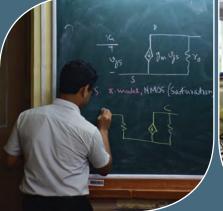


भारतीय अभियांत्रिकी विज्ञान एवं प्रौद्योगिकी संस्थान, शिवपुर INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR









वार्षिक प्रतिवेदन Annual Report 2019-20



## वार्षिक प्रतिवेदन **Annual Report** 2019-20

(April 01, 2019 - March 31, 2020)

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





# **Detailed Contents**

## **01** Organisation and <u>Administration</u>

1.1 Board of Governors	13
1.2 The Senate	14
1.3 Finance Committee	14
1.4 Building and Works Committee	15
1.5 Important Functionaries	16
1.6 Administration	17
1.7 Warden of Hostels	18
1.8 Head of the Departments	19
1.9 Head of Schools/Centres	20
1.10 Coordinator, TEQIP III	21
1.11 Professors-in-Charge	21

## **02** Human Resources

2.1 Academic Staff	25
2.2 Non Academic Staff	33
2.3 Non-Teaching Officers	38
2.4 Faculty/Officers/Staff Superannuated	39

## 03

### Academic Programmes

3.1 Four-Year B.Tech. Degree Programme	42
3.2 Five-Year B.Arch. Degree Programme	42
3.3 Two-Year M.Tech. Degree Programme	43
3.4 Two-Year M.Sc. Degree Programme	44
3.5 Two-Year MBA Programme	44
3.6 Ph.D. Programme	44
3.7 Student Strength	44
3.8 Scholarship to Students	45
3.9 Institute Result	46
3.10 Convocation	48

## 04

### Academic Departments, Schools and Centres

4.1 Aerospace Engineering and Applied Mechanics	52
4.2 Architecture Town and Regional Planning	53
4.3 Chemistry	54
4.4 Civil Engineering	56
4.5 Community Science and Technology	58
4.6 Computer Science and Technology	59
4.7 Disaster Mitigation Engineering	60
4.8 Earth Science	60
4.9 Ecology, Infrastructure and Human Settlement	60
Management	
4.10 Electrical Engineering	61
4.11 Electronics and Telecommunication	62
Engineering	
4.12 Green Energy and Sensor Systems	63
4.13 Health Care Science and Technology	64
4.14 Humanities and Social Sciences	65
4.15 Human Resource Management	66
4.16 Information Technology	67
4.17 Management Sciences	68
4.18 Materials Science and Engineering	68
4.19 Mathematics	69
4.20 Mechanical Engineering	70
4.21 Mechatronics and Robotics	72
4.22 Metallurgy and Materials Engineering	73
4.23 Mining Engineering	74
4.24 Physics	75
4.25 Safety and Occupational Health Engineering	76
4.26 VLSI Technology	76
4.27 Water and Environment Research	77

## **05** Academic Service Centres

5.1 Centre of Excellence on Microstructurally	80
Designed Advanced Materials	
5.2 Ramanujan Central Library	81
5.2.1 Computerization	
5.2.2 Services offered	
5.2.2 Electronic Resources	
5.3 Computer Centre	82
5.3.1 Resources/ Facilities	
5.3.2 Hardware	
5.3.3 Software	
5.3.4 Short-Term Courses/ Training Programs	
5.4 Sophisticated Instrumentation Centre	82
5.4.1 Administration	
5.4.2 Users of the Facilities	
5.5 Quality improvement program	83
5.6 TEQIP III	83
5.7 Central Workshop	84
5.8 Industry Institute Partnership Cell	85
5.9 Special Reservation Cell	85
5.10 Intellectual Property Right Cell	85
5.11 Alumni Cell	87
5.12 Internal Complaint Committee	89

# 06

### Sponsored Research and Industrial Consultancy Activities

6.1 New Externally Funded Projects initiated in	93
2019-2020	
6.2 Completed Projects in 2019-2020	96
6.3 List of Ongoing Projects in 2019-2020	97
6.4 List of Consultancy Project 2019-2020	101
6.5 Academic and Research Collaboration	109
6.6 Research Programs with Foreign Collaborating	110
Institute	

### **07** Students Amenities and Activities

7.1 General	114
7.2 Proctorial Board	114
7.3 Student's Hostel	114
7.4 Sports and Games	114
7.5 Sports Training	114
7.6 National Service Scheme	114
7.7 National Cadet Corps	115
7.8 Games and Sports Activities organised	115
7.9 Students' Senate	116

## **08** Training and Placement

8.1 The Mandate	122
8.2 Some of the related Industry-Connect and allied events	122
8.3 Placement Statistics for 2019 Pass-Out Batch	122
8.4 Recruiters of 2019 Pass-Out Batch	124
8.5 Vacational Training	126

## **09** Campus Facilities

Compus Facilities	130
Campus Facilities	130

## **10** Other Notable activities

Other Notable Activities	140
Appendix I : List of Journal Publications	143
Appendix II : Book, Book Chapter, Monograph	160

## 11 Annual Accounts 2019-20

Annual Accounts	168
Audit Report	206



# From the Desk of the Chairperson

My association with the Indian Institute of Engineering Science and Technology, Shibpur has been over a year now. I am pleased to observe that this Institute, with a glorious legacy of engineering education, has achieved significant academic prestige and greater visibility at the national level during this period. IIEST has been ranked 21st in Engineering and 6th in Architecture at the NIRF Ranking 2020. I take this opportunity to congratulate the faculty members, the staff, and the students for their hard work and the laurels that they have achieved throughout the year. However, with a vision to feature in the first ten in the NIRF Ranking and gain an international reputation, the faculty members need more focus on research-oriented activities. The Institute has made considerable progress in the digitization of administrative work, but it needs to be completed soon. We also need urgently resolve the pending issues related to making a transition from a State-aided University to an Institute of National Importance to ensure the betterment of all the stakeholders. The year 2020 has been challenging for all of us due to the severe global impact of the COVID-19 pandemic. I congratulate the IIEST community for facing this unprecedented situation bravely and ensuring the continuity of the academic and administrative activities without compromising public health issues. Following the MoE guidelines, online classes have been held regularly for all the academic programmes, and online examinations will be conducted soon. A requirement of large-scale mobilization of the administration to manage the online admission of the undergraduate students for the academic year 2020-21 has been completed successfully. There have also been several encouraging events at the Institute this year despite the difficult circumstances. The Union Ministry has sanctioned Rs 129 crores to build a hostel that will finally solve the problem of providing accommodation to a large number of students. A digital education hub has been established with the help of a generous donation made by an alumnus. A well-wisher of the Institute has contributed to initiate scholarships/assistantships for undergraduate students in the near future. We were honored as the Union Education Minister, Shri Ramesh Pokhriyal 'Nishank', (virtually) inaugurated the DST-IIEST solar PV hub at IIEST in October 2020. I hope we continue such activities in the coming years to achieve our vision of establishing IIEST as an internationally acclaimed technical Institute. I wish all of you stay safe and healthy and achieve success in your future academic endeavors.

(Vasudev K. Aatre) Chairperson, BoG IIEST, Shibpur



# From the Desk of the Director



I am delighted to bring out the Annual Report of our Institute for the year 2019-20. Our Institute has been able to make significant strides in teaching-learning, research, and administrative reforms this year despite the world reeling under the effect of the Covid-19 pandemic.

The dynamic guidance of Dr. Vasudev K. Aatre, the Honourable Chairperson of the Board of Governors of the Institute and the perseverance of our faculty members have aided the Institute in moving forward towards achieving excellence. IIEST has been placed at number 21 in Engineering and at the 6th position in Architecture in this year's NIRF ranking. The Institute secured 314th position in QS ranking among the top Asian Institutes. The stakeholders of the Institute are incessantly striving to improve the position further.

It is heartening to witness that even in the face of the pandemic, phases of lockdowns, and unlock stages, the IIEST fraternity has put up a brave front in serving the student community undeterred. Following the MHRD, now MoE's guidelines, online classes for the UG, PG, and Ph.D. programs are regularly held. The Institute shall go for online examinations in real-time using the digital platform very soon. We have even successfully conducted the supplementary examinations for UG final year students and the PG students in the physical mode while taking every precaution to contain the virus. The administration's untiring efforts in completing the online admission process for the First-year UG and PG students for the session 2020-21 is praiseworthy.

The Institute acknowledges the financial contributions of two generous octogenarians who stepped out of their homes, risking their health amidst the pandemic to reach our Institute. One of them donated a sum of Rupees one crore to help bridge the digital divide when online education is the new norm for students. The other donated a sum of Rupees fifty lakhs to create an endowment fund for the deserving students. Additionally, there have been several encouraging incidents for the Institute despite the trying times. The DST-IIEST Solar PV Hub was virtually inaugurated by the Union Education Minister, Shri Ramesh Pokhriyal' Nishank' in October 2020. The Institute has also received Rupees 129 crores sanctioned by the Union Ministry to build a 10-storey hostel that can accommodate 1000 students.

I hope we continue our odyssey towards building IIEST as an internationally acclaimed institute in the coming years.

I congratulate the entire team for their relentless efforts in giving the Annual Report its present shape.

Jai Hind!

Parthasarathi Chakrabarti Director, IIEST, Shibpur





The Vision of IIEST, Shibpur is to become one of the best Institutes in the world in providing the state-of-the art multidisciplinary 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**

- 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

- 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.
- To increase the student capacity to meet the growing demands for industry
- To maintain global standards in student-faculty ratio, research output, publications in journals and placement of students
- 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
- To provide research and development consultancy, which will foster healthy industry-academia partnership, thereby providing a competitive edge to the indigenous manufacturing





# Organisation and Administration

# 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 Technology 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:

The Board of Governors	Authorities under the
The Senate	NITSER Act2007
The Finance Committee	Authoritics under the UEST
The Building and Works Committee	Authorities under the IIEST, Statutes 2017

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 of India is the Visitor of IIEST, 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 IISET 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 a large number of rules, regulations, ordinance, etc.



### **1.1 Board of Governors**

The Board of Governors of the Institute is constituted as per provisions of Section 11 of the NITSER Act, 2007. During 2019-2020, the composition of the Board was as below

#### Dr. Vasudev K. Aatre

Distinguished Scientist & former Secretary, Department of Defence Research & Development and Scientific Adviser to Raksha Mantri

#### Chairperson

(From 28.02.2019 to 24.02.2022) E-mail- vasudev.k.aatre@gmail.com

#### Additional Secretary(TE) & CVO

MHRD, Govt. of India, Shastri Bhawan, New Delhi-110 001 **Ex-Officio-Member** Ph.- 233869031; 23381097

#### Prof. Parthasarathi Chakrabarti

Director, IIEST, Shibpur. Howrah - 711103 **Ex-Officio-Member** Ph- 033-26682674 Fax- 033-26687575 E-mail- director@iiests.ac.in

#### **Prof. Anurag Kumar**

Director, IISc, Bangalore Sir C.V. Raman Avenue Bangalore – 560 012 **Ex-Officio-Member** Ph: 080-2360-0690 / 2293-2222 Fax:91-80-23600936 Email: diroff@admin.iisc.ernet.in anurag@ece.iisc.ernet.in

### Prof. T. G. Sitharam

Director, IIT, Guwahati, Guwahati – 781039, India Member (From 18.02.2019 to 07.02.2021) Email- dirctor@iitg.ac.in

#### Shri Binoy Kumar

Secretary, Ministry of Steel, Udyog Bhavan New Delhi - 110011

Member (From 18.02.2019 to 07.02.2021) E-mail- secy-steel@nic.in

#### Dr. Shekhar C Mande

DG, CSIR-cum-Secretary, DSIR, Department of Scientific & Industrial Research,

Ministry of Science & Technology Technology Bhawan, New Mehrauli Road, New Delhi-110016

Member (From 18.02.2019 to 07.02.2021) E-mail- dgcsir@csir.res.in Ph- +91-11-23710472, 23717053

#### Prof. Rohini Godbole

Centre for High Energy Physics IISC, Bnagalore, Bengaluru-560012

Member (From 18.02.2019 to 07.02.2022)

E-mail- rohini@ets.iisc.ac.in godbolerm@gmail.com rohini@iisc.ac.in

Ph- +91-80-2293-2845

#### Secretary, Higher Education Department

Govt. of West Bengal Bikash Bhavan, Salt Lake, Kolkata-700091

**Ex-Officio-Member** Email- highereducationwb@gmail.com Ph: 033-2321 1280

#### Prof. Aditya Bandyopadhyay

Professor, Department of Architecture, Town and Regional Planning, IIEST, Shibpur (Senate nominated) Member

(From 16.07.2019 to 15.07.2021) Email- bandyopadhyay.aditya@gmail.com adityabandyopadhyay@arch.iiests.ac.in

#### Prof. Shyamal Kumar Chattopadhyay

Professor, Department of Chemistry, IIEST, Shibpur (Senate nominated)

#### Member

(from 16.07.2019 to 15.07.2021)

Email- shch20@hotmail.com shyamal@chem.iiests.ac.in shyamalchattopadhyay@gmail.com

### Prof. P. S. Avadhani

Professor & Former Principal, AUCE(A), Department of Computer Science and Systems Engineering, A.U. College of Engineering, Andhra University Visakhapatnam, Visakhapatnam, Andhra Pradesh 530003

### Member

(From 18.02.2019 to 07.02.2021) Email- psavadhani@yahoo.com psavadhani.csse@auvsp.edu.in

#### Smt. Darshana M Dabral

Joint Secretary & Financial Advisor to the Govt. of India, Ministry of Human Resource Development,

Shastri Bhawan, New Delhi-110 001

Ex -Officio-Member Email: Jsfa.edu@gov.in Ph: 2338 2696

#### Dr. Biman Bandyopadhyay

Registrar,IIEST, Shibpur Howrah -711103 Secretary to BOG Ph-(033) 2668-1503 (0) Fax : (091)-(033)-2668-2916 E-mail : regis@becs.ac.in

### **1.2 The Senate**

It is constituted under Section 14 of the NITSER Act 2007. The Senate of the Institute is its principal academic authority. All permanent professors of the Institute are the members of Senate.

### **1.3 Finance Committee**

#### Dr. Vasudev K. Aatre

Distinguished Scientist & former Secretary,

Department of Defence Research & Development and

Scientific Adviser to Raksha Mantri

**Ex-Officio-Chairman** 

Dr. Parthasarathi Chakrabarti Director, IIEST, Shibpur.

**Ex-Officio-Member** 

### Additional Secretary (TE) & CVO, MHRD

Govt. of India or his nominee or Joint Secretary (NITs &DL), MHRD, Govt. of India or his /her nominee

**Ex-Officio-Member** 

### Smt. Darshana M Dabral

Joint Secretary & Financial Advisor to the Govt. of India, MHRD or her nominee

**Ex-Officio-Member** 

### Prof. Shyamal Kumar Chattopadhyay Professor, Dept of Chmistry, IIEST, Shibpur

Member (From 19.07.2019)

### Prof. P. S. Avadhani

Professor & Former Principal, AUCE(A), Department of Computer Science and Systems Engineering, A.U. College of Engineering, Andhra University Visakhapatnam, Visakhapatnam, Andhra Pradesh 530003

Member

(From 19.07.2019)

Dr. Biman Bandyopadhyay Registrar, IIEST, Shibpur

**Ex-Officio-Member Secretary** 

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



### 1.4 Building and Works Committee

Dr. Parthasarathi Chakrabarti

Director, IIEST, Shibpur.

**Ex-Officio-Chairman** 

### **Director or Deputy Secretary**

or his nominee dealing with the Institute in the Ministry (MHRD)

**Ex-Officio-Member** 

#### **Director or Deputy Secretary**

or his nominee dealing with Finance of Institute in the Ministry (MHRD)

**Ex-Officio-Member** 

Prof. Sriman Bhattacharya Deputy Director, IIT Kharagpur

Member

### **Prof. Sudip Kumar Roy** Dean, Planning and Development,

IIEST, Shibpur

Member

One expert each from Civil and Electrical Engineering Wing of Central or State Government or any autonomous body of repute

Member (vacant)

### Dr. Biman Bandyopadhyay

Registrar, IIEST, Shibpur Ex-Officio-Member Secretary

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.



### 1.5 Important Functionaries (As on date)

### Chairman, Council of NITSER

#### Shri Ramesh Pokhrial 'Nishank'

Honorable Minister, Ministry of Education

Government of India

Chairman, Board of Governors

Dr. Vasudev K. Aatre

### Director

Prof. Parthasarathi Chakrabarti

### Deans

Academic Affairs	: Prof. Susanta Chakraborty
Associate Dean- Academic Affairs	: Prof. Rana Roy
Faculty Welfare	: Prof. Prasanta Kumar Nandi
Associate Dean-Faculty Welfare	: Prof. Sulata Mitra
Dean-Research & Consultancy	: Prof. Subhasis Bhaumik
Dean-Planning & Development	: Prof. Sudip Kumar Roy
Dean-Student Welfare	: Prof. Debabrata Mazumdar
Associate Dean-Student Welfare	: Dr. Asok Adak
Dean-International Relations & Alumni Affairs	: Prof. Arindam Biswas

### Registrar

Registrar

: Dr. Biman Bandyopadhyay

### **1.6 Administration**

Director Prof. Parthasarathi Chakrabarti Ph no: +91-33-26682674 Fax 26687575 Email: director@iiests.ac.in

Registrar Dr. Biman Bandyopadhyay Ph no: 91-33-26681503 M-9874222228 Email:regis@iiests.ac.in

Deputy Registrar (S&P) Shri Sambhunath Datta Ph no: 91-33-26684561 Email:dr@iiests.ac.in

Deputy Registrar (Academic) Dr. Nirmalya Bhattacharya Ph no: 91-33-26688081 Email: controller@iiests.ac.in

Deputy Registrar (Finance) Shri Alok kr. Maity Ph no: +91-33-26684561 (216) Email: dr.finance@iiests.ac.in

Deputy Registrar (Admin) Dr. Devasis Datta Ph no: +91-33-26684561 Email: d3dr.iiests@gmail.com

Superintending Engineer (Actg.) Dr. Tapash Kumar Roy Associate Professor, Department of Civil Engineering Ph no: +91-33-26684561(345) Email: uengineer@iiests.ac.in

Assistant Training officer Shri Usha Shankar Bhattacharya Ph no: +91-33-26684561 (258) Assistant Registrar

Shri Alok K Mitra Ph no: +91-33-26684561 (276) Email: akmitra7077@yahoo.co.in

Assistant Registrar& Internal Auditor Shri Shib Sankar Basak Ph no: +91-33-26684561 (378) Email: shibu9355@yahoo.co.in arssb@iiests.ac.in

Assistant Registrar Dr. Bivore Das Ph no: +91-33-26684561 (643) Email: bibhor.das@gmail.com arbd@iiests.ac.in

Assistant Registrar Sri Dipankar Chakraborty Ph no: +91-33-26684561 (640) Email: dcosd@yahoo.co.in

Joint Librarian Dr. Hari Prasad Sharma Ph no: 91-33-26684561(ext 284) Email: sharma\_hp@hotmail.com

Assistant Librarian (Selection Grade) Shri Shushil Kumar Barman Ph no: +91-33-26684561 (291) Email: sushilbarman@gmail.com

Assistant Librarian Sri Abani Oraon Ph no: +91-33-26684561 (725) Email: abani@library.iiests.ac.in

Workshop Superintendent Dr. Dibyendu Chatterjee Email: dibeyendu\_660@rediffmail.com

Physical Instructor Dr. Zia-UI-Alam Email: alamzia2002@yahoo.com Physical Instructor Sri Sandip Chatterjee Email: c.sandip2010@gmail.com

Central Public Information Officer Dr. Hari Prasad Sharma Ph no: 91-33-26684561(ext 284) Email: sharma\_hp@hotmail.com

First Appellate Authority (Under the RTI Act 2005) Prof. Dipali Banerjee Professor, Department of Physics Email: faa@iiests.ac.in

Nodal Officer Dr. Biman Bandyopadhyay Ph no: 91-33-26681503 Email:regis@iiests.ac.in

Chief Warden Prof. Sudipta Mukhopadhyay Professor Department of Mining Engineering Email:sudiptaiiest@gmail.com

Chief Vigilance Officer Prof Abdur Rouf Professor Department of Electrical Engineering Email: arouf@ee.iiests.ac.in

Medical Officer Dr. Rubi Golder Ph no. : +91-33-26684561 (332) Email: rubigolder@gmail.com

### 1.7 Warden of Hostels (As on date)

### Chief Warden: Prof. Sudipta Mukhopadhyay

SI.No.	Name	Email Id	Hostel
1	Dr. Nillohit Mukherjee	nillohit.mukherjee@gmail.com	A-39, A.K. Seal Hall, Downing (H-10)
2	Dr. Pritam Saha	pritam@civil.iiests.ac.in	A.C. Roy Hall (H-7), Hostel-9 (Extn.)
3	Shri Sambhunath Dutta	dattasn@gmail.com	B.Sen Hall (H-9)
4	Prof. S. K. Karmakar	skk.besus@gmail.com	D. Banerjea Hall (H-8)
5	Dr. Ashis Kumar Bera	ashis@civil.iiests.ac.in	Hostel-11
6	Prof. Sudipta Mukhopadhyay	sudiptaiiest@gmail.com	Hostel-15
7	Prof. Subhash Mondal	scmondall@gmail.com	Hostel-16
8	Dr. Ayan Banerjee	ayanb12@gmail.com	Hostel-PG(H-13)
9	Dr. Sujata Biswas	sujata@civil.iiests.ac.in	Lt. Williams hall of residence.
	Dr. Dipankana Bhattacharjee	dipankana@civil.iiests.ac.in	
10	Dr. Nityananda Nandi	nityananda@aero.iiests.ac.in	MacDonald Hall
11	Prof. Chaitali Ray	chaitali@civil.iiests.ac.in	Pandya Hall
12	Dr. Chanchal Majumdar	chanchal@civil.iiests.ac.in	Richardson Hall
13	Dr. Sukumar Kundu	erskundu@gmail.com	Sen Hall
14	Dr. Tapash Roy	tapash2000@hotmail.com	Sengupta Hall
15	Dr. Ananya Barui	ananya.pariksha@gmail.com	Sister Nivedita Hall
16	Prof. Aditya Bandyopadhyay	bandyopadhyay.aditya@gmail.com	Wolfenden Hall
17	Shri Alok Kr.Mitra	akmitra7077@gmail.com	Hostel -14

### **1.8 Head of the Departments**

SI.No.	Departments	Name of HoD	Tenure from	Tenure Upto
1.	Aerospace Engineering & Applier Mechanics	Prof. Amit Roychowdhury	15.11.2018	Will continue till further order
2.	Architecture, Town & Regional Planning	Prof. Partha Sarathi Mukhopadhyay	02.04.2018	09.07.2020
3.	Chemistry	Prof. Ajit Kumar Mahapatra	18.12.2017	17.12.2019
		Prof. Sudip Kr. Chattopadhyay	18.12.2019	17.12.2021
4.	Civil Engineering	Prof. Anirban Gupta	10.07.2018	09.07.2020
5.	Computer Science and Technology	Prof. Sulata Mitra	31.03.2017	02.04.2019
		Prof. Sekhar Mandal	03.04.2019	02.04.2021
6.	Earth Science	Prof. Ananya Mukhopadhyay	03.05.2017	02.05.2019
		Prof. Bhabani Prasad Mukhopadhyay	03.05.2019	02.05.2021
7.	Electrical Engineering	Prof. Ashoke Sutradhar	01.06.2017	31.05.2019
		Prof. Prasid Syam	01.06.2019	31.05.2021
8.	Electronics and Telecommunication Engineering	Dr. Ayan Banerjee	15.11.2018	Will continue till further order
9.	Human Resource Management	Prof. Manas Kumar Sanyal	23.08.2004	Until further order
10.	Humanities and Social Sciences	Prof. Partha Sarathy Roy	17.09.2018	16.09.2020
11.	Information Technology	Prof. Hafizur Rahaman	11.07.2018	09.07.2020
12.	Mechanical Engineering	Prof. Shyamal Chatterjee	05.05.2017	06.05.2019
		Prof. Partha Pratim Dey	07.05.2019	06.05.2021
13.	Metallurgy and Materials	Prof. Sumit Ghosh	24.05.2017	23.05.2019
	Engineering	Dr. Manojit Ghosh	24.05.2019	06.05.2021
14.	Mining Engineering	Dr. Sudipta Mukhopadhyay	22.11.2018	Will continue till further order
15.	Mathematics	Director	01.04.2019	03.07.2019
		Prof. Tapan Kr. Kar	04.07.2019	03.07.2021
16.	Physics	Dr. Amit Kundu	20.06.2017	19.06.2019
		Dr. Krishnendu Mukherjee	20.06.2019	19.06.2021

### 1.9 Head of Schools/Centres

1         Purabi Das School of Information Technology         Prof. Sipra Das (Bit) Prof. Monojit Mitra Prof. Aparajita Sengupta Prof. Santi Prasad Maity         10.07.2019 10.07.2019         09.07.2020           2         School of Management Sciences Prof. Aparajita Sengupta Prof. Bichitra Kumar Guha Prof. Anritava Basu Malitck         10.07.2019 10.07.2019         09.07.2019 09.07.2020           3         M. N. Dastur School of Material Science and Engineering         Prof. Nil Ratan Bandyopadhyay Prof. Dipali Banerjee         08.12.2017 01.02.2020         31.01.2020 09.07.2019 01.02.2020           4         School of VLSI Technology Prof. Konika Das (Battacharya) Prof. Konika Das (Battacharya) Prof. Anindita Sengupta         10.01.2019 0.01.2020         09.07.2019 0.01.2020           5.         School of Community Science an Technology         Prof. Saya Sil Prof. Jaya Sil Prof. Jaya Sil Prof. Jaya Sil Prof. Santan U Das Prof. Jaya Sil Prof. Santan U Das         10.01.2010 0.01.2020         09.07.2019 0.01.2020           6.         School of Mechatronics and Robotics         Prof. Prasid Syam Prof. Aparan (Dey) Ghosh Prof. Aparan (Dey) Ghosh Prof. Aparan (Dey) Ghosh Prof. Ambarish Ghosh         10.01.2019 0.01.2020         09.07.2019 0.01.2020           7.         School of Ecology, Infrastructure and Human Settlement mad Human Settlement and Human Settlement Prof. Swati Saha Prof. Ambarish Ghosh Prof. Swati Saha Prof. Swati Sah	SI.No.	Departments	Name of HoD	Tenure from	Tenure Upto
InterfaceProf. Samil Prasad Maity10.01.202009.07.20202School of Management SciencesProf. Aparajita Sengupta Prof. Amitava Basu Mallick10.01.2019 10.07.2019 09.07.202009.07.20203M. N. Dastur School of Material Science and EngineeringProf. Nil Ratan Bandyopadhyay Prof. Dipali Banerjee08.12.2017 01.02.20231.01.2020 9.07.20194School of VLSI Technology Prof. Science and EngineeringProf. Jaya Sil Prof. Sujay Sul Prof. Sujay Sul Prof. Anindita Sengupta10.01.2019 10.01.202009.07.2019 09.07.20195.School of Community Science and TechnologyProf. Sujay Kumar Mukherjea Prof. Jaya Sil Prof. Jaya Sil Prof. Rana Roy10.01.2019 10.01.202009.07.2019 09.07.20196.School of Machatronics and RoboticsProf. Prasid Syam Prof. Ambarish Ghosh15.10.2018 10.01.201930.04.2019 09.07.20207.School of Disaster Mitigation Prof. Ambarish Ghosh ManagementProf. Santaru Das Prof. Ambarish Ghosh Prof. Santaru Das00.01.2019 09.07.201909.07.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Anindita Sengupta Prof. Santaru Das Prof. Santaru Das Prof. Santaru Das Prof. Santaru Das10.01.2019 09.07.201909.07.20199.School of Disaster Mitigation Prof. Santaru Das Prof. Santaru Das Prof. Santaru Das Prof. Santaru Das Di D.01.202009.07.202009.07.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Anindita Sengupta Prof. Santaru Das Prof. Santaru	1	Purabi Das School of Information	Prof. Sipra Das (Bit)	10.01.2019	09.07.2019
2School of Management SciencesProf. Aparajita Sengupta10.01.201909.07.20193M. N. Dastur School of Material Science and EngineeringProf. Nil Ratan Bandyopadhyay08.12.201731.01.20204School of VLSI TechnologyProf. Nil Ratan Bandyopadhyay09.07.201909.07.20195.School of VLSI TechnologyProf. Jaya Sil10.01.201909.07.20195.School of Community Science and TechnologyProf. Sujay Kumar Mukherjea10.01.201909.07.20197.School of Mechatronics and RoboticsProf. Sujay Kumar Mukherjea10.01.201909.07.20206.School of Mechatronics and RoboticsProf. Prasid Syam15.10.201830.04.20197.School of Disaster Mitigation EngineeringProf. Aparaid (Dey) Ghosh10.01.201909.07.20197.School of Ecology, Infrastructure and Human Settlement ManagementProf. Anindita Sengupta10.01.201909.07.20198.School of Ecology, Infrastructure and Human Settlement ManagementProf. Anindita Sengupta10.01.201909.07.20199.Prof. Souvanic Roy Prof. Souvanic Roy10.01.201909.07.202009.07.20209.Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Susanta Kumar Praui27.02.201926.08.201910Centre for Healthcare Science and For, Susanta Kumar PrauiProf. 20.201912.03.202012.03.202010Centre for Healthcare Science and For, Amintava Basu Mallick Prof. Susanta Kumar Praui10		Technology	Prof. Monojit Mitra	10.07.2019	09.01.2020
Image: Constraint of the second sec			Prof. Santi Prasad Maity	10.01.2020	09.07.2020
Image: series of the	2	School of Management Sciences	Prof. Aparajita Sengupta	10.01.2019	09.07.2019
3         M. N. Dastur School of Material Science and Engineering         Prof. Nil Ratan Bandyopadhyay Prof. Dipali Banerjee         08.12.2017         31.01.2020           4         School of VLSI Technology         Prof. Jaya Sil Prof. Konika Das (Bhattacharya) Prof. Konika Das (Bhattacharya) Prof. Anindita Sengupta         10.01.2019         09.07.2019           5.         School of Community Science and Technology         Prof. Sujay Kumar Mukherjea Prof. Jaya Sil         10.01.2019         09.07.2019           6.         School of Mechatronics and Robotics         Prof. Prasid Syam Prof. Santanu Das         10.01.2019         09.07.2020           7.         School of Disaster Mitigation Engineering         Prof. Aparna (Dey) Ghosh Prof. Santanu Das         10.01.2019         09.07.2019           7.         School of Ecology, Infrastructure and Human Settlement Management         Prof. Aparna (Dey) Ghosh Prof. Sautanic Roy         10.01.2019         09.07.2019           9.         School of Ecology, Infrastructure and Human Settlement Management         Prof. Anindita Sengupta Prof. Sauta Santa Prof. Sauta Santa Mukhopadhyay         10.01.2019         09.07.2020           9.         Centre of Excellence in Green Energy and Sensor Systems         Prof. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Sauta Kumar Parul         27.02.2019         26.08.2019           10.01.2010         Op.07.2019         Prof. Anindita Sengupta Prof. Susanta Kumar Parul         13.03.2020			Prof. Bichitra Kumar Guha	10.07.2019	09.01.2020
Science and Engineering         Prof. Dipall Banerjee         01.02.2020         31.07.2020           4         School of VLSI Technology         Prof. Jaya Sil         10.01.2019         09.07.2019           4         School of VLSI Technology         Prof. Konika Das (Bhattacharya)         10.07.2019         09.07.2019           5.         School of Community Science and Technology         Prof. Sujay Kumar Mukherjea         10.01.2019         09.07.2019           6.         School of Mechatronics and Robotics         Prof. Prasid Syam         15.10.2018         30.04.2019           7.         School of Disaster Mitigation Engineering         Prof. Aparna (Dey) Ghosh         10.01.2019         09.07.2019           8.         School of Ecology, Infrastructure Management         Prof. Souvanic Roy         10.01.2019         09.07.2019           9.         Centre of Excellence in Green Energy and Sensor Systems         Prof. Anindita Sengupta         10.01.2019         09.07.2019           10.         Centre for Healthcare Science and Technology         Prof. Anindita Sengupta         27.02.2019         26.08.2019           11.0         Centre for Healthcare Science and Technology         Prof. Anindita Sengupta         27.02.2019         12.03.2020           10         Centre for Healthcare Science and Technology         Prof. Anindita Sengupta         27.02.2019			Prof. Amitava Basu Mallick	10.01.2020	09.07.2020
4School of VLSI TechnologyProf. Jaya Sil10.01.201909.07.20199Prof. Konika Das (Bhattacharya)10.01.201909.07.20199Prof. Anindita Sengupta10.01.202009.07.20205.School of Community Science and Prof. Anindita Sengupta10.01.201909.07.20199Prof. Sujay Kumar Mukherjea Prof. Jaya Sil Prof. Jaya Sil10.01.201909.07.20206.School of Mechatronics and RoboticsProf. Prasid Syam Prof. Santanu Das Prof. Debasis Datta15.10.201830.04.20197.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Souvanic Roy10.01.201909.07.20198.School of Ecology, Infrastructure and Human Settlement ManagementProf. Anindita Sengupta Prof. Souvanic Roy Prof. Souvanic Roy10.01.201909.07.20199Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Susanta Kumar Parui27.02.201926.08.201910.Centre for Healthcare Science and TechnologyProf. Anindita Sengupta Prof. Susanta Kumar Parui10.01.201909.07.201910.Centre for Water and Prof. Susanta Sanath Mulkhopadhyay27.02.201926.08.201912.03.202011.Centre for Water and Prof. Susanta Kumar Parui10.01.201909.07.201909.07.201910.Centre for Healthcare Science and Prof. Suranjan SinhaProf. 20.0909.07.201909.07.201911.Centre for Water and Prof. Water andProf. Ambarish Ghosh10.01.201909.07.	3	M. N. Dastur School of Material	Prof. Nil Ratan Bandyopadhyay	08.12.2017	31.01.2020
Brone School of Community Science and Technology         Prof. Konika Das (Bhattacharya) Prof. Anindita Sengupta         10.07.2019         09.01.2020           5.         School of Community Science and Technology         Prof. Sujay Kumar Mukherjea Prof. Jaya Sil         10.01.2019         09.07.2019           6.         School of Mechatronics and Robotics         Prof. Prasid Syam Prof. Debasis Datta         15.10.2018         30.04.2019           7.         School of Disaster Mitigation Engineering         Prof. Aparna (Dey) Ghosh Prof. Santanu Das Prof. Aparna (Dey) Ghosh Prof. Souvanic Roy         10.01.2019         09.07.2019           8.         School of Ecology, Infrastructure and Human Settlement Management         Prof. Souvanic Roy Prof. Sautal Saha Prof. Partha Sarathi Mukhopadhyay         10.01.2019         09.07.2019           9.         Centre of Excellence in Green Energy and Sensor Systems         Prof. Anindita Sengupta Prof. Sistanta Kumar Parui         27.02.2019         26.08.2019           10.01         Centre for Healthcare Science and Technology         Prof. Dipali Banerjee Prof. Sistanta Kumar Parui         10.01.2019         09.07.2019           10.01         Centre for Water and         Prof. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha         10.01.2019         09.07.2019           11.00         Centre for Water and         Prof. Amitava Basu Mallick Prof. Suranjan Sinha         10.01.2019         09.07.2019 </td <td></td> <td>Science and Engineering</td> <td>Prof. Dipali Banerjee</td> <td>01.02.2020</td> <td>31.07.2020</td>		Science and Engineering	Prof. Dipali Banerjee	01.02.2020	31.07.2020
Image: state in the s	4	School of VLSI Technology	Prof. Jaya Sil	10.01.2019	09.07.2019
5.School of Community Science and TechnologyProf. Sujay Kumar Mukherjea Prof. Jaya Sil Prof. Jaya Sil Prof. Rana Roy10.01.2019 0.01.202009.07.2019 0.9.01.20206.School of Mechatronics and RoboticsProf. Prasid Syam Prof. Santanu Das Prof. Santanu Das Prof. Debasis Datta15.10.2018 01.05.201930.04.2019 31.10.20197.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Souvanic Roy10.01.2020 01.11.201909.07.2019 09.07.20198.School of Ecology, Infrastructure and Human Settlement ManagementProf. Anindita Sengupta Prof. Anindita Sengupta10.01.2019 09.07.201909.07.20209.Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Susanta Kumar Parui27.02.2019 13.03.202026.08.2019 12.03.202010.Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Suranjan Sinha10.01.2019 10.01.201909.07.2019 09.07.201911.Centre for Water andProf. Amarish Ghosh10.01.2019 10.07.201909.07.202011.Centre for Water andProf. Amarish Ghosh10.01.2020 10.01.202009.07.202011.Centre for Water andProf. Amarish Ghosh10.01.20			Prof. Konika Das (Bhattacharya)	10.07.2019	09.01.2020
TechnologyProf. Jaya Sil Prof. Rana Roy10.07.2019 10.01.202009.01.2020 09.07.20206.School of Mechatronics and RoboticsProf. Prasid Syam Prof. Santanu Das Prof. Santanu Das Prof. Debasis Datta15.10.2018 01.05.2019 01.05.201930.04.2019 01.05.20197.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Ambarish Ghosh Prof. Suvanic Roy10.01.2020 01.01.202009.07.2019 09.01.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy Prof. Suvati Saha Prof. Partha Sarathi Mukhopadhyay10.01.2019 10.01.201909.07.2019 09.07.2019 09.07.20209Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Susanta Kumar Parui27.02.2019 13.03.202026.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Suranjan Sinha10.01.2019 10.01.201909.07.2019 09.07.201911Centre for Water andProf. Ambarish Ghosh Prof. Suranjan Sinha10.01.2019 10.01.201909.07.2020			Prof. Anindita Sengupta	10.01.2020	09.07.2020
And ConstructionProf. Rana Roy10.01.202009.07.20206.School of Mechatronics and RoboticsProf. Prasid Syam15.10.201830.04.20197.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Ambarish Ghosh Prof. Souvanic Roy10.01.202009.07.20198.School of Ecology, Infrastructure and Human Settlement ManagementProf. Aparna (Dey) Ghosh Prof. Souvanic Roy10.01.201909.07.20199.Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.201926.08.201910.Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Amitava Basu Mallick10.01.2019 10.07.201909.07.201911.Centre for Water andProf. Dipali Banerjee Prof. Amitava Basu Mallick10.01.2019 10.07.201909.07.201911.Centre for Water andProf. Ambarish Ghosh Prof. Amitava Basu Mallick10.01.2019 10.07.201909.07.201911.Centre for Water andProf. Dipali Banerjee Prof. Amitava Basu Mallick10.01.2020 10.01.202009.07.2020	5.	School of Community Science and	Prof. Sujay Kumar Mukherjea	10.01.2019	09.07.2019
6.School of Mechatronics and RoboticsProf. Prasid Syam15.10.201830.04.20197.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh10.01.201990.07.20197.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh10.01.201909.07.20197.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy10.01.201909.07.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy10.01.201909.07.20199Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Susanta Kumar Parui27.02.201926.08.201910Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Suranjan Sinha10.01.201909.07.201911Centre for Water andProf. Suranjan Sinha10.01.201909.07.201911Centre for Water andProf. Ambarish Ghosh10.01.201909.07.201911Centre for Water andProf. Dipali Banerjee Prof. Suranjan Sinha10.01.201909.07.201911Centre for Water andProf. Ambarish Ghosh10.01.201909.07.2019		Technology	Prof. Jaya Sil	10.07.2019	09.01.2020
RoboticsProf. Santanu Das Prof. Debasis Datta01.05.2019 01.11.201931.10.2019 30.04.20207.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Ambarish Ghosh Prof. Souvanic Roy10.01.2019 10.07.201909.07.2019 09.01.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy Prof. Souvanic Roy10.01.2019 10.07.201909.07.2019 09.01.20209.Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Susanta Kumar Parui27.02.2019 13.03.202026.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.01.2019 10.01.201909.07.201911Centre for Water and Prof. Water andProf. Ambarish Ghosh10.01.2020 10.01.202009.07.202011Centre for Water and Prof. Prof. Ambarish Ghosh10.01.2019 10.01.201909.07.2019			Prof. Rana Roy	10.01.2020	09.07.2020
Indicating basisProf. Samualid basisO1.01.2017O1.01.2017Prof. Debasis Datta01.11.201930.04.20207.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Ambarish Ghosh Prof. Ambarish Ghosh Prof. Souvanic Roy10.01.201909.07.20198.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy Prof. Swati Saha Prof. Partha Sarathi Mukhopadhyay10.01.201909.07.20199Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.201926.08.201910Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Suranjan Sinha10.01.201909.07.201911Centre for Water and Prof. Water andProf. Ambarish Ghosh10.01.201909.07.201911Centre for Water and Prof. Prof. Suranjan Sinha10.01.201909.07.2020	6.	School of Mechatronics and	Prof. Prasid Syam	15.10.2018	30.04.2019
7.School of Disaster Mitigation EngineeringProf. Aparna (Dey) Ghosh Prof. Ambarish Ghosh10.01.2019 10.07.201909.07.2019 09.01.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy10.01.201909.07.20199Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Sissanta Kumar Parui27.02.201926.08.201910Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Suranjan Sinha10.01.201909.07.201911Centre for Water andProf. Ambarish Ghosh10.01.201909.07.2020		Robotics	Prof. Santanu Das	01.05.2019	31.10.2019
EngineeringProf. Ambarish Ghosh Prof. Souvanic Roy10.07.2019 10.01.202009.01.2020 09.07.20208.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy Prof. Swati Saha Prof. Partha Sarathi Mukhopadhyay10.01.2019 10.07.2019 09.07.2019 09.07.202009.07.20209Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.2019 13.03.202026.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.07.2019 10.01.201909.07.202011Centre for Water and Prof. Water andProf. Ambarish Ghosh10.01.2019 10.01.201909.07.2019			Prof. Debasis Datta	01.11.2019	30.04.2020
Non-AnalysisHon-Analysis GroupHon-AnalysisHon-Anal	7.	School of Disaster Mitigation	Prof. Aparna (Dey) Ghosh	10.01.2019	09.07.2019
8.School of Ecology, Infrastructure and Human Settlement ManagementProf. Souvanic Roy Prof. Swati Saha Prof. Swati Saha Prof. Partha Sarathi Mukhopadhyay10.01.2019 10.07.2019 09.07.202009.07.20209Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.2019 26.08.201926.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.01.2019 10.01.201909.07.202011Centre for Water and For Water andProf. Ambarish Ghosh10.01.2019 10.01.201909.07.2019		Engineering	Prof. Ambarish Ghosh	10.07.2019	09.01.2020
and Human Settlement ManagementProf. Swati Saha Prof. Partha Sarathi Mukhopadhyay10.07.2019 13.03.202009.01.2020 09.07.20209Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.2019 27.08.201926.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.01.2019 10.01.202009.07.2019 09.07.201911Centre for Water and Fort. Prof. Ambarish GhoshProf. Ambarish Ghosh10.01.2019 10.01.201909.07.2019			Prof. Souvanic Roy	10.01.2020	09.07.2020
ManagementProf. Swahl Saha10.07.201707.01.20209Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.2019 26.08.201926.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.01.2019 10.01.201909.07.2019 09.07.201911Centre for Water and For Line and Line an	8.	School of Ecology, Infrastructure	Prof. Souvanic Roy	10.01.2019	09.07.2019
9Centre of Excellence in Green Energy and Sensor SystemsProf. Anindita Sengupta Prof. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.02.2019 27.08.201926.08.2019 12.03.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick10.01.2019 10.07.201909.07.2019 09.07.202011Centre for Water and Energy and Sensor Mater andProf. Ambarish Ghosh10.01.2019 10.01.201909.07.2019			Prof. Swati Saha	10.07.2019	09.01.2020
Energy and Sensor SystemsProf. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.08.2019 13.03.202012.03.2020 12.09.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.01.2019 10.07.201909.07.2019 09.07.202011Centre for Water and Energy and Sensor Mater and EnergyProf. Ambarish Ghosh10.01.201909.07.2019		Management	Prof. Partha Sarathi Mukhopadhyay	13.03.2020	09.07.2020
Energy and Sensor SystemsProf. Binay Krishna Ghorai Prof. Susanta Kumar Parui27.08.2019 13.03.202012.03.2020 12.09.202010Centre for Healthcare Science and TechnologyProf. Dipali Banerjee Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.01.2019 10.07.201909.07.2019 09.07.202011Centre for Water and Energy and Sensor Mater and EnergyProf. Ambarish Ghosh10.01.201909.07.2019					
10Centre for Healthcare Science and TechnologyProf. Dipali Banerjee10.01.201909.07.201911Centre for Water and TechnologyProf. Amitava Basu Mallick10.01.202009.07.202011Centre for Water and TechnologyProf. Ambarish Ghosh10.01.201909.07.2019	9	Centre of Excellence in Green	Prof. Anindita Sengupta	27.02.2019	26.08.2019
10Centre for Healthcare Science and TechnologyProf. Dipali Banerjee10.01.201909.07.201910Prof. Amitava Basu Mallick Prof. Suranjan Sinha10.07.201909.07.202011Centre for Water and Enclosed Prof. Ambarish GhoshProf. Ambarish Ghosh10.01.201909.07.2019		Energy and Sensor Systems	Prof. Binay Krishna Ghorai	27.08.2019	12.03.2020
TechnologyProf. Amitava Basu Mallick10.07.201909.01.2020Prof. Suranjan Sinha10.01.202009.07.202011Centre for Water and EnclosedProf. Ambarish Ghosh10.01.201909.07.2019			Prof. Susanta Kumar Parui	13.03.2020	12.09.2020
Image: Second	10	Centre for Healthcare Science and	Prof. Dipali Banerjee	10.01.2019	09.07.2019
11     Centre for Water and     Prof. Ambarish Ghosh     10.01.2019     09.07.2019		Technology	Prof. Amitava Basu Mallick	10.07.2019	09.01.2020
			Prof. Suranjan Sinha	10.01.2020	09.07.2020
Environmental Research Prof. Souvanic Roy 10.07.2019 09.01.2020	11	Centre for Water and	Prof. Ambarish Ghosh	10.01.2019	09.07.2019
		Environmental Research	Prof. Souvanic Roy	10.07.2019	09.01.2020

Prof. Debashis Moitra

09.07.2020

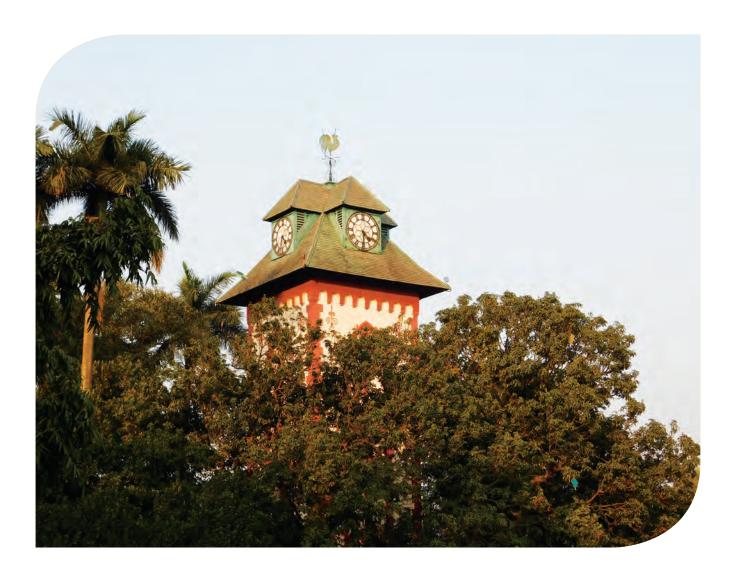
10.01.2020

### 1.10 Coordinator, TEQIP-III

Prof. Kalyan Kumar Bhar

### 1.11 Professors-in-Charge

Library	: Prof. Sudip Kumar Chattopadhyay
Furniture	: Prof. Sudipta Mukhopadhyay
Examination	: Prof. Chandan k Chanda
Design and Management of the Institute's	
Website	: Sri Amal Barman
ERP Cell	: Dr. Indrajit Banerjee
DUO India Fellowship Program	: Prof. Arindam Biswas
Chairman, Committee for development,	
redesign the Institute Website, look after	
its maintenance and Network and	
IT Infrastructure Committee	: Prof. Arindam Biswas







החוד

Dis n



ШП

# Human Resources

## **Human Resources**

Like other CFTIs, sanctioned posts for both teaching and non-teaching are dependent on 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:-

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.

