sl No.	Student	Graduating year	program admitted	university/ institutions	Admission year
1	Pragna Debnath	2017 (UG)	MBA	IIM Kolkata	2017
2	Ritwika Majumdar	2017 (UG)	MBA	XLRI, Jamshedpur	2017
3	Aniket De Roy	2017 (UG)	M. Tech	IIT Kharagpur	2017
4	Shalmoli Ghosh	2017 (UG)	MS	IIT Kharagpur	2017
5	Shivaditya Tapna	2017 (UG)	M. Tech	NIT Suralkhal	2017
6	Garima Shakya	2017 (PG)	PhD	IIT Kanpur	2017

4.7 ECOLOGY, INFRASTRUCTURE, AND HUMAN SETTLEMENT MANAGEMENT

4.7.1 Academic Research

- Scholars enrolled during the year - 01
- Scholars Registered during the year– 04
- Scholars Continuing their doctoral research from previous Year – 04 Nos.

4.7.2 Publications

- (SCI/SCOPUS) indexed Journals: 01
- Papers published in National and International Conferences: 01

4.7.3 Details of Conferences, Seminars, Workshops and Symposia organized

SEIHSM has organized symposium entitled “Social and Environmental Implications of Infrastructure Projects” on 14th November, 2018 in collaboration with Comtel Consultants and Infraprojects Pvt. Ltd.

4.7.4 Extension Activities and Social outreach:

Planning and Action Research for livelihood and Infrastructure development for Adaptation to Climate Change in West Bengal Sunderbans.

4.7.5 New Academic/ Research Initiatives, if any.

- Sustainable Urban Development Strategy for Ecologically Fragile and Landslide Prone Areas in Darjeeling Hills.
- National Consultation on Policy and Advocacy for an Improved Urban Renewal Mission
- In collaboration with Institute of Habitat Studies, Tata Institute of Social Sciences (TISS) and India Habitat Forum (INHAF), Pune.

- ‘Development of Climate Proof and Energy Efficient Housing Prototypes for Northeastern India through Application of Local Resource Based Appropriate Technology’ presented before the Programme Advisory Committee and likely to be funded DST, Govt. of India.
- ‘Development of public transport system planning method for incremental growth of small and medium cities of eastern and north-eastern States’ presented before the Programme Advisory Committee and likely to be funded DST, Govt. of India
- ‘Utility and Robustness Based Approach for Planning of Capital Intensive Transportation Links (Bridges and Tunnels) in the Northeast’ presented before the Programme Advisory Committee and likely to be funded DST, Govt. of India

4.7.6 Academic Collaboration, if any:

Collaborative Research with University of Victoria, British Columbia, Canada on Comparative Study of Ecosystem Management in India and Canada

4.8 ELECTRICAL ENGINEERING

Year of establishment: 1912

4.8.1 Details of Academic Programme

4.8.1.1 Bachelor's Level

- 4-Year B. Tech in Electrical Engineering

4.8.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters’ Programme (M.Tech) in Electrical Engineering

4.8.2 Academic Research

Research Areas

- Power System Security Analysis
 - Use of Power Electronic Converters to Power System,
 - Power Quality and
 - Use of Distributed computing in P.S. problems
 - Drives, Energy
 - Stochastic Processes, Modelling and Control of Physiological Systems, Vehicle Dynamics, Embedded Systems, Smart Instrumentation.
 - Converter Topology, AC to AC power converter, Power Quality, Vector Control Drive
 - Stabilization and Control of Uncertain Nonlinear and Time Delay Systems using Linear Matrix Inequalities AND application to physical systems.
 - Power System Protection; Smart Grid Controls for Increased Efficiency of Distribution Networks
 - Solar PV Energy Measurement and Instrumentation; Integration of Solar PV Distributed Generation into Conventional Electric and Smart Networks,
 - Use of PLDs in efficient control of electric drives
 - Power Quality estimation and improvement using digital platforms

- Signal Processing
- Real time control
- Textile Instrumentation.
- Power System Operation, Monitoring & Control
- Power System Optimization
- Applications of AI
- Machine learning based smart monitoring and control
- Applications of Nanotechnology in Power and Energy Sectors
- Energy Informatics
- Nonlinear Phenomena in Power Electronic Circuits
- Power Electronics
- Induction Heating
- Power Electronics
- Machine Drives
- Microcontroller-based applications
- Linear control systems applications

PhD Research

- Scholars enrolled during the year –15
- Scholars Registered during the year– 09
- PhD awarded during the year-06

4.8.3 Publications

- | | |
|---|----|
| • (SCI/SCOPUS) indexed Journals: | 20 |
| • Papers published in National and International Conferences: | 22 |
| • No. of Books/ Monographs published: | 04 |

4.8.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

- Prof.Anindita Sengupta has been elected as Chairperson, IEEE Joint CSS-IMS Kolkata Chapter for the 2018

4.8.5 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- Artificial Neural Network Based Adaptive Over-Current Relay”, Inventors: Dr. Paramita Chattopadhyay, Dr. Pratyay Konar, Mr. Subhrajit Mitra, File. No.: 201731019385, Filing Date: 02/06/2017 (This patent has been filed with financial support from TEQIP - II)

- The SB-RIO FPGA Based Board operational on the Labview Platform has helped in the Development of the Phasor Measurement Unit, very much an important Device in Smart Grid Networks.
- Also this set-up was used by the final year students to understand the Basics of signal Processing and Creating algorithms for Numerical relays, on the Virtual instrumentation Platform provided by LABview

4.8.6 Details of Foreign Visits and Invited Lectures

Sl No.	Name of the faculty	Institute visited	Duration and date of the visit	Purpose of visit with details / Details of the lecture delivered
1.	Dr. Paramita Chattopadhyay	At Institute for Intelligent Systems Research and Innovation, Deakin University , Australia	26.3.2017 - 9.4.2017	Laboratory visit and collaborative Research Topic of the Lecture Delivered : Data Mining and Knowledge Discovery in Fault Diagnosis of Induction Motor”
3.	Dr. Paramita Chattopadhyay	NIT, Durgapur	November, 2017	Invited Talk: “Challenges in Soft Computing Driven Approaches in Electrical Engineering Applications”
4.	Dr. Paramita Chattopadhyay	NIT, Durgapur	February, 2018	Invited Talk: “Nano Engineered Transformer Oil”

4.8.7 Details of Conferences, Seminars, Workshops and Symposia organized

Sl. No	Name of Seminar / Workshop / Conference	Name of the Coordinator / Organizer	Date and duration	Sponsored by
1.	Training Course for Junior Engineers of Calcutta Electric Supply Corporation (CESC) Ltd	D. Roy and A. B. Choudhury		CESC

4.8.8 Names of important visitors to the Department/ School/ Centre:

Sl. No.	Name of Visitor	Designation	Institute	Foreign/Indian	Purpose of visit
1.	Prof. Akhtar Kalam	Professor, Leader, Smart Energy Research Unit	Victoria University, Melbourne, Australia	Foreign	To deliver a talk on Smart Grid

Sl. No.	Name of Visitor	Designation	Institute	Foreign/Indian	Purpose of visit
2.	Mr. Surajit Banerjee	Senior Manager	ERLDC, POSOCO, A Govt. of India Undertaking	Indian	To deliver a talk on Phasor Measurement Unit Deployment in Indian Utilities
3.	Professor Saifur Rahaman,	President-elect IEEE PES, Joseph Loring Professor and Director,	VT Advanced Research Institute, USA	Foreign	lecture on " Role of Smart Buildings in the Development of a Smart City "

4.8.9 Industrial Collaboration, if any :

Darjeeling Ropeway Fitness Certification by a group of Experts Civil, Electrical from IEST

4.9 ELECTRONICS AND TELECOMMUNICATION ENGINEERING

Year of establishment : 1968

4.9.1 Details of Academic Programme

4.9.1.1 Bachelor's Level

- 4-year Bachelor's Programme (B.Tech) in Electronics and Telecommunication Engineering

4.9.1.2 Master's Level

- 5-Year B.Tech.-M.Tech Dual Degree Course
- 2-Year Masters' Programme (M.Tech) Engineering

4.9.2 Academic Research

Research Areas

- **Microwave and Antenna**
 - Planar circuit and antenna
 - Microwave avalanche devices
 - IMPATT amplifiers and oscillators
 - Meta-materials and its applications
 - Phased array antenna
 - Electromagnetic band-gap materials
 - Surface integrated waveguides (SIW)
 - RFID and its applications
- **Microelectronics, Devices and VLSI**
 - Biosensors
 - MEMS based pressure and conductivity sensor
 - Nanostructured semiconducting metal oxides for sensor applications

- Chemical sensors
- MEMS based gas sensors and its CMOS integration
- VLSI design and testing
- VLSI based signal processing
- VLSI Architectures for Communication and Biomedical Engineering
- **Communication and Signal processing**
 - Wireless Ad-hoc and sensor networks
 - Cognitive Radio networks
 - Hardware efficient FIR filter design
 - Space-time coding for wireless communication
 - DSP algorithms
 - Design of CDMA spreading codes
 - Medical imaging
 - Sensor signal processing
 - CORDIC based DSP architectures

PhD Research

- Scholars enrolled during the year –10
- Scholars Registered during the year– 05
- Scholars Continuing their doctoral research from previous Year – 15
- PhD Thesis Submitted during the year : 03
- PhD awarded during the year : 03

4.9.3 Publications

- (SCI/SCOPUS) indexed Journals : 43
- Papers published in National and International Conferences : 04

4.9.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

- Dr. DebasisMitra won Young Faculty Research Award -2018
- Dr. Partha Bhattacharyya, Supervisor of the Thesis awarded as ISSS Postgraduate Students' Award (Masters) 2018.
- Dr. Partha Bhattacharyya, Supervisor of the Thesis awarded as Innovative Master Thesis Award 2018.

4.9.5 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- Digital Image and Signal Processing Lab (under construction)
- Wireless and Mobile Communication Lab (under construction)
- Microelectronics Laboratory

4.9.6 Details of Foreign Visits and Invited Lectures

- Dr. Partha Bhattacharyya and Dr. Debasis Mitra attended 3rd International Conference on Advances in Sensors, Actuators, Metering and Sensing (ALLSENSORS 2018), HELD IN Rome, Italy during 25th – 29th March, 2018.

4.9.7 Details of Conferences, Seminars, Workshops and Symposia organized

- IEEE Distinguished Lecture on “Terminal Antenna Design for Future wireless” by Prof. BuonKiong Lau, Lund University, Sweden.

4.9.8 Academic Collaboration, if any:

4.9.8.1 Mentor of Bhagalpur Engg. College

4.10 CENTRE OF EXCELLENCE FOR GREEN ENERGY AND SENSOR SYSTEMS

Year of establishment : 2009

4.10.1 Details of Academic Programmes

4.10.1.1 Master's Level

- 2-Year Masters' Programme (M.Tech) in Renewable Energy Science and Technology

4.10.2 Academic Research

Research Areas

- **Solar Photovoltaics**
 - Crystalline Silicon
 - Amorphous Silicon
 - TOPCON and IBC
- **Energy Storage**
 - Supercapacitors
 - Vanadium Redox Batteries
- **Sensors**
 - Selective Gas Sensors
 - Biosensors
 - Electrochemical Sensors

PhD Research

- Scholars enrolled during the year: 01
- Scholars Registered during the year: 01
- Scholars Continuing their doctoral research from previous Year: 12
- PhD Thesis Submitted during the year: 5
- PhD awarded during the year: 5
- No of PhD to be awarded & submitted: 3

4.10.3 Publications

- (SCI/SCOPUS) indexed Journals: 32
- Papers published in National and International Conferences: 01
- No. of Books/ Monographs published: 03

4.10.4 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- DST-IIEST Solar PV Hub

4.10.5 Details of Conferences, Seminars, Workshops and Symposia organized

Industry Institute Perception in Solar Cell R & D in India	DST, GOI	1 st Feb 2018	Workshop
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4.10.6 New Academic/ Research Initiatives, if any:

- Research initiatives on TOPCON, IBC solar cells, Supercapacitors and Piezoelectric energy harvesters

4.11 HEALTHCARE SCIENCE AND TECHNOLOGY

Year of establishment: 2010

4.11.1 Details of Academic Programme**4.11.1.1 Master's Level**

- 2-Year Masters' Programme (M.Tech) in Biomedical Engineering
- 2-Year Masters' Programme (M.Tech) in Safety and Occupational Health Engineering

4.11.2 Academic Research**Research Areas**

- Clinical microbiology
- Neurobiotechnology
- Cancer Biology and Bioinformatics
- Mechanotransduction in Stemcells
- Mitochondrial dynamics in Cancer detection
- Quantitative microscopy, wound healing.
- Bioactive polymers for tissue engineering,
- Piezoelectric and conducting polymers, biocompatibility of medical devices, drug delivery for hemostasis management
- Bioprinting and 3d printing of grafts.
- Vascular (neuro, cardio) Biology, Tumor metastasis and Nano-biotechnology Biomechanics
- Nano science and bioinorganic, environment
- Vascular physiology.

4.11.3 Publications

- (SCI/SCOPUS) indexed Journals: 44
- Papers published in National and International Conferences: 02
- No. of Books/ Monographs published: 09

4.11.4 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any.

- Bioinstrumentation, Biomaterials and Biotechnology Laboratories

4.11.5 Details of Foreign Visits and Invited Lectures

- International conference in Colombo, Srilanka, December 2017 (S. Sarkar)
- Visiting Scientist at Dept of Pharmacy, State University of Denver, USA (CDM) during April 2018 (Chitragada Das Mukhopadhyay)

4.11.6 Details of Conferences, Seminars, Workshops and Symposia organized

- Workshop on Medical Devices: Design, Development and Clinical Translation; 15th December 2017

4.11.7 Important visitors to the Centre:

- Prof. Pankaj Pankaj, Dean, International(South Asia) and Professor of Computational Biomechanics, Civil and Environmental Engineering, University of Edinburgh (18.01.2018).
- Dr. Sharmila Mande, Chief Scientist, TCS Life Science (28.11.2017).
- Dr. Gour Gopal Datta, Director, DRDO, Jagadish Chandra Bose Centre For Advanced Technologies, Kolkata (20.11.2017).
- Prof. Dilip K. Sarkar, Professor, Centre Universitaire de Recherche sur l'Aluminium (CURAL), Université du Québec à Chicoutimi, Canada (29.11.2017).
- Prof. Anindya Deb, IISc Bengaluru (15.12.2017)
- Dr. Soma Bandyopadhyay, TCS Kolkata (15.12.2017)
- Prof. Gautam Saha, IIT Kharagpur (15.12.2017)
- Dr. Nirjhar Bhattacharya, NRS Medical College and Hospital (15.12.2017)
- Prof. Marc Madou, University of California, Irvine (15.12.2017)
- Dr. Mazi Zarrehearvar, CEO, MicrobeDx Inc., USA. (15.12.2017)
- Dr. Sergio Martinez, Tec de Monterrey, Mexico (15.12.2017)

4.11.8 Academic Collaboration, if any:

- CGCRI (Dr. Subhadip Bodhak),
- IICB, Bose Institute (Dr. Subrata Mazaumdar),
- SINP—Kolkata, IIT Kharagpur (Dr. HN Misra, Dr. J. Chatterjee),
- GNIDSR Sodepur (Dr. RR Paul), Medical College Kolkata

4.11.9 Industrial Collaboration, if any :

- Alfatek Systems, Kolkata.
- Tata Steel Ltd. India
- Cromz. Inc., USA

4.12 INFORMATION TECHNOLOGY

Year of establishment : 2000

4.12.1 Details of Academic Programme

4.12.1.1 Bachelor's Level

- 4- Year Bachelor of Engineering (B.E.) in Information Technology.

4.12.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters' Programme (M.E.) in Information and Communication Engineering.

4.12.2 Academic Research

Research Areas

- Logic Synthesis, VLSI Design and Test, CAD for Microfluidic Biochips, Nanotechnology, Reversible Computing
- Optimization of Architectural and Layout Level Design of 3D Nanoscale Systems with major thrust on a) Performance Centric, Power Aware Design of Network-on-Chips(NoC) and b) Performance Centric Layout Design of 3D Integrated Circuits
- Post Silicon Nanoscale Technologies and Computing
- Wireless ad-hoc Sensor Network
- VLSI Testing
- 3DIC Testing
- VLSI digital Circuit Testing
- System-On-Chip Testing
- Network-On-Chip Testing
- Secret Sharing, Visual Cryptography

Research Areas

- Scholars enrolled during the year: 03
- Scholars Registered during the year: 02
- Scholars Continuing their doctoral research from previous Year: 20
- PhD awarded during the year: 04

4.12.3 Publications

- (SCI/SCOPUS) indexed Journals: 38

- Papers published in National and International Conferences: 40
- No. of Books/ Monographs published: 04

4.12.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

- IETE J C Bose Memorial Award [The best engineering oriented work] to Sandip Bhattacharya, Debaprasad Das and Hafizur Rahaman for their work “Stability Analysis in Top-Contact and Side-Contact Graphene Nanoribbon Interconnects” [2017-2018]
- Best paper award to A Biswas, S. P. Maity, P Bhattacharya for their paper titled “Optimal Geometric Active Contours: Application to Human Brain Segmentation”. 52nd Annual Convention of the Computer Society, Kolkata, 19-21 January, 2018.

4.12.5 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- WSN and IoT Laboratory funded by DST India Government.

4.12.6 Details of Foreign Visits and Invited Lectures

- Prof. Hafizur Rahaman
 - Visited Hsinchu, Taiwan as a member of Indo Taiwan (DST) Bilateral cooperation on Fabless IC manufacturing and as invited speaker to deliver Lecture on workshop “Electro Devices and Solid-state Circuits”, held on 27-29 December 2017 at Hsinchu, Taiwan. [Title: Tunnel Field Effect Transistors: Challenges and Opportunities].
 - Attended the steering committee meeting of IEEE Asian Test Symposium and WRTLT 2017 held at Taipei, Taiwan during 27th November-1st December 2017 and presented two technical papers in the symposium
 - Attended First International Linkage Degree Programme (ILDLP) Committee meeting on 17th Jan. and practical meeting on 18th January 2018 held at Hiroshima University, Japan and delivered lecture on “Globalization of Education, Science and Research: The University Experience”.
- Dr. Indrajit Banerjee
 - Presented paper at IEEE Wireless Communications and Networking Conference (WCNC 18), 15-18 April 2018, Barcelona, Spain.
- Dr. Santi Prasad Maity
 - Prof. S. P. MAITY visited San Fransisco to present research paper by Avik Banerjee and Santi P. Maity, Subhabrata Ray, On Residual Energy Maximization in Energy Harvesting Cognitive Radio Network, IEEE WCNC 2017, San Fransisco, CA, 19-22 nd March, 2017.
- Dr. Malay Bhattacharyya

- ACM SIGCHI Conference on Human Factors in Computing Systems (CHI EA), Denver, USA, May 06-11, 2017.
- ACM SIGCHI Workshop on Designing for Curiosity (CHI Curiosity), Denver, USA, May 07, 2017.
- ACM SIGCHI Symposium on HCI Across Borders (CHI HCIXB), Denver, USA, May 06-07, 2017.

4.12.7 Details of Conferences, Seminars, Workshops and Symposia organized

- (a) One day Technical Lecture Meeting on “Feature Evaluation Measures for Feature Subset Selection in Pattern Recognition and Data Mining Problems” in association with IEEE CASS on March 28, 2018 at IEST, Shibpur.
- (b) IEEE 1st International Symposium on Devices, Circuits and Systems [ISDCS 2018] held at IEST Shibpur during 27-31 March 2018 in collaboration with Hiroshima University, Japan under Bi-lateral Cooperation.
- (c) One week GAIN course on “Advances in Wireless Communications: From 5G to Cognitive Radio” from 18th December-22nd December, 2017. Foreign Faculty- Dr. Kaushik Chowdhury, Northeastern University, Boston, USA
- (d) Workshop on Big Data Analytics (BigDA) 2017 at IEST, Shibpur, India during October 28-29 and November 01, 2017, Organizing Chair: Dr. Malay Bhattacharyya.

4.12.8 Names of important visitors to the Department/ School/ Centre :

- a) Prof. Subhas Chandra Mukhopadhyay, FIEEE (USA), FIEE (UK), FIETE (India), School of Engineering, Macquarie University, NSW 2109, Sydney, Australia,
- b) Dr. Sudhir Dhawan, Chief Architect & Strategist, High Volume Systems, Lenovo (Taiwan/USA Operation) visited IEST Shibpur during 22-23 Feb 2018 and delivered lecture on Current and Future Processor Architecture on 23rd Feb 2018.
- c) Dr. Ujjwal Guin, Electrical and Computer Engineering Dept., Auburn University visited Department of Information Technology, IEST Shibpur on 6th January 2018 for possible collaboration on Hardware Security.
- d) Dr. Sujoy Sinha Roy, Computer Security and Industrial Cryptography group (COSIC) of KU Leuven, Belgium visited Department of Information Technology, IEST Shibpur on 2nd August 2017 and delivered talk on Investigation of the implementation aspects of public key cryptography on embedded platform”
- e) Prof. Basabi Chakraborty, Software and Information Science Department, Iwate Prefectural University, Iwate, Japan.
- f) Dr. Kaushik Chowdhury, Northeastern University, Boston, USA (22nd Dec., 2017-22nd DEC 2017)
- g) Dr. Koushik Sinha, Southern Illinois University, USA (12th January, 2018)

4.12.9 Students’ laurels in academic field:

- Subha Koley, PhD Scholar, Commonwealth Split site PhD Fellowship for 1 year in University of Lincoln, UK, Commonwealth Service Commission, UK [2017-2018]

4.12.10 Extension Activities and Social outreach:

- Various activities as Secretary, Executive Committee, IEEE CASS Chapter, Kolkata Section
- Various activities as Member, Administrative Committee, IEEE Computer Chapter, Kolkata Section

4.12.11 New Academic/ Research Initiatives, if any:

- Sponsored research supported by Institution of Engineers, India
- Sponsored research supported by Commonwealth Service Commission, UK
- Cognitive Radio in IoT

4.12.12 Academic Collaboration, if any:

- a) Research Collaboration with University of Lincoln, UK
- b) Research Collaboration with Northeastern University, Boston, USA (SPM)
- c) Yoshihiko Suhara, Recruit Institute of Technology and MIT Media Lab
- d) MdMustafizur Rahman, University of Texas at Austin
- e) Markus Krause, ICSI, UC Berkeley
- f) Sanghamitra Bandyopadhyay, Indian Statistical Institute, Kolkata
- g) Debjani Roy, Bose Institute
- h) Prof. Robert Wille, Professor and Head, Department for Integrated Circuit and System Design, Johannes Kepler University Linz, Austria
- i) Prof. Rolf Drechsler, IEEE Fellow, University of Bremen, Germany
- j) Prof. Krishnendu Chakrabarty, IEEE/ACM Fellow, Duke University, USA

4.12.12.1 Industrial Collaboration, if any :

- Bluezeal Labs, IIT, Bombay, Technical Mentor

4.13 MATERIALS SCIENCE AND ENGINEERING

Year of establishment: 2001

4.13.1 Details of Academic Programme**4.13.1.1 Master's Level**

- 2-Year Masters' Programme (M.Tech) in Materials Engineering

4.13.2 Academic Research**Research Areas**

- Ferrous and Non-ferrous Metallic Alloys
- Nano-structured semiconducting Materials
- Composite Materials
- Polymer and Polymer-Composites
- Biomaterials

PhD Research

- Scholars Registered during the year: 05
- Scholars Continuing their doctoral research from previous Year: 12
- PhD Thesis Submitted during the year: 4
- PhD awarded during the year: 4
- No of PhD to be awarded & submitted: 4

4.13.3 Publications

- (SCI/SCOPUS) indexed Journals: 15
- Papers published in National and International Conferences: 08
- No. of Books/ Monographs published: 08

4.13.4 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- SMALL (Laboratory for Low-dimensional Advanced Material Synthesis)
- Polymer and Polymer Based Composite Processing Laboratory
- Optical and Electrical Characterization Laboratory

4.13.5 Details of Foreign Visits and Invited Lectures

- N. R. Bandyopadhyay
 - Invited Speaker at the 1st International Conference on Mineral Engineering and Materials Science (ICMEMS-2017) held during November 20-22, 2017 at Sydney, Australia.

4.13.6 Details of Conferences, Seminars, Workshops and Symposia organized

- Colloquium on ‘Emerging Technologies: Metallurgy and Materials’ held on October 30, 2017.

4.13.7 Names of important visitors to the Department/ School/ Centre :

- Dr. Arindam Das, Nano-engineered Surfaces, Interfaces & Coatings of Massachusetts Institute of Technology (MIT), USA
- Dr. Niladri Banerjee, Department of Physics Loughborough University United Kingdom
- Dr. Sri Bandyopadhyay, School of Materials Science and Engineering, University of New South Wales, Sydney, Australia
- Dr. Sumitesh Das, TATA STEEL LIMITED, Jamshedpur

4.13.8 Extension Activities and Social outreach

- Hands on training for preparation of Fire Retardant Jute composite by the involvement of rural women for improvement of their livelihood.

4.13.9 Collaboration, with extra mural agencies, if any

- Tata Steel, R & D, Jamshedpur,
- ISRO, Bangalore,
- CSIR-CGCRI, Kolkata

4.13.10 Industrial Collaboration, if any:

- Tata Steel, R & D, Jamshedpur
- Amersil-Ketex Pvt. Ltd., Kharagpur,
- ISRO, Bangalore,
- CSIR-CGCRI, Kolkata

4.14 MATHEMATICS

Year of establishment: 1856

4.14.1 Details of Academic Programme**4.14.1.1 Master's Level**

- 2-Year Masters' Programme (M.Sc) in Applied Mathematics

4.14.2 Academic Research

- Scholars enrolled during the year : 16
- Scholars Registered during the year: 13
- Scholars Continuing their doctoral research from previous Year: 52
- PhD awarded during the year: 14
- No of PhD to be awarded & submitted: 07

4.14.3 Publications

- (SCI/SCOPUS) indexed Journals: 100

4.14.4 Details of Foreign Visits and Invited Lectures

- Dr. Ujjal Debnath visited Division of Human Support System, Faculty of Symbiotic Systems Science, Fukushima University, Japan during 118-28 March, 2018.

4.14.5 Details of Conferences, Seminars, Workshops and Symposia organized

- The Department organized a 5 day National Workshop on "Recent Advances in Modelling and Computational Techniques in Applied Mathematics" during 20th November 2017 to 24th November 2017.

4.14.6 Extension Activities and Social outreach:

SL NO	TOPIC	VENUE	DATE
1.	Scholars of the Department worked together with "SAMAYITA", NGO, for the help of cancer patient	Chittaranjan Cancer Research Institute & Hospital	08.08.2017
2.	Faculties extended their big hands to help the students of Jhantipahari School, Bankura	Jhantipahari School, Bankura	August 2017

4.14.7 Details of recent graduates pursuing higher studies/ post doctoral research in reputed institutes:

SL. NO	NAME	INSTITUTE
1.	Arup Maity	Harish Chandra Research Institute
2.	Anuran Maity	IIT, Madras
18.	Sumangal Bhattacharyya	IIT, Tirupati
4.	SubrataGolui	IIT, Guahati
5.	AnupamKhatua	IEST, Shibpur
6.	Priyam Chakraborty	IEST, Shibpur
7.	AktarSeikh	IEST, Shibpur
8.	KanishaPujaru	IEST, Shibpur

4.15 MECHANICAL ENGINEERING

Year of establishment: 1921

4.15.1 Details of Academic Programme

4.15.1.1 Bachelor's Level

- 4-year Bachelor of Engineering (B. Tech) in Mechanical Engineering

4.15.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters' Programme (M.Tech) in Mechanical Engineering

4.15.2 4.19.2. Academic Research

- PhD awarded during the year: 08

4.15.3 Publications

- (SCI/SCOPUS) indexed Journals: 43
- Papers published in National and International Conferences: 15
- No. of Books/ Monographs published: 01

4.15.4 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- Fracture Mechanics Laboratory has been established in the Mechanical Engineering Department in June 2017 under BRNS Project, Department of Atomic Energy, Government of India.

4.15.5 Details of Foreign Visits and Invited Lectures

- **Dr. Sujoy K Saha** Professor of ME Department participated and presented a technical paper in World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics in Brazil during June 2017.
- **Dr. Sudip Ghosh** Associate Professor of ME Department visited Russia from 16th to 24th September 2017.

4.15.6 Students' laurels in academic field

- a) **Avik Ghosh**, a current 8th Semester UG student of this Department successfully qualified in Graduate Record Examination (GRE) with 327 score and cleared Test of English as Foreign Language (TOEFEL) with 114 score.
- b) **Pulasta Chakraborty** a current 8th Semester UG student of this Department successfully qualified in Graduate Record Examination (GRE) with 323 score and cleared Test of English as Foreign Language (TOEFEL) with 104 score.
- c) **Arani Mukhopadhyay** a current 8th Semester UG student of this Department successfully qualified in Graduate Record Examination (GRE) with 321 score and cleared Test of English as Foreign Language (TOEFEL) with 112 score.
- d) Many students (UG and PG) and research scholars presented technical papers in various conferences in India under the financial assistance from TEQIP.

4.16 MECHATRONICS

Year of establishment: 2007

4.16.1 Details of Academic Programme

4.16.1.1 Master's Level

- 2-Year Masters' Programme (M.Tech.) in Mechatronics

4.16.2 Academic Research

Research Areas

- AI and Soft Computing,
- Autonomous Intubation,
- Bio-medical and Exoskeleton Devices,
- Bio-signals
- Dexterous Robotic Hand,
- Image Processing,
- Intelligent Systems,
- Micro Systems, Teleportation,
- Mobile Robots,
- Prosthetics,
- Sensors Development,
- Unmanned Aerial Vehicle,

PhD Research

- Scholars Registered during the year: 01
- PhD awarded during the year: 03

4.16.3 Publications

- (SCI/SCOPUS) indexed Journals: 05
- Papers published in National and International Conferences: 03

4.16.4 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- KUKA Industrial Robot with CNC machines.

4.16.5 Details of Foreign Visits and Invited Lectures

- Saptak Bhattacharya visited Robotics Laboratory, Hiroshima University, Japan from 20/06/2018 to 10/07/2018
- S Bhaumik delivered an invited talk at the C. V. Raman College of Engineering, Bhubaneswar.
- S Bhaumik delivered a key note address on “Leveraging Simulation Techniques for Productivity Improvement” on February 2017 at the Steelenium Hall, Tata Steel, Jamshedpur.
- S Bhaumik delivered an invited talk in Jagadish Bose National Science Talent Search, Kolkata, 6th June 2017
- S Bhaumik was an invited speaker at the AICTE sponsored FDP on "Recent Developments in Artificial Intelligence & Robotics" at ECE Department, Narula Institute of Technology, Agarpara, Kolkata, January 2018.

4.16.6 Details of Conferences, Seminars, Workshops and Symposia organized

- One day Seminar on Advances in Mechatronics & Robotics: Education, Research and Industrial Application: June 2017.

4.16.7 Important visitors to the Department/ School/ Centre:

- Dr. Abhijit Nagchaudhuri, Engineering & Aviation Sciences, Maryland, USA (February 2018)
- Dr. Barun Pratiher, Mechanical Dept., IIT Jodhpur (August 2018)
- Prof. B. Corves , RWTH Aachen, University, Germany (June 2017)

- An Expert team visited from Hiroshima University, Japan (2017)
- Dr. S K Chaudhuri, FNAE, Ex-Director, RCI, DRDO

4.16.8 Students' laurels in academic field :

- 1st Prize - International Symposium on 3D Printing Technology (3D printing Olympiad), April 2018 , IEM Kolkata.