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.

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 pay scale enjoyed by the employees are at par with that in other CFTIs and, as provided in the IIEST, Shib pur 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 IIEST 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.



### 2.1 Academic Staff

The Academic staff scenario in 2019-20 is shown in Table 2.1. Details of Academic Staffs in various academic departments, schools and centres are furnished below.

### Table 2.1: Regular Faculty members of Individual Department

### **AEROSPACE ENGINEERING AND APPLIED MECHANICS**

SI. No.	Faculty Name	Highest Degree	Designation
1	SUJAY KUMAR MUKHERJEA	Ph.D.	PROFESSOR
2	SALIL HALDAR	Ph.D.	PROFESSOR
3	KOUSTUV DEBNATH	Ph.D.	PROFESSOR
4	SUBHASIS BHAUMIK	Ph.D.	PROFESSOR
5	SANTANU MAJUMDER	Ph.D.	PROFESSOR
6	AMIT ROY CHOWDHURY	Ph.D.	PROFESSOR
7	RANA ROY	Ph.D.	PROFESSOR
8	BASUDEB BHATTACHARYYA	Ph.D.	ASSOCIATE PROFESSOR
9	NITYANANDA NANDI	Ph.D.	ASSOCIATE PROFESSOR
10	PRITHWISH KUMAR DAS	Ph.D.	ASSOCIATE PROFESSOR
11	MIHIR CHANDRA MANNA	Ph.D.	ASSOCIATE PROFESSOR
12	NILOY KHUTIA	Ph.D.	ASSOCIATE PROFESSOR
13	PABITRA HALDER	Ph.D.	ASSOCIATE PROFESSOR
14	DEBASHIS PAL	Ph.D.	ASSISTANT PROFESSOR Gr-I
15	KRISHNENDU BHOWMIK	M.Sc.(Engg)	ASSISTANT PROFESSOR Gr II
16.	JOYDEEP BHOWMIK	Ph.D.	ASSISTANT PROFESSOR Gr II
17	PRATIM KUMAR	Ph.D.	ASSISTANT PROFESSOR Gr II
18	PRINCE RAJ LAWRENCE RAJ	Ph.D.	ASSISTANT PROFESSOR Gr II
19	INDRAJIT MUKHERJEE	Ph.D.	ASSISTANT PROFESSOR Gr II

### **ARCHITECTURE TOWN & REGIONAL PLANNING**

SI. No.	Faculty Name	Highest Degree	Designation
1	AMITAVA ROY	Ph.D.	ASSOCIATE PROFESSOR
2	ARUP SARKAR	Ph.D.	PROFESSOR
3	ADITYA BANDYOPADHYAY	Ph.D.	PROFESSOR
4	SOUVANIC ROY	Ph.D.	PROFESSOR
5	SWATI SAHA	Ph.D.	PROFESSOR
6	PARTHA SARATHI MUKHOPADHYAY	Ph.D.	PROFESSOR
7	KEYA MITRA	Ph.D.	PROFESSOR
8	SUBRATA KUMAR PAUL	Ph.D.	ASSOSCIATE PROFESSOR
9	SOUMEN MITRA	Ph.D.	ASSOCIATE PROFESSOR
10	TUHIN SUBHRA MAPARU	Ph.D.	ASSISTANT PROFESSOR GRADE II
11	SUTAPA DAS	Ph.D.	ASSOSCIATE PROFESSOR
12	BHASKAR DE	Ph.D.	ASSISTANT PROFESSOR GRADE II

### **GREEN ENERGY & SENSOR SYSTEMS**

SI. No.	Faculty Name	Highest Degree	Designation
1	NILLOHIT MUKHERJEE	PhD	ASSISTANT PROFESSOR GRADE II
2	SANTANU MAITY	PhD	ASSISTANT PROFESSOR GRADE II

### CHEMISTRY

SI. No.	Faculty Name	Highest Degree	Designation
1	BIBHUTOSH ADHIKARY	PhD	PROFESSOR
2	ANUP MONDAL	PhD	PROFESSOR
3	SHYAMAL KR. CHATTOPADHYAY	PhD	PROFESSOR
4	PRASANTA KR. NANDI	PhD	PROFESSOR
5	BINAYKRISHNA GHORAI	PhD	PROFESSOR
6	AJIT KUMAR MAHAPATRA	PhD	PROFESSOR
7	SUDIP KUMAR CHATTOPADHYAY	PhD	PROFESSOR
8	CHINMOY BHATTACHARYA	PhD	ASSOCIATE PROFESSOR
9	JHUMA GANGULY	PhD	ASSOCIATE PROFESSOR
10	PAPU BISWAS	PhD	ASSOCIATE PROFESSOR
11	NANDA DULAL PAUL	PhD	ASSISTANT PROFESSOR GRADE I
12	UJJAL BHATTACHARJEE	PhD	ASSISTANT PROFESSOR GRADE II
13	LAKSMIKANTA ADAK	PhD	ASSISTANT PROFESSOR GRADE II

### **HEALTH CARE SCIENCE & TECHNOLOGY**

SI. No.	Faculty Name	Highest Degree	Designation	
1	ANANYA BARUI	PhD	ASSISTANT PROFESSOR	GRADE II

### **CIVIL ENGINEERING**

SI. No.	Faculty Name	Highest Degree	Designation
1	KALYAN KR. CHATTOPADHYAY	PhD	PROFESSOR
2	KALYAN KUMAR BHAR	PhD	PROFESSOR
3	SUDIP KR. ROY	PhD	PROFESSOR
4	SUBRATA CHAKRABORTY	PhD	PROFESSOR
5	ANIRBAN GUPTA	PhD	PROFESSOR
6	AMBARISH GHOSH	PhD	PROFESSOR
7	CHAITALI RAY	PhD	PROFESSOR
8	APARNA (DEY)GHOSH	PhD	PROFESSOR
9	PRASANTA CHAKRABORTY	ME	ASSOCIATE PROFESSOR
10	DEBASHIS MOITRA	PhD	PROFESSOR
11	ARUN KUMAR CHAKRABORTY	MTRP	ASSOCIATE PROFESSOR
12	DEBABRATA MAZUMDER	PhD	PROFESSOR
13	ASHIS KR. BERA	PhD	ASSOCIATE PROFESSOR
14	SUGATO PAL	ME	ASSOCIATE PROFESSOR

SI. No.	Faculty Name	Highest Degree	Designation
15	SUJATA BISWAS	PhD	ASSOCIATE PROFESSOR
16	SOUMYA BHATTACHARJYA	PhD	ASSOCIATE PROFESSOR
17	SANDIP CHAKRABORTY	ME	ASSISTANT PROFESSOR
18	SUJIT KUMAR DALUI	PhD	ASSISTANT PROFESSOR GRADE I
19	TAPASH KUMAR ROY	PhD	ASSOCIATE PROFESSOR
20	SNEHA MURMU	ME	ASSISTANT PROFESSOR
21	PRITAM SAHA	PhD	ASSISTANT PROFESSOR GRADE I
22	ASOK ADAK	PhD	ASSOCIATE PROFESSOR
23	CHANCHAL MAJUMDER	PhD	ASSOCIATE PROFESSOR
24	UJJWAL SAHA	PhD	ASSISTANT PROFESSOR GRADE I
25	DEBOJYOTI PANDIT	PhD	ASSISTANT PROFESSOR GRADE II
26	ANUJ KISHORE BUDHKAR	PhD	ASSISTANT PROFESSOR GRADE II
27	DIPANKANA BHATTACHERJEE	PhD	ASSISTANT PROFESSOR GRADE II

### COMPUTER SCIENCE AND TECHNOLOGY

SI. No.	Faculty Name	Highest Degree	Designation
1	UMA BHATTACHARYA	PhD	PROFESSOR
2	JAYA SIL	PhD	PROFESSOR
3	SUSANTA CHAKRABORTY	PhD	PROFESSOR
4	AMIT KUMAR DAS	PhD	PROFESSOR
5	SIPRA DAS (BIT)	PhD	PROFESSOR
6	BIPLAB KR SIKDAR	PhD	PROFESSOR
7	SOMNATH PAL	ME	ASSOCIATE PROFESSOR
8	MANAS HIRA	M.Tech.	ASSOCIATE PROFESSOR
9	SULATA MITRA	PhD	PROFESSOR
10	SEKHAR MANDAL	PhD	PROFESSOR
11	ABHIK MUKHERJEE	PhD	ASSOCIATE PROFESSOR
12	ASIT KUMAR DAS	PhD	PROFESSOR
13	APURBA SARKAR	PhD	ASSOCIATE PROFESSOR
14	SAMIT BISWAS	PhD	ASSISTANT PROFESSOR GRADE I
15	TAMAL PAL	M.E	ASSISTANT PROFESSOR
16	SURAJEET GHOSH	PhD	ASSOCIATE PROFESSOR
17	MALAY KULE	PhD	ASSISTANT PROFESSOR
18	ASHISH KUMAR LAYEK	M.E	ASSISTANT PROFESSOR
19	NIRNAY GHOSH	PhD	ASSISTANT PROFESSOR GRADE II

### EARTH SCIENCES

SI. No.	Faculty Name	Highest Degree	Designation
1	BHABANI PRASAD MUKHOPADHYAY	PhD	PROFESSOR
2	ANANYA MUKHOPADHYAY	PhD	ASSOCIATE PROFESSOR
3	ATIN KUMAR MITRA	PhD	ASSISTANT PROFESSOR GRADE I
4	MOUMITA TALUKDAR	PhD	ASSISTANT PROFESSOR GRADE II

### **ELECTRICAL ENGINEERING**

SI. No.	Faculty Name	Highest Degree	Designation
1	ASHOKE SUTRADHAR	PhD	PROFESSOR
2	ABHIJIT CHAKRABARTI	PhD	PROFESSOR
3	BISWARUP BASAK	PhD	PROFESSOR
4	PRASID SYAM	PhD	PROFESSOR
5	ABDUR ROUF	M.Tech.	PROFESSOR
6	CHANDAN KUMAR CHANDA	PhD	PROFESSOR
7	DEBABRATA ROY	PhD	PROFESSOR
8	APARAJITA SENGUPTA	PhD	PROFESSOR
9	MAINAK SENGUPTA	PhD	PROFESSOR
10	KONIKA DAS(BHATTACHARYA)	PhD	PROFESSOR
11	DEBJANI GANGULY	M.E.	ASSOCIATE PROFESSOR
12	AMAL BARMAN	M.E.	ASSOCIATE PROFESSOR
13	ANINDITA SENGUPTA	PhD	PROFESSOR
14	AMALENDU BIKASH CHOUDHURY	PhD	ASSOCIATE PROFESSOR
15	KAUSHIK MUKHERJEE	PhD	ASSOCIATE PROFESSOR
16	ABHINANDAN DE	PhD	ASSOCIATE PROFESSOR
17	PARAMITA CHATTOPADHYAY	PhD	ASSOCIATE PROFESSOR
18	SUKANYA PARUI	PhD	ASSISTANT PROFESSOR
19	BHASKARAN BARMAN	M.E.	ASSISTANT PROFESSOR
20	SUVARUN DALAPATI	PhD	ASSISTANT PROFESSOR GR I

### ELECTRONICS AND TELECOMMUNICATION ENGINEERING

SI. No.	Faculty Name	Highest Degree	Designation
1	MONOJIT MITRA	PhD	PROFESSOR
2	SANTANU DAS	PhD	PROFESSOR
3	AYAN BANERJEE	PhD	ASSOCIATE PROFESSOR
4	SUSANTA KUMAR PARUI	PhD	PROFESSOR
5	CHIRASREE ROY CHAUDHURI	PhD	ASSOCIATE PROFESSOR
6	TAMAGHNA ACHARYA	PhD	ASSOCIATE PROFESSOR
7	PARTHA BHATTACHARYYA	PhD	ASSOCIATE PROFESSOR
8	DEBASIS MITRA	PhD	ASSISTANT PROFESSOR
9	ANKITA PRAMANIK	PhD	ASSISTANT PROFESSOR
10	RIK CHATTAPADHYAY	PhD	ASSISTANT PROFESSOR GRADE II

### HUMAN RESOURCE MANAGEMENT

SI. No.	Faculty Name	Highest Degree	Designation
1	MANAS KUMAR SANYAL	PhD	PROFESSOR

### HUMANITIES AND SOCIAL SCIENCES

SI. No.	Faculty Name	Highest Degree	Designation
1	RUPEN BASU MALLIK	M.Com	ASSOCIATE PROFESSOR
2	PARTHA SARATHY ROY	PhD	ASSOCIATE PROFESSOR
3	MALLIKA GHOSH SARBADHIKARY	M.Phil	ASSOCIATE PROFESSOR
4	SUBHASIS BANDYOPADHYAY	MA	ASSOCIATE PROFESSOR
5	AVERI MUKHOPADHYAY	PhD	ASSISTANT PROFESSOR GRADE II
6	MADHUMITA ROY	PhD	ASSISTANT PROFESSOR GRADE II

### **INFORMATION TECHNOLOGY**

SI. No.	Faculty Name	Highest Degree	Designation
1	HAFIZUR RAHAMAN	PhD	PROFESSOR
2	SANTI PRASAD MAITY	PhD	PROFESSOR
3	ARINDAM BISWAS	PhD	PROFESSOR
4	SUKANTA DAS	PhD	ASSOCIATE PROFESSOR
5	TUHINA SAMANTA	PhD	ASSOCIATE PROFESSOR
6	PRASUN GHOSAL	PhD	ASSOCIATE PROFESSOR
7	INDRAJIT BANERJEE	PhD	ASSOCIATE PROFESSOR
8	SURAJIT KUMAR ROY	PhD	ASSOCIATE PROFESSOR
9	CHANDAN GIRI	PhD	ASSOCIATE PROFESSOR
10	SHYAMALENDU KANDAR	M.Tech.	ASSISTANT PROFESSOR
11	RUCHIRA NASKAR	PhD	ASSISTANT PROFESSOR GRADE I

### MATHEMATICS

SI. No.	Faculty Name	Highest Degree	Designation
1	BASUDEB MUKHOPADHYAY	PhD	PROFESSOR
2	BINAYAK SAMADDER CHOUDHURY	PhD	PROFESSOR
3	GURUPRASAD SAMANTA	PhD	PROFESSOR
4	MURARI MITRA	PhD	PROFESSOR
5	TAPAN KR. ROY	PhD	PROFESSOR
6	SANAT KR. MAJUMDER	PhD	PROFESSOR
7	ASOKE KUMAR DHAR	PhD	PROFESSOR
8	TAPAN KR. KAR	PhD	PROFESSOR
9	PARBATI SAHA	PhD	PROFESSOR
10	PRITHA DAS	PhD	PROFESSOR
11	SMITA PAL (SARKAR)	PhD	ASSISTANT PROFESSOR
12	SHARIFUL ALAM	PhD	ASSOCIATE PROFESSOR
13	UJJAL DEBNATH	PhD	ASSOCIATE PROFESSOR
14	SORITA OJHA	PhD	ASSISTANT PROFESSOR GRADE II

### **MECHANICAL ENGINEERING**

SI. No.	Faculty Name	Highest Degree	Designation
1	DEBASISH DUTTA	PhD	PROFESSOR
2	SUJOY KUMAR SAHA	PhD	PROFESSOR
3	SISIR KUMAR GUHA	PhD	PROFESSOR
4	SANTANU KR. KARMAKAR	PhD	PROFESSOR
5	APURBA KISHORE DUTTA	PhD	PROFESSOR
6	BIJAN KUMAR MANDAL	PhD	PROFESSOR
7	SHYAMAL CHATTERJEE	PhD	PROFESSOR
8	ACHIN KUMAR CHOWDHURI	PhD	ASSOCIATE PROFESSOR
9	SUDIP GHOSH	PhD	ASSOCIATE PROFESSOR
10	PARTHAPRATIM DEY	PhD	PROFESSOR
11	UTTAM RANA	PhD	ASSISTANT PROFESSOR
12	ASHIM GUHA	PhD	ASSISTANT PROFESSOR
13	ARITRA GANGULY	PhD	ASSOCIATE PROFESSOR
14	SUBHAS CHANDRA MONDAL	PhD	PROFESSOR
15	SANTANU DAS	PhD	ASSISTANT PROFESSOR GRADE II

### METALLURGY AND MATERIALS ENGINEERING

SI. No.	Faculty Name	Highest Degree	Designation
1	AMITAVA BASU MALLICK	PhD	PROFESSOR
2	PARTHA PROTIM CHATTOPADHYAY	PhD	PROFESSOR
3	SWARUP KR GHOSH	PhD	PROFESSOR
4	SUMIT GHOSH	M.Tech.	ASSOCIATE PROFESSOR
5	MANOJIT GHOSH	PhD	ASSOCIATE PROFESSOR
6	DEBDULAL DAS	PhD	ASSOCIATE PROFESSOR
7	SUKUMAR KUNDU	PhD	ASSISTANT PROFESSOR
8	TAPENDU MANDAL	M.Tech.	ASSISTANT PROFESSOR
9	GAUTAM ANAND	PhD	ASSISTANT PROFESSOR GRADE II
10	KAUSHIK DAS	PhD	ASSISTANT PROFESSOR GRADE I

### MINING ENGINEERING

SI. No.	Faculty Name	Highest Degree	Designation
1	PRABIR KR. PAUL	PhD	PROFESSOR
2	NETAI CH. DEY	PhD	PROFESSOR
3	INDRANATH SINHA	PhD	PROFESSOR
4	SURANJAN SINHA	PhD	PROFESSOR
5	PRATIK DUTTA	PhD	PROFESSOR
6	SUDIPTA MUKHOPADHYAY	PhD	PROFESSOR
7	GOPAL CHANDRA ROY	PhD	ASSISTANT PROFESSOR
8	MD. MIRAJUL ISLAM	PhD	ASSISTANT PROFESSOR

### **PHYSICS**

SI. No.	Faculty Name	Highest Degree	Designation
1	DIPALI BANERJEE	PhD	PROFESSOR
2	SUKHENDU SEKHAR SARKAR	PhD	PROFESSOR
3	MOUSUMI BASU	PhD	PROFESSOR
4	SAMPAD MUKHERJEE	PhD	ASSOCIATE PROFESSOR
5	SAMAR JANA	PhD	ASSOCIATE PROFESSOR
6	AMIT KUNDU	PhD	ASSOCIATE PROFESSOR
7	KRISHNENDU MUKHERJEE	PhD	ASSOCIATE PROFESSOR
8	DEBASIS RAY	PhD	ASSISTANT PROFESSOR
9	SYED MINHAZ HOSSAIN	PhD	ASSOCIATE PROFESSOR
10	ABHIJIT BISOI	PhD	ASSISTANT PROFESSOR
11	MOJAMMEL HAQUE MONDAL	PhD	ASSISTANT PROFESSOR
12	DWIPESH MAJUMDER	PhD	ASSISTANT PROFESSOR

### **MECHATRONICS & ROBOTICS**

SI. No.	Faculty Name	Highest Degree	Designation
1	TANMAY PAL	PhD	ASSISTANT PROFESSOR GRADE II

### **COMMUNITY SCIENCE & TECHNOLOGY**

SI. No.	Faculty Name	Highest Degree	Designation
1	JAYATI BHOWAL	PhD	ASSISTANT PROFESSOR GRADE II
2	SHANTONU ROY	PhD	ASSISTANT PROFESSOR GRADE II

### **VLSI TECHNOLOGY**

SI. No.	Faculty Name	Highest Degree	Designation
1	TAMAL GHOSH	PhD	ASSISTANT PROFESSOR GRADE II

### Table 2.2: Non Regular Faculty Members

### **TEMPORARY FACULTY**

Name	Deptt./School/	
	Centre	
Apurba Das	AE&AM	
Dipankar Saha	ETC	
Vikash Kumar	ME	
Amit Kumar Rai	ME	
Partha Sarathi Chowdhury	SOMS	
Poulomi Mukherjee Mondal	SOMS	
Rana Basu	SOMS	
Parijat Pallab Jana	MNDSMSE	
Nitesh Mondal	AE&AM	
Avishek Kumar	MET	
Poulami Ghosh	PHYSICS	
Suman Samui	ETC	
Manasi Das	SOMR	
Reetam Mondal	EE	
Rajarshi Chakravarti	EARTH SCIENCES	
Mrinal Kanti Layek	EARTH SCIENCES	
Shashwati Banerjee	HSS	
Suman Samanta	SOMS	
Basabdatta Palit	ETC	
Gaurav Saini	CEGESS	
Korak Sarkar	AE&AM	
Manas Rakshit	ETC	
Mithu Sarkar	EE	
Deepti Ranjan Majhi	CE	
Debdeep Saha	EE	
Raju Prasad Mahato	ME	
Vinod Kumar Bussa	EE	
Siddharth Tamang	ME	
Kaunsar Jabeen	SOCSAT	
Sangita Deb Barman	CE	
Joynarayan Mukherjee	MNDSMSE	
Moumita Ghosh	SOCSAT	
Sananda Chatterjee	SOMR	
Mitrajit Ghosh	CHST	
Avisor Bhattacharya	MET	
Subir Das	SOMR	
Ismail Mondal	MINING	
Shanujas.V	SOMS	
Satarupa Roychowdhury	SOMS	
	Apurba DasApurba DasDipankar SahaVikash KumarAmit Kumar RaiPartha Sarathi ChowdhuryPoulomi Mukherjee MondalRana BasuParijat Pallab JanaNitesh MondalAvishek KumarPoulami GhoshSuman SamuiManasi DasReetam MondalRajarshi ChakravartiMrinal Kanti LayekShashwati BanerjeeSuman SamantaBasabdatta PalitGaurav SainiKorak SarkarManas RakshitMithu SarkarDeepti Ranjan MajhiDebdeep SahaRaju Prasad MahatoVinod Kumar BussaSiddharth TamangKaunsar JabeenSangita Deb BarmanJoynarayan MukherjeeMoumita GhoshSananda ChatterjeeMitrajit GhoshAvisor BhattacharyaSubir DasIsmail MondalShanujas.V	

SI. No.	Name	Deptt./School/ Centre
40	Aditi Sarkar	MINING
41	Kajal Mukhopadhyay	ETC
42	Santanu Bose	MNDSMSE
43	Anirban Chakraborty	ETC
44	Dulali Nag	HSS
45	Jhuma Dutta Choudhury	HSS
46	Jnui Deb Mallick Datta	SOMS
47	Prasun Kumar Chatterjee	CE
48	Pralay Kumar Talapatra	SOMS

### **VISITING FACULTY**

SI. No.	Name	Deptt./School/ Centre
1	Prof. Samarjit Sengupta	CEGESS
2	Dr. Amal Bhattacharyya	Electrical
3	Dr. Satadal Mal	Electrical
4	Dr. Debasish S. Chakraborty	CHST
5	Prof. Nil Ratan Bandyopadhyay	MNDSMSE

### CONTRACTUAL FACULTIES

SI. No.	Name	Deptt./School/ Centre
1	Dr. Arijit Sinha	MNDSMSE
2	Dr. Sumita Mukhopadhyay	CEGESS
3	Dr. Chitrangada Das Mukhopadhyay	CHST

### **INSPIRE FACULTY**

SI. No.	Name	Deptt./School/ Centre
1	Snehangshu Patra	CEGESS
2	Swatilekha Ghosh	MNDSMSE
3	Arik Kar	CHEMISTRY
4	Anirban Bagui	CEGESS

### 2.2 Non-Academic Staff

A list of employees along with their designations is provided in the Table 2.2 while Table 2.3 provides the list of Institute Officers.

Table 2.2: Non Academic Staff in position

SI. No.	Name	Designation	SI. No.	Name	Designation
1	ABHIJIT BHATTACHARYYA	ASSISTANT- SG-II	25	ASHOK KUMAR ROY	MTS (COOK)
2	ABIR KUMAR GANGULY	U.D. CLERK	26	ASHOKE HALDER	MTS (JR. DRIVER)
3	AJOY KUMAR DAS	MTS (WKSP.	27	ASHOKE ROUTH	MTS (SR. SWEEPER)
		ATTENDANT-III)	28	ASHURA BEGAM	MTS (HELPER-III)
4	ALOK ROY	SUPERINTENDENT	29	ASIK MOHAMMAD	MTS (JR. DURWAN)
5	AMAL KUMAR MANDAL	TECHNICAL ASSISTANT	30	ASIM DAS CHAKRABORTY	ASSISTANT- SG-II
6	AMALENDU SAHOO	SR. TECHNICAL ASSISTANT	31	ASISH KUMAR PAUL	SR. TECHNICAL ASSISTANT
7	AMAR NATH DUTTA	MTS (HELPER-II)	32	ASIT BARAN DEY	MTS (SR. PEON)
8	AMAR TARAFDER	SR. TECHNICAL	33	AVIJIT NATH	MTS (JR. PEON)
		ASSISTANT	34	AYANDEB DATTA	ASSISTANT- SG-II
9	AMAR TARAFDER	MTS (WKSP.	35	BABLU SANTRA	TECHNICIAN - SG- II
		ATTENDANT-II)	36	BADAL SEAL	MTS (SR. DURWAN)
10	AMITAVA CHOWDHURY	TECHNICAL ASSISTANT	37	BAGALA PRASAD PATRA	TECHNICAL ASSISTANT - SG-I
11	AMITAVA PAL	TECHNICAL ASSISTANT	38	BAIDYANATH MONDAL	ASSISTANT- SG-II
12	AMIYA KUMAR PAUL	MTS (SR. PEON)	39	BALARAM RAY	TECHNICIAN - SG- II
13	AMIYA RATAN ROUT	TECHNICAL	40	BAPI MAJHI	MTS (JR. DURWAN)
		ASSISTANT	41	BHANU DAS	MTS (SR. DURWAN)
14	AMRITA BANDYOPADHYAY	SR. TECHNICAL ASSISTANT	42	BHOLA PRASAD HARIJAN	MTS (JR. SWEEPER)
15	ANINDYA MUKHOPADHYAY	ASSISTANT- SG-II	43	BHULU GHOSH	MTS (SR. DURWAN)
16	ANJANA SENGUPTA	SR. TECHNICAL ASSISTANT	44	BIBHAS CHANDRA MITRA	SR. TECHNICAL ASSISTANT
17	ARABINDA SAMANTA	MTS (JR. DURWAN)	45	BIBHUTI BHUSAN DEY	MTS (JR. PEON)
18	ARATI MAJUMDAR	MTS (SR. PEON)	46	BIJIT KUMAR DEY	TECHNICAL ASSISTANT
19	ARINDAM BANERJEE	ASSISTANT- SG-II	47	BIJON SARKAR	MTS (HELPER-III)
20	ARPITA DAS	ASSISTANT- SG-II	48	BIKASH MAJHI	MTS (COOK)
21	ARUN KR PATRA	MTS (SR. COOK)	49	BIMAL DUTTA	MTS (JR. PEON)
22	ARUN KUMAR GHOSH	SR.	50	BIMAL KUMAR GHOSH	MTS (SR. DURWAN)
			51	BIPLAB KAYAL	MTS (HELPER-III)
23			52	BIPLAB MUKHERJEE	SUPERINTENDENT
24	ASHOK KUMAR GHOSH	MTS (JR CASH SARKAR/RC SUP)	53	BISHNU PADA CHOUDHURY	TECHNICAL ASSISTANT

01	N		01	N
SI. No.	Name	Designation	SI. No.	Name
54	BISWAJIT DAS	SR. TECHNICAL	85	GITA HELA
		ASSISTANT	86	GOPAL CHANDRA PARUA
55	BISWAJIT DAS	STORE HELPER	87	GOUR MONDAL
56	BISWAJIT KAR	MTS (COOK-SR)		
57	BISWAJIT SAMANTA	TECHNICAL ASSISTANT	88	GOURANGA CHOWDHURY
58	BISWAJIT SARKAR	MTS (JR. DURWAN)	. 89	HARAN CHANDRA SADHUKHAN
59	BISWANATH DARJEE	MTS (JR. DURWAN)	90	HAREKRUSHNA DASH
60	BRAJA GOPAL KONER	TECHNICAL ASSISTANT	91	HARI PRASAD SAHA
61	BRINDABAN PATTA	TECHNICAL	92	HIRU KUMAR MAJHI
		ASSISTANT	93	IDRISH MALLICK
62	BUDDHADEV SAMANTA	MTS (SR. MALI)	94	JAGANNATH ROY
63	CHAITALI BHATTACHARJEE	MTS (JR. PEON)	95	JAHAR PAL
64	CHANDA DEVI	MTS (HELPER-II)	96	JANARDAN KAR
65	CHANDAN KARMAKAR	MTS (JR. DURWAN)		
66	CHANDRA SHEKHAR MALAKAR	MTS (JR. SWEEPER)	97	JAYANTA KUMAR CHANDRA
67	CHANDRANI	ASSISTANT- SG-II	98	JAYANTA KUNDU
			99	JAYDEB BARUA
68	CHINMOY SANA	PERSONAL ASSISTANT	100	JOYDEB DOLAI
69	DEB KUMAR JANA	MTS (HELPER-II)	101	JOYDEB GANGULY
70	DEBABRATA PATRA	MTS (SR. DURWAN)	102	JUDHISTIR MANDAL
71	DEBASHIS MONDAL	MTS (JR. DURWAN)	103	JULFIKER ALI MOLLA
72	DEBASISH SAHA	ASSISTANT- SG-II	104	KAKALI PAKHIRA PAN
73	DEBENDRA NATH GHOSAL	MTS (SR. DURWAN)	105	KALYAN PRASAD PATHAK
74	DEBJIT BHOWMIK	SR. TECHNICAL ASSISTANT	106	KANAI DAS
75	DHARMENDRA DAS	MTS (SR. PEON)	107	KANKAR MOHAN DAS
76	DHIMAN CHANDRA DAS	MTS (HELPER-III)	108	KASHI NATH SINGH
77	DIBYENDU PAUL	TECHNICIAN - SG- II	108	KEYARANI MANDAL
78	DILIP KUMAR BAG	MTS (JR. MALI)	. 107	
79	DILIP KUMAR DAS	MTS (SR. MALI)	110	KRISHNA CHAKRABORTY
80	DIPENDU PAUL	MTS (JR. PEON)	111	KUMARESH DEY
81	GANESH SARDAR	MTS (SR. DURWAN)	112	LAKSHMAN HANSDA
82	GANGADHAR NAYAK	MTS (SR. SWEEPER)	113	LALOO HELA
83	GAUTAM BISWAS	SUPERINTENDENT	114	MADANMOHAN BOSE
84	GAUTAM KUMAR GARAI	SUPERVISOR INST	115	MAHADEV BISWAS
	-	-		

Designation

MTS (SR. SWEEPER) MTS (SR. PEON)

MTS (SR. CASH SARKAR)

MTS (JR. DURWAN) PRIVATE SECRETARY

MTS (JR. DURWAN)

MTS (JR. SWEEPER) MTS (HELPER-I) MTS (SR. PEON) TECHNICAL ASSISTANT

TECHNICAL ASSISTANT HAMMER MAN

TECHNICAL ASSISTANT - SG-I TECHNICIAN - SG- II MTS (JR. SWEEPER)

MTS (COOK)

MTS (COOK) MTS (SR. PEON) TECHNICAL ASSISTANT

TECHNICAL ASSISTANT

MTS (JR. PEON) MTS (JR. PEON) MTS (SR. PEON) MTS (JR. SWEEPER) SUPERINTENDENT SUPERINTENDENT

- I)

MTS (HELPER GR.

SUPERINTENDENT MTS (SR. PEON) MTS (JR. PEON)

SUPERINTENDENT

SI. No.	Name	Designation	SI. No.	Name	Designation	
116	MAHESH DAS	MTS (SR. DURWAN)	147	NIMAIN CHARAN SATAPATHY	SUPERINTENDENT	
117	MAHUA BANDOPADHYAY	MTS (JR. PEON)	148	NIRANJAN NAYAK	MTS (SR. SWEEPER)	
118	MALATI DEY	MTS (JR. PEON)	149	NIRMAL KAR	MTS (COOK)	
119	MALAY GARAI	PERSONAL	150	PAPIYA CHATTOPADHYAY	NURSE	
120	MAMIT MITRA	ASSISTANT PERSONAL	151	PARTHA SARATHI BARURI	TECHNICAL ASSISTANT	
		ASSISTANT	152	PARTHA SARATHI NATH	ASSISTANT- SG-II	
121	MANAS KUMAR SAHA	MTS (COOK)	153	PARTHASARATHI MAITY	SUPERINTENDENT	
122	MANOJ BHAGAT	MTS (JR. PEON)	154	PIJUSH DATTA	ASSISTANT- SG-II	
123	MANTU CHAKRABORTY	MTS (HEAD MALI)	155	PINTU DAS	MTS (JR. DURWAN)	
124	MANTU GOSWAMI	SUPERINTENDENT	156	PRABIR NASKAR	MTS (HELPER-II)	
125	MD MURTUZA	MTS (HELPER-II)	157	PRADIP DAS	MTS (JR. DURWAN)	
126	MD RIAZ	MTS (JR. SWEEPER)	158	PRADIP KR DEY	TECHNICIAN - SG- II	
127	MD SHAMIM	MTS (WKSP. ATTENDANT-III)	159	PRADIP KUMAR DAS	TECHNICAL ASSISTANT	
128	MD SIRAJUDDIN	MTS (HELPER-II)	160	PRADIP MISTRY	TECHNICAL	
129	MENOKA TURI	MTS (JR. SWEEPER)			ASSISTANT	
130	MILAN KANTI DEY			PRADUT KR MANNA	MTS (SR. PEON)	
101		ASSISTANT - SG-II	162	PRAMILA NAYAK	MTS (SR. SWEEPER)	
131	MILAN MAJUMDER	MTS (SR. FARASH)	163	PRASANTA GOPE	SR. TECHNICAL	
132	MILON KUMAR DAS	MTS (JR. PEON)			ASSISTANT	
133		MTS (JR. SWEEPER)	164	PRASANTA MALLICK	MTS (JR. PEON)	
134	MINTU CHARAN KHAN	SR. PERSONAL ASSISTANT	165	PRATAP PRAMANICK	DUPLICATING OPERATOR	
135	MITHILESH KUMAR ROY	MTS (JR. DRIVER)	166	PRODIP KUMAR ROY	SR. TECHNICAL ASSISTANT	
136	MOHINI MOHAN DEBSHARMA	TECHNICAL ASSISTANT	167	PROSENJIT PANJA	MTS (SR. PEON)	
137	MOUMITA SAHOO PORYA	SENIOR	168	PURNENDU BERA	MTS (SR. PEON)	
		PHARMACIST	169	RABI NAYAK	MTS (JR. DURWAN)	
138	MRINMOY KUMAR JANA	MTS (JR. PEON)	170	RABI SANKAR KANDAR	SENIOR	
139	MURALI MOHAN MOHANTY	MTS (COOK)			PHARMACIST	
140	MURARI MONDAL	MTS (HELPER-II)	171	RABIN DAS	MTS (SR. PEON)	
141	NAGESWAR MAHATO	MTS (JR. SWEEPER)	172	RABIN JANA	MTS (COOK)	
142	NANI GOPAL ROY	TECHNICAL ASSISTANT	173	RABINDRA NATH BANERJEE	METHOR FITTER	
143	NARAYAN CHANDRA DASH	MTS (JR. PEON)	174	RADHASHYAM CHATTERJEE	MTS (COOK)	
144	NARESH BHAGAT	MTS (JR. SWEEPER)	175	RAJA BANERJEE	SUPERINTENDENT	
145	NEMAI CHARAN BAL	MTS (SR. DURWAN)	176	RAJAT MUKHOPADHYAY	SR. TECHNICAL ASSISTANT	
146	NILUFAR AHMED	NURSE	177	RAJENDRA BHAGAT	MTS (HELPER-II)	

SI. No.	Name	Designation	SI. No.	Name	Designation	
178	RAJESH ROUTH	MTS (JR. SWEEPER)	208	SANJAY SINGH	MTS (HELPER-III)	
179	RAJIB BANDYOPADHYAY	TECHNICAL	209	SANJIB DAS	MTS (COOK)	
		ASSISTANT	210	SANJOY BHAGAT	MTS (HELPER-III)	
180	RAJKUMAR DHALI	MTS (JR. MALI)	211	SANJOY GHOSH	MTS (JR. DURWAN)	
181	RAJKUMAR DOME	MTS (SR. SWEEPER)	212	SANJOY NASKAR	TECHNICAL	
182	RAKESH KUMAR NAYAK	MTS (JR. PEON)			ASSISTANT	
183	RAKTIM MAITY	SR. TECHNICAL ASSISTANT	213	SANKAR KARMAKAR	MTS (COOK)	
184	RAM BRIJ PRASAD HARIJAN	MTS (SR. DURWAN)	214	SANTANU CHATTOPADHYAY	TECHNICAL ASSISTANT - SG-I	
185	RAM CHANDRA ROUTH	MTS (SR. SWEEPER)	215	SANTANU GANGULI	ASSISTANT- SG-II	
186	RAM PRASAD ROUTH	MTS (JR. SWEEPER)	216	SANTANU PRAMANICK	MTS (JR. PEON)	
187	RAM SUNDER YADAV	ASSISTANT- SG-II	217	SANTOSH KUMAR KAYAL	TECHNICAL	
188	RAMA ROY	MTS (SR. PEON)			ASSISTANT	
189	RAMESH HALDER	TECHNICAL	218	SAPANI NAYAK	MTS (JR. DURWAN)	
190	RANJAN KUMAR BISWAS	ASSISTANT	219	SARBANI BARARI	TECHNICAL ASSISTANT	
		ASSISTANT - SG-I	220	SARBANI SARKAR	TECHNICAL ASSISTANT	
191	RANJAN KUMAR PAL	MTS (COOK)	221	SAROJIT DAS	ASSISTANT- SG-II	
192	RANKANIDHI NAYAK	MTS (SR. SWEEPER)			MTS (LAB.	
193	RANU DEY	MTS (SR. PEON)	222	SATYA NARAYAN KARMAKAR	ATTENDANT-III)	
194	RASBIHARI CHAKRABARTI	SUPERINTENDENT	223	SATYAJIT BARUA	SUPERINTENDENT	
195	RICHARD FRANCIS SUBBA	MTS (SR. PEON)	224	SAUMENDU ATTA	LIBRARY &	
196	RITA GHOSH	MTS (HELPER-III)			INFORMATION ASSISTANT	
197	RUMA DAS GHOSH	MTS (HELPER-III)	225	SEKHAR RAO	MTS (JR. SWEEPER)	
198	RUMA NASKAR CHAKRABORTY	SUPERINTENDENT	226	SHYAMAL KR MANNA	ASSISTANT- SG-II	
199	RUMELI BOSE	TECHNICAL	227	SIBAPRASAD JANA	MTS (SR. DURWAN)	
		ASSISTANT	228	SIBU DAS	MTS (JR. DRIVER)	
200	SADHU THAKUR	MTS (JR. MALI)	229	SIDHESWAR ROY	MTS (JR. MALI)	
201	SAIBAL GHOSH	TECHNICIAN - SG- II	230	SINTU DAS	TECHNICAL	
202	SAJAL KUMAR CHAKRABORTY	SR. TECHNICAL ASSISTANT		SISIR KUMAR ROY		
203	SALEHA BEGUM	MTS (SR. PEON)	231	SK KARIM	MTS (JR. DURWAN) MTS (SR. MALI)	
204	SALIL KUMAR DALUI	TECHNICAL	232			
		ASSISTANT	233	SNEHASHIS SAHA	TECHNICAL ASSISTANT	
205	SAMARENDRA NATH GHOSH	U.D. CLERK	234	SNIGDHA DUTTA PANJA	NURSE	
206	SANDIP PRAMANICK	MTS (JR. PEON)	235	SOMA NASKAR SARDAR	TECHNICAL	
207	SANJAY GHOSH	MTS (SR. PEON)			ASSISTANT	

SI. No.	Name	Designation	SI. No.	Name	Designation
236	SOMNATH DAS	ASSISTANT- SG-II	264	SUSANTA KUMAR CHAKRAVORTY	TECHNICAL ASSISTANT - SG-I
237	SOUMEN GOPE	TECHNICAL ASSISTANT	265	SUSANTA PAL	MTS (JR. SWEEPER)
238	SOURASIS MITRA	ASSISTANT- SG-II	266	SUSHIL KUMAR DEY	MTS (JR. DURWAN)
239	Souvik patra	TECHNICAL	267	SUSMITA SARKAR	SUPERINTENDENT
		ASSISTANT	268	SUTAP CHAKRABORTY	SR. TECHNICAL
240	SUBHADRA MANNA	MTS (JR. PEON)			ASSISTANT
241	SUBHAJIT BISWAS	TECHNICAL ASSISTANT	269	SWAPAN BANERJEE	MTS (SR. PEON)
242	SUBHAS SARKAR	MTS (JR. PEON)	270	SWAPAN CHAKRABORTY	MTS (SR. DURWAN)
243	SUBHASISH PRADHAN	TECHNICAL ASSISTANT	271	SWAPAN KUMAR JANA	TECHNICAL ASSISTANT
244	SUBHRA ROY	SR.STENOGRAPHER	272	SWAROOP SHOBHAN MUKHERJEE	TECHNICAL ASSISTANT
244	SUBIR GHOSH	MTS (SR. CYCLO.OP)	273	SWATI KAR	SUPERINTENDENT
245	SUBRATA BAIDYA	ASSISTANT- SG-II	273	TAMAL KUMAR DAS	SUPERINTENDENT
240	SUBRATA CHAKRABORTY	MTS (SR. PEON)	274	TAPAN ORAON	MTS (JR. SWEEPER)
247	SUCHITA KHAKHA	ASSISTANT- SG-II	275	TARAK DAS	MTS (SR. DURWAN)
240	SUDAMA CHOWDHURY	MTS (JR. DURWAN)	270	TARAK MAJHI	MTS (SK. DORWAR)
249	SUDARSAN MAHATO	MTS (JR. DURWAN)	277	TARAK NATH DAS	SUPERINTENDENT
		WORK ASSISTANT			
251	SUDIPTA MANDAL	(DRESSER)	279	TARAK NATH DEY	MTS (JR. PEON)
252	SUGATA MUNSHI	SR. TECHNICAL	280 281	TARAK NATH JANA TARAPRASANNA GANGULY	MTS (JR. DURWAN)
		ASSISTANT		TARUN PAUL	MTS (COOK)
253	SUJAN SARKAR	ASSISTANT- SG-II	282	TARUN PAUL	SR. PERSONAL ASSISTANT
254	SUJATA MANDI	ASSISTANT- SG-II	283	TARUN CHANDRA DAS	MTS (COOK)
255	SUJATA MISRA	TECHNICAL ASSISTANT	284	TARUN KANTI MITRA	ASSISTANT- SG-II
256	SUJIT MAZUMDAR	SR.STENOGRAPHER	285	TINKU DAS	MTS (JR. MALI)
257	SUKUMAR SARKAR	MTS (SR. PEON)	286	TUSHAR KANTI MITRA	MTS (SR. DURWAN)
258	SUMITRA BAGCHI	SR. TECHNICAL ASSISTANT	287	UJJAL KUMAR GUPTA	SR. SUPERINTENDENT
259	SUNIL KR MANNA	SUPERINTENDENT	288	UTPAL GHOSH	ASSISTANT- SG-II
260	SURAJIT DAS	ASSISTANT- SG-II	289	UTTAM CHATTERJEE	ASSISTANT- SG-II
261	SURESH CHANDRA NAIK	MTS (HELPER-III)	290	UTTAM KUMAR DOLAI	MTS (COOK)
262	SUSANTA BHATTACHERJEE	MTS (HELPER-II)	291	UTTAM PAL	MTS (JR. PEON)
263	SUSANTA DHARA	SR. TECHNICAL	292	YEASIN MULLICK	TURNER CUM FIT.
		ASSISTANT	293	ANJAN KUMRAR SUR	SR. PEON

## 2.3 Non-Teaching Officers

Details of incumbent officers have been provided here.

#### Table 2.3: List of Officers

SI. No.	Name of the Employee	Designation
1	DR. BIMAN BANDYOPADHYAY	Registrar
2	SRI SAMBHUNATH DATTA	Deputy Registrar
3	DR. DEVASIS DATTA	Deputy Registrar
4	SRI ALOK KUMAR MAITY	Deputy Registrar
5	DR. NIRMALYA KUMAR BHATTACHARYYA	Deputy Registrar
6	SRI ALOK KUMAR MITRA	Assistant Registrar
7	SRI SHIB SANKAR BASAK	Assistant Registrar
8	DR. BIVORE DAS	Assistant Registrar
9	SRI DIPANKAR CHAKRABARTY	Assistant Registrar
10	DR. RUBI GOLDER	Medical Officer
11	DR. HARI PRASAD SHARMA	Joint Librarian
12	SRI SUSHIL KUMAR BARMAN	Assistant Librarian(Selection Grade)
13	SRI ABANI ORAON	Assistant Librarian
14	SRI USHA SANKAR BHATTACHARYA	Assistant Training Officer

## 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 was changed from 60 to 65. The list of faculty and staff members who retired/expired during the period mentioned is furnished below

#### Table 2.4

SI. No.	Name		Date of Superannuation
1	KAJAL BHATTACHARYA		30.04.2019
2	BASUDEB DEY		31.07.2019
3	TAPAN KUMAR DAS	GOVT	31.07.2019
4	BAIDYANATH ROY		31.08.2019
5	BADAL CH. DAS		30.11.2019
6	JOYDEB DAS		30.11.2019
7	DEBASIS SARKAR		31.11.2019
8	SHANTINATH CHAKRABORTY		31.12.2019
9	DEBASISH SIKDAR		31.12.2019
10	SUBRATA CHATTERJEE		31.12.2019
11	BISHU KERKETTA	GOVT	31.12.2019
12	JAGADISH PAL		31.01.2020
13	NIL RATAN BANDYOPADHYAY		31.01.2020
14	DIPANKAR DAS		31.01.2020
15	NIKHIL CHANDRA MONDAL	GOVT	31.01.2020
16	SANDIP KUMAR RAM	GOVT	31.01.2020
17	RUP CHAND NASKAR	GOVT	29.02.2020
18	BASUDEV AICH		29.02.2020
19	TRIBHUBAN SHAW		29.02.2020
20	BICHITRA KUMAR GUHA		29.02.2020
21	RATINDRA NATH DE		29.02.2020
22	GAUTAM BANDYOPADHYAY		31.03.2020
23	KRUSHNA CHANDRA KAR	EXPD	13.12.2019





# Academic Programmes

# Academic Programmes

#### The Institute offers the following undergraduate and postgraduate programmes.

- Four-year B.Tech. Degree Programme
- Five-year Dual Degree (B.Tech.-M.Tech.) programme
- Five-Year B.Arch Degree Programme
- Two-Year M.Tech. Degree Programme
- Two-Year M.PLAN Degree Programme
- Two-Year M.Sc. Degree Programme
- Two-Year MBA Degree Programme

#### 3.1 Four-Year B.Tech. Degree Programme

The Institute offers 4-year full time courses leading to B.Tech. degrees 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

On the basis of performance of a student, options are offered to(i) change discipline at the end of 2nd semester and (ii)switch over to Dual Degree(B.Tech.-M.Tech. programme), at the end of 6th semester, for completing M.Tech. programme along with the B.Tech. programme by studying for one more year.

### 3.2 Five-Year B.Arch Degree Programme

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

## 3.3 Two-Year M. Tech Degree Programme

#### The Institute offers 2-year full time courses leading to M.Tech degree in the following fifteen disciplines:

- i) Applied Mechanics Aerospace Engineering & Applied Mechanics Department
- ii) Civil Engineering Civil Engineering Department
- iii) Computer Science and Engineering Computer Science and Technology Dept
- iv) Electrical Engineering-Electrical Engineering Department
- v) Electronics and Telecommunication Engineering-Electronics and Telecommunication Engineering Department
- vi) Green Energy Centre of Excellence for Green Energy & Sensor Systems
- vii) Biomedical Engineering Centre for Healthcare Science and Technology
- viii) Safety & Occupational Health Engineering Centre for Healthcare Science and Technology

- ix) Information Technology Information Technology Department
- x) Materials Science & Engineering-School of Materials Science & Engineering
- (xi) Metallurgical Engineering Metallurgy and Materials Engineering Department
- xii) Mechanical Engineering Mechanical Engineering Department
- xiii) Mechatronics-School of Mechatronics & Robotics
- xiv) Mining Engineering Mining Engineering Department
- xv) Geoinformatics Mining Engineering Department
- xvi) VLSI Design School of VLST Technology

All the above mentioned Engineering Departments including Architecture offer 2-year full time PG programme leading to M.Tech and MOP (for Architecture) degrees. The admission is made through the Centralised Counselling for M.Tech./M.Arch./M.Plan system for the NITs and CFTIs. Details of specialisation for the courses are furnished in Table 3.1

#### Table 3.1: Details of M.Tech./MOP Programmes

Departments/Schools/ Centres	PG Program (Specialisation)	Departments/Schools/ Centres	PG Program (Specialisation)	
Aerospace Engineering	Mechanics of Fluids	Electronics and	Communication Engineering &	
and Applied Mechanics	Mechanics of Solids	Telecommunication	Signal Processing	
Architecture Town &	Urban & Regional Planning	Engineering	Digital Systems	
Regional Planning			Microwave & Communication	
Centre of Excellence for	Renewable Energy Science and		Engineering	
Green Energy & Sensor Systems	Technology	Department of Information Technology	Information Technology	
Centre for Healthcare	Biomedical Engineering	Department of	Machine Design	
Science and Technology	Safety and Occupational Health	Mechanical Engineering	Heat Power Engineering	
	Engineering		Production Engineering	
Department of Civil	Environmental Engineering	Department of Metallurgy	Iron and Steel Technology	
Engineering	Geotechnical Engineering	& Materials Engineering	Surface Engineering	
	Structural Engineering	Department of Mining	Geoinformatics	
	Transportation Engineering	Engineering	Mining Engineering	
	Water Resources Engineering	School of Materials	Materials Science & Technology	
Computer Science and	Computer Science & Engineering	Science & Engineering		
Technology		School of Mechatronics	Mechatronics	
Department of Electrical	Control System & Instrumentation	& Robotics		
Engineering	Power & Energy Systems	School of VLSI	VLSI Design	
	Power Electronics, Machines and Drives	Technology		

## 3.4 Two-Year M.Sc. Degree Programme

#### The Institute offers 2-year full time courses leading to M.Sc. degree in the following five disciplines

- a) Chemistry Chemistry Department
- b) Food Processing & Nutrition Sciences School of Community Science and Technology
- c) Applied Geology Earth Science Department
- d) Applied Mathematics Mathematics Department
- e) Physics -Physics Department

## 3.5 Two-Year MBA Programme

The Institute offers a two-year MBA programme by School of Management Sciences.

#### 3.6 Ph.D. Programme

The Institute offers full time Ph.D. programme in the following broad areas of stady:

- a) ARCHITECTURE
- b) ENGINEERING
- c) HUMANITIES AND SOCIAL SCIENCES
- d) MANAGEMENT
- e) SCIENCE
- f) Other Areas of INTERDISCIPLINARY & MULTIDISCIPLINARY STUDIES

### 3.7 Student Strength

#### Table 3.2: Student Strength as on 31.03.2020

Category	UG				PG	i		Ph.D.				Total	
	Male		Fem	ale	М	ale	Fe	male	N	lale	Fema	ale	
	NPH	РН	NPH	PH	NPH	PH	NPH	PH	NPH	PH	NPH	PH	
General	897	31	176	5	307	2	92	5	401	5	138		2059
SC	293		72		85		24		129		33		636
ST	143		36		21		5		4				209
OBC	611	9	109	5	181		30		86		13		1044
Total	1944	40	393	10	594	2	151	5	620	5	184		3948

#### Table 3.3: Ph.D. Students at IIESTS

Ph.D Students	2014-15	2015-16	2016-17	2017-18	2018-19	2019-2020
No. of Full Time Admitted	259	131	71	171	52	85
Degree Awarded	52	57	74	83	63	96

## 3.8 Scholarship to Students

#### **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.

#### **Dual Degree**

The Institute offers GATE Scholarship for the students in the Dual Degree Courses which will be available during 9th to 10th Semester subject to Valid GATE score of the 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.

#### **Post Graduate Level**

Besides the GATE scholarship for the M.Tech. and M.Plan. 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 offered by various banks. A number of scholarships offered by the Global Alumni Association of this Institute are also available to the students.



## 3.9 Institute Result

#### Statistics of Examination Result: Academic Year 2019-2020.

#### Undergraduate

Course	Appeared	Passed	Pass Percentage
Bachelor of Architecture	13	13	100
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in Mechanical Engineering	67	67	100
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	76	76	100
Civil Engineering			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	73	72	98.6
Electrical Engineering			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	46	46	100
Electronics & Telecommunication Engineering			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	24	24	100
Metallurgy & Materials Engineering			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	20	20	100
Mining Engineering			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	77	77	100
Computer Science & Technology			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	61	60	98.36
Information Technology			
Bachelor of Technology Under Five Year Dual Degree (B.Tech M.Tech.) Programme in	28	27	96.4
Aerospace Engineering			
Total	485	482	99.38

#### **Dual Degree**

Course	Appeared	Passed	Pass Percentage
Five Year Dual Degree (B.Tech M.Tech.) Programme in Mechanical Engineering	3	3	100
Five Year Dual Degree (B.Tech M.Tech.) Programme in Civil Engineering	31	31	100
Five Year Dual Degree (B.Tech M.Tech.) Programme in Electrical Engineering	12	12	100
Five Year Dual Degree (B.Tech M.Tech.) Programme in Electronics & Telecommunication Engineering	10	10	100
Five Year Dual Degree (B.Tech M.Tech.) Programme in Metallurgy & Materials Engineering	2	2	100
Five Year Dual Degree (B.Tech M.Tech.) Programme in Information Technology	1	1	100
Total	59	59	100

#### Postgraduate

Course	Appeared	Passed	Pass Percentage
Master of Technology in Mechanical Engineering	22	22	100
Master of Technology in Civil Engineering	33	33	100
Master of Technology in Electrical Engineering	13	13	100
Master of Technology in Electronics & Telecommunication Engineering	11	11	100
Master of Technology in Metallurgy and Materials Engineering	7	7	100
Master of Technology in Mining Engineering	2	2	100
Master of Technology in Computer Science & Engineering	13	13	100
Master of Technology in Information Technology	3	3	100
Master of Urban and Regional Planning	7	6	85.7
Master of Technology in Engineering Mechanics	11	11	100
Master of Technology in Geoinformatics	12	12	100
Master of Technology in Renewable Energy Science and Technology	15	15	100
Master of Technology in Safety and Occupational Health	7	7	100
Master of Technology in Biomedical Engineering	7	7	100
Master of Technology in Materials Engineering	12	12	100
Master of Technology in VLSI Design	11	11	100
Master of Technology in Mechatronics	12	12	100
Master of Science in Chemistry	24	24	100
Master of Science in Applied Mathematics	15	15	100
Master of Science in Physics	19	19	100
Master of Science in Applied Geology	24	24	100
Master of Science in Food Processing & Nutrition Sciences	11	11	100
Master of Business Administration	24	24	100
Total	315	314	99.68

### 3.10 Convocation

The Sixth Convocation of the Indian Institute of Engineering Science and Technology, Shibpur was held on January 31, 2020. Dr. Vasudev K Aatre, Chairperson, Board of Governors, Prof. Parthasarathi Chakrabarti, Director along with the respected Chief Guest, Dr. Sekhar Basu, DAE Homi Bhaba Chair Professor, Former Chairman, Atomic Energy Commission of India, Former Secretary, Department of Atomic Energy (Gol), Members of the Board of Governors, and Members of the Senate graced the Convocation. A number of students and their family members, faculties, staff, guests and members of the media attended the Convocation.

Dr. Vasudev K Aatre, Chairperson, Board of Governors, IIESTS, Former Director General, Defence Research and Development Organization (Gol) & Former Scientific Adviser to Raksha Mantri & Chairperson, BOG, IIEST, Shibpur presided over the function. Late Dr. Sekhar Basu, DAE Homi Bhaba Chair Professor, Former Chairman, Atomic Energy Commission of India, Former Secretary, Department of Atomic Energy (Gol) delivered the Convocation Address as the Chief Guest. Prof. Parthasarathi Chakrabarti, Director, IIEST, Shibpur delivered the Welcome Address.









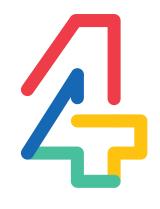
The total number of Degree recipients in this Convocation was 970 and around 700 students received the degree in person. Degrees and prizes have been awarded in this Convocation to a total of 511 Undergraduate students of 10 disciplines, 318 postgraduate students from Twenty-two different programmes, 45 Dual Degree students of five courses and 96 Ph.D Fellows. Institute Medals have been awarded to 43 candidates who have secured highest marks in different disciplines. The President of India Gold Medal has been awarded to Ms. Sweta Agarwal, Department of Electronics & Telecommunication Engineering who secured 1st position among the undergraduate students of all ten engineering disciplines taken together. Ganesh Chandra Mitra Memorial Medal has been awarded to Ms. Protyusha Dutta, Department of Mathematics who secured 1st position among the postgraduate students of all the disciplines. Nine endowment medals have been awarded to the students who have stood first in their respective disciplines or have secured highest marks in a particular subject.







মান্মকি প্রতিভা



# Academic Departments, Schools and Centres

On the 150<sup>th</sup> Birth Anniversary of Gurudey Rabindranath Tagore onserver in reseat Environment & Education in presence of Dry 155 OF State unasindhu D2.5 State or indra Bharati University Dath May 100 (320) (340(31, 5855)) Sri Niranjan Pradhan

# Academic Departments, Schools and Centres

The following paragraphs present very brief profiles of the Departments, Schools and Centres with their salient achievements.

## 4.1 Aerospace Engineering and Applied Mechanics (AE&AM)

The department of Applied Mechanics was established as a separate major engineering department in 1947 and subsequently the Drawing Section was attached to it in late fifties. With effect from 2008, the department has been renamed as the Department of Aerospace Engineering and Applied Mechanics. Till date, the prominent research areas of the department are Biomechanics, Robotics and Mechatronics, Structural Dynamics and Earthquake Engineering, Computational Fluid Dynamics, Soil-Structure Interaction, Eco-Hydraulics etc. Recent sponsors of research projects at the department include: DST, AICTE, UGC, BARC, BRNS, MHRD, and CSIR. The research outcomes of the department can be gauged by the significant number of publications made by faculty members in journals of repute.

#### Workshops/Conferences/Seminars organized

- a) National Workshop, Autopilot Programming of Unmanned Aerial Vehicles, was attended by Dr. Niloy Khutia on 14-02-2020 for 2 days.
- b) National 1-day Workshop on Inflight Icing / Ice Protection and Certification was attended by Dr. Prince Raj Lawrence Raj on 03-03-2020.
- c) Short-term course and Workshop on autopilot programming of UAVs was attended by Dr. Joydeep Bhowmik on 13-02-2020 for 3 days.



# Workshops/Conferences/Seminars attended in India and abroad

- a) 3-Day Pedagogy Workshop on Class Room Teaching at IIEST, Shibpur from 09-07-2019 to 11-07-2019 was attended by Dr. Pratim Kumar and Dr. Indrajit Mukherjee.
- b) Summer School on Deep Learning and Items Usability through Hardware Interactions at IIEST Shibpur from 24-06-2019 to 26-06-2019 was attended by Dr. Indrajit Mukherjee.
- c) National Workshop on "E-Marketing", Department of Commerce, Gol, from 17-06-2019 to 18-06-2019 was attended by Dr. Pratim Kumar.
- d) Short Term Course on Fundamentals of Brain Inspired Robotics at IIT Kanpur from 25-11-2019 to 28-11-2019 was attended by Dr. Indrajit Mukherjee.



# Achievements/Awards received by the students (Academic, Extracurricular, Co-Curricular)

- Mr. Santosh Kumar Singh joined as Post Doc fellow at Tel Aviv University in Israel.
- Mr. Sayahnya Roy joined as Post Doc fellow.
- Mr. Vijit Kanjilal received the Prime minister award.

## 4.2 Architecture, Town and Regional Planning (ARCH T & RP)

The Department of Architecture, Town and Regional Planning at the Indian Institute of Engineering Science and Technology, Shibpur has a long and rich history. Shortly after Independence, in 1949, two sister Departments were established at the erstwhile Bengal Engineering College, that is, the Department of Architecture headed by Mr G K Paknikar and the Department of Town and Regional Planning headed by Mr Abani Kumar De. The former offered the first 5-Year undergraduate degree in architecture of the country (Bachelor of Architecture-B Arch), the latter offered the first 2-Year postgraduate diploma in town and regional Planning of the country (Diploma in Town and Regional Planning-DTRP).

Later, in October 1952, the two Departments merged to form the Department of Architecture, Town and Regional Planning headed by Mr Joseph Allen Stein, the renowned American architect, who has left his indelible mark in the postindependence architecture of India. The DTRP programme subsequently became a full time course in Master of Town and Regional Planning (MTRP) from 1975.

In 2019, responding to the requirements of the present times, the postgraduate programme was upgraded as Master of Planning (specialization in Urban and Regional Planning). This was done to broaden the horizon of the Department in terms of academics, research and students' employment opportunities.

In its first ever participation as an independent entity in the National Institutional Ranking Framework (NIRF) for Architecture, approved by the Ministry of Human Resource Development, the Department obtained the sixth position in India rankings 2020, from amongst 66 participating institutions and departments of architecture.

Now, as an integral part of the IIEST, Shibpur, the department has expanded considerably with varied areas of research that include the following Architecture and Built form, Computer Aided Architecture, Vernacular and Rural Architecture, Energy and Building, Urban Design, Architectural Conservation, Housing and Human Settlement Planning, Transportation Planning, Remote Sensing and Geographical Information Environmental Planning and Management, System, Rural Planning and Development, Regional Planning and Development, Earthquake resilient Buildings and Built form, Urban Planning/Town Planning, Infrastructure Planning, Urban Administration, Management and Finance, Climate Change and Human Settlements. Presently the department has developed several state of the art facilities for the benefit of the students, such as Material Museum for permanent display of samples of building materials, Computer Aided Architectural Design laboratory, Multimedia Simulation Laboratory and Remote Sensing and GIS laboratory.



# Workshops/Conferences/Seminars attended in India and abroad

- a) Prof. Keya Mitra attended National Workshop on Earthquake Resistant Practices for Undergraduate Students of Architecture, National Information Centre of Earthquake Engineering (NICEE) from 01-07-19 to 07-07-2019,
- b) Dr. Tuhin Subhra Maparu attended 15th World Conference on Transport Research: WCTR 2019, The World Conference on Transport Research Society, from 26-05-2019 to 31-05-2019.

# Achievements/Awards received by the students (Academic, Extracurricular, Co-Curricular)

- Bakary F Njie's PG thesis on Environment and Disaster Management of Banjul, Gambia has been accepted as principal format for environmental and disaster management activities in Kanifing Municipal Council, The Gambia, Africa. He has been invited by the Mayor, Kanifung Municipal Council to prepare a Concept Paper for donor agencies such as UNDP.
- Sakshi Singh, graduate architect and content writer, has founded a content startup named 'ArchIndia' and presently publishes regularly in an e-zine mode.
- Aditee Prabhakar, doctoral student, received the Paul R. Lawrence Fellowship Award, 2020.

## 4.3 Chemistry

The over a century old department has a glorious past. The Department, besides engaging itself in undergraduate and postgraduate teaching has a heritage of conducting research in various fields. At present, the faculty members are involved in research in the frontier areas of Chemistry and Chemical Physics, which include Coordination & Bio inorganic Chemistry, Carbohydrate Chemistry, Electro chemistry & Corrosion Science, Fuel Cell Technology, Molecular Recognition & Supra-molecular Chemistry, Structural Chemistry, Catalysis, Synthetic Organic & Organometallic Chemistry, Thin Film Semiconductor, Solar Photo-voltaic & Photo-electrochemical Cells, Non-linear Optical Phenomena: Modelling & Computation, Non-equilibrium Statistical Mechanics, Relativistic & non-relativistic Electronic Structure Theory. The department is endowed with a number of research projects sponsored by various funding agencies. The department has also been selected for MHRD special grant and DST-FIST and UGC-SAP programmes.

# List of Awards/laurels/achievements of Faculty member

- a) Dr. Nanda Dulal Paul received the Young Faculty Research Award, from IIEST Alumni Association Washington Metro Area (IIESTAAWMA) and GAABESU Shibpur Foundation, in USA on 2019,
- b) Dr. Jhuma Ganguly become the Fellow of the Indian Chemical Society [Fellow membership No: F-8312 (LM)] in Indian Chemical Society on 2020.

#### Workshops/Conferences/Seminars organized

- a) Dr. Jhuma Ganguly and team organised the Seminar-cum-Workshop on IPR: Awareness, Practice and Challenges in Academia, National Research Development Corporation, Govt. of India, on 07-11-2019 for 2 days,
- b) Dr. Jhuma Ganguly and team organised the Seminarcum-Workshop on IPR: Technology Innovation and IP Protection at IIESTS on 15-02-2020 for 1 day.





# Workshops/Conferences/Seminars attended in India and abroad

- a) Dr. Chinmoy Bhattacharya attended the International Conference on "Electrochemistry for Industry, Health and Environment" (EIHE 2020) from Indian Society for Electro Analytical Chemistry(ISEAC) in Association with Analytical Chemistry Division, Chemistry Group (A), Bhabha Atomic Research Centre (BARC), in Mumbai from 21-01-2020 to 25-01-2020
- b) Dr. Chinmoy Bhattacharya attended the 56th Annual Convention of Chemists 2019 & International Conference on Recent Trends in Chemical Sciences, Indian Chemical Society, Kolkata & School of Studies in Chemistry, from Pt. Ravishankar Shukla University, in Raipur, Chhattisgarh from 14-11-2019 to 16-11-2019
- c) Dr. Ajit Kumar Mahapatra attended the 3rd Asian Conference on Chemo-sensors and Imaging Probes (AsianCHIP-2019) in the Department of Chemistry, Guru Nanak Dev University, Amritsar, India from 06-11-2019 to 09-11-2019
- d) Dr. Ajit Kumar Mahapatra attended the International Conference on Chemistry for Human Development (ICCHD-2020), Professor Asima Chatterjee Foundation (PACF), CU with Heritage Institute of Technology, Kolkata) from 09-01-2020 to 11-01-2020.

# List of Awards/laurels/achievements of Students

- Suvonil Sinha Ray received DR. D. S. KOTHARI POSTDOCTORAL FELLOWSHIP.
- Swarnendu Baduri (PhD) Received the Prize for best poster presentation in the National Symposium on Renewable Energy for Sustainable Future: Materials & Technology Development, organized by Heritage Institute of Technology, Kolkata, held on 28th Feb. 2020.
- Debasis Sariket (PhD) received the Best poster award in International conference on electrochemistry in industry, health and environment (EIHE-2020), organized by Indian Society for Electro-analytical Chemistry & Analytical Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai, held on 21st -25th Jan, 2020.
- Dipika Pan (PhD) Received the S. S. Bhatnagar Young Scientist Award for Oral Presentation International seminar on RECENT ADVANCES IN CHEMISTRY & MATERIAL SCIENCES (RACMS 2020) by Indian Chemical Society.

## 4.4 Civil Engineering

Founded in May, 1856, the Department of Civil Engineering, as old as the Bengal Engineering College itself, is a 149 year old Engineering Department. The Department was, originally established as the Civil Engineering College, Calcutta with the object of imparting training to personnel in the field of Civil Engineering for the fulfilment of the need of the Public Works Department of the Government of India. Since then it has been striving to develop and maintain a glorious national tradition of producing quality Civil Engineers for the country. In course of time the Civil Engineering College was upgraded to the status of a full-fledged Government Engineering College with various disciplines, and renamed as the Bengal Engineering College. Then it was upgraded to Bengal Engineering and Science University, Shibpur. Presently, the institute has been converted to an Institute of National Importance and named as IIEST, Shibpur. The Civil Engineering department, at present, provides facilities for research and development in the broad areas of Structural Engineering, Geo-Technical Engineering, Water Resources Engineering, Environmental Engineering and Transportation Engineering. The Department has been associated with various sponsored projects in the above fields. It is one of the Government of India recognized Quality Improved Programme Centres. The Department regularly undertakes sponsored research from the AICTE, MHRD, UGO, CSIR etc.

# List of Awards/laurels/achievements of Faculty member

• Dr. Tapash Kumar Roy received the Best Conference Paper Award from the Indian Geotechnical Society, Silchar Chapter in 2019.





#### Workshops/Conferences/Seminars organized

- a) Dr. Dipankana Bhattacherjee organised Short-term course on Studies on the simulation of climatic events in a geotechnical centrifuge, Department of Civil Engineering, IIESTS and IGS Kolkata Chapter, on 02-08-2019.
- b) Dr. Anuj Kumar Budhkar, Dr. Pritam Saha organised Shortterm course on Research. and Innovations in Traffic Safety Engineering (RITSE-2019), on 17-06-2019.
- c) Dr. Anuj Kumar Budhkar, Dr. Tapash Kumar Roy organised Short-term course on Transportation in Rural areas, sponsored by TEQIP from 20-01-2020 to 24-01-2020.
- d) Dr. Chanchal Majumdar, Dr. Asok Adak, Prof. Debabrata Mazumder organised National Conference on Sustainable Advanced Technologies for Environmental Management on 18-12-2019 for 3 days.
- e) Dr. Asok Adak organised International Conference on Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies (CRSIDE 2020), in collaboration with ASCE, India Section, on 02-03-2020 for 3 days.
- f) Dr. Ujjwal Saha organised National Seminar on Climate Change and Water Crisis, sponsored by TEQIP-III, on 21-06-2019 for 1 day.
- g) Prof. Anirban Gupta organised Thirteenth International Global Water Alliance Conference with Global Water Alliance, USA and Rural Development Forum, IE(I) from 04-01-2020 to 06-01-2020.

## Workshops/Conferences/Seminars attended in India and abroad

- a) Dr. Dipankana Bhattacherjee attended 5-day Online Faculty Development Program on DEEKSHARAMBH (Student Induction Program) at NATIONAL INSTITUTE OF TECHNOLOGY PATNA on 10-08-2020 for three Days.
- b) Dr. Dipankana Bhattacherjee attended the Pedagogy Workshop on "Class Room Teaching" sponsored by TEQIP-Phase III from 09-07-2019 to 11-07-2019.
- c) Dr. Anuj Kishor Budhkar attended Conference of Transportation Research Group 2019 by TRG Group India International from 18-12-2019 to 21-12-2019.
- d) Dr. Subrata Chakraborty attended 29th European Safety and Reliability Conference, European Society for Safety and Reliability in TU Hannover Germany from 22-09-2019 to 26-09-2019.
- e) Dr. Tapash Kumar Roy attended the 8th International Symposium on Fusion of Science and Technology (ISFT-2020) at J.C. Bose University of Science and Technology, YMCA Faridabad as a joint venture of the National Council of YMCAs of India, Govt. of Haryana, and the Central Agencies for Development Aid, Bonn, Germany, from 06-01-2020 to 10-01-2020.

## 4.5 Community Science and Technology

In response to the demand for proper coordination and integration of technology innovation and technology transfer activities, School of Community Science and Technology (SOCSAT) was founded in 2004 at this University for facilitating the development and growth of the unorganized sector in India. Ever since the school has been making significant progress in the frontier areas of basic and applied research juxtaposed with various training programmes congruous with the objectives of the school. M.Sc. Course in "Food Processing and Nutrition Science" has been started from the Academic session (2007-2008).





## 4.6 Computer Science and Technology

The Department of Computer Science and Technology (CST) was established in 1982. Since its inception the department has played an important role in developing a vibrant and forward-looking academic environment. The department maintains state-of-the-art infrastructure and facilities for advanced research and consultancy. It was accredited by the National Board of Accreditation (NBA) as 'A' grade and received ISO 9000 certification in 1999-2000. The department was also honoured as the DST-FIST sponsored department in 2004. Some of the thrust areas identified by the department include Cryptanalysis, Database Verification/ Consistency Checking and Data Mining, Image Processing including document image processing and CBIR, Avionics and robotics control, VLSI Design and Testing for Sub-micron Technology. Further, the department also conducts advanced research on Interconnection network, Mixed Signal Design and Testing, Mobile Computing, Theory and Applications of Cellular Automata in diverse fields, Synthesis and Testing of reversible circuit, Digital Micro fluidic Bio Chip and Nano-Biochip, Pattern Recognition, and Bio Informatics.

# List of Awards/laurels/achievements of Faculty member

• Dr. Nirnay Ghosh received the Start-up Research Grant (SRG) from DST-SERB, Govt. of India, 2020

#### Workshops/Conferences/Seminars organized

- a) Prof. Jaya Sil organised Webinar on Machine Learning in Healthcare sponsored by TEQIP-III on 07-12-2020 for 5 days
- b) Dr. Malay Kule organized International Conference, IEEE International Symposium on Devices, Circuits and Systems 2020 by IIEST, Shibpur and Hiroshima University, Ministry of Electronics and Information Technology, etc. from 04-03-2020 for 3days.
- c) Dr. Malay Kule organized Webinar on Computational Advances for Biomedical Engineering funded by TEQIP-III from 23-11-2020 for 5 days.
- d) Prof. Sipra Das Bit organized Webinar on Internet of Things: Architectures, Protocols, Applications and security concerns funded by TEQIP-III from 14-12-2020 for 5 days.
- e) Mr. Apurba Sarkar organized the International Conference of Computational Intelligence in Pattern Recognition on 04-01-2019 for 2 days.
- f) Mr. Ashish Kumar Layek organized National Workshop on Internet of Things (IoT) on 15-02-2017 for 1 day.

# Workshops/Conferences/Seminars attended in India and abroad

- a) Dr. Nirnay Ghosh attended three Days Pedagogy Workshop on Classroom Teaching funded by TEQIP-III (IIEST, Shibpur), from 09-07-2019 to 11-07-2019;
- b) Mr. Ashish Kumar Layek attended IBSSC 2019 1st IEEE Bombay Section Signature International Conference, IEEE BOMBAY SECTION, from 26-07-2019 to 28-07-2019;
- c) Dr. Surajeet Ghosh attended IEEE Computer Society Annual Symposium on VLSI (ISVLSI) 2019,IEEE Computer Society, from 15-07-2019 to 17-07-2019.





## 4.7 Disaster Mitigation Engineering

In the spirit of developing interdisciplinary research facilities and the development of different mitigation processes against natural hazards, the School of Disaster Mitigation Engineering has been established by this university in 2007. The experimental workstation of the school is under construction near the 2nd gate of this University, where a 1.5 m x 1.5m Horizontal single Axis Seismic Table is being installed in October 2008 under the TEQIP program. For the school, housing has been provided on the 3rd floor in the 8th storied new building under construction in the Southern portion of the University. Proposal for setting up Post Graduate Course in Disaster Mitigation Engg., Earthquake Engg. are being framed for introduction shortly.

#### **Previous Directors**

- Prof. B.C. Chattopadhyay
- Dr. Sekher Chandra Dutta

## 4.8 Earth Science

Though teaching of geology as a subject was introduced in the civil engineering curricula more than a century ago, Geology became an important section of the Department of Mining and Geology ever since its establishment in 1956. With introduction of master's programme in applied geology the department was bifurcated and the Department of Geology came into being in 2005. It was later renamed as the Department of Earth Sciences. During its less than a decade's existence as a separate entity, the department has established linkages with industry and academia alike both in India and abroad. Strengthening of departmental infrastructure is on the anvil;so is closer international and national collaboration. Students of the present department are being trained by permanent and eminent visiting faculties of diverse fields of geology, involved in frontier areas of research like sedimentology, basin tectonics, basin analysis, paleontology etc. to cope up with the need of petroleum or mineral exploration, natural hazard mitigation and Geo Science research. Students are able to find employment in mining companies, petroleum industries and environmental firms.

#### Workshops/Conferences/Seminars organized

• Dr. Moumita Talukdar organised the International Conference Humboldt Kolleg 2020 on "Flow", Alexander von Humboldt Foundation on 03-01-2019.



## 4.9 Ecology, Infrastructure and Human Settlement Management

The School came into existence in 2006 to conduct inter-disciplinary and cutting edge research, postgraduate studies and to extend technical support services on issues having the critical interface of ecology, human settlements and infrastructure development. The Schools activities focus on Spatial and Environmental Planning, Natural Resource Management, and Green Architecture.Identified thrust areas for the department include Spatial and Environmental Planning, Community based Natural Resource Management, Carrying Capacity Assessment for Urban Settlements, Human Settlement Planning for Ecologically Fragile Areas, Planning for Heritage Conservation, and Climate Change and Human Settlements. The areas in which research work is undertaken also include Natural Resource Extraction and Livelihood, Sustainability for Local Communities, Green Building Techniques, and Institutional Reform and Capacity Building for Urban, Rural and Natural Resource Governance.

## 4.10 Electrical Engineering

A combined Electrical and Mechanical Engineering Department was established in the then Bengal Engineering College in the year 1902. Demerger of the departments took place in 1912 and the Department came into existence. The degree course in Electrical Engineering was introduced during the year 1935-36. First batch of students with M.E. Degree in Electrical Engineering came out in 1955. Since 1989 this department has been serving as one of the QIP Centres for Post Graduate Studies and Research in Electrical Engineering. Research specializations offered in the department include Control Systems, Electrical Machines, Power Electronics, and Power Systems. The faculty members are actively engaged in numerous collaborative and sponsored research projects. in the last few years, a number of research projects with a funding of a few crores have been executed (funding from Central Government agencies). However, more than 10 research projects have also been funded by non-Government agencies.







#### Workshops/Conferences/Seminars organized

 Prof. Anindita Sengupta organized One-Day Lecture Meeting on "Smart Grid, AMI and Smart Metering" under the umbrella of IEEE Joint CSS-IMS Kolkata Chapter.

## Workshops/Conferences/Seminars attended in India and abroad

 Prof. Konika Das (Bhattacharya) attended IEEE TENCON International conference at Kochi, Kerala Chapter from 17-10-19 to 21-10-19.

## 4.11 Electronics and Telecommunication Engineering

The initial nucleation of the department was in the Department of Physics and Telecommunication from which the department demerged from its parent department in 1968, and was christened as the Department of Electronics and Telecommunication Engineering. The first batch of electronics and telecommunication engineers graduated from the department in 1971, the master's programme was launched in 1972. Currently PG programmes are offered in the specialization of Digital Systems and Instrumentation, Microwave Communication, and Communication Engineering and Signal Processing. Thrust areas identified by the department include Area Optimization of Linear Analog VLSI Circuit, ASIC chip design for Biomedical and Sensor Applications, Broadband over Power Line, Development of Field Deployable Biosensor System for Pathogen Detection, Fault Diagnosis of Analog and Mixed Signal Circuit. The department also conducts research on MEMS Based Integrated Sensor System Design and Development, Microstrip antenna for wireless communication, Network and Information Security, VLSI Architecture Design for Real Time Signal Processor and Wireless Communication and Networking. Considerable effort has been put forward during the last couple of years towards setting up new undergraduate and postgraduate laboratories and augmenting the facilities in the existing laboratories. The department has registered a commendable performance in research and development work. A good number of research projects worth a high value are being carried out with the assistance of various funding agencies leading to high volume of quality publications in international and national journals and conferences.

# List of Awards/laurels/achievements of Faculty member

• Dr. Ankita Pramanik received the Best Paper Award NWDCN, 21st IEEE ICDCN Conference, 2020.

#### Workshops/Conferences/Seminars organized

- a) Dr. Partha Bhattacharyya organized the International Conference, 4th International Symposium on Devices, Circuits and Systems (ISDCS-2021) on 06-03-20 for 3 days.
- b) Dr. Ankita Pramanik organized National Seminar on Digital Humanities with HSS Department.

## Workshops/Conferences/Seminars attended in India and abroad

 Dr. Rik Chattopadhyay attended three Day pedagogy Workshop on 'Class Room Teaching' at IIEST, Shibpur from 09-07-19 to 11-07-19.

#### **Patent filed**

- a) Inventors: Partha Bhattacharyya and Arnab Hazra; Title: A process for fabricating an undoped Transition Metal Oxide (TMO) based p-n homojunction diode with high rectification efficiency; Year: 2020; Status: Approved; File no.: 341257.
- b) Inventors: Partha Bhattacharyya and Arnab Hazra; Title: A process for forming a TiO2 Nanotube based room temperature (27°C) alcohol sensor device; Year: 2020; Status: Approved; File no.: 345631.



## 4.12 Green Energy and Sensor Systems

The Centre of Excellence for Green Energy and Sensor Systems (CEGESS) was established in November, 2009 with the objectives to promote renewable energy in general and Solar Energy in particular, to conduct cutting-edge research as a front line R&D incubator through a multidisciplinary approach in the field of renewable energy and sensor systems, and to contribute to the development of highly qualified and innovative personnel through specialized training and knowledge build-up in areas of renewable energy and sensor systems. The Research and education at CEGESS is closely associated with industry and several national & foreign academic institutions of repute with an aim to foster cutting edge research and establish ourselves as a leader in this field. Interests and activities in the centre include solar cell design, fabrication and characterization with a special focus on nanomaterials, solar photovoltaic systems design and development, solar energy storage system, smart micro grid, sensor design, fabrication and characterization using novel materials and methods for agricultural, environmental, automobile and healthcare applications (including quantum dot based biosensors) and development of SMART sensor system

# List of Awards/laurels/achievements of Faculty member

• Dr. Gaurav Saini received the Best paper presentation award in ICMMRE-2019.

#### Workshops/Conferences/Seminars organized

 Dr. Nillohit Mukherjee organised the 3rd International Symposium on Devices, Circuits and Systems on 04-03-2020.

## Workshops/Conferences/Seminars attended in India and abroad

- a) Dr. Gaurav Saini attended the International Conference on Innovations in Clean Energy Technologies (ICET-2020), Energy Centre, MANIT Bhopal.
- b) Dr. Gaurav Saini attended the International Conference on Mechanical, Materials and Renewable Energy (ICMMRE 2019) at Sikkim Manipal University, Sikkim, India.
- c) Dr. Gaurav Saini attended the International Conference on Power and Energy Systems Engineering (CPESE 2019) from Okinawa Institute of Science and Technology's (OIST) Conference Centre in Okinawa, Japan from 20-09-2019 to 23-09-2019.





# 4.13 Health Care Science and Technology

This Centre had been established in 2010 with the objectives (a) to provide a platform for interdisciplinary teaching and research in the fields of Health Care Science and Technology leading to a better integrated health care delivery system, (b) to develop highly qualified and innovative professionals in the field of Bio-medical Science and Technology through intensive knowledge and teaching (c) to introduce interdisciplinary master's and doctoral program in Health Care Science and Technology and (d) to collaborate with different medical research institutions and health care institutions.

# List of Awards/laurels/achievements of Students

• Ripon Sarkar (PhD) joined as Post Doc. Fellow at Texas Tech University Health Sciences Centre.





## 4.14 Humanities and Social Sciences

The establishment of the Department of Humanities in 1945 reflected a holistic and pragmatic approach to engineering education in the modern era. Renamed as the Department of Humanitie and Social Sciences in 2004, the department has always emphasized the need for modernized syllabi in communication skills, knowledge of the society, and economy that are in tune with contemporary developments. Along with Core and Elective courses in Sociology, Management and Finance, the Humanities and Social Sciences department has been offering a core course on Professional Communication in English to the B.Tech. First semester students. Various other English elective courses on Indian Writings in English, Literature and Urban Experience, Popular Literature, Film Studies, Business Communication, Research and Technical Writing for Engineers are also offered both at the undergraduate and the postgraduate levels. It is also imperative that the students of IIEST, Shibpur should have adequate managerial skills to cope with the recent changes in the social and the economic environment of business. It is, therefore, the responsibility of the Humanities and Social Sciences department to fill the lacunae in the aforementioned areas and enable a less jarring transition of our graduates from students to responsible and mature citizens. Additionally, the HSS department also extends its teaching to the postgraduate courses in the MBA programme since1999.

The department, at present, offers Ph. D programs in English and Cultural Studies, and Management Studies. It also offers a compulsory course on Technical Writing to all the Ph.D. scholars of the institute.

#### Workshops/Conferences/Seminars organized

- a) Mr. Subhasis Bandyopadhyay organized National Seminar, Secularism Science and Democracy on 07-02-2020 for 1 day.
- b) Prof. Mallika Ghosh organized Short-term course on Introduction to digital Humanities: Cultural Dynamics in a Digital Age at IIEST, Shibpur from 09-12-2019 for 5 days.

# Workshops/Conferences/Seminars attended in India and abroad

- a) CMA Rupen Basu Mallik attended MSME National Conference on Convention at Indian Chambers of Commerce from 11-07-2019 to 12-07-2019.
- b) CMA Rupen Basu Mallik attended National Workshop on Advanced Excel & Power Point Merchant Chamber of Commerce on 03-08-2019.
- c) CMA Rupen Basu Mallik attended the MCCI Mutual Fund Forum 2019, held on 06.09.2019.



## 4.15 Human Resource Management

Opened in 1948 as the Department of Training and Placement, this was renamed as Department of Human Resource Management with extension of activities beyond job placements and training. The current activities of the department encompass the following:

- Job Placements of students of the university though Campus and Off-campus selection processes.
- Vacational / Summer Training of the students of the University including Summer Internship Programme at foreign universities and Remote Internship Programme at reputed industries.
- Grooming up (Personality/Soft-Skill/ Performance Effectiveness) Programmes for the Students.
- Industry-Contact programme/ Academic collaborations with major industries including Tata Steel, Infosys, MindTree, Larsen & Toubro, ABB, Punj Lloyd, Cognizant, Tech-Mahindra, Wipro etc.
- Entrepreneurship Development Programme conducted by a newly set-up Cell under the department funded by AICTE.



Career Counselling.



## 4.16 Information Technology

The beginning of this century is marked as the start of the Information Age which has not only revolutionized Indian and global industrial markets but has also had an impact on the engineering education system. The erstwhile BESU, Shibpur responded timely by introducing a new specialized engineering degree course in Information Technology under the department of Information Technology in the year 2000. The course is unique with respect to the similar degree program offered by other Indian universities and is framed accordingly to educate graduate engineer to be an expert of microelectronics-based processing, computing and communication of data that global IT sector of coming days demands. The department has celebrated its first 10 years of existence with an impressive record of achievement. The strength of the department has been in its diverse areas of research in which it has excelled. Research focuses of the department are in the fields of Systems Architecture and Design, Theory and Applications of Cellular Automata, Digital Image Watermarking and Signal Processing, Digital Geometry and Image Analysis, Wireless and Mobile Communication, Sensor Network, FPGA based Embedded Systems.

# List of Awards/laurels/achievements of Faculty member

• Dr. Ruchira Naskar received the IEEE Computer Society Early Career Young Women Scientists Fellowship on 2019.

#### Workshops/Conferences/Seminars organized

- a) Dr. Tuhina Samanta, Dr. Indrajit Banerjee organised the Short-term Five Days course, Faculty Development Program on A Development of IoT and its Applications sponsored by TEQIP III on 17-06-2019 for 5 days;
- b) Dr. Indrajit Banerjee, Dr. Chandan Giri, Dr. Surajit Kumar Roy organised International Conference on 3rd International Symposium on Device Circuit and Systems on 04-03-2020 for 3 days;
- c) Dr. Indrajit Banerjee, Dr. Surajit Kumar Roy organised International Conference IEEE Asian Test Symposium (ATS 2019), on 12-10-2019 for 4 days.

# Workshops/Conferences/Seminars attended in India and abroad

- a) Prof. Santi Prasad Maity attended the 5th Int. Congress on Information and Communication Technology (ICICT), G R Foundation from 19-02-2020 to 20-02-2020.
- b) Dr. Chandan Giri attended the 3rd International Conference on Devices Circuits and Systems, 2020, at IIEST, Shibpur from 04-03-2020 to 06-03-2020.
- c) Dr. Surajit Kumar Roy attended the International Conference on Devices, Circuits and Systems (ISDCS), 2020 by IIEST, Shibpur and Hiroshima University from 04-03-2020 to 06-03-2020.

#### **Patent Filed**

- a) Inventors: Chinmoy Ghorai, Swapan Shakhari, Arpita Debnath, and Indrajit Banerjee; Title: Method For Selecting A Forwarding Vehicle For Multi-Hop Routing In Urban Vanets; Year: 2019; File no.: 201931014519.
- b) Inventors: Sagar Bose, Indrajit Banerjee, and Soujanya Bhowmik; Title: Apparatus for Multi-Radio Interfacing Based Reliable IoT-Enable Physical Sensory Transmission System; Year: 2019; File no.: 201931028264.







## 4.17 Management Sciences

School of Management Sciences was started in 1999. Master of Business Administration courses are taught in the School of Management Sciences. The courses include writing of dissertation on business and industrial topics by the MBA students under the guidance of faculty members both in the 1st and 2nd year. Beside this, doctoral researches are carried out under the aegis of the School. Academic and research focus of the School is in the areas of Financial Management, Human Resource Management, IT Management, Marketing Management and Operations Management.





### 4.18 Materials Science and Engineering

Dr. M. N. Dastur School of Materials Science and Engineering was established in 2001 to address the growing demand amongst the academicians, scientists and practicing engineers. The knowledge of behaviour of materials is a prerequisite for the holistic development of science, engineering and technology with a focus to provide a synergic environment to pursue the interdisciplinary teaching and research. The school has the theoretical and experimental resources to address the scientific and engineering problems.