4.16.9 New Academic/ Research Initiatives, if any

- Product development under rural technology
- Neuroscience

4.16.10 Collaboration, with extra mural agencies, if any:

- National Institute for the Orthopedically Handicapped (NIOH under MSJE, Govt. of India), Kolkata

4.16.11 Academic Collaboration, if any

4.16.11.1 M. Tech in collaboration with CSIR laboratories, namely, CMERI Durgapur, CEERI Pilani and CSIO Chandigarh

4.16.12 Details of recent graduates pursuing higher studies/ post doctoral research in reputed institutes:

- Post Doc. in Universita della Calabria, Italy
- University of California Davis
- Post doc. in Hanbat National University, South Korea, TIET Patiala
- PhD in INRIA Rennes at the LAGADIC research group France, IIT Bombay, IIT Madras, IIT Delhi, IIT Guwahati, IIT Bhubaneswar

4.17 METALLURGY AND MATERIALS ENGINEERING

Year of establishment: 1939

4.17.1 Details of Academic Programme

4.17.1.1 Bachelor's Level

- 4-year B. Tech Programme in Metallurgy and Materials Engineering

4.17.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year Masters' Programme (M.Tech) in Metallurgy and Materials Engineering with Specializations in: Iron and Steel Technology, and Surface Engineering

4.17.2 Academic Research

Research Areas

- Ultra high strength steel, TWIP steel, Micro-alloyed high carbon steel
 - Microstructure and texture in aluminium base alloy
 - Aluminium based coating on steel

- Colour coated steel
- Diffusion bonding, Friction Stir Welding
- Wear of Materials
- Nano-structured materials
- Electronic Materials
- Biomaterials
- Composites
- **Research Areas**
- Scholars enrolled during the year: 03
- Scholars Registered during the year: 04
- Scholars Continuing their doctoral research from previous Year 04
- PhD Thesis Submitted during the year: 02
- PhD awarded during the year: 02

4.17.3 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- Metallography Laboratory
- Testing of Metals Laboratory
- Heat Treatment Laboratory
- Corrosion Laboratory
- X-ray Laboratory
- SEM Laboratory
- Metal Casting Laboratory
- Smithy & Forging Laboratory
- Welding Laboratory
- Computer Laboratory
- Physics of Metals Laboratory
- Nanostructure processing Laboratory

4.17.4 Names of important visitors to the Department/ School/ Centre

- Dr. Manish Ray – DMRL, Hyderabad, as INAE-AICTE Professor
- Dr. Jayanta Kr. Saha – INSDAG, as INAE-AICTE Professor

4.17.5 Academic Collaboration, if any:

- IIT, Kharagpur
- IIT, Kanpur
- NML, Jamshedpur

- Jadavpur University
- *Colorado School of Mines*, Golden, USA

4.17.6 Industrial Collaboration, if any:

- Tata Steel Limited, Jamshedpur
- INSDAG, Kolkata

4.18 MINING ENGINEERING

Year of establishment: 1906

4.18.1 Details of Academic Programme

4.18.1.1 Bachelor's Level

- 4-Year B. Tech in Mining Engineering

4.18.1.2 Master's Level

- 5 year integrated Dual (BTech-MTech) Degree programme
- 2-Year MTech programme in Mining Engineering
- 2-Year MTech programme in Geoinformatics

4.18.2 Academic Research

Research Areas

- | | |
|---|---|
| • Occupational Health and Safety | • GIS / GPS and Remote Sensing Application |
| • Carbon Sequestration and Exploitation of Coal-Bed-Methane | • Mineral beneficiation |
| • Mine Closure Planning | • Environmental appraisal and planning |
| • Environmental Modelling | • Mine system optimization |
| • Rock mechanics , strata control and slope stability | • IT application in Mining |
| | • Rock blasting with explosives: Simulation & behavioural modelling |

Doctoral Research

- | | |
|--|----|
| • Scholars enrolled during the year : | 03 |
| • Scholars Registered during the year: | 01 |
| • PhD awarded during the year: | 01 |

4.18.3 Publications

- | | |
|---|----|
| • (SCI/SCOPUS) indexed Journals: | 07 |
| • Papers published in National and International Conferences: | 04 |
| • No. of Books/ Monographs published: | 02 |

4.18.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

- 25th Business School Affaire-Education Leadership Award For excellence in education and research in Nov 2017

4.18.5 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- MINERAL DRESSING / MINERAL BENEFICIATION LABORATORY
 - Pneumatic Cyclone Assembly 1 Lot
 - Jaw CRUSHER 1
 - Hot Air oven 1
 - Bucket Elevator 1
 - Jig based pilot plant 1
 - C-700 Mozley Hydro cyclone Test Rig 1
 - Vibrating Screen with AC variable Speed drive 1
 - Ball Mill 1
 - Sieve Shaker (Different size) 2
 - Forth Flootation cell 1
 - Rod Mill 1
 - Screw Washer with AC variable speed drive 1
 - Particle Size Analyzer (Microtrac S3500) 1
 - Density meter (precisa) 1
 - Weighing Balance (electronic) 1
 - Hydrocyclone(tega) 1-2 inch & stub assembly 1
 - pH meter (5 Point calibration)
 - Rotational Viscometer
 - Hot plate 1
 - Magnetic stirrer 1
 - Wilfley shaker table 1

- MINE ENVIRONMENTAL SCIENCE AND VENTILATION ENGINEERING LABORATORY
 - High Volume Dust Samplers 2
 - Gravimetric Dust Sampler 1
 - Sound Level Meter 2
 - Humidity/Temperature meter 1
 - Lux Meter1
 - Nephelo Meter
 - PH Meter
 - Water analysis kit1
 - uv-vis Spectro photo Meter 1
 - Whirling hydro Meter 2
 - Anemo Meter 1
 - Methano Meter 1
 - Blast Vibration Meter 1
 - CO Detector 1
 - Flame Safety Lame 1
 - Gas Tasting Arrangement 1
 - Peristaltic Pump 1
 - Water Bath 1

○ Auto Clave	1
○ Nephelometer	1
○ Soil and Water Analysis Kit	1
○ Weather Monitoring System	1
○ Gas chromatograph	1
○ Crossing Point Apparatus	1
○ Atomic Absorption Spectrophotometer	1
● UNDERGROUND MINING MACHINERY LABORATORY	
○ Headgear Structure	2
○ Drumwinding System	1
○ Skip winding system	1
○ King Detaching Safety Hook	1
○ Armored Detaching Safety Hook	1
○ Electric Coal Drill Machine	1
○ Jack Hammer Drill Machine	2
○ Direct Rope Haulage Model	1
○ Endless Rope Haulage Model	1
○ Main & Tail Rope Haulage Model	1
○ Gate Belt Conveyor	1
○ Scraper Chain Conveyor	1
○ Shaker conveyor	1
○ Load Haul Dumper (LHD)	1
○ Side Discharge Loader (SDL)	1
○ Continuous Miner /Road Header	1
○ Jim Crow	1
○ Back Stay	1
○ Reliance Rope Capel	1
○ Single & Double C- coupling	2
○ Single & Double D - Coupling	2
○ Haulage Appliances (Stop Block , Jazz Rail, Crossings etc)	1
○ Different types of wire ropes	1
○ Different types of Gear	1
○ Long wall Panel Model	1
● MINE SURVEY LABORATORY	
○ Dual frequency GNSS Receivers for DGPS survey	1
○ Single frequency GNSS receivers for DGPS survey	1
○ Auto Level	5
○ Electronic Theodolite	6
○ Total Station	2
○ Prismatic Compass	2
○ GPS	2
○ Tripod	12
○ Staff	6

○ Ranging Rod	20
○ Engineers Chain	12
○ Measuring Tape(30m)	6
● GIS / GPS LAB	
○ Scanner AO size	
○ ARC info software (3 user)	
○ Workstation 4no's	
○ ERDAS software (5 user)	
○ Plotter AO size	
○ SERVO UPS	
○ Envi 5.0 (10 Users)	
○ Envi 5.0 (10 Users)	
○ Geomedia Professional	
○ Raster to vector software	
○ ILWIS	
● ROCK MECHANICS LAB	
○ Univarsa Testinsg Machine(U.T.M.)	1
○ Point Load Testing Machine	1
○ Tri axial cell with pressure system	1
○ Brazilian Test apparatus	1
○ Proto Dyakonov apparatus	2
○ Slake Durability Test apparatus	1
○ Precision Vacuum oven apparatus	1
○ Rock cutting Machine	1
○ Rock polishing Machine	2
○ Schmit hammer	1
○ Rock permeability test apparatus	1
○ Shear testing apparatus	1
● COMPUTER APPLICATION LAB	
WORKSTATIONS	
○ B.E. Computer Lab	25
○ M.E. Computer Lab	6
SOFTWARE	
○ Surpac Software	
○ Minex Software	
○ Rock science Software	
○ GEM Software	
○ Whittle Software	
● MINE DEVELOPMENT LABORATORY	
○ Model for Shaft Sinking	1

- BULK SOLID HANDLING LABORATORY
 - Weighing Scale (with density Gauge)
 - Vibrating Screen with AC variable Speed drive
 - Bucket Elevator
 - Hopper with Vibrating Feeder (Electro-magnetic type)

- DEVELOPMENT OF HUMAN FACTOR AND ERGONOMICS LAB.
 - Cardiocoach, for measuring Aerobic capacity during work
 - Polar HRM, to measure cardiac frequency
 - TST ECG, to measure cardiac implication during work and Workload simulation
 - Ergofellow software, to measure or analyze posture risks.

4.18.6 Details of Foreign Visits and Invited Lectures:

Prpf. N.C.Dey and Research Scholar Mr. S.Banerjee attended and presented research paper in Xth INTERNATIONAL CONFERENCE TUR -2017, Krynica, Poland in September, 2017.

Prpf. P. Dutta attended as Moderator of Technical sessions at Carbon Capture Utilization and Storage Conference at Chicago, USA during April 2017 .

Prpf. S,Sinha delivered two lectures in workshop on green mining approach and ensuring positive impacts on environment on 27/11 and 29/11/2017

Prpf. S. Sinha delivered lecture on road map development for skill development center at IBM , Kolkata

Prpf. S. Sinha delivered two lectures at the workshop on Scientific evaluation of mine closure plan in light of SDF organized jointly by IBM and IEST

Prpf. S.Sinha delivered an invited Lecture in workshop on Green mining at IIT KGP on 10/11/2017

4.18.7 Details of Conferences, Seminars, Workshops and Symposia organized

Prof. Sudipta Mukhopadhyay, Organizing Secretary of First Eastern Zonal THINK INDIA Convention 2018 “IDEA” on 17-18 March 2018 in the EZCC, Kolkata, organized by Moulana Abul Kalam Azad Institute of Asian Studies, Kolkata with Vidarthi Vikash. The theme of the Seminar was “Smart Village”.

Organised two workshop as academic partner at skill development center , Indian Bureau of Mines , Government of India,Kolkata

4.18.8 Names of important visitors to the Department/ School/ Centre

The IEST, Shibpur, India through Mining Engineering Department and the Department of Natural Resources and Mines, Queensland Government, Australia through the Safety in Mines, Testing and Research Station (SIMTARS) have signed a Memorandum of Understanding (MoU) on May 9, 2017 to explore opportunities including the feasibility of promoting academic exchanges, research, joint projects and training.

Professors of Military Institute of Science and Technology, Dhaka, Bangladesh visited in May, 2017.

IBM official visited the department in connection with MOU signed with IEST and Indian Bureau of Mines , Minstry of Mines , Government of India for skill development center at Kolkata

4.18.9 Students' laurels in academic field

Educational Tour to d Coal mines and metal mines to students.

4.18.10 Extension Activities and Social outreach:

Starting of skill development centre IBM,Kolkata by Prof S.Sinha

Prof. N.C.Dey as external expert of IIT, Kharagpur; ISM, Dhanbad and Calcutta University

Prof S . Sinha as external expert in ME examination in IIT, Kharagpur

4.18.11 New Academic/ Research Initiatives, if any:

Coordinating the NBA activities of Bhagalpur college of Engineering Bhagalpur As Mentor by Prof. G.C.Roy

University of Cambridge, U.K.. on Extraction and synthesis of nano particles from mine waste for photocatalytic activity, a collaborative research work is going on by research team of Prof. Sudipta Mukhopadhyay.

4.18.12 Academic Collaboration, if any:

- MOU signed with SIMTAR, Queensland Government, Australia in the field of Human Factors Ergonomics and Mine safety.
- Collaborative research work with UGC-Department of Atomic Energy consortium, Kolkata.

4.18.12.1 Industrial Collaboration, if any :

Carrying out Scientific Study for strata Monitoring and Management plan for extraction of develop pillars at Sapri project, ECL by continuous Miner

Carried out research work on treatment of waste water effluent from textile tanneries (Salem district, Tamil Nadu.) with help of Nano material synthesized from mine waste.

4.19 PHYSICS

Year of establishment : 1926

4.19.1 Details of Academic Programme

- 2-Year Masters' Programme (M.Sc) in Applied Physics

4.19.2 Academic Research

Research Areas

- Solid State Physics, Transport properties of solids
- Solid State Physics, Electroceramics
- Theoretical Nuclear Structure and Nuclear Astrophysics

- Fibre Optics in linear and nonlinear domain
- Solid State Physics, Synthesis and characterization of nano materials
- Spectroscopy of Condensed Matter, Rare Earth Laser and Optical Materials
- High Energy Physics
- High Energy Physics, Cosmology
- Theoretical Atomic Physics
- Atomic Physics in Plasmas, Laser-atom interactions.
- Low dimensional Solid State Physics
- Plasma Physics, Plasma Surface Interaction, Transport properties of transition metal ions
- Carbon nanotubes, Graphine, Nanoelectronics and Nanoscience
- Experimental Nuclear Physics and Nuclear Astrophysics
- Experimental condensed matter physics
- Theoretical condensed matter physics

PhD Research

- Scholars enrolled during the year : 04
- Scholars Registered during the year: 03
- PhD awarded during the year: 01

4.19.3 Publications

- (SCI/SCOPUS) indexed Journals: 38
- Papers published in National and International Conferences: 20

4.19.4 Names of important visitors to the Department/ School/ Centre:

Prof. Surajit Sen, (SUNY, Buffalo) – July-Aug, 2017, Fullbright Programme

4.19.5 Academic Collaboration, if any

- CGCRI, Kolkata.
- Jadavpur University, Kolkata
- UGC-DAE- Kolkata and Indore Centre.
- Institute for Plasma Research, Gandhinagar
- Saha Institute for Nuclear Physics (SINP), Kolkata
- Calcutta University
- IIT, Kharagpur
- S. N Bose National Centre for Basic Sciences, Kolkata.
- Indian Association for the Cultivation of Science, Kolkata
- Jawaharlal Nehru University, New Delhi.
- Inter University Accelerator Centre, New Delhi.

- Rutherford Appleton Laboratory, UK.
- Augsburg University, Germany.
- Max Planck Institute for Chemical Physics of Solids, Germany.

4.20 VLSI TECHNOLOGY

Year of establishment : 2006

4.20.1 Details of Academic Programme

- 2-Year Masters' Programme (M. Tech) in VLSI Design

4.20.2 Academic Research

Research Areas

- Digital VLSI Design
- Analog and Mixed Signals
- VLSI Testing
- Nanotechnology
- Bio-chip Design Automation
- NOC & SOC Design
- FPGA Synthesis and Testing
- VLSI Physical Design Automation
- Digital Watermarking
- Intelligent and Cognitive systems
- System on chip architectures
- Network on Chip
- 3D IC Design

Doctoral Research

- Scholars enrolled during the year: 01
- Scholars Registered during the year: 03
- Scholars Continuing their doctoral research from previous Year: 03
- PhD Thesis Submitted during the year: 05
- PhD awarded during the year: 05

4.20.3 Publications

- (SCI/SCOPUS) indexed Journals: 17
- Papers published in National and International Conferences: 14

4.20.4 Details of awards and laurels won by faculty members for excellence in academic pursuits

Dr. Amretashis Sengupta was recipient of DFG -RTG Fellowship (Germany)

4.20.5 Creation/ Modernisation of Academic Laboratory and Research infrastructure, if any

- Ganapati Sengupta VLSI Laboratory (Research Lab)
- SMDP-II Laboratory
- Advanced FPGA Lab.
- Advanced VLSI Design Lab.
- Chip to System Design (C2SD) Lab.
- Advanced Semiconductors and Computational Nanoelectronics Lab

4.20.6 Details of Foreign Visits and Invited Lectures

- Dr Amritasish Sengupta delivered an invited talk on "Two Dimensional Materials for Low Power Electron Devices and Clean Energy Application", Hanse-Wissenschaftskolleg Fellow lecture, held at Delmenhorst, Germany, 29 March, 2017.
- Dr Indranil Hatai delivered an invited talk in March 2017 on "SOC based Embedded system design" at DIATM, Durgapur, West Bengal
- Dr Indranil Hatai delivered an invited talk in June 2017 on "SOC design using Verilog" at MCKV, Lilluah, West Bengal
- Dr Indranil Hatai delivered an invited talk in July 2017 on "VLSI System Design" at Vidyasagar University
- Dr Indranil Hatai received teaching assistant ship for the NPTEL online course "VLSI Physical Design" in March-April 2017

4.20.7 Names of important visitors to the Department/ School/ Centre :

- Prof. Tapas Maity, Assistant Professor, Hiroshima University
- Prof. Bhargab B. Bhattacharya, ISI, Kolkata.
- Prof. Santanu Mahapatra, IISc, Bangalore.
- Prof. Mitiko Miura Mattaush, Professor, Hiroshima University.
- Dr. Arup Bhattacharya, Former Scientist, IBM, USA
- Prof. Brajesh Kaushik, IIT, Kanpur

4.20.8 New Academic/ Research Initiatives, if any:

4.20.8.1 Academic Collaboration

- Department Computer Science and Engineering, Duke University, Durham, USA (Research Professor)
- Department Computer Science, University of Bristol, UK (Royal Society Programme)
- Department of Computer Science, University of Bremen, German (DST-DAAD Programme)
- ACM Unit, Indian statistical Institute, Kolkata, India (DST Programme)
- Department of Computer Science and Engineering and Electronics and Communication Engineering IIT Karagpur, India (India Chip Programme, PhD Collaboration)
- Department of Electronics and Communication Engg., IISC., Bangalore, India (India Chip Programme)
- Institute of Radio Physics and Electronics Science, Calcutta University, Kolkata, India (Research Collaboration, Clean Room Facility)
- Department of Electronics and Communication Engg., National Institute of Technology Durgapur, India (India Chip Programme, Research Collaboration)
- Department of Electronics and Tele-communication Engg., Jadavpur University, Kolkata (India Chip Programme, Research Collaboration)

4.20.8.2 Research Initiatives:

- Added computational study of 2D materials for application in Lithium/ Sodium ion batteries as another area of research during HWK fellowship.

- New Initiative started for Power Electronic Circuit Fabrication, Hiroshima University, Japan

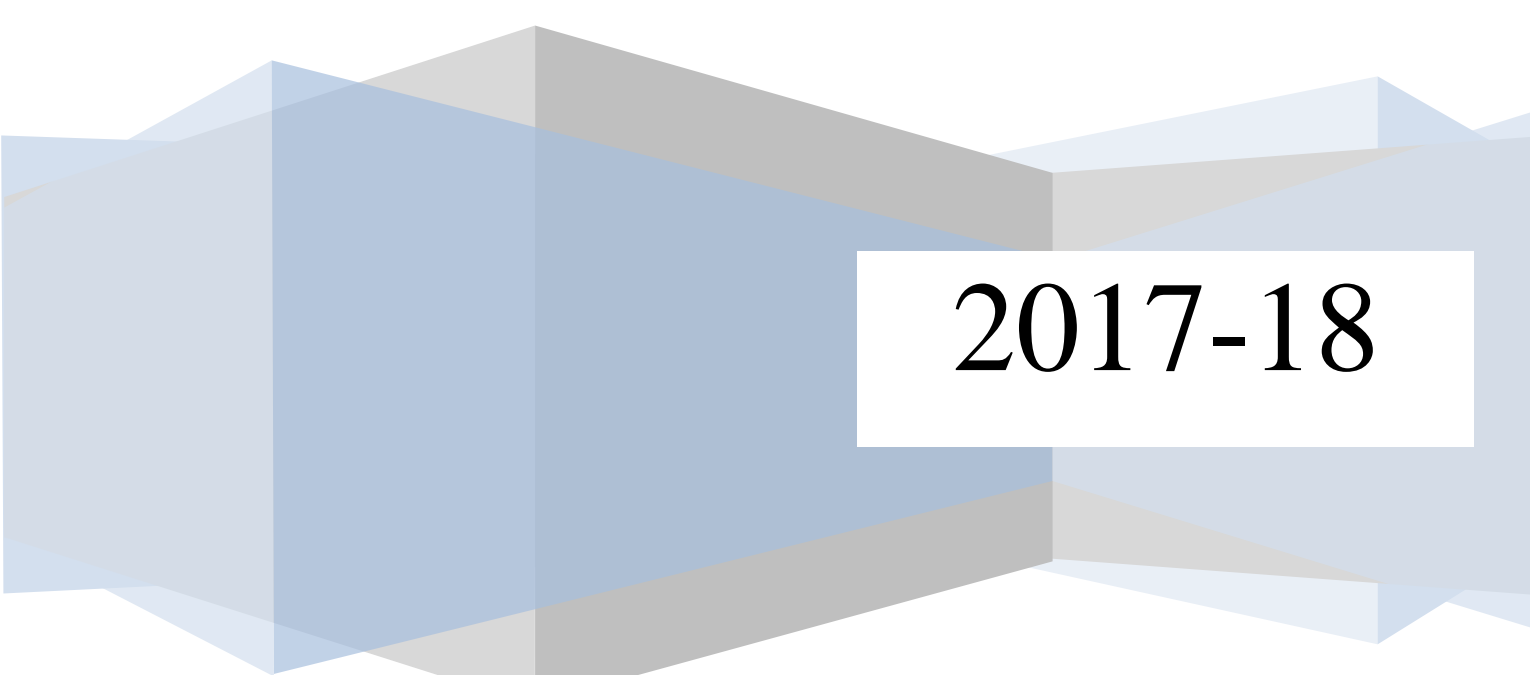
Industrial Collaboration, if any : Sankalp Semiconductors, Bangalore

4.20.9 Details of recent graduates pursuing higher studies/ post doctoral research in reputed institutes

- Mr Supratim Saha student of M.Tech(VLSI Design) joined Qualcomm in 2017.
- Mr Sabyasachi Tiwari student of M.Tech(VLSI Design) joined to PhD program at University of Texas,Dallas,USA in 2017.
- Mr Subhashis Dolai student of M.Tech(VLSI Design) joined to PhD program at University of Utah,Salt Lake City,USA in 2017.
- Mr Sandipan Haldar, Mr Sudarshan Kumar, Mr Ravi Singh, Ms Sweta Tiwary and Mr Ramdas Yadav students of M.Tech(VLSI Design) joined DxCorr Design Services, Bangalore in 2017.

IEST Shibpur

§5. Academic Service Centres



2017-18

5 ACADEMIC SERVICE CENTRES

The academic service centres discharge important support functions in the Institute's endeavour to produce quality human resources in the realm of applied sciences, engineering and technology, and management. The Institute's academic service centres comprise (i) the Ramanujan Central Library, (ii) the Tagore Centre for Green Technology Business Incubation (TCGTBI), (iii) the Computer Centre, (iv) the Sophisticated Instrumentation Centre, (v) the Continuing Education Programme (CEP) Cell, and (vi) the Workshop.

5.1 RAMANUJAN CENTRAL LIBRARY

The mission of the Ramanujan Central Library is to facilitate creation of new knowledge through acquisition, organization and dissemination of knowledge resources and providing for value added services.

The Ramanujan Central Library has the distinction of being one of the oldest and a moderately large resourceful technical libraries in the eastern India. The total area of the library is around 3,000 square metres.

The library not only caters to the basic information needs of faculty members, research scholars and students of this Institute but also provides information and documentation services to researchers of neighbouring universities and research institutes.

The process of strengthening the infrastructure and facilities of the Ramanujan Central Library continued throughout the period under review. The storing capacity of books in the library increased through the procurement of double faced library racks. The Library is open from 9.00 A.M. to 10.30 P.M. from Mondays to Fridays and 10.00 A.M. to 6.30 P.M. on Saturdays and Sundays. The library provides open access services for books and other documents to its members including students.

5.1.1 Scenario

Over the last two decades the Library scenario has been continually changing under the influence of rapid technological advances. With ever rising applications of Information and Communication Technologies (ICTs) there has been radical change in the dimension of library and information services. For effective utilization of resources and resource sharing, libraries are now increasingly computerized and integrated into local, regional, national and international networks. Keeping pace with the rapidly changing scenario, in information science in general, and that in scientific and technological libraries in particular, the Ramanujan Central Library has, of late, been putting pointed thrust towards developing web based digital resource services.

5.1.2 Collection Development

During the period under review 5,872 books were added in the library collection out of which 308 titles received as gift. The number of books and other documents issued to the members in the above period is 46,370. The library boasts of having a good collection of old and rare books and bound journals of the nineteenth century.

5.1.3 Computerization

The library has already computerized its entire housekeeping operations and now offered services through the integrated library management system – LibSys and introduced system generated bar-coded membership (with photograph and biometric) database of users for speedy charging and discharging of books. The library is providing online search facilities (WebOPAC) of its collection through the website of the Institute for remote access. Library is upgrades its servers and integrated library management software (LibSys7), introduced electronic surveillance system (CCTV) and attendance management system and in the process of introducing RFID based inventory control system for better collection management and efficient circulation services to its members. Procurement process of additional desktop computers and other peripherals are in process.

5.1.4 Services offered

- Web based library services
- Access to electronic journals
- Access to bibliographic databases
- Lending Service
- Reading Room Service
- Reference Service
- Digital Question Papers Access Service
- Inter Library Loan Service
- Similarity (Plagiarism) Checking Service
- Institutional Digital Repository Service
- Services to Alumni and distinguished visitors

5.1.5 Electronic Resources

The facilities in the Library have been significantly improved by the way of introducing scholarly electronic resources. The access of e-resources – *ASCE Journals*, *ASME Journals*, *IEL Online*, *American Chemical Society (ACS)*, *American Institute of Physics (AIP)*, *American Physical Society (APS)*, *Royal Society of Chemistry (RSC)*, *Springer Link*, *Taylor & Francis Journals*, *JSTOR*, *Economic and Political Weekly*, and *ISID* database available through the E-SHODH SINDHU Consortium is continued. The subscription of seven subject collections (namely, Chemistry; Computer Science; Earth and Planetary Sciences; Engineering; Physics and Astronomy; Materials Science; and Mathematics) of Elsevier's *Science Direct* database is also continued. The library is also subscribed three bibliographical databases, namely Indian Citation Index (upto December 2017), Scopus and Web of Science (1965 to present) for providing reference and citation services to its users.

The library staff members make the users aware about the online citation (bibliography) and similarity (plagiarism) checking services and help them in using these tools.

5.2 TAGORE CENTRE FOR GREEN TECHNOLOGY BUSINESS INCUBATION (TCGTBI)

The Tagore Centre for Green Technology Business Incubation (TCGTBI), a society registered under the West Bengal Societies Registration Act, 1961, is set up to promote

innovation and entrepreneurship by converting and translating technology ideas and innovation in various disciplines of science and engineering into products, processes and services for commercial exploitation and the benefit of society. To accomplish its goal, TCGTBI runs and manages a Business Incubator (BI) at the Institute to facilitate incubation of new enterprises with innovative technologies by admitting them in BI and providing them physical, technical and networking supports and services.

5.2.1 Infrastructure

Infrastructural facilities are offered to the incubate companies on an individual basis, along with a set of shared/ common infrastructure mentioned here-in-under:

- Office space: Company specific
- Internet connection

Apart from company specific infrastructure as stated above, TCGTBI provide following facilities to all incubatee companies on shared basis:

- (i) Photocopier
- (ii) Scanner
- (iii) shredder
- (iv) Teleconferencing facilities as available. The usage of this facility will be paid by incubates as per the rate fixed by TCGTBI, time to time.
- (v) Meeting/Conference room with projection equipment
- (vi) TCGTBI Library facilities
- (vii) Pantry facilities
- (viii) Common secretarial pool/ staff

Besides, TCGTBI facilitate the incubatee companies to access departmental laboratories and other resources of IEST, Shibpur or at its Partner Institute for their specific requirements. Access to Institutional resources is possible as per extant rules of the Institutes, after observing necessary formalities and on payment of required fees. Usage of such resources should be with permission of the concerned department.

5.2.2 Entrepreneurship Promotion

In a globalised and digitised world of today, a culture of innovation, creativity and entrepreneurship have become the watch word in most economies. But, Entrepreneurial talent sitting within academia is largely untapped in India, as mostly in academic institutes employability is more focused than entrepreneurship. Thus, to promote entrepreneurship amongst students of technology institute and offer them the needed support to turn their ideas into reality, at IEST-Shibpur, TCGTBI is established, that aims to help students build and grow a business. IEST-Shibpur being the home to thousands of incredibly smart students with innovative ideas, where TCGTBI wishes to support every part of a student entrepreneur's journey, from inspiring their ideas, to helping create a compelling pitch and connecting them to the global network of mentors, investors and experts.

5.3 COMPUTER CENTRE

The Centre had its modest beginning in 1976 in the premises of the Electrical Engineering Department with a TDC-316 machine operated through punched cards. In 1992, the centre became a separate central computing facility, complete with servers and networked computers, on two floors of the block III of the main. Presently the Computer Centre is located at the new Technology building near the main administrative building, to provide adequate regular computing infrastructure, as well as high performance computing facilities for the students, research scholars, faculty members and staffs.

5.3.1 Resources/ Facilities

At present, in its temporary location, the centre primarily caters for the computing needs of UG curriculum. There are two laboratories: Laboratory-I and Laboratory-II, each equipped with 30 nos. of Pentium 4 pcs. These are connected through LAN to a central server. The PCs are provided with Internet facilities also.

5.3.2 Hardware

- 2 nos HP Proliant DL145 Rack Server
- HP Blade Centre
- 150 nos of Desktop PC
- 3 nos Laser Printer
- Scanner
- Multi Utility Print/Scan/Copier
- Wallmount Projector
- Internet Gateway Server

5.3.3 Software

- OS: Redhat Linux, Windows XP
- Compilers : GNU compilers for C/ C++ and Java

5.3.4 Short-Term Courses/ Training Programs

The centre offers short-term courses for students on programming, as well as basic computer training programmes for staff.

5.4 SOPHISTICATED INSTRUMENTATION CENTRE

The Sophisticated Analytical Instruments Facility (SAIF), formerly known as RSIC, was established by Department of Science and Technology (DST). The key commitment of the Centre is to provide advanced instrumental facility and scientific services required to support and to raise the level of research contributions at par with the international standards. The purpose of establishing these centres is to provide data collection facility from sophisticated analytical equipments to scientific community for their advanced research with nominal charges. The SAIF facility at IEST Shibpur has started its journey recently in 2016. The high-end facilities available at the Centre included Scanning Electron Microscope (SEM), Nano indentation etc. The Centre also arranges testing facilities in state-of-the art analytical instruments, *viz.*, Multipurpose Tribometer, 3D Optical Profiler, Thermal Evaporation System

and Atomic Force Microscopy. As a first installment to set up SAIF facility at IEST Shibpur, three major instruments namely, Single Crystal X-ray Diffractometer, NMR, and High Resolution Mass Spectrometer have been approved by DST. The Single Crystal X-ray Diffractometer has already been installed at IESTS and running successfully.

Main objectives of the centre are as below:

- To provide data collection facility to the samples received from different Institutes/Universities/National Labs/Colleges/Industries other than IESTS.
- To acquire and develop capability for preventive maintenance and repair of sophisticated instruments
- To organize short term courses/workshops on the use and application of various instruments and analytical techniques
- To train technicians for maintenance and operation of sophisticated instruments to undertake design and development of instruments/accessories of existing instruments.

5.4.1 Administration

To facilitate smooth functioning of SAIF, whose activities are going to increase manifold in near future, a Local Advisory Committee has been constituted for SAIF, IESTS consisting of following members given below.

S K Chattopadhyay Professor, Department of Chemistry	Coordinator
B K Ghorai Professor and Head, Department of Chemistry	Member
Nanda D. Paul Assistant Professor, Department of Chemistry	Member
P Biswas Assistant Professor, Department of Chemistry	Member
S Jana Professor, Department of Physics	Member
S K Chattopadhyay Professor, Department of Chemistry	Member

5.4.2 Users of the Facilities

The facilities provided at the Centre may be utilized by any user/ organization on payment of nominal charges. The details about the procedure for using the facilities and the charges for sample analysis, information about short term courses/training programmes/workshops etc. can be obtained from the respective Coordinators of the SAIFs or the websites of the Facilities.

5.5 CONTINUING EDUCATION PROGRAMME (CEP) CELL

The Continuing Education Programme (CEP) and the Quality Improvement Programme (QIP) Cell at IEST, Shibpur has been actively involved in reaching out to and communicating with the working professionals across the academic and industrial institutions and organizations to setup, uplift and build an environment conducive for the development of competency and the related training requirements. Such a venture has led to the enrichment of a holistic culture of the industry-academia handshake which has not only culminated in the

betterment of the aforesaid, but also has led to better chances and provisions of placement of our students. In addition, this has further strengthened the possibilities of collaborative research. During the academic session of 2017-18 the QIP-CEP Cell envisaged a widespread participation in their short- and long-term courses/programmes from people coming from different cross-sections that span the professionals from industries, faculty members and students from academic institutions and professionals working in the development of the rural sector.

The All India Council for Technical Education (AICTE) funds fully the courses offered and organized by the QIP aimed to meet three major objectives. These objectives, in turn, form the primary activities of the QIP aimed at the degree level Engineering, Pharmacy and Polytechnic institutions. These objectives are to (a) create and provide opportunities to faculty members of the degree-level engineering institutions to improve their qualification by offering admissions to Master's and PhD programmes, (b) arrange short term courses at the major QIP centres to serve the teachers in a fruitful manner, and (c) undertake curriculum development related activities for the enrichment of the teaching-learning process. In such a structure, a candidate upon selection followed by the admission is put on deputation, with the parent institution bearing his/her salary and allowances. In turn, any candidate selected for admission under the QIP needs to stick to an undertaking to serve his/her parent institution for a minimum period of three years after completion of the programme. Under the QIP category, one PhD student from an AICTE approved engineering college was admitted during the 2017-2018 academic session. In addition, one teacher was inducted into the PhD programme under the advance admission scheme during 2018.

During the academic session 2017-2018, a total of 15 Seminar/Symposium/ Conference were organized under the Institute's CEP Cell, financially assisted by various funding agencies like DST, UGC, CSIR, AICTE, DRDO, DIT, ISRO, AERB, BARC and INSA, along with the Institutional financial support. Many of the courses under the CEP received remarkable response and continued to attract large participation, both from within and from outside the Institute. During 2017-2018, a number of courses on social issues like the "Nirman Sahayakas from Gram Panchayats on Rural Engineering Issues" and "Sustainable Advanced Technologies for Environmental Management" were conducted by the Civil Engineering Department. It is worth mentioning that the "Nirman Sahayakas from Gram Panchayats on Rural Engineering Issues" made an extensive impact and a total of 10 sessions of the same during the academic year bears a testimony to this.

The training programme on "Laboratory Personnel Training on Standard Operating Procedures (SOPs) and Good Laboratory Practices (GLPs)" conducted by the Civil Engineering department has been acclaimed by the academic and industrial personalities. The national level workshop on "Recent Trends in Geomatics" organized by the Civil Engineering Department has been a very relevant step and has received accolades. The seminars "Recent Advances in Chemistry and Industry" organized by the Chemistry Department and "Devices, Circuits and Systems" by the Information Technology Department have been praised by the industry and academia.

5.6 WORKSHOP

Different shops of the IEST workshop are looked after by different departments. While the mechanical engineering department takes care of (i) the machine shop, (ii) the carpentry shop, and (iii) the fitting shop, (iv) the forging and welding shop is looked after by the materials and metallurgical engineering department. The department of electrical engineering is responsible for running and upkeep of the (iv) electrical shop. It handles the teaching of workshop practical courses meant for all the 1st year students at undergraduate level in addition to that for higher semester students of a few departments namely mechanical engineering, at both undergraduate and postgraduate levels. Going beyond the realm of curricular courses, the workshop extends its facilities to different academic units of the Institute in fabricating models and prototypes for both academic and extra mural research. Besides conventional machines and equipments, the workshop is equipped with modern fabrication and production units. State of the art equipments available with the Workshop include CNC machining centre, CNC Milling with ATC, Centre-less grinding Machine, Universal milling machine with retrofit, etc. The emerging thrust areas of the Workshop include the following.

- Advanced manufacturing processes
- Product manufacturing
- Product assembly and inspection
- Manufacturing planning
- Computer aided manufacturing for industry.

IEST Shibpur

**§6. Sponsored Research and Industrial
Consultancy**



2017-18

6 SPONSORED RESEARCH AND INDUSTRIAL CONSULTANCY

The Research and Consultancy Cell has, of late, matured into the singular channel for diverse externally funded research and industrial consultancy at the Institute. As of now its principal role is to act as a facilitator for R&D activities at the Institute. But, in consonance with the 'make in India' thrust of the Government and in tune with the technology roadmap of the country the Cell is now gearing up to play a greater role to act as the hinge point for multi and interdisciplinary mega research for which the Institute is now well poised.

6.1 SPONSORED RESEARCH AND INDUSTRIAL CONSULTANCY ACTIVITIES

A tradition of uncompromising quality-concern has put the Institute in good treads and, over the last few years, a good number of government and non-government funding agencies like AICTE, UGC, CSIR, DST, DIT, DAE, BRNS, DRDO, ISRO, UNICEF have come forward to sponsor Research Projects. Presently the Institute is putting a purposeful thrust on collaborative research both at national and international level.