Since last decade the school has been able to make modest footprints in its journey towards development and understanding the characteristics of advanced and emerging materials for efficacious application. From 2003 the School has been offering an M. Tech. programme in Materials Engineering. Thrust areas of research for the School are Nano-structured semiconducting materials, Energy and Environment Materials, Smart materials, Composite materials, High strength steels, Materials modeling and Optimisation, and Bio-materials.



## 4.19 Mathematics

Since the inception of B. E. College, the Department of Mathematics earned a glorious heritage of conducting research activities in various fields of Mathematics. The department also undertakes teaching of Mathematics, including Statistics, Operations Research, Numerical Analysis and Computational Techniques, to undergraduate and postgraduate students in various branches of Engineering, Architecture. The past and present members of faculty of the department have been conducting research works in different branches of Pure and Applied Mathematics. The research work undertaken in the department is spread over the areas of Fracture Machines, Mathematics Education, Random Analysis, Functional Analysis and Fuzzy Systems, Fluid Mechanics, Graph Topology, Thermoelectricity, Maximum Entropy Models, Mathematical and Statistical Theory of Life Testing and Reliability, Fuzzy Logic and Fuzzy Petrinets, Fuzzy Optimization and Application in O.R.

# List of Awards/laurels/achievements of Faculty member

- a) Dr. Ujjal Debnath received Associateship at IUCAA, Pune, India, 2020.
- b) Prof. Guruprasad Samanta received D.Sc. from S.K.M. University, Dumka, 2020.
- c) Dr. Tapan Kumar Kar, Professor & Head, Department of Mathematics, is included in the list of Top 2 % Scientists in the World in all disciplines from India, based on the Stanford University Study 2019.

# Workshops/Conferences/Seminars attended in India and abroad

- a) Prof. Tapan Kumar Kar attended International Conference on Mathematical Sciences and Applications (ICMSA 2020), Department of Mathematics, University of Kalyani from 26-02-2020 to 28-02-2020.
- b) Prof. Parbati Saha, Prof. Binayak Samadder Choudhury attended Applied Mathematical Skills for Science & Engineering using contemporary Tools at Maulana Abul Kalam Azad University of Technology, West Bengal.

# Achievements/Awards received by the students (Academic, Extracurricular, Co-Curricular)

- Parthasakha Das received the Joint project of Exeter University, UK and Dept. of Maths, IIEST, Shibpur -Short-term with the possibility of extension under India Partnerships Development Fund (IPDF) 1.3
- Dr. Shyamal Ghosh Joined as Post-Doctoral Fellow, University of the Free State, Bloemfontein, South Africa.
- Dr. Priyanka Majumder Joined as Post-Doctoral Fellow, Dept. of Mathematics, IIT Bombay.



## 4.20 Mechanical Engineering

The inception of the Mechanical Engineering Department may be traced back to 1921 when a diploma course in Mechanical Engineering started in this Institute. The firstdegree course in Mechanical Engineering started from 18th July, 1930. Moving through a few decades, the Department of Mechanical Engineering consolidated to its present condition offering 10-Semester Dual Degree Course and a 4-Semester Postgraduate Course. The Department provide sample laboratory facilities and hands-on training to its students both in the conventional subjects and also in the emerging fields of specialization. The Departmental faculty consists of erudite teachers who actively pursue research work of original nature. Almost, all the members of the faculty have earned to their credit quite a number of praiseworthy research papers published in highly reputed peer reviewed international journals. Some of the senior faculty members are engaged as Fellows of renowned International societies like American Society of Mechanical Engineers, Institution of Mechanical Engineers, London, etc.





## List of Awards/laurels/achievements of Faculty member

- a) Prof. Sujoy Kumar Saha received Stanford University Top 2% Mechanical Engineers award the World Over Stanford University on 2020.
- b) Prof. Sujoy Kumar Saha received ASME Fellow: I Mech E Fellow, Chartered Engineer UK, ICHMT Scientific Council Member, Assembly of World Conferences Member ASME, IMEchELond, ICHMT 2020.
- c) Prof. Sujoy Kumar Saha became Editor Int Comm Heat Mass Transfer in ICHMT Journal 2020.

#### Workshops/Conferences/Seminars organized

- a) Prof. Sujoy Kumar Saha organized International Conference PDPU in Gandhinagar, INDIA on 16-02-2020 for 6 days
- b) Prof. Sujoy Kumar Saha organized International Conference in University Kuala Lumpur on 16-04-2020 for 2days
- c) Prof. Sujoy Kumar Saha organized International Conference at IIT Roorkee from 16-01-2020 for 4 days
- d) Prof. Partha Pratim Dey organized a Short-term course on Advanced Topics of Mechanical Engineering L&T ECC from 21-05-2012 for 10 days

## Workshops/Conferences/Seminars attended in India and abroad

- a) Prof. Sujoy Kumar Saha attended International Conference PDPU, Kuala Lumpur University, IIT Roorkee on 16-01-2020 to 16-04-2020.
- b) Dr. Bidyut Pal attended National Workshop on Pedagogy (Class Room Teaching) at IIEST Shibpur from 09-07-2019 to 11-07-2019.
- c) Dr. Bidyut Pal attended National Workshop on E-Procurement and GeM, IIEST Shibpur on 17-06-2019 to 18-06-2019.
- d) Dr. Bidyut Pal attended international Webinar on How 3D Printing is helping to combat COVID19 Stratasys from 22-04-2020 to 22-04-2020.
- e) Dr. Santanu Das attended National workshop on "E-Procurement and GeM" IIEST Shibpur from 17-06-2019 to 18-06-2019.
- f) Dr. Santanu Das attended National Pedagogy Workshop on Class Room Teachingat IIEST Shibpur from 09-07-2019 to 11-07-2019.
- g) Dr. Santanu Das attended Seminar-cum-Workshop on IPR: Awareness, Practice and Challenges in Academial Innovation Facilitation Centre of IIEST-Shibpur, in collaboration with IPR Cell, TCGTBI, IIC and ED Cell from 06-11-2019 to 07-11-2019.

- h) Prof. Bjan Kumar Mandal attended 11th International Exergy, Energy and Environment Symposium (IEEES11-2019) at SRM Institute of Science & Technology, Chennai, India from 14-07-2019 to 18-07-2019.
- Prof. Bijan Kumar Mandal attended International Conference on Energy and Sustainable Development 2020 (ICESD - 2020) at Jadavpur University from 14-02-2020 to 15-02-2020.



### 4.21 Mechatronics and Robotics

Keeping parity with the evolving multi-disciplinary technological advancement, a School of Mechatronics and Robotics had been established in the Institute in 2007. In sync with the changed technological scenario, the School introduced a new specialised interdisciplinary postgraduate programme in Mechatronics in collaboration with three CSIR laboratories, namely - CMERI Durgapur, CEERI Pilani and CSIO Chandigarh. The course has been framed to educate graduate engineers to be an expert in mechatronics, an interdisciplinary subject that involves fusion of mechanical, electrical, and electronics engineering. Doctoral programmes in Mechatronics and Robotics are pursued at the School.

The School has been actively pursuing research in the areas of: Dexterous Robotic Hand, Mobile Robots, Micro Systems, Teleportation, Unmanned Aerial Vehicle, Bio-medical and Exoskeleton Devices, Prosthetics, Intelligent Systems; Multisensory Myoelctric Controlled Intelligent Active Ankle-Foot Prosthesis, Sensor Integrated Multi-Fingered Dexterous Robot Hand with Data Glove Interface, etc. Research facilities created in the School include: Bi-handed robot, humanoid robot, drives and control, sensors, image processing set up, mechanical motion transmission devices, data gloves, lasers, smart materials, haptic devices, embedded systems, virtual instrumentation, modeling and simulation.





## 4.22 Metallurgy and Materials Engineering

The Department of Metallurgy started its journey at the Bengal Engineering College in the year 1939 with the introduction of a 3-year degree course in Metallurgy under the Calcutta University. The department is the second oldest metallurgy department of the country. Over the years, the department has contributed significantly in the frontiers of Metallurgy. This department was the first to introduce postgraduate course in metallurgy in the country. The faculty members of the department have developed excellent expertise in the areas of Physical Metallurgy, Computational Techniques, Mechanical Behaviour of Materials, Nano-Technology, Powder Metallurgy, High Strength Steel, Diffusion Bonding and Friction of Stir Welding.







## List of Awards/laurels/achievements of Faculty member

- a) Dr. Manojit Ghosh received Mitacs Globalink Research Award, March 2020, Supervisor Mitacs 2020.
- b) Dr. Manojit Ghosh received IIM-ASM Visiting Lectureship Award.
- c) Dr. Manojit Ghosh received Indian Institute of Metals and American Society of Metals 2019.
- d) Dr. Debdulal Das was awarded for Outstanding Contribution in Reviewing JOURNAL ALLOYS AND COMPOUNDS, Elsevier 2019.
- e) Prof. Swarup Kumar Ghosh received Best Paper Award in (Oral Presentation) International Conference ICPCM 2019, NIT, RKL, INDIA 2019.

## Achievements/Awards received by the students (Academic, Extracurricular, Co-Curricular)

- Mr. Arkajit Ghosh received Mitacs Globalink Research Award, GAABESU Research Award.
- Mr. Avinava Roy received GAABESU Research Award.

## 4.23 Mining Engineering

In India, tertiary level education and training in mining engineering started at this Institute, way back in 1906. The Department was winded up in 1929 and re-established in 1956. The Department offers undergraduate and postgraduate programme in Mining Engineering. The Department of Mining Engineering is an approved QIP centre for postgraduate study in Mining Engineering. Research specialisations available in the department include Carbon sequestration, Coal bed methane, GIS and Remote Sensing, Mine Environment, Environmental Management, Mine Planning and Design, Mineral Dressing, Occupational Health and safety and Rock Mechanics and Strata Control.

## Achievements/Awards received by the students (Academic, Extracurricular, Co-Curricular)

• Ishan Basu joined in Ph.D. at North Eastern University, Boston.

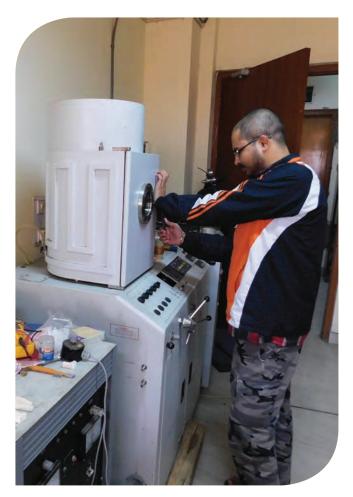




## 4.24 Physics

The department of Physics has a century old past and has come through the era of revolutionary thoughts in the world of physics to the present century of technological revolution. The year 2000 was a landmark for this department when the M.Sc. course in Applied Physics was introduced. In the last five years the faculty members of the department have contributed more than 100 research papers in international journals of repute and international conference proceedings. Many of our students are engaged in research and some of them are also in scientific jobs in various premier research institutions of India, such as SINP, IACS, TIFR, BARC, IPR, CGCRI etc. Identified thrust areas of research are as follows: Nuclear structure and nuclear astrophysics, High energy physics, Quantum field theory at finite temperature and density and Quantum chromo-dynamics, Synthesis and characterization of thermoelectric nano-material and composites, Magnetic properties of materials, Characterization of Fuel cells and its components, Preparation and characterization of oxide glass by sol-gel route, Spectroscopic investigation on rare earth and transition metals in search of LASER materials, Fluorescence and phosphorescence study of rare earth materials, Design and optimization of optical fibres for dense WDM system. Fabrication and characterization of optical nano-fibres, Nonlinear pulse propagation through single mode optical fibres and waveguides, Atomic Physics in Plasmas, Laseratom interactions, Spectroscopy of confined quantum systems, Many body techniques in atomic physics, Silicon nanostructure based: Lightemitters, Detectors, Microcavities, Sensors, Processing and characterization of electro-ceramic materials used ascapacitor dielectrics, sensors and actuators.





## Workshops/Conferences/Seminars attended in India and abroad

- a) Dr. Abhijit Bisoi attended DAE-BRNS symposium on Nuclear Physics DAE-BRNS from 23-12-2019 to 27-12-2019.
- b) Dr. Syed Minhaz Hossain attended National Conference on Science and Technology: Rural Development ISCA, Kolkata Chapter and Surendranath College, from 20-01-2020 to 21-01-2020.

#### **Patent Filed**

 Inventors: S M Hossain, A. Nandi, S. Biswas, S Chakrabarty, S.Majumder, H.Saha; Title: Generation of photovoltaic effect with enhanced open circuit voltage by amine functionalized graphene capped silicon nanocrystal assembly; Year: 2019; File no.: 201931020690

## Achievements/Awards received by the students (Academic, Extracurricular, Co-Curricular)

 Ms. Sudipta Chakrabarty (PhD) received Best Poster Award in IWPSD-2019.

## **4.25 Safety and Occupational** Health Engineering

Safety and Occupation Health (SOH) has gained importance due to the dramatic change that has taken place in the work environment where the workforce is exposed to diverse occupational pursuits and hazards. Considering the need of the day as well as the societal responsibility the University has started this school in the year 2007. The current activities of the school include a part time M Tech. programme in Safety and Occupational Health Engineering as well as interdisciplinary research.

This school aims at developing a competent human resource capable of implementing the safety policy for organized and un-organised sectors; create and strengthen infrastructure for SOH engineering; establish a synergy between the stake holders and carry out research in upcoming fields.

The research activities of this school have a diverse hue that include Study of Ergonomics and Physiology in industries; Industrial Health & Hygiene in organized and unorganized sector; Hazard Identification Technique in key industries and Safety Audit and Management.





## 4.26 VLSI Technology

Founded as a part of the Special Manpower Development Project of the Ministry of Information Technology, the School started functioning in 2006 with a flagship M. Tech Course in VLSI Design. The School aims to integrate the efforts of scientists and engineers working in different fields of Microelectronics and Semiconductor devices, towards design and production of VLSI. Major equipment and instruments procured for the school are Linux servers, Sun Solaris Servers, Workstations etc.

#### Workshops/Conferences/Seminars organized

 Tamal Ghosh, organised International Conference ISDCS 2020 IIEST, Shibpur and Hiroshima University, Japan on 04-03-2020.

## Workshops/Conferences/Seminars attended in India and abroad

• Tamal Ghosh, attended ICACNI 2019 IIIT, Kalyani from 20-12-2019 to 21-12-2019.

#### **Patent Filed**

• Tamal Ghosh, filed "sub 100 degree C metal-metal thermo-compression direct bonding" 2019 (Applied) 1846/CHE/2014.

## **4.27** Water and Environment Research

Stressing the needs of advanced research and knowledge dissemination, the University has established the Centre for Advanced Research on Water that will provide a common platform with state-of-the-art infrastructure for more focused and holistic interdisciplinary and collaborative research on water. Objective of this is to i) serve as the central focus for water resources research at the University, ii) work in collaboration with national and international research organizations to solve complex water resources problems at the national and international level, iii) communicate the results of its advanced research to government, industry, and other educational institutions, iv) act as a regional centre for water-related research, education, planning, and implementation and v) innovate and implement technology solutions for the people.

Activities of the centre will include i) Post Graduate and Doctoral Research on Complex Water Related Field Problems, ii) Developing Innovative Technology Solutions, iii) Providing State-of-the-art Testing Facilities, iv) Providing Training for the Government Officials, v) Providing Expertise for Industrial Projects on Water, vi) Providing Training for the Community People, vii) Organizing Awareness Programmes, viii) Collaborating with National and International Organizations for Technology transfer, ix) formulating National Level Water Resources Management and Action Plans, x) Publishing a Technology Journal for the Centre and xi) Developing an exhaustive digital archive of raw and processed information on Water Resources of India.









# Academic Service Centres

# Academic Service Centres

## 5.1 Centre of Excellence on Microstructurally Designed Advanced Materials

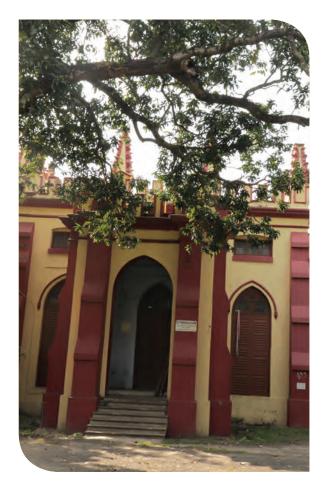
The Centre of Excellence on Microstructurally Designed Advanced Materials was established in 2013 with the financial assistance received under the TEQIP II scheme. Multipurpose Tribometer, 3D Optical Surface Profilers, Atomic Force Microscope (AFM), Hall Effect Measurement Set-Up, Ultrasonic Vibrator, Melting Furnace & Thermal Evaporation System laboratories were developed and are operational from February 2015.

The centre primarily focuses on multi disciplinary research, training and development of concepts in computation, design, characterization and application of materials in the areas of advanced sensor materials, affordable bio-implants, and crash worthy structural steel, alternative permanent magnet materials and materials refurbishment. Apart from carrying out research in the areas mentioned above, the centre also aims at creating technologies that can be commercially exploited by industries.

At present, several undergraduate, postgraduate students and PhD research scholars use the research facilities for their research work based on ng advanced materials.

Projects and financial assistances received from different funding agencies are enlisted below

## **Projects & financial assistance received/submitted from other funding agency:**



SI. No.	Project Name	Funding Agency	Duration	Total Amount	Status
01	"Development of High Energy Density Rare Earth Free MnBi and FeCo/Cu Core-shell Exchange Spring Coupled Permanent Magnet" Prof. A. Basu Mallick	DST-SERB Project	3 years	64,10591.00	On going
02	"Fatigue study for seismic performance assessment of Rebars" Dr. Debdulal Das	Tata Steel Pvt. Ltd. Jamshedpur	3 years	28,81,840.00	On going
03	"Fatigue Property Evaluation and Micro structural Characterization of Hot Rolled Steels" Dr. Debdulal Das	Tata Steel Pvt. Ltd. Jamshedpur	12 months	14,85961.00	On going

## 5.2 Ramanujan Central Library

#### Preamble

The Institute library has the distinction of being one of the oldest and largest resourceful technical libraries in the eastern India. The library not only caters to the basic 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 Library is open from 9.00 A.M. to 12 O'clock in the midnight from Monday to Friday, and 10.00 A.M. to 6.30 P.M. on Saturday and Sunday. The library provides open access services for books and other learning materials to its members including students.

#### **Collection Development**

During the period under review 2,734 books were added in the collection of the library. The number of books and other documents issued to the members in the above period is 33,747. The library procured 13,535 e-books of Springer Nature published during 2016 to 2019 and 1584 e-books of McGgraw-Hill (Schaum's Core Outline Collection - 185 titles, Computing and TAB Collection - 820 titles and 579 titles belonging to its Express Library). The library boasts of having a good collection of old and rare books and journals of the nineteenth century.

#### 5.2.1 Computerization



The library has already computerized its entire housekeeping operations and now offered services through the integrated library management system - LibSys7. The library is providing online search facilities (WebOPAC) of its collection through the website of the Institute for remote access. Library upgraded its servers and integrated library management software, introduced biometric attendance management system and RFID based inventory control system for better collection management and efficient circulation services to its members.

#### 5.2.2 Services offered

- Web based library services
- Access to electronic journals
- Access to bibliographic (Citation) databases
- Lending Service
- Reading Room and e-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

#### **5.2.3 Electronic Resources**

The facilities in the Library have been significantly improved by the way of introducing a good number of scholarly electronic resources. The access of e-resources - ASCE Journals, ASME Journals, American Chemical Society (ACS), American Institute of Physics (AIP), American Physical Society (APS), Oxford University Press, Springer Link, Taylor & Francis Journals, JSTOR, Economic and Political Weekly, ISID, Nature, South Asian Archives, Web of Science, World e-Book Library (WeL) and Urkund (Plagiarism detection software) 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, IEL Online, Wiley Online Journals, Royal Society of Chemistry (RSC), AIAA Journal, Journal of Aircraft, Journal of Enhanced Heat Transfer, Nature Chemistry and Nature Electronics is also continued. The library is also subscribing bibliographical database - Scopus, similarity checking webtool - Turnitin, digital learning companion for employability development -HBR Ascend and digital writing assistance tool - Grammarly.

## Participation in Seminars/Conferences/Training Programmes

Dr. H.P. Sharma, Joint Librarian and Sri Indrajit Ghosh, Information and Data Entry Assistant of the Library participated in the Regional Training Programme for Admin Users of PDS -URKUND jointly organized by INFLIBNET Centre, Ahmedabad and Indian Institute of Management, Calcutta, held at IIM Calcutta on 21st August 2019.

## **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, completed with servers and networked computers, on two floors of the block III of the main building. 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, the Computer Centre caters for the computing needs of UG curriculum, as well as provides facilities for advanced computing with high-end software. The Centre also provides computing facilities for online tests for Campus Placements of the students. There are four computing laboratories: Laboratory-I, II, III and IV, each equipped with adequate number of desktop PCs, which are connected to a dedicated central server through LAN. All PCs are connected to 1GBPS Internet connection.

#### 5.3.2 Hardware

- One HP Z640 Gateway Server
- One HP Z640 Software License Server
- Three Graphics Workstations
- 180 nos. of Desktop PC
- 3 nos. Laser Printer
- Scanner
- Multi Utility Print/Scan/Copier
- Wall mount Projector

#### 5.3.3 Software

- OS: Linux, Windows
- Compilers : GNU compilers for C/ C++ and Java
- Software: COMSOL, ANSYS, MATLAB

#### **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 IIEST, Shibpur has started its journey recently in 2016. As a first installment to set up SAIF facility at IIEST, Shibpur, three major instruments namely, Single Crystal X-ray Diffractometer, NMR, and High Resolution Mass Spectrometer have been approved by DST. All the instruments have been successfully installed. However, presently the SCXRD instrument is not functional as it requires replacement of its photon detector.

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 IIESTS.
- 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, IIESTS consisting of following members given below.

#### Prof. S K Chattopadhyay

**Coordinator** Department of Chemistry

#### Prof. B K Ghorai

Member Department of Chemistry

#### **Dr.P Biswas**

Member Department of Chemistry

#### Dr.Nanda D. Paul

Member Department of Chemistry

#### Dr.S Jana

Member Department of Physics

#### Prof. D. Banerjee

Member Department of Physics

#### Prof. D. Dutta

Member Department of Mechanical Engineering

#### Prof. A. Roychowdhury

Member Department of Aerospace and Applied Mechanics

#### Prof. P. Syam

Member Department of Electrical Engineering

#### Dr. P. Bhattachrya

Member Department of Electronics and Telecommunications

#### Dr. P. Saha

Member Department of Civil Engineering

#### 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 website of the center.

### 5.5 Quality Improvement Program

With a vision to ameliorate and enhance the quality of technical education in the country, the Government of India, in 1970, envisioned and put the concept of the Quality Improvement Program (QIP) into form at the technical institutions of eminence and excellence. The primary target of the programme is to upgrade the expertise and capabilities of teachers of the AICTE approved degree-level engineering institutions. Presently there are nine Major QIP centres and several (74) other Minor centres spread across the country. The IIEST, Shibpur has been nominated as a Minor QIP Centre by the AICTE. The QIP Cell at IIEST, Shibpur caters the need of quality improvement, as envisaged in the Quality Improvement Program. The QIP Cell works regularly with the objective of providing an avenue for the teachers teaching in any of the AICTE approved degree-level engineering institution in the country to pursue M. Tech. or Ph. D. and upgrade their qualifications. The entire administrative protocol associated with the QIP Cell of the institute gets routed through the Office of the Dean (Academic), IIEST, Shibpur. Like every year, this year (2019-2020) too many students had applied for joining the Ph.D. programme at IIEST, Shibpur through QIP. However, only one candidate has been selected.

### **5.6 TEQIP III**

Based on the performance of TEQIP-I and TEQIP-II, National Project Implementation Unit (NPIU), New Delhi awarded funding for TEQIP-III project. NPIU also assigned IIEST, Shibpur as the Mentor Institute of Bhagalpur College of Engineering (BCE), Bhagalpur, Bihar, and NIT Manipur, under the twinning programme of TEQIP-III. IIEST, Shibpur will help BCE as well as NIT Manipur towards their overall academic and administrative development for NBA, autonomy, and introduction of post graduate programmes.

Under TEQIP – III, NPIU has sanctioned a funding of Rs. 7.70 crores to IIEST, Shibpur, for the project period 2017-2021.

#### Achievements during the period 2019–20

A sum of Rs. 2.61 crores has been utilised for the financial year 2019-20. Equipment including Pressure Controlled Coring System, Rock Deformation Measurement Device, and High-end Server have been procured. Also, advanced software

including ANSYS, ABAQUS, COMSOL and Matlab have also been procured which are installed in central servers, which are being accessed by the student and the faculty members of different departments.

Based on the excellent performance of the Institutute in TEQIP – III, NPIU requested IIEST, Shibpur to be the Mentor Institute for NIT Manipur also. Accordingly, the Institute now mentors NIT Manipur towards enhancing academic activities. The Director and faculty members of NIT Manipur also visited IIEST, Shibpur and had discussions with the faculty members of various departments.

From TEQIP-III project, financial assistances have been provided to two hundred seventeen (217) undergraduate engineering students for attending summer internship programsoffered by various premier institutions, research organisations and industries.

Financial assistances have also been provided from TEQIP – III project to one hundred forty six (146) students for attending Seminar/Conference/Workshop held within India to present their accepted papers.

Ten (10) in-house programs were organised by the engineering departments with financial support from TEQIP-III fund.

TEQIP-III has provided financial assistance to two hundred twenty nine (229) students of final year undergraduate engineering students for payment of GATE-2019 Registration Fee.

Sixty-one (61) students of different departments from Bhagalpur College of Engineering completed Summer Internship in the respective departments of IIEST, Shibpur during June-July, 2019.

Financial supports have been provided from TEQIP-III project to two hundred sixty eight (268) Engineering students for purchase of consumable items related to their research projects.

Prof. Subhasis Bhaumik, Professor, Dept. of Aerospace Engineering and Applied Mechanics, IIEST, Shibpur delivered lectures on "Robotics and Robot Application" and Prof. Manas Kumar Sanyal, Professor and Head, HRM Dept., IIEST, Shibpur delivered lectures on "Career Planning and Development" in BCE, Bhagalpur, Bihar during February 19-20, 2020.

Four (4) education tours have been organized for the students with financial support from TEQIP-III fund.

IIEST, Shibpur and Confederation of Indian Industry (CII), Eastern Region have jointly organised an event "CII Higher Education Conclave on Disruptive Innovation in Higher Education" held on 17th August, 2019 at ITC Sonar, Kolkata, with partial financial support from TEQIP-III.

## **5.7 Central Workshop**

The Central Workshop is intended as a core facility to carry out classes and mechanical fabrication works required for Engineering students. It handles the teaching of workshop practical courses meant for all the 1st year students at undergraduate level in which students are given practice in the areas of Fitting, Welding and Machining. 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 extramural research. It extends its facilities to the UG, PG and PhD students to carry out their project work.

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, Centreless grinding Machine, Universal Milling Machine with retrofit, etc.

The objective of the central workshop is to expose students to basics of manufacturing as it plays a direct role in improvement of quality of human life and creating wealth for the nation. This knowledge is highly essential for pragmatic supervision and control of productive operations in future life. 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.



## 5.8 Industry Institute Partnership Cell

#### **IIPC** activities

- MOU signed between IIEST, Shibpur and IBM; for a wide range of activities, starting from Learning Sessions for Students, the GuruCool for Teachers, IBM in collaboration with Smartbridge invites all faculty members to participate in this month-long Training & Project Build-a-Thon program, at no premium.
- All contemporary topics for students like CyberSecurity, Data Science, BlockChain, Cloud Computing, Leadership and Motivation and multiple others were conducted by IBM professionals and once the student completes the course in phases, they are eligible for A Badge or Certificate.
- 3. The IBM Global University Program Academic Award was bestowed on Dr. Ankita Pramanik and Dr. Gopal Chandra Roy of the ETC and Mining Dept. respectively for the Project on Underground Mine Monitoring System.
- 4. The Illumination Engineering students from the Departments of Electrical Engineering, Computer Science, Electronics and Telecommunication, IT and Mechanical Engg. attended an on-line Webinar by Dr. Christian Todaro. The event was organized by the Indian Society of Lighting Engineers and invited the IIPC, IIEST, Shibpur to join the webinar. He has been an international sales manager for eight years at Khatod. Khatod Opto Electronics is an Italian firm, based in Milan. He is a German University graduate. Todaro has 15 years of experience in lighting for the development and production of secondary optics applied to LED technology. The students got a feel about the intense R and D in Communication and Materials technology that is being required by the Lighting Revolution.
- 5. The Health Sub-Committee of the Bengal Chamber of Commerce and Industry, Kolkata had an on-line meeting to know the research activities being taken up by the Centre for Health Care Science and Technology, along with other members from the Dept of ETC and AeroSpace Engineering, primarily for the detection of COVID. Also some researches are eligible to be incubated, as per the observations of the Senior Doctors from Medica Hospital, School of Tropical Medicine and Apollo Hospitals from Kolkata.

## **5.9 Special Reservation Cell**

A Special Reservation Cell (SRC) has been constituted in the Institute vide Office Order No.RDO/88/18 Dated 25th July 2018 for enforcement of orders of reservation in posts and services of the Institute in pursuance to the Department of Personnel and Training, Ministry of Personnel, Public Grievance and Pension, Government of India vide Office Memorandum no. 43011/153/2010–Estt. (Reg.) dated 4th January, 2013.

The Cell has actively involved for preparation of the Seat Matrix for admission to UG, PG and PhD courses for the academic session 2020–21. Chairman, SRC was present as a member of the board of interview for selection of all PhD students. Reservation for Economically Weaker Sections (EWSs) scheme in admission is implemented by the Institute in two phases i.e. 12.5% increase in seats for the academic session 2019–20 and remaining 12.5% increase in seats for the academic session 2020–21. The Cell has submitted updated Reservation Roster for Professors, Associate Professors and Assistant Professors of the Institute on 4th October 2019. The Reservation Roster for non-teaching staff of the Institute is pending due to non availability of restructuring of designation data of non-teaching employees.

For implementation of Central Educational Institutions (Reservation in Teachers' Cadre) Act, 2019 in the Institute, Chairman, SRC was present in the meeting with Hon'ble Director of the Institute and other members on 22.11.2019 and 25.11.2019. Cell also helped the Institute for submission of reports time to time when asked by the MHRD regarding reservation issues.

## 5.10 Intellectual Property Rights Cell

The intellectual property acts a crucial and significant foundation for an Institute. In the current technological situation, intangible resources, e.g., know-how, inventions, brands, trademarks, designs, coding from software, development of new chemical and medical products are more valuable than Institutional physical assets. IPR Cell, IIEST, Shibpur guides academic and non-academic staff, students, scholars, and outside agencies on ethical practices.It also offers guidelines the Institute regarding intellectual property rights (IPR) and obligations, which include the nature of IP, its ownership, exploitation, technology transfer, and confidentiality requirements.

#### Current members of the IPR Cell, IIEST, Shibpur:

- 1. Prof. Parthasarathi Chakrabarti, Director, Chairman of IPR Cell,
- 2. Prof. Sudip Kr.Roy, Dean-Academic, Member,
- 3. Prof. Subhasis Bhaumik, Dean-Research and Consultancy, Member,
- 4. Prof. Arindam Biswas, Dean-International Relations & Alumni Affairs, Member,
- 5. Prof. Konika Das (Bhattacharya), Department of Electrical Engineering, Member,
- 6. Prof. Mousumi Basu, Department of Physics, Member,
- 7. Prof. Sudip Kumar Chattopadhyay, Department of Chemistry, Member,
- 8. Prof. Manas Kumar Sanyal, Department of Human Resource Management, Member,
- 9. Dr. Jhuma Ganguly, Department of Chemistry, Convenor of IPR Cell,

Website link: https://www.iiests.ac.in/IIEST/IPRC

#### Current Status(2019-2020):

1.	No of Patent Filing of IIEST, Shibpur	08
2.	No of Patent Granted	02
3.	No of Copy rights	02

#### **Granted patents**

SI. No.	Title of Patent	Patent Application no and Date of Filling (India)	Patent No./date	Inventor(s)
1.	A process for forming a TiO2 Nanotube based room temperature (27°C) alcohol sensor device.	1286/KOL/2014, 11.12.2014	Indian Patent No. 345631 , dated 30.08.2020	Dr. Partha Bhattacharyya, Arnab Hazra,
2	A process for fabricating an undoped transition metal oxide (TMO) based p-n homojunction diode with high rectification efficiency.	581/KOL/2015, 27.05.2015	Indian Patent No. 341257, dated 13.07.2020	Dr.Partha Bhattacharyya, Arnab Hazra,

#### Current activities (2019-2020)

SI. No.	Title of Events	Date and Durations	Sponsorship
1.	Seminar-cum-Workshop on IPR : Awareness, Practice and Challenges in Academia	6 to 7th November 2019	National Research Development Corporation, (NRDC) Govt. of India
2	Seminar-cum-Workshop on IPR: Technology Innovation and IP Protection	15th February, 2020	IIEST, Shibpur

## 5.11 Alumni Cell

#### **Establishment of Alumni Cell:**

To strengthen the interaction and involvement of the alumni for the betterment of the Institute an Alumni Cell (AC) has been formed. The Alumni Cell, IIEST, Shibpur shall act as the single point of contact for consideration of all alumni related proposals. The Cell shall meet periodically to consider the different issues and the decisions taken shall be implemented subsequent to the approval of the Director. The Cell shall actively promote participation of the alumni community in the development of the Institute in the form of endowment funds, CSR funds, etc. The Institute shall enter into a MoU with individual donor (an alumnus or a kin of the alumnus) or alumni group and the contributions shall be spent abiding the MoU. The auditing of the alumni donations shall be done and made available in the public domain. The Cell shall monitor that important alumni related matters be made available in one section of the Institute website. The web page shall contain information regarding announcements to reach out to the alumni for different purposes. The Institute shall maintain an Alumni database which the individual alumnus shall be allowed to update regarding his/her present assignments, achievements, etc. The Cell shall identify key areas where the support of alumni be pulled in. The Cell has to identify potential alumni for accelerating the fund raising activity. The Cell must also focus on raising fund under CSR.A separate Student Welfare Fund shall be created from the donation of the alumni to address the needs of the students in exigency like hospitalization, students needing financial help, etc.

#### First Alumni Convention:

The first alumni convention of IIEST, Shibpur was celebrated in a grand manner on 1st February, 2020. It was held at the Lords' ground of the Institute.

The inaugural session of the program was attended by a large number of participants comprising the alumni, invited guests, members of the faculty and administration, and the students. The Guests and speakers on the dais were Prof. Parthasarthi Chakrabarti, Director, Dr. VK Aatre, Chairman and Chief Guest of the occasion, Prof. Arindam Biswas, Dean, International Affairs and Alumni relations, Mr. Gautam Ray, Vice-President, Alumni Cell, Prof. Amitabha Ghosh, Guest of Honour, Prof. Sudip Kumar Roy, Vice-President, Alumni Cell as well as Dean, Planning and Development and Dr. Biman Bandyopadhyay, Registrar.

The Director, Prof. Parthasarathi Chakrabarti while welcoming the gathering emphasized that the Alumni Convention is a single window channel for the alumni to connect directly with their alma mater. He also remarked that this type of alumni convention is present in the reputed Institutes in India and also globally. IIEST Shibpur has established its alumni cell as an initiative in this direction and the alumni convention was the first step of the institute to reach out directly to its alumni diaspora. The Director also highlighted that some of the buildings like the Institute Hall, Hostels and other buildings need immediate renovation. He had also pointed out at the plight of cleanliness in the Institute.

Prof. V. K. Aatre Chairperson Board of Governors of IIEST, Shibpur, in his address to the august assembly remarked that the word alumni have come from the Latin word meaning "to nourish". He also said that the alumni are the brand ambassador of the Institute and IIEST, Shibpur is looking for overwhelming support from her alumni.

A panel discussion on the topic" Building collaborative ecosystem for strengthening alumni and Institute interaction" was held during the alumni convention. The panelists were Mr. Gautam Ray, of CESC, Mr. Prabir Neyogi, Canada, Mr. Sanjoy Ghosh, Simoco, Mr. Sushanta Sinha, Mr. Gautam Biswas, Dr. Tapas Som, and Mr. Sunandan Narayan Basu. Prof. N R Bandyopadhyay was the Moderator of the event. The alumni reiterated their support towards rebuilding this 164-year young Institute in the panel discussion. The alumni fondly recollected how the Institute has nourished them with utmost care and now they feel it is their turn to play an important role in mentoring the present students, budding entrepreneurs and strengthening industry institute interactions.

Mr. Sunanadan Narayan Basu, Alumnus of the 1956 batch pledged an amount of 1 crore to be given over a span of 2 yrs. towards the betterment of the institute. Dr. Prabir Neogi, Alumnus of 1962 batch announced setting up of an endowment fund in the name of his late father to help his alma mater.

The day long program included a department tour where the alumni re-lived their student days. The event concluded with the Valedictory program. ChairmanBoG, Director, Dean (IRAA), Dean (P&D) were on the dais.

Two awards were given out during this session.Dr. Tapas Som, alumnus of 1971 was invited to handover the GAABESU Washington Metropolitan Area Young FacultyResearch Award to Dr. Nanda Dulal Paul, Assistant Professor in the department of Chemistry.

Alumnus of 1962 pass out batch, Dr. Prabir Neogiwas also invited to give out the Smt. Uma Rani Neogi award for academic excellence for the best women student till 6th Semester. To encourage female students in engineering disciplines, Dr. Neogi had instituted this award in the name of his late mother. This year in its third edition, the award was bagged by Ms. Anwesha Basu, 4th year student of Department of Computer Science and Technology. Mr. Neogi pointed out the fact that the previous winners of the award went on to win the President of India Gold Medal Award of IIEST, Shibpur awarded to the best graduating student of the Institute.

Prof. Arindam Biswas, Dean, International Relations & Alumni Affairs of the Institute remarked that "In the first alumni convention of IIEST, Shibpur many alumni joined from different parts of the world, namely Canada, USA and UK. This has been a successful convention where alumni discussed different matters for the upliftment of their alma mater. At the end, the Institute and the alumni resolved to work in synergy for the betterment." This was followed by a discussion with the alumni. Finally, the vote of thanks was proposed by the Registrar. It was declared at the meet that henceforth the alumni convention will be an annual affair and will be held every year on the day succeeding the Convocation of the Institute. The event ended with a photo session.

#### Development of Institute Website sponsored by an alumnus

The development of the new Institute website has been undertaken which has been sponsored by Mr. Sanjay Kumar Ghosh, an alumnus, Electronics and Telecommunication Engg. Dept., 1987 batch.

#### Construction of Volleyball Court by 89 batch

The 1989 batch has proposed for a construction of volleyball court in the Institute premises which will cost approximately 25 Lacs. The construction will be done by the 1989 batch and it will be handed over to the Institute. The Institute has earmarked a place in the Lords Ground for the construction of the same. Necessary formalities in the form of MoU will be completed.



## **5.12 Internal Complaints Committee**

The implementation of the Vishaka guidelines and the 2013 Act in universities must be predicated upon a clear understanding of the nature and significance of sexual harassment redressal mechanisms in the context of an institutional space such as the University and other Institutes of Higher education. These are not merely 'workplaces' where faculty and non-teaching staff work but are primarily places where students come to learn and be trained for their professional careers, and to realise their full potential as individuals. It is therefore imperative that all students, particularly women students, are provided with a safe and dignified environment in which they are able to achieve these goals, because only then will they be able to realise the constitutional promise of equality. The University-level ICC, when conceived of as an implementation of the Vishaka guidelines, was a mechanism to both prevent any violation of a safe and dignified environment and to ensure that if such violations do take place they are effectively and speedily dealt with. It is for this reason that ICCs have been put in place to provide a civil redressal mechanism in contrast to a criminal --primarily punitive --process. The goal of the SH policy is to end the problem faced by the student/employee through an internal system of relief that is easy to access, and thereby provides an effective remedy to the aggrieved complainant as quickly as possible so that she can continue to study and develop without further impediments

The composition of the Committee for the specific period of this report is as follows:

Prof. Keya Mitra, Prof. Subrata Chatterjee, Mr. Malay Garai, Ms. Susmita Sarkar, Ms. Smita Pal (Sarkar), Ms. Rapti Ray,

Ms Rituparna Das, Ms Karri Sudharshana, Ms Archana Mahato







# Sponsored Research and Industrial Consultancy Activities

## Sponsored Research and Industrial Consultancy Activities

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.

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-lessimportant 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 peerreviewed national and international Journals. A significant number of research projects funded by MHRD, MNRE, MeitY, DST, DBT, Digital India Corporation, DST-FIST, Indian Council of Medical Research, UNICEF, Ministry of Earth Science, CSIR, ISRO, DRDO, Ministry of Steel, Ministry of Defense, DAE-BRNS, TATA Steel, Electrosteel Casting Limited (ECL) and international funding agencies like CIDA, USAID, DelPHE, SANEI, UKRI-RCUK 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 steadily during the last five years. Besides the conventional fields, 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 include Advanced Materials, Green Energy and Sensors, Synthesis of new compounds and catalysis, Computational Chemistry, Bio-Mechanics, Power Electronics, VLSI and Embedded Systems, Earthquake Dynamics, Disaster Management, Environmental Remediation, Healthcare Science and Technology, Computational Biology, Mobile Computing, Nano Science and Technology, Remote-sensing and GIS, Space Technology, Structural Engineering, Communication, Sensor Network, Water Resource and Environment, Transportation Planning, Aerospace Engineering, Fluid Mechanics, Carbon Sequestration, Atomic and Nuclear Physics, Soft Computing, Image processing, Mine Safety, Housing and Human Settlement Planning, Electrochemistry, Sedimentology, Environmental Economics, Mathematical and Statistical Theory of Life Testing and Reliability, Robotics & Mechatronics, Rural Technology etc.

Major augmentation in infrastructure for facilitating academic, research and administrative activities in the Institute has been undertaken during the past one year.

A total no. of about 300 research projects worth more than Rs. 140 Cr. and about 550 consultancy projects amounting to about Rs. 55 Cr. sanctioned to the Institute during the period of 2011 – 2020.

# Some highlights of ongoing sponsored research activities:

- In 2019-20, seven research proposals have been sanctioned by MHRD, Govt. of India under the Scheme for Promotion of Academic and Research Collaboration (SPARC) with total sanctioned amount of Rs. 5.16 Cr. to facilitate global research network, improve research ecosystem and academic standard.
- As an outcome of the SPARC project, Dr. Takahiro lizuka (Hiroshima University), Prof. Hans Juergen Mattausch (Hiroshima University), Prof. Krishnendu Chakrabarty (Duke University), Dr. Arijit Banerjee (University of Illinois, Urbana Champagne) and Prof. Kaushik Roy (Purdue University) visited institute and delivered talks.
- Presently 2 nos. of research projects sponsored by Tata Steel in the area of development of advanced high strength steel, amounting to Rs. 99.06 lakhs are ongoing.
- Department of Science and Technology (DST), Govt. of India sponsored DST Solar PV Hub Project of Rs. 27 Cr. which is current ongoing.
- Technology development initiative of MHRD and DST, Government of India has sanctioned impacting research innovation and technology (IMPRINT-2) of Rs. 1.14 Cr. involving Tata Steel as the participating collaborating industry.

## Some major consultancy projects in 2019–20 include:

- Analysis of referee coal samples from different mines by South Eastern Coalfields Limited, Bharat Cooking Coal Ltd.
- Verification of mine closure activities by Lignite Power Private Limited, Singareni Collieries Company Limited.

- Checking of structural design and stability of multi-storied building in Kolkata.
- Re-assessment of Vent Shaft and New Mahakaran Dewatering scheme for Construction of UG Vent Shaft and New Mahakaran Station by Transtonnelstroy - Afcons Joint Venture.
- Quality Monitoring Construction of three Bridges & Approach Road at Nayakhali at the 5th Km, at Jalda near Mandermani at 15th Km & at Saulat at 29th Km of Saikat Sarani under Tamluk Highway division in the district of Purba Midnapur by Mackintosh Burn Limited
- Proof Consultancy Services for 4 laning of Barhi Koderma Section of NH 31 from km 0.00 to 27.500 in the state of Jharkhand by Ram Kripal Singh Construction Pvt. Ltd.
- Consultative Collaboration on Research between IIEST, Shibpur and KMRCL for Kolkata East West Metro Project.
- Study of EIA/EMP and Bank Protection Study within Port limits in Halisahar Municipality.
- Renovation of Kedarnath Arogya Bhavan, Bali.
- Vetting of Structural design and drawings for Logistic Hub at Garden Reach, Kolkata under KMDA.
- Traffic Survey (7 days, 24 hours) of Vidyasagar Setu.
- Rain water harvesting of artificial recharge for Khagra Joydev Coal Block at Birbhum District of West Bengal.
- Scientific study for stability of dragline dump at Mungoli OCM of Wani Area, Western Coalfields limited (WCL) etc.

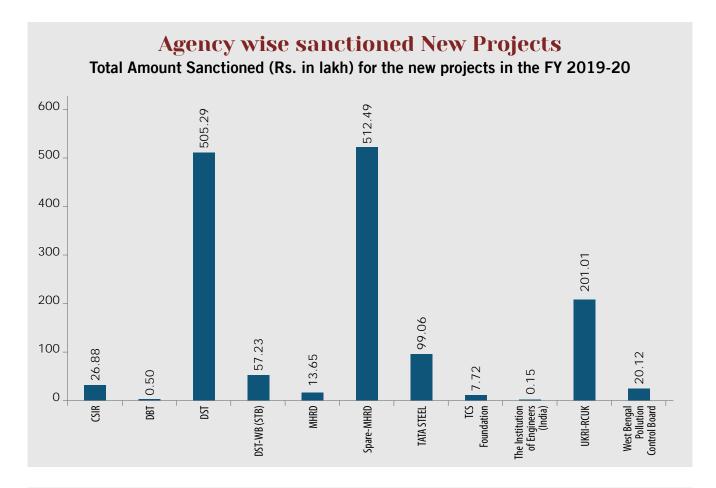
At present, the Institute is carrying out advance sponsored research and consultancy projects with a total approved budget of about Rs 35 Cr.