In order to enhance the level of intellectual productivity and efficacy, the Institute has established a “Research and Consultancy Cell (RACC)” of which the principal objective is to facilitate - on behalf of the institute, coordination in administration, managerial, liaison, monitoring etc. of sponsored research and consultancy work within the ambit of the administrative framework of the Institute. This allows research workers to devote more time to fruitful research without bothering much on not-too-technical but no-less-important other aspects of the project administration and implementation.

The Institute enjoys a reputation for excellence in research and development. Casting a glance at its academic departments, the Institute can boast of commendable performance of its faculty members, particularly their quality research output which is reflected by a good number of publications in peer-reviewed national and international Journals. A significant number of research projects funded by AICTE, UGC, DST, CSIR, ISRO, DRDO, DIT, Ministry of Steel, Ministry of Defense, SMDP, BRNS, MNRE, TATA Steel, TISCO, SAIL, NML, ICDC, NMRL and international funding agencies like CIDA, USAID, DeIPHE, SANEI etc. bear testimony to the quality of research programmes carried out at the Institute. In the recent past Institute shared its research accomplishments with IISc (ACRC) Bangalore, IBM Kolkata, TATA Steel, SAIL, Infosys, DRDL, CPRI, TCS etc.

The number of sponsored projects and the funding have increased significantly during the last five years. Besides the conventional fields of technology and science, the Institute in recent years has brought many frontier areas of S&T under the purview of its sponsored research activities. Some of such areas are: Advanced Materials, Bio-Mechanics, Bio-materials, Earthquake Dynamics, Disaster Management, Environmental Remediation, Fuel Cell, Green Energy and Sensors, Healthcare Science and Technology, Mobile Computing, Nano Science and Technology, Power Electronics, Remote-sensing and GIS, Space Technology, MEMS fabrication, Structural Engineering, Surface Engineering, VLSI and Embedded Systems, Sensor Network, Mechatronics and Robotics, Water Resource, Turbulent Flow, Carbon Sequestration, Remote Sensing, Atomic and Nuclear Physics, Soft Computing, Image

§6. Sponsored Research and Industrial Consultancy

processing etc. Major augmentation in infrastructure for facilitating academic, research and administrative activities in the Institute has been undertaken during the past one year. While a total of 41 sponsored projects were concluded during the year, the details of 33 new externally funded projects started during the year are furnished in Table 6.1. Particulars of consultancy work carried out during 2017-18 are furnished in Table 6.2.

Table 6.1: New Externally Funded Projects initiated in 2017-18

Sl. No.	Dept.	Principal Investigator	Title of the Project	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
1	Physics	Abhijit Bisoi	Interplay between Single Particle and Collective Excitation in K Isotopes	SERB, DST	33.6834
2	Metallurgy	Amitava Basu Mallick	Development of High Energy Density Rare Earth Free MnBi and FeCo/Cu Coreshell Exchange Spring Coupled Permanent Magnet	SERB, DST	64.1059
3	CHST	Chitragada Das Mukhopadhyay	Induction of local hyperthermia to treat brain cancer using electromagnetism.....	DST-WB	15.7600
4	CEGESS	Snehangshu Patra	Integrated Photobioelectrochemical systems for efficient CO ₂ sequestering	DST-SERB	30.4700
5	Civil	Champakali Das	Study on the response of improved soft subgrade and use of river bed materials under simulated loading environment	DST (KIRAN, WOA-A)	23.8000
6	Chemistry	Anita Das	The Radical Character of Polycyclic Hydrocarbons with Open-Shell Ground State: An Extended Multireference Study	SERB	19.2000
7	Chemistry	Arik Kar	Core@shell semiconductor nanomaterials for the photocatalytic continuous flow treatment of xanthene dyes	The Royal Society, Independent Scientific Academy of the UK	26.9439
8	CHST	Sabyasachi Sarkar	Electricity from Coal under Ambient Environment using Radiant Energy	Tata Steel. Ltd.	3.1200
9	CHST	Ananya Barui	Low cost bench-top fluorescence microscope with integrated diagnostic algorithm for early cervical cancer risk prediction	DST	34.3200
10	Electrical	Mainak Sengupta	Design, Analysis and Fabrication of 0.25 hp Double Sided Axial Flux Switched Reluctance Motor (DSAF SRM) Drives for Semi-electric/manual assist bicycle	Murata Business Engineering (India) Private Limited	59.8656
11	ETC	Pallabi Pramanik	Development of Water Purification System based on III - Nitride Ultraviolet Light Emitting	SERB	14.4000

Table 6.1: New Externally Funded Projects initiated in 2017-18

Sl. No.	Dept.	Principal Investigator	Title of the Project	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
			Diodes		
12	Civil	Anirban Gupta	Demonstration of Child Friendly Group Hand Washing Facilities in Schools in Uttar Dinajpur District	UNICEF	21.7206
13	Civil	Anirban Gupta	Application of Emerging Biotechnology for Non-point Source Pollution Control of River Ganga, India	IC-IMPACTS, Canada	CAD 16321
14	ETC	Chirasree Roychaudhuri	Development of Electronic Tongue based Sensing System for Water Toxicity Monitoring	The Institute of Engineers (IEI)	1.2000
15	CEGESS	Hiranmay Saha	UK India Clean Energy Research Institute (UKICERI)	DST	138.1400
16	Chemistry	Chinmoy Bhattacharya	Modifications of Aurovillius Type Semiconducting Photocatalysts through Incorporation of Dopants and Cocatalysts for Improvement of Photoelectrochemical water Oxidations Behaviour	CSIR	9.0000
17	Chemistry	Sasanka Dalapati	(i) Exploration of AIE Active Supramolecular Aggregates and Polymers: Design Strategy, Synthesis and Applications (ii) Crystalline Porous Organic Materials: Diversity and Applications	DST-Inspire	35.0000
18	Chemistry	Jayanta Nanda	Developing a New Peptide Based Synthetic Self-replicating System	DST-Inspire	35.0000
19	Metallurgy	Debdulal Das	Fatigue Study for Seismic Performance Assessment of Rebars	TATA Steel, Jamshedpur	28.8184
20	Chemistry	Ajit Kumar Mahapatra	Design and Synthesis of NIR and AIE-Moieties Containing Fluorescent Chemodosimeter Molecular Probes for the Detection of Biologically Important Analytes	SERB	28.3756

Table 6.1: New Externally Funded Projects initiated in 2017-18

Sl. No.	Dept.	Principal Investigator	Title of the Project	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
21	IT	Prasun Ghosal	Programming and Development of a Smart Home Automation System Using IOT Framework	The Institute of Engineers (IEI)	0.3000
22	CHST	Ananya Barui, Chirasree Roychaudhuri & Ashoke Sutradhar	Dr. Bholanath Chakraborty Laboratory for Fundamental Research in Homeopathy	Central Council for Research in Homeopathy (CCRH), Ministry of Ayush, Govt. of India	30.0000
23	Physics	Chirashree Lahiri	Low Energy Astrophysical p-process of Stellar Nucleosynthesis: Design of Reaction-Decay network with Nuclear Physics Inputs from RMF and DFT Theory	DST-SERB (NPDF)	19.2000
24	CEGESS	Arindam Kole	Synthesis and Characterization of Metal Nano Structures for Application in Silicon Based Plasmonic Solar Cells	DST-SERB (NPDF)	19.2000
25	CEGESS	Hiranmay Saha	Enhancement of Efficiency of C-Si Solar Cells by 0.2-0.3% through Incorporation of Silicon Nitride Nanoparticles on Front Surface	Bharat Heavy Electricals Limited (BHEL)	19.9900
26	Chemistry	Sourav Mardanya	Designing of Lanthanide Based Nanoparticles in Conjugation with Platinum Metals for the Degradation of Organic Pollutants under Visible Light Irradiation	SERB-NPDF	19.2000
27	Metallurgy	Swarup Kumar Ghosh	Development of Zn-Al Coating with other Metals followed by Cashew Nut Shell Liquid (CSNL) based Paint as Top Coat on Ductile Iron Pipes	Electrosteel Castings Ltd. (ECL)	1.9838
28	Civil	Kalyan Kumar Bhar	Industrial research on a clean process for delivering arsenic free safe water to affected communities in India	Global Innovation and Technology Alliance (GITA), (DST & CI)	25.1177
29	CEGESS	Nillohit Mukherjee	Flexible super capacitors based on carbon nano	DST/TMD/SERI	40.5636

Table 6.1: New Externally Funded Projects initiated in 2017-18

Sl. No.	Dept.	Principal Investigator	Title of the Project	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
			materials for energy storage		
30	CST	Surajeet Ghosh	Design and Implementation of Pipeline Architecture for DNA Sequence Alignment	Dept. of Biotechnology, Govt. of India	20.4480
31	ETC	Chirasree Roychaudhuri	Extreme Point of Care Diagnostics on a CD	Indian Council of Medical Research, Dept. of Health Research, Ministry of Health & Family Welfare, Govt. of India	46.9780
32	Earth Science	Atin Kumar Mitra	Deformation processes in the evolution of gneissic structures: Experimental and field investigations	SERB	30.9880
33	Physics	Samar Jana	Characteristics of light emission in Eu ³⁺ doped Zinc Phosphate glass matrices	SERB	28.1094

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
1	Civil	Ambarish Ghosh	Soil Investigation for the Proposed Construction of G+4 Storied Women's Hostel with the Campus of Women ITI at Gariahat, Kolkata, WB, India	PWD, Govt. of West Bengal	1.6461
2	Civil	Ambarish Ghosh	Soil Investigation for the proposed Construction of Staff Qtrs. For 16 Nos. of Group C and 32 Nos. of Group D employees at Belgachia campus under WBUAFS	PWD, Govt. of West Bengal	2.3010
3	Civil	Kalyan Kumar Bhar	Construction of Weir at Darakeshwar River near pump house at Adra under South Eastern Railway	Modern Construction Co., Kolkata	6.1360
4	Civil	Kalyan Kumar Bhar	Hydraulic Model Studies, Siltation Studies, Bank Protection works and Jetty Layout for Marine 'Industrial Cluster' Project at Kulpi, West Bengal	Bengal Shipyard Limited, Kolkata	31.2405
5	Civil	Ambarish Ghosh	Review of Structural stability and adequacy of Berth nos. 4, 6, 8 at Kidderpore Dock-I in connection with Creation of mechanized container handling facilities for allowing working of Mobile Harbour Crane (MHC)	Kolkata Port Trust	4.4250
6	Civil	Tapas Kumar Roy	Engineering Study including Road Inventory Under Hooghly Highway Division - I.P.W. (Roads)	Civil Solutions, Kolkata - 700055	0.5900
7	Mining	Pratik Dutta & Prabir Kumar Paul	Assessment and Verification of Mine Closure Activities for NCL India Mines	NLC India Ltd. (A. Govt. of India Enterprise)	4.1300
8	Civil	Prasanta Chakraborty	Vetting of Structural Design and Drawings of Atrium Sky Light of Bangladesh Bhavan at Santiniketan, Bolepur	Narayan Kumar	0.4720

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
9	Civil	Ambarish Ghosh	Vetting of Design and Drawing of PVD - Construction of a ROB including approach Road from STKK Road on G.T. Road	Z-Tech (India) Pvt. Ltd., Kolkata - 700029	0.8850
10	Civil	Kalyan Kumar Chattopadhyay	Vetting of Foreign Visitors Accommodation at IIT, Kharagpur	CPWD, Kolkata	2.9500
11	Civil	Saibal Kumar Ghosh	Vetting of 100000 lit O.H. Tank at Shalimar Howrah	Sudarshan Sengupta & Sons Kharagpur	0.5900
12	Civil	Saibal Kumar Ghosh	Proof checking of design of Strut-Water system at Kolkata Biman Bandar Site	ITD Cementation India Ltd.	2.0000
13	Civil	Saibal Kumar Ghosh	Vetting of Design of North Bengal Gate	Westinghouse Saxby Farmer Limited	1.1800
14	Civil	Saibal Kumar Ghosh	Verify the Inventory of the Sabudjeep ECO-Tourism Project	Sikaria Divinity (P) Ltd.	5.9000
15	Civil	Asok Adak	Tunnel effluent sample analysis and associated mitigation measures	Transtunnelstory-Afcons Joint Venture	1.7700
16	Civil	Ambarish Ghosh	Independent Assessment of effect of vibration, emanating from installation of Sheet Piles using a vibra-sinker and monitoring of vibration at 5A/1C, Lord Sinha Road, Kolkata - 700071	Kish Developers LLP	3.1860
17	Civil	Soumya Bhattacharjya	Vetting of design of H.D. Bolts for North Bengal Gate	Westinghouse Saxby Farmer Limited	0.2360
18	Architecture	Arup Sarkar	Renovation work of the Town Hall, Howrah	Howrah Municipal Corporation	6.0700
19	Civil	Ambarish Ghosh	Expert Opinion and recommendation for Administrative Complex at Nimtouri as regards settlement of building	Mackintosh Burn Limited	4.1300

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
20	Civil	Saibal Kumar Ghosh	Vetting of Design & details of 80m span distressed bridge at Farakka	Royal Infrastructure Ltd., Kolkata	7.0800
21	Civil	Ambarish Ghosh	Vetting of the revised design of R E Wall by using Fly Ash as filling materials at Mogra ROB	Dineshchandra R. Agarwal Infracon Pvt. Ltd., Gujrat	1.2980
22	Civil	Ambarish Ghosh & Kalyan Kumar Chattopadhyay	Study on the river bank protection scheme adjoining the proposed G+11 Primarily Residential Building at the premises no. 20 & 22 B, G.T. Road, Mouza-Bhadrakali, Uttarpara, Dist. - Hooghly, West Bengal	Regent Hirise Pvt. Ltd.	5.3100
23	Civil	Ambarish Ghosh	Vetting of design and drawing for the project structure for view barrier adjoining to the dumping ground beside Belghoria Expressway at Pramod Nagar area and also structure for view Barrier cum Hoarding display over crash Barrier on R.O.B at Belghoria Express Highway	Traders & Engineers Pvt Ltd.	0.6490
24	Civil	Saibal Kumar Ghosh	Vetting of G+18 storied Building at Kolkata - 700014	ELIXIR, Kolkata - 700025	3.5400
25	Civil	Ambarish Ghosh	Vetting of Structural Design of MSTC Composite Building at New Town	NBCC (India) Ltd.	3.5400
26	AE&AM	Souvanic Roy, Soumen Mitra, Ruchira Das, Subrata Kr. Paul	Serampore Heritage Documentation and Proposal for Development of Heritage Walk	National Museum of Denmark (NMD), Denmark	9.2500
27	Civil	Saibal Kumar Ghosh	Health Monitoring of Shalimar Railway Station	Sudarshan Sengupta & Sons, Kharagpur	0.5900

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
28	Civil	Kalyan Kumar Chattopadhyay	Vetting of design & drawing for construction of Mezzanine Floor of Town Hall Building, Ground Floor at HMC	Panchdeep Constructions Ltd., Howrah	1.1800
29	Mining	Netai Chandra Dey	Coal Grade Monitoring (3 Samples)	Eastern Coalfields Limited (ECL)	0.0850
30	Civil	Tapas Kumar Roy	Technical vetting of Plans for Construction / Extension of North Block (Biology Block) of Bagnan College, Howrah for financial assistance of West Bengal (Vide Memorandum Notification No. 499-Edn(CS)/10M-96/13, dated 08.05.2017)	Bagnan College, Howrah	0.8260
31	CEGESS	Hiranmay Saha	Vetting Report	Bengal Sun Solar Energy (I) Pvt. Ltd.	0.2500
32	Civil	Saibal Kumar Ghosh	Vetting of 1100 cum over head reservoir	D.C. Rakshit & Company	0.4720
33	Mechanical	Sudip Ghosh	Vetting of Air Conditioning & Mechanical Ventilation System Design & Drawing of 5 Government Medical Colleges in the State of West Bengal	West Bengal Medical Services Corporation Ltd., Govt. of West Bengal	8.0000
34	Civil	Sugato Pal	Inspection of Jaldapara Tourist Lodge and Necessary Report	West Bengal Tourism Development Corporation Ltd.	0.5900
35	Civil	Saibal Kumar Ghosh	Vetting of RCC Building at Mouza-Patulua, Khardah	Siddha Waterfront LLP	7.0800
36	Civil	Saibal Kumar Ghosh	Vetting of RCC Building at Mouza Karnamadhhabpur	Siddha Real Building LLP	7.0800
37	Civil	Ambarish Ghosh	Reviewing Computation of Geotechnical Projects	UC Consultancy	0.9440

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
38	Civil	Saibal Kumar Ghosh	Health Monitoring of Shalimar Station Building	Panchdeep Constructions Ltd., Howrah	0.2832
39	Civil	Saibal Kumar Ghosh	Vetting of Multistoried Building of Air India	Shamvvi Consultant	1.0620
40	Civil	Aparna (Dey) Ghosh	Advice regarding load bearing capacity of Assembly Hall for further construction	Kalyani Mahavidyalaya	0.5900
41	Civil	Ambarish Ghosh	Soil Investigation for the proposed construction of ten storied academic cum administrative building along with an auditorium in the second campus of Asutosh College at Bhasa, P.O. Bishnupur, South 24 Parganas	Asutosh College, Kolkata	3.4810
42	Civil	Saibal Kumar Ghosh	Vetting of Launching details at Farakka	Royal Infrastructure Ltd., Kolkata	2.1240
43	Civil	Ambarish Ghosh	Independent Assessment of effect of vibration, emanating from installation of Sheet Piles using a vibra-sinker at 42B, Chowringhee Road, Kolkata - 700071	Chowringhee Residency Pvt. Ltd.	1.4160
44	Civil	Ambarish Ghosh	Expert Opinion as regards settlement of Block 7 & 9 of the Parvati Garden, Ward No. 17 at Birati	Parvati Resources Pvt. Ltd.	2.6550
45	Electrical	Jagadish Pal	Vetting of Electrical Part of Electro-Mechanical design & drawings of 5 Government Medical Colleges in the State of West Bengal	West Bengal Medical Services Corporation Ltd., Govt. of West Bengal	24.0000
46	Civil	Ambarish Ghosh & Kalyan Kumar	Study on bank protection adjoining the proposed construction G+III storied Residential Building at	Arun Prakash Gupta	2.9500

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
		Chattopadhyay	56, Amarendra Sarani under Uttarpada - Kourtrung Municipality, Ward No.17, Hooghly		
47	Civil	Ambarish Ghosh & Kalyan Kumar Chattopadhyay	Study on bank protection adjoining the proposed construction G+III storied Residential Building at 75 Amarendra Sarani under Uttarpada - Kourtrung Municipality, Ward No.17, Hooghly	Kalyan Gupta	2.9500
48	Civil	Saibal Kumar Ghosh	Site Inspection of Slip form for Chimney at Rourkela	Bygging India Pvt. Ltd.	1.1800
49	Civil	Ambarish Ghosh	Sub-soil Investigation in connection with "Vertical Extension/Horizontal Extension of Girls' Hostel of Fishery Faculty Campus of WBUAFS at 5, Budderhat Road, Chakgharia, P.O.- Panchasayar, Kolkata	PWD, Govt. of West Bengal	0.6500
50	Civil	Ambarish Ghosh	Soil Investigation for the Proposed Construction of an English Medium School of Sourindra Vidyapith, Behala, Kolkata	PWD, Govt. of West Bengal	1.4500
51	Civil	Ambarish Ghosh	Soil Investigation for the Proposed Construction of Govt. Polytechnic at Behala, Kolkata	PWD, Govt. of West Bengal	3.0500
52	Civil	Subrata Chakraborty	Vetting of Compressor Room at Bangalore	Eastern Metec Pvt. Ltd., Kolkata	0.4720
53	Civil	Aparna (Dey) Ghosh	Technical Advisory Service for Impact Analysis of Away from Reactor Spent Fuel Facility at KKNPP 1 & 2	Development Consultants Private Limited	18.0000
54	Civil	Tapas Kumar Roy	Structural Design Vetting for the work "Construction of structural bridge for carrying 700 mm dia Ductile Iron (k-9) drinking water pipeline	Haldia Development Authority	1.7700

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
			at Ghosemore near Brajalalchak for water supply system project		
55	Civil	Saibal Kumar Ghosh	Vetting of RCC Building at 6, J.L.N. Road, Kolkata	Siddha Real Estate Development Pvt. Ltd.	6.9000
56	Civil	Saibal Kumar Ghosh	Vetting of RCC Building at Rajarhat, 24 Parganas (N)	Ganesh Tracom Pvt Ltd & Others	6.9000
57	Civil	Soumya Bhattachariya	Vetting of Industrial Shed for Tripura Industrial Development Corporation	Calwien Marketing Pvt. Ltd.	0.5750
58	Civil	Saibal Kumar Ghosh	Vetting of Boundary Wall at Rajbandh, Durgapur	Bismi Construction, Kolkata	0.6900
59	Civil	Saibal Kumar Ghosh	Vetting of (G+16) Storied Building of NDITA	KMDA, Kolkata	4.6000
60	Civil	Saibal Kumar Ghosh	Vetting of Bridge at Paschim Medinipur	Paschim Medinipur Zilla Parishad	1.4375
61	Civil	Saibal Kumar Ghosh	Vetting of Slip Form Structure at Rourkela	Basu & Associates	1.1500
62	Civil	Subrata Chakraborty	Rail Wheel Factory, Bangalore	Eastern Metec Pvt. Ltd., Kolkata	1.3800
63	Civil	Saibal Kumar Ghosh	Vetting of G+7 Storied Building at DM Office, Barasat	KMDA	4.6000
64	Civil	Ambarish Ghosh	Vetting of Design and Drawing of RE Wall for the project: Elevated Road between Jinjira Bazar and Batanagar on Budge Budge Trunk Road in Kolkata	Z-Tech (India) Pvt. Ltd. Kolkata - 700029	1.4375
65	Mining	Pratik Dutta & Prabir Kumar Paul	Mine Closure Assessment and Certification of Gare Palma IV/4 and IV/5 Mine	HINDALCO Industries Ltd.	2.99

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
66	Civil	Ambarish Ghosh	Construction of Subway at Shalimar Railway Station	IRCON International Ltd.	0.805
67	Civil	Kalyan Kumar Chattopadhyay & Ambarish Ghosh	Design of Oil and Water Storage Tanks for Oil Terminal Project in UNA HP	Oriental Nicco Projects Pvt. Ltd.	3.45
68	Civil	Kalyan Kumar Chattopadhyay & Ambarish Ghosh	Study on the river bank protection adjoining the proposed construction of Building at Municipal Holding No. 20, Aswani Kumar Dutta Sarani Serampore, Hooghly	R.K. Construction	1.725
69	Civil	Ambarish Ghosh	Proof checking of detail design & drawings of Foot Over Bridge at Crossing of Park Street & Jawaharlal Nehru Road	STUP Consultants Pvt. Ltd.	2.875
70	Civil	Kalyan Kumar Chattopadhyay	Vetting of Pedestrian Underpass on E.M. Bypass	Vardhman Engineering Works, Delhi	4.60
71	Civil	Sudip Kumar Roy & Sandip Chakraborty	Services for the Safety Audit for Preparation of Detailed Project Report for Construction of Traffic Dispersal System along Kona Expressway (NH-1 17)	RITES Ltd.	3.45
72	HRM	Manas Kumar Sanyal	Advisory services as Social and Environmental Expert related to "Consultancy Services for Preparation of Detailed Project Report for Construction of Traffic Dispersal System along Kona Expressway (NH-1 17) for upgraded Santragachi Railway Station and newly constructed Santragachi Bus Terminus	RITES Ltd.	4.025

Table 6.2: Consultancy Work Carried Out during 2017-18

Sl. No.	Department/ School/ Centre	Principal Investigator	Project Title	Funding Agency	Total Amount Sanctioned (Rs. in lakh)
73	Civil	Kalyan Kumar Chattopadhyay	Feasibility study for shifting of toilets of Chamber No. 4 at 1st floor of Main Building, Hon'ble High Court, Calcutta	Public Works Department, Govt. of W.B.	1.2
74	Civil	Kalyan Kumar Chattopadhyay	Vetting of design of Yoke Platform for the construction of Pontton cum Gangway/Jetty at Shibpur Ghat, Howrah	Hooghly River Bridge Commissioners	0.8625
75	Civil	Sudip Kumar Roy	Vetting of Estimates of various projects of Vidyasagar University	Vidyasagar University	1.2888
76	Civil	Ambarish Ghosh	Proof checking of detail design & drawings of substructures, Piers and Abutments of 17 BRIDGES in between Bairabi - Sairang in connection with Bairabi - Sairang new line project in Mizoram	Byucksan India Pvt. Ltd.	17.25
77	Civil	Ambarish Ghosh	Review of the Design and Recommendation by M/S VCC at the four locations of R E Wall of Mogra ROB approaches	Dineshchandra R. Agrawal Infracon Pvt. Ltd., Gujrat	2.875
78	Civil	Kalyan Kumar Chattopadhyay & Ambarish Ghosh	Study on the river bank protection adjoining the proposed construction at Swarn Ganga Reality Ltd. Pujali	Swarn Ganga Reality Ltd.	2.645
79	Civil	Ambarish Ghosh	Review of Structural Design of Drawing	Er. Prosenjit Sen, Empanelled Structural Engineer of KMC	4.07

6.2 CONFERENCE/ SYMPOSIA/ SEMINARS

The Institute organized 15 international and national conference/ workshop/ training programme under 'Research and Consultancy' Cell which involves a budget of Rs. 1.28 crore. Mainly Civil, IT, and Chemistry departments conducted these programmes. The areas involved Devices, Circuits and Systems, Nirman Sahayakas from Gram Panchayets on Rural Engineering Issues, Recent Advances in Chemistry and Industry, Sustainable Advanced Technologies for Environmental Management, Laboratory Personnel Training on Standard Operating Procedures (SOPs) and Good Laboratory Practices (GLPs).

Table 6.3: Conferences/ Workshops/ Training Programmes Conducted in 2017-18

Sl. No.	Department.	Title of the Conference / Workshop / Training Programme	Conference / Training Programme Date
1	Information Technology	International Symposium on "Devices, Circuits and Systems (ISDCS 2018)	29-31 Mar. 2018
2	Civil Engineering	National Workshop on "Recent Trends in Geomatics	02-03, Feb. 2018
3	Civil Engineering	Training of "Nirman Sahayakas from Gram Panchayets on Rural Engineering Issues"	04 Sept - 22 Dec 2017
4	Chemistry	National Symposium on "Recent Advances in Chemistry and Industry"	02-03 Aug. 2017
5	Civil Engineering	National Conference on "Sustainable Advanced Technologies for Environmental Management (SATEM-2017)	28-30 Jun. 2017

6.3 SPONSORED RESEARCH PROJECTS

Institute received 33 nos. of new sponsored research projects with a sanctioned amount of Rs.7.38 crore. Almost all the Departments, Schools and Centres received such sponsored projects. Significant funding came from organisations/ agencies like the Department of Science and Technology, Government of India; The Royal Society UK; Tata Steel. Ltd.; Murata Business Engineering (India); UNICEF, IC-IMPACTS, Canada; The Institution of Engineers (India); the Council of Scientific and Industrial Research; the Central Council for Research in Homeopathy (CCRH), Ministry of Ayush, Govt. of India; Bharat Heavy Electricals Limited (BHEL); Electrosteel Castings Ltd. (ECL); Global Innovation and Technology Alliance (GITA); Dept. of Biotechnology, Indian Council of Medical Research, Dept. of Health Research. Thrust areas of sponsored research included (i) High Energy Density Rare Earth Free Permanent Magnet, (ii) Motor Drives for Semi-electric/ manual Assist Bicycle, (iii) Pollution Control of the River Ganges, (iv) Clean Energy, (v) New Peptide based Synthetic Self-replicating System, (vi) Fundamental Research in Homeopathy, (vii) Flexible Super Capacitors, (viii) Extreme Point of Care Diagnostics on a CD etc.

6.4 INDUSTRIAL CONSULTANCY/TESTING

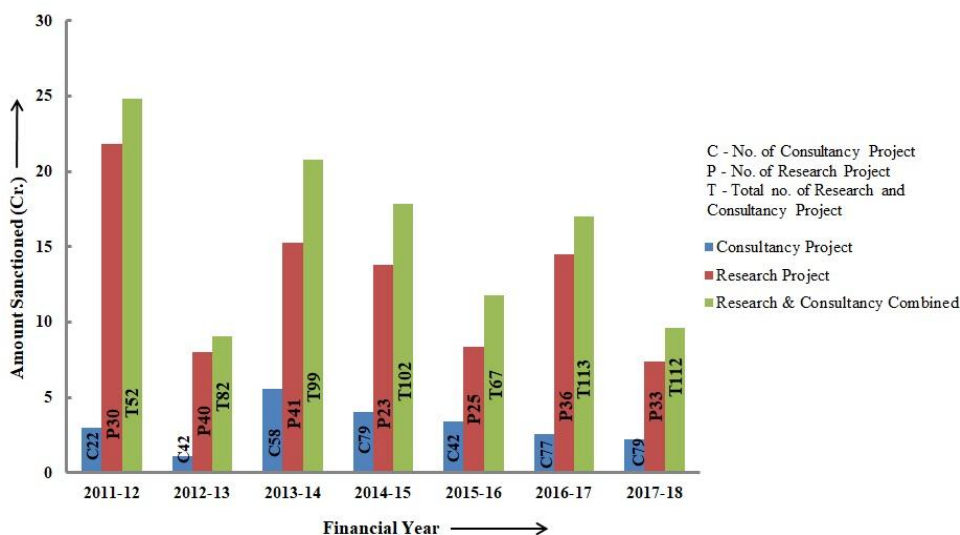
From April 2017 to March 2018, Institute carried out about 79 consultancy work at a sanctioned amount of Rs. 2.25 crore in different engineering departments namely, Civil, Mining, Architecture, Mechanical, Green Energy, Electrical and HRM Department. Some of

the sponsorer of these consultancy work includes Bengal Shipyard Limited, Kolkata, West Bengal Medical Services Corporation Ltd., Govt. of West Bengal, Development Consultants Private Limited, Byucksan India Pvt. Ltd., Kolkata Port Trust, Mackintosh Burn Limited, National Museum of Denmark (NMD), Eastern Coalfields Limited, Haldia Development Authority, KMDA, Kolkata, HINDALCO, RITES Ltd.

6.4.1 Testing work

From April 2017 to March 2018, the Institute carried out 44 testing jobs received from 20 different organisations. An overwhelming majority of the testing work was carried out by the Civil Engineering Department alone. Testing assignments were received from the following organisations.

- 1 M/s. Bengal Construction Co.
- 2 M/s. Calcutta Cement Pvt. Ltd.
- 3 M/s. Chamurchi Agro (India) Ltd.
- 4 M/s. Clifford Facility Services Pvt. Ltd.
- 5 M/s. Daga Power Systems & Engineers Pvt. Ltd.
- 6 M/s. Dimensions
- 7 M/s. Eden Real Estates Pvt. Ltd.
- 8 M/s. Larsen & Toubro Ltd.
- 9 M/s. Laxmie Enterprise
- 10 M/s. M.R.Construction
- 11 M/s. Nirman Engineers Co-operative Society Ltd.
- 12 M/s. Oriental Construction
- 13 M/s. Panchdeep Constructions Ltd.
- 14 M/s. S.G. Environmental Projects Pvt. Lts.
- 15 M/s. Shreya Construction
- 16 M/s. Snowtex Tradelink Pvt. Ltd.
- 17 M/s. World Electric House
- 18 Mr. Subhendu Chakraborty
- 19 M/s. Success Enterprise
- 20 M/s. Subhas Trading Co.



The Bar chart shows the total fund sanctioned in the FY 2011-12 to FY 2017-18 in Research and Consultancy related projects.

6.5 ACADEMIC AND RESEARCH COLLABORATION

Over the last few years, in tune with the Institute policy of strengthening national and international collaboration, the Institute has signed quite a number of MOUs with various academic/ research/ government organisations and Industry houses. In 2017-18, the Institute signed instruments of understanding with a few more organisation. Details of MOU signed are furnished in Table 6.4.

Table 6.4: MOU Signed with various academic/ research/ government/ organisations and Industry houses

Sl. No.	Organisation	Particulars
1	Aark Digital Pvt Ltd	Intellectual Property Rights Including Technical Information and Yearly Payment for the Support and Services Purpose for Development of Solar Systems
2	National Institute of Technology, Durgapur	Joint Supervision of PhD Research and Post Graduate Dissertations, Faculty Exchange in Areas of Mutual Interest, Exchange of Scientific and Technical Informaiton, Joint Organisation of Seminars, Workshops, Conferences and Training Programmes etc.
3	BHEL (MoA)	Research Programmes Promoting Execution Industrial Research, Innovation etc through BHEL, Funding by Supporting Research Programs/ Fellowship
4	BHEL (MoA)	Enhancement of Efficiency of Solar Cells
5	IPA	Visit and Exchange, Student Exchange Programme, Joint Academic and Research Programmes, Establishment of Chair Professor Curriculum Development, Faculty Development Programs, Laboratory Development, Placements and Internships, Intellectual Property Laws
6	SIMTARS, Queensland, Australia	Promoting Academic Exchanges, Research, Joint Research Projects and Training. Collaboration on Joint Research. Visits Between Institueions by Faculty, Students and Research Staff, Sharing of Research Materials, Collaborative Research Projects and Publications, Joint Organisation of Conferences, Seminars or other

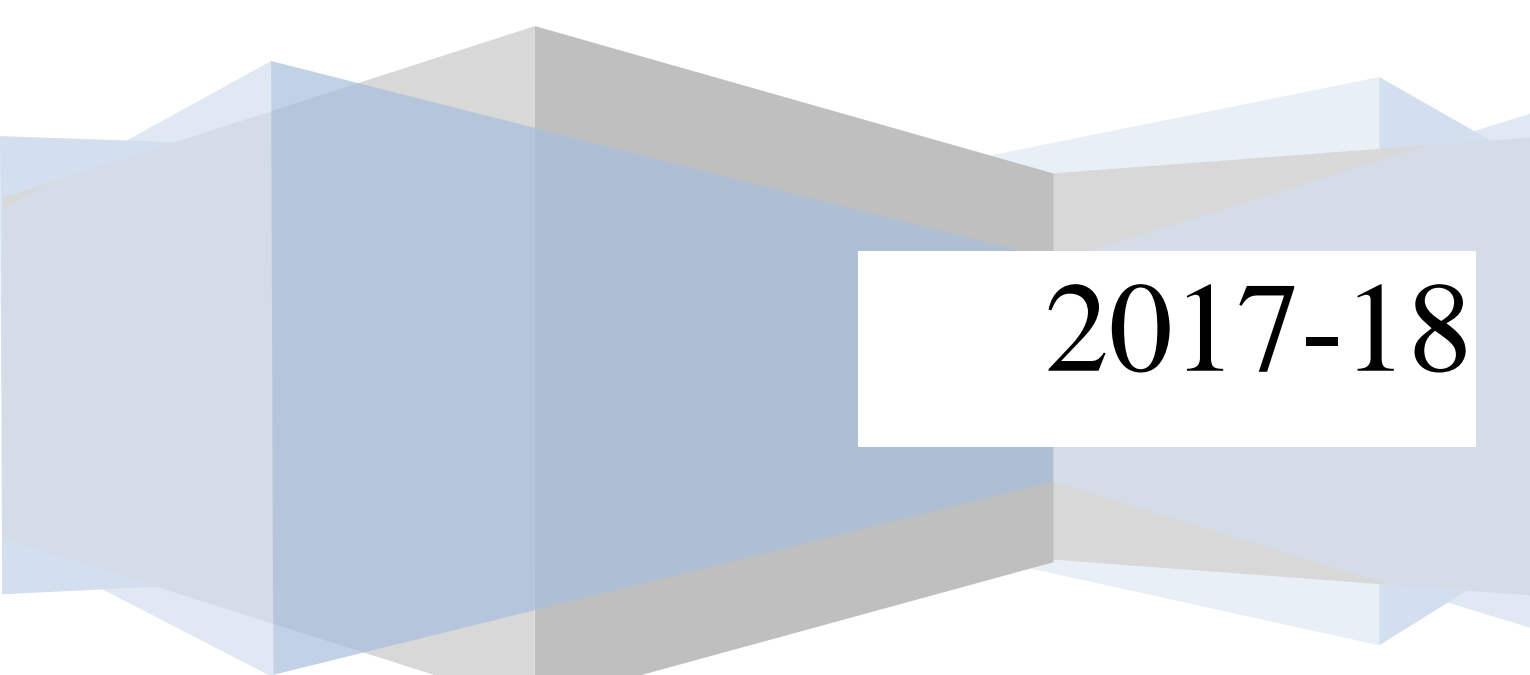
§6. Sponsored Research and Industrial Consultancy

Sl. No.	Organisation	Particulars
		Academic Meetings and Training Opportunities.
7	Indian Bureau of Mines	Undertaking Joint Academic and Research Programmes, Curriculum Development.
8	AMER-Sil Ketex Pvt Ltd	Collaborative Research Work
9	Sanjiban Hospital	To Provide Necessary Research, Educational Facilities like Classrooms, Laboratories etc. To Gain Knowledge of First Hand Clinical Problems, Other Logistics, Data Support for Projects
10	CE Testing Company Pvt. Ltd & IIT Kharagpur AIMIL Ltd	To Constitute a Consortium for the Purpose of Jointly Participating In the Bidding Process for Projects
11	TATA Steel	Collaborative R&D
12	ERIS India Technologies	Collaboration on Education Programs, Curriculum Designing and Development, Faculty Development Skills, Training
13	ERIS India Technologies	To Setup ESRI India Centre of Geospatial Excellence (COGE) for all Aspects of GIS Related Infrastructure, Faculty and Student Training and Laboratory Needs. To Pursue Certificate Course In Geoinformatics In Association With Esri India
14	Murata Business Engineering (India) Pvt Ltd	Carrying Out Research Projects
15	TATA Motors Ltd	Collaborative Research
16	IIT (ISM), Dhanbad	Extending Cooperation for Research Students, and Staffs. Faculty Exchange, Cooperative Research Projects and Sharing of Laboratory Facilities.

IEST Shibpur

§ 7 Students' Activities

Students Welfare, Amenities and Activities



2017-18

7 STUDENTS AMENITIES AND ACTIVITIES

7.1 GENERAL

On the recommendation of the Review Committee (1953), a proctorial department was established at the erstwhile Bengal Engineering College, Shibpur in the year 1956. The principal objective of the department was to look after their discipline, welfare, and extra-curricular activities of students. With the conversion of this Institute to a CFTI the Institute switched over to a Dean based mode of functioning and, as such, since 2014, it functions under the direct supervision of the Dean (Student Welfare). In order to create an environment conducive to fostering growth of academic and cultural life in the Institute and to develop sound mental health of students the Institute considers it important to engage them students creatively in various activities to hone their soft skills. Such activities include, *inter-alia*, activities in the domain of sports, culture, soft skill, and hobbies. Various students societies like Societies for Artistic Expression, Music and Dance, Debate and Quiz, Drama and Literature, Modelling and Robotics have been formed with befitting names. These societies function under the overall guidance of the Dean - Student Welfare.

7.2 PROCTORIAL BOARD:

A Proctorial Board has been constituted at the Institute to monitor and oversee the discipline related matters and to advise the Director on corrective and other necessary measures. For imposing disciplinary measures the Board is guided by the 'Manual on Student discipline' framed by the Institute Senate.

7.3 STUDENTS' HOSTELS

There are 18 Hostels/ Halls of Residence for students. Three women's hostels cater exclusively to girl students and research scholars. Day to day management of each of the halls/ hostels is looked after by a Warden/ Superintendent appointed from amongst the members of the faculty/ officer. At every hostel, a mess committee constituted from amongst the borders oversee the messing arrangements. At the Institute level, a Joint Mess Committee (JMC), comprising representatives from every mess committee, ensures co-ordination and takes policy decisions. While the overall hostel administration is looked after by the Chief Warden, responsibility for dispute resolution is vested with the Dean (Student Welfare).

7.4 SPORTS AND GAMES

The Athletic Club is the hub of the activities involving sports, games and physical exercises. Athletic Club plays a key role in the everyday lives of students cultivating and nurturing their talents in the sports and games arena. The students under the auspices of the Institute's athletic club participated in a variety of physical activities during their time beyond academic hours.

The Campus has two play grounds, - The 'Lords' in the east and the 'Oval' towards the west. These play grounds provide opportunities to the students for practicing sport like cricket, football, etc. A newly constructed Basketball Ground is a new attraction. A swimming pool opens to the students and campus-inmates for nine months of the year. The gymnasium of the Institute has undergone significant modernisation in the recent past.

Sport facilities available at the Institute include Volleyball Ground, Badminton Court (Concrete), Basketball (hard court) and a well equipped gymnasium. A Students' Amenity Centre and a Yogic practice arena has recently been added to the facilities. Activities relating to Sports and Games are overseen by the Institute Sports Board.

7.4.1 Sports Training

The first-degree curricula of the Institute require the students to opt for one of the many programmes offered under the aegis of the sports board. Apart from two regular physical instructors, a few part timers are associated in the physical training and sport related training/ coaching of the students. Stress is put on scientific training procedure for development of sports performances in different sporting events.

7.4.2 National Service Scheme (NSS)

The Institute's NSS programme is oriented towards developing socially sensitised personality in the students. NSS cadres offer complimentary assistance in academic pursuits of local destitute children in the form of free tuition. NSS units also raise and distribute books and related learning materials. Exercise books, copies, pen, pencil, erasers are distributed on "No charge basis". During the year under review, the NSS unit organized a garment distribution programme and also organized a Voluntary Blood Donation camp in the University campus.

7.4.3 National Cadet Corps (NCC)

The NCC unit at the Institute is affiliated to the Senior Division of 49 Bengal Battalion NCC. The Unit aims to serve the nation through appropriate activities. It also prepares the students for NCC certification examination In 2017-18, about forty (40) cadets has taken part in the Institute's NCC activities.

7.4.4 Games and Sports Activities organised in 2017-18.

7.4.4.1 Institutional Competitions

Sl No.	Event	Date	
		From	to
1.	Inter Department Knock-out Football Tournament for 1st Semester BTech/ BArch Boys	21.08.2017	25.08.2017
2.	Inter Year Cricket Tournament for Boys	01.09.2017	14.01.2018
3.	Inter Hostel Table Tennis Tournament for Boys	01.04.2017	05.04.2017
3.	Inter Hostel Table Tennis Tournament for Girls	01.04.2017	05.04.2017
4.	Inter Year Football Tournament for Boys	21.02.2018	23.03.2018
5.	Inter Department Football Tournament for Boys	01.09.2017	12.09.2017
6.	Inter Hostel Volleyball Tournament for Boys	08.02.2018	30.03.2018
7.	Inter year Basketball Tournament for Boys	21.02.2018	23.02.2018
8.	Inter year Basketball Tournament for Girls	21.02.2018	23.02.2018
9.	Inter year Badminton Tournament for Girls	02.01.2018	07.01.2018
10.	Inter Hostel Football Tournament for Boys	28.03.2017	07.04.2017

Sl No.	Event	Date	
		From	to
11.	Annual Athletic Meet	22.03.2018	26.03.2018
12.	Invitational Football Tournament (2017-18)	24.03.2018	26.03.2018

7.4.4.2 Off-Campus Competitions

Sl No.	Event	Organiser	Date	
			From	to
1.	East Zone Inter University Cricket Tournament for Boys	KIIT, Bhubaneswar	21.12.2017	03.01.2018

7.5 STUDENTS SENATE

In order to create an environment conducive for fostering growth of academic and cultural life in the Institute and to develop sound mental health of the students by engaging themselves creatively within the Institute campus, an idea of constituting a Students' body named Students' Senate was conceived. The principal objective for forming the Students' Senate has been to empower the students so that they can express themselves and act creatively in diverse areas of academics, culture, sports and games with a sense of fraternity.

With all bonafide students as its members, the General Council of the Students' Senate is elected by its members. The General Council comprises Secretaries, Treasurers from various Students' Academic Societies, Students' Societies of Creative Expressions and Captains of Students' Clubs of Games and Sports.

The executive committee of the Senate is constituted mostly from amongst the members of the general council through a process of election. The Director nominates the President and the Vice-President of the executive committee from amongst the members of the faculty.

7.5.1 Students' Societies

Various students' societies are active; the societies provide platforms to students to pursue extra-curricular activities and hobbies. The Students' Societies active in 2017-18 included:

- | | |
|----------------------|--|
| 1) Camera Buff | The Cine Club, |
| 2) Catharsis | The Photographic Society, |
| 3) Code IEST | The Coding Club, |
| 4) Debsoc | The Debating Society, |
| 5) Euphony | The Music Club, |
| 6) Les Thespiens | The Drama Club, and |
| 7) Lit SOC | The Literary Society, |
| 8) Quiz Maniac Being | The Quiz club, |
| 9) Reflex-o Beta | The Dance Club, |
| 10) Robodarshan | The Robotic Society, |
| 11) SCAGE | The Society for Creative Arts and Green Environment. |

At the 'Students' Centre for Creative Expression', the students practice dramatics, music, photography, quiz and debates, etc. Students interested in scientific modelling and Robotics find ample scope to develop innovative models, including robots. The students Robotics club

has developed a number of different types of Robots, including Robots with vision. A coding club nurtures the students to hone their software development acumen. *Instruo*, the intercollegiate techno-management festival and the REBECA, the Annual Students' Social are the intercollegiate events that cause reverberations in the campus through hundreds of feet-fall. The eightieth edition of REBECA was organised in April 2017.



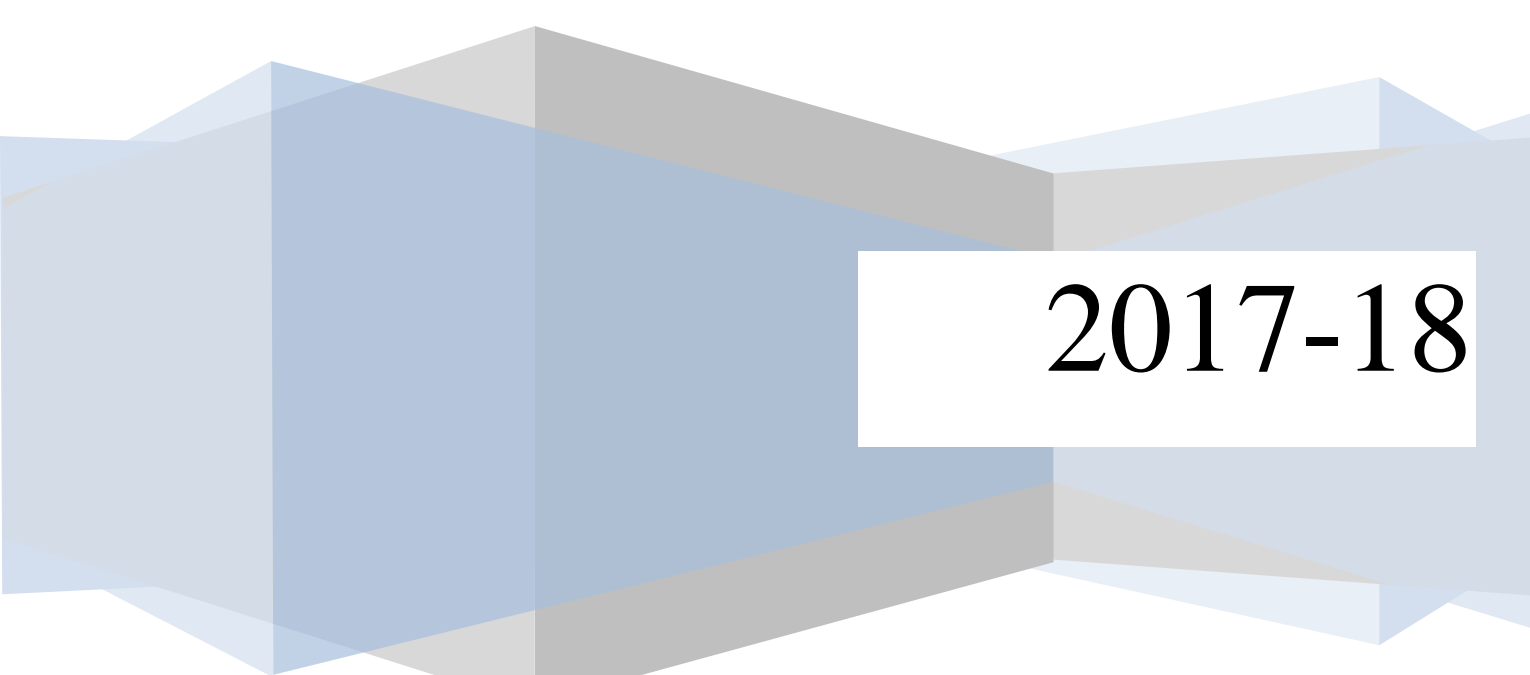






IEST Shibpur

§ 8. Training and Placement



2017-18

8 TRAINING AND PLACEMENT

Training and placement of students are looked after by the Human Resource Management (HRM) Department. Mandate of the Department includes, *inter alia*, the following.

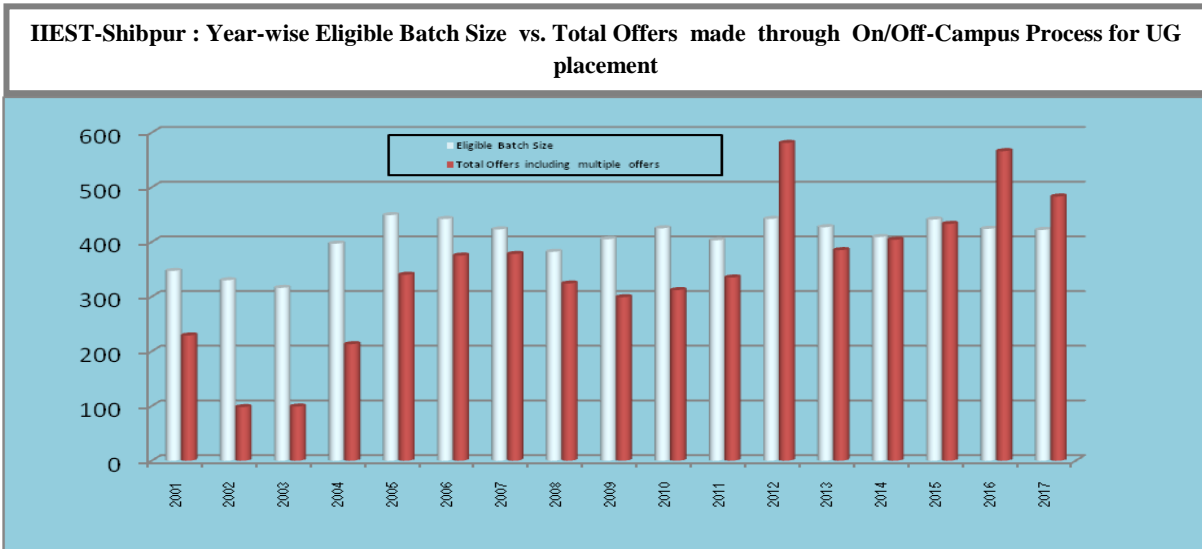
- Job Placements of students of the Institute through Campus and Off-campus selection processes.
- Internship / Summer Training of students at various industries and research institutes.
- Grooming up (Personality/Soft-Skill/ Performance Effectiveness) Programme for the Students.
- Facilitation for other options: Preparatory programme for competitive examinations and other educational options abroad.
- Industry Interaction Programme/ Academic collaborations.
- Entrepreneurship Development.
- Innovation and IPR awareness and facilitation.
- Research and Consultancy.
- Offering PhD Programme.
- Career Counselling.

This predominantly is a service department catering to all UG, PG and PhD students in terms of their placement and training.

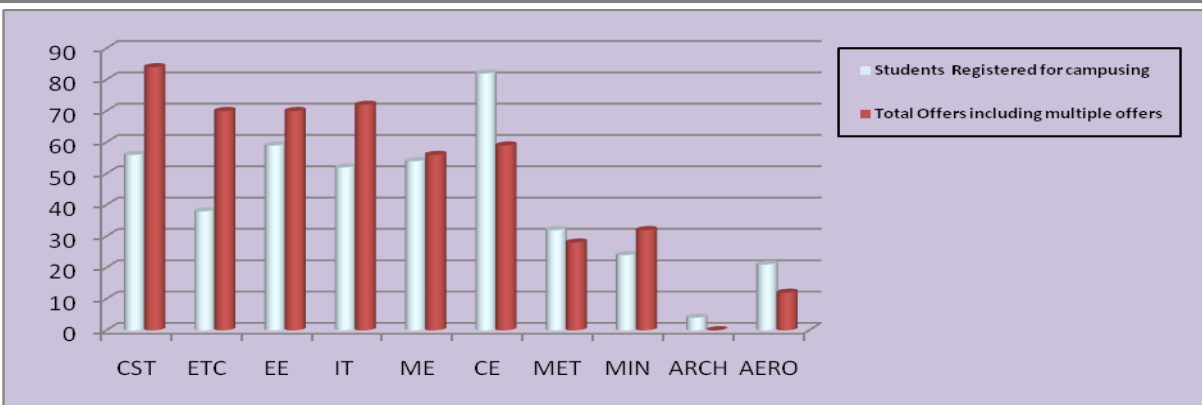
8.1 ON CAMPUS RECRUITMENT

- One month Placement Preparatory Program for students of IEST, funded by TEQIP-II.
- Entrepreneurship orientation for 2016 new entrants.
- Seminar- cum workshop on Innovation & IP Creation: imperatives of Professional Education, sponsored by NRDC
- Interactive session with Dr. P.B.S. Bhadoria of IIT-KGP on National Initiative for Design and Innovation (NID) for rural development
- National Entrepreneurship Development Programme on Micro –Solar Dome
- Students Interaction with representative NEN on app-based entrepreneurship learning module
- Reach the students' programme designed for incubate company Maybright
- Research Scholar of HRM dept. awarded with “Outstanding Paper Award” in Intellectual Property Rights in 24th West Bengal State Science & Technology Congress 2017
- Seminar on Technopreneurship – An Emerging Career Option By Dr. Partho Ghosh
- TCS- Student Felicitation (Best Student Award)
- Interaction Programme with various industries.

8.1.1 Placement Statistics for 2018 passout batch of IEST, Shibpur

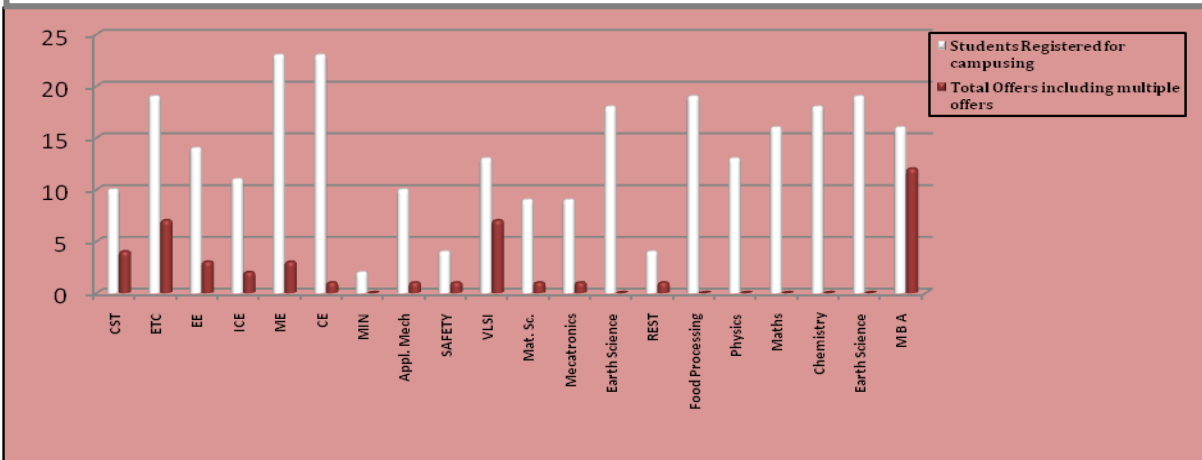


IEST-Shibpur : Eligible Batch Size vs. Total Offers made through On/Off-Campus Process for UG placement - 2017 pass-out batch



*Students with backlog might not have been considered as eligible for Campus Selection by the recruiters.

IEST-Shibpur : Year-wise Eligible Batch Size vs. Total Offers made through On/Off-Campus Process for PG placement – 2017 pass-out batch



8.1.2 Recruiters over recent years

COMPANIES VISITING IESTS DURING RECENT YEARS FOR ON / OFF-CAMPUS RECRUITMENT PROCESS									
S.No	Name of the visiting Company	2010	2011	2012	2013	2014	2015	2016	2017
1	A.M.W.								
2	Aakash Institute								
3	ABB Ltd.								
4	Accelaries Business Solutions P.Ltd.								
5	Accenture India								
6	Adhunik Power								
7	ADP India.								
8	Adobe								
9	Afcons Infrastructure Ltd.								
10	Alfatek Systems								
11	Aircon								
12	Airovent								
13	Alstom Ltd.								
14	Alstom Projects								
15	Amazon India								
16	Anshin Software								
17	Ashiana								
18	Atos								
19	Avanseus Technologies								
20	Axis Bank								
21	Babtech Consultants								
22	Balmer Lawrie								
23	Bandhan Bank								
24	Bengal Emta								
25	BHEL								
26	Blue Star								
27	BOC India								
28	Bridge&Roof Co.Ltd.								
29	Britania Industries								
30	Broad Ridge								
31	C.E.Testing								
32	Cadence								
33	Capgemini								
34	CapitalVia								
35	CES								
36	CESC								
37	Coal India Ltd.								
38	Coffee-day Beverages								
39	Cosmic Circuits								
40	CTS								
41	Cybage								
42	Cuprum Bagrodia								
43	Cummins								
44	CVRCE								
45	Daikin								
46	DCPL								
47	Deloittee								

COMPANIES VISITING IESTS DURING RECENT YEARS FOR ON / OFF-CAMPUS RECRUITMENT PROCESS									
S.No	Name of the visiting Company	2010	2011	2012	2013	2014	2015	2016	2017
48	DemagCranes&Comp.								
49	Direct-I								
50	Dolsera								
51	D X Corr								
52	DVC								
53	Digital Dynamic								
54	Egis India								
55	Electro Steel Castings								
56	Elegant Marine Services								
57	E-Tutor Home								
58	Energy Inratech								
59	Ericsson India								
60	Essab India								
61	Essar								
62	Essel Mining								
63	EXL Infotel								
64	EXL Service								
65	Fi-Tek								
66	Flur Daniel								
67	Foster Wheeler								
68	Foster Wheeler Bengal								
69	Future Generali Insurance								
70	Gontermann-Peipers								
71	Google								
72	GRSE								
73	G. E. Digital								
74	Haldia Petrochemicals								
75	Hiland Group								
76	Himadri Chemicals								
77	Hindalco								
78	Hindalco,Mumbai								
79	Hindustan Motors.								
80	Hindusthan National Glass								
81	HSBC								
82	Hyundai Motors								
83	IBM								
84	IES Academy								
85	Indian Army								
86	Indian Navy								
87	Infinity Infotech Parks								
88	Infosys Technologies								
89	Inoplexus								
90	Infoway								
91	I F B Agro Ltd.								
92	Interra Software								
93	Interview Street								
94	India Power Corpn. Ltd								
95	Indian Oil Corporation								

COMPANIES VISITING IESTS DURING RECENT YEARS FOR ON / OFF-CAMPUS RECRUITMENT PROCESS									
S.No	Name of the visiting Company	2010	2011	2012	2013	2014	2015	2016	2017
96	ITC Infotech.								
97	ITC Ltd.								
98	ITD Cementation								
99	Jaibalaji Group								
100	Jacobs								
101	JCAPCPL								
102	Jindal Steel Works								
103	Joy Mining Services								
104	JSL Stainless								
105	JUSCO (Tata Steel)								
106	KaramChandThapar								
107	KEC International								
108	Keross FZ-LLC								
109	Kharagpur Metal								
110	KONE								
111	Kovair Software								
112	L & T - ECC								
113	L & T Ltd.								
114	L&T Rambol								
115	Lafarge India								
116	Lahmeyer International								
117	Landis+Gyr.								
118	Lexmark International								
119	Linde Group								
120	Lister Technologies								
121	Lloyds & Steel								
122	M Junction								
123	M.N.Dastur								
124	Mahindra & Mahindra								
125	Mahishwari Mining								
126	Mani Group								
127	Maruti Udyog Ltd.								
128	Mather&Platt								
129	McNally Bharat								
130	Mecon Ltd.								
131	Meditab Software								
132	Micro-Soft								
133	Ministry of Power,Bhutan								
134	Mallak Group								
135	Mott. MacDonald								
136	Murugappa Group								
137	Mu-Sigma								
138	Neo-Metaliks								
139	Net Guru								
140	Nomura Fintech								
141	Ocenearing Engineering								
142	Odessa Technologies								
143	Orient Fans								

COMPANIES VISITING IESTS DURING RECENT YEARS FOR ON / OFF-CAMPUS RECRUITMENT PROCESS									
S.No	Name of the visiting Company	2010	2011	2012	2013	2014	2015	2016	2017
144	Otis Elevator								
145	Paharpur Cooling Tower								
146	Patton India								
147	Peri India								
148	Pinnacle Infotech Ltd.								
149	PIPL								
150	Polstar								
151	Pipavav								
152	Primetals Technologies								
153	Punj Lloyd								
154	PWC								
155	Reve Systems								
156	RILReliance India Ltd.								
157	Rice Group								
158	Rites Ltd.								
159	RS Software								
160	S.K. Samanta & Co.								
161	Samsung								
162	Samsung Electronics								
163	Samsung Engg.								
164	Sanmar Group								
165	Sankalp Semiconductor								
166	Sapient								
167	Schenek Process								
168	Scope								
169	Shapoorji & Pallonji								
170	Siemens								
171	Signotron								
172	Simplex Infra								
173	Singens								
174	Silab Tech								
175	Smart Prix								
176	SML ISUZU Ltd								
177	Snap Deal								
178	S & W								
179	Sova Ispat								
180	SP Algorithm								
181	Star Coolers								
182	Starlite Group								
183	State Bank of India								
184	Stup Consultant								
185	Tata Capital								
186	Tata Chemicals								
187	Tata Hitachi								
188	Tata Power								
189	Tata Steel								
190	Tata Tinplate								
191	Tavant Technologies								

COMPANIES VISITING IESTS DURING RECENT YEARS FOR ON / OFF-CAMPUS RECRUITMENT PROCESS									
S.No	Name of the visiting Company	2010	2011	2012	2013	2014	2015	2016	2017
192	Tata Consulting Engineers								
193	Tata Metalics								
194	Tata Blue Scope								
195	Tata Consultancy Services								
196	Tech Mahindra								
197	Techno Electric								
198	Tega Industries								
199	Telcon								
200	Texas Instrument								
201	TIL Ltd								
202	Titagarh Wagons Ltd								
203	Trishul Consultancy								
204	Uttam Galva								
205	Universal								
206	Vawsum								
206	Vedanta								
207	Vikram Solar								
208	Vikrant Forge								
209	Viraj Projects								
210	Visa Power								
211	Visa Steel								
212	Voith Paper								
213	Voith Hydro								
214	Voltas Ltd.								
215	W.Hunger Hydraulics								
216	WABAG								
217	Wacker								
218	WBDCL								
219	WSEDCL								
220	Wedoria								
221	Wipro								
222	WPIL Ltd.								
223	Z S Associates								
224	Zycus								

Besides, Final Placements, many students, pre-dominantly from Pre-final Year also had the opportunity for Vocational Training or Summer Internship Programme in reputed industrial / academic institutions - some of them also leading to Pre-Placement Offers.

List of Organisations for Vacational Industrial Training							
Sl. No.	Name of the Organisation	2016	2017	Sl. No.	Name of the Organisation	2016	2017
1	ABB india			40	Digital Dynamic Technology		
2	ABS Plaza , Hooghly			41	DRDO ,Chandipur		
3	Accenture			42	DRDO, Kanpur		
4	Adani Power Ltd.			43	Durgapur Steel Plant		
5	ADE ,Bangalore			44	Durgapur Steel power station, Burdwan		

§8. Training and Placement

List of Organisations for Vacational Industrial Training							
Sl. No.	Name of the Organisation	20 16	20 17	Sl. No.	Name of the Organisation	20 16	20 17
6	Airport Authority of India			45	Durgapur Steel Thermal Power Station		
7	Amazon			46	Earnst & Young LLP		
8	Amec Foster Wheeler			47	East central Railways; Hajipur		
9	Archtecht Consultants			48	Eastern Coalfield		
10	Bharat Heavy Electrical Ltd.			49	Eastern Region Load Despatch Centre		
11	BHEL Kolkata			50	Ericsson		
12	Bihar Rajya Pul Nirman Nigam Ltd.			51	ERLDC Kolkata		
13	Bihar State Road Development Corporation Ltd.			52	Farakka Super Thermal		
14	Bitchem			53	Garden Reach Shipbuilders & Engineers Ltd.		
15	Bokaro Steel Plant , Jharkhand			54	GERMI		
16	Bokaro Thermal Power Station			55	Globsyn Skill Development Ltd.		
17	Bridge & Roof Co. India Ltd.			56	Glocal Healthcare Systems (p) Ltd.		
18	BSNL Kalyani.			57	Goldman Sachs		
19	BSNL,Jharkhand			58	Haldia Development Authority		
20	C E S C Ltd.			59	Haldia Energy Ltd.		
21	C H R D			60	Haldia petrochemicals Ltd.		
22	Capacloud Training Solution (p) Ltd.			61	Hanon Climate System India Pvt.Ltd.		
23	Central Public Works Departments , kolkata			62	Hewlett Packard		
24	CHART,Durgapur			63	Hindustan Unilever		
25	Chittaranjan Locomotive Works			64	Holtec Consulting Pvt.Ltd.		
26	Coal India Ltd.			65	Hyundai		
27	Constell Consultants Pvt.Ltd.			66	I I S C O		
28	Cygnat Industries Ltd.			67	I X I A		
29	Damodar Valley Corporation			68	Iisc,Bangalore		
30	Deltron Equipment &systems Pvt. Ltd.			69	IISER Kolkata		
31	Development Consultants Pvt. Ltd.			70	IIT , Ropar		
32	IIT ,BHU			71	OTIS Elevator co.Ltd.		
33	IIT ,Delhi			72	P W C		
34	IIT,Kharagpur			73	Panchayat and Rural Development Govt. of w.b.		
35	IIT,Madras			74	Patratu Thermal Power Station		
36	Internshala			75	Power System Opration Corporation Ltd.		
37	IOCL , Barauni			76	Public Works Department		
38	IOCL , kolkata			77	PWD,Asansol		
39	IOCL, Kolkata			78	Rail Bhava , Delhi		
79	Irrigation & Waterways Govt. of W.B.			103	Rail Wheel Plant , Bel Bihar		
80	ITC , Munger			104	Railway Workshop , Liluah		
81	ITC Ltd.			105	Rajabazar Science College		

List of Organisations for Vocational Industrial Training							
Sl. No.	Name of the Organisation	2016	2017	Sl. No.	Name of the Organisation	2016	2017
82	ITD Cementation			106	Rastriya Ispat Nigam Ltd.		
83	JSW			107	RDCIS ,Jharkhand		
84	Kedia Pipes			108	S.E.Railway , Kharagpur		
85	Larsen & Tubro			109	SAIL, Rourkela		
86	M.N. Dastur &co.Ltd. Pvt.			110	Shapoorji Palonji&co.pvt. Ltd.		
87	M.N.Dastur			111	Simplex Infrastructures Ltd.		
88	Mackintosh Burn Ltd.			112	Skybits Technologies Pvt.Ltd.		
89	McNally Bharat Engg.co.Ltd.			113	South Eastern Railways, Kharagpur		
90	Megatherm Group			114	State Bank of India		
91	Metal & Steel Factory			115	STUP Consultants		
92	Metro Rail Bhawan			116	T I L Ltd.		
93	Metro Railway Kolkata			117	Tata Hitachi		
94	Microsoft			118	Tata Power Company Ltd.		
95	Morgan Stanley			119	Tata Steel		
96	Natural Thermal Power Corporation			120	Telecom Regulatory of India		
97	NetApp			121	Texas Instruments		
98	NHPC Darjeelig			122	The Bengal Park Chambers Hosing Development Ltd.		
99	NIT, Rourkela			123	TISCO , Jamshedpur		
100	North Bengal Construction Division,siliguri			124	Uttar Pradesh Rajkiya Nigam Ltd.		
101	NTPC			125	Variable Energy Cyclotron Centre		
102	OTIS Elevator co.Ltd.			126	West Bengal Power Development Co. Ltd.		
	P W C			127	West Bengal State Electricity Distribution Co. Ltd.		