The following tables and diagrams describe the details of new externally funded projects started during the year, ongoing projects, completed projects, particulars of new consultancy work sanctioned and carried out during year 2019-20.

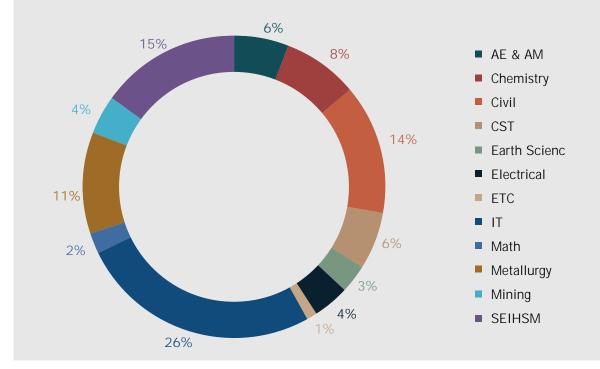
SI. No.	Dept.	Name of Principal Investigator	Funding Agency- updated	Total Amount Sanctioned (Rs. in lakh)
1	AE&AM	Amit Roy Chowdhury	DST	83.6986
2	Chemistry	Sudip Kumar Chattopadhyay	CSIR	10.017
3	Chemistry	Debabani Ganguly	DBT	0.5
4	Chemistry	Nanda Dulal Paul	DST	32.597
5	Chemistry	Jhuma Ganguly	DST	30.9229
6	Chemistry	Sangeeta Ghosh (Mentor - Chinmoy Bhattacharya)	DST	21.79

#### 6.1 Table: New Externally Funded Projects initiated in 2019-20.

SI. No.	Dept.	Name of Principal Investigator	Funding Agency- updated	Total Amount Sanctioned (Rs. in lakh)
7	Chemistry	Laksmikanta Adak	DST-WB(STB)	6.3
8	Chemistry	Nanda Dulal Paul	DST-WB(STB)	3.3
9	Chemistry	Jhuma Ganguly	DST-WB(STB)	6.25
10	Civil	Anirban Gupta	DST	148
11	Civil	Dr. Chanchal Majumder	DST-WB(STB)	14.46
12	Civil	Dr. Pritam Saha	DST-WB(STB)	11.958
13	Civil	Pritam Saha	The Institution of Engineers (India)	0.15
14	Civil	Anirban Gupta	West Bengal Pollution Control Board	10.0016
15	Civil	Anirban Gupta	West Bengal Pollution Control Board	10.114
16	CST	Dr. Nirmay Ghosh	DST	16.6606
17	CST	Abhik Mukherjee	ICSSR - MHRD	13.65
18	CST	Susanta Chakraborty	SPARC- MHRD	47.5093
19	Earth Science	Moumita Talukdar	DST	35
20	Electrical	Anindita Ganguly (PI) & Aparajita Sengupta (Mentor)	DST	10.05
21	Electrical	Debabrata Roy	DST	42.5372
22	ETC	Dr. Ankita Pramanik	DST-WB(STB)	14.958
23	IT	Prasun Ghosal	DST	6.6
24	IT	Ruchira Naskar	DST	15.121
25	IT	Sukanta Das	DST	6.6
26	IT	Hafizur Rahaman	SPARC- MHRD	90.1423
27	IT	Hafizur Rahaman	SPARC- MHRD	89.1485
28	IT	Hafizur Rahaman	SPARC- MHRD	89.3423
29	IT	Sukanta Das	SPARC- MHRD	59.1548
30	Math	Tapan Kumar Kar	CSIR	16.863
31	Math	Ujjal Debnath	DST	6.6
32	Metallurgy	Manojit Ghosh	SPARC- MHRD	39.9563
33	Metallurgy	Dr. Arunansu Haldar	TATA STEEL	49.5305
34	Metallurgy	Dr. Arunansu Haldar	TATA STEEL	49.5305
35	Metallurgy	Debdulal Das	TCS Foundation	7.72
36	Mining	Pratik Dutta	DST	49.1089
37	SEIHSM	Souvanic Roy	UKRI-RCUK	201.0126

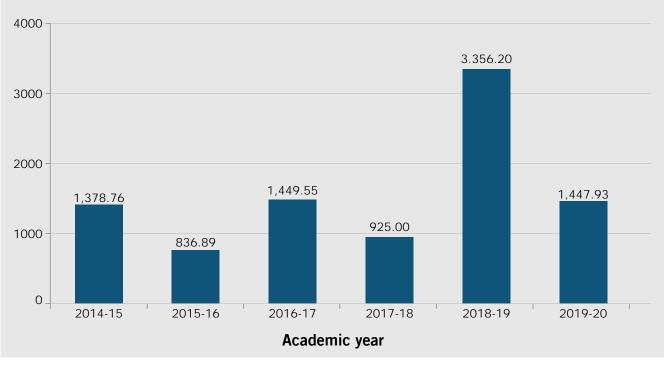


**Department wise sanctioned New Projects** Total sanctioned amount in FY 2019-20: 13.4685 Cr.



## Year wise Sanctioned Project amounts

#### Fund Sanctioned (in lakhs)



#### 6.2 Table: Completed Projects in 2019-20

SI. No.	DEPARTMENT	NAME OF THE PRINCIPAL FUNDING INVESTIGATOR		
1	CEGESS	ARINDAM KOLE	SERB-NPDF	
2	Chemistry	AJIT KUMAR MAHAPATRA	DAE-BRNS	
3	Chemistry	SOURAV MARDANYA	SERB-NPDF	
4	Chemistry	NANDA DULAL PAUL	DST-SERB	
5	Chemistry	NANDA DULAL PAUL	CSIR	
6	Chemistry	ANITA DAS	SERB-NPDF	
7	Chemistry	DEBABANI GANGULY	DBT-RLF	
8	Chemistry	CHINMOY BHATTACHARYYA	DST-BOYSCAST	
9	Chemistry	JAYATI DUTTA	NMRL-CARS	
10	Chst	SABYASACHI SARKAR	DST-SERB	
11	Chst	RAKHI MAJUMDAR	SERB-NPDF	
12	Civil	SUMIT CHAKRABORTY	SERB-DST	
13	Civil	ANIRBAN GUPTA	IC-IMPACTS	
14	Civil	ANIRBAN GUPTA	UNICEF-TRG	
15	Civil	SUDIP KUMAR ROY	CSIR-CRRI	
16	Electrical	ASHOKE SUTRADHAR	UGC-SAP	
17	ETC	BAIDYA NATH ROY	DST-SERB	

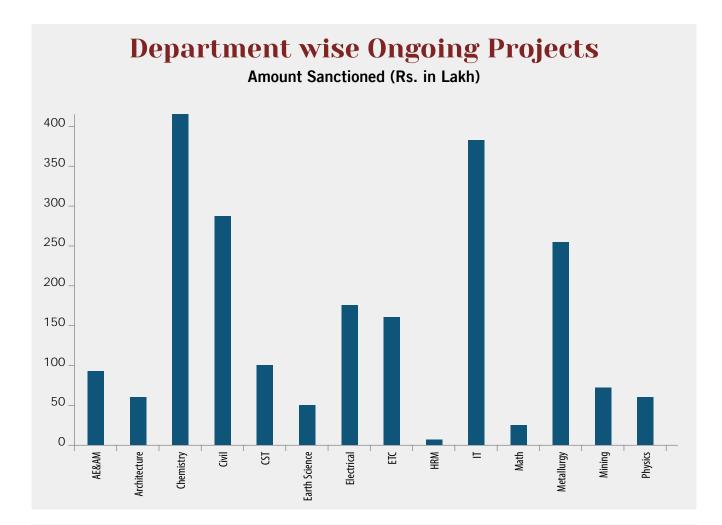
SI. No.	DEPARTMENT	NAME OF THE PRINCIPAL INVESTIGATOR	FUNDING AGENCY
18	IT	PRASUN GHOSAL	IEI
19	IT	ARINDAM BISWAS	DBT
20	Mechanical	PARTHA PRATIM DEY	BRNS
21	Metallurgy	P. P. CHATTOPADYAYA	IEI
22	Metallurgy	PARTHA PRATIM CHATTOPADHYAY	TATA-STEEL
23	Mining	SUDIPTA MUKHOPADHYAY	UGC
24	MNDSMSE	PROSENJIT SAHA	DST-INSPIRE
25	MNDSMSE	NILRATAN BANDYOPADHYAY	TATA STEEL
26	MNDSMSE	PROSENJIT SAHA	SERB
27	Physics	MANISH PAL CHOWDHURY	DST-PAC-OTH
28	SEIHSM	SOUVANIC ROY	SHH-K-WB
29	SEIHSM	SOUVANIC ROY	SHH

## 6.3 Table: List of Ongoing Projects in 2019-20

SI. No.	I. No. DEPT. NAME OF PRINC		FUNDING AGENCY	AMOUNT SANCTIONED (RS. IN LAKH)
1	AE&AM	Amit Roy Chowdhury	DST	83.6986
2	AE&AM	Subhasis Bhaumik	MHRD, Govt. of India (IIT, KGP)	10.0000
3	AT&RP	Souvanic Roy	DST	65.9820
4	CEGESS	Anirban Bagui	DST-Inspire	86.2743
5	CEGESS	Sanhita Majumdar	DST-WOS	30.0000
6	CEGESS	Snehangshu Patra	DST	35.0000
7	CEGESS	Snehangshu Patra	DST-SERB	30.4700
8	Chemistry	Ajit Kumar Mahapatra	SERB	28.3756
9	Chemistry	Ajit Kumar Mahapatra	CSIR	27.2600
10	Chemistry	Anita Das	SERB	19.2000
11	Chemistry	Arik Kar	DST-Inspire	35.0000
12	Chemistry	Arik Kar	The Royal Society, Independent Scientific Academy of the UK	26.9439
13	Chemistry	Chinmoy Bhattacharya	DST-WB	10.8253
14	Chemistry	Debabani Ganguly	DBT - Ramalingaswami Fellowship	88.0000
15	Chemistry	Debabani Ganguly	Dept. of Biotechnology, Govt. of India	1.5000
16	Chemistry	Dibyendu Sain	SERB-NPDF	19.2000
17	Chemistry	Jayanta Nanda	DST-Inspire	35.0000
18	Chemistry	Jhuma Ganguly	DST	30.9229
19	Chemistry	Jhuma Ganguly	Science & Technology and Biotechnology, GOWB	6.2500
20	Chemistry	Laksmikanta Adak	DST-WB(STB)	6.3000

SI. No.	DEPT.	NAME OF PRINCIPAL INVESTIGATOR	FUNDING AGENCY	AMOUNT SANCTIONED (RS. IN LAKH)	
21	Chemistry	Marinal K. Bera	CSIR	17.5600	
22	Chemistry	Nanda Dulal Paul	DST-WB(STB)	3.3000	
23	Chemistry	Nanda Dulal Paul	DST-SERB	32.5970	
24	Chemistry	Sasanka Dalapati	DST-Inspire	35.0000	
25	Chemistry	Sudip Kumar Chattopadhyay	CSIR	10.0170	
26	CHST	Amit Roy Chowdhury	Dept. of Biotechnology	10.0100	
27	CHST	Ananya Barui, Chirasree Roychaudhuri & Ashoke Sutradhar	Central Council for Research in Homeopathy (CCRH), Ministry of Ayush, Govt. of India	380.0000	
28	CHST	Aritri Ghosh (Ananya Barui)	Indian Council of Medical Research	2.2840	
29	CHST	Chitrangada Das Mukhopadhyay	DST-WB	15.7600	
30	CHST	Pallab Datta	Indian Council of Medical Research	22.4800	
31	Civil	Pritam Saha	DST-WB(STB)	11.9580	
32	Civil	Anirban Gupta	UNICEF, Kolkata	34.6478	
33	Civil	Anirban Gupta	DST	148.0000	
34	Civil	Anirban Gupta	West Bengal Pollution Control Board	10.0016	
35	Civil	Anirban Gupta	West Bengal Pollution Control Board	10.1140	
36	Civil	Champakali Das	DST (KIRAN, WOA-A)	23.8000	
37	Civil	Chanchal Majumder	DST-WB(STB)	14.4600	
38	Civil	Pritam Saha	The Institution of Engineers (India)	0.1500	
39	Civil	Sumit Chakraborty	SERB-DST Young Scientist	26.4472	
40	CST	Nirmay Ghosh	SERB	16.6606	
41	CST	Abhik Mukherjee	ICSSR-MHRD	13.6500	
42	CST	Surajeet Ghosh	Dept. of Biotechnology, Govt. of India	20.4480	
43	CST	Susanta Chakraborty	MHRD-SPARC	47.5093	
44	Earth Science	Bhabani Prasad Mukhopadhyay	The West Bengal Power Development Corporation Ltd., Govt. of West Bengal	22.2200	
45	Earth Science	Moumita Talukdar	DST-Inspire	35.0000	
46	Electrical	Anindita Ganguly (PI) & Aparajita Sengupta (Mentor)	SERB	10.0500	
47	Electrical	Debabrata Roy	SERB	58.1359	
48	Electrical	Mainak Sengupta	MHRD-SPARC	97.2352	
49	ETC	Ankita Pramanik	DST-WB(STB)	14.9580	
50	ETC	Chirasree Roy Chaudhuri	Digital India Corporation, A Section 8 Company of Ministry of Electronics and Information Technology, Govt. of India	7.4000	

SI. No.	DEPT.	NAME OF PRINCIPAL INVESTIGATOR	FUNDING AGENCY	AMOUNT SANCTIONED (RS. IN LAKH)
51	ETC	Chirasree Roychaudhuri	Indian Council of Medical Research, Dept. of Health Research, Ministry of Health & Family Welfare, Govt. of India	46.9780
52	ETC	Pallabi Pramanik	SERB	14.4000
53	ETC	Partha Bhattacharyya	Visvesvaraya Young Faculty Research Fellowship Scheme - Media Lab Asia	37.0000
54	ETC	Debasis Mitra	Visvesvaraya Young Faculty Research Fellowship Scheme - Media Lab Asia	37.0000
55	HRM	Manas Kumar Sanyal	National Research Development Corporation (An Enterprise of DSIR-DST-GOI)	6.0000
56	IT	Hafizur Rahaman	MHRD-SPARC	90.1423
57	IT	Hafizur Rahaman	MHRD-SPARC	89.1485
58	IT	Hafizur Rahaman	MHRD-SPARC	89.3423
59	IT	Indrajit Banerjee	DST-WB	15.8600
60	IT	Ruchira Naskar	DST-ICPS	15.1210
61	IT	Sukanta Das	MHRD-SPARC	59.1548
62	IT	Sukanta Das	SERB	6.6000
63	Math	Tapan Kumar Kar	CSIR	16.8630
64	Math	Ujjal Debnath	SERB	6.6000
65	Metallurgy	Arunansu Haldar	TATA STEEL	49.5305
66	Metallurgy	Amitava Basu Mallick	SERB, DST	64.1059
67	Metallurgy	Arunansu Haldar	TATA STEEL	49.5305
68	Metallurgy	Debdulal Das	TATA Steel, Jamshedpur	28.8184
69	Metallurgy	Manojit Ghosh	DST	17.2000
70	Metallurgy	Manojit Ghosh	MHRD-SPARC	39.9563
71	Mining	Prabir Kumar Paul	SERB	34.1764
72	Mining	Pratik Dutta	DST	49.1089
73	Physics	Abhijit Bisoi	SERB, DST	33.6834
74	Physics	Mousumi Basu	SERB	21.6117
75	SEIHSM	Souvanic Roy	UKRI-RCUK	201.0126
76	SMSE	Prosenjit Saha	DST-INSPIRE	35.0000
77	SMSE	Prosenjit Saha	SERB	42.1953
78	SMSE	Swatilekha Ghosh	DST-Inspire	35.0000
79	SOCSAT	Manisha Maity (Jayati Bhowal)	Indian Council of Medical Research	1.7800
80	SOSCAT	P.S. Roy	BPCL	93.1952
81	VLSI	Hafizur Rahaman	DEITY, MCIT, Govt. of India	128.0000







IIEST Shibpur 100 Annual Report 2019-20

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
1	2019-2020	AE&AM	Amit Roy Chowdhury, Debasish Maitra, Ashok Moitra	Conveyor & Ropeway Services Pvt. Ltd.	2.5960	2019
2	2019-2020	Civil	Ambarish Ghosh	Traders and Engineers Private Ltd.	3.1320	2020
3	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	1.2390	2019
4	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	0.7080	2019
5	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	1.6520	2019
6	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	1.7700	2019
7	2019-2020	Civil	Tapash Kumar Roy	Bharat Petroleum Corporation Limited	1.7700	
8	2019-2020	Civil	Tapash Kumar Roy	Bharat Petroleum Corporation Limited	1.7700	
9	2019-2020	Civil	Ambarish Ghosh	ESPACE	2.3600	2019
10	2019-2020	Civil	Soumya Bhattacharjya	Progressive Construction Co.	1.1800	2020
11	2019-2020	Civil	Aparna (Dey) Ghosh	Housing Directorate, Govt. of W.B.	0.7080	2019
12	2019-2020	Civil	Soumya Bhattacharjya	Progressive Construction Co.	2.3600	2020
13	2019-2020	Civil	Tapash Kumar Roy	Kolkata Port Trust	5.9000	2019
14	2019-2020	Civil	Sudip Kumar Roy	Consumer Unity & Trust Society	1.1800	2019
15	2019-2020	Civil	Prasanta Chakraborty	Hindustan Steelworks Construction Limited	1.1800	2019
16	2019-2020	Civil	Tapash Kumar Roy	West Bengal Housing Board	2.1240	2019
17	2019-2020	Civil	Arun Kumar Chakraborty	Srijan Ecological Upliftment Pvt. Ltd.	1.1800	2019
18	2019-2020	Civil	Ambarish Ghosh	KIC Resources Ltd	5.9000	2019
19	2019-2020	Civil	Arun Kumar Chakraborty	Sinha & Associates	1.8861	2019
20	2019-2020	Civil	Ambarish Ghosh	Bridge and Roof Co. (India) Ltd.	1.1800	2019
21	2019-2020	Civil	Soumya Bhattacharjya	Progressive Construction Co.	1.1800	2019
22	2019-2020	Civil	Soumya Bhattacharjya	Porel Dass Water & Effluent Control Pvt. Ltd.	3.5400	2019
23	2019-2020	Civil	Ambarish Ghosh	Muskan Highrise Pvt. Ltd.	2.0650	2019

## 6.4 Table: List of New Consultancy Projects sanctioned in 2019-20.

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
24	2019-2020	Civil	Ambarish Ghosh	Jalan Builders Pvt. Ltd.	2.0650	2019
25	2019-2020	Civil	Soumya Bhattacharjya	Sudarshan Sengupta & Sons	1.1800	2019
26	2019-2020	Civil	Soumya Bhattacharjya	Sudarshan Sengupta & Sons	0.7080	2019
27	2019-2020	Civil	Ambarish Ghosh	UC Consultancy, Mankundu, Hooghly	1.2390	2019
28	2019-2020	Civil	Sudip Kumar Roy, Ambarish Ghosh, Sandip Chakraborty & Sujit Kumar Dalui	Ram Kripal Singh Construction Pvt. Ltd.	14.1600	2019
29	2019-2020	Civil	Sujit Kumar Dalui & Ambarish Ghosh	Mackintosh Burn Limited	2.3600	2019
30	2019-2020	Civil	Subrata Chakraborty	ABCI Infrastructures Pvt. Ltd.	2.1240	2019
31	2019-2020	Civil	Ambarish Ghosh and Sujit Kumar Dalui	Mackintosh Burn Limited	1.1210	2019
32	2019-2020	Civil	Debashis Moitra & Sujit Kumar Dolui	Damodar Ropeways & Infra Ltd.	1.4750	2019
33	2019-2020	Civil	Ambarish Ghosh & Kalyan Kumar Chattopadhyay	Dream Home Developer	2.3600	2019
34	2019-2020	Civil	Ambarish Ghosh and Sujit Kumar Dalui	Mahanadi Coalfields Limited	2.6432	2018
35	2019-2020	Civil	Kalyan Kumar Chattopadhyay and Sujit Kumar Dalui	Effluent & Watertreatment Engineers (P) Ltd.	0.8850	2019
36	2019-2020	Civil	Ambarish Ghosh	Traders and Engineers Private Ltd.	1.7700	2019
37	2019-2020	Civil	Ambarish Ghosh and Sujit Kumar Dalui	Mackintosh Burn Limited	1.6520	2019
38	2019-2020	Civil	Ambarish Ghosh	Unimark Mirania Project LLP	7.0800	2019
39	2019-2020	Civil	Soumya Bhattacharjya	West Bengal Housing Infrastructure Development Corporation Ltd.	1.1800	2019
40	2019-2020	Civil	Subrata Chakraborty	Office of the Superintending Engineer, Kolkata Health Circle, P.W.Dte., Govt. of West Bengal	1.1800	2019
41	2019-2020	Civil	Subrata Chakraborty	Mani Square Ltd.	10.3840	2019
42	2019-2020	Civil	Kalyan Kumar Bhar	Chief Engineer & Project Director, Public Health Engineering Directorate, Govt. of West Bengal	3.5100	2019
43	2019-2020	Civil	Ambarish Ghosh	Transtonnelstroy - Afcons Joint Venture	13.4520	2019

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
44	2019-2020	Civil	Soumya Bhattacharjya	Comtel Consultants & Infraprojects Pvt. Ltd.	2.9500	2019
45	2019-2020	Civil	Tapash Kumar Roy	Kolkata Port Trust	1.8880	2019
46	2019-2020	Civil	Sujit Kumar Dalui, Soumya Bhattacharjya	Ninjas Consultancy & Services	0.5900	2019
47	2019-2020	Civil	Sujit Kumar Dalui, Soumya Bhattacharjya	Ninjas Consultancy & Services	1.1800	2019
48	2019-2020	Civil	Ujjwal Saha	M.C. Ghosh & Associates	4.7200	2019
49	2019-2020	Civil	Kalyan Kumar Chattopadhyay	West Bengal Medical Services Corporation Limited	10.6200	2019
50	2019-2020	Civil	Tapash Kumar Roy	Bhawani Pipes and Tanks	1.7700	2019
51	2019-2020	Civil	Ambarish Ghosh	Mackintosh Burn Limited	0.9440	2019
52	2019-2020	Civil	Ambarish Ghosh	Mackintosh Burn Limited	30.9750	2019
53	2019-2020	Civil	Ambarish Ghosh	Eastern Syndicate	0.8850	2016
54	2019-2020	Civil	Soumya Bhattacharjya	Amal Dutta Roy, 204/1A, Linton Street, Kolkata - 700014	2.0650	2019
55	2019-2020	Earth Science	B.P. Mukhopadhyay	C.E. Testing Company Pvt. Ltd.	1.5340	2019
56	2019-2020	Earth Science	Ananya Mukhopadhyay	C.E. Testing Company Pvt. Ltd.	2.4544	2019
57	2019-20	Met. & Mat.	Sukumar Kundu	Rashmi Metaliks Limited	2.0000	2019
58	2018-2019	Met. & Mat.	Sukumar Kundu	Metal & Steel Factory	6.7260	2018
59	2019-2020	Mining	Prabir Kumar Paul	South Eastern Coalfields Limited	12.9800	2019
60	2019-2020	Mining	Pratik Dutta	South Eastern Coalfields Limited	12.3900	2019
61	2019-2020	Mining	Sudipta Mukhopadhyay	South Eastern Coalfields Limited	29.1908	2019
62	2019-2020	Mining	N.C.Dey	The West Bengal Power Development Corporation Ltd.	1.5140	2020
63	2019-2020	Mining	Sudipta Mukhopadhyay	Bharat Cooking Coal Ltd.	47.2850	2019
64	2019-2020	Mining	Sudipta Mukhopadhyay	Lanco Anpara Power Limited	8.2317	2019
65	2019-2020	Mining	Sudipta Mukhopadhyay	Bharat Cooking Coal Ltd.	29.1826	2019
66	2017-2018	Mining	Pratik Dutta	Western Coalfields Limited	9.9700	
67	2019-20	Mining	Sudipta Mukhopadhyay	South Eastern Coalfields Limited	47.3322	2019

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
68	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	4.1300	2019
69	2019-2020	Mining	Netai Chandra Dey	Vedanta Ltd.	0.3850	2019
70	2019-2020	Mining	Gopal Chandra Roy	Lignite Power Private Limited	12.0360	2019
71	2019-2020	Mining	Sudipta Mukhopadhyay	The Singareni Collieries Company Limited (SCCL)	48.3800	2019
72	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	3.9884	2019
73	2018-2019	Mining	Pratik Dutta	Western Coalfields Limited		
74	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	4.6610	2019
75	2019-2020	Mining	(1) Netai Chandra Dey & Pratik Dutta (2) Netai Chandra Dey & Sudipta Mukhopadhyay	Cuprum Bagrodia Limited	7.7880	2019
76	2019-2020	Mining	Pratik Dutta	Western Coalfields Limited	10.6200	2018
77	2019-2020	Mining	Gopal Chandra Roy	Eastern Coalfields Limited	0.9440	2019
78	2019-2020	Mining	Sudipta Mukhopadhyay	Hindalco Industries Ltd.	3.5400	2018
79	2019-2020	Mining	Netai Chandra Dey and Pratik Datta	Sunflag Iron & Steel Co Ltd.	1.4750	2019
80	2019-2020	Mining	Netai Chandra Dey and Sudipta Mukhopadhyay	Bharat Cooking Coal Ltd.	7.9650	2019
81	2019-2020	Mining	Netai Chandra Dey and Sudipta Mukhopadhyay	The West Bengal Power Development Corporation Ltd.	0.9000	2019
82	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	4.8970	2019

## 6.5 Table: List of Ongoing Consultancy Projects in 2019-20.

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
1	2019-2020	AE&AM	Amit Roy Chowdhury, Debasish Maitra, Ashok Moitra	Conveyor & Ropeway Services Pvt. Ltd.	2.5960	2019
2	2018-2019	Civil	Ambarish Ghosh	Transtonnelstroy Afcons J.V.	7.6700	2019
3	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	1.2390	2019
4	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	0.7080	2019
5	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	1.6520	2019
6	2019-2020	Civil	Ambarish Ghosh	Executive Engineer, Kolkata Division, Social Sector	1.7700	2019

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
7	2019-2020	Civil	Ambarish Ghosh	ESPACE	2.3600	2019
8	2019-2020	Civil	Ambarish Ghosh	KIC Resources Ltd	5.9000	2019
9	2019-2020	Civil	Ambarish Ghosh	Bridge and Roof Co. (India) Ltd.	1.1800	2019
10	2019-2020	Civil	Ambarish Ghosh	Muskan Highrise Pvt. Ltd.	2.0650	2019
11	2019-2020	Civil	Ambarish Ghosh	Jalan Builders Pvt. Ltd.	2.0650	2019
12	2019-2020	Civil	Ambarish Ghosh	Larsen & Toubro Limited	1.4160	2019
13	2019-2020	Civil	Ambarish Ghosh	UC Consultancy, Mankundu, Hooghly	1.2390	2019
14	2019-2020	Civil	Ambarish Ghosh	Traders and Engineers Private Ltd.	1.7700	2019
15	2019-2020	Civil	Ambarish Ghosh	Unimark Mirania Project LLP	7.0800	2019
16	2019-2020	Civil	Ambarish Ghosh	Transtonnelstroy - Afcons Joint Venture	13.4520	2019
17	2019-2020	Civil	Ambarish Ghosh	Mackintosh Burn Limited	0.9440	2019
18	2019-2020	Civil	Ambarish Ghosh	Mackintosh Burn Limited	30.9750	2019
19	2019-2020	Civil	Ambarish Ghosh	Eastern Syndicate	0.8850	2016
20	2019-2020	Civil	Ambarish Ghosh & Kalyan Kumar Chattopadhyay	Dream Home Developer	2.3600	2019
21	2019-2020	Civil	Ambarish Ghosh and Sujit Kumar Dalui	Mackintosh Burn Limited	1.1210	2019
22	2019-2020	Civil	Ambarish Ghosh and Sujit Kumar Dalui	Mackintosh Burn Limited	1.6520	2019
23	2019-2020	Civil	Aparna (Dey) Ghosh	Housing Directorate, Govt. of W.B.	0.7080	2019
24	2019-2020	Civil	Arun Kumar Chakraborty	Srijan Ecological Upliftment Pvt. Ltd.	1.1800	2019
25	2019-2020	Civil	Arun Kumar Chakraborty	Sinha & Associates	1.8861	2019
26	2019-2020	Civil	Debashis Moitra & Sujit Kumar Dolui	Damodar Ropeways & Infra Ltd.	1.4750	2019
27	2018-2019	Civil	Kalyan Kumar Bhar	BMT Consultants (India) Pvt. Ltd.	12.7322	2019
28	2019-2020	Civil	Kalyan Kumar Bhar	Chief Engineer & Project Director, Public Health Engineering Directorate, Govt. of West Bengal	23.0100	2019

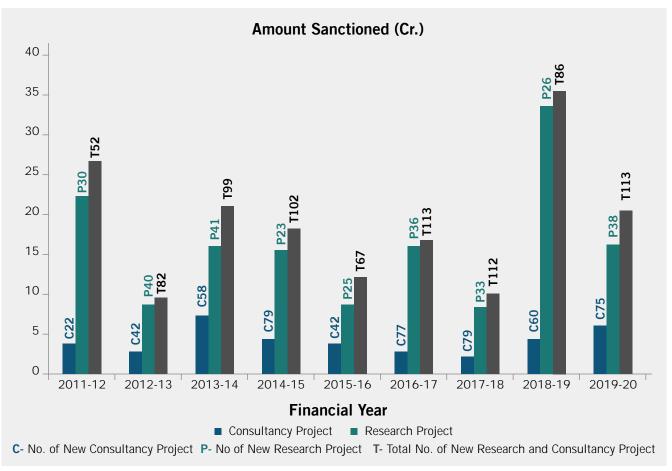
SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
29	2017-2018	Civil	Kalyan Kumar Chattopadhyay	West Bengal Medical Services Corporation Ltd., Govt. of West Bengal	132.6320	2017
30	2018-2019	Civil	Kalyan Kumar Chattopadhyay	West Bengal Medical Services Corporation Limited	10.9504	2017
31	2019-2020	Civil	Kalyan Kumar Chattopadhyay	West Bengal Medical Services Corporation Limited	10.6200	2019
32	2019-2020	Civil	Kalyan Kumar Chattopadhyay and Sujit Kumar Dalui	Effluent & Watertreatment Engineers (P) Ltd.	0.8850	2019
33	2019-2020	Civil	Prasanta Chakraborty	Hindustan Steelworks Construction Limited	1.1800	2019
34	2018-2019	Civil	Soumya Bhattacharjya	Kolkata Municipal Corporation, Town Planning & Development Department	4.9000	2019
35	2019-2020	Civil	Soumya Bhattacharjya	Progressive Construction Co.	1.1800	2020
36	2019-2020	Civil	Soumya Bhattacharjya	Progressive Construction Co.	2.3600	2020
37	2019-2020	Civil	Soumya Bhattacharjya	Progressive Construction Co.	1.1800	2019
38	2019-2020	Civil	Soumya Bhattacharjya	Porel Dass Water & Effluent Control Pvt. Ltd.	3.5400	2019
39	2019-2020	Civil	Soumya Bhattacharjya	Sudarshan Sengupta & Sons	1.1800	2019
40	2019-2020	Civil	Soumya Bhattacharjya	Sudarshan Sengupta & Sons	0.7080	2019
41	2019-2020	Civil	Soumya Bhattacharjya	West Bengal Housing Infrastructure Development Corporation Ltd.	1.1800	2019
42	2019-2020	Civil	Soumya Bhattacharjya	Comtel Consultants & Infraprojects Pvt. Ltd.	2.9500	2019
43	2019-2020	Civil	Soumya Bhattacharjya	Amal Dutta Roy, 204/1A, Linton Street, Kolkata - 700014	2.0650	2019
44	2019-2020	Civil	Subrata Chakraborty	ABCI Infrastructures Pvt. Ltd.	2.1240	2019
45	2019-2020	Civil	Subrata Chakraborty	Office of the Superintending Engineer, Kolkata Health Circle, P.W.Dte., Govt. of West Bengal	1.1800	2019
46	2019-2020	Civil	Subrata Chakraborty	Mani Square Ltd.	10.3840	2019
47	2019-2020	Civil	Sudip Kumar Roy	Consumer Unity & Trust Society	1.1800	2019

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
48	2017-2018	Civil	Sudip Kumar Roy & Sandip Chakraborty	RITES Ltd.	3.4500	2016
49	2019-2020	Civil	Sudip Kumar Roy, Ambarish Ghosh, Sandip Chakraborty & Sujit Kumar Dalui	Ram Kripal Singh Construction Pvt. Ltd.	14.1600	2019
50	2019-2020	Civil	Sujit Kumar Dalui & Ambarish Ghosh	Mackintosh Burn Limited	2.3600	2019
51	2019-2020	Civil	Sujit Kumar Dalui, Soumya Bhattacharjya	Ninjas Consultancy & Services	0.5900	2019
52	2019-2020	Civil	Sujit Kumar Dalui, Soumya Bhattacharjya	Ninjas Consultancy & Services	1.1800	2019
53	2019-2020	Civil	Tapash Kumar Roy	Bharat Petroleum Corporation Limited	1.7700	2019
54	2019-2020	Civil	Tapash Kumar Roy	Bharat Petroleum Corporation Limited	1.7700	2019
55	2019-2020	Civil	Tapash Kumar Roy	Kolkata Port Trust	5.9000	2019
56	2019-2020	Civil	Tapash Kumar Roy	West Bengal Housing Board	2.1240	2019
57	2019-2020	Civil	Tapash Kumar Roy	Kolkata Port Trust	1.8880	2019
58	2019-2020	Civil	Tapash Kumar Roy	Bhawani Pipes and Tanks	1.7700	2019
59	2019-2020	Civil	Ujjwal Saha	M.C. Ghosh & Associates	4.7200	2019
60	2019-2020	Earth Science	B.P. Mukhopadhyay	C.E. Testing Company Pvt. Ltd.	1.5340	2019
61	2019-2020	Earth Science	Ananya Mukhopadhyay	C.E. Testing Company Pvt. Ltd.	2.4544	2019
62	2017-2018	Electrical	Jagadish Pal	West Bengal Medical Services Corporation Ltd., Govt. of West Bengal	24.0000	2017
63	2017-2018	HRM	Manas Kumar Sanyal	RITES Ltd.	4.0250	2016
64	2019-20	Met. & Mat.	Sukumar Kundu	Rashmi Metaliks Limited	2.0000	2019
65	2018-2019	Met. & Mat.	Sukumar Kundu	Metal & Steel Factory	6.7260	2018
66	2019-2020	Mining	Gopal Chandra Roy	Lignite Power Private Limited	12.0360	2019
67	2019-2020	Mining	Gopal Chandra Roy	Eastern Coalfields Limited	0.9440	2019
68	2017-2018	Mining	Netai Chandra Dey	Eastern Coalfields Limited (ECL)	0.0850	2017
69	2018-2019	Mining	Netai Chandra Dey	Coal India Limited	2.5960	2018

SI. No.	Financial Year	Dept.	Name of Principal Investigator	Funding Agency	Total Amount Sanctioned (Rs. in lakh)	Year of Sanction
70	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	4.1300	2019
71	2019-2020	Mining	Netai Chandra Dey	Vedanta Ltd.	0.3835	2019
72	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	3.9884	2019
73	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	4.6610	2019
74	2019-2020	Mining	Netai Chandra Dey	Eastern Coalfields Limited	4.8970	2019
75	2019-2020	Mining	<ul> <li>(1) Netai Chandra Dey &amp;</li> <li>Pratik Dutta</li> <li>(2) Netai Chandra Dey &amp;</li> <li>Sudipta Mukhopadhyay</li> </ul>	Cuprum Bagrodia Limited	7.7880	2019
76	2019-2020	Mining	Netai Chandra Dey and Pratik Datta	Sunflag Iron & Steel Co Ltd.	1.4750	2019
77	2019-2020	Mining	Netai Chandra Dey and Sudipta Mukhopadhyay	Bharat Cooking Coal Ltd.	7.9650	2019
78	2019-2020	Mining	Netai Chandra Dey and Sudipta Mukhopadhyay	The West Bengal Power Development Corporation Ltd.	0.9000	2019
79	2017-2018	Mining	Pratik Dutta	Western Coalfields Limited	9.9700	2017
80	2018-2019	Mining	Pratik Dutta	Western Coalfields Limited	-	
81	2019-2020	Mining	Pratik Dutta	Western Coalfields Limited	10.6200	2018
82	2019-2020	Mining	Sudipta Mukhopadhyay	Fund received from various funding agencies for different consultacy services	-	2019
83	2019-2020	Mining	Sudipta Mukhopadhyay	Lanco Anpara Power Limited	8.2317	2019
84	2019-2020	Mining	Sudipta Mukhopadhyay	Bharat Cooking Coal Ltd.	29.1826	2019
85	2019-20	Mining	Sudipta Mukhopadhyay	South Eastern Coalfields Limited	47.3322	2019
86	2019-2020	Mining	Sudipta Mukhopadhyay	The Singareni Collieries Company Limited (SCCL)	48.3800	2019

#### 6.6 Table: Research Account statement for the last three financial years

SI. No.	Financial Year	Fun	d Received (Rs.	)	Fund Transferr Overhea		Expenditure (Rs.)		
		R&D Project	Consultancy	Testing Fees	R&D Project	Consultancy	Manpower	Equipment	
1.	2019-20	11,52,76,043	3,09,25,269	1,93,049	53,36,046	67,20,151	2,82,11,048	6,22,45,776	
2.	2018-19	28,85,49,919	4,35,58,662	8,32,978	42,62,008	88,48,608	3,02,97,848	2,84,61,189	
3.	2017-18	7,89,46,712	3,28,19,966	2,82,500	56,78,048	87,60,343	3,09,16,391	3,38,72,558	



The above chart shows the no. of new sponsored research and consultancy projects sanctioned during the period of FY 2011-12 to FY 2019-20.

## **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 2019-20, the Institute signed a MOU with CSIR-CGCRI, Kolkata on research and academic joint activities.



MoU signed with CSIR-CGCRI on 26th July 2019.

## 6.6 Research Programs with Foreign Collaborating Institute

SPARC Projects	Foreign Collaborating Institute
SPARC – 01:	University of Ghent, Belgium
SPARC – 02	National Tsing Hua University, Taiwan
SPARC – 03	Purdue University, USA
SPARC – 04	Duke University, USA
SPARC – 05	Hirosima University, Japan
SPARC – 06	Massachusetts Institute of Technology (MIT), USA and University of Illinois at Urbana-Champaign.
SPARC – 07	University of Turku, Finland

i. Scheme for Promotion of Academic and Research Collaboration (SPARC):

IIEST Shibpur 116 Annual Report 2019\_20

- ii. Newton International Fellowship Alumni 2019 by The Royal society, London, UK Foreign Collaborating Institute University of Cambridge, UK.
- iii. Newton Bhabha Ph.D. Placement Program (2019-20) by DBT, Gol and British Council, UK Foreign Host Institute: Loughborough University, UK.
- iv. A collaborative research hub being executed by a research consortium led by New Castle University, UK in partnership with 24 institutions across the globe including IIEST, Shibpur with financial support of more than Rs.2 Cr. from Research Council UK (RCUK) under the Global Challenges Research Fund for the project "GCRF Living Deltas Hub" with an objective to tackle complex challenges of delta degradation and loss of resilience through a trans-disciplinary framework by capturing changing delta trajectories, quantify climate induced threats and develop solutions to realize sustainable development goals (SDGs) and address the challenges of the delta regions of Ganges-Brahamaputra-Meghna.





# Students Amenities and Activities

## **Student's 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 the 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 those 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 participate 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 practising sport like cricket, football, etc. A newly constructed Basketball Ground is a new attraction. A swimming pool is open 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 have recently been added to the facilities. Activities relating to Sports and Games are overseen by the Institute Sports Board.

## 7.5. 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.

## 7.6. 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, and 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 Institute campus.

In the last session, the NSS unit of the Institute have undertaken number of social activities with the volunteers of the Institute.

- Displayed hoarding, banner at prominent places in the slum areas regarding Health, Nutrition, Hygiene, Sanitation, ill-effects of drug & smoking, child labour, early marriage etc. for focusing public attention and awareness.
- Numbers of dustbins have been installed in different parts of the campus to keep the campus clean under "SWACHH BHARAT ABHYAN".
- Continuing self defence activities for female students. A total of 20 girls were actively engaged in this programme.
- Organized one Women's Self Defence workshop in the campus.

#### 7.7 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.

As of now, the Institute Sports Board registered 40 students cadet in the 41 Bengal Bn NCC. We have supported the unit to conduct Firing activities twice in the Institute Firing Range. But due to unavoidable circumstances, no cadets of this institute took part in the said Small Arm firing activities. In the coming year, we are planning to register more than 40 students as NCC cadets to the unit. Also this year, we are going to organize an additional programme on advantages of NCC in future endeavour of the Engineers and technocrats, having engineering degrees. They could get ample scope to crack SSB examination in the Defence Services as Engineers.

#### 7.8. Games and Sports Activities organised

#### **Table 7.1 Institutional Competitions**

SI. No.	Event	Date			
1.	Inter Department Knock-out Football Tournament for 1st Semester B.Tech/ B.Arch Boys	14.10.2019	17.10.2019		
2.	Inter Department Football Tournament for Boys	21.10.2019	08.11.2019		
3.	Inter Hostel table Tennis championship for Boys	20.01.2020	29.01.2020		
4.	Inter Hostel Badminton Tournament for Boys	16.01.2020	27.01.2020		
5.	Individual Badminton Championship for Girls	16.01.2020	27.01.2020		
6.	Inter year Cricket Tournament for Boys	30.03.2019	06.04.2019		
7.	Inter Year Basket Tournament for Boys	06.01.2020	11.01.2020		
8	Inter Hostel Basketball Tournament for Girls	06.01.2020	11.01.2020		
9.	Annual Athletic Meet: 2019-2020	19th February 2020			
10.	Inter year Volleyball Tournament for Boys	15.02.2020	18.02.2020		

#### Table 7.2 Off-Campus Competitions

SI. No.	Event	Organizer	Date		
1.	Chetan Devraj East Zone Inter Technical Cricket Tournament	BIT, Mesra, Ranchi	19.02.2020	23.02.2020	
2.	Inter NIT Sports Competition	MNIT, Jaipur	17.10.2019	20.10.2019	
3.	All Inter University Aquatics Championship for Girls	LPU, Jalandhar, Punjab	06.11.2019	08.11.2019	
4.	AGON Inter College Football Tournament at CNMC, Kolkata	CNMC, Kolkata	16.08.2019	19.08.2019	
5.	EZ Inter University Football (M) Tournament	Ravenshaw University, Cuttack, Odisha	02.11.2019	08.11.2019	

#### 7.9. Students' Senate

In order to create an environment conductive 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.



#### **Students' Societies**

Various students' clubs/societies are active; the societies provide platforms to students to pursue extra-curricular activities and hobbies. The Students' Societies active in 2019-20 include:

1) Camera Buff	The Cine Club
2) Catharsis	The Photographic Society
3) Code IIEST	The Coding Club
4) Debsoc	The Debating Society
5) Euphony	The Music Club
6) Les Thespiens	The Drama Club
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.
12) Entrepreneurship Development Cell	The Society for Enterprenurship Development and Innovation
13) Society of Games and Sports	The Society for Games and Sports activities
14) Club on Engineering Safety (ENSAFE)	The Club for addressing Engineering Safety
15) Vivekananda Youth Circle	The Club for promoting eternal ideals preached by Swami Vivekananda
16) Animal Welfare Club	The Club for taking care of stray animals staying and moving inside the
	institute campus

At the 'Students' Centre for Creative Expression', the students practise 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 inter-collegiate techno-management festival and the REBECA, the Annual Students' Social are the inter-collegiate events that cause reverberations in the campus through hundreds of foot-falls.

#### LitSoc

LitSOC, the Literary Society of IIEST, Shibpur was established as a sanctuary, a safe haven for all its students, where everyone is free to express themselves. LitSoc aims to provide a platform, not to just creative writers and avid readers, but to all the like-minded individuals to come together and learn the art of expression. The very root of the Society is in creating an atmosphere of creativity and out-of-the-box thinking through countless successful events.



#### **Reflexo-Beta**

The dance club is a hub for all the dancers in the campus to dance out their motivations. The club has members starting from freshers to research scholars - who practise a wide range of dance form from Indian classicals like Kathak, Bharatnatyam, Kathakali to western forms like hip hop, dubsteps, contemporary, Bollywood and several other dance forms. The club is focused in the art and is interested in promoting message through concept expression forms and its compositions.

#### Camera Buff

Camerabuff is the official film club of IIEST, Shibpur. In this club, the knowledge and ideas of different aspects of cinema are reviewed. Apart from that the knowledge about the technicalities of a cinema is also imparted to the students of this college. As a whole, students enjoy every bit of what thet do and what they watch for creating a good bond and togetherness with the today's society.



#### Les Thespians

Les Thespians, the official dramatics society of IIEST, Shibpur was founded back in 2009. It has produced many successful and tremendously praised theatrical productions. The society helps the theatre enthusiasts of the Institute to build a common platform. Les Thespians produces many home production dramas throughout the year and invites professional drama groups as well to perform on various occasions.