8.1.3 Department wise Training and Placement

8.1.3.1 Computer Science and Technology

- Students registered for campus interview: 56
- Students with at least one offer: 48

8.1.3.2 Earth Sciences

- One student (Arijit Bera) got placed as Assistant Geologist in NALCO, India.
- One student (Debasish Kuri) got placed as Trainee Geologist in Fugro Geotech, M.P.
- One student (Mayukh Dey) got placed as Trainee Geologist in CE Testing.
- Two students (George Biswas and Siperna Nayak) have joined Ph.D programme in National Geophysical Research Institute (NGRI), Hyderabad and in the Department of Earth Sciences, IEST-S.
- One student (Rupsha Chakrabarty) has joined as GIS Analyst in Infinium Solutionz Pvt. Ltd., (Adani Group) Ahmedabad

8.1.3.3 Humanities and Social Sciences

- Partha Sarathy Roy: Received training from TCGIBI, IESTS, Howrah

8.1.3.4 Electrical Engineering

Sl. No.	Where training/ Placement Undertaken	On campus/ Off campus	Went for Higher study
1	IBM GBS	On campus	University of California, San Diego
2	Accenture	On campus	Robotics Institute, Carnegie Mellon University
3	Vikram Solar Pvt. limited	On campus	IIT, Kharagpur
4	CESC limited	On campus	
5	HSBC	On campus	
6	Vedanta Resources LTD	On campus	
7	Mu Sigma	On campus	
8	Vedanta Resources	On campus	
9	PWC India	On campus	
10	Tata Steel Ltd.	On campus	
11	TECHNO ELECTRIC	On campus	
12	Otis Elevators India Limited	On campus	
13	PricewaterhouseCoopers	On campus	
14	IBM India Private Limited	On campus	
15	Cognizant Accenture Infosys	On campus	
16	BSNL	Off campus	

8.1.3.5 Information Technology

Sl. No.	Date of Visit	Company Visited	Student Intake	
			UG	PG
1		Microsoft	1	
2	17-Aug-16	ZS Associates	2	
3	30-Aug-16	PWC	5	
4	01-Sep-16	Dynamic Digital	1	
5	7-Sep-16	Microsoft	3	
6	8-Sep-16	Nomura Fintech	4	
7	9-Sep-16	Avanseus Technologies	2	
8	17-Sep-16	MU Sigma	1	
9	20-Sep-16	Accenture	11	
10	22-Sep-16	CTS	14	
11	23-Sep-16	Wipro	9	
12	27-Sep-16	IBM	7	1
13	4-Oct-16	Infosys	6	
14	5-Dec-16	DX Corr	2	
15	21-Dec-16	E-Tutorhome	1	
16	18-Jan-17	Reve System	1	
17	30-Jan-17	M junction	2	

8.1.3.6 Mechanical Engineering

- The Department arranged summer internship and vocational/industrial training to the 4th and 6th semester undergraduate students in leading core industries and power plants. As on date, about 53 students were placed through campus interviews in

various leading organizations. Some students also opted for higher studies like M. Tech. and MBA in leading institutions through qualifying examinations like GATE and CAT respectively.

8.1.3.7 Metallurgy and Materials Engineering

- Adequate no. of students after 6th semester took training in different Integrated Steel Plants, private industries, CSIR Laboratories etc. More than 70% students of 8th semester got placement and the rest opted for higher studies.

8.1.3.8 School of Community Science and Technology

8.1.3.8.1 Training Scenario 2016-17

Module name	No.of Trainees	Traning Duration (Hrs)
Repair & Maintenance of Air Conditioner	38	600
Repair & Maintenance of Domestic Electronic Appliances	19	620
Plumbing	20	600
Electrician – Industrial	39	800
Welding Technology	60	800
Total	176	3420

Placement assistance of Trainees are provided after completion of the training programme into few companies like Weather Makers Pvt Ltd (A.C), Bharati Shipyard Ltd (Welding), Crystal restoration, Voltus Ltd, Blue Star Ltd, L.G Company, Unique Service center, Robotics, Patel Engineering Works, Hi-techno power consultants Ltd. and various Govt. Empanelled contractors like Genius Enterprise, Landscape solutions Pvt Ltd, S.R.Enterprise, World Electrics House, Sk. Nizzamuddin etc.

Out of the total 176 trainees, 70 candidates are placed in the said companies.

8.1.3.8.2 Training Programme

- Skill development / Vocational Training was given to the unemployed youth around the locality in Metiabruz, Kolkata”, Garden Reach Shipbuilders & Engineers Limited (GRSE), Kolkata, a Govt. of India undertaking under the Ministry of Defense.

8.1.3.9 School of Management Sciences

- 2016 – Total Pass out 18 (Opted out of placement – 2)
- Placement on Campus: 8
- Placement off Campus: 4

8.1.3.10VLSI

Training and Placement (2014-2016 batch M.Tech. (VLSI Design)

1. Subheccha Shyamal Banerjee Global Foundries ,USA
2. Supratim Saha Qualcomm International, Bangalore
3. Arijit Datta Sankalp Semiconductors

- | | | |
|----|----------------------|--|
| 4. | Sayandip De | PhD, Eindhoven University of Technology,
Netherland |
| 5. | Arko Dutta | PhD, Nanyang Technical University, Singapore |
| 6. | Shahid Iqbal Mallick | DxCorr, Bangalore |
| 7. | Sudeshna Chakraborty | PWC, Kolkata |
| 8. | Aritra Chatterjee | PWC, Kolkata |
| 9. | Shubhankar Mondal | BSNL, Kolkata |

8.1.3.11 Centre of Excellence for Green Energy and Sensor System

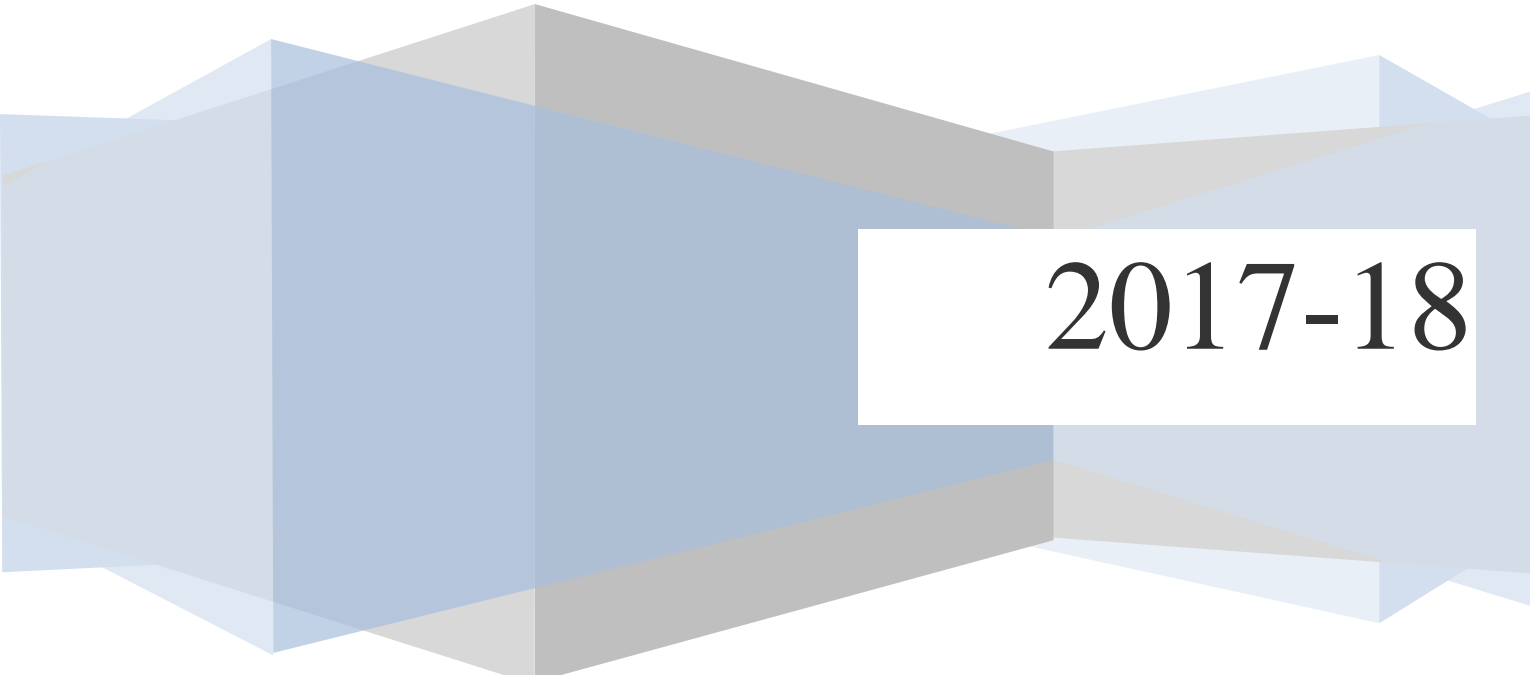
8.1.3.11.1 Training and Placement

All the M. Tech. students of 1st batch (2014-16) are well placed

SL No	Name	Designation	Name & Adress of Employer/Company
1	Dipak Kumar Saha	Sr. Project Engineer	Agni Power & Electronics Pvt Ltd, 114 Rajdanga Gold Park, Kol-700109
2	Kausturi Chatterjee	JRF	MeghnadSaha Inst. of technology
4	Sourav Nandi	Sr. Section Engineer	Eastern Railway, Howrah Division
6	MohdAlam	PhD Scholar	IIT Delhi
7	Dipak Kumar Mandal	JRF	Calcutta University, Rajabazar Campus
8	Ishita Chaturvedi		Airport Authority of India
9	Pritam Banerjee	Ph.D Scholar	IEST, Shibpur
11	Saikat Ghosh	JRF	IIT KGP
12	Arup Dhar	PhD scholar	IIT KGP
13	Debayan Biswas	Solar Trainer	SLIEM, Salt lake
14	DebasishDey		Eastern Railway

IEST Shibpur

§ 9. Campus Facilities



2017-18

9 CAMPUS FACILITIES

Located on the west bank of River Hooghly towards the east of the Acharya Jagadish Chandra Bose Indian Botanic Garden at Shibpur Howrah, the walled campus of the Institute occupies an area of 124 ha. The campus has a rich flora diversity with a mix of water bodies, most of which are connected to the Ganges and thus enjoy tide and wane of the river.



A Panoramic view of the IEST Campus

Well connected by road, rail and river the campus is located at 22.5552° N, 88.3071° E. While a few of the buildings pre-dates the Institute, The principal activities of the Institute are carried out from two sets of buildings, viz., (i) the main integrated four storied academic buildings comprising 11 blocks, and (ii) the eight storied Science and Technology Buildings of which four blocks have been constructed till date.

9.1 ESTATE



Situated on the west bank of the river Hooghly, the campus has rich waterbodies

9.1.1 Main Academic Building

Constructed in the early fifties this integrated building is an early hall mark of the noted architect and civil engineer Mr Habibur Rahaman. The main academic complex is a four-storied building covering about 22,000 square metre area that accommodates most of the engineering departments, The Training and Placement Cell, the Academic Section and the Examination Section.



Main building viewed from Parade Ground



First Lobby of Main Building

9.1.2 Science and Technology Building

The newly constructed eight-storied Science and Technology building with 14400 square metres area accommodates some of the existing engineering departments, science and management departments, and various centres and schools. Office of the Vice-Chancellor, Offices of the Deans, Registrar, and other financial and administrative offices are also located in this building. Annexes to this building are now being constructed to accommodate future departments, schools, centres and offices.



Eight-Storeyed Science & Technology Building



Science & Technology Building: Another view

9.1.3 Workshop Complex

The old Workshop complex where the former Bengal Engineering College was originally started in this campus is now a heritage building. Part of the workshop is housed in the adjoining building. The workshop complex is quite large, encompassing an area of about 8500 square metres. The Workshop Complex has nine engineering shops to offer trainings in different basic shop practices including Carpentry Shop, Smithy Shop, Welding and Painting Shop, Fitting Shop, Machine Shop, Foundry and Pattern Shop, Boiler Shop, Electric Shop, Automobile Shop and Project Model Shop



The main workshop complex



Road to Carpentry and Foundry Shops

9.2 HEALTH SERVICES

The Institute has a hospital to cater to the needs of the campus inmates with medical officers and other supporting staff. It provides 24 hours ambulance service. Besides, the hospital has an ID Ward to effectively isolate students suffering from infectious diseases such as chicken pox, mumps, measles etc. Outdoor treatment is available in two shifts: morning and afternoon except Sundays and holidays. Serious cases are generally transferred either to any city hospital or to the Students' Health Home, Kolkata, the institute having Universal Membership for the later. The institute hospital provides 24 hours ambulance service.



The Institute Hospital is located in one of the heritage buildings, The Heaton Hall

9.3 BANKS

The Campus has branches of three banks - United Bank of India (UBI), UCO Bank, and State Bank of India (SBI) - along with associated ATM facilities.

9.4 CAMPUS SERVICES AND MANAGEMENT

- The Institute is provided with uninterrupted power supply from the Calcutta Electric Supply Corporation Limited.
- Water supply is provided by the Howrah Municipal Corporation. In addition, the Institute has its own captive generation plant and also water supply sources.
- There are three agencies which look after the maintenance of various services in the campus:
- The Public Works Department (Maintenance) for maintenance of all buildings and roads
- The Public Works Department (Electrical) to look after the maintenance of electrical services
- Public Health Engineering Department for maintenance of water supply and sewage disposal

9.5 HALLS / HOSTELS OF STUDENTS

The Institute, with a sanctioned student strength of 3630, has 17 hostels including three girls' hostels.

There are 9 multi-seated hostels for boys:

- A. C. Roy Hall (Hostel 7)
- D. Banerjee Hall (Hostel 8)
- Hostel 9
- A. K. Seal Hall (Hostel 10)
- Hostel 11
- Hostel 13 – exclusively for PG and Research Scholars
- Hostel 14
- Hostel 15
- Hostel 16



Multi seated Hostel 14



Hostel 14, with Vidyasagar Setu in the background

9.5.1 Single Seated Halls of Residences

There are 5 single-seated halls for boys:

- Macdonald Hall
- Richardson Hall
- Sen Hall
- Sengupta Hall
- Wolfenden Hall



Richardson Hall



Macdonald Hall

9.5.2 Women's Hostel

There are 3 girls' hostels (single and multi-seated):

- Lt. William Hall of Residence
- Pandya Hall
- Sister Nivedita Ladies Hostel



Sister Nivedita Ladies Hostel



Lt. William Hall for female PG & Research Scholars

9.6 SPORTS GROUNDS

There are two main sports grounds - named after the famous English stadiums - the Lords, and the Oval. Lords ground is for general purpose games and sports, and also serves as main venue for the Convocation Ceremony and the College Fest - REBECA. The Oval Ground is more well-maintained and is used for Physical Training, Sports Meets, and inter and intra-college Cricket and Football matches.



Lords Ground



Oval Ground



Pavilion, Oval



Shed, Oval

9.6.1 Basketball Court

The institute has a basketball court near the Hospital Building, opposite to Oval Ground. Basketball enthusiasts flock here in the evenings for friendly matches.



Basketball Court



A Firendly Basketball Match

9.6.2 Alumni Swimming Pool

The Alumni Swimming Pool is a wonderful gift from our alumni association, GAABESU, to the residents of the institute. It started operating from April 2013.



Swimming Pool entrance



Alumni Swimming Pool

9.6.3 Gymnasium

The century old heritage athletic club building houses the gymnasium. GAABESU, our alumni association, recently renovated the building, bought new equipments, and inaugurated the upgraded gymnasium in August 2014.



Gymnasium Entrance



Interior

9.7 STUDENTS' AMENITIES CENTRE

This is a common-room for students, just beside the Lords Ground. It serves multi purpose, and also houses the Drama Club of the institute. It was initiated with generous contribution from an alumnus of 1948 batch.

9.7.1 Students' Centre for Creative Expressions

Slater Hall houses some of the clubs and societies of the institute, most notably the Music Club, the Debate Club, the Photography Club and the Innovation Centre.



Students' Amenities Centre



Slater Hall

9.7.2 Netaji Bhavan

This is a building overlooking the Lords Ground, and serves multi-purpose. During festivities like Convocation, College Fests and Conferences, it can serve as reception area, as dining area or as a stage for street-theatres. In other times, it is a centre for UdyanSabpeyechhirAsar - an external body conducting children's programs in physical fitness exercise, games & sports, drawing and painting, and other cultural activities.



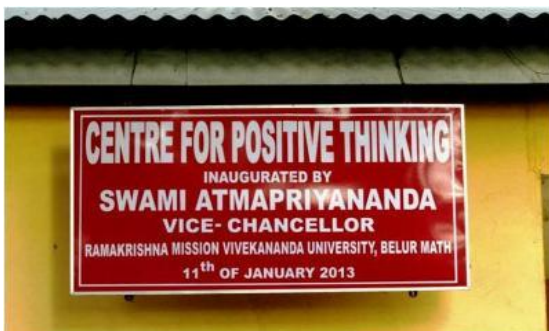
Way to Third Gate



Netaji Bhavan

9.7.3 Spiritual Development

The Vivekananda Youth Circle (for boys) and Sister Nivedita Study Circle (for girls) help in holistic personality development of the students. A meditation centre for students - PrasantaNeer (BABTECH Meditation Hall) – was designed, funded, and constructed in the year 2013 by an alumnus of 1974 batch.



Centre for Positive Thinking



Meditation Centre by the Bidisha Lake

9.8 WATER BODIES

The campus has three large water bodies which add to its beautification. Of these, the Bidisha Lake has a connection to the River Ganges, and hence experiences the rise and fall of water level through tides.



Bidisha Lake, with the iconic Clocktower



Another view Bidisha Lake



Bidisha Lake, with the iconic Clocktower



Lake near First Gate

9.9 INSTITUTE GATES

The main gate of the institute (known as First Gate) was a gift from our alumni in the year 1956, when the institute completed a 100 years of its journey. The first gate leads to the main academic buildings, the Halls of Residence, and the Lords Ground. The second gate was reconstructed in the year 2013 to an impressive architectural structure. The new design was done by a student of Architecture Department, and the funding was from alumni of 1983 batch. The second gate leads to the hostels, ladies' hostels, Wolfenden Hall, Oval Grounds and Swimming Pool. A Third Gate is also present which opens to the Botanical Garden adjoining area, and is open for selected times of the day.



First Gate, also known as Centenary Gate



Second Gate

9.10 CLOCKTOWER

The famous Turret Clock of the Clock Tower was installed in the year 1921. This iconic structure has always found its place in the logo of the institute. The clock was donated by Sir Rajendranath Mukherjee, an alumnus of 1883 batch, and chief engineer of the modern Howrah Bridge, and the Victoria Memorial.



The Clocktower, also serves as a Water Tank



Clocktower at Night

9.11 THE CEMETERY

The institute has a graveyard adjacent to Pandya Hall and the Guest House. In here, graves dating back to 1852 and before can be found.



A curiously shaped tombstone



Overview of the Graveyard

9.12 ODYSSEY OF THE INSTITUTE

This is a Gallery of Historical Events. The journey of our institute from 1856 to present day is carved in thirteen stone tablets. The 200 kg giant bell in the centre is over a century old. In 1820, it was installed in a tower beside the then Bishop's College. It is said that the renowned poet Michael Madhusudan Dutta - who stayed in Bishop's College during that time - used to wake up in the morning hearing the sound of this bell.



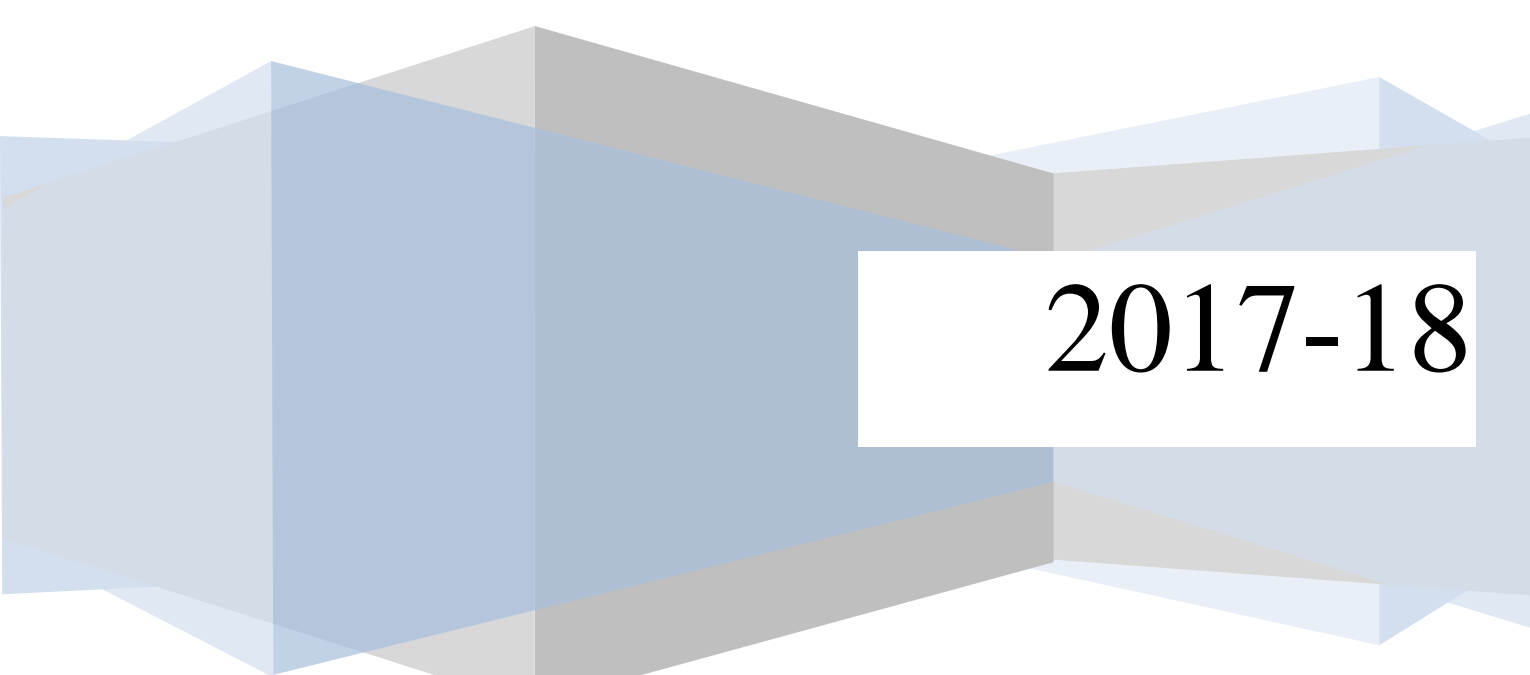
The stone tablet gallery



Incubation Centre (TCGTBI)

IEST Shibpur

§ 10. Institute Accounts



2017-18

10 INSTITUTE ACCOUNTS

The Indian Institute of Engineering Science and Technology, Shibpur, West Bengal an autonomous body, was established in March 2014 by converting the erstwhile Bengal Engineering Science and University, Shibpur by an Act of the Parliament, *viz.* the National Institute of Technology, Science Education and Research (Amendment) Act, 2014. The Institute is now a Centrally Funded Technical Institute and the NITSER Act, 2007 declared it to be one of the Institutes of National Importance.

The summaries of (i)the Balance Sheet, (ii) the Income And Expenditure Account, and (iii) the Receipts and Payments Accounts for the Financial year 2017-18 are furnished in the next five pages (p131-p135)

The annual accounts of the Institute for the year 2017-18 have been audited under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 read with Section 22(2) National Institute of Technology, Science Education and Research Act, 2007. The Separate Audit Report (SAR) on the account of the Institute for the year 2017-18, as received from the Director General of Audit, Central, Kolkata, Indian Audit and Accounts Department is attached as Appendix-4.

10.1 SUMMARY OF BALANCE SHEET**BALANCE SHEET AS ON 31ST MARCH 2018**

Amount in Rupees

SOURCES OF FUNDS	Schedule	Current Year	Previous Year
CORPUS / CAPITAL FUND	1	2,11,37,58,564	1,88,00,58,767
DESIGNATED / EARMARKED / ENDOWMENT FUNDS	2	24,90,94,673	20,80,75,556
CURRENT LIABILITIES & PROVISIONS	3	50,85,82,479	47,78,03,894
TOTAL		2,87,14,35,716	2,56,59,38,218

APPLICATION OF FUNDS	Schedule	Current Year	Previous Year
FIXED ASSETS	4	1,23,40,96,619	1,10,84,76,927
- Tangible Assets		1,22,58,06,247	-
- Capital Work in Progress		-	-
- Intangible Assets		82,90,372	-
INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS	5	25,61,51,787	24,43,43,520
- Long Term		15,25,31,398	
- Short Term		10,36,20,389	
INVESTMENTS - OTHERS	6	37,53,34,135	1,67,10,155
CURRENT ASSETS	7	95,63,34,953	1,12,24,64,760
LOANS, ADVANCES & DEPOSITS	8	4,95,18,222	7,39,42,855
TOTAL		2,87,14,35,716	2,56,59,38,218

SIGNIFICANT ACCOUNTING POLICIES	23
CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS	24

Sd (Alok Kumar Maity)
Dy. Registrar (Finance)

Sd (B Bandyopadhyay)
Registrar

Sd (D Bandyopadhyay)
Proprietor
M No – 057861
DEBASIS BANDYOPADHYAY
& CO
CHARTERED ACCOUNTANTS

10.2 INCOME AND EXPENDITURE ACCOUNT**INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2018**

Particulars	Schedule	Amount in Rupees	
		Current Year	Previous Year
<u>INCOME</u>			
Academic Receipts	9	17,79,68,308	14,98,95,438
Grants / Subsidies	10	1,01,21,04,095	77,65,52,449
Income from Investments	11	3,15,98,242	2,94,26,934
Interest earned	12	1,08,34,891	90,21,920
Other Income	13	1,92,98,664	79,43,711
Prior Period Income	14	2,96,03,155	-
<u>TOTAL (A)</u>		1,28,14,07,356	97,28,40,452
<u>EXPENDITURE</u>			
Staff Payments & Benefits (Establishment expenses)	15	76,30,83,568	62,36,33,006
Academic Expenses	16	19,23,88,217	15,10,93,134
Administrative Expenses	17	10,85,44,958	6,95,34,888
Transportation Expenses	18	9,34,974	7,60,857
Repairing & Maintenance	19	4,23,88,872	1,62,51,625
Depreciation		10,68,31,164	8,38,59,315
Finance Costs	20	40,859	64,232
Other Expenses	21	2,62,817	15,17,060
Prior Period Expenses	22	2,79,78,765	14,71,350
<u>TOTAL (B)</u>		1,24,24,54,194	94,81,85,468
Balance being excess of Income over Expenditure (A-B)		3,89,53,162	2,46,54,985
Transfer to / from Designated Fund			
Building fund			
Others (specify)			
Balance being Surplus / (Deficit) carried to Capital Fund		3,89,53,162	2,46,54,985

Significant Accounting Policies 23
Contingent Liabilities and Notes to Accounts 24

Sd (Alok Kumar Maity)
Dy. Registrar (Finance)

Sd (B Bandyopadhyay)
Registrar

Sd (D Bandyopadhyay)
Proprietor
M No – 057861
DEBASIS BANDYOPADHYAY
& CO
CHARTERED ACCOUNTANTS

10.3 RECEIPTS AND PAYMENTS ACCOUNTS**RECEIPTS AND PAYMENTS ACCOUNTS FOR THE YEAR ENDED 31st MARCH 2018**

RECEIPTS	CURRENT YEAR	PREVIOUS YEAR	PAYMENTS	CURRENT YEAR	PREVIOUS YEAR
I			I		
Opening Balances			Expenses		
a) Cash Balances	6,650	28,796	a) Establishment Expenses	76,30,83,568	62,49,49,776
b) Bank Balances			b) Academic Expenses	19,22,36,800	14,75,81,890
i. in Current Accounts	3,97,72,530	7,99,75,646	c) Administrative Expenses	10,83,66,931	6,98,77,756
ii. In Deposit Accounts		58,45,17,307	d) Transportation Expenses	9,34,974	7,60,857
iii. Savings Accounts	36,93,56,788	11,81,64,956	e) Repairs & Maintenance	4,23,88,872	1,60,27,775
iv. Howrah Treasury PF	20,99,44,453	11,12,74,756	f) Prior Period Expenses	-	-
c) Cheques in hand	-	-	g) Other Expenses	2,62,817	15,17,060
II			II		
Grants Received			Payments against Earmarked/Endowment Funds		
a) From Govt. of India	1,30,00,00,000	99,90,75,000		19,86,429	31,88,007
b) From State Govt.	95,52,162	-	III		
c) Form UGC-Non Plan	-	-	Payments against Sponsored/Scheme	25,29,46,405	40,49,44,864
c) Form Other Sources (Details)	-	-	IV		
III			Payments against Sponsored/Fellowship/Scholarship	3,71,92,668	5,30,31,607
Academic Receipts	17,79,68,308	14,98,95,438	V		
			Investments and Deposits made		
IV			a) Out of Earmarked/Endowments Funds	-	6,30,92,321
Receipts against Earmarked/Endowment Funds	2,72,10,702	4,76,35,628	b) Out of Own Funds (Investments-Others)	12,62,89,893	-

§10. Institute Accounts

RECEIPTS	CURRENT YEAR	PREVIOUS YEAR		PAYMENTS	CURRENT YEAR	PREVIOUS YEAR
V Receipts against Sponsored/Scheme	22,53,54,968	40,92,27,074		VI Term Deposits with Schedule Banks	-	-
VI Receipts against Sponsored/Fellowship/Scholarship	4,07,05,241	2,65,31,042		VI I Expenditure on Fixed Assets and Capital Works-in-progress		
VI I Income on Investments from				a) Fixed Assets	7,37,44,522	9,78,88,082
a) Earmarked/Endowment Funds	14,79,316	15,64,541		b) Capital Works-in-Progress	-	-
b) Other Investments	6,811	1,946		VI II Other Payments including Statutory Payments	11,01,77,328	14,76,30,351
VI II Interest Received on				IX Refunds of Grants	-	-
a) Bank Deposits	88,34,846	59,11,907		X Deposit and Advances	20,32,21,957	14,76,01,209
b) Loans & Advances	-	-		XI Other Payments (Finance Cost)	40,859	64,232
c) Savings Bank Accounts	1,15,67,407	90,21,920		XI I Other Payments (including prior period /write off)	-	5,306
d) Provident Fund	1,57,04,750	3,25,49,271		XI II Adjustment of Opening Deposit Balance	-	58,45,17,307
IX Investments Encashed	-	-				
X Term Deposit with scheduled Banks encashed and Term Deposits for earlier years brought into Receipts and Payments Account	-	14,46,71,224				

§10. Institute Accounts

XI	Other Income (Including Prior Period Income)	1,88,77,430	94,99,725		XI Closing Balances		
XI I	Deposit and Advances	8,57,80,340	2,59,40,676		V a) Cash Balances	6,650	6,650
XI II	Miscellaneous Receipts including Statutory Receipts	15,19,45,677	22,62,71,968		b) Bank Balances i. in Current Accounts	13,52,44,258	3,97,72,530
XI V	Any Other Receipts	-	-		ii. In Deposit Accounts iii. Savings Accounts iv. Howrah Treasury PF c) Cheques in hand	- 39,00,96,273 25,58,47,174 -	- 36,93,56,788 20,99,44,453 -
		2,69,40,68,380	2,98,17,58,820			2,69,40,68,379	2,98,17,58,820

Sd (Alok Kumar Maity)
Dy. Registrar (Finance)

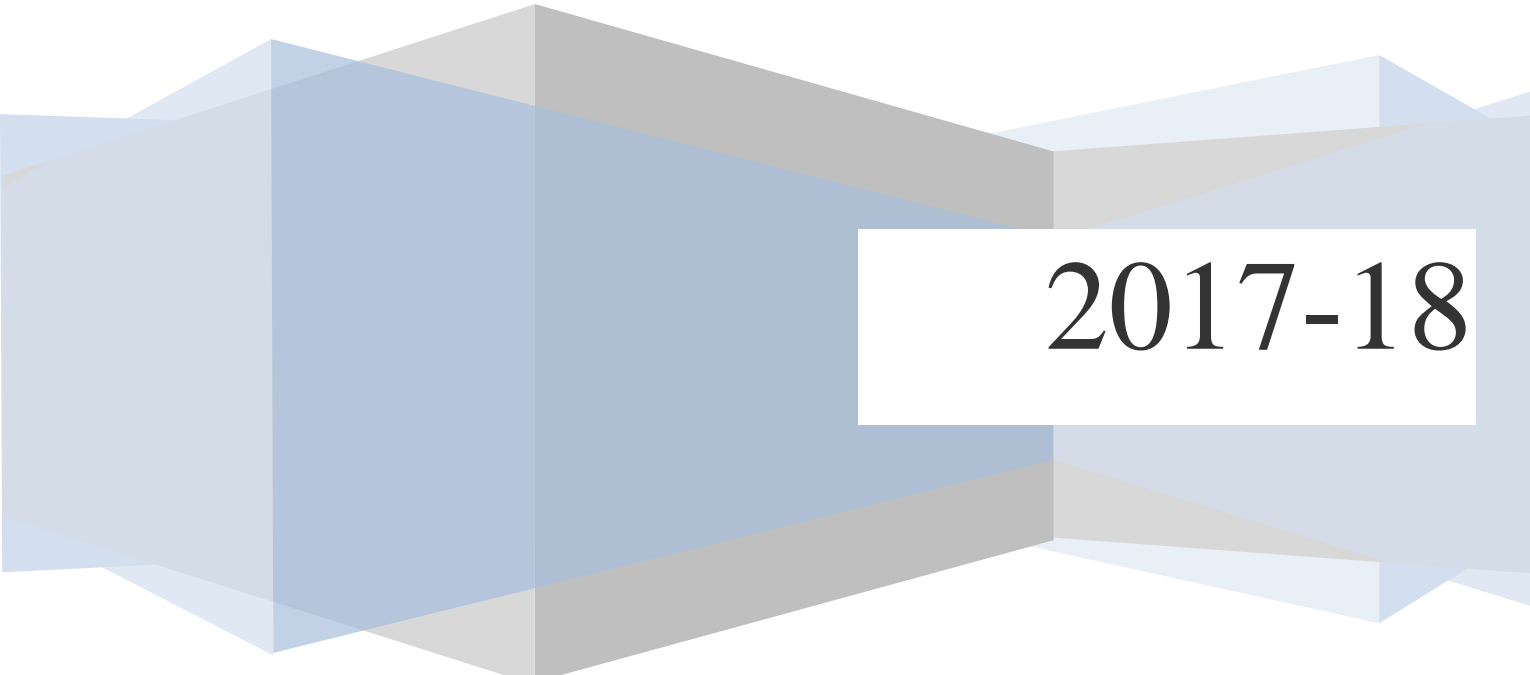
Sd (B Bandyopadhyay)
Registrar

Sd (D Bandyopadhyay)
Proprietor
M No – 057861

DEBASIS BANDYOPADHYAY & CO
CHARTERED ACCOUNTANTS

IEST Shibpur

Appendices



2017-18

DECISIONS TAKEN BY THE BUILDING AND WORKS COMMITTEE

Resolutions adopted by the Building and Works Committee in its meeting held on December 29, 2017 included the following.