#### Euphony

Music: the word that brings to our memory the reverberations of our favourite songs and artists. It is much more than a few vocal melodies or instrumental rhythms. It is an art, it is an emotional expression. And at Euphony, we respect, love, practice, and spread the joy of this art form. It isn't just a place for guitarists, drummers, or singers; it consists of an assortment of people who love music, who find passion in music and enjoy it. From folk songs to electronic compositions, we house a multitude of music styles. So, while our namesake may be synonymous to pleasing sounds, the music society, at the end of the day, also becomes a music learning school, a family, a home that nurtures talents of young musicians and helps them flourish.

#### **Quizmanic BEings**

Quizmaniac BEings started in 2008 with regular sessions being conducted in N-235 Classroom and since then it has grown in size. We aim to change the way people think about quizzing and shed their redundant ideas about it as its questions have come to privilege not just memory but also breadth, deduction and lateral thinking. This new shape was a response to the rise of the internet. By conducting regular open quiz sessions in college create a conducive atmosphere for quizzing. The biggest trick to succeed in a quiz isn't just knowledge or memorizing facts but the inherent curiosity to find out The Why.

#### DebSoc

The aim of the society is to serve as a platform for avid orators and help build a debating culture on campus. The activities hone speaking skills, instil confidence and helps develop public speaking abilities.



#### Robodarshan

Robodarshan is a club founded in 2009 to invoke interest in students about robotics. Robodarshan's motto is 'there is nothing a bot can't do. The primary activities of Robodarshan includes conducting lecture sessions on robotics, the lecture sessions are followed by handson sessions, where Robodarshan mentors in making a robot for specific tasks. Robodarshan conducts DIY, exclusively for the first-year students of IIEST, Shibpur and a plethora of fun robotics competitions, which goes by the name Automaton, a part of Instruo – the technomanagement fest of IIEST, Shibpur. Robodarshan also collaborates with other departments of IIEST, Shibpur to organise Robotics events.



#### **Entrepreneurship Development Cell**

Entrepreneurship Development Cell, IIEST, Shibpur (EDC IIESTS) was set up in the year 2009 under the AICTE initiative and is working under the guidance of the Department of Human Resources Management, IIEST, Shibpur in coordination with NRDC-IIEST IFC, TCGTBI and now with IIC IIESTS. With the sole aim of enhancing the standard of innovations around the region of IIEST, Shibpur, Entrepreneurship Development Cell focuses on fostering the corporate culture onto the pool of IIEST, Shibpur students through several external activities like raising the awareness on the field of Medium, Small and Medium Enterprises with the involvement of the students from IIEST & Non-IIEST and faculty under a single pool of working community.



#### CodeIIEST

In this age of increasing automation, programming is not limited to only computer science and related fields. Every competent engineer needs to know how to program. This makes Code IIEST, Shibpur one of the most important clubs in the institute. As of now it has four different chapters - Competitive Programming, Machine Learning, Security, and Open Source. A platform is created, which allows students to gain assistance and mentorship to come together to learn and solve algorithmic challenges, participate in various contests all over the globe, develop web and system applications and solve intriguing problems enhancing their coding ability. Aim of the club is to propagate the enthusiasm for coding in the Institute and especially amongst freshmen. The secret of getting ahead is getting started and this club provides every student with the right start.

#### Catharsis

It is a family of engineers, who found their solace in photography, their passion, their expression, their catharsis. They say, there are things that nobody would see, had a photographer not captured them, and at Catharsis, the young shutterbugs try to freeze those moments with their shutters and bring out the greater truths of life. While Catharsis is now decade-old club, this student's society began its journey as BECPhos – B E College Photographic Society back in 1971. The club welcomes all photography enthusiasts among college students, beginners and old-timers alike, to explore this field of art and bring out their creative gifts.

#### Society of Games and Sports

Since the inception of this glorious Institute, the two major wonders of the campus is the Oval and Lords Ground and the Gymnasium formed in the later years. Fostering the sporting culture, this society has been serving the Institute right from its very establishment. Firstly, known as the Athletic Club of IIEST, Shibpur had a unique structure which got renamed as the Sports Board of IIEST, Shibpur. It boasts of its age-old traditions and never ceases to stop excelling.

#### Club on Engineering Safety (ENSAFE)

The ENSAFE is said to be dedicated to address the burning issues of safety across various engineering domains and spread awareness of the same in the society.

#### **Animal Welfare Club**

The Animal Welfare Club is said to take care of stray animals staying and moving inside the institute campus systematically and efficiently as a self-less job.

#### Vivekananda Youth Circle

The Vivekananda Youth Circle is said to provide excellent opportunity to those students of the institute, who are striving to work, think and build their characters on the eternal ideals preached by Swami Vivekananda by reading and organizing appropriate literature.

## SCAGE (Society for Creative Arts and Green Environment)

SCAGE is a platform where students get to express themselves in all forms of Art domains. The club intends to nurture Creativity within oneself, while keeping in mind one's responsibility towards conserving Green Environment.







Odysky of B.E. College Through A Glorious Path. (1856 - 2013) WUH VENERATION TO THE GREAT PAST AND WARM WISHES FOR A GREAT FRUIT (RE OF OUR REVERTED ALMA STATES D. T., COLLI GE 1974 ALL NO

## Training and Placement

## 8.1 The Mandate

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

- Job Placements of the 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
- Career Counselling

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

#### 8.2 Some of the related Industry-Connect and allied events facilitated by HRM Department during 2019–20 where IIESTS students took part:

- Career Opportunity Program organised by TCS
- Engagement with Harvard Business Review (HBR) offering series of free subscriptions and career development guidelines
- Tata Steel Women of Mettle
- Tech Diversity Hiring event organised by Amazon
- Adobe CodeVita International Women's Contest
- Google Kickstart : The Way to Placement Process
- Venkat Panchapashan Memorial Scholarship Program organised by Google
- Sharing the Experience- Program with recently passed out students
- Self assessment & preparations a session by Cognizan
- Session with Department of Atomic Energy receiving a brief on Career Opportunities in Atomic Energy.
- American Express Hiring Challenge
- Self Preparation Program by FirstNaukri.Com
- Robert Bosch Gmbh Code Gladiators
- Anveshan 2020 Program by Analog Devices

- RPA Hackathon organised by UiPath & TechGig for Code Gladiators
- Ericsson 2019 Student Contest
- TCS Codevita Contest
- Cognizant MasterCode Coding Contest
- Data Innovation Event by Western Digital
- VIGYAN Contest organised by Daimler India
- Cognizant Ace Learner Contest
- IBM Hack Challenge
- Digital Marketing Project organised by Shiksha & Learn
- A Platform That Identifies The Brightest Engineering Minds, organised by Economic Times
- NEI Factory Contest organised by NBC Bearing
- Infosys Hack-With-Infy Challenge

The details of the UG and PG placements for the last 3 years with department wise break up is furnished in Table 8.1 and Table 8.2, respectively. Table 8.3 records the details of the placement of the students from schools/centres at the PG level. Table 8.4 documents the vacational training data for the last 3 years.

#### 8.3 Placement Statistics for 2019 Pass-Out Batch

The details of the UG and PG placements for the last 3 years with department wise break up is furnished in Table A and Table B, respectively. Table C records the details of the placement of the students from schools/centres at the PG level for the last 3 years.

## Table 8.1: UG Placement

Year	Department	CST	ETC	EE	IT	ME	CE	MET	MIN	AERO	ARCH	Total
2019-20	Total No. of	88	49	63	78	45	54	16	20	14	0	427
2018-19		82	43	61	81	61	59	25	30	20	0	462
2017-18	Offers	58	31	44	61	52	44	16	16	12	0	334

## Table 8.2: PG Placement (Departments) (M.Tech & DualDegree)

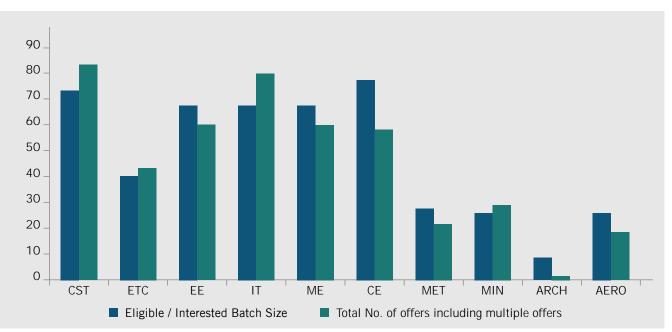
Year	Department	CST	ETC	EE	ICE	ME	CE	MET	MIN	Appl Mech	Phy	Chem	Math	Earth Sc.	Total
2019-20		17	16	9	2	8	11	1	2	0	1	0	0	0	67
2018-19	Total No. of Offers for PG	5	14	3	14	9	7	1	0	1	0	0	3	2	59
2017-18		7	4	3	6	2	4	0	0	1	0	0	4	3	34

#### Table 8.3: PG Placement (School/Centre)

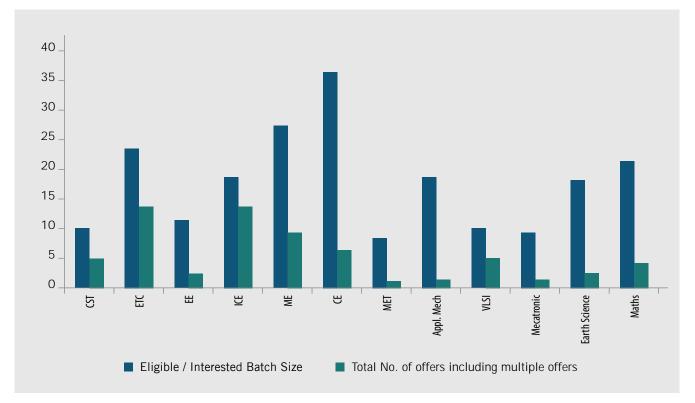
Year	Department	Bio- Medical	VLSI	Mat Science	Mechatronics	Safety & Occupational Health	REST	Management Science	FPNS	Total
2019-20	Total No. of	0	2	1	0	2	1	17	0	23
2018-19	Offers for PG	0	6	0	1	0	0	0	0	7
2017-18		0	15	1	2	0	1	0	0	19

Graphical presentations of Total Offers made vis-a-vis Eligible Batch-Size of different disciplines, separately for UG and PG, are given below alongwith a list of recruiters for 2019 Pass-out students.

### Eligible UG Batch Size vs. Total Offers made through Institutional Placement Process for 2019 pass-out batch



### Eligible PG Batch Size vs. Total Offers made through Institutional Placement Process for 2019 pass-out batch



## 8.4 Recruiters of 2019 Pass-Out Batch

SI. No.	Recruiters	SI. No.	Recruiters
1	Aakash Institute	13	Capgemini
2	Abzooba Inc.	14	CESC Ltd.
3	Acxiom Consulting Ltd.	15	CGI Information Systems
4	Aditya Birla Group	16	Cirel Systems Pvt. Ltd.
5	Adobe Inc.	17	Codenation Solutions LLP
6	AECOM	18	Cognizant Technology Solutions
7	Appnomic (Obopay)	19	Daimler Commercial Vehicles Ltd
8	BABTECH Consulting Engineering	20	DCG AILabs
9	Bajaj Auto Ltd.	21	Denso Haryana Pvt. Ltd.
10	Buyer Foresight	22	Development Consultants Private Limited
11	Byju's	23	DMT Consulting Ltd.
12	Cadence Design Systems	24	DX Corr Ltd.

SI. No.	Recruiters	SI. No.	Recruit
25	Dynamic Digital Technologies	52	Price W
26	ELEATION	53	S. K. S
27	Electrosteel Casting Ltd.	54	Saint G
28	Elegant Marine Services	55	Samsur
29	Envestnet Yodlee	56	Sasken
30	GainwellCommosales Pvt. Ltd.	57	Shapoo
31	Haldia Petrochemicals Ltd.	58	Silfra T
32	Hindusthan Unilever Ltd.	59	Simple
33	Hyland Software Ltd.	60	SMS In
34	Hyundai Motors India Ltd.	61	Subex I
35	Infosys Ltd.	62	Tata Bh
36	Institute of Engineering and Management	63	Tata Blu
37	IPM Commodities Pvt. Ltd.	64	Tata Co
38	ITD Cementation India Ltd.	65	Tata Po
39	Jacobs	66	Tata Pro
40	Jindal Stainless Steel Ltd.	67	Tata Ste
41	JSW Steel Ltd.	68	Tega In
42	Larsen &Tubro Ltd.	69	Texas Ir
43	Maheswari mining Pvt. Ltd.	70	Vedanta
44	Maruti Suzuki India Ltd.	71	Vikram
45	Mentor Graphics	72	Whatfix
46	Mentor Graphics	73	Wood G
47	Microsoft IDC	74	WSP In
48	MN Dastur & Co. Ltd.	75	Xelpmo
49	Netcracker Technologies	76	Zifo R 8
50	Nineleap Technologies Ltd.	77	ZS Asso
51	Nissan Digital	78	Zycus
			,

SI. No.	Recruiters
52	Price Waterhouse Coopers
53	S. K. Samanta & Co. Ltd.
54	Saint Gobain
55	Samsung R&D
56	Sasken Technologies
57	Shapoorji & Pallonji Co. Ltd.
58	Silfra Technologies
59	Simplex Infrastractures Ltd.
60	SMS India Ltd
61	Subex Limited
62	Tata Bhusan Steel Ltd.
63	Tata Bluescope Steel Ltd.
64	Tata Consultancy Services
65	Tata Power Ltd.
66	Tata Projects Ltd.
67	Tata Steel Ltd.
68	Tega Industries Ltd.
69	Texas Instruments
70	Vedanta Limited
71	Vikram Solar Ltd.
72	Whatfix
73	Wood Group (Foster Wheeler)
74	WSP India Ltd.
75	Xelpmoc Designs
76	Zifo R & D Solutions
77	ZS Associates
78	Zycus

Besides, final Placements, many students, predominantly from Pre-final Year, also had the opportunity for Vacational Training (VT) or Summer Internship Programme in reputed industrial / academic institutions - some of which are also maturing to Pre-Placement Offers.

## 8.5 Vacational Training

Besides final Placements, many students, predominantly from Pre-final Year, also had the opportunity for Vacational Training (VT) or Summer Internship Programme in reputed industrial / academic institutions during 2019-20, some of which are also maturing to Pre-Placement Offers.

Relevant information regarding such Vacational Training are given below.

#### **Vacational Training / Internship**

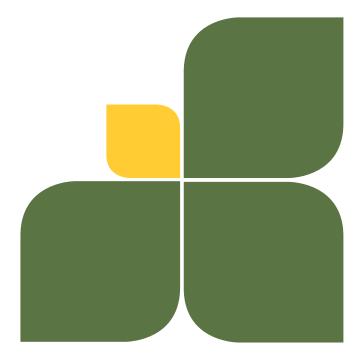
Year	Training (Year wise)			
2019-20		74		
2018-19	No. of companies offering Vacational Training	61		
2017-18		55		

#### List of Companies / Institutions Offering VT / Internship Opportunities during 2019

SI. No.	Company / Institution	SI. No.	Company / Institution
1	Bhaba Atomic Research Centre	21	Dynamic Digital Technology
2	Bharat Electronics Ltd.	22	Eastern Coalfield
3	Bharat Heavy Electricals Ltd.	23	Envestnet Yodlee
4	Bharat Sanchar Nigam Ltd.	24	Gainwell Commosales Pvt.Ltd.
5	Bhilai Steel Plant	25	Garden Reach Shipbuilders & Engineers Ltd.
6	Bihar State Power Holding Co.Ltd.	26	Gas Authority of India
7	Bihar State Transmission Co. Ltd.	27	Haldia Development Authority
8	Bridge & Roof Co. India Ltd.	28	Heavy Engineering Corpn. Ltd.
9	CESC Ltd.	29	Hindusthan Aeronautics Ltd.
10	CAIR, Bangalore	30	Hyland Software
11	Chittaranjan Locomotive Works	31	IDRBT, Hyderabad
12	Codenation	32	IISC, Bangalore
13	Crompton Greaves Limited	33	IIT, BHU
14	CSIR	34	IIT, Delhi
15	CTPP, Chhapra	35	IIT Bhubaneshwar
16	Daikin Airconditioning (I) Ltd.	36	IIT, Roorkee
17	Damodar Valley Corporation	37	IIT, Madras
18	Diesel Locomotives, Varanashi	38	IOCL
19	DRDO	39	ISRO
20	Durgapur Projects Limited	40	Jharkhand Urja Vikash Nigam

SI. No.	Company / Institution
41	Kanti Thermal Power Plant, Muzaffarpur
42	Larsen & Tubro Ltd.
43	M. N. Dastur
44	Marathon Electeric Motor Ltd.
45	Mejia Thermal Power
46	Micro-Soft
47	Natural Thermal Power Corporation
48	Neo Teletronix Pvt. Ltd.
49	NTPC
50	ONGC
51	Ordance Factory
52	PWC
53	POSCO Kolkata
54	Power System Operation Corporation Ltd.
55	Saint Gobain India
56	SBI
57	Semi-conductor Laboratory

SI. No.	Company / Institution
58	Siemens Limited
59	Silfra Technology Ltd.
60	Solid State Physics, Delhi
61	South Eastern Coalfield, Bilaspur
62	Tafe Motors & Tractors
63	Tata Steel
64	TCS
65	Tega Industries Ltd.
66	Texas Instruments
67	TISCO
68	UP Power Corporation
69	Variable Energy Cyclotron Centre
70	Vedanta Crain Oil & Gas
71	Vikram Solar Limited
72	West Bengal Power Development Co. Ltd.
73	West Bengal State Electricity Distribution Co. Ltd.
74	Xelpmoc Design & Technology







# Campus Facilities

## 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 are connected to the Ganges and thus enjoy tide and wane of the river. 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.





#### 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 fourstoried building covering about 22,000 square metre area that accommodates most of the engineering departments, The Training and Placement Cell and the Academic Section.

### 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 Director, 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.



## 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.



## 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.

#### 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.

#### Campus Services <u>and Man</u>agement

- 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 Central Public Works Department (Maintenance) for maintenance of all buildings and roads
- The Central Public Works Department (Electrical) to look after the maintenance of electrical services
- Public Health Engineering Department for maintenance of water supply and sewage disposal

## 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)
- A. K. Seal Hall (Hostel 9)
- Hostel 10
- Hostel 11
- Hostel 13 exclusively for PG and Research Scholars
- Hostel 14
- Hostel 15
- Hostel 16





### 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

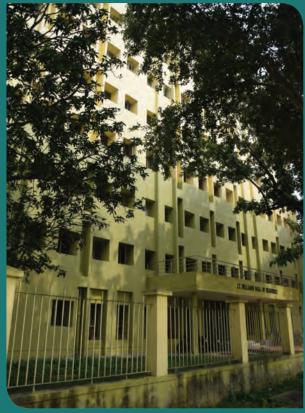


## There are 3 girls' hostels (single and multi-seated):

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



Sister Nivedita Hall of Residence



Lt. William Hall for female PG & Research Scholars

## **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 well-maintained and is used for Physical Training, Sports Meets, and inter and intra-college Cricket and Football matches.



#### **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.

## <u>Alumni Swimm</u>ing Pool

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



#### **Gymnasium**

The centruy 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

## **Students' Amenities Centre**

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

### Students' Centre for Creative Expressions

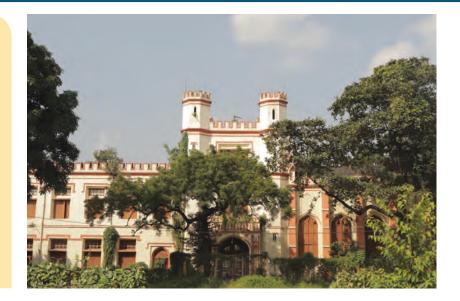
Slater Hall houses some of the clubs and societies of the institute, most notably the Music Club, the Debate Club, the Photography Club and the Innovation Centre.

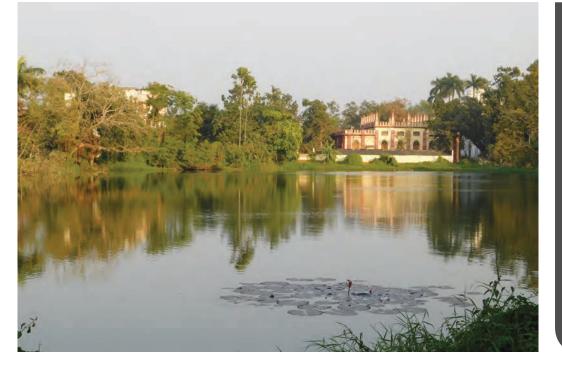
### Netaji Bhavan

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.

#### 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 - Prasanta Neer (BABTECH Meditation Hall) – was designed, funded, and constructed in the year 2013 by an alumnus of 1974 batch.





## 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.

## **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.







#### **Clock Tower**

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 Cemetery

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

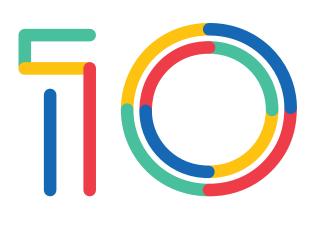


## Odyssey of the Institute

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.







# Other Notable Activities

## Other Notable Activities

#### **DST-IIEST Solar PV Hub**

## R&D highlights during April 2019 - March 2020

Research and Development activities in the DST-IIEST Solar Hub are currently focussed on four thrust areas of Solar Photovoltaics Energy, viz (i) Development of industry compatible High Efficiency PERC solar Cells (ii) Development of thin Crystalline Silicon solar cells (iii) Improvement of Solar PV Module Performance and Reliability under Indian climatic conditions (iv) Self cleaning of Solar PV Modules. Besides the R&D activities the solar Hub has the mandate of establishment of active interaction with the industries and institutes working in the field of solar Photovoltaics.

In the first thrust area in depth investigation on Evolution of PERC from AI-BSF: Optimization Based on Root Cause Analysis has been carried out. Detailed theoretical modeling and analysis of solar cells based on PERC Architecture to identify the dominant loss mechanisms and provide a pathway towards achieving higher efficiency has been performed. Based on the analysis first cut PERC solar cells of efficiency around 19.6 % have been fabricated and characterized in the Hub without using the two essential equipment for PERC solar cell but using Al2O3 as passivation layer. This is a significant improvement of efficiency from the conventional industry standard AI-BSF solar cells of 18.5-18.8% efficiency. In the second thrust area exploratory research on thin silicon solar cells with plasmonics and nanostructured light trapping schemes have been carried out. Experimental optimization of DBR of the TiO2-SiO2 Layered structure has been performed.

In the third thrust area an industry compatible Environment Chamber for testing the thermal cycling, humidity freeze and damp heat testing tests of Solar PV Modules as per IEC And IS specifications has been established in the Hub. This facility would immensely help in design of accelerated lifetime testing of photovoltaic materials and modules for Indian climatic conditions. A comprehensive model has been developed for dry deposition processes and validated with the data of IIEST, Shibpur. Site survey and physical inspection of different plants of West Bengal has been done with an Industry partner, Dupont, India.

In the fourth Thrust area for Self- Cleaning Coatings for Solar Panels, recipe of Hydrophobic coatings have been developed using commercial spray gun yielding optical transmission of 90-91%, contact angle 75-120 degree, sliding angle 28-30 degree, hardness of 9H. A Glass based, Single Phase EDS fabricated using silver ink by Screen Printing-6 inch x 6 inch has been developed and demonstrated in collaboration with HHV, Bangalore, Flexible Electronics Centre, IIT Kanpur, and CNSE, Bangalore.

In another project being pursued at DST Solar PV Hub p-TOPCon solar cells have been fabricated with about 18.7% efficiency with commercial p-Si wafers.



Publications related to the research work done under the umbrella of Solar PV Hub are as furnished below:

Title of the Paper	Author Name	ame Journal Name		Issue No.	Year, Pages	
Application of Hybrid RGO-ITO Bilayer TCO on a-Si Solar Cell for Performance Enhancement	Nandi A, Mandal S, Ghosh S, Dhar S, Majumdar S, Saha H, Hossain S M		9	1	2019, 12-17	
Performance Enhancement of Solar Cell by Incorporating Bilayer RGO-ITO Smart Conducting Antireflection Coating	Nandi A, Dhar S, Majumdar S, Saha H, Hossain S M	Global Challenges	1800109	1-5	2019	
Potential of zinc oxide nanowhiskers as antireflection coating in crystalline silicon solar cell for cost effectiveness	Sharma J R, Banerjee P, Mitra S, Ghosh H, Bose S, Das G, Mukhopadhyay S,	Journal of Materials Science: Materials in Electronics	30	12	2019, 11017-11026	
Design Analysis of Heterojunction Solar Cells with Aligned AZO Nanorods Embedded in p-type Si wafer	Sharma J R, Das G, Roy A B, Bose S, Mukhopadhyay S	Silicon			2019, 1-12	
Application of N-doped ZnO Nanorods in Heterojunction Si Solar Cells	Sharma J R, Saha D, Roy A B, Das G, Patra S, Barua A K, Mukhopadhyay S	G, Patra S, Barua A Proceedings in		55	2019, 361-366	
Sacrificial Layer Assisted Front Tetured Glass Substrate with Improved Light Management in Thin Film Si Solar Cells	Bose S, Mandal S, Barua A K, Mukhopadhyay S	Journal of Materials Science-Materials In Electronics	30	3	2019, 2622-2629	
Innovative Utilization of Improved n-doped µc-SiOx: H Films to Amplify the Performance of Micromorph Solar Cells	Das G, Bose S, Mukhopadhyay S, Banerjee C, Barua A K	Silicon	11	1	2019, 487–493	
Performance and stability improvement of single junction a-si:h solar cell by interface engineering	Ahmad G, Das G, Roy J N	Journal of Materials Science: Materials in Electronics			2019	
Recombination Analysis of Tunnel Oxide Passivated Contact Solar Cell	Mitra S, Ghosh H, Saha H, Ghosh K	IEEE Transactions On Electron Devices	66	3	2019, 1368- 1376	
Optimal design and implementation of solar PV-wind- biogas-VRFB storage integrated smart hybrid microgrid for ensuring zero loss of power supply probability	Thatagata Sarkar, Ankur Bhattacharjee, Hiranmay Samanta, Konika Bhattacharya, Hiranmay Saha	Energy Conversion and Management	191		2019, 102- 118	
A Photoelectrochemical Supercapacitor based on a single BiVO4-RGO Bilayer Photocapacitive electrode	Anirban Roy, Pavel Majumdar, Pavel Sengupta, Suvodip Kundu, Shivkanya Shinde, Arkajyoti Jha, Krishnendu Pramanik, Hiranmay Saha	Electrochimica Acta	329		2019	

Title of the Paper	Author Name	Journal Name	Vol No.	Issue No.	Year, Pages
Comprehensive Modeling of Dust Accumulation on PV Modules Through Dry Deposition Processes	nulation on PV Modules Sengupta, H. Saha F		10	4	2020
Optically enhanced trap assisted hysteretic I-V characteristics of nanocrystalline silicon based p-i-n heterostructure	Sudipta Chakrabarty, Gourab Das, Mallar Ray, Syed Minhaz Hossain	Journal of Applied Physics	127		2020, 085708
Study of the properties of SiOx layers prepared by different techniques for rear side passivation in TOPCon solar cells	Nabin Chandra Mandal, Susmita Biswas, Shiladitya Acharya, Tamalika Panda, Sourav Sadhukhan, Jayasree Roy Sharma, Anupam Nandi, Sukanta Bose, Arindam Kole, Gourab Das, Santanu Maity, Partha Chaudhuri, Hiranmay Saha	Materials Science in Semiconductor Processing	119		2020, 105163
Evolution of PERC from AI-BSF: Optimization Based on Root Cause Analysis	Nabin Chandra Mandal, Shiladitya Acharya, Susmita Biswas, Tamalika Panda, Sourav Sadhukhan, Jayasree Roy Sharma, Sukanta Bose, Gourab Das, Arindam Kole, Anupam Nandi, Santanu Maity, Partha Chaudhuri, Hiranmay Saha, Subhendu Guha	Applied Physics A	126		2020, 569

#### Fight against COVID 2019

The world is undergoing a critical time; an unexpected pandemic has hit the humankind and is killing people in thousands. In these crucial times, ensuring few elementary precautions like social distancing and maintaining hygiene may save us from the precarious future. The sanitizers are essential element during this period of pandemic and its demand has become more than supply. This created overpricing of sanitizers. Therefore, to help the people in the Howrah region, IIEST, Shibpur decided to make hand sanitizers available to the general public free of cost. A team of IIESTS prepared approximately 500 liters of hand sanitizer following the World Health Organization guideline. Within a week of ideating, the much needed bottles of sanitizers were not only prepared, tested and packed, in-house but also distributed to the local families mostly of labourers. On 19th April 2020, Director Prof. Parthasarathi Chakrabarti handed over the bottles of sanitizers himself to the representatives of the Shibpur Thana, campus residents and also to the general public. The institute is happy to be a part of the war against this deadly virus.





#### All Department Journal List (497 Unique Numbers)

#### AE & AM

- S Chatterjee, S Roy, S Majumder, B Basu, A Roychowdhury, Journal of Biomechanical Engineering (ASME), **142**, 2020. [Impact Factor: 2.025]
- P. Kumar, M. Varshney and A. Manash, Propulsion and Power Research, **8**, pp. 329-338, 2019. [Impact Factor: 2.2]
- L. Prince Raj, HojinJeong, Rene Roy, Jin-HweKweon, Rho Shin Myong, SAE Technical Papers, 2019. [Impact Factor: 0.51]
- P. Kumar and P.C. Joshi, INCAS Bulletin, **12**, pp. 105-117, 2020. [Impact Factor: 0.14]
- S Sarkar, TP Sahu, A Datta, N Chandra, A Chakraborty, P Datta, S Majumder, A Roychowdhury, Acta of Bioengineering and Biomechanics (Wroclaw Univ Technology), **21**, pp. 83-93, 2019. [Impact Factor: 0.968]
- D. Pal and S. Chakraborty, Proceedings of the Royal Society A, 475, pp. 20190382(1-14), 2019. [Impact Factor: 2.741]
- S K. Basantia, A. Bhattacharya, N. Khutia and D. Das, Metals and Materials International, Springer, 2019. [Impact Factor: 1.99]
- D. Pal and S. Chakraborty, Physical Review E, **101**, pp. 033105(1-13), 2020. [Impact Factor: 2.296]
- 9. L. Prince Raj, K. Yee, R. S. Myong, Aerospace Science and Technology, **98**, 2020. [Impact Factor: 4.499]

#### ARCH T & RP

- T. Sarmah, S. Das, A. Narendra & B.H. Aithal, International Journal of Disaster Risk Reduction, **50**, 2020. [Impact Factor: 2.568]
- A. Narendra, S. Das, V. Shivamurthy & B.H. Aithal, Journal of Environmental Informatics Letters, 3, pp. 107-119, 2020. [Impact Factor: 4.81]
- S. Basack, A. Sarkar, Building Engineer, pp. 22-27, 2019. [Impact Factor: 0.36]
- 4. T. S. Maparu, and T. N. Mazumder, Transport Policy, 2020. [Impact Factor: 3.382]

#### CE

- P. Sanyal and S. K. Dalui, Wind and Structures, An International Journal, Korea (Techno Press), DOI: https:// doi.org/10.12989/was.2020.30.3.245, **30**, pp. 245-260, 2020. [Impact Factor: 1.922]
- S. Chakraborty, R. Mandal, S. Chattopadhyay, S. Chakraborty, Construction & Building Materials, **211**, pp. 1-11, 2019. [Impact Factor: 4.419]
- 3. M. Sit and C. Ray, Composites Part B, **176**, 2019. [Impact Factor: 7.635]
- A. Das and A. K. Bera, Geotechnical and Geological Engineering, **37**, pp. 4121-4133, 2019. [Impact Factor: 1.54]
- A. Roy, Z. Zhang, A. (D.) Ghosh and B. Basu, Journal of Vibration and Control, 25, pp. 2695-2705, 2019. [Impact Factor: 2.8]
- A. Roy, R. Manna and S. Chakraborty, Probabilistic Engg Mech, 55, pp. 78-89, 2019. [Impact Factor: 2.411]
- A. Roy, S. Chakraborty, Rel. Engg & Sys Safety, 200, pp. 106948, 2020. [Impact Factor: 5.04]
- B. Bhattacharyya and S. K. Dalui, Journal of Structural Engineering, ASCE, DOI: 10.1061/(ASCE)ST.1943-541X.0002686, Vol. 146, pp. pp- 04020137-1 to 04020137-14, 2020. [Impact Factor: 2.528]
- B. Mondal, A. Adak, P. Datta, Environ. Eng. Manag. J. 18, pp. 1245-1254, 2019. [Impact Factor: 1.186]
- 10. B. Mondal, A. Adak, P. Datta, J. Photochem. Photobiol. A Chem. **375**, pp. 237-243, 2019. [Impact Factor: 3.261]
- 11. B. Chatterjee and D. Mazumder, Biomass and Bioenergy, 139, pp. Jan-17, 2020. [Impact Factor: 3.537]
- B. Chatterjee and D. Mazumder, Renewable and Sustainable Energy Reviews, **104**, pp. 439 - 469, 2019. [Impact Factor: 10.556]
- B. Chatterjee, S. Mondaland, D. Mazumder, Journal of Indian Chemical Society, 96, pp. 461 - 468, 2019. [Impact Factor: 0.2]

- D. Pandit, S. M. Srinivasan, Journal of Intelligent Material Systems and Structures, **31**, pp. 515-524, 2019. [Impact Factor: 2.41]
- D. Bhattacherjee and B.V.S Viswanadham, Journal of Geotechnical and Geoenvironmental Engineering (ASCE), United States, **145**, pp. (04019108) 1-13, 2019. [Impact Factor: 3.07]
- 16. D. Biswas and C. Ray, International Journal of Mechanical Sciences, pp. 161-162, 2019. [Impact Factor: 4.631]
- D. Biswas and C. Ray, International Journal of Numerical Methods in Engineering, **119**, pp. 1245-1278, 2019. [Impact Factor: 1.06]
- D. Biswas and C. Ray, Journal of Sound and Vibration, 453, pp. 43-64, 2019. [Impact Factor: 3.429]
- 19. G. Datta, S. Bhattacharjya, S. Chakraborty, Structure and Infrastructure Engineering, 2020. [Impact Factor: 2.62]
- 20. G. Datta, A. Sahoo and S. Bhattacharjya, Wind and Structures, **31**, pp. 59-73, 2020. [Impact Factor: 1.922]
- G. Datta, S. Bhattacharjya, S. Chakraborty, Structural and Multidisciplinary Optimization, *62*, pp. 2711-2730, 2020. [Impact Factor: 3.925]
- K. K. Moulick, A. Shiuly,and S. Bhattacharjya, The Indian Concrete Journal, **93**, pp. 22-30, 2019. [Impact Factor: 0.15]
- K. K. Moulick, S. Bhattacharjya, S. K. Ghosh and A. Shiuly, Computers and concrete, 23, pp. 433-444, 2019. [Impact Factor: 1.507]
- 24. N.H. Barbhuiya, D. Das, A. Adak, J. Indian Chemical Soc. **96**, pp. 441-446, 2019. [Impact Factor: 0.15]
- 25. P. Saha, N. Roy, S. Basu, Transportation Research Procedia, **44**, pp. 35-39, 2020. [Impact Factor: 1.2]
- P. Sanghamitra, S. Goswami, D. Mazumder and S. Mukherjee, Journal of Indian Chemical Society, 96, pp. 515 522, 2019. [Impact Factor: 0.2]
- 27. R. Chatterjee and C. Majumder, Journal of the Indian Chemical Society ,**96**, pp. 499-506, 2019. [Impact Factor: 0.15]
- R. Loganath and D. Mazumder, Water and Environment Journal, doi:10.1111/wej.12555 2020. [Impact Factor: 1.178]
- 29. R. Chatterjee and C. Majumder, Journal of Water Process Engineering, pp. 101686, 2020. [Impact Factor: 3.370]
- R. Chatterjee, C. Majumder, Journal of The Indian Chemical Society, 97, pp. 501-506, [Impact Factor: 0.15].

- R. Kar, S. K. Dalui, and S. Bhattacharjya, Wind and Structures, 28, pp. 111-128, 2019. [Impact Factor: 1.922]
- R. Mandal, S. Chakraborty, P. Chakraborty and S. Chakraborty, Materials Letters, 243, pp. 46-49, 2019. [Impact Factor: 3.109]
- R. Bhattacharya and D. Mazumder, Water Science and Technology, 81, pp. 62 - 70, 2020. [Impact Factor: 1.624]
- S. Bhattacharjya, M. Sarkar, G. Datta, and S. K. Ghosh, S.K, International Journal of Reliability, Quality and Safety Engineering, 26, pp. 1950009, 2019. [Impact Factor: 0.989]
- S. Chaudhuri, R. Chatterjee, S.K. Ray, C. Majumder, Journal of The Indian Chemical Society, **97**, pp. 541-546, 2020. [Impact Factor: 0.15]
- 36. S. Das, A. Adak, A. Barui, J. Indian Chem. Soc. **96**, pp. 475-479, 2019. [Impact Factor: 0.15]
- S. Lata, R. Prabhakar, A. Adak, S.R. Samadder, Environ. Sci. Pollut. Res., 2019. [Impact Factor: 3.306]
- S. Mondal and A. (D.) Ghosh, Construction and Building Materials, 225, pp. 67-75, 2019. [Impact Factor: 4.419]
- 39. S. Mondal and P. Saha, Innovative Infrastructure Solutions, **5**, pp. 22, 2020. [Impact Factor: 7.5]
- 40. S. N. Thakur, S Chakraborty, C. Ray, Struct Engg and Mech, **72**, pp. 203-216, 2019. [Impact Factor: 2.984]
- S. Ghosh, A. Roy and S. Chakraborty, Journal of Earthquake Engineering, pp. 10.1080/13632469.2019.1570395, 2019. [Impact Factor: 2.779]
- 42. S Ghosh, and S Chakraborty, Probabilistic Engg. Mech,61, pp. 103065, 2020. [Impact Factor: 2.411]
- S-P Zhu, K. B, Chakraborty and S, Trung N-T, Computer Methods in Appl. Mech.Engg, **366**, pp. 113027, 2020. [Impact Factor: 5.763]

#### CEGESS

- G. Saini and R. P. Saini, International Journal of Energy Research, 43, pp. 6639-6679, 2019. [Impact Factor: 3.741]
- J. R. Sharma, D. Saha, A. B. Roy, G. Das, S. Patra, A. K. Barua and S. Mukhopadhyay, Springer Proceedings in Physics, pp. 215 (361), 2019. [Impact Factor: 0.3]
- G. Das, S. Bose, S. Mukhopadhyay, C. Banerjee and A..K.Barua, Silicon, pp 11(487), 2019. [Impact Factor: 1.246]

- S Bose, S Mandal, A. K. Barua and Sumita Mukhopadhyay, Journal of Materials Science: Materials in Electronics, **30**(2622), 2019, DOI: 10.1007/s10854-018-0537-4. [Impact Factor: 2.078]
- J. R. Sharma, G. Das, A. B. Roy, S. Bose, S. Mukhopadhyay, Silicon, 2019. DOI: 10.1007/s12633-019-00134-4. [Impact Factor: 1.246]
- S. Biswas, A. Nandi, S. Mukhopadhyay, P. Chaudhuri, H. Saha, S. M. Hossain, Applied Surface Science, pp. 494C(326), 2019. [Impact Factor: 6.182]
- J. R. Sharma, P. Banerjee, S. Mitra, H. Ghosh, S. Bose, G. Das, S. Mukhopadhyay, Journal of Materials Science: Materials in Electronics, 30(11017), 2019. DOI:10.1007/s10854-019-01443-5. [Impact Factor: 2.078]
- S. Bose, S. Mandal, A. K. Barua, S. Mukhopadhyay, Journal of Materials Science & Technology, 55, 136, 2020. [Impact Factor: 6.155]
- S. Biswas, A. Nandi, S. Basu, S. Chakrabarty, S. Mukhopadhyay, H. Saha and S. M Hossain, Materials Today: Proceedings, (2020) doi: 10.1016/j. matpr.2020.08.370. [Impact Factor: 26.416]
- 10. G. Saini and R.P. Saini, Ocean Engineering, **199**, pp. 107019, 2020. [Impact Factor: 3.068]
- R. Maity, S. Shuvro, S. Maity and N. P. Maity, Microsystem Technologies, 26, pp. 1001-1009, 2019. [Impact Factor: 1.737]
- R. Narzary, P. Phukan, S. Maity, and P. P. Sahu, Journal of Materials Science: Materials in Electronics, **31**, pp. 4142-4149, 2020. [Impact Factor: 2.22]
- R. R. Das, A. Chowdhury, A. Chakraborty and S. Maity, Microsystem Technologies, 26, pp. 1813-1821, 2019. [Impact Factor: 1.737]
- S. Baruah, J. Bora and S. Maity, Microsystem Technologies, 26, pp. 2651-2660, 2020. [Impact Factor: 1.737]
- A. Nandi, S. Mandal, S. Ghosh, S. Dhar, S. Majumdar, H. Saha, and S. M. Hossain, IEEE Journal of Photovoltaics, 9 (1), pp. 12 17, 2019 [Impact Factor: 3.890]
- A. Nandi, S. Dhar, S. Majumdar, H. Saha, and S. M. Hossain, Global Challenges, **1800109**, pp. 1 – 5, 2019 [Impact Factor: 4.306]
- T. Sarkar, A. Bhattacharjee, H. Samanta, K. B. Das, and H. Saha, Energy Conversion and Management, **191**, pp. 102 – 118, 2019 [Impact Factor: 8.020]
- G. Ahmad, G. Das, and J. N. Roy, Journal of Materials Science: Materials in Electronics, 12415, 2019 [Impact Factor: 2.210]

- S. Mitra, H. Ghosh, H. Saha, and K. Ghosh, IEEE Transactions On Electron Devices, 66(3), pp. 1368 – 1376, 2019 [Impact Factor: 2.970]
- A. Roy, P. Majumdar, P. Sengupta, S. Kundu, S. Shinde, A. Jha, K. Pramanik, and H. Saha, Electrochimica Acta, 329, 2019 [Impact Factor: 6.216]
- 21. S. Sengupta , S. Sengupta, and H. Saha, IEEE Journal of Photovoltaics, **10 (4)**, 2020 [Impact Factor: 3.890]
- S. Chakrabarty, G. Das, M. Ray, and S. M. Hossain, Journal of Applied Physics, **127**, 085708, 2020, [Impact Factor:2.286]
- N. C. Mandal, S. Biswas, S. Acharya, T. Panda, S. Sadhukhan, J. R. Sharma, A. Nandi, S. Bose, A. Kole, G. Das, S. Maity, P. Chaudhuri, and H. Saha, Materials Science in Semiconductor Processing, **119**, 105163, 2020 [Impact Factor: 3.085]
- N. C. Mandal, S. Acharya, S. Biswas, T. Panda, S. Sadhukhan, J. R. Sharma, S. Bose, G. Das, A. Kole, A. Nandi, S. Maity, P. Chaudhuri, H. Saha, and S. Guha, Applied Physics A, **126**, 569, 2020 [Impact Factor: 1.870]

#### CHEMISTRY

- M Periyasamy, A Kar, Journal of Materials Chemistry C., 8, pp. 4604-4635. 2020. [Impact Factor=7.059]
- A. Kar., Olszówka, J., Sain, S., Sloman, S-R., Montes, O., Fernández, A., Pradhan, S. K., Wheatley, Journal of Alloys and Compounds, **810**(151718), pp. 1-11, 2019. [Impact Factor: 4.65]
- R. De. Savarimuthu, A. Ballav, T. Singh, P.; Nanda, J.; Hasija, A.; Chopra, D. M. K Bera, Synlett, **31**, pp. 1587-1592, 2020. [Impact Factor: 2.369]
- M. Bandyopadhyay, A. Nayak, M. K. Bera, Synlett, **31**, pp. 1474-1478, 2020. [Impact Factor: 2.369]
- R. De.; M. K. Bera, Synth Commun, 50, pp. 1780-1789, 2020. [Impact Factor: 1.796]
- A. Savarimuthu, D. G. L. Prakash., Augustine Thomas, S. Gandh, T. M. K. Bera., Org. Biomol. Chem., 18, pp. 3552-3562, 2020. [Impact Factor: 3.412]
- R. Kumar, M. K. Bera, R. Zimmer, D. Lentz, H.-U. Reissig, E.-U. and Wurthwein, Eur. J. Org. Chem., pp. 1753-1763, 2020. [Impact Factor: 2.889]
- S. K. Samanta, M. K. Bera, Org. Biomol. Chem, 17, pp. 6441-6449, 2019. [Impact Factor: 3.412]
- R. Ghosh.; S. Kundu, R. Majumdar, S. R. Das, A. Banerjee, U. Guria, M. Banerjee, M. K. Bera, K. M. Subhedar, M. P. Chowdhury, Applied Nanoscience, **9**, pp. 1939-1952, 2019. [Impact Factor: 3.198]