- The following Estimates received from the Executive Engineer, PWD (Civil Wing), Howrah Division, for various repair, renovation and up-gradation work in the Institute were put up before the Committee.
 1. Thorough repair of external surface of the Guest House and the Kitchen attached to it, at an estimated cost of Rs. 9,29,969/-.
 2. Emergent repair of residential quarters no. D-114 and E-207 at an estimated cost of Rs. 2,97,957/-.
 3. Emergent repair of residential quarters no.. D-215, D-240 and E-209, at an estimated cost of Rs. 5,14,448/-.
 4. Emergent repair of residential quarters no. V-9, F-223, F-224, F-196 and F-197 at an estimated cost of Rs. 2,46,308 /-.
 5. Revamping of foundry lab for installation and running of the new experimental rolling mill under a sponsored project funded from the Steel Development Fund (SDF), Ministry of Steel, Govt. of India at an estimated cost of Rs. 1,87,846 /-
 6. Emergent repair of Qtr. No. D-224 and D-266 at an estimated cost of Rs. 4,55,090 /-.
 7. Restructing of the Aeromodelling laboratory of AEand AM Department at an estimated cost of Rs. 3,25,426 /-.
 8. Setup of New Laboratories and also renovation and remodelling of existing space in the department of Electronics and Telecommunication Engineering at an estimated cost of Rs. 24,14,815/-.
 9. Construction of septic tank, inspection pit, and soak-well behind residential quarters block B-156 to 161 and block E-200 to 212, installation of pipe network and repair cum renovation work (Sand P) of different hostels at an estimated cost of Rs. 4,32,293/-.
 10. Half yearly routine sanitary and plumbing at Hostels, Offices, Barracks *etc.* (Excluding Main Building, Dastur Building and 8-storied Building) at an estimated cost of Rs. 4,03,871/-.
 11. Half yearly day-to-day operation (round the clock), preventive maintenance, and servicing of existing fire fighting and fire alarm system at the Science and Technology Building at an estimated cost of Rs. 4,28,404/-.
 12. Emergent repair and maintenance works of different building at an estimated cost of Rs. 5,05,389/-.
 13. Renovation and repair of the residence of the Superintendent of the Richardson Hall at an estimated cost of Rs. 4,70,805/-.
 14. Emergent work Repair, Painting and Sanitary and Plumbing work at the residence of the superintendents of the Richardson Hall and the Macdonald Hall at an estimated cost of Rs. 4,56,734/-.
 15. Renovation and repair of the residence of the superintendent of the Macdonald Hall at an estimated cost of Rs. 4,74,181/-.

16. Emergent repair of the rear outside wall and parapet walls of B-type quarters (B-177-184) at an estimated cost of Rs. 3,72,711/-.
17. Special roof treatment work by APP membrane at the Downing Hall (Central Block) at an estimated cost of Rs. 5,57, 578/-, .
18. Emergent repair (Painting and Sand P works) of the warden's residential quarter (internal portion; ground and 1st floor) attached to the Pandiya Hall at an estimated cost of Rs. 2, 52, 744/-.
19. Emergent repair (repair, wood work, M.S. Grill, ceramic tiles and other ancillary works) of the warden's residential quarter (internal portion; ground and 1st floor) attached to the Pandiya Hall at an estimated cost of 5, 11, 524/-.

The Building and Works Committee considered the above estimates and noted that all the works were of minor in nature and were within the budgetary provision and available budget of the Institute. Having considered the merits of each of the cases, the Committee in exercise of the powers and functions conferred under subsection (ii) of Section 13 of the IEST Statutes, 2017, accorded the necessary administrative approval and expenditure sanction for these works.

- The Committee considered an estimate of Rs. 62,02,180/- received from the Executive Engineer, Howrah Division, PWD (Civil Wing) for thorough repair of external surface and stair block with allied works at the Pratchi Building of the Institute.

The Committee noted that the estimate was related to a work falling with the realm of repair, renovation, and up-gradation but the estimate exceeded Rs. 25 and as such, it falls under the category of major works and, as stipulated in sub-section(i) of Section 13 of the IEST Statutes, 2017, it can be undertaken after necessary administrative approval and expenditure sanction from the Board. It was also observed that the estimated amount was within the budgetary provision and available budget of the Institute. having considered the necessity of the work and reasonableness of the estimate the Committee recommended undertaking of the work proposed and recommended that the matter be placed before the Finance Committee for its consideration and recommendation to the Board of Governors administrative approval and financial sanction.

- The Committee considered the following estimates received from the Executive Engineer, Electrical Division, Public Health Engineering Directorate. towards repair and renovation work of the existing PHED Pump Houses, Supply and Installation of pumping machineries and water supply pipelines for the newly completed Lt. William Hall of Residence and installation of new water supply main discarding the portion of existing old pipelines blow the road:

1. Renovation of pump house, CWR pump house near office building, store room near PHE pump house, sewerage pump house at eastern zone, CWR pump houses near Eastern zone OHR and drinking water pump house at at an estimated cost of 11,05,996/-.
2. Renovation of pump houses near western zone OHR, garage block, sewerage pump house near Oval Ground, near 1st gate, PHE office Building at an estimated cost of Rs.7,79,255/-.
3. Supply and installation of open monoblock submersible pumping machinery, pipeline and others necessary works in CWR at IEST, Shibpur (at Lt. William hostel) at an estimated cost of 6,01,050/-.

4. Relocation of main pipelines near V.C's Bungalow to OHR of Downing site and other allied works at an estimated cost of Rs.14,47,160/-.

The Building and Works Committee considered the above estimates and noted that all the works were of minor in nature and were within the budgetary provision and available budget of the Institute. Having considered the merits of each of the cases, the Committee in exercise of the powers and functions conferred under subsection (ii) of Section 13 of the IEST Statutes, 2017, accorded the necessary administrative approval and expenditure sanction for these works.

- The Committee considered the following estimates received from the Executive Engineer, Howrah Electrical Division, PWD (Electrical Wing) towards various repair, renovation and up-gradation work at the Institute:
 1. Reorientation of Street Light around Oval ground for dismantling of overhead power service line in the campus at an estimated cost of Rs. 15, 12,423/-.
 2. Drawing of main power supply line to Lt. Willam Hall from a feeder pillar at an estimated cost of Rs. 295,989/-.
 3. Patch E.I. work at Quarter No: D-220, 221, 226, 252, 230, 234, B-170, 247, Pratchi-299, 301, LCH-157 and Downing Hall at an estimated cost of Rs. 129,665/-.
 4. Patch E.I. work at Quarter No: Pratchi-310 at an estimated cost of Rs. 86,815/-.
 5. Patch E.I work at Gymnasium, Chemistry Department and Physics Department at an estimated cost of Rs. 54, 388/-.
 6. Patch E.I. work at Quarter No: D-243 and 279 at an estimated cost of Rs. 78,730/-.
 7. Patch E.I. work at Quarter No: LCH-284 in the campus of IEST, Shibpur, Howrah at an estimated cost of Rs. 29,010/-.
 8. Renovation of E.I. Work at quarter no: D-107 at an estimated cost of Rs. 70,491/-.
 9. Renovation of E.I. Work at quarter no: D-128 at an estimated cost of Rs. 70,491/-.
 10. Renovation of E.I. Work at quarter no: D-283 at an estimated cost of Rs. 70,491/-.
 11. Renovation of E.I. Work at quarter no: D-274 at an estimated cost of Rs. 70,491/-.
 12. Renovation of E.I. Work at quarter no: D-267 at an estimated cost of Rs. 70,491/-.
 13. Renovation of E.I. Work at quarter no: D-275 at an estimated cost of Rs. 70,491/-.
 14. Renovation of E.I. Work at quarter no: B-180 at an estimated cost of Rs. 96,592/-.
 15. Patch E.I. work at Quarter No: D-114, 127, 197 and Pratchi-314 at an estimated cost of Rs. 1, 20, 038/-.
 16. E.I. Work in room no: U 721 under physics dept. At 6th floor of 8-storied building, at an estimated cost of Rs. 215,892 /-.
 17. Renovation of E.I. Work at residential quarter no. D-228 (for PG student) at an estimated cost of Rs. Rs.70,491/- .
 18. Renovation of E.I. Work at quarter no: D-212, D-213, D-215, D-217 (for conversion to hostel) at an estimated cost of Rs. 2,20,023/-.
 19. Renovation of E.I. Work at Student's Canteen adjacent to the Institute Hall, at an estimated cost of Rs. 1, 68, 188 /-.
 20. E.I. work for fixing of 2x5 Amp plug and switch at Hostel 10 at an estimated cost of Rs.57,612/-.

21. Electrical Installation work for set up of new laboratories and also renovation and remodeling of existing space in the ETC Engineering Department, at an estimated cost of Rs. Rs.22, 66, 565 /-.

The Building and Works Committee considered the above estimates and noted that all the works were of minor in nature and were within the budgetary provision and available budget of the Institute. Having considered the merits of each of the cases, the Committee in exercise of the powers and functions conferred under subsection (ii) of Section 13 of the IEST Statutes, 2017, accorded the necessary administrative approval and expenditure sanction for these works.

- The Committee considered the following estimates received from the Executive Engineer, Howrah Electrical Division, PWD (Electrical Wing) towards various repair, renovation and up-gradation work at the Institute:
 1. Installation, Testing and Commissioning of 415 Volt, 3 phase, 500 KVA, Silent D.G. Set attached to Sub-Station-II in the campus at an estimated cost of Rs. 61,80,000/-.
 2. Electrical Installation for setting up new laboratories and also renovation and remodeling of existing space in the Eand TC Engineering Department, at an estimated cost of Rs. 36,61,866/-.

The Committee noted that the estimates were related to works falling with the realm of repair, renovation and up-gradation but the estimate exceeded Rs. 25 lakhs and as such, it fell under the category of major work and, therefore, as stipulated in sub-section 1(i) of Section 13 of the IEST Statutes, 2017, it can be undertaken after necessary administrative approval and expenditure sanction from the Board. It was also observed that the estimated amount was within the budgetary provision and available budget of the Institute. having considered the necessity of the work and reasonableness of the estimate the Committee recommended undertaking of the work proposed and recommended that the matter be placed before the Finance Committee for its consideration and recommendation to the Board of Governors administrative approval and financial sanction.

- The Committee considered the following estimates submitted by University Engineer for various renovations and up gradation of electrical installations works of the Institute.
 1. Electrical Installation work at Laboratory-II (CMS-2SWL-02) and Laboratory-III (CMS-2 SWL-03) of Computer Science Department at third floor of Main Building of the Institute at an estimated cost of Rs. Rs. 7,33,943.00/-.
 2. Electrical Installation work at Seminar Room and M.E Class room of Mining Engineering Department at 2nd floor of Main Building of the Institute at an estimated cost of Rs. 1,99,156/-.

The Building and Works Committee considered the above estimates and noted that all the works were of minor in nature and were within the budgetary provision and available budget of the Institute. Having considered the merits of each of the cases, the Committee in exercise of the powers and functions conferred under subsection (ii) of Section 13 of the IEST Statutes, 2017, accorded the necessary administrative approval and expenditure sanction for these works.

- The Building and Works Committee ratified the administrative approval accorded by the Director for the following work

1. Emergent repair works of Qtr. No. F-129, F-130 and different locations of Sengupta Hall at an estimated cost of Rs. 4,48,411/-.
2. Painting works of Grave Yard besides Guest House at an estimated cost of Rs. 1,04,009/-.
3. Roof Treatment work by APP modified bituminous membrane on the roof of I.T. Department in the Main Building including Roof of 2nd Lobby at an estimated cost of Rs. 10,49,919/-.
4. E/R works of Qtr. No. F - 122, F - 123, F - 106, F - 104, F - 105 and MacDonald Room (74, 75, 91, 76, 92) and different locations of the some Hostels at an estimated cost of Rs. 1,68,356/-.
5. Emergent repair of Qtrs. No. D/280, D/264, and D/255 at an estimated cost of Rs. 4,06,963/- .
6. Emergent repair of Qtrs. No. D/280, D/255 and D/264 at an estimated cost of Rs. 41, 448/-.
7. Emergent Sand P Works in different buildings at an estimated cost of Rs. 4,30,536 /- .
8. Renovation of common Toilet in S -Type Qtrs. beside SBI Bldg at an estimated cost of Rs. 2,84,891/-.
9. Special roof Treatment work by APP modified bituminous membrane at the roof of A-Type Qtrs. (SOCSAT and SBI Building) at an estimated cost of Rs. 5,09,698 /-.
10. Renovation of Computational Lab (Department of Aerospace Engineering and Applied Mechanics) at an estimated cost of Rs. 1,70,306/-.
11. Renovation of Condition Monitoring Laboratory at the Gr. Floor of Electrical Engineering Deptt. at an estimated cost of Rs. 2,88,869 /-.
12. Construction of Portion - B of Central Wing (3rd Phase) Science and Technology Building at an estimated cost of Rs. 3, 30, 940 /-.
13. Half yearly day-to-day operation (round the clock) preventive maintenance and service of existing fire fighting and fire alarm equipments installed at 8-storied Academic/Administrative building at an estimated cost of Rs. 4,31,055/- .
14. Half yearly routine sanitary and plumbing maintenance work of different Buildings, Hostels, Offices, Barrack (Excluding Main Building Dastur Building and 8-Storied building) at an estimated cost of Rs. 3,71,853/-.
15. Emergent temporary restoration of internal campus road from 3rd gate to Swimming pool at an estimated cost of Rs. 5,05,141/-.
16. Emergent Sanitary and Plumbing Repair works in Hostel (East Side of the campus), D-Type Qtrs. (120 to 125) V - Type Qtr. (V - 10) Guest House and Main Building at an estimated cost of Rs. 3,99,320/- .
17. Emergent Repair Works of Qtrs. No. D - 116, D - 129, D - 222, at an estimated cost of Rs. 4,99,188/-.
18. Replacement of damaged roof top of (2 Nos. Room and Stair Room) Hostel 15 and Hostel 16 at an estimated cost of Rs. 13,14,463 /-.
19. Emergent repair and maintenance work different building at an estimated cost of Rs. 5, 32,450/-.
20. External renovation work of Barrack-93 building at an estimated cost of Rs. 4,50,531/-.
21. Emergent repair of 4 Qtr. No. D - 276 to accommodate CPWD Personnel and entrance portion of Stair Blocks at an estimated cost of Rs. 4,42,879/-.

22. Emergent bituminous road surfacing works from 8th storied Building to Swamiji Nursery within IEST Shibpur Campus at an estimated cost of Rs. 3,47,658 /-.
23. Emergent bituminous road surfacing works from Guest House to crossing portion near Clock Tower at an estimated cost of Rs. 2,95,900/-.
24. Emergent bituminous road surfacing from V.C. Bunglow to S Type Qtrs. at an estimated cost of Rs. 1,64,697/-.
25. Emergent repair of Hostel-13, 16, 14 and 15 (Toilet Block) and S Type Qtrs at an estimated cost of Rs. 5,11,160/-.
26. Construction of Septic Tank, Soak Pit, Inspection Pit with laying of allied sewerage pipe line behind Downing Hall East and West Side at an estimated cost of Rs. 4,90,509/-.
27. Emergent repair and maintenance of different Hostels (S and P works inside and Outside of Hostel No. 7, 8, 9, 10, 11, 13 and Lt. William Hall) at an estimated cost of Rs. 5, 05,973/-.
28. Construction of New Toilet situated at 3rd Gate at an estimated cost of Rs. 1,39,613/-.
29. Renovation work in ETC Lab adjacent to Bio Sensor Lab at 3rd Floor of Main Building at an estimated cost of Rs. 3,22,936/-.
30. Emergent repair works to E - 210, V - 7, D - 262 and D 233 (Kitchen and Dinning portion) and Chemistry Lab Near ETC Deptt. Situated at 3rd Floor at Main Building at an estimated cost of Rs. 5,40,120 /- .
31. Renovation and Revamping of Laboratory of Aerospace Engineering and Applied Mechanics Deptt. Ground Floor of Main Building (Next to S.M. Lab) at an estimated cost of Rs. 2,95,823/-.
32. Face Lifting of Road stretch from 8 storied building to Biogas Plant with flanks, removal of rubbish from different location of the Campus Shibpur at an estimated cost of Rs. 1,82,570/-.
33. Replacement of flooring, Painting and allied works in Guest House at an estimated cost of Rs. 4,27,281/-.
34. Construction of parking place in front of guest house at an estimated cost of Rs. 3,53,144 /-.
35. Emergent repair of overhead tanks supporting structure of the two residential quarters (E-200 to E-211) at an estimated cost of Rs. 1,00,544 /-.
36. Replacement of old sewer lines, repair of drains and allied works of residential quarters no. M.F-4, M.F-5, M.F-6 and M.F-1 at an estimated cost of Rs. 6,77,434 /-.
37. Painting and allied works in 4th floor and stair block from 4th floor to ground floor of 8th -storied Science and Technology Building (3rd phase Portion-B) at an estimated cost of Rs. 4,77,888/-.
38. Emergent repair works of D-226 and D-143 at an estimated cost of Rs. 3, 84,041/-.
39. Emergent repair works of D-243 and D-190 at an estimated cost of Rs. 4,26,412 /- .
40. Installation of Aluminum partition in 5th, 6th and 7th floor of 8-storied Science and Technology Building (3rd phase Portion-B) of the Earth Science Department and the Architecture Department at an estimated cost of Rs. 8,20,026/-.
41. Emergent repair, painting works of Pratchi 302, D-192 (Dining, Kitchen, Bath and Latrine) and F-186, F-187 at an estimated cost of Rs. 3, 12,706 /-.
42. Construction of Portion B of Central Wing (3rd phase), Science and Technology Building - Addition and Alteration of different rooms in 5th, 6th, and 7th floor and allied works at an estimated cost of Rs. 4,94,241/-.

43. Construction of Kitchen Shade beside Hostel-8, fitting of grills in quarter No: E-208, painting of fencing at the Sengupta Hall and repairing of gardens adjacent to Hostel-8 at an estimated cost of Rs. 5,01,058/-.
44. Emergent repair of corridor kitchen, toilet dining, stair case, and rooms at Hostel 8, Sengupta Hall (all necessary cement work and inside paint etc.) at an estimated cost of Rs. 2, 24,789/-.
45. Renovation of E.I work for new laboratory in Fitting Shop at the workshop building at an estimated cost of Rs. 2,91,965/-].
46. Rewiring the E.I works for conditionMonitoring laboratory of Electrical Engineering Department at an estimated cost of Rs. 2,66,657/-.
47. Renovation of E.I work at quarter No: D-276 (for CPWD Office) at an estimated cost of Rs. 99,787/-.
48. Renovation of E.I work at Room No: C-222, 224 and 226 of AE&AM Department at an estimated cost of Rs. 2,32,919/-.
49. Renovation of E.I work at quarter No: D-142 at an estimated cost of Rs. 74,299/-].
50. Renovation of E.I work at quarter No: MF-196 and MF-197, patch work for quarter no: D-105 at an estimated cost of Rs. 67,721/-].
51. Re-wiring the E.I works for corridor, two small adjacent rooms and toilet near room no: N-116 of AE&AM Department at an estimated cost of Rs. 73,376/-.
52. Renovation of E.I work at quarter No: D-143 at an estimated cost of Rs. 82,443/-]
53. Renovation of E.I work at Aeromodelling Laboratory of AE&AM Department at an estimated cost of Rs. 3,19,929/-.
54. Patch E.I work at quarters no. D-233, 271, 136, 116, 239, 126, 231, 262, B-179, 181, E-144, 200, MF-246, 247, S-1, PK-37 and V-7 at an estimated cost of Rs.2,26,465/-].
55. Renovation of E.I. Work at Quarter Nos. BK 78, 166, 167 (for Security Personnel) at an estimated cost of Rs. 2,76,754/-.
56. Renovation of E.I Work at Quarter No: D-241 at an estimated cost of Rs. 80,312/-.
57. Renovation of Electrical Installation Work at Computer Centre at 1st Floor 3rd Phase of Portion-B of 8-storied Science and Technology Building at an estimated cost of Rs. 2,01,127/-.
58. Renovation of E.I Work at Quarter No: D-224 at an estimated cost of Rs. 80,312/-].
59. Renovation of E.I Work at Quarter No:MF-223 and 224 at an estimated cost of Rs. 42,663/-].
60. Renovation of E.I Work at Quarter No: D-190 at an estimated cost of Rs. 82,774/-].
61. E.I. Work for fixing of 2x 5A Plug and Switch at Hostel-14 at an estimated cost of Rs. 2,56,387/-].
62. Electrical Installation work at Heat Transfer Lab of Mechanical Engg. Deptt. at an estimated cost of Rs. 65,949/-].
63. Renovation of E.I Work at Quarter No: B-178 at an estimated cost of Rs. 1,01,561/-].
64. Rearrangement of power feeding through underground cables instead of existing overhead system around the Oval ground for P>H>E pump, Street Light, Wolfenden Hall Heaton Hall, Clock Tower, etc. and allied work at an estimated cost of Rs. 8,11,035/-].
65. Rearrangement of power feeding through underground cables instead of existing overhead system towards D-type, Barrack type quarters and other utility services at an estimated cost of Rs. 18,97,577/-].
66. Renovation of E.I work at quarter no D-265 at an estimated cost of Rs. 77,314/-].

67. Renovation of E.I work for staircase and toilet portion at Quarter No: 171-194 Block MF-6 at an estimated cost of Rs. 61,946/-].
68. Renovation of E.I work for staircase and toilet portion at Quarter Block F-III at an estimated cost of Rs. 73,688].
69. Electrical installation work at computer laboratory -II near PDSIT, 3rd floor in main building at an estimated cost of Rs. 32,352/-].
70. Renovation of E.I. Work at quarter no Paccaline 37 and 38 at an estimated cost of Rs. 31,788/-].
71. Renovation of the E.I. Works at Superintendent's quarter of Richardson Hostel at an estimated cost of Rs. 1,98,414/-].
72. Supply and fixing of 1200 mm sweep AC ceiling fan at different locations inside the campus at an estimated cost of Rs. 1,19,663/-].
73. Providing lift attendant for 3 nos. of (Kone make) lift installed at Portion B, 3rd phase and 1 no MRL lift (Otis make) installed at Portion-A, 3rd phase of 8-storied Science and Technology Building at an estimated cost of Rs. 4,85,933/-].
74. Annual comprehensive maintenance of 8 (eight) nos. Lift installed at an estimated cost of Rs. 7,17,419/-].
75. Day to day operation of 7 (seven) nos. Lift installed at an estimated cost of Rs. 10,61,637/-].
76. Annual comprehensive maintenance of Cummins make DG set (160 KVA) installed at an estimated cost Rs. 1,79,452/-].
77. Renovation of E.I. Work at Room No. S-417, S-430 and Graphics Room of Mechanical Engineering Dept. (3rd floor) at an estimated cost of Rs. 5,88,381/-].
78. Supply and fixing of LED tube light fittings at Macdonald at an estimated cost of Rs. 2,04,352/-].
79. Supply and fixing of LED tube light fittings at Richardson Hall at an estimated cost of Rs. 2,08,439/-].
80. Supply and fixing of LED tube light fittings at Sen Hall at an estimated cost of Rs. 2,08,439 /-].
81. Supply and fixing of LED tube light fittings at Sengupta Hall at an estimated cost of Rs. 2,08,439/-].
82. Supply and fixing of LED tube light fittings at Wolfenden Hall at an estimated cost of Rs. 2,16,613/-].
83. Supply and fixing of LED tube light fittings at Hostel No: 8, 9 and 11 at an estimated cost of Rs. 2,82,006/-].
84. Renovation of E.I. Work at quarter no: D-218 (for student PG student) at an estimated cost of Rs. 70,491 /-].
85. Supply and installation of exhaust afn at Hostel No 7 at an estimated cost of Rs. 43, 136 /-].
86. Renovation of E.I. Work at quarter no: D-140 (for student Hostel) at an estimated cost of Rs. 70,491/-].
87. Renovation of E.I. Work at quarter no: D-106 (for student Hostel) at an estimated cost of Rs. 70,491/-].
88. Renovation of E.I. Work at quarter no: D-198 (for student Hostel) at an estimated cost of Rs. 70,491/-].
89. Renovation of E.I. Work at quarter no: D-273 (for student Hostel) at an estimated cost of Rs. 70,491/-].

90. Maintenance of different electrical accessories Residential Portion (Light/Fan/Plug Points) at an estimated cost of Rs. 7,30,454/-].
91. Maintenance of different electrical accessories Residential Portion (Light/Fan/Plug Points) at an estimated cost of Rs. 4,01,389/-].
92. Maintenance of different electrical accessories Non-Residential Portion (Light/Fan/Plug Points of Guest House, Street Light, Sub-stations and other offices) at an estimated cost of Rs. 9,58,082 /-].
93. Maintenance of different electrical accessories Non-Residential Portion (Light/Fan/Plug Points of Administrative Building and Main Building) at an estimated cost of Rs. 24, 07, 010 /-].
94. Day to day maintenance of entire E.I work and operation of pump motor set for 8-storied Science and Technology Building (Phase I, II and III) and Main Building at an estimated cost of Rs. 17, 11, 252 /-].
95. Day-to-day maintenance of entire E.I work of Guest House, Quarters, Hostels, Streetlights, Sub-station I and II and operation of D.G. Sets (200 KVA and 160 KVA) at an estimated cost of Rs. 17,11,252/-].
96. Structural Repairing and renovation of the 12-legged 4.55 lakh lit. capacity overhead reservoir at an estimated cost of Rs. 19,49,904/-]
97. Structural Repairing and renovation of the 8-legged overhead reservoir at an estimated cost of Rs. 13,10,968/-]
98. Daily wage rate in respect of contractors' (of PHED) labours engaged at 6 nos. Pump houses at an estimated cost of Rs. 21,23,942 /-]
99. Electrical Installation work of Class room at 3rd floor of Main Building of Information Technology Department at an estimated cost of Rs. 2,65,672/-.
100. Electrical Installation work of faculty room at 2nd floor of Main Building of Information Technology Department Estt. Amt.Rs. 1,57,196/-.
101. Electrical Installation work at VLSI Lab at ground floor Estt. Amt.Rs. 98,957/-.
102. Electrical Installation work at Humanities and Social Science Department at newly allotted space at third floor of Main Building at an estimated cost of Rs. 9,00,516/-.
103. Supply, Installation testing and commissioning of fire detection with alarm system including supply of Fire Extinguisher at Ramanujan Central Library Estt. Amt.Rs. 15,73,119/-.
104. Supply and fixing of Black Curtain,wings,replace the wire rope, washing the cyclorama and replace the wooden bar for Cyclorama of Institute Hall at an estimated cost of Rs. 52, 910/-.
105. Electrical Installation work at Kitchen with 2 rooms at top floor of A.C.Roy Hall (Hostel No-7) at an estimated cost of Rs. 1,93,168/-.
106. Roof top tank cleaning of Main Building, 8storied Building, different office Building different Hostel Building and Guest House, Canteen at an estimated cost of Rs. 82,492/-.
107. Installation of Air-Condition machine at Estate section, security and Purchase section of Registrar office at 5th floor of Science and Technology Building at an estimated cost of Rs. 1,74,971/-.
108. Complete de - mucking of the hot water pond (adjacent to boiler shop) including de watering and including transporting and dumping the muck to the dumping ground inside the campus as per direction of Authority at an estimated cost of Rs.6,41,397.88/-.

109. Renovation of rooms of first floor of Downing hall inside the campus at an estimated cost of Rs.8,62,566/-.
110. Renovation / Rearrangement inside the HSS department at newly allotted space at third floor of Main building at an estimated cost of Rs.24,55,819/-.
111. Emergent repair, painting, sanitary plumbing and other miscellaneous work at D - 197 inside the campus at an estimated cost of Rs.75038.57/-.
112. Emergency repairing of ceiling and other miscellaneous work at drawing hall (room no.- 426 to 431) at third floor of main building at an estimated cost of Rs.95,954/-.
113. Emergency repairing of ceiling and other miscellaneous work at room no. 435 at third floor of main building at an estimated cost of Rs.64,230/-.
114. Emergency repairing of parapet wall and other miscellaneous work at the roof of Downing hall of main building at an estimated cost of Rs.92,761/-.
115. Emergency repairing of ceiling and other miscellaneous work at class room in the third floor of CST at an estimated cost of Rs.89,976/-.
116. Emergency repairing of ceiling and other miscellaneous work at faculty chamber in the third floor of CST Department at an estimated cost of Rs.98,316/-.
117. Painting in walls, Vitrified tiles in floor and installation of aluminum windows in room at first floor of main building for the chamber of Associate Deans Estt Amt. Rs.1,25,340.14/-.
118. Aluminum partition wall and partition wall at Degradation material Laboratory of Metallurgy department at 2nd floor of 8- storied Building at an estimated cost of Rs.1,53,021.19/-.
119. Anti - termite treatment (post construction measure) to main building at Metallurgy Engineering Department and vacated portion of Chemistry (ground floor and third floor) at an estimated cost of Rs.1,72,188.31/-.
120. Renovation of reference book section and other two rooms at second floor of Library building at an estimated cost of Rs.1,79,393/-.
121. Renovation of old book centre and other two rooms at second floor of Library building at an estimated cost of Rs.1,96,611/-.
122. Installation of aluminum partition wall with door near 1st. and 2 nd. Floor middle stair case at Library building at an estimated cost of Rs.1,40,477/-.
123. Routine and emergency maintenance towards Sanitary Plumbing installation in 8- storied Building, Main Building and M. N. Dastur Building at an estimated amount of Rs.4,50,000/-.
124. Aluminum partition, painting, flooring and other miscellaneous work for extension of laboratory space at CEGESS laboratory at ground floor of 8 - storied building at an estimated cost of Rs.6,44,621.24/-.
125. Installation of aluminum partition, painting, flooring false ceiling and other miscellaneous work for establishment of Dr. Bholanath Chkraborty Memorial Research centre at first floor of Part B at 8 - storied building at an estimated cost of Rs.13,00,057.84/-.
126. Emergent renovation of Kitchen, Dining, repairing of rooms, inside outside painting and other miscellaneous work at A. C. Roy hall (Hostel no. 7 at an estimated cost of Rs. 21,07,914.12/-.
127. Emergent remodeling of rooms and corridors of 1st. Floor of A. K. Seal hall at an estimated cost of Rs. 1,28,192.93/
128. Emergent repairing work ceiling at Seminar hall of CST Department at third floor of main building (including 3% contingencies at an estimated cost of Rs. 1,35,931.34/-,

129. Emergent repairing work of false ceiling and flooring at Seminar hall of CST Department at third floor of main building (including 3% contingencies) at an estimated cost of Rs. 1,09,027.81/-.
130. Aluminum partition wall, painting and other miscellaneous work at room no U721 under Physics Department in 6th Floor of 8 storied building at an estimated cost of Rs. 2,46,487.16/-.
131. Emergent repairing Painting, Vitrified tiles, false ceiling and other miscellaneous work of the class room of Mining Engineering Department at second floor of main building at an estimated cost of Rs. 1,55,810.11/-.
132. Painting, flooring, false ceiling and other miscellaneous work in the Software Laboratory and at faculty chamber at 2nd. Floor of main at an estimated cost of Rs.,2,70,465.37/-.
- Having noted that the following proposals put up by the University Engineer are minor works and works pertaining to repair and maintenance within the approved budgetary provision of the Institute, the Building and Works Committee accorded necessary administrative approval and expenditure sanction for the following works.
 1. Emergent Renovation / Reconstruction of rooms of Old Cash section for making laboratories of Civil Engineering Department at an estimated cost of Rs. 15,93,025.84/-.
 2. Emergent Renovation/ Reconstruction of old board room for making suitable for CMS room at an estimated cost of Rs. 2,26,166.52/-.
 - The Building and Works Committee ratified the administrative decision of the Director for construction of building for micro grid control station submitted by Vivekananda Institute of Biotechnology at an estimated cost of 6,70,679.29/-. The Committee approved the estimate and accorded administrative approval and expenditure sanction for this work.
 - The Building and Works Committee **considered the estimates received from the Superintending Engineer, Nabanna Circle, PWD (Civil Wing) for repair and up-gradation of various roads inside the Institute at an estimated cost of Rs.75,26,166/-.** *The Committee noted that the estimates were related to works falling with the realm of repair, renovation and up-gradation but the estimate exceeded Rs. 25 lakhs and as such, it fell under the category of major work and, therefore, as stipulated in sub-section 1(i) of Section 13 of the IEST Statutes, 2017, it can be undertaken after necessary administrative approval and expenditure sanction from the Board. It was also observed that the estimated amount was within the budgetary provision and available budget of the Institute. having considered the necessity of the work and reasonableness of the estimate the Committee recommended undertaking of the work proposed and recommended that the matter be placed before the Finance Committee for its consideration and recommendation to the Board of Governors.*
 - The Director accorded administrative approval and expenditure sanction to the following estimates received from the Executive Engineer, Howrah Division, PWD (Civil Wing) towards various repair, renovation and up gradation work in the Institute:
 1. Construction of septic tank, laying of sewer lines and allied works of barrack 164, 165, 166, and 167 at an estimated cost of Rs.3,08,081/-.
 2. Construction of septic tank beside 'B' type quarters. near the 2nd gate and the Nibedita Hostel and laying of sewer line at an estimated cost of Rs.3,38,569/-.

3. Repair of doors, steel windows in 7 no. Hostel and taking out and stacking brick soling at Lords Ground within IEST, Shibpur during the year 2017-18 at an estimated amount of Rs.81,780 /-.
4. Up-gradation cum repair work of Qtrs. no. D-106 and D/265 at an estimated amount of Rs.3,93,250/-.
5. Repair works of Sen Hall, Sengupta Hostel, McDonald, Richardson, Nivedita and Hostel-16, 11, 8 etc. at an estimated amount of Rs.5,12,353/-.
6. Special roof treatment work by tarfelt on the roof of Model School at an estimated amount of Rs.1,97,322/-.
7. Repair and painting works of Pratichi -310, D- 239 and B-175 within IEST, Shibpur during the year 2017-18 at an estimated amount of Rs.4,61,565/-.
8. Repair, painting ancillary works in Qtr. No. D-118, d-228 and fixing of MS grills only in Qtr. No. D-130 at an estimated cost of Rs.4,35,495/-.
9. Repair and painting works in Pratichi 306 and D-111 within IEST, Shibpur during the year 2017-18. [Memo No. 2675 dt. 21.12.2017 of E.E., P.W.D., Howrah Division Estt. No. 351 of 2017-18 at an estimated cost of Rs.3,67,339/-.
10. Beautification and development of ground beside Pandya Hostel near 1st gate at an estimated cost of Rs.3,81,747/-.
11. Repair and painting works of B-179, D-at an estimated cost of Rs.4,10,697/.
12. Replacement of damaged roof slab at 1st floor Rooms of Netaji Bhavans repair and painting works at an estimated cost of Rs.4,86,105/-.
13. Renovation of toilets (Ladies and gents) and adjacent room situated at ground floor of Netaji at an estimated cost of Rs.3,47,853/-.
14. Construction of septic tank, inspection pit, circular soak pit allied with sewerage line at F/2 quarter block in the campus of IEST, during the year 2017-18 at an estimated cost of Rs.4,10,295/-.
15. E/R and painting works in Qtr. no. D-221, D-220, D-141, D-142 at an estimated cost of Rs.3,34,936/-.
16. Emergent repair and painting of stair Blocks and different 'D' type quarters at an estimated cost of Rs.4,81,386/-.
17. Repair and painting works B-178, D-117 at an estimated cost of Rs.4,36,707/.
18. Repair and painting of Qtr. no. D-235 and D-222 at an estimated cost of Rs.2,65,055/-.
19. Emergent repair work at Richardson Hall and Sengupta Hall at an estimated cost of Rs.4,31,071/-.
20. Emergent repair to different buildings within IEST campus (Guest House, Library, Nivedita hostel, L.T. William Hall D/212 to 219) during the year 2017-18 – S and P at an estimated cost of Rs.3,73,711/-.
21. Emergent repair to 16 no. Hostel Building at an estimated cost of Rs.3,67,754/-.
22. Painting of Earthquake and Canteen building with allied works at an estimated cost of Rs.1,54,271/-.
23. Repair and painting works of Qtrs. No. B-251 and D/237 at an estimated cost of Rs.5,12,459/-.
24. Repair and painting works of E-152, E-202 at an estimated cost of Rs.1,70,514/.
25. External repair, installation of sheds and painting of Hostel No. 14 at an estimated cost of Rs.5,18,838/-.
26. Repair of internal and external surface of 9 Nos. Hostel, fixing of grill in verandah portion repair of windows and other allied works at an estimated cost of Rs.5,02,568/-.

27. Repair and painting of corridors (from GF to 3rd floor) of 10 Nos. Hostel installation of over head tank structure at Sengupta Hall (Super Qtr.) at an estimated cost of Rs.2,41,095/-.
28. Repair of steel windows painting of door and windows and painting external surface and internal corridor of 9 Nos. hostel etc. at an estimated cost of Rs.5,12,185/-.
29. Repair and painting of Qtr. No. D-275 and D-278 at an estimated cost of Rs.3,50,466/-.
30. Repair of Boundary wall in different locations surrounding IEST, Shibpur campus and fixing of RBT wire fencing as necessary at an estimated cost of Rs.19,20,131/-.
31. Repair cum up-gradation works of Qtr. No. D-121 and D-273 within IEST, Shibpur campus during the year 2017-18 at an estimated cost of Rs.3,72,577/-.
32. Repair and painting works of D-274, D-105 at Pratchi-305 (only plaster partially) at an estimated cost of Rs.3,63,456/-.
33. Internal minor repair works of toilets, rooms and white-washing of corridors of Hostel No. 14 with allied works at an estimated cost of Rs.3,13,315/-.
34. Construction of Septic tank, inspection pit, circular soak pit along with sewerage line in Hostel No. 15 at an estimated cost of Rs.1,78,242/-.
35. Renovation of old G.I. pipe line with allied sanitary and plumbing works in P.G. Hostel, 8 No. Hostel and 9 No. Hostel at the campus at an estimated cost of Rs.4,76,845/-.

All the above mentioned thirty-five proposals/ estimates were placed before the Committee for its consideration and ratification. The Committee noted that all these works were of minor in nature and were within the budgetary provision and available budget of the Institute. The Committee ratified the action taken by the Director.

LIST OF ACADEMIC STAFFS IN VARIOUS DEPARTMENTS/ SCHOOLS AND CENTRES

Aerospace Engineering and Applied Mechanics

Name	Designation	Areas of Interest
A. Roychowdhury, PhD	Professor	Biomechanics, Solid Mechanics, Finite Element Analysis
B. Bhattacharyya, PhD	Associate Professor	Numerical Methods, Biomechanics.
D. Pal, M.E.	Assistant Professor	Computational Fluid Dynamics, Microfluidics, Fluid Mechanics & Thermal Engineering
K. Bhowmik, M.Sc(Engg)	Assistant Professor	Solid Mechanics, Finite Element Methods
K. Debnath, PhD	Professor	Fluid Dynamics, Hydraulics
M.C. Manna, PhD	Associate Professor	Vibration, Dynamics
N. Khutia, PhD	Assistant Professor	Finite element analysis, Fracture Mechanics
N. Nandi, PhD	Associate Professor	Fluid Mechanics, Flow separation, Hydraulics and hydraulic structures
P. Halder, PhD	Assistant Professor	Computational Fluid Dynamics, High Speed Compressible Flow (Hypersonic), Magneto-hydrodynamics & Aero Propulsion
P. K. Das, PhD	Associate Professor	Earthquake Engineering, Structural Dynamics
R. Roy, PhD	Professor	Earthquake Engineering, Soil-structure interaction
S. Bhaumik, PhD	Professor	Robotics, Mechatronics, Fluid Power System, CAD/CAM, Automation
S. Halder, PhD	Professor	Solid Mechanics, Finite Element Methods
S. Majumder, PhD	Professor	Solid Mechanics, Biomechanics
S. K. Mukherjea, PhD	Professor	Fluid Mechanics, Computational Fluid Dynamics

Architecture, Town and Regional Planning

Name	Designation	Specialization/ Research Area
A. Bandyopadhyay, PhD	Professor	Mathematical Models in Urban Planning, Regional Planning
A. Roy, PhD	Associate Professor	Energy and Architecture
A. Baksi	Assistant Professor (Temporary Faculty)	City Planning
A. Sarkar, PhD	Professor	Geographic information System,

Name	Designation	Specialization/ Research Area
		Urban and Regional Planning
K. Mitra, PhD	Professor	Seismic Evaluation, Disaster Risk Mitigation and Management, Cultural heritage seismic risk mitigation, Urban Design
P. Mukhopadhyay, PhD	Associate Professor	Disaster Resistant Architecture, Urban Design, Technical Education, Visual Design
P. Chatterjee	Assistant Professor (Temporary Faculty)	Urban Design
R. Das	Assistant Professor (Temporary Faculty)	Urban Design
S. Mitra, PhD	Assistant Professor	Geographic Information System, Urban and Regional Planning
S. Roy, PhD	Professor	Spatial and Environmental Planning, Alternative Technology and Green Building Techniques, Community Based Natural Resource Management
S. K. Paul, PhD	Assistant Professor	Transport Planning, Urban and Regional Planning
S. Saha, PhD	Professor and Head	Urban and Regional Planning

Civil Engineering Department

Name	Designation	Specialization/ Research Area
A. Adak, PhD	Assistant Professor	Environmental Engineering
A. D. Ghosh, PhD	Professor	Structural Engineering
A. Ghosh, PhD	Professor	Geotechnical Engineering
A. Gupta, PhD	Professor	Environmental Engineering
A. K. Bera, PhD	Associate Professor	Geotechnical Engineering
A. K. Chakraborty, MTRP	Associate Professor	Structural Engineering
B. Basu, PhD	Visiting Professor	Structural Engineering
B. D. Mundhra, PhD	Visiting Professor	Construction Technology
C. Majumder, PhD	Assistant Professor	Environmental Engineering
C. Ray, PhD	Professor	Structural Engineering
D. Ghosh, PhD	Visiting Professor	Environmental Engineering
D. Mazumber, PhD	Professor	Environmental Engineering
D. Moitra, PhD	Associate Professor	Geotechnical Engineering
G. Bhattacharya, PhD	Professor	Geotechnical & Highway Engineering
K. K. Bhar. PhD	Professor	Water Resources Engineering
K. K. Chattopadhyay. PhD	Professor	Geotechnical & Structural Engineering

Name	Designation	Specialization/ Research Area
P. Chakraborty, M.E.	Associate Professor	Structural Engineering
P. Bandyopadhyay, M.E.	Associate Professor	Environmental Engineering
P. Saha, PhD	Assistant Professor	Transportation Engineering
S. Adhikari, PhD	Visiting Professor	Structural Engineering
S. Bhattacharjya, PhD	Assistant Professor	Structural Engineering
S. Biswas, PhD	Assistant Professor	Water Resources Engineering
S. Chakraborty, M.E.	Assistant Professor	Transportation Engineering
S. Chakraborty, PhD	Professor	Structural Engineering
S. Gangopadhyay, PhD	Visiting Professor	Transportation Engineering
S. Ghosh, PhD	Visiting Professor	Water Resources Engineering
S. K Roy, PhD	Professor & Head	Transportation Engineering
S. K. Dalui, PhD	Assistant Professor	Structural Engineering
S. K. Ghosh, PhD	Visiting Professor	Structural Engineering
S. Murmu, M.E.	Assistant Professor	Water Resources Engineering
S. Pal, M.E.	Associate Professor	Structural Engineering
T. K. Roy, PhD	Assistant Professor	Geotechnical & Transport Engineering
U. Saha, PhD	Assistant Professor	Water Resources Engineering

Chemistry

Name	Designation	Specialization/ Research Area
A. K. Mahapatra, PhD	Professor	Design, Synthesis and Recognition of Bio-active Molecules
A. Kar, PhD	DST inspire Faculty	Inorganic Chemistry/ Nanomaterials
A. Mondal, PhD	Professor	Thin film semiconductors, solar cells, gas sensors and photocatalysis
B. Adhikary, PhD	Professor	Nanomaterials and Co-ordination Chemistry
B. K. Ghorai, PhD	Professor and Head	Synthetic Organic, Organometallic and Materials chemistry
C. Bhattacharya, PhD	Assistant Professor	Photo-electrochemical Solar Cells, Conducting Polymers, Corrosion Science
D. Ganguly, PhD	Ramalingaswami Fellow	Computational Chemistry
J. Dutta, PhD	Faculty	Electrochemical Nanoscience, Fuel Cells, Solar Cells
J. Ganguly, PhD	Assistant Professor	Carbohydrate Chemistry
J. Nanada, PhD	DST inspire Faculty	Design and development of new self-replicating systems
M. Bera, PhD	Assistant Professor	Synthetic Organic Chemistry
N.D. Paul, PhD	Assistant Professor	Homogeneous catalysis and bio-inspired coordination chemistry
P. Biswas, PhD	Assistant Professor	Coordination and Bioinorganic

Name	Designation	Specialization/ Research Area
		Chemistry, catalysis, nanomaterials
P. K. Nandi, PhD	Professor	Nonlinear Optics: Modeling and Computation
S. Dalapati, PhD	DST inspire Faculty	Supramolecular aggregates and porous organic polymers
S. K. Chattopadhyay, PhD	Professor	Coordination Chemistry, Bioinorganic Chemistry
S. K. Chattopadhyay, PhD	Professor	Theoretical Molecular Sciences
S. P. Goswami, PhD	Faculty	Molecular Recognition and Supramolecular Chemistry

Computer Science and Technology Department

Name	Designation	Specialization/ Research Area
A. K. Das, PhD	Associate professor	Data Mining and Pattern Recognition, Machine Learning, Audio and Video Signal Analysis, Text Data analysis, Bioinformatics.
A. K. Layek , M.E	Assistant professor	Wireless Telecommunication and Networking
A. Kumar Das, PhD	Professor	Image Processing
A. Mukherjee, PhD	Associate professor	Real Time Systems
A. Sarkar , PhD	Assistant professor	Digital Geometry, combinatorial Geometry, Computational Geometry, Image & shape Analysis
B. K. Sikdar , PhD	Professor	Cellular Automata
J. Sil, PhD	Professor	Machine Learning, Image Processing
M. Hira, M.Tech	Associate professor	Theoretical Computer Science
M. Kule, M.Tech	Assistant professor	Defect Tolerance & Testing of Nanoscale Circuits
S. Biswas, PhD	Assistant professor	Digital Image Processing and Analysis
S. DasBit, PhD	Professor	Mobile Computing, Wireless Sensor Network, Delay Tolerant Network
S. Ghosh, PhD	Assistant professor	Information Retrieval, Machine Learning.
S. Mondal, PhD	Associate professor	Image Processing and pattern Recognition
S. Pal, M.E	Associate Professor	Data Mining and Pattern Recognition, Machine Learning
S. Mitra, PhD	Professor	Mobile computing, QoS issues in cellular network, Ad-hoc network, Multihomed mobile network

Name	Designation	Specialization/ Research Area
Surajeet Ghosh, PhD	Assistant Professor	Computer Architecture
S. Chakroborty, PhD	Professor	Bio-chip, Quantum Computing, Video Image Processing, Big-data application
T. Pal, M.E	Assistant professor	Image Processing, Wireless Multi-media Sensor Network
U. Bhattacharya, PhD	Professor	Mobile network

Earth Sciences

Name	Designation	Specialisation/ Research Area
A, Mukhopadhyay, PhD	Associate Professor	Sedimentology and Stratigraphy
A. K. Mitra, PhD	Assistant Professor	Structural Geology
B. P. Mukhopadhyay, PhD	Professor	Sedimentology and Basin Tectonics
T. K. Gangopadhyay, PhD	Associate Professor	Invertebrate Paleontology

Electrical Engineering Department

Name	Designation	Specialization/ Research Area
A. B. Choudhury, PhD	Associate Professor	Power Systems
A. Barman, M.E.E.	Associate Professor	Measurement, Illumination, Computer Programming and Simulation/ Open Source Software
A. Chakrabarti, PhD	Professor	Power Systems, Networks
A. De, PhD	Assistant. Professor	High Voltage Engineering., Power Systems
A. K. Maitra, PhD	Professor	Power Systems, Power System Protection
A. Rouf, M.Tech.	Professor	Electrical Machines, Non-Conventional Energy
A. Sengupta, PhD	Associate Professor	InstrumentationControl Systems
A. Sengupta, PhD	Professor	Control Systems
A. Sutradhar, PhD	Professor	Instrumentation, Digital systems
B. Barman, M.E	Assistant. Professor	Power Electronics & Machine Drives
B. Basak, PhD	Professor	Electrical Machines, Power Electronics & Drives
C. K. Chanda, PhD	Professor	Power System, Electrical Machines
D. Ganguly, M.E.E.	Associate. Professor	Power Electronics & Drives, Microprocessor Applications
D. Roy, PhD	Professor	Electrical Machines & Drives
D. Sarkar, PhD	Professor	Electrical Machines, electromagnetic Fields
G. Bandyopadhyay, PhD	Professor	Power Systems, Computer Applications

Name	Designation	Specialization/ Research Area
J. Pal, PhD	Professor	Power Systems, Programming in C Language, LaTeX documentation
K. Das (Bhattacharya), PhD	Professor	Microprocessor & Power System Protection
K. Mukherjee, PhD	Assistant Professor	Power Electronics / Electrical Machine Drives, Distributed Generation, Power Quality
M. Pal, PhD	Guest Faculty	Control Systems
M. Sengupta, PhD	Professor	Electromagnetic Electrical Machines and Drives
P. Chattopadhyay, PhD	Assistant. Professor	Power System, Condition Monitoring
P. Syam, PhD	Professor	Power Electronics and Drives
S. Dalapati, PhD	Assistant. Professor	Power Electronics and Drives; DSP/Microcontroller based Applications
S. Mallik, PhD	Professor	Electrical Machines
S. Parui, PhD	Assistant. Professor	Electrical Machines & Drives, Power Systems

Electronics and Tele Communication Department

Name	Designation	Specialization/ Research Area
A. Banerjee, PhD	Associate Professor	VLSI Architectures Design for Communication & Biomedical Engineering, DSP architecture design using CORDIC
A. Pramanik , ME.	Assistant Professor	Error Control Coding, Image Processing, GPS, MIMO, STBC
A. Roy, PhD	Associate Professor	Microprocessor based system, Signal Processing, Power Electronics
B. Ray, PhD	Professor	Signal Processing, Image Processing and VLSI design and testing
C. Roychoudhury, PhD	Assistant Professor	Electrical biosensors with electronic interface, electrical studies of biological cells
D. Mitra, PhD	Assistant Professor	Applied Electromagnetics and Antenna Engineering
M. K. Mahata, PhD	Assistant Professor	III-V heterostructure semiconductor devices.
M. Mitra, PhD	Professor	Fabrication of Microwave Device Like IMPATT, its Characterization and System development
P. Bhattacharyya, PhD	Assistant Professor	Nanomaterial based Chemical Sensors, MEMS based Sensors and Its Signal Processing, Low Power VLSI Design

Name	Designation	Specialization/ Research Area
S. Das, PhD	Professor	Planar circuits, & antennas, metamaterial, RFID
S. K. Parui, PhD	Associate Professor	Microstrip and CPW based Printed Circuits and antennas, Frequency selective surfaces (FSS), Electro-magnetic bandgap structures (EBG), Defected ground structures (DGS)
S. R. B. Chaudhuri, PhD	Professor	Design & Dev. of Small Antenna, Network & Information Security, Digital System Design
S. Banerjee, MTech.	Assistant Professor	High frequency devices, optical communication
T. Acharya, PhD	Assistant Professor	Wireless Communication and Networks, Dynamic spectrum access and software defined radio networks, Green communications

Human Resource Management Department

Name	Designation	Specialization/ Research Area
M. K. Sanyal, PhD	Professor	Entrepreneurship ,Intellectual Property Right , Environmental Planning

Humanities and Social Sciences Department

Name	Designation	Specialization/ Research Area
J. Mukherjee, PhD	Visiting Professor	English
M. Chakraborty, PhD	Visiting Professor	Pluralism in Mathematics
M. Dutta, PhD	Professor	Environmental Economics
M. G. Sarbadhikary , M.Phil	Associate Professor	English
M. Kundu, PhD	Visiting Professor	Social Anthropology
P. S. Roy, PhD	Associate Professor	Marketing Management
R B. Mallik, M.Com, FCMA	Associate Professor	Accounting & Finance
S. Bandyopadhyay, MA	Associate Professor	Sociology

Information Technology Department

Name	Designation	Specialization/ Research Area
A. Biswas, PhD	Associate Professor	Digital Geometry, Image Processing and Pattern Recognition, Medical Image Analysis
C. Giri, PhD	Assistant Professor	VLSI digital Circuit Testing, System-On-Chip Testing, Network-On-Chip Testing

Name	Designation	Specialization/ Research Area
H. Rahaman, PhD	Professor	Design & Test of VLSI Circuits, Network-On-Chip, SOC Testing, Design & Testing of Cryptographic Hardware ,Design & Testing of Micro fluidic Bio Chip
I. Banerjee, PhD	Assistant Professor	Wireless ad-hoc Sensor Network
M. Bhattacharyya, PhD	Assistant Professor	Crowdsourcing,Big Data Analysis,Computational Molecular Biology
P. Ghosal, PhD	Assistant Professor	Optimization of Architectural and Layout Level Design of 3D Nanoscale Systems with major thrust on a) Performance Centric, Power Aware Design of Network-on-Chips(NoC) and b) Performance Centric Layout Design of 3D Integrated Circuits,Post Silicon Nanoscale Technologies and Computing
S. Das, PhD	Assistant Professor	Cellular Automata,Distributed Computing
S.Kandar, M.Tech	Assistant Professor	Secret Sharing, Visual Cryptography
S. Kr. Roy, PhD	Assistant Professor	VLSI Testing, 3DIC Testing
S. Prasad Maity, PhD	Professor	Digital Image Watermarking, Wavelets for image de-noising, watermarking, Access control and Error concealment, Optimized spread Spectrum watermarking, VLSI for watermarking,,PAPR reduction in multicarrier communication ,Wireless Channel Estimation, Multiuser Detection in MC-CDMA, Optical Computing
T. Samanta, PhD	Assistant Professor	Nanometric interconnect design and analysis,Design of algorithms for ASIC, 3D ICs,Design automation for Digital Microfluidic ,Biochip,Protocol design for wireless sensor network

Mathematics Department

Name	Designation	Specialization/ Research Area
A. K. Dhar, PhD	Professor	Non-linear waves in Ocean
B. S. Choudhury, PhD	Professor	Functional Analysis, Topology, Nonlinear Dynamics, Mathematical Economics, Quantum Information theory, Fuzzy

Name	Designation	Specialization/ Research Area
		systems, Stochastic differential equation
B.Mukhopadhyay, PhD	Professor	Elasticity, Thermo elasticity, Thermo visco elasticity, Micropolar elasticity
G. Samanta, PhD	Professor	Mathematical Biology and Operations Research
J. De, PhD	Professor & Head	Elasticity & Plasticity, Mathematical Methods, Fracture Mechanics, Fluid Mechanics
M. Mitra, PhD	Professor	Reliability Theory, Mathematical Statistics, Operations Research, Nonparametric Inference
P. Das, PhD	Associate Professor	Mathematical biology, Neural network, Nonlinear data analysis
P. Saha PhD	Professor	Computational Intelligence
S. Alam, PhD	Assistant Professor	Financial Mathematics
S. K. Mazumder, PhD	Professor	Information, Optimization, O.R, Entropy Optimization and its applications in different branches of Science and Technology
S. Pal (Sarkar), PhD	Assistant Professor	Mathematical Theory of Elasticity & Plasticity
T. Kar, PhD	Professor	Dynamical systems, stability and bifurcation theory, population dynamics, Mathematical Ecology (Theoretical studies on ecology, population management, food chain, conservation of aquatic ecosystems, sustainable use of ecosystem services), Mathematical modeling in ecology and epidemiology, Pest control.
T. Roy, PhD	Professor	Fuzzy and Intuitionistic Fuzzy set Theory, Inventory, Transportation, Reliability Optimization, Information Theory, Portfolio Optimization, Fuzzy and Stochastic Optimization

Mechanical Engineering Department

Name	Designation	Specialization/ Research Area
A Guha ,M. Tech.	Assistant Professor	Advanced Machining, Fluid flow
A. Ganguly, PhD	Assistant Professor	Heat Power Engineering, Solar Energy, Solar Hydrogen systems, Greenhouse

Name	Designation	Specialization/ Research Area
		Technology
A. Sarkar, PhD	Visiting Professor	Thermal Engineering
A.K. Chowdhuri, PhD	Associate Professor	M/C. Design, Combustion
A.K. Dutta, PhD	Professor	Production Engineering
B.K. Bhattacharyya, PhD	Visiting Professor	Production Engineering
B.K. Mandal, PhD	Professor	Alternative Fuels, CFD, Combustion, Refrigeration
D. Datta, PhD	Professor	Ultrasonic Non-destructive evaluation, Composite Materials, Machine Design
P.P. Dey, PhD	Associate Professor	CAD/CAM, Fracture Mechanics, Non Traditional machining
R.N. De, M.E.	Assistant Professor	Production Engineering, Quality Management
S C Mondal, PhD	Associate Professor	Manufacturing, Quality Engineering, Modeling and optimization of manufacturing processes
S. Chakrabarti, PhD	Professor	Power Plant Engineering, CFD, Biomedical
S. Chatterjee, PhD	Professor and Head	Nonlinear Dynamics of mechanical and Micro-mechanical systems
S. Ghosh, PhD	Associate Professor	Energy
S.K. Guha, PhD	Professor	Machine Design & Bearing Lubrication, Tribology
S.K. Karmakar, PhD	Professor	Tribology (Friction, Wear Modeling, Contact Mechanics, Machine Design
S.K. Saha, PhD	Professor	Heat Power Engineering, Heat Transfer Enhancement.
U. Rana, M.Tech	Assistant Professor	Thermal Engineering, CFD

Metallurgy and Materials Engineering Department

Name	Designation	Specialization/ Research Area
A. Basumallick, PhD	Professor and Associate Dean	Nanostructured Materials, Electronic and Magnetic materials
D. Das, PhD	Associate Professor	Wear of Materials Nanomaterials & Nanocomposites
K. K. Ray , PhD	Faculty	Deformation and Fracture
K. K. Ray , PhD	Faculty	Deformation and Fracture
M. Ghosh, PhD	Associate Professor	Aluminium alloys, Crystallographic texture
P. S. Banerjee, PhD	Faculty	Extractive metallurgy, Foundry, Corrosion

Name	Designation	Specialization/ Research Area
P.P.Chattopadhyay, PhD	Professor (On-lien)	Phase Transformation
R Datta, M.Tech	Faculty	Electronics
S. Chatterjee , PhD	Professor	Microalloyed Steel, Advance joining technique
S. Ghosh, M.E.	Associate Professor and Head	Development and Characterization of metal matrix composites, Joining of Materials, Steel Making, Corrosion
S. K.Ghosh, PhD	Professor	Processing-structure-property correlations of steels
S. Kundu, PhD	Assistant Professor	Advance Joining techniques, Corrosion
S. Sadhukhan,M.Tech	Associate Professor	Physical Metallurgy, Mechanical testing, Heat treatment
T. Mandal,MTEch	Assistant Professor	Electronic Materials, Biomaterials, Carbon based Composites

Mining Engineering Department

Name	Designation	Specialization/ Research Area
C. L Salui, PhD	Assistant Professor	GIS and Remote Sensing
G .C.Roy, PhD	Assistant Professor	Coal Mining, Mining Machinery And Optimization Techniques
I. N. Sinha, PhD	Professor	Surface Mining,Mine Environment Science and Management
Md.M.Islam, PhD	Assistant Professor	Mining Pollution control and Management
N. C. Dey, PhD	Professor	Coal Mining. U/G mining machinery Safety & Legistion and Ergonomics
P.Dutta, PhD	Professor Head	Rock Mechanics and Coal Bed Methane(CBM)
P.K.Paul, PhD	Professor	Metal Mining. GIS and
S. D. Bhattacharya, PhD	Assistant Professor	GIS and Remote Sensing
S. Mukhopadhyay, PhD	Associate Professor	Mineral Dressing and Bulk Material Handling
S. Sinha, PhD	Professor	Mine Environment, Mine Planning & Design and Mineral Economics

Physics Department

Name	Designation	Specialization/ Research Area
D. Banerjee , PhD	Professor	Solid State Physics, Transport properties of solids
B. Kumar Guha, PhD	Professor	Solid State Physics, Electroceramics
S. Sarkar , PhD	Professor	Theoretical Nuclear Structure and Nuclear Astrophysics
M. Basu, PhD	Professor	Fibre Optics in linear and nonlinear domain
S. Mukherjee, PhD	Associate Professor	Solid State Physics Synthesis and characterization of nano materials
S. Jana, PhD	Associate Professor	Spectroscopy of Condensed Matter, Rare Earth Laser and Optical Materials
K. Mukherjee, PhD	Associate Professor	High Energy Physics
A. Kundu, PhD	Associate Professor	High Energy Physics, Cosmology
D. Ray, PhD	Assistant Professor	Theoretical Atomic Physics Atomic Physics in Plasmas, Laser-atom interactions.
S. M. Hossain, PhD	Assistant Professor	Low dimensional Solid State Physics
A. Majumdar, PhD	Assistant Professor	Plasma Physics, Plasma Surface Interaction, Transport properties of transition metal ions
M.P. Chowdhury, PhD	Assistant Professor	Carbon nanotubes, Graphine, Nanoelectronics and Nanoscience
A. Bisoi, PhD	Assistant Professor	Experimental Nuclear Physics and Nuclear Astrophysics
M. H. Mondal, PhD	Assistant Professor	Experimental condensed matter physics
D. Majumder, PhD	Assistant Professor	Theoretical condensed matter physics
S. Kanungo, PhD	Assistant Professor (inspire faculty)	Computational and theoretical condensed matter physics

School of community Science and Technology

Name	Designation	Specialization/ Research Area
D.K.Bhattacharyya, PhD	Faculty	Oil Technology
D.K.Bhattacharyya, PhD	Faculty	Oil Technology
J. Bhowal, PhD	Assistant Professor	Biochemistry and Microbiology
M. Ghosh, PhD	Assistant Professor	Analytical Chemistry/Extraction

Name	Designation	Specialization/ Research Area
		Technology
M. Ghosh, PhD	Assistant Professor(contractual)	Analytical Chemistry/ Extraction Technology
P Chattopadhyay, PhD	Faculty	Food Technology, Biochemical Engineering
P. Chattopadhyay, PhD	Faculty	Food Technology, Biochemical Engineering
P. S. Roy, PhD	Professor	Marketing Management
P. S. Roy, PhD	Professor	Marketing Management

Dr. M.N. Dastur School of Materials Science and Engineering

Name	Designation	Specialization/ Research Area
A. K. Chakrabarti, PhD	Professor	Metallurgical manufacturing (foundry, Machining, Welding, Surface Engineering), Extractive Metallurgy
B. C. Mitra, PhD	Professor	Polymer and Polymer Composites
D. Banerjee, PhD	Assistant Professor (contractual)	Nanomaterials, Carbon nanotube, graphene, composite materials, field emission
M. Ray, PhD	Assistant Professor	Experimental and theoretical investigations on semiconductor and hybrid nanostructures.
N. R. Bandyopadhyay, PhD	Professor	Physical Metallurgy of Steel, Materials Characterization, Nano-materials, Energy Materials
P. Saha, PhD	Assistant Professor (inspire faculty)	Polymer Nanocomposites, Polymeric Biomaterials, Water Purification using Nanomaterials, Electrospinning and 3D printing of polymeric materials
R. K. Ray, PhD	Professor	Physical Metallurgy and Materials Engineering
S. Chatterjee, PhD	Professor	Phase Transformation, HSLA Steel, High Strength Steel, Diffusion Bonding of Similar and Dissimilar Materials, Friction Stir Welding of Similar and Dissimilar Materials
S. Ghosh, PhD	Assistant Professor (inspire faculty)	Electrochemical Engineering, Plating Technology, Energy Storage Material, Electrode for Li & Na Ion Battery
T.K. Roy, PhD	Visiting Professor	Making, shaping and treating of steel and conceptual plan Project monitoring

School of Management Sciences

Name	Designation	Specialization/ Research Area
A. Ghosh, FPM (Doctorate)	Assistant Professor On Contract	Strategic Management /Entrepreneurship /Innovation
K. K.. Bhattacharjee, PhD	Assistant Professor On Contract	Optimization
P. K. Paul, PhD	Director, SOMS	GIS, RS & MIS
P. M. Mondal, PhD	Assistant Professor On Contract	Operations Management/ Management Information System
R. Basu, PhD	Assistant Professor On Contract	Operations Management /Quality & Service Management
R. K. Rao Kondasani, PhD	Assistant Professor On Contract	Marketing Management
S. K. Chakraborty, ME,PGDBM	Professor	Operations Management

Centre for Healthcare Science and Technology

Name	Designation	Specialization/ Research Area
A. Barui, PhD	Assistant Professor (Contractual)	
C. D. Mukhopadhyay, PhD	Assistant Professor (Contractual)	Clinical microbiology, Cancer Biology and Imaging
P. Datta, PhD	Assistant Professor (Inspire)	Biomaterials, Biofabrication and Drug Delivery

School of VLSI Technology

Name	Designation	Specialization/ Research Area
A. Sengupta, PhD	INSPIRE Faculty	2-D materials based FET, atomistic simulations
H. Rahaman, PhD	Director	Logic Synthesis, VLSI Design and Test, CAD for Microfluidic Biochips, Nanotechnologies, Reversible Computing
I. Hatai, PhD (Tech.)	Assistant Professor (Contract)	Digital VLSI Design, Digital Signal Processing, Wireless Communication, Biomedical System Design, Architectural Design of ICs.
K. Ghosh, PhD (Engg)	Project Faculty (SMDP-C2SD)	Design and testing of Analog VLSI circuits
P. Ray, PhD	Assistant Professor (Contract)	Biochip design Automation, Embedded System, Algorithm and data structures , VLSI physical design, Object oriented System Design, Computer Architecture, Microcontrollers

Name	Designation	Specialization/ Research Area
P. S. Gupta, MTech	Assistant Professor (Contract)	Nanophotonics and novel 2D materials: Modeling and Simulation
S. Ghosh, PhD	Assistant Professor (Contract)	Digital VLSI Design & VLSI Architectures, Digital Image Watermarking, Synthesis and Verification, VLSI Testing.