- T. Lechel, R. Kumar, M. K. Bera, R. Zimmer, H.-U. Reissig, *Beilstein J. Org. Chem.* 15, pp. 655-678, 2020. [Impact Factor: 2.622]
- A. Mondal, K. Hatua and P. K. Nandi, Journal of Molecular Graphics and Modelling, 88, pp. 81 -91, 2019. [Impact Factor: 1.930]
- A. Mondal, K. Hatua and P.K. Nandi, Chemical Physics Letters, **720**, pp. 36 - 41, 2019. [Impact Factor: 1.920]
- P. Banerjee, K. Hatua, A. Mondal and P. K. Nandi, International Journal of Quantum Chemistry, **119**, pp. 1-15, 2019. [Impact Factor: 2.170]
- P. Banerjee, A. Avramopoulos and P. K. Nandi, Chemical Physics Letters, **729**, pp. 92-98, 2019. [Impact Factor: 1.920]
- H. S. Das, P. K. Nandi, S. Biring and R. Das, Journal of Indian Chemical Society, **96**, pp. 343 – 348, 2019. [Impact Factor: 0.150]
- A. Gangopadhyay and A. K. Mahapatra, New J. Chemistry, 43, pp. 11743--11748, 2019. [Impact Factor: 3.288]
- A. Sharma, S. Chattopadhyay, and D. Sinha, Molecular Physics (Special Issue), **118**, pp. e1774673, 2020. [Impact Factor: 1.59]
- A. Gangopadhyaya, S. S. Aliand, A. K. Mahapatra, Chemistry Select, 4, pp. 8968-8972, 2019. [Impact Factor: 1.811]
- 19. B. C. Ranu, T. Ghosh and L. Adak, Current Microwave Chemistry, **7**, pp. 40-49, 2020. [Impact Factor: 2.90]
- B. Jana, S. Maity, A. Mondal and J. Ganguly, Journal of Luminescence, **222**, pp. 117128, 2020. [Impact Factor: 3.28]
- G. Chakraborty, R. Sikari, R. Mondal, S. Mandal, and N. D. Paul and A. Journal of Organic Chemistry, **9**, pp. 431-436, 2020. [Impact Factor: 3.13]
- J. Das, T. Mapder, S. Chattopadhyay, S. K. Banik, PLoS ONE, **15**(2), pp. e0228967, 2020. [Impact Factor: 2.74]
- K. Mandal, D. Jana, B. K. Ghorai and N. R. Jana, ACS Appl. Nano Mater. 2, pp. 3292-3299, 2019. [Impact Factor: 7.5]
- M. Chakraborty, S.Mondal, C. Cardin, A. L. Rheingold, C. D. Mukhopadhyay, S. K. Chattopadhyay, Polyhedron, **175**, pp. 114167, pp. 1-9, 2019. [Impact Factor: 2.343]
- N. Parshi, D. Pan, V. Dhavle, B. Jana, S. Maity, J. Ganguly, International Journal of Biological Macromolecules, **141**, pp. 626-35, 2019. [Impact Factor: 5.162]

- P. Adak, A, Mondal, S. K. Chattopadhyay, New. J. Chem. 44, pp. 3748-3754, 2020. [Impact Factor: 3.288]
- P. Adak, B. Ghosh, A. Bauza, A. Frontera, S. R. Herron, S. K. Chattopadhyay, RSC Adv., pp. 12735-12746, 2020. [Impact Factor: 3.119]
- P. Hajra, S. Kundu, A. Maity and C. Bhattacharya, Chemical Engineering Journal, **374**, pp. 1221-1230, 2019. [Impact Factor: 10.652]
- P. K. Samanta, S. Ray, T. Das, S. H. Gage, M. Nandi, R. M. Richards and P. Biswas, Microporous and Mesoporous Materials, **284**, pp. 186-197, 2019. [Impact Factor: 4.551]
- P. Mandal, B. Show, Sk. T. Ahmed, D. Banerjee, A. Mondal, Journal of Materials Science: Materials in Electronics, **31**, pp. 4708-4718, 2020. [Impact Factor: 2.22]
- P. Mondal, S. Biswas, D. Jana, B. Das, U. K. Ghorai, B. K. Ghorai and S. Acharya, Journal of Solid State Chemistry, 282, pp. 121122, 2020. [Impact Factor: 2.32]
- R. Banerjee, D. Ghosh, J. Satra, A. B. Ghosh, D. Singha, M. Nandi and P. Biswas, ACS Omega, 4, pp. 16360-16371, 2019. [Impact Factor: 2.87]
- R. Biswas, S. K. Das, S. N. Bhaduri, A. Bhaumik and P. Biswas, ACS Sustainable Chemistry & Engineering, 8, pp. 5856-5867, 2020. [Impact Factor: 7.632]
- R. K. Chaudhuri and S. Chattopadhyay, Journal of Chemical Physics, **151**, pp. 74114, 2019. [Impact Factor: 2.991]
- R. Mondal, G. Chakraborty, K. M. V. Vliet, N. P. van Leest, B. de B. and N. D. Paul, Inorg. Chim. Acta. 500, pp. 119190, 2020. [Impact Factor: 2.046]
- R. Mondal, S. Sinha, S. Das, G. Chakraborty, and N. D. Paul, Adv. Synth. Catal., **362**, pp. 594-600, 2020. [Impact Factor: 5.851]
- R. Sikari, S. Sinha, G. Chakraborty, S. Das, N. P. van Leest, and N. D. Paul, Adv. Synth. Catal. **361**, pp. 4342-4353, 2019. [Impact Factor: 5.851]
- S. Bera, S. Ghosh, S. Shyamal, C. Bhattacharya, R.N Basu, Solar Energy Materials and Solar Cells, **194**, pp. 195-206, 2019. [Impact Factor: 6.984]
- S. Chattopadhyay, Journal of Physical Chemistry A, 123, pp. 2211, 2019. [Impact Factor: 2.6]
- S. Chattopadhyay, Journal of Physical Chemistry A, 123, pp. 5980, [Impact Factor: 2.6]
- S. Chattopadhyay, Journal of Physical Chemistry, **124**, pp. 1444, 2020. [Impact Factor: 2.6]

- K. Manna, A. Gangopadhyay, KalipadaMaiti, S. Mondal, and A. K. Mahapatra, Chemistry Select, 4, pp. 7219-7245, 2019. [Impact Factor: 1.811]
- S. Manna, R. K. Chaudhuri, and S. Chattopadhyay, Journal of Chemical Physics, **152**, pp. 244105, 2020. [Impact Factor: 2.991]
- S. Manna, S. Sinha Ray, S.Chattopadhyay and R. Chaudhuri, Journal of Chemical Physics, **151**, pp. 64114, 2019. [Impact Factor: 2.991]
- 45. S. Ray, R. Biswas, R. Banerjee and P. Biswas, Nanoscale Advances, **2**, pp. 734-745, 2019. [Impact Factor: 7.233]
- S. Ray, R. Biswas, R. Banerjee, A. B. Ghosh and P. Biswas, Chemistry, Select, *4*, pp. 12409 -12417, 2019. [Impact Factor: 1.811]
- S. S. Ali, A. Gangopadhyay, A. K.r Pramanik, U. N. Guria, S. K. Samanta, A. K. Mahapatra, Dyes and Pigments, **170**, pp. 107585, 2019. [Impact Factor: 4.04]
- S. Sengupta, S. Khan, S. K. Chattopadhyay, I. Banerjee, T. K. Panda, S. Naskar, Polyhedron, **182**, pp. 114512, pp. 1-10, 2020. [Impact Factor: 2.343]
- S. Shyamal, A. Maity, A. K. Satpati, C. Bhattacharya, Applied Catalysis B: Environmental, **246**, pp. 111-119, 2019. [Impact Factor: 16.683]
- S. Shyamal, A. Maity, A.K. Satpati, C. Bhattacharya, Electrochimica Acta, **308**, pp. 384-391, 2019. [Impact Factor: 6.215]
- 51. S. Sinha Ray, S. Manna, A. Ghosh, R. K. Chaudhuri, and S. Chattopadhyay, International Journal of Quantum Chemistry, **119**, pp. e25776, 2019. [Impact Factor: 2.17]
- S. Maity, N. Naskar, B. Jana, S. Lahiriand, J. Ganguly, Carbohydate Polymers, **251**, pp. 116999, 2020. [Impact Factor: 7.187]
- S. Maity, N. Naskar, S. Ahiriand, J. Ganguly, Environ. Sci.: Water Res. Technol., 5, pp. 1318-27, 2019. [Impact Factor: 3.449]
- S. Das, S. Sinha, D. Samanta, R. Mondal, G. Chakraborty,
   P. Band N. D. Paul, J. Org. Chem. 84, pp. 10160-10171, 2019. [Impact Factor: 4.805]
- S. Sinha, S. Das, R. Mondal, S. Mandal, and N. D. Paul, Dalton Trans, 49, pp. 8448-8459, 2020. [Impact Factor: 4.052]
- 56. S. Tamang and S. Aravindan, Applied Thermal Engineering, Vol 162, 114250, 2019. pp. 114250, 2019. [Impact Factor 4.725].

- 57. S. Tamang and S. Aravindan, Materials Letters, Vol 254, pp 145-148, 2019 [Impact Factor 3.204].
- 58. S. Tamang, N. Kumar and S. Aravindan, Key Engineering Materials, Vol. 821, pp 222-228, 2019.

#### CHST

- A. Ghosh, S. Raha, S. Dey, K. Chatterjee, A. R. Chowdhury, A. Barui, Analyst, **144**, pp. 1309-1325, 2019. [Impact Factor: 3.97]
- S. Dey, A. Ray, N. C. Maiti, P. Banerjee, J. Chatterjee, S. P. Maity, A. Roychowdhury& A. Barui, J. Med. Biol. Eng. 39, pp. 151-162, 2019. [Impact Factor: 1.17]
- S. Basu, A. Ghosh, A. Barui, B. Basu, Journal of Biomaterials Applications, **33**, pp. 1035-1052, 2019. [Impact Factor: 2.76]
- A. Barui, P. Datta, Biological Reviews, **94**, pp. 810-827, 2019. [Impact Factor: 10.7]
- A. Satpathy, A. Pal, S. Sengupta, A. Das, Md. M. Hasan, I. Ratha, A. Barui, S. Bodhak, Journal of the Indian Institute of Science, 99, 2019. [Impact Factor: 0.74]
- P. Datta, V. Vyas, S. Dhara, A. R. Chowdhury, A. Barui, 16, pp. 842-868, 2019. [Impact Factor: 2.22]
- R. Sarkar, S. Kishida, M. Kishida, N. Nakamura, T. Kibe, D. Karmakar, C. R. Chaudhuri, A. Barui, Toxicology in Vitro, 60, pp. 336-346, 2019. [Impact Factor: 2.9]
- R. Sarkar, A. Das, R. R. Paul, A. Barui, Future Oncology, 15, pp. 3619-3631, 2019. [Impact Factor: 2.66]
- 9. A. Chakraborty, A. Ghosh, A. Barui, Journal of Raman Spectroscopy, **51**, 2020. [Impact Factor: 2]
- A. Chakraborty, A. Das, S. Raha, A. Barui, Journal of Photochemistry and Photobiology B: Biology, **203**, pp. 111778, 2020. [Impact Factor: 4.38]
- S. Agarwal, S. Saha, V. K. Balla, A. Pal, A. Barui, S. Bodhak, Frontiers in Mechanical Engineering, 6, pp. 90, 2020. [Impact Factor: 2.44]
- A. Ghosh, K. Chatterjee, A. R. Chowdhury, A. Barui, Mitochondrion, **52**, pp. 115-124, 2020. [Impact Factor: 3.99]
- S. Das, A. Barui, A. Adak, Journal of Water Process Engineering, **37**, pp. 101497, 2020. [Impact Factor: 3.46]
- 14. A. Das, P. Datta, A. R. Chowdhury, A. Barui, IET Nanobiotechnology, 2020. [Impact Factor: 1.7]
- A. Mukhopadhyay, M. Rajput, A. Barui, S. S.Chatterjee, N. K. Pal, J. Chatterjee, R. Mukherjee, Materials Science and Engineering: C, **116**, pp. 111218, 2020. [Impact Factor: 5.88]

- S. S. Smita, A. Das, A. Barui, Photochemistry and Photobiology, 96, pp. 1283-1293, 2020. [Impact Factor: 2.24]
- 17. A. Das, S. Adhikary, A. R. Chowdhury, A. Barui, Biomedical Materials, 2020. [Impact Factor: 3.44]
- N. Paul, R. Sarkar, R. Sarkar, A. Barui, S. Sarkar, Journal of Chemical Sciences, **132**, pp. 21, 2020. [Impact Factor: 1.4]
- N. Paul, Rudra Sarkar, Ripon Sarkar, A. Barui, Sabyasachi Sarkar, Journal of Chemical Sciences, **132**, pp. 21, 2020. [Impact Factor: 1.4]
- N. Paul, Rudra Sarkar, Ripon Sarkar, A. Barui and Sabyasachi Sarkar, J. Chem. Sci, **132**, pp. 21, 2020. [Impact Factor: 1.4]
- H. Jangir, A. Bhardwaj, J. Ramkumar, Sabyasachi Sarkar and Mainak Das, Front. Mater., 6, pp. 217, 2019. [Impact Factor: 2.7]
- 22. G. S. Das, Kumud M. Tripathi, G. Kumar, Sudip Paul, S.Mehara, S. Bhowmik, B.Pakhira, S. Sarkar, M.S Roy and T. Y. Kim, New J. Chem., **43**, pp. 14575, 2019. [Impact Factor: 3.28]
- 23. D. Banerjee and S. Sarkar, Heritage, **2**, pp. 2137, 2019. [Impact Factor: NA]
- G. S. Das, S. Sarkar, R. Aggarwal, S. K.Sonkar, J. Park, K. M. Tripathi and T. Kim, Carbon Lett., **29**, pp. 595, 2019. [Impact Factor: 2.3]
- 25. G.Moula, M.Bosea and S. Sarkar, New J. Chem., **43**, pp. 8332, 2019. [Impact Factor: 3.28]
- B.Ruidas, T K Sur, Kunal Pal, S. S. Chaudhury, P. Prasad, K. Sinha, P K Sarkar, Pritha Das, C. D. Mukhopadhyay, Molecular Biology Reports, 47, pp 3745-3763, 2020. [Impact Factor: 2.1]
- K. G. Goswami, S. Mete, S. S. Chaudhury, P. Sar, E.Ksendzov, C. D. Mukhopadhyay, S. V.Kostjuk, P. De, ACS Applied Polymer Materials, 5, pp. 2035–2045, 2020. [Impact Factor: 8.097]
- 28. K. Sinha and C. D. Mukhopadhyay, J Biosci, 45, pp. 44, 2020. [Impact Factor: 1.6]
- 29. N Choudhury, B Ruidas, B Saha, K Srikanth, C. Das Mukhopadhyay, P De, Polymer Chemistry, **11**, pp 2015-2026, 2020. [Impact Factor: 4.7]
- B.T Saha, B.Ruidas, S. Mete, C. Das Mukhopadhyay, K.Bauri andPriyadarsi De , Chemical science, **11**, 141-147, 2020. [Impact Factor: 9.3]
- M. Chakraborty, S. Mondal, C. Cardin, A. L.Rheingold, C. Das Mukhopadhyay, Shyamal K. Chattopadhyay, Polyhedron, **175**, 2020. [Impact Factor: 2.06]

- B.Ruidas, S. S. Chaudhury, K. Pal, P K Sarkar, C. Das Mukhopadhyay, Nanomedicine, 4, 1173-1189 ,2019, [Impact Factor: 6.5]
- S. S. Chaudhury, A.Sannigrahi, M. Nandi, V. K. Mishra, P. De, K. Chattopadhyay, S. Mishra, Jaya Sil, C. Das Mukhopadhyay, Molecular Neurobiology, 56, pp. 6551– 6565, 2019. [Impact Factor: 4.5]
- P. Datta, S. Ray, Journal of Labelled Compounds and Radiopharmaceuticals, 63, pp 333-355, 2020. [Impact Factor: 1.27]
- P. Sengupta, A. Ghosh, N. Bose, S. Mukherjee, A. R. Chowdhury, P. Datta, Journal of Applied Polymer Science, 2020, 49115, 2020. [Impact Factor: 2.5]
- N.K.Tewary, A.Gupta, G.Mandal, S.K.Ghosh, A.Das, P.Datta, A.Ghosh, Materials Today Proceedings, 18, pp 5202–5208, 2019. [Impact Factor: 0.576]
- P.Sengupta, K. Pramanik, P. Datta, P. Sarkar, Biosensors and Bioelectronics, **154**, pp 112072, 2020. [Impact Factor: 10.2]
- P. Sengupta, S. Shinde, Pavel Majumdar, M. L., P. Datta and S.u Patra, Journal of The Electrochemical Society, 167, 047513, 2020. [Impact Factor: 3.66]
- S. Mondal, P. Das, P. Datta, A. D. Ghosh, Cement and Concrete Composites, **108**, pp. 103523, 2020. [Impact Factor: 6.2]
- S K Samanta, K.Maiti, S. S. Ali, U. N.Guria, A. Ghosh, P. Datta, A. K. Mahapatra, **173**, pp 107997, 2020. [Impact Factor: 4.04]
- A. Pal, B. Biswas, A. Das, A. Chakraborty, P. Datta, A. R. Chowdhury, Arijit Sinha, Journal of Composite Materials, 54, pp. 287-298, 2020. [Impact Factor: 1.63]
- R. Barua, H. Giria, S. Datta, A. Roychowdhury, P. Datta, Proc Inst of Mech Eng Part H: J Eng Med, 234, pp. 223-231, 2019. [Impact Factor: 1.28]
- S Mondal, S Manna, S Pathak, A Ghosh, P Datta, D Mandal and S Mukhopadhyay, New J. Chem., 44, pp, 954-7961, 2020. [Impact Factor: 3.2]
- 44. Sudipto Datta, Ankita Das, A. R. Chowdhury and Pallab Datta, Biointerphases, 14, pp. 051006, 2019. [Impact Factor: 2.04]
- P. Singh, S.Misra, A. Das, S. Roy, P. Datta, G. Bhattacharjee, B.Satpati, J. Nanda, ACS Appl. Bio Mater.,
   2, pp. 4881-4891, 2019. [Impact Factor: 8.758]
- P. Datta, Veena Vyas, S.Dhara, A. R. Chowdhury, A. Barui, J Bionic Engineering, 16, pp 842–868: 842. [Impact Factor: 2.8]

- S. Sarkar, T. P.Sahu, A. Datta, N. Chandra, A. Chakraborty, P. Datta, S. Majumder, A. R. Chowdhury, Acta of Bioengineering & Biomechanics, **21**, pp 83-93, 2019. [Impact Factor: 1.01]
- 48. P. Datta, S.Dhara, J Indian Inst Sci., **99**, pp 329–337, 2019. [Impact Factor: 8.57]
- P.Sasmal, P. Datta, Journal of Drug Delivery Science and Technology, 52, 559-567, 2019. [Impact Factor: 2.73]
- Moncal, K.Kerim, V.Ozbolat, P. Datta, D.Heo, I.Ozbolat, J Mater Sci Mater Med, **30**, pp. 55, 2019. [Impact Factor: 2.4]
- P. P.Maity, D. Dutta, S. Ganguly, K. Kapat, K. Dixit, A. R. Chowdhury, R.Samanta, N. Chandra Das, P. Datta, A. K. Das & S.Dhara, Nature Communications Biology, 2, pp. 146, 2019. [Impact Factor: 12.1]

#### CST

- A. Garai, S. Biswas, S. Mandal and B. B. Chaudhuri, IET Image Processing, 14, pp. 74-83, 2020. [Impact Factor: 1.995]
- 2. A. Roy, T. Acharya and S. D. Bit, International Journal of Communication Systems, 2019. [Impact Factor: 1.3]
- A. Paul and J. Sil, IEEE/ACM Transactions on Computational Biology and Bioinformatics, 16, pp. 1970-1985, 2019. [Impact Factor: 3.015]
- A. Paul and J. Sil, Information Sciences, **478**, pp. 222-238, 2019. [Impact Factor: 5.91]
- A. Choudhury and B. K. Sikdar, Journal of Electronic Testing, 2020. [Impact Factor: 1.49]
- B. Chakraborty, M. Dalui and B. K. Sikdar, Journal of Circuits, Systems and Computers, 28, pp. 1950148, 2019. [Impact Factor: 0.481]
- 7. D. Dutta, J. Sil and P. Dutta, Expert Systems With Applications, **146**, 2020. [Impact Factor: 5.452]
- D. Dutta, J. Sil and P. Dutta, Expert Systems With Applications, **137**, pp. 357-379, 2019. [Impact Factor: 5.452]
- H. Bhaumik, S. Bhattacharyya, S.Chakraborty, Applied Soft Computing. Journal, Vol-75, pp. 633-651, 2019. [Impact Factor: 6.030]
- 10. J. Sengupta, S. Ruj and S. D. Bit, IEEE Transactions on Industrial Informatics, 2020. [Impact Factor: 9.1]
- J. Sengupta, S. Ruj and S. D. Bit, Journal of Network and Computer Applications, Elsevier Science, **149**, pp. Jan-20, 2019. [Impact Factor: 5.6]

- M. Kule, H. Rahaman and B. B. Bhattacharya, Journal of Circuits, Systems, and Computers, 28, 2019. [Impact Factor: 1.363]
- M. Kule, H. Rahaman and B. B. Bhattacharya, Journal of Computational Electronics, **19**, pp. 555-564, 2020. [Impact Factor: 1.532]
- M. Goswami, A. Mondal, M. H. Mahalat, B. Sen and B. K. Sikdar, International Journal of Electronics Letters, 8, pp. 83-96, 2020. [Impact Factor: 0.45]
- M. Goswami, M. Roychoudhury, J. Sarkar, B. Sen and B. K. Sikdar, Arabian Journal for Science and Engineering, 2019. [Impact Factor: 1.711]
- 16. N. Das, S. Basu and S. D. Bit, ACM Transactions on Spatial Algorithms and Systems, **6**, 2020. [Impact Factor: 1.7]
- N. Ghosh, S. Chandra, V. Sachidanandan and Y. Elovici, IEEE Internet of Things Journal, 6, pp. 10773 - 10785, 2019. [Impact Factor: 11.705]
- N. Mukherjee, J. Sil, Abhimanyu Sahu and Ananda S. Chowdhury, Pattern Recognition Letter, **129**, pp. 158-165, 2020. [Impact Factor: 3.225]
- R. Banerjee and S. D. Bit, Wireless Networks, Springer, 25, pp. 5113-5135, 2019. [Impact Factor: 2.6]
- R. Datta, S. Mandal and S. Biswas, Pattern Recognition and Image Analysis, **19**, pp. 212-223, 2019. [Impact Factor: 0.93]
- R. P. Barnwal, N. Ghosh, S. K. Ghosh and S.K. Das, ACM Transactions on Cyber-Physical Systems (TCPS), 4, 2019. [Impact Factor: 0.479]
- R. P. Barnwal, N. Ghosh, S.K. Ghosh and S. K. Das, Elsevier Pervasive and Mobile Computing (PMC), **57**, pp. 64-77, 2019. [Impact Factor: 2.725]
- S. Bhattacharjee, N. Ghosh, V. Shah and S.K. Das, IEEE Transactions on Mobile Computing 19, pp. 200-216, 2020. [Impact Factor: 5.112]
- S. Bhattacharjee, S. Roy and S. D. Bit, Computer Communications, Elsevier Science, **134**, pp. 96-113, 2019. [Impact Factor: 2.8]
- 25. S. Chakraborty, S. Chakraborty, SN Applied Sciences, pp. 2523-3971, 2019. [Impact Factor: NA]
- S. Muhuri,S. K. Setua, S. Chakraborty, IEEE Transactions on Computational Social Systems , 2020. [Impact Factor: 3.29]
- 27. S. Das and J. Sil, Health Information Science and Systems, **7**, pp. Jul-15, 2019. [Impact Factor: 4.5]

- S. Biswas and J. Sil, Journal of King Saud University -Computer and Information Sciences, **32**, pp. 718-729, 2020. [Impact Factor: 3.98]
- 29. T. Pal and S. Das Bit, Journal of Visual Communication and Image Representation, **70**, pp., 2020. [Impact Factor: 2.5]
- T.Chowdhury, S.Muhuri, S. N. Chakraborty, S. Chakraborty, IEEE Transactions on Computational Social System, 6, pp. 858-869, 2019. [Impact Factor: 3.29]

#### EE

- T. Chakraborty, P. Ghosh, S. Mal, U. Biswas. International Journal of System Assurance Engineering and Management, **10**, Issue 5, pp. 1361–1368, 2019. [Impact factor: 1.02]
- K.Sarker, T. Chakraborty, S. A.Paramanik, J. A.Sarker, S. Mal, U. Biswas, Journal of Electrical Engineering, 13(3), pp 24-37,2020. [Impact Factor: 0.686]
- R. Mondal, J. D. and S. Halder, Asian Journal of Control (AJC), 22, pp.1345-1349, 2020. [Impact Factor: 2.57]
- R. Mondal and J. Dey, ISA Transactions, 96, pp.352-366, 2020. [Impact Factor: 4.301]
- R. Mondal and J. Dey, IEEE Transactions on Industrial Applications, 56(6), pp. 7055-7066 2020.[Impact Factor: 4.270]
- S. B. Pal, A. Das, K. Das(Bhattacharya), D. Mukherjee, Measurement and Control, SAGE Publications, **52**, pp. 1308-1318, 2019. [Impact Factor: 1.492]
- D. Bose, C. K. Chanda, A. Chakrabarti, Microsystem Technologies, 26, pp. 2443-2451, 2020. [Impact Factor: 1.61]
- D. Maity, S. Banerjee, C. K. Chanda, Iranian Journal of Science and Technology, Transactions of Electrical Engineering, 43, pp. 77-90, 2019. [Impact Factor: 0.556]
- H. Dhulipati, S. Mukundan, C. Lai, K. Mukherjee, J. Tjong and N. C. Kar, IEEE Transactions on Energy Conversion, 34, pp. 731-740, 2019. [Impact Factor: 5.4]
- S. Das, T. Santra, A. B. Choudhury, D. Roy and S. Yamada, Electric Power Components and Systems, 47, pp. 396-405, 2019. [Impact Factor: 1.16]
- S. Dey, D. Roy, S. Patra and T. Santra, Elsevier, Heliyon, 5, 2019. [Impact Factor: 1.65]
- S. Pusti, T. Santra and D. Roy, Progress in Electromagnetic Research, 83, pp. 203-211, 2019. [Impact Factor: 1.898]

- S.Basu Pal, R. Kumar, K. Das Bhattacharya, D. Mukherjee, International Journal of Metrology and Quality Engineering, **10**, pp. 8, 2019. [Impact Factor: 0.71]
- S. Garai, P. Basu, A. Sutradhar, A. Sengupta, Sadhana, 45, pp. 268:1-268:5, 2020. [Impact Factor: 0.85]
- S. Ghosh, J. K. Das, Chandan Kr. Chanda, Microsystem Technologies, 25, pp. 4671-4674, 2019. [Impact Factor: 1.61]
- 16. T. Santra, D. Roy and A. B. Choudhury, J. Inst. Eng. India Ser. B, **100**, pp. 123-129, 2019. [Impact Factor: 0.52]
- T. Santra, S. Pramanik, D. Sarkar, A. B. Choudhury and D. Roy,IEEE Transactions on Applied Superconductivity, **29**, pp. 01-Aug, 2019. [Impact Factor: 1.75]
- T. Sarkar, A. Bhattacharya, H. Samanta, K. Das(Bhattacharya), H.Saha, Energy Conversion and Management, Elsevier, **191**, pp. 102-118, 2019. [Impact Factor: 8.2]
- P. Mukherjee, S. Paitandi and M. Sengupta, Sadhana -Academy Proceedings in Engineering Sciences,45(1), 2020. DOI 10.1007/s12046-019-1264-0.[Impact Factor: 0.769]
- Kundu J. and M. Sengupta, Sadhana Academy Proceedings in Engineering Sciences, 45, 2020. DOI 10.1007/s12046-020-1284-9.[Impact Factor: 0.769]
- 21. Paitandi S. and M. Sengupta, **45**(5), 2020. D0I10.1007/ s12046-020-1301-z.[Impact Factor: [Impact Factor: 0.769]
- P. Mukherjee and M. Sengupta, Sadhana Academy Proceedings in Engineering Sciences, 45(9), 2020. DOI 10.1007/s12046-020-01470-7.[Impact Factor: 0.769]
- 23. D. Roy and M. Sengupta, Sadhana Academy Proceedings in Engineering Sciences, **44**, 2019,DOI 10.1007/ s12046-019-1195-9. [Impact Factor: 0.769]
- 24. V. K. Bussa, R. K. Singh and R. Mahanty, *IET Power Electronics*, **12**, 6, pp. 1532-1544, 2019, DOI: 10.1049/ iet-pel.2018.5826. [Impact Factor: 2.839]
- S. Dey, V. K. Bussa and R. K. Singh, *IEEE Journal of Emerging and Selected Topics in Power Electronics*, 7(2), pp. 1329-1341,2019, DOI: 10.1109/JESTPE.2018.2883243 [Impact Factor: 4.728]
- N. Yalla, P. Agarwal, J. S. P. Ammanamanchi Venkata and V. K. Bussa, *IET Power Electronics*, **13**(4), pp. 693-702, 2020. DOI: 10.1049/iet-pel.2019.0193 [Impact Factor: 2.839]

 V. K. Bussa, R. K. Singh, R. Mahanty and V. N. Lal, *IEEE Transactions on Industry Applications*, **56**(2), pp. 2031-2047, 2020, DOI: 10.1109/TIA.2020.2966175. [Impact Factor: 3.488]

#### ES

- 1. B. Nath, Z. Niu and A. K. Mitra, Journal of Earth System Science, **128**, pp. Jan-21, 2019. [Impact Factor: 1.423]
- M. Talukdar, D. Mukhopadhyay, S. Sanyal, & P. Sengupta, Geological Journal, 55, pp. 3615-3642, 2019. [Impact Factor: 1.595]
- S. Nayak, B.P. Mukhopadhyay, A. K.Mitra, R Chakraborty, Arabian Journal of Geosciences, 13, pp. (955) 1-14, 2020. [Impact Factor: 1.327]
- M. K. Layek, and P. Sengupta, Journal of Environmental and Engineering Geophysics, 24(3), pp. 487-496, 2019.https://doi.org/10.2113/JEEG24.3.487 [Impact Factor:3.3]
- M. K. Layek, P. Sengupta, and A. Mukherjee, Journal of Coastal Conservation, 23(1), 121-131, 2019. https:// doi.org/10.1007/s11852-018-0642-9 [Impact Factor: 1.374]
- A. Barla,S. Singh, R. Chakravarti, Ore Geology Reviews, 103482, Doi 10.1016/j.oregeorev.2020. [Impact factor: 3.8]
- M. Khatun, S. Singh, R. Chakravarti, A. S. Venkatesh, GeologicalJournal, 5(7), pp. 5233-5250, 2019. [Impact Factor: 1.9]
- M. Khatun, S. Singh, R. Chakravarti, Journal of the Geological Society of India, 94, pp. 53-61, 2019. [Impact Factor 0.9]

#### ETC

- A. Pramanik, S. P. Maity, Z. Farheen, IET Digital Library, 13, pp. 3145-3152, 2019. [Impact Factor: 1.664]
- A. Chakraborty and A. Banerjee, Microprocessor and Microsystems, Elsevier, 65, pp. 180-195, 2019. [Impact Factor: 1.161]
- A.Ganguly and A. Banerjee, Analog Integrated Circuits and Signal Processing, Springer, **102**, pp. 169-179, 2020. [Impact Factor: 0.925]
- A.Ganguly, A. Chakraborty and A. Banerjee, International Journal of Electronics, Taylor and Francis, **106**, pp. 1845-1863, 2019. [Impact Factor: 1.004]
- D. Chakraborty, A. Chakraborty, A. Banerjee and S. R. B. Chaudhuri, Multimedia Tools and Applications, Springer, 78, pp. 26759-26785, 2019. [Impact Factor: 2.313]

- I. Sil, B. Chakraborty, S. J. Shivaraja, A. Kumar, V. Manjuladevi, R. K Gupta, and P. Bhattacharyya, IEEE Transactions on Electron Devices, 67, pp. 4256 - 4261, 2020. [Impact Factor: 2.62]
- J. Halder, T. Acharya, M. Chatterjee, U. Bhattacharya, Computer Communications (Elsevier), 160, 2020. [Impact Factor: 2.816]
- K. Ghosh, H. Rahaman, P. Bhattacharyya, IEEE Transactions on Applied Superconductivity, **30**, pp. 7400109, 2020. [Impact Factor: 1.75]
- 9. S. Basak, T. Acharya, Ad Hoc Networks (Elsevier), 108, 2020. [Impact Factor: 3.643]
- S. Bhattacharjee, T. Acharya U. Bhattacharya, IEEE/ACM Transactions on Networking, 28, 2020. [Impact Factor: 3.315]
- S. Ghosal, K. Dutta, P. Bhattacharyya, IEEE Electron Device Letters, 41, pp. 912-915, 2020. [Impact Factor: 4.02]
- S. Ghosal, P. Bhattacharyya, IEEE Transactions on Device and Materials Reliability, **20**, pp. 84-91, 2020. [Impact Factor: 1.790]
- S. Ghosh, T. Acharya, S. P. Maity, IEEE transactions on Vehicular Technology, 69, pp. 10167 - 10176, 2020. [Impact Factor: 5.379]
- S. Ghosal, P. Bhattacharyya, IEEE Transactions on Electron Devices, 66, pp. 3982-3987, 2019. [Impact Factor: 2.62]
- A. K. Singh, Nitesh K. Chourasia, B. N. Pal, A. Pandey and P. Chakrabarti, IEEE Photonics Technology Letters, 32, pp. 1548-1551, 2020, [Impact Factor: 2.860]
- 16. A. K. Singh, A. Pandey and P. Chakrabarti, IEEE Sensors Journal. [Impact Factor : 3.076]
- 17. A. K. Dikshit, P. Banerjee, N. Mukherjee, P. Chakrabarti, Superlattice and Microstructures. [Impact Factor: 2.120]
- Nilotpal, S. Bhattacharyya, P. Chakrabarti, Optical Engineering, **59**, pp. 107102, 2020. [Impact Factor: 1.280]
- V.Devarakonda, A. D.D. Dwivedi, A. Pandey, P. Chakrabarti, Optical and Quantum Electronics, **52**, pp. 1-19, 2020. [Impact Factor: 1.842]
- N. K. Chourasia, A. K. Singh, S. Rai, A. Sharma, A. Srivastava, P. Chakrabarti, B.N. Pal, IEEE Transactions on Electron Devices, 67, pp. 4385-4391, 2020. [Impact Factor: 2.970]
- A.K. Singh, A. Pandey and P. Chakrabarti, IEEE Photonics Technology Letters, **32**, pp. 1045-1048, 2020. [Impact Factor: 2.860]

- A. K. Singh, N. K. Chourasia, B. N. Pal, A. Pandey and P. Chakrabarti, IEEE Trans. Electron Devices, 67, pp. 2028-2034, 2020. [Impact Factor: 2.970]
- A. K. Singh, A. Pandey and P. Chakrabarti, IEEE Sensors Journal, **20**, pp. 4047-4054, 2020. [Impact Factor: 3.076]
- Nilotpal, Aman, S. Bhattacharyya and P. Chakrabarti, Journal of Optical Society of America-B, **37**, pp. 586-592, 2020. [Impact Factor: 2.284]
- A. Kumar Singh, A. Pandey and P. Chakrabarti,Organic Electronics, **75**, pp. 105424, DOI: 10.1016/ j.orgel.2019.105424. [Impact Factor: 3.495]
- A. Kumar Dikshit, Nabin Chandra Mandal, Sukanta Bose, NillohitMukherjeeand P. Chakrabarti, Solar Energy, **193**, pp. 293-302, 2019. [Impact Factor: 4.674]
- Nilotpal, L. Nama, S. Bhattacharyya, and P. Chakrabarti, International Journal of RF and Microwave Computer-Aided Engineering, pp. 1-9, 2019. [Impact Factor: 1.306]
- M. Midya, S. Bhattacharjee, G.K.Das & M. Mitra, Int. Journal of RF & Microwave computer aided design (Wiley), DOI:10.1002/mmce.22152, pp. 1–10, Jan 2020.[Impact Factor: 1.528]
- 29. J. Banerjee & M. Mitra, IETE Journal of Research (Taylor & Francis), DOI:10.1080/03772063.2019.1709569, pp.1-11, 2020.[Impact Factor: 1.125]
- G. K. Das, R. Dutta, D. Mitra, and M. Mitra, Prog. In Electromagn. Res. Lett., 87, pp.123-130, 2019.[Impact Factor: 2.322]
- 31. G. K. Das, T. Shaw, D. Mitra, and M. Mitra, Int. J. RF Microw. Comp. Aided Eng., **29**, 8, 2019.[Impact Factor: 1.528]
- M. Midya, S. Bhattacharjee, and M. Mitra, Int. Journal of RF & Microwave computer aided design (Wiley), pp.1-9, 2019, DOI:10.1002/mmce.21918.[Impact Factor: 1.528]
- S. Bhattacharjee, S. Maity, S.R. B. Chaudhuri & M. Mitra, IEEE Transaction on Antenna & propagation', 67(8), 2019.[Impact Factor: 4.435]
- M. Midya, S. Bhattacharjee, & M. Mitra, IET Microwaves, Antenna & Propagation, 13, 12, pp.2020-2025,2019. [Impact Factor: 2.036]
- 35. T. Shaw, and D. Mitra, IEEE Antennas Wireless Propag. Lett., **18** (9), pp. 1823-1827, 2019. [Impact Factor: 3.726]
- 36. T. Shaw, and D. Mitra, IET Microwaves, Antennas & Propagation, **13** (12), pp. 1974-1982, 2019. [Impact Factor: 2.036]

- 37. S. Kayal, T. Shaw, and D. Mitra, Applied Physics A, Springer, **126** (13), 2020. [Impact Factor: 1.810]
- G. Samanta and D. Mitra,IET Microwaves, Antennas & Propagation, 14 (2), pp. 177-184, 2020. [Impact Factor: 2.036]
- 39. S. Das, and D. Mitra, Electromagnetics, **40** (2), pp. 83-92, 2020. [Impact Factor: 0.553]

#### HSS

- S. Banerjee, &K. Goswami, Progress in Development Studies, 20(1), pp. 7-25, 2020. [Impact Factor: 1.125]
- S. Banerjee, & K. Goswami, K., International Journal of Industrial Ergonomics, 73, pp. 102834, 2019. [Impact Factor: 1.571]
- S. Banerjee, & K. Goswami, International Journal of Workplace Health Management, **12**(3), pp. 102-119, 2019.[Impact Factor: 0.980]
- S. Banerjee, & K. Goswami, Inclusive Growth and Backward Region Development: Sectoral Issues, pp. 131-152, 2019.[Impact Factor: ]
- A.Mukhopadhyay, The IUP Journal of English Studies, 15, pp. 43-63, 2020. [Impact Factor: 0.070]

#### IT

- A. Pramanik, S. P. Maity, A.Sethia, Microsystem Technologies, 25, pp. 1731-1742, 2019. [Impact Factor: 1.513]
- A. Banerjee and S. P. Maity, IEEE Transactions on Cognitive Communications and Networking, 6, pp. 718-727, 2020. [Impact Factor: 4.574]
- D. K. Maity, S. K. Roy, C. Giri, Journal of Electronic Testing, 35, pp. 741-759, 2019. [Impact Factor: 0.664]
- A. Panda, R. Naskar and S. Pal, IET Image Processing, 13, pp. 1516 - 1524, 2019. [Impact Factor: 2.610]
- P. Chanak, I. Banerjee, R. S. Sherratt, Int. J. Communication Systems, **33**, pp. 2020(9), 2020. [Impact Factor: 1.319]
- S. Mukherjee, I. Pan, T. Samanta, Applied Soft computing, 85, pp. 105839, 2019. [Impact Factor: 6.03]
- D. B. Tariang, R. S. Chakraborty and R. Naskar, IEEE Signal Processing Letters, 26, pp. 1132-1136, 2019. [Impact Factor: 4.180]
- 8. A. Paul, T. Sutradhar, P. Bhattacharya and S. P. Maity, Applied Optics, October, pp. 01-10, 2020. [Impact Factor: 1.96]

- A. Bhowmik, G. Ch. Das, S. D. Ray, S. Kundu, S. P. Maity, Wireless Networks, **26**, pp. 1033-1043, 2020. [Impact Factor: 2.659]
- R. Rout, S. P. Maity, P. P. Chowdhury, J. K. Das, Sk. S. Hassan, H. M. Pandey, Neural Computing and Applications, **32**, pp. 7803-7821, 2020. [Impact Factor: 4.774]
- T. Kaibartta, C. Giri, H. Rahaman and D. Kumar Das, IET Computers & Digital Techniques, 13, pp. 383 - 396, 2019. [Impact Factor: 0.785]
- D. Bandyopadhyay, A. Biswas, B. B. Bhattacharya, Journal of digital imaging, **32**, pp. 300-313, 2019. [Impact Factor: 2.99]
- 13. N. Nesa and I. Banerjee, Transactions on Computational Science, **35**, pp. 85-105, 2020. [Impact Factor: 2.644]
- A. Choudhury, R. Naskar, A.B. Mallick and S. Pal, Engineering Computations, Emerald Insight, **36**, pp. 1913-1933, 2019. [Impact Factor: 1.410]
- 15. P. Chanak and I. Banerjee, IEEE Trans. Consumer Electron, **66**, pp. 223-232, 2020. [Impact Factor: 2.739]
- V. U. Sameer and R. Naskar, Multimedia Tools and Applications, Springer, **79**, pp. 28079-28104, 2020. [Impact Factor: 2.313]
- 17. N. Nesa, T. Ghosh, I. Banerjee, J. Inf. Secur. Appl., **47**, pp. 320-328, 2019. [Impact Factor: 2.327]
- N.Karmakar, S. Mondal, A. Biswas, Information Sciences, 499, pp. 84-101, 2019. [Impact Factor: 5.563]
- 19. N. Ghosh, T. Prasad, I. Banerjee, Wireless Personal Communications, **109**, pp. 2019. [Impact Factor: 1.061]
- 20. J. Bakas, S. Ramachandra and R. Naskar, SPIE Journal of Electronic Imaging, **29**, pp. 23006, 2020. [Impact Factor: 1.260]
- S. Chowdhury and C. Giri, Wireless Personal Communications, **109**, pp. 189-210, 2019. [Impact Factor: 1.019]
- S. Chatterjee, S. P. Maity, T. Acharya, IEEE Transactions on Cognitive Communications and Networking, 5, 2019. [Impact Factor: 4.574]
- 23. Roy, N.D. Biswas, A. Multimedia Tools and Applications, **79**(9-10), pp. 6823-6843, 2020. [Impact Factor: 2.6]
- A. Banerjee and S. P. Maity, Transactions on Emerging Telecommunications Technologies, **30**, 2019. [Impact Factor: 1.594]
- A. Ray and S. P. Maity, International Journal of Wavelets, Multiresolution and Information Processing, **17**, pp. 1950003, 2019. [Impact Factor: 0.463]

- 26. S. R. Islam, S. P. Maity, A. K. Ray, IET Image Processing, 2020. [Impact Factor: 1.995]
- 27. A. Banerjee and S. P. Maity, Ad Hoc Networks, **82**, pp. 46-55, 2019. [Impact Factor: 3.643]
- S. Ghosh, T. Acharya, and S.P. Maity, Wireless Networks, 25, pp. 3867-3881, 2019. [Impact Factor: 2.659]
- 29. A. Banjerjee and S. P. Maity, IEEE System Journal, **13**, pp. 3836-3846, 2019. [Impact Factor: 3.987]
- S. Chowdhury, A. Roy, A. Benslimane and C.Giri, Ad Hoc Networks, 94, 2019. [Impact Factor: 3.643]
- A. Banerjee, S.P. Maity and R. K. Da, IEEE Communication Letters, 23, pp. 120-123, 2019. [Impact Factor: 3.419]
- Nimisha Ghosh, Indrajit Banerjee, R. Simon Sherratt, Wirel. Networks, 25(4), pp. 1829-184, 2019. [Impact Factor: 2.659]
- S. Dey, A. Ray, N. C.Maiti, P. Banerjee, J. Chatterjee, S. P.Maity, A.Roychowdhury, A. Barui, Journal of Medical and Biological Engineering, **39**, pp. 151-162, 2019. [Impact Factor: 1.173]
- T. Bhattacharjee and S. P. Maity, Journal of Information Security and Applications, 45, pp. 108-120, 2019. [Impact Factor: 2.327]
- 35. S.Phani, S.Lahiri, A. Biswas, Journal of Quantitative Linguistics, **26**, pp. 287-305, 2019. [Impact Factor: 1.06]
- R. Dixit and R. Naskar, Multimedia Tools and Applications, Springer, **78**, pp. 13819-13840, 2019. [Impact Factor: 2.313]
- A. D. Roy, N. Biswas, Innovations in Systems and Software Engineering, 16, 2020. [Impact Factor: 0.950]
- N.Nesa, I. Banerjee, IEEE Internet Things J., 6, pp. 2532-2539, 2019. [Impact Factor: 9.936]
- 39. S. P. Maity, Microsystem Technologies, **25**, pp. 1763-1763, 2019. [Impact Factor: 1.513]
- Bandyopadhyay, T. Dutta, N. Dutta, A. Biswas, B. B Bhattacharya, Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, 7, pp. 37-48, 2019. [Impact Factor: 0.76]
- 41. A. Paul, A. Banerjee and S. P. Maity, IET Communications, 13, pp. 1327-1335, 2019. [Impact Factor: 1.779]
- P. Biswas, T. Samanta, Springer Wireless Personal Communications, **112**, pp. 439-461, 2020. [Impact Factor: 1.06]