Centre of Excellence for Green Energy and Sensor System

Name	Designation	Specialisation/ Research Area
A. Mondal, PhD	Professor and Head	Photovoltaics, Nanomaterials, Sensors
B.Bandyopadhyay, PhD	Adjunct Professor	Solar energy Energy policy
H. Saha PhD	Faculty	Photovoltaics and Sensors
N. Mukherjee, PhD	Assistant Professor (on contract)	Nanomaterials and sensors
P. Chaudhury, PhD	Faculty	Photovoltaics
R. Bhattacharyya, PhD	Faculty	Photovoltaics and Sensors
S. Guha , PhD	Visiting faculty	Photovoltaics
S. Patra , PhD	Inspire Faculty	Electrochemistry and Energy storage systems
S.Mukhopadhyay, PhD	Assistant Professor (on contract)	Photovoltaics

LIST OF OFFICERS

SI No.	Name	Designation
1.	Ajoy Kumar Ray	Director
2.	Biman Bandyopadhyay	Registrar
3.	Hari Prasad Sharma	Joint Librarian
4.	Subrata Kumar Kar	Univ. Engineer
5.	Sambhunath Datta	Deputy Registrar
6.	Nirmalya Kumar Bhattacharyya	Deputy Controller of Examinations
7.	Devasis Datta	Deputy Registrar (R&C)
8.	Alok Kumar Maity	Deputy Registrar(Audit)
9.	Sushil Kumar Barman	Assistant Librarian (S.G)
10.	Dibyendu Chatterjee	Superintendent of Workshop
11.	Usha Sankar Bhattacharya	Assistant Training Officer (Sr.)
12.	Alok Kumar Mitra	Assistant Proctor (Sr.)
13.	Bivore Das	Assistant Registrar (Sr.)
14.	Shib Sankar Basak	Assistant Registrar (Sr.)
15.	Dipankar Chakrabarty	Assistant Controller of Examinations
16.	Abani Oraon	Assistant Librarian
17.	Rubi Golder	Medical Officer
18.	Zia Ul Alam	Physical Instructor (Sr.)
19.	Sandip Chattopadhyay	Physical Instructor

LIST OF TECHNICAL STAFFS

Sl. No.	Employee Name	Designation
1	Bagala Prasad Patra	Superintendent Technical
2	Basudeb Aich	Superintendent Technical
3	Basudeb Dey	Superintendent Technical
4	Dipankar Das	Superintendent Technical
5	Jayanta Kumar Chandra	Superintendent Technical
6	Milan Kanti Dey	Superintendent Technical
7	Ranjan Kumar Biswas	Superintendent Technical
8	Rashbehari Nayak	Superintendent Technical
9	Santanu Chattopadhyay	Superintendent Technical
10	Susanta Kumar Chakravorty	Superintendent Technical
11	Sunil Kr Maji	Superintendent Technical
12	Tushar Kanti Das	Superintendent Technical
13	Gautam Kumar Garai	Supervisor Instructor
14	Rupchand Naskar	Workshop Instructor
15	Tapan Kr Das	Workshop Instructor
16	Amalendu Sahoo	Technical Assistant - Grd. I
17	Amar Tarafder	Technical Assistant - Grd. I
18	Amrita Bandyopadhyay	Technical Assistant - Grd. I
19	Anjana Sengupta	Technical Assistant - Grd. I
20	Asish Kumar Paul	Technical Assistant - Grd. I
21	Bibhas Chandra Mitra	Technical Assistant - Grd. I
22	Biswajit Das	Technical Assistant - Grd. I
23	Debjit Bhowmik	Technical Assistant - Grd. I
24	Prasanta Gope	Technical Assistant - Grd. I
25	Prodip Kumar Roy	Technical Assistant - Grd. I
26	Rajat Mukhopadhyay	Technical Assistant - Grd. I
27	Raktim Maity	Technical Assistant - Grd. I
28	Sajal Kumar Chakraborty	Technical Assistant - Grd. I

Sl. No.	Employee Name	Designation
29	Sugata Munshi	Technical Assistant - Grd. I
30	Sumitra Bagchi	Technical Assistant - Grd. I
31	Susanta Dhara	Technical Assistant - Grd. I
32	Sutap Chakraborty	Technical Assistant - Grd. I
33	Amal Kumar Mandal	Technical Assistant - Grd. II
34	Amitava Chowdhury	Technical Assistant - Grd. II
35	Amitava Pal	Technical Assistant - Grd. II
36	Amiya Ratan Rout	Technical Assistant - Grd. II
37	Bijit Kumar Dey	Technical Assistant - Grd. II
38	Bishnu Pada Choudhury	Technical Assistant - Grd. II
39	Biswajit Samanta	Technical Assistant - Grd. II
40	Braja Gopal Koner	Technical Assistant - Grd. II
41	Brindaban Patta	Technical Assistant - Grd. II
42	Hari Prasad Saha	Technical Assistant - Grd. II
43	Janardan Kar	Technical Assistant - Grd. II
44	Kankar Mohan Das	Technical Assistant - Grd. II
45	Keyarani Mandal	Technical Assistant - Grd. II
46	Mohini Mohan Debsharma	Technical Assistant - Grd. II
47	Nani Gopal Roy	Technical Assistant - Grd. II
48	Partha Sarathi Baruri	Technical Assistant - Grd. II
49	Pradip Kumar Das	Technical Assistant - Grd. II
50	Pradip Mistry	Technical Assistant - Grd. II
51	Rajib Bandyopadhyay	Technical Assistant - Grd. II
52	Ramesh Halder	Technical Assistant - Grd. II
53	Rumeli Bose	Technical Assistant - Grd. II
54	Salil Kumar Dalui	Technical Assistant - Grd. II
55	Sanjoy Naskar	Technical Assistant - Grd. II
56	Santosh Kumar Kayal	Technical Assistant - Grd. II
57	Sarbani Barari	Technical Assistant - Grd. II
58	Sarbani Sarkar	Technical Assistant - Grd. II

Sl. No.	Employee Name	Designation
59	Sintu Das	Technical Assistant - Grd. II
60	Snehashis Saha	Technical Assistant - Grd. II
61	Soma Naskar Sardar	Technical Assistant - Grd. II
62	Soumen Gope	Technical Assistant - Grd. II
63	Souvik Patra	Technical Assistant - Grd. II
64	Subhajit Biswas	Technical Assistant - Grd. II
65	Subhasish Pradhan	Technical Assistant - Grd. II
66	Sujata Misra	Technical Assistant - Grd. II
67	Swapan Kumar Jana	Technical Assistant - Grd. II
68	Swaroop Shobhan Mukherjee	Technical Assistant - Grd. II
69	Bablu Santra	Sr. Mechanics-II
70	Dibyendu Paul	Sr. Mechanics
71	Jayanta Kundu	Sr. Mechanics
72	Pradip Kr Dey	Sr. Mechanics
73	Saibal Ghosh	Sr. Mechanics
74	Yeasin Mullick	Turner cum Fitter
75	Nikhil Ch Mondal	Fitter
76	Sandip Kumar Ram	Fitter
77	Hiru Kumar Majhi	Hammer Man

LIST OF ADMINISTRATIVE AND OTHER STAFFS

Sl. No.	Employee Name	Designation
1	Haran Chandra Sadhukhan	P S To The Director
2	Arun Kumar Ghosh	Sr. Superintendent
3	Ujjal Kumar Gupta	Sr. Superintendent
4	Mintu Charan Khan	Personal Assistant
5	Tarun Paul	Personal Assistant
6	Alok Roy	Jr. Superintendent
7	Kashi Nath Singh	Jr. Superintendent
8	Nimain Charan Satapathy	Jr. Superintendent
9	Raja Banerjee	Jr. Superintendent
10	Ruma Naskar Chakraborty	Jr. Superintendent
11	Sunil Kr Manna	Jr. Superintendent
12	Tamal Kumar Das	Jr. Superintendent
13	Arup Kumar Patra	Jr. Superintendent
14	Biplab Mukherjee	Jr. Superintendent
15	Gautam Biswas	Jr. Superintendent
16	Judhistir Mandal	Jr. Superintendent
17	Madanmohan Bose	Jr. Superintendent
18	Mahadev Biswas	Jr. Superintendent
19	Mantu Goswami	Jr. Superintendent
20	Parthasarathi Maity	Jr. Superintendent
21	Rasbihari Chakrabarti	Jr. Superintendent
22	Satyajit Barua	Jr. Superintendent
23	Susmita Sarkar	Jr. Superintendent
24	Swati Kar	Jr. Superintendent
25	Tarak Nath Das	Jr. Superintendent
26	Chinmoy Sana	Sr. Stenographer
27	Malay Garai	Sr. Stenographer
28	Mamit Mitra	Sr. Stenographer

Sl. No.	Employee Name	Designation
29	Saumendu Atta	Library Asst
30	Nilufar Ahmed	Nurse
31	Papiya Chattopadhyay	Nurse
32	Snigdha Dutta Panja	Nurse
33	Moumita Sahoo Porya	Senior Pharmacist
34	Rabi Sankar Kandar	Senior Pharmacist
35	Abir Kumar Ganguly	U.D. Clerk
36	Samarendra Nath Ghosh	U.D. Clerk
37	Balaram Ray	Sr. Telephone Operator
38	Subhra Roy	Jr. Steno-Typist
39	Sujit Mazumdar	Steno-Typist
40	Gour Mondal	Sr. Cash Sarkar
41	Debasish Saha	Sr. Binder
42	Abhijit Bhattacharyya	Jr. Assistant
43	Anindya Mukhopadhyay	Jr. Assistant
44	Arindam Banerjee	Jr. Assistant
45	Arpita Das	Jr. Assistant
46	Asim Das Chakraborty	Jr. Assistant
47	Ayandeb Datta	Jr. Assistant
48	Baidyanath Mondal	Jr. Assistant
49	Chandrani Mukhopadhyay	Jr. Assistant
50	Partha Sarathi Nath	Jr. Assistant
51	Pijush Datta	Jr. Assistant
52	Ram Sunder Yadav	Jr. Assistant
53	Santanu Ganguli	Jr. Assistant
54	Sarojit Das	Jr. Assistant
55	Shyamal Kr Manna	Jr. Assistant
56	Somnath Das	Jr. Assistant
57	Sourasis Mitra	Jr. Assistant

Sl. No.	Employee Name	Designation
58	Subrata Baidya	Jr. Assistant
59	Suchita Khakha	Jr. Assistant
60	Sujan Sarkar	Jr. Assistant
61	Sujata Mandi	Jr. Assistant
62	Surajit Das	Jr. Assistant
63	Tarun Kanti Mitra	Jr. Assistant
64	Utpal Ghosh	Jr. Assistant
65	Uttam Chatterjee	Jr. Assistant
66	Ashoke Halder	Jr. Driver
67	Mithilesh Kumar Roy	Jr. Driver
68	Sibu Das	Jr. Driver
69	Ashok Kumar Ghosh	Record Supplier
70	Ashoke Kr Das	Record Supplier
71	Gobardhan Nayak	Record Supplier
72	Jagannath Roy	Helper -I
73	Md Sirajuddin	Helper-II
74	Md Murtuza	Helper-II
75	Badal Ch Das	Helper-II
76	Joydeb Ganguly	Helper-II
77	Amar Nath Dutta	Helper-II
78	Chanda Devi	Helper-II
79	Deb Kumar Jana	Helper-II
80	Murari Mondal	Helper-II
81	Prabir Naskar	Helper-II
82	Rajendra Bhagat	Helper-II
83	Susanta Bhattacharjee	Helper-II
84	Ashura Begam	Helper - III
85	Bijon Sarkar	Helper - III
86	Biplab Kayal	Helper - III

Sl. No.	Employee Name	Designation
87	Dhiman Chandra Das	Helper - III
88	Rita Ghosh	Helper - III
89	Ruma Das Ghosh	Helper - III
90	Sanjay Singh	Helper - III
91	Sanjoy Bhagat	Helper - III
92	Santinath Chakraborty	Helper - III
93	Suresh Chandra Naik	Helper - III
94	Subir Ghosh	Sr. Cyclo. Operator
95	Pratap Pramanick	Duplicating Operator
96	Satya Narayan Karmakar	Lab. Attnd-III
97	Rabindra Nath Banerjee	Methor Fitter
98	Md Shamim	Fitter Asstt.
99	Biswajit Kar	Sr. Cook
100	Arun Kr Patra	Cook
101	Kalyan Prasad Pathak	Cook
102	Murali Mohan Mohanty	Cook
103	Nirmal Kar	Cook
104	Ashok Kumar Roy	Cook
105	Bikash Majhi	Cook
106	Joydeb Dolai	Cook
107	Manas Kumar Saha	Cook
108	Rabin Jana	Cook
109	Radhashyam Chatterjee	Cook
110	Ranjan Kumar Pal	Cook
111	Sanjib Das	Cook
112	Sankar Karmakar	Cook
113	Tarak Majhi	Cook
114	Taraprasanna Ganguly	Cook
115	Tarun Chandra Das	Cook

Sl. No.	Employee Name	Designation
116	Uttam Kumar Dolai	Cook
117	Tribhuban Shaw	Head Durwan
118	Badal Seal	Sr. Durwan
119	Bhanu Das	Sr. Durwan
120	Bhulu Ghosh	Sr. Durwan
121	Bimal Kumar Ghosh	Sr. Durwan
122	Debabrata Patra	Sr. Durwan
123	Debendra Nath Ghosal	Sr. Durwan
124	Ganesh Sardar	Sr. Durwan
125	Kajal Bhattacharya	Sr. Durwan
126	Krushna Ch Kar	Sr. Durwan
127	Mahesh Das	Sr. Durwan
128	Nemai Charan Bal	Sr. Durwan
129	Ram Brij Prasad Harijan	Sr. Durwan
130	Shyamsundar Ganguly	Sr. Durwan
131	Sibaprasad Jana	Sr. Durwan
132	Swapan Chakraborty	Sr. Durwan
133	Tarak Das	Sr. Durwan
134	Tushar Kanti Mitra	Sr. Durwan
135	Arabinda Samanta	Jr. Darwan
136	Asik Mohammad	Jr. Durwan
137	Bapi Majhi	Jr. Durwan
138	Biswajit Sarkar	Jr. Durwan
139	Biswanath Darjee	Jr. Durwan
140	Biswanath Das	Jr. Durwan
141	Chandan Karmakar	Jr. Durwan
142	Debashis Mondal	Jr. Durwan
143	Gouranga Chowdhury	Jr. Durwan
144	Harekrushna Dash	Jr. Durwan

Sl. No.	Employee Name	Designation
145	Pintu Das	Jr. Durwan
146	Pradip Das	Jr. Durwan
147	Rabi Nayak	Jr. Durwan
148	Sanjoy Ghosh	Jr. Durwan
149	Sapani Nayek	Jr. Durwan
150	Sisir Kumar Roy	Jr. Durwan
151	Sudama Chowdhury	Jr. Durwan
152	Sudarshan Mahato	Jr. Durwan
153	Sushil Kumar Dey	Jr. Durwan
154	Tarak Nath Jana	Jr. Durwan
155	Amiya Kumar Paul	Sr. Peon
156	Arati Majumdar	Sr. Peon
157	Asit Baran Dey	Sr. Peon
158	Bimal Kumar Jana	Sr. Peon
159	Debasish Sikdar	Sr. Peon
160	Dharmendra Das	Sr. Peon
161	Gopal Chandra Parua	Sr. Peon
162	Jahar Pal	Sr. Peon
163	Julfiker Ali Molla	Sr. Peon
164	Kanai Das	Sr. Peon
165	Lakshman Hansda	Sr. Peon
166	Pradut Kr Manna	Sr. Peon
167	Prosenjit Panja	Sr. Peon
168	Purnendu Bera	Sr. Peon
169	Rabin Das	Sr. Peon
170	Rama Roy	Sr. Peon
171	Ranu Dey	Sr. Peon
172	Richard Francis Subba	Sr. Peon
173	Saleha Begum	Sr. Peon

Sl. No.	Employee Name	Designation
174	Sanjay Ghosh	Sr. Peon
175	Subrata Chakraborty	Sr. Peon
176	Sukumar Sarkar	Sr. Peon
177	Swapan Banerjee	Sr. Peon
178	Avijit Nath	Jr. Peon
179	Bibhuti Bhusan Dey	Jr. Peon
180	Bimal Dutta	Jr. Peon
181	Chaitali Bhattacharjee	Jr. Peon
182	Dipendu Paul	Jr. Peon
183	Kakali Pakhira Pan	Jr. Peon
184	Krishna Chakraborty	Jr. Peon
185	Kumaresh Dey	Jr. Peon
186	Mahua Bandopadhyay	Jr. Peon
187	Malati Dey	Jr. Peon
188	Manoj Bhagat	Jr. Peon
189	Milon Kumar Das	Jr. Peon
190	Mrinmoy Kumar Jana	Jr. Peon
191	Narayan Chandra Dash	Jr. Peon
192	Prasanta Mallick	Jr. Peon
193	Rakesh Kumar Nayak	Jr. Peon
194	Sandip Pramanick	Jr. Peon
195	Santanu Pramanick	Jr. Peon
196	Subhadra Manna	Jr. Peon
197	Subhas Sarkar	Jr. Peon
198	Tarak Nath Dey	Jr. Peon
199	Uttam Pal	Jr. Peon
200	Bishu Kerketta	Head Mali
201	Mantu Chakraborty	Head Mali
202	Buddhadev Samanta	Sr. Mali

Sl. No.	Employee Name	Designation
203	Dilip Kumar Das	Sr. Mali
204	Sk Karim	Sr. Mali
205	Dilip Kumar Bag	Jr. Mali
206	Rajkumar Dhali	Jr. Mali
207	Sadhu Thakur	Jr. Mali
208	Sidheswar Roy	Jr. Mali
209	Tinku Das	Jr. Mali
210	Ashoke Routh	Sr. Sweeper
211	Gangadhar Nayak	Sr. Sweeper
212	Gita Hela	Sr. Sweeper
213	Niranjan Nayak	Sr. Sweeper
214	Pramila Nayak	Sr. Sweeper
215	Rajkumar Dome	Sr. Sweeper
216	Ram Chandra Routh	Sr. Sweeper
217	Bhola Prasad Harijan	Jr. Sweeper
218	Chandra Shekhar Malakar	Jr. Sweeper
219	Idrish Mallick	Jr. Sweeper
220	Jaydeb Barua	Jr. Sweeper
221	Kailash Nayak	Jr. Sweeper
222	Laloo Hela	Jr. Sweeper
223	Menoka Turi	Jr. Sweeper
224	Md Riaz	Jr. Sweeper
225	Mina Routh	Jr. Sweeper
226	Nageswar Mahato	Jr. Sweeper
227	Naresh Bhagat	Jr. Sweeper
228	Rajesh Routh	Jr. Sweeper
229	Ram Prasad Routh	Jr. Sweeper
230	Sekhar Rao	Jr. Sweeper
231	Susanta Pal	Jr. Sweeper

Sl. No.	Employee Name	Designation
232	Tapan Oraon	Jr. Sweeper
233	Milan Majumder	Sr. Farash
234	Biswajit Das	Store Helper
235	Joydeb Das	Workshop Attendant-I
236	Ram Nath Shaw	Workshop Attendant-I
237	Amarendra Nath Polley	Workshop Attendant-II
238	Ajoy Kumar Das	Workshop Attendant-III
239	Sudipta Mandal	Work Assistant (Dresser)

LIST OF MESS EMPLOYEES

1	Ajit Kumar Bera	28	Lakshmi Jana
2	Amaresh Majhi	29	Makhan Kr Kar
3	Amit Dolui	30	Mangal Nayek
4	Ananta Kumar Jena	31	Md Sirajuddin
5	Aparna Biswas	32	Mukul Roy
6	Ashok Mahato	33	Nawal Kishore Singh
7	Asit Roy	34	Nisha Dhara
8	Asto Sardar	35	Parbati Das
9	Babaji Nayak	36	Rakhahari Pathak
10	Bablu Majhi	37	Ram Santra
11	Bhagirath Nayak	38	Rina Halder
12	Bijoli Ray	39	Samar Dutta
13	Bistu Charan Mahakur	40	Sarbeswar Shaw
14	Chanda Hela	41	Saroj Maity
15	Chaya Das	42	Sasanko Sekhar Konar
16	Dhananjoy Majhi	43	Satya Ranjan Bera
17	Dhaneswar Nayek	44	Sridhar Nayek
18	Dilip Majhi	45	Subal Nayak
19	Gokul Nayek	46	Sudarshan Dolai
20	Gora Das	47	Sukumar Bhattacharjee
21	Goutam Dalapati	48	Sulochana Nayak
22	Hemanta Majhi	49	Sunil Kumar Bera
23	Jhuma Das	50	Tapan Kumar Roy
24	Kalo Majhi	51	Tapash Majhi
25	Kedar Nayak	52	Tararani Shaw
26	Khudiram Majhi	53	Uttam Majhi
27	Krishna Sarkar		

IEST Shibpur

Publications

Appendix 3



2017-18

11 PUBLICATIONS IN 2017-18

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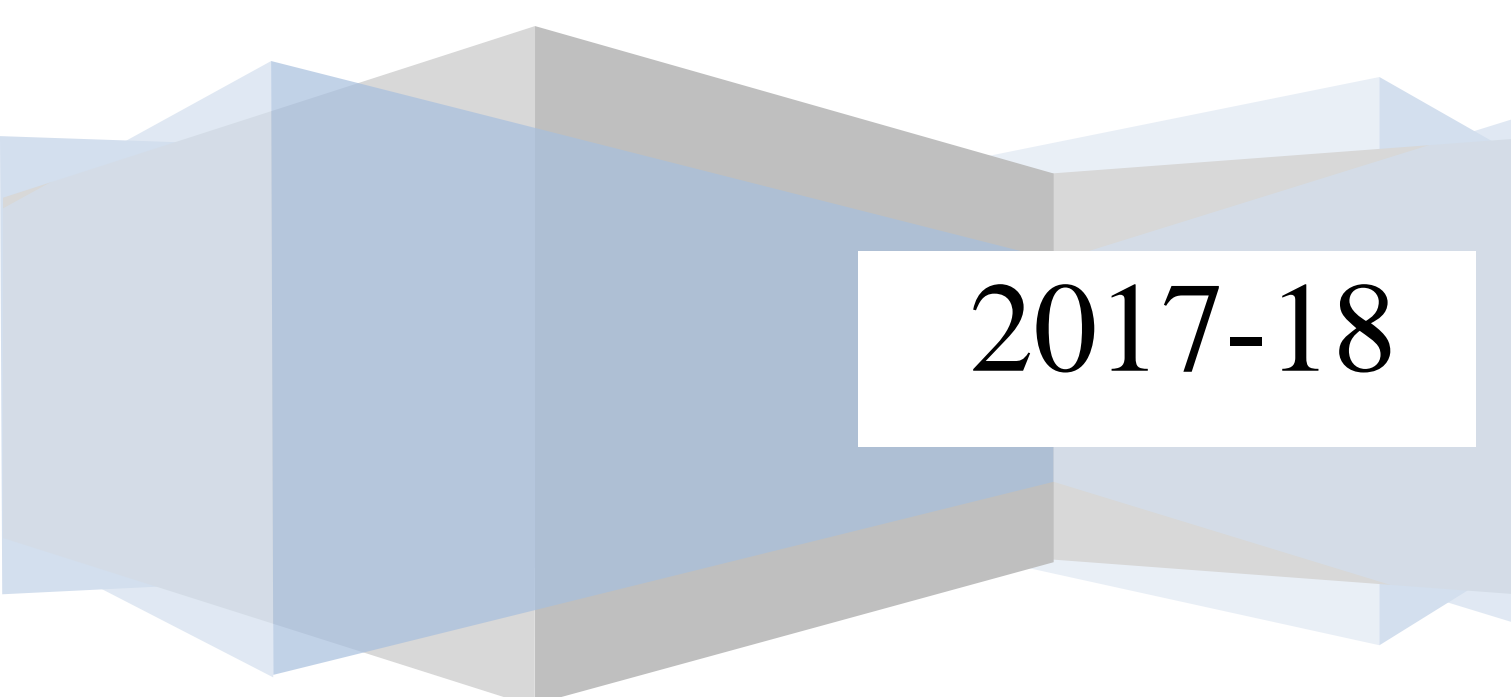
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IEST Shibpur

Separate Audit Report

Appendix 4



2017-18



**भारतीय लेखा तथा लेखा-परीक्षा विभाग
महा निदेशक, लेखा-परीक्षा का कार्यालय,
केन्द्रीय, कोलकाता**

**INDIAN AUDIT AND ACCOUNTS DEPARTMENT
OFFICE OF THE DIRECTOR GENERAL OF AUDIT,
CENTRAL, KOLKATA.**

No: OA II (AB)/AR/2017-18/IIEST / 553

Date: 14.02.19

A copy of the Separate Audit Report alongwith Annexure on the accounts of the **Indian Institute of Engineering Science and Technology, Shibpur** for the year 2017-18 is forwarded to the **Director, Indian Institute of Engineering Science and Technology, Shibpur, P.O.-Botanic Garden,, Howrah-711103** for information and necessary action.

Arrangement may please be made for preparation of Hindi Version of the Separate Audit Report with Annexure at your end and sending the same directly to the Ministry.

It may please be ensured that the Audited Accounts and the Separate Audit Report along with Annexure are placed before the apex body for consideration and adoption before the same are sent to the Government for being placed in Parliament.

Two copies of the printed Annual Report for the year 2017-18 (both English and Hindi Version) containing the Audited Accounts and the Separate Audit Report along with Annexure, as laid before Parliament, may please be forwarded to this Office for necessary action at this end.

Encl.: As stated


Dy. Director (Inspection)

जि. आई. प्रेस बिल्डिंग, 8 किरण शंकर राय रोड (1म मंजिल), कोलकाता-700001
Govt. of India Press Building. 8, Kiran Sankar Roy Road, Kolkata- 700001
Phone : 2254-0221, (Gram: ACCOUNTCENT) POST BOX: 2699, Fax No.: 033 22135377



भारतीय लेखा तथा लेखा-परीक्षा विभाग
महा निदेशक, लेखा-परीक्षा का कार्यालय,
केन्द्रीय, कोलकाता

**INDIAN AUDIT AND ACCOUNTS DEPARTMENT
OFFICE OF THE DIRECTOR GENERAL OF AUDIT,
CENTRAL, KOLKATA.**

No: OA II (AB)/AR/2017-18/IIEST / 552

Date: 14.02.2019

To
The Secretary,
Ministry of Human Resource Development,
Government of India,
Department of Higher Education,
Technical Section-I, Shastri Bhawan,
New Delhi - 110001

**Subject: Separate Audit Report on the accounts of the Indian Institute of Engineering
Science and Technology, Shibpur, Howrah for the year 2017-18**

Sir,

I am to forward herewith the Separate Audit Report in the prescribed format introduced by the C & A.G of India on the accounts of the **Indian Institute of Engineering Science and Technology, Shibpur, Howrah** for the year 2017-18. A copy of the annual accounts of the organisation for the year 2017-18 is also enclosed.

2. Despite mention in previous year's Audit Report, the Institute has not taken any rectificatory measures in the matters objected in Para No. 2.2.
3. Two copies of Separate Audit Report (both English and Hindi Version), as presented before Parliament, may please be forwarded to this office for necessary action at this end.
4. The dates of laying the audited accounts and the Separate Audit Report for the years 2014-15 to 2017-18 on the Tables of both the Houses of Parliament may also please be communicated to this office.

Yours faithfully,

(A. Das)

Principal Director of Audit
Central: Kolkata

Encl.: As stated

जि. आई. प्रेस बिल्डिंग, 8 किरण शंकर राय रोड (1म मंजिल), कोलकाता-700001
Govt. of India Press Building, 8, Kiran Sankar Roy Road, Kolkata- 700001
Phone : 2254-0221 (Gram: ACCOUNTCENT) POST BOX: 2699. Fax No.: 033 22135377

Separate Audit Report of the Comptroller & Auditor General of India on the Accounts of the Indian Institute of Engineering Science and Technology, Shibpur, Howrah for the year ended 31 March 2018

We have audited the attached Balance Sheet of the Indian Institute of Engineering Science and Technology, Shibpur, Howrah as at 31 March 2018, the Income and Expenditure Account and Receipts and Payments Account for the year ended on that date under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 read with Section 22(2) of the National Institute of Technology, Science Education and Research (Amendment) Act, 2014. These financial statements are the responsibility of the Institute's Management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This separate Audit Report contains the comments of the Comptroller and Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum-performance aspects, etc., if any, are reported through Inspection Reports/CAG's Audit Reports separately.
3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the Management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.
4. Based on our audit, we report that:

- i. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit;
- ii. The Balance Sheet and Income and Expenditure Account/Receipt and Payment Account dealt with by this report have been drawn up in the format prescribed by the Ministry of Human Resource Development, Government of India vide order No. 29-4/2012-FD dated 17 April 2015.
- iii. In our opinion, proper books of accounts and other relevant records have been maintained by the Indian Institute of Engineering Science and Technology, Shibpur, Howrah as required under Section 22(2) of the National Institute of Technology, Science Education and Research (Amendment) Act, 2014 in so far as it appears from our examination of books.
- iv. We further report that

Comments on accounts

A Balance Sheet

1.1 Liabilities

1.1.1 Current Liabilities and Provisions (Schedule-3): ₹ 50.86 crore

The above head was overstated by ₹27.47 crore due to inclusion of provident fund balance of employees instead of attaching with annual accounts after preparing separate fund account. Such contravention of Format of Account prescribed by MHRD resulted in overstatement of Current Assets, Loans and Advances (Schedule-7) by ₹27.47 crore.

1.2 Assets

1.2.1 Loans, Advances and Deposits (Schedule-8): ₹4.95 crore

The above head was understated by ₹4.46 crore due to non-inclusion of receivable amount instead of the same being shown as negative balance under the head Current Liabilities and Provisions (Schedule-3) as under:

- a) Inclusion of negative balance of ₹46.96 lakh against six sponsored projects (Schedule-3b) in contravention of Format of Accounts prescribed by MHRD.
- b) Inclusion of negative balance in respect of 13 head of accounts totalling ₹ 3.99 crore under Current Liabilities and Provisions.

Resultantly, Current Liabilities and Provisions (Schedule-3) was understated by ₹4.46 crore.

B General

2.1 Instead of identification of receipts of ₹17.79 lakh, the amount was shown in the Suspense Account under the head Current Liabilities and Provision (Schedule-3).

2.2 Despite mention in previous years audit report, no rectification was done in following cases:

- (i) The material effect on change of depreciation as per Companies Act, 1956 from written down value to straight line method at the rate prescribed by MHRD since the year 2013-14 was not disclosed in annual account.
- (ii) The retirement benefits were not provided as per actuarial method though specified in Format of Account prescribed by MHRD.
- (iii) In violation of Format of Account prescribed by MHRD, the Institute did not provide details of bank account as an annexure to Current Assets (Schedule-7).
- (iv) Though there was no sanction letter against the receivable amount of ₹7.22 crore, the amount was shown as receivable from MHRD, resulting in overstatement of both assets and liabilities by ₹7.22 crore.
- (v) No provision was made for advance of ₹0.93 lakh towards procurement of 4041 books remaining unadjusted from eight to four years.
- (vi) Although there were 68 Endowment Funds valuing ₹11.23 crore, Institute could utilise only ₹ 7 lakh from 18 Funds.

(vii) There was a discrepancy of ₹1.13 crore between Earmarked Fund (Schedule-2) and assets position against the fund balance due to keeping the amount in general account of Institute instead of distinctly under Earmarked Fund.

2.3 Although time-barred, Institute did not write back to account cheques valuing ₹1 lakh for two banks (UCO-489 and SBI-857) issued during June - December 2017.

2.4 In violation of Format of Account prescribed by MHRD, a discrepancy of ₹43 lakh out of Capital Grant (Plan) was cropped up between net creation of fixed assets of ₹18.91 crore in Schedule-4A and capitalisation of fixed assets of ₹19.34 crore in Corpus Fund/Capital Fund (Schedule-1).

2.5 Income from investment including accrued interest was shown as ₹1.57 crore and ₹1.25 crore under Schedule-2 (Earmarked/Endowment Fund) and Schedule-11 (Income from Investment) respectively, resulting in discrepancy of ₹ 32 lakh.

C Grants-in-aids

The Institute is mainly financed from Government of India. Institute had an opening balance of grants (Schedule-10) as ₹ (-)17.64 crore. For the year 2017-18, Grants-in-aids sanctioned for and received by Institute were ₹130 crore. Out of total available grants of ₹112.36 crore, Institute utilised ₹119.58 crore (Revenue-₹100.24 crore and Capital-₹19.34 crore) leaving an excess expenditure of ₹7.22 crore.

Further, during the year 2017-18, Institute received grant of ₹95.52 lakh from Government of West Bengal and there was an opening balance of ₹1.73 lakh (Schedule-10). Out of total available grants (₹97.25 lakh), Institute made revenue expenditure of ₹96.78 lakh leaving an unspent grant of ₹0.47 lakh.

D. Net effect

The net impact of the comments given in preceding paragraphs was that both Assets and Liabilities were overstated by ₹23.01 crore as at 31 March 2018.

E. Management letter

Deficiencies which have not been included in the Audit Report have been brought to the notice of the Director, IEST Shibpur, through a management letter, issued separately for remedial/corrective action.

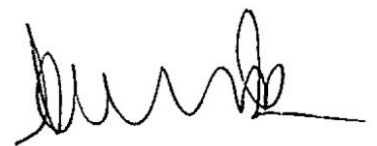
v. Subject to our observations in the preceding paragraphs, we report that the Balance Sheet, Income and Expenditure Account and Receipts and Payments Account dealt with by this report are in agreement with the books of accounts.

vi. In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in Annexure to this Audit Report, give a true and fair view in conformity with accounting principles generally accepted in India.

a. in so far as it relates to the Balance Sheet, of the state of affairs of the Indian Institute of Engineering Science and Technology, Shibpur as at 31 March 2018 and

b. in so far as it relates to Income and Expenditure Account of the Surplus for the year ended on that date.

For and on behalf of the C&AG of India



(A. Das)
Principal Director of Audit
(Central) Kolkata

Place: Kolkata
Date: 14.02.2019

Annexure

A. Adequacy of Internal Audit System

Internal Auditing System is inadequate due to the following:

1. There was no internal audit manual of Institute.

B. Adequacy of Internal Control System

Internal Control System is inadequate in the following areas:

1. There was no plan for rotation of duties of employees dealing with cash, stocks and other valuables.
2. Fidelity guarantees was not obtained in respect of employees handling valuables such as cash and stocks.
3. Insurance coverage relating to cash in transit and cash in hand was inadequate.
4. Cheque Protectors were not used.
5. The Institute had no centralized purchase department.
6. Identity cards were neither renewed periodically nor got back from the employees at the time of retirement.

C. System of physical verification of Assets and Inventories.

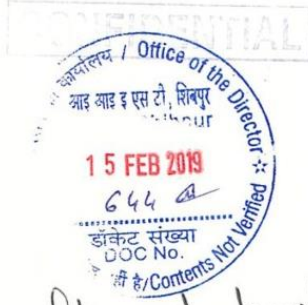
Institute did not prepare any consolidated Fixed Assets Register as per GFR-22 (2017) during the year 2017-18. Further, Institute did not conduct physical verification of fixed assets as well as inventories.

D Regularity in payment of statutory dues:

The Institute is regular in payment of statutory dues.



A.Das
IA & AS



भारतीय लेखा तथा लेखा-परीक्षा विभाग
महा निदेशक, लेखा-परीक्षा का कार्यालय,
केन्द्रीय, कोलकाता

**INDIAN AUDIT AND ACCOUNTS DEPARTMENT
OFFICE OF THE DIRECTOR GENERAL OF AUDIT,
CENTRAL, KOLKATA.**

D.O No. OAII(AB)/AR/2017-18/IEST/554
Date: 14.02.19

Dear

Shri. Shobkarab...

I have audited the annual accounts of the IEST, Shibpur, Howrah for the year 2017-18 and have issued the Audit Report thereon vide letter dated 14.02.2019. The following deficiencies noticed during the course of audit were not included in the Audit Report but are brought to your notice for corrective and remedial action.

1. In a deviation from Format of Accounts prescribed by MHRD, closing balance of ₹8.40 crore under deposit account was not included in Receipts and Payments Account.
2. No details were provided for inclusion of capital expenditure of ₹36.36 lakh against earmarked fund titled DST- FIST under the head Designated/Earmarked/Endowment Funds (Schedule-2).
3. Fixed Assets (Schedule-4): ₹ 123.40 crore
 - a) In a departure from declared Accounting Policy, fixed asset, viz computer software had been depreciated more than its asset value, resulting understatement of both Fixed Assets (Schedule-4) and Corpus/Capital Fund (Schedule-1) by ₹ 0.90 lakh.
 - b) The above head was overstated by ₹18 lakh due to inclusion of repair and maintenance charges for electrical accessories and lift instead of including as revenue expenditure, resulting in overstatement of Corpus/ Capital Fund (Schedule-1) by ₹ 18 lakh.

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4. Depreciation

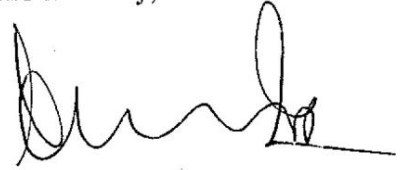
The above head was overstated by ₹0.90 lakh due to overcharging of depreciation @ 5 per cent on repair charges of ₹18 lakh incorrectly included under Electrical Installation and Equipment (Fixed Assets/Schedule-4) resulting in understatement of Excess of Income over Expenditure by ₹0.90 lakh.

5. Academic Receipts (Schedule-9): ₹17.80 crore

The above head was overstated by ₹29 lakh due to inclusion of Caution Money payable to the students resulting in overstatement of Excess of Income over Expenditure by ₹29 lakh.

Regards.

Yours sincerely,



Prof. Parthasarathi Chakrabarti,
Director,
Indian Institute of Engineering Science and Technology (IEST), Shibpur
Howrah -711103.