#### Math

- A. Khatua, S. Jana and T. K. Kar, Ecological Informatics, 57, pp. 101070, 2020. [Impact Factor: 2.511]
- A. Khatua, T. K. Kar, Int. J. Ecol. Econ. Stat., 40, pp. 16-31. 2019. [Impact Factor: 0.300]
- 3. A. Das and G.P. Samanta, **538**, pp. 122844, 2020. [Impact Factor: 2.924]
- 4. B. Singh and S. Pal (Sarkar), Mathematical Models in Engineering, **5**, pp. 79-89, 2019. [Impact Factor: 0.325]
- B. Singh, S. Pal (Sarkar) and K. Barman, Journal of Thermal Stresses, 42, pp. 874-889, 2019. [Impact Factor: 2.626]
- Behnam Pourhassan and U. Debnath, Gravitation and Cosmology, 25, pp. 196-204, 2019. [Impact Factor: 0.88]
- Binod Chetry, Jibitesh Dutta, U. Debnath and Wompher deiki Khyllep, International Journal of Geometric Methods in Modern Physics, **16**, pp. 1950173 (1-38), 2019. [Impact Factor: 1.287]
- D. K. Das, K. Das and T. K. Kar, International Journal of Applied and Computational Mathematics, 2019. [Impact Factor: 2.037]
- D. K. Das, S. Khajanchi and T. K. Kar, Chaos, Solitons and Fractals, **130**, pp. 109450, 2020. [Impact Factor: 3.764]
- D. K. Das, S. Khajanchi and T. K. Kar, Applied Mathematics and Computation, **366**, pp. 124732, 2020. [Impact Factor: 3.472]
- D. Pal, S. Biswas, G. S. Mahapatra, G. P. Samanta, Journal of Applied Nonlinear Dynamics, 8, pp. 419-433, 2019. [Impact Factor: 0.73]
- 12. D. Pal, B. Ghosh and T. K. Kar, BioSystems, **185**, pp. 104018, 2019. [Impact Factor: 1.808]
- D. Pal, T. K. Kar, A. Yamauchi and B. Ghosh, BioSystems, 187, pp. 104064, 2020. [Impact Factor: 1.808]
- K. Pujaru and T. K. Kar, Nonlinear Analysis: Modelling and Control, 25, pp. 400-416. 2019. [Impact Factor: 2.78]
- 15. M. Chowdhury, P. Das and A. Das, Mediterranean Journal of Mathematics, **17**, 2019. [Impact Factor: 1.22]
- Mahasweta Biswas, U. Debnath and Shounak Ghosh, International Journal of Geometric Methods in Modern Physics, 16, pp. 1950178(1-20), 2019. [Impact Factor: 1.287]

- Mahasweta Biswas, U. Debnath, Shounak Ghosh and B. K. Guha, European Physical Journal C, **79**, pp. 659 (1-9), 2019. [Impact Factor: 4.389]
- P. Das, P. Das and S. Das, Applied Mathematics and Computation, **361**, pp. 536-551, 2019. [Impact Factor: 3.47]
- P. Das, S. Mukherjee and P. Das, Chaos, Solitons & Fractals, **128**, pp. 297-305, 2019. [Impact Factor: 3.76]
- 20. P. Das, S. Mukherjee and P. Das, Physica A, **541**, pp. 123606, 2020. [Impact Factor: 2.79]
- 21. P. Sen, A. Maiti and G. P. Samanta, FILOMAT, **33**, pp. 2529-2542, 2019. [Impact Factor: 0.76]
- P. Saha and U. Debnath, Modern Physics Letters A, 34, pp. 1950127 (1-15), 2019. [Impact Factor: 1.391]
- 23. P. Saha and U. Debnath, European Physical Journal C, **79**, pp. 919 (1-16), 2019. [Impact Factor: 4.389]
- R. Banerjee, D. Mukherjee and P. Das, Nonlinear Dynamics, **99**, pp. 3285-3300, 2020. [Impact Factor: 4.87]
- 25. S. Biswas, D. Pal, G.S.Mahapatra and G. P. Samanta, Biophysics, **65**, pp. 826-835, 2020. [Impact Factor: 3.665]
- 26. S. Das, P. Das, and P. Das, Int. J. of Dynamical Systems and Differential Equations, 2019. [Impact Factor: 0.15]
- S. Mandal, S. Pal(Sarkar) and T. K. Roy, International Journal of Applied and Computational Mathematics, 5, pp. Article no. 166, 2019. [Impact Factor: 2.037]
- 28. S. Sengupta and P. Das, Nonlinear Dynamics, **97**, pp. 2777-2798, 2019. [Impact Factor: 4.87]
- 29. S. Saha and G. P. Samanta, Letters in Biomathematics, 2019, DOI: 10.1080/23737867.2019.1624204. [Impact Factor: 2.5]
- S. Saha and G. P. Samanta, Physica A, **527**, pp. 121152, 2019. [Impact Factor: 2.924]
- S. Saha and G. P. Samanta, Mathematical Biology and Bioinformatics ,15, pp. 268-294, 2020. [Impact Factor: 1.846]
- S. Saha and G. P. Samanta, Energy, Ecology and Environment, 5, pp. 47-60, 2020. [Impact Factor: 10.935]
- S. Ghosh & G. P. Samanta, Letters in Biomathematics, 2019. [Impact Factor: 2.5]
- S. Maity and U. Debnath, European Physical Journal Plus, 134, pp. 514 (1-20), 2019. [Impact Factor: 3.228]

- S. Mondal & G. P. Samanta, Energy, Ecology and Environment, 5, pp. Dec-33, 2019. [Impact Factor: 10.935]
- 36. S. Mondal and G. P. Samanta, Physica A, **534**, pp. 122301, 2019. [Impact Factor: 2.924]
- K. Kar, D.Das, K. Pujaru, International Journal of Dynamics and Control, 8, pp. 792-804, 2019. [Impact Factor: 1.204]
- T. K. Kar, D. Pal and B. Ghosh, Journal of Theoretical Biology, 469, pp. 35-46. 2019. [Impact Factor: 2.327]
- 39. T. Bandyopadhyay and U. Debnath, Advances in High Energy Physics, pp. 5393491(1-12), 2019. [Impact Factor: 1.422]
- 40. U. Debnath, European Physical Journal C, **79**, pp. 499 (1-9), 2019. [Impact Factor: 4.389]
- 41. U. Debnath, Modern Physics Letters A, **35**, pp. 2050033 (1-15), 2019. [Impact Factor: 1.391]
- 42. U. Debnath, Modern Physics Letters A, **35**, pp. 2050070 (1-20), 2019. [Impact Factor: 1.391]
- 43. U. Debnath, European Physical Journal Plus, **135**, pp. 135 (1-22), 2020. [Impact Factor: 3.228]
- 44. U. Debnath, Gravitation and Cosmology, **26**, pp. 75-81, 2020. [Impact Factor: 0.88]
- 45. U. Debnath, European Physical Journal Plus, **135**, pp. 424 (1-12), 2020. [Impact Factor: 3.228]
- U. Debnath and K. Bamba, European Physical Journal C, 79, pp. 722 (1-14), 2019. [Impact Factor: 4.389]

#### ME

- A. Sharma, A. Tripathi, D. Narsimhachary, R.P. Mahto, J. Paul, Surf. Topogr. Metrol. Prop., 7, 2019, doi:10.1088/2051-672X/ab4826. [Impact Factor: 2.93]
- R.P. Mahto, C. Gupta, M. Kinjawadekar, A. Meena, S.K. Pal, J. Manuf. Process., 38, pp. 370–386, 2019, [Impact Factor: 4.580]
- R.P. Mahto, R. Kumar, S.K. Pal, Mater. Charact. 160, 2020, [Impact Factor: 3.562]
- R.P. Mahto, S.K. Pal, Friction Stir Welding of Dissimilar Materials: An Investigation of microstructure and nano-Indentation study, J. Manuf. Process. 55, pp. 103–118, 2020, [Impact Factor: 4.050]
- Md. P. Iqbal, A. Tripathi, R. Jain, R.P. Mahto, S. K. Pal, P. Mandal, Int. J. of Mechanical Sciences, 185(105882), 2020. [Impact Factor: 4.631]

- Sahu SK, R.P. Mahto, Pal K., J Mater Eng Perform, **1991**, pp. 1–8, 2020, [Impact Factor: 1.883]
- A.Pramanick, ParthaPratim Dey, P. Kr Das, Ceramics International, 46, pp. 2887-2894, 2020. [Impact Factor: 3.64]
- A. K. Rana, S. K. Paul, P. P. Dey, Journal of Materials Research and Technology, 8, pp. 3705-3712, 2019. [Impact Factor: 5.289]
- JA.ta Kumar Biswas, Swati Dey, S. Kumar Karmakar, Amit Roychowdhury and Shubhabrata Datta, Current Medical Imaging, 16, pp. 371-382, 2020. [Impact Factor: 0.812]
- Masud Rana, JA. Kumar Biswas, P. Biswas, S. K.Karmakar and A.Roychowdhury, Biocybernetics and Biomedical Engineering, Elsevier Publication, 40, pp. 415-425, 2020. [Impact Factor: 2.537]
- 11. P. K. Mondal and B.K. Mandal, Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 2019. [Impact Factor: 2.34]
- R. Roy and B.K. Mandal, Journal of Thermal Analysis and Calorimetry, **139**, pp. 3247-3261, 2019. [Impact Factor: 2.731]
- R. Roy, A. J. Bhowal and B. K. Mandal, Journal of Thermal Science and Engineering Applications, **12**, pp. 031024-36, 2020. [Impact Factor: 1.544]
- S. K. Saha, M. S. Emani, H. R. Ranjan, A. Bharti, IJHMT, Applied Thermal Engineering, **11**, pp. 6, 2020. [Impact Factor: 2.11]
- S. Sardar, S. K. Karmakar and D. Das, Friction, Springer Publication, 8, pp. 847-873, 2019. [Impact Factor: 3.45]
- S. Sardar, S. Kumar Karmakar and D. Das, Journal of Tribology, ASME, **141**, pp. 041602 - (1-22), 2019. [Impact Factor: 1.829]
- S. Sardar, S. K. Pradhan, S. K Karmakar and D. Das, Journal of Composite Materials, Sage Publication, 54, pp. 2577-2598, 2020. [Impact Factor: 1.972]
- S. Sardar, S. K. Pradhan, S. K. Karmakar and D. Das, Journal of Tribology, ASME, **141**, pp. 071601-(1-19), 2019. [Impact Factor: 1.829]
- S. Bhattacharya, S. Roy, M. Rana, S. Banerjee, S. Kumar Karmakar and J. A. Kumar Biswas, Journal of Mechanics in Medicine and Biology, **19**, pp. 1950017 -(1-15), 2019. [Impact Factor: 0.86]
- S. Tamang and S. Aravindan, Applied Thermal Engineering, 162(114250), 2019. [Impact Factor 4.725]

- 21. S. Tamang and S. Aravindan, Materials Letters, **254**, pp. 145-148, 2019. [Impact Factor 3.204]
- S. Tamang, N. Kumar and S. Aravindan, Key Engineering Materials, 821, pp. 222-228, 2019.[Impact Factor: 1.755]
- R. K. De and A. Ganguly, Journal of the Brazilian Society of Mechanical Sciences and Engineering, **41**: 393, pp.1-17, 2019.[Impact Factor: 1.755].
- R. K. De and A. Ganguly, International Journal of Air Conditioning and Refrigeration 27(2), pp. 1950018-1-13, 2019. [Impact Factor: 2.500]
- R. K. De and A. Ganguly, Thermal Science and Engineering Progress, **17**(1), pp.100488, 2020. [Impact Factor: 4.36]
- 26. S.K. Sahu, K. Pal, R.P. Mahto, P. Dash, Int. J. Adv. Manuf. Technol., 2019. [Impact Factor: 4.050]

#### MET

- A. Ghosh, M. Ghosh, R.Kalsar, Journal of Alloys and Compounds, 802, pp. 276-289, 2019. [Impact Factor: 4.65]
- 2. A. Ghosh, M. Ghosh, Materials Today: Proceedings, 2020. [Impact Factor: 0.97]
- A. Ghosh, M. Ghosh, A. Seikh, N. Alharthi, Journal of Materials Research and Technology, **900**, pp. 01-08, 2020. [Impact Factor: 5.289]
- A. Roy, S. Hembram, M. Ghosh, A. Majumdar, Materials Research Express, 7, pp. 01-11, 2020. [Impact Factor: 1.41]
- 5. A.P. Sekhar and D. Das, Metals and Materials International, 2019. [Impact Factor: 1.99]
- A.P. Sekhar and D. Das, Materials and Corrosion, 70, pp. 2052-2063, 2019. [Impact Factor: 1.533]
- A.P. Sekhar, A.B. Mandal and D. Das, Journal of Materials Research and Technology, **9**, pp. 1005-1024, 2020. [Impact Factor: 5.289]
- A.P. Sekhar, S. Nandy, K.K. Ray and D. Das, Journal of Materials Engineering and Performance volume, 28, pp. 2764-2778, 2019. [Impact Factor: 1.652]
- A. Choudhury, S. Pal, R.Naskar, A. B. mallick, Engineering Computations, **36**, pp. 1913-1933, 2019. [Impact Factor: 1.41]
- D. D. Majumdar, D.P. Mondal, M. Ghosh, A. Roychoudhury, Materials Science Forum, **941**, pp. 2047-2053, 2019. [Impact Factor: 0.35]

- D. Dutta Majumdar, D. P. Mondal, A. K. Jha, M. Ghosh and A. Roy Chowdhury, Procedia Manufacturing, **35**, pp. 833-839, 2019. [Impact Factor: 1.59]
- D. D. Majumdar, V. Kumar, A. Roychowdhury, D. P. Mondal, M. Ghosh, S. K.Nandi, Materialia, 9, pp. , 2020. [Impact Factor: 7.29]
- 13. G. Ananda, S. Sardar, A. Guha and D. Das, Materialstoday: Proceedings, 2020. [Impact Factor: 0.97]
- I. Dey, S. K. Ghosh and R. Saha, Journal of Materials Research and Technology, 8, pp. 2685-2698, 2019. [Impact Factor: 5.289]
- 15. N Mishra, C Shah, and K Das, Materials Science Forum, **978**, pp. 337 343, 2020. [Impact Factor: 0.35]
- 16. N. G. Roy, A. Ghosh, P. P. Dey, M. Ghosh, Materials Today: Proceedings, 2020. [Impact Factor: 0.97]
- N. K. Tewary, S. K. Ghosh, D. Chakrabarti & S. Chatterjee, Materials Science and Technology, **35**, pp. 1483-1496, 2019. [Impact Factor: 1.835]
- N. K. Tewary, S. K. Ghosh, R. Saha and S. Chatterjee, Philosophical Magazine, **99**, pp. 2487-2516, 2019. [Impact Factor: 1.778]
- S. Chakraborty, A. K. Gupta, D Roy, A Basumallick, Materials Letters, **257**, pp. 126739, 2019. [Impact Factor: 3.204]
- S Chatterjee, A. B. Mallick, Materials Science and Engineering Technology, 50, pp. 1459-1470, 2019. [Impact Factor: 0.744]
- S. Roy, D. Das and T.K. Roy, Journal of Electronic Materials, 48, pp. 5650-5661, 2019. [Impact Factor: 1.774]
- 22. S. Roy, T.K. Roy and D. Das, Ceramics International, **45**, pp. 24835-24850, 2019. [Impact Factor: 3.83]
- S. Sardar and D. Das, Metals and Materials International, 2019. [Impact Factor: 1.99]
- 24. S. Sardar, S.K. Karmakar and D. Das, ASME Journal of Tribology, **142**, pp. 31702, 2020. [Impact Factor: 1.829]
- S. Sardar, S.K. Karmakar and D. Das, ASME Journal of Tribology, **141**, pp. 41602, 2019. [Impact Factor: 1.829]
- S. Sardar, S.K. Pradhan, S. Karmakar and D. Das, Journal of Composite Materials, 54, pp. 2577-2598, 2020. [Impact Factor: 1.972]
- S. Sardar, S.K. Pradhan, S.K. Karmakar and D. Das, ASME Journal of Tribology, **141**, pp. 071601 (19 pages), 2019. [Impact Factor: 1.829]
- S. Sharma, G. Saha, M. Ghosh , Metallography, Microstructure, and Analysis, **9**, pp. 86-91, 2020. [Impact Factor: 1.080]

- 29. S.K. Basantia, A. Bhattacharya, N. Khutia and D. Das, Metals and Materials International, pp. , 2019. [Impact Factor: 1.99]
- S. K. Basantia, P. K. Prusty, D. Das and N. Khutia, Materialstoday: Proceedings, 2020. [Impact Factor: 0.97]
- S. Dey, R. K. Roy, A. B. Mallick, A. Mitra, A. K. Panda, Journal of Materials Science, 54, pp. 11292-11303, 2019. [Impact Factor: 3.553]
- T. Dutta, D. Das, S. Banerjee, S.K. Saha, S. Datta, Measurement, **137**, pp. 595-603, 2019. [Impact Factor: 3.364]
- A. Kumar, A. Al-Jumaili, K.Bazaka, P. Mulvey, J. Warner, MV Jacob Materials, **13(3)**, pp. 586, 2020. [Impact Factor: 3.057]
- A Al-Jumaili, P Mulvey, A Kumar, K Prasad, K Bazaka, J Warner, Scientific reports, 9 (1), pp. 1-16, 2019. [Impact Factor: 3.998]
- 35. A. Al-Jumaili, A. Kumar, K.Bazaka, MV Jacob Materials 12 (19), pp. 3099, 2019. [Impact Factor: 3.057]
- A. Bhattacharya, K. Mondal, C. S. Upadhyay, S.Sangal, Computational Materials Science, **173**: 109428, 2020. [Impact Factor: 2.863]
- A. Bhattacharya, K. Mondal, C.S. Upadhyay and S. Sangal, Computational Materials Science, 180,pp. 109718-13, 2020.[Impact factor: 2.863]
- N. K. Tewary, S. K. Ghosh, R. Saha and S. Chatterjee, Philosophical Magazine, **99**(20), pp. 2487-2516, 2019. [Impact Factor: 1.778]
- G. Mandal, S. K. Ghosh and S. Chatterjee, Archives of Metallurgy and Materials, 65(2), pp. 861-868, 2020. [Impact Factor: 0.733]
- G. Mandal, S. K. Ghosh, D. Chakrabarti and S. Chatterjee, Physics of Metals and Metallography, **121**(3), pp. 269-275, 2020. [Impact Factor: 1.187]
- N. K. Tewary, S. K. Ghosh, A. Mandal, D. Chakrabarti and S. Chatterjee, Metallurgical and Materials Transactions A, 51(9), pp. 4483-4498, 2020. [Impact Factor:1.874]
- 42. S. Ghosh, Thin Solid Films, **692**, pp. 137578, 2019. [Impact Factor 2.030]
- P.C. Singh and S. Ghosh, Surface Topography: Metrology and Properties, 8, pp. 025002, 2020.[Impact Factor: 2.93]
- S. Gupta, A. Banerjee, J. Sarkar, M. Kundu, S. K. Sinha, N. R. Bandyopadhyay, S. Ganguly, Materials Chemistry and Physics, **252**, 123286, 2020. [Impact Factor: 3.403]

- A. B. Siddique, V. P. Singh, A. K. Pramanick and M Ray, Materials Chemistry and Physics, **249**, pp. 122984, 2020.[Impact Factor: 3.408]
- B. Biswas, B. Hazra, A. Sarkar, N.R. Bandyopadhyay, B.C Mitra, A. Sinha, Polymer Composites, 40, pp. 2790-2801, 2019. [Impact Factor: 2.010]
- B. Biswas, P. Sawai, A. Santra, A. Gain, P. Saha, B.C.Mitra , N.R. Bandyopadhyay, A. Sinha, Cellulose, 26, pp. 4445–4461, 2019.[Impact Factor: 3.900]
- A. Pal, B. Biswas, A. Das, A. Chakraborty, P. Datta, A.R. Chowdhury, A. Sinha, Journal of Composite Materials, 54(3),pp. 287-298, 2019.[Impact Factor: 1.613]
- A. Sinha, P. P. Chattopadhyay, Journal of The Institution of Engineers (India): Series D, **100**, pp. 129-133, 2019. [Impact Factor:0.840]
- P. Nasker, A. Samanta, S. Rudra, A. Sinha, A. K. Mukhopadhyay, M. Das, Journal of the Mechanical Behavior of Biomedical Materials, **95**, pp. 136-142, 2019.[Impact Factor: 3.372]
- S. Sahoo, A. Sinha, M. Das, Journal of the Mechanical Behavior of Biomedical Materials, **102**, 103494, 2020. [Impact Factor: 3.372]
- 52. A. Dhara, D. Kr. Chanda, A. Nandi, A. Sinha, N.R. Bandyopadhyay, N.Mukherjee, Journal of Environmental Chemical Engineering, **8**, 103672, 2020.[Impact Factor:4.3]
- A. Sinha, A. Pal, A. Santra, S. Murmu, U.K. Ghorai, A.R. Chowdhury, D. Banerjee, Journal of The Institution of Engineers (India): Series D,101, pp. 223-232, 2020. [Impact Factor: 0.178]
- K. K. Sadasivuni, P. Saha, J. Adhikari, K. Deshmukh, M. B. Ahamed, J, J. Cabibihan, Polymer Composites, **41**,pp. 32–59, 2020. [Impact Factor: 2.010]

#### **MND SMSE**

- 1. S Ghosh, Thin Solid Films, **692**, pp. 137578, 2019. [Impact Factor: 2.030]
- 2. P.C. Singh and S. Ghosh, Surface Topography: Metrology and Properties, **8**, pp. 025002, [Impact Factor: 2.93]
- S. Gupta, A. Banerjee, J. Sarkar, M. Kundu, S. K. Sinha, N.R. Bandyopadhyay, S. Ganguly, Materials Chemistry and Physics, **252**, pp. 123286, 2020. [Impact Factor: 3.408]
- S. Chakraborty, A.K. Gupta, D. Roy, A. BasuMallick, Materials Letters, **257**, pp. 126739, 2019. [Impact Factor: 3.019]

- A. B. Siddique, V. P. Singh, A. K. Pramanick and M Ray, Materials Chemistry and Physics, **249**, pp. 122984, 2020. [Impact Factor: 3.408]
- B. Biswas, B. Hazra, A. Sarkar, N.R. Bandyopadhyay, B.C Mitra, A. Sinha, Polymer Composites, 40, pp. 2790-2801, 2019. [Impact Factor: 2.010]
- B. Biswas, P. Sawai, A. Santra, A. Gain, P. Saha, B.C.Mitra , N.R. Bandyopadhyay, A. Sinha, Cellulose 26, pp. 4445–4461, 2019. [Impact Factor: 3.90]
- A. Pal, B. Biswas, A. Das, A. Chakraborty, P. Datta, A.R. Chowdhury, A. Sinha, Journal of Composite Materials, 54(3), pp. 287-298, 2019. [Impact Factor: 1.63]
- A. Sinha, P. P. Chattopadhyay, Journal of The Institution of Engineers (India): Series D, **100**, pp. 129-133, 2019. [Impact Factor: 0.840]
- P. Nasker, A. Samanta, S. Rudra, A. Sinha, A. K. Mukhopadhyay, M. Das, Journal of the Mechanical Behavior of Biomedical Materials, **95**, pp. 136-142, 2019. [Impact Factor: 3.372]
- S. Sahoo, A. Sinha, M. Das, Journal of the Mechanical Behavior of Biomedical Materials, **102**, pp. 103494, 2020. [Impact Factor: 3.372]
- A. Dhara, D. Kr. Chanda, A. Nandi, A. Sinha, N.R. Bandyopadhyay, N.Mukherjee, Journal of Environmental Chemical Engineering, 8, pp. 103672, 2020. [Impact Factor: 4.300]
- A. Sinha, A. Pal, A. Santra, S. Murmu, U.K. Ghorai, A.R. Chowdhury, D. Banerjee, Journal of The Institution of Engineers (India): Series D, **101**, pp. 223-232, 2020. [Impact Factor: 0.840]
- K. K. Sadasivuni, P. Saha, J. Adhikari, K. Deshmukh, M.B. Ahamed, Polymer Composites, **41**, pp. 32– 59, 2020. [Impact Factor: 2.010]
- 15. S Basu, Md. Nazmul Alam, Swarnavo Basu, Himadri S. Maiti, '8YSZ Carbonate composite electrolyte-conductivity enhancement' Journal of Alloys and Compound 816 (2020)152161.

#### Mining

- A. Mukherjee, P. Dutta, Journal for Science and Engineering, 44, pp. 10421-10431, 2019. [Impact Factor: 1.711]
- M. Chowdhury and P.K. Paul, Environment Development and Sustainability, **22**, pp. 5849-5871, 2019. [Impact Factor: 2.191]
- P. Dutta, A. Chatterjee, S. Bhowmik, Journal of CO2 Utilization, **39**, pp. 101150, 2020. [Impact Factor: 5.993]

- 4. S. Banerjee, N. C. Dey, Journal of Mines, Metals and Fuels, **68**, pp. 5-10, 2020. [Impact Factor: 0.06]
- P. Mukhopadhyay, N. C. Dey, Journal of The Institution of Engineers (India): Series C,100, pp. 59-64, 2019. [Impact Factor: 0.178]
- P. Mukhopadhyay, N. C. Dey, International Journal of Medical and Health Sciences, 13, pp. 111-117, 2019. [Impact Factor: 5.796]
- S. Dey, N. C. Dey, Journal of Mines, Metals and Fuels, 67, pp. 489-493, 2019. [Impact Factor: 0.06]
- 8. P. Mukhopadhyay, N. C. Dey, Journal of Mines, Metals and Fuels, **67**, pp. 385-390, 2019. [Impact Factor: 0.06]
- 9. N. C. Dey, S. Banerjee, Journal of Mines, Metals and Fuels, **67**, pp. 232-240, 2019. [Impact Factor: 0.06]
- P. Mukhopadhyay, N. C. Dey, Journal of Mines, Metals and Fuels, 67, pp. 292-298, 2019. [Impact Factor: 0.06]
- 11. A. Mukherjee and P. Dutta, Arabian Journal for Science and Engineering , 44 (12), pp. 10421-10431, 2019. [Impact Factor: 1.711]

#### **Physics**

- A. Nandi, S. Mandal, S. Ghosh, S. Dhar, S. Majumdar, H. Saha, S. M. Hossain, IEEE Journal of Photovoltaics, 9(1), pp. 12-17, 2019. [Impact Factor: 3.736]
- A. Nandi,S. Dhar, S. Majumdar, H. Saha,S. M. Hossain, Global Challenges, **1800109**, pp. 1-5, 2019. [Impact Factor: 4.306]
- J. R. Sharma, P. Banerjee, S. Mitra, H. Ghosh, S. Bose, G. Das, S. Mukhopadhyay, Journal of Materials Science: Materials in Electronics, **30**(12), pp. 11017-11026, 2019. [Impact Factor: 2.078]
- 4. J. R. Sharma, G. Das, A. B. Roy, S. Bose, S. Mukhopadhyay, Silicon, pp. 1-12. [Impact Factor: 1.246]
- J. R. Sharma, D. Saha, A. B. Roy, G. Das, S. Patra, A. K. Barua, S. Mukhopadhyay, Springer Proceedings in Physics, 215(55), pp. 361-366, 2019. [Impact Factor: 0.30]
- S. Bose, S. Mandal, A. K. Barua, S. Mukhopadhyay, Journal Of Materials Science-Materials In Electronics, **30**(3), pp. 2622-2629, 2019. [Impact Factor: 2.078]
- T. Sarkar, A. Bhattacharjee, H.Samanta, K. Das, K. Bhattacharya, H. Saha, Energy Conversion and Management, **191**, pp. 102-118. [Impact Factor: 7.181]
- G. Das, S. Bose, S. Mukhopadhyay, C. Banerjee, A. K. Barua, Silicon, **11**(1), pp. 487–493, 2019. [Impact Factor: 1.246]

- G. Ahmad, G. Das, J. N. Roy, Journal of Materials Science: Materials in Electronics, 2019. [Impact Factor: 2.078]
- S. Mitra, H. Ghosh, H. Saha, K. Ghosh, I E E E Transactions On Electron Devices, 66(3), pp. 1368-1376, 2019. [Impact Factor: 2.62]
- G. Ahmad, G. Das, J. N. Roy, Journal of Materials Science: Materials in Electronics, pp. 12415, 2019. [Impact Factor: 2.078]
- A. Roy, P. Majumdar, P. Sengupta, S. Kundu, S. Shinde, A. Jha, K. Pramanik, HiranmaySaha, Electrochimica Acta, **329**, 2019. [Impact Factor: 6.216]
- 13. Saheli Sengupta, S. Sengupta, H. Saha, IEEE J. Photovoltaics, 10(4), 2020. [Impact Factor: 3.736]
- N. C. Mandal, S. Biswas, S. Acharya, T. Panda, S.Sadhukhan, J. R. Sharma, A. Nandi, S. Bose, A. Kole, G. Das, S.Maity, P. Chaudhuri, H.Saha, M a t e r i a l s Science in Semiconductor Processing, **119**, pp. 105163, 2020. [Impact Factor: 2.82]
- N. C. Mandal, S. Acharya, S. Biswas, T. Panda, S.Sadhukhan, J. R. Sharma, S. Bose, G. Das, A. Kole, A. Nandi, S.Maity, P. Chaudhuri, H.Saha, S. Guha, Applied Physics A, **126**, pp. 569, 2020. [Impact Factor: 1.784]
- A. Maity, S. Jana, S. Ghosh and S. Sharma, Journal of Non-Crystalline Solids, 550, pp. 120322, 2020. [Impact Factor: 2.929]
- A.Nandi, P.Nag, D.Panda, S.Dhar, S.M.Hossain, H.Saha, S.Majumdar, ACS Omega, **4**, pp. 11053-11065, 2019. [Impact Factor: 2.87]
- B.Das, S. M. Hossain, B. Pakhira, A. K.Pramanick, R. Das, M. Ray, Semiconductor science and technology, 35, pp. 35003, 2020. [Impact Factor: 2.654]
- S. Biswas, A. Nandi, S. Mukhopadhyay, P. Chaudhury, H. Saha, S.M.Hossain, Applied Surface Science, **494**, pp. 326-334, 2019. [Impact Factor: 6.182]
- S. Chakrabarty, G. Das, M.Ray, S. M. Hossain, Journal of Applied Physics, **127**, pp. 85708, 2020. [Impact Factor: 2.328]
- S.Maity, P.Panchadhyayee, B.B.Das, S.M.Hossain, Physics Education, 54, pp. 35005, 2019. [Impact Factor: 0.58]

#### SOCSAT

- S. Majumdar, A. Naha, D.K.Bhattacharyya and J. Bhowal, Journal of Biomass and Bioenergy, **125**, pp. 169-179, 2019. [Impact Factor: 3.551]
- S. Majumdar, B. Goswami, A. Chakraborty,D.K. Bhattacharyya and J. Bhowal, Preparative Biochemistry and Biotechnology, **49**, pp. 935-948, 2019. [Impact Factor: 1.23]
- S. Sengupta, D.K. Bhattacharyya, R. Goswami and J. Bhowal, Journal of the Science of Food and Agriculture, 99, pp. 5808-5818, 2019. [Impact Factor: 2.614]
- S. Sengupta, H. Koley, S. Dutta and J.Bhowal, Nutrition, 63, pp. 36-44, 2019. [Impact Factor: 3.639]

#### SOMR

- T. S. Sarkar, S. Das, B. Chakraborty, and H. S. Dutta, IEEE Sensors Journal ,19-7, pp. 2474-2481, 2019. [Impact Factor: 3.076]
- S. Das, S. Nayak, B. Chakraborty, and S. Mitra, Sensors & Actuator A: Physical, Elsevier, **297**, pp. 1-7, 2019, [Impact Factor: 2.904]

### **Appendix II**

#### All Department Book & Book Chapters List

#### Book Written (10)

#### CST

N. Sengupta and J. Sil, Intrusion Detection- A Data Mining Approach, Springer, 2020.

S. Basu, S. Roy and S. Das Bit, Reliable Post-Disaster Services over Smartphone based DTN: An End-to-End Framework,¢, Smart Innovation, Systems and Technologies Series, Springer, 2019.

S. Bhattacharyya, I. Pan, S. De, E. Behrman, S. Chakraborty, Quantam Machine Learning, DE GRUYTER, (BERLIN/ BOSTON), 2020.

#### EE

D. Mondal, A. Chakrabarti, A. Sengupta, Power System Small Signal Stabilty Analysis and Control, Elsevier (Academic Press, International Publication), 2020.

C. Kumar, S. Banerjee, D. Maity, Impact of Shunt Capacitor and DERs in Distribution Networks, Lambert Academic Publishing (International), 2019.

S. Chanda and A. De, Optimal Utilization of Smart Grid Resources to Offer Social Welfare - Theory, Concept and Implementation, GRIN Verlag, Munich, Germany, 2019.

#### IT

R. Naskar, V. U. Sameer, R. Dixit and J. Bakas, Digital Forensic: Current Trends and Practices Studium Press (India), 2019.

#### MATH

T. K. Kar and S. Jana, Fundamental Engineering Mathematics (CSE & IT), Santra Publication Pvt. Ltd., 2019.

#### ME

S. K. Saha, H. R. Ranjan, M. S. Emani, A. Bharti, Heat Transfer Enhancement, Springer Brief, 2020.

#### **Books Edited (9)**

#### CE

D. Mazumder, C. Majumder and A. Adak, Proceedings of peer-reviewed extended abstracts for National Conference on Sustainable Advanced Technologies for Environmental Management (SATEM-2019), December, 2019.

A. Adak, S. K. Deb, S. Mitra, A. Halder, S. K. Roy, P. Sengupta, K. K. Bhar, S. K. Dalui and S. Chakraborty, Proceedings of Peer-Reviewed Abstracts for Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies (CRSIDE2020), Thinker, March, 2020.

P. Samui, D. T. Bui, S. Chakraborty, R. C. Deo, Handbook of Probabilistic Model, Elsevier Sc., Imprint: Butterworth-Heinemann, September, 2019.

D.Mazumder, C. Majumder and A. Adak, Special Issue of SATEM-2019, Indian Chemical Society, April, 2020.

D. Mazumder, C.Majumder and A. Adak, Special Issue on Innovative Technologies for Industrial Waste Management, Indian Chemical Society, September, 2020.

#### HSS

R. B. Mallik, Advisory Editorial Board Member, Contemporary issues in Accounting and Finance: A Peer Reviewed Edited Volume, Indian Academic Researchers Association, 2019.

#### MATH

T. K. Kar and S. Jana, Fundamental Engineering Mathematics-Probability & Statistics Sem-II (CSE & IT) & Sem-III (ECE& BME), Santra Publication Pvt Ltd., January, 2020.

T. K. Kar and S. Jana, Fundamental Engineering Mathematics, (Sem II, all Streams except CSE and IT), Santra Publications Pvt Ltd., January, 2020.

#### ME

S K Saha, International Communications Heat Mass Transfer, Elsevier, 2020.

#### Book Chapters (71)

#### AE&AM

P. Kumar, Advances in Engineering Research, An Overview on the Combustion Theories and Numerical Simulations for the Prediction of Burning rate of Solid Propellants, NovaScience Publishers, pp. 87-123 Scopus November, 2020.

G. K. Bose, P. Ghosh and D. Pal, Process Analysis, Designand Intensification in Microfluidics and Chemical Engineering, Analytical and Numerical Modelling of Liquid Penetration in a Closed Capillary, IGI Global, pp. 114-135, 2019.

#### ARCH T & RP

R. Ray and P. Mukhopadhyay, Encyclopedia of Renewable and Sustainable Materials, vol. 4, Study of Junctions with Bamboo: An Attempt towards their Classification Oxford: Elsevier, Scopus, pp. 205-210, January, 2020.

S. Das, Annual Tech. Vol 2019 of Arch. Engg. Div. on Sustainable ArchitecturalEngineering: Materials and Technology, Use of BIM and prefabrication to improve environmental sustainability of affordable housing in India Institute of Engineers (India), pp. 121-128, 2019.

A. Mohanta, R.N. Mohanty & S. Das, Into Design for a Connected World Technical issues of using BIM: East Indian architects perspective, Springer, pp. 565-574, 2019.

K. Mitra, Perception, Design and Ecology of the Built Environment, Design for Resilience: Traditional Knowledge in Disaster Resilience in the Built Environment, Springer Geography, 149-166, January, 2020.

R.Das, S.Nag and K.Mitra, Perception, Design and Ecology of the Built Environment.Urban Transformations of Residential Settlements in Colonial Towns: Case Study of Chandernagore and Serampore, Springer Geography, pp. 23-50, January, 2020.

S. Mitra and M. Sadhukhan, Perception, Design and Ecology of the Built Environment - A Focus on the Global SouthSpatial Growth of Religious Architecture: Case of Indian Temples, Springer Geography, pp. 401-425, March, 2020.

S. K. Paul, A. Chatterjee and S. Roy, Perception, Design and Ecology of the Built Environment - A Focus on the Global South Issues and Challenges for Transit-Oriented Development in the Scenario of a Developing Country: The Case of Kolkata Metropolitan Area, India, Springer, Scopus, pp. 65-90, January, 2020.

#### CE

D. Bhattacherjee and B.V.S Viswanadham, Lecture notes in Civil Engineering (ISBN: 978-981-13-6712-0).Use of hybrid geosynthetics in mitigating rainfall induced slope instability, In: Geotechnics for Transportation Infrastructure, Springer, Singapore, pp. 689-702, 2019.

D. Bhattacherjee and B.V.S Viswanadham, Ground Improvement Techniques (ISBN: 978-981-15-9987-3). Lecture notes in Civil Engineering, Centrifuge Modelling of Marginal Soil Slopes under Rainfall with Hybrid Geosynthetic Inclusions Springer, Singapore, 2020.

S. Kumar, A. Kalamdhad, A .Ghangrekar, Sustainability in Environmental Engineering, Removal of Arsenic V contaminant by fixed bed column study by Graphene oxide manganese iron (Go-Mn-Fe), pp. 225-236, Springer, 2019.

A. Das and A K. Bera, Geotechnical Characterization Modelling, Lecture notes in Civil Engineering 85 Study on Effect of Tie Length on Uplift Capacity of Anchor With Geotextile Tie Using Finite Element Software ABAQUES, Scopus, Springer Nature Singapore Pvt Ltd. pp.215-218, 2020.

A. Das and A. k. Bera Advances in Sustainable Construction Materials and Geotechnical Engineering, Lecture note in Civil Engineering, 35Numerical Investigation of Uplift Behaviour of BellShaped Anchor in cSoilSpringer Nature Singapore Pvt. LTD., pp. 141-151, 2020.

S Patra and A K Bera, Geotechnical Characterization and Modelling, Lecture notes in Civil Engineering, 85Determination of Top Granular Layer Thickness for JGT Reinforced Low Volume Rural Road Based on FE Analysis, Springer Nature Singapore Pvt Ltd., Scopus,pp. 723-740, 2020.

S. Patra and A.K.Bera, Soil Dynamics and Earthquake Geotechnical Engineering, Lecture Series in Civil Engineering,15 Field and Numerical Investigation on Time Dependent Behabiour of Jute Geotextile (JGT) Reinforced Rural Road. Springer Nature Singapore Pvt Ltd. Scopus, pp. 207-216, 2019.

S. Chakraborty, Atin Roy, Shyamal Ghosh, Swarup Ghosh, Risk Based Technologies, Metamodeling-Based Reliability Analysis of Structures Under Stochastic Dynamic Loads with Special Emphasis to Earthquake. Springer Nature Singapore Pte Ltd., 2019.

S. Mandal, S.K. Dalui, S K, S. Bhattacharjya, Advances in structures, systems and materials, Lecture notes on multidisciplinary industrial engineering, Springer Nature, Singapore, 2020,https://doi.org/10.1007/978-981-15-3254-2\_10, ISBN 978-981-15-3253-5 ISBN 978-981-15-3254-2 (eBook), Effect of aerodynamic modifications on a tall building with horizontal irregularity, springer Nature, pp. 99-107, April, 2020. A. K. Bairagi and S. K. Dalui, Advances in structures, systems and materials, Lecture notes on multidisciplinary industrial engineering, Springer Nature, Singapore, 2020, https://doi. org/10.1007/978-981-15-3254-2\_3, ISBN 978-981-15-3253-5 ISBN 978-981-15-3254-2 (eBook), Spectral Density at Roof of Setback Tall Building Due to Time Variant Wind Load, Springer Nature, pp. 21-29, April, 2020.

D. Mukherjee, S. Das, P. Saha, S. K. Roy, Lecture Notes in Intelligent Transportation and InfrastructureAnalysis of Pedestrian Movements on Sidewalks: A Case Study in Kolkata, India, Springer, pp.99-111, January, 2020.

S. Basu, P. SahaLecture Notes in Intelligent Transportation and Infrastructure, Assessment of Crash Risks at Highway Access Points with Restricted Sight VisibilitySpringer, pp. 76-88, January 2020.

S. Basu, A. Datta, S. Mondal, P. Saha, Lecture Notes in Networks and Systems, Reliability-Based Safety Assessment of Mixed Vehicular Traffic Under the Influence of Time-of-Day.

T. Das, S. Bhattacharjya. Optimization Methods for Engineering Problems, Apple Academic Press Book, Application of efficient Moving Least Squares Method on Robust Design Optimization, Apple Academic Press Book, 2020, Accepted, Springer Scopus, pp. 197-210, March 2020.

G. Datta, S. Bhattacharjya, Recent Advances in Computational Mechanics and Simulations - Select Proceedings of the 7th ICCMS, Book series- Lecture notes in Civil Engineering, DUAL POLYNOMIAL RESPONSE SURFACE BASED ROBUST DESIGN OPTIMIZATION OF STRUCTURE UNDER STOCHASTIC BLAST LOAD, Springer Nature, 2020.

K. K. Moulick, A. Shiuly, S. Bhattacharjya, Water Resources: Current and Future Challenges and Research DirectionsRice Husk Ash Blended Cement Need of Dedicated Indian Standard CodalProvisionsISBN number: 978-81-941009-3-5, 2020.

M. Chanda, K. C. Misra, S. Bhattacharjya, Recent Advances in Theoretical, Applied, Computational and Experimental Mechanics. Lecture Notes in Mechanical Engineering, Fatigue Life Assessment of an Existing Railway Bridge in India Incorporating Uncertainty, Springer, Singapore, pp. 145-154, 2020.

R.Loganath and D.Mazumder, Sustainable Waste Management: Policies and Case StudiesDevelopment of a Simplified Mathematical Model for Anaerobic Digestion, Springer, pp. 571 – 578, 2020.

R.Loganath and D. Mazumder, Climate Impacts on Water Resources in India, Acclimation and Treatability Studies on Slaugter House Wastewater by Hybrid UASB Reactor, Springer, pp. 193-201, 2020.

#### CEGESS

G. Saini and R.P. Saini, Hydrological Extremes. Water Science and Technology, Performance Study of Cross Flow Hybrid Hydrokinetic Turbine, Springer, pp. 249-257, SCIE/SCOPUS, 2020.

#### Chemistry

S. K. Chattopadhyay, C. Das, An Introduction to Vanadium: Chemistry, Occurrence and Applications Vanadium dependent haloperoxidases and their model complexes: Structure, Spectroscopic properties and reactivity Nova Science Publishers Inc., New York, Scopus, pp. Mar-34, March, 2019.

S. Maity, A. Chatterjee and J. Ganguly, Green Approaches in Medicinal Chemistry for Sustainable Drug Design Stimuli responsive sugar-derived hydrogels: a modern approach in Cancer biology, Elsevier, pp. 616-649, 2020.

#### CHST

A. Chakraborty, D. Nandan Tibarewala, Ananya Barui Bioelectronics and Medical Devices Impedance-based biosensors Woodhead Publishing Series in Electronic and Optical Materials, 2019.

J.Bhuyan and S. Sarkar, Bioinspired Models of Mo and W-Enzymes in CO2 Reduction, Bioinspired Chemistry: From Enzymes to Synthetic Models ed. Marius Réglier; in Series on Chemistry, Energy and the Environment eds. Karl M Kadish and Roger Guilard, World Scientific Publishing Co Pte Ltd., Chapter 6, 123–153, DOI: 10.1142/9789813274440\_0006, 2019.

S. K. Sonkar, S. Sarkar, Nanocarbon and its Composites; Preparation, Properties, and Applications; Prospects of nanocarbons in agriculture, Nanocarbon and its Composites Edited by Anish Khan, Mohammad Jawaid, Inamuddin& Abdullah Mohamed Asiri, WP, Elsevier, Chapter 8, 287-318. DOI: 10.1016/B978-0-08-102509-3.00008-0, 2019.

K. Sinha, R. Majumder, C. D. Mukhopadhyay, Simplified Detection of Serotonin by FET-Based Sensor. In: Ramkrishna D., Sengupta S., Dey Bandyopadhyay S., Ghosh A. (eds) Advances in Bioprocess Engineering and Technology. Lecture Notes in Bioengineering. Springer, Singapore. https://doi. org/10.1007/978-981-15-7409-2\_4, First Online 30 September 2020, DOI ISBN: 978-981-15-7408-5, 2020.

K. Sinha, S. S. Chaudhury, B.Ruidas, R. Majumder, T. K. Sur, P. K. Sarkar, and C. D. Mukhopadhyay. Role of Modern Biological Techniques in Evidence-Based Validation of Ayurvedic Herbometallic Preparations. Evidence-Based Validation of Traditional Medicine, [Springer Nature Singapore Pte. Ltd.] 978-981-15-8127-4, DOI 10.1007/978-981-15-8127-4, 2020.

S. S. Chaudhury, B.Ruidas, P. Kumar Sarkar and C. D. Mukhopadhyay. HirakBhasma: A Potential Herbometallic Antibacterial Drug Assessed by In Vitro Pre-Clinical Studies. Advanced studies in Experimental and Clinical Medicine: Modern trends and latest Approaches. [Apple Academy Press (AAP), USA]. ISBN: 9781771889063, 2020.

T. Pal, B. Ruidas, C. D. Mukhopadhyay, Modern Advancement of Nanotechnology Over Conventional Drug Therapies. In: Ramkrishna, 2020

D. Sengupta S., Dey Bandyopadhyay S., Ghosh A. (eds) Advances in Bioprocess Engineering and Technology. Lecture Notes in Bioengineering. Springer, Singapore. https://doi. org/10.1007/978-981-15-7409-2\_50, ISBN 978-981-15-7408-5.

P. Sengupta, K.Khanra, A. Roy Chowdhury, P. Datta, Labon-a-chip sensing devices for biomedical applications, Bioelectronics and Medical Devices, K. Pal et al, Editors, Woodhead Publishing, 2019, Pages 47-95.

#### CST

S. Maity and J. Sil, Hybrid Machine Intelligence for Medical Image Analysis Analysis of Human Bone Disorder Using Fuzzy and Possibility Theory, Springer Nature, SCI, pp. 119-156, 2020.

T.Bera, A. Das, J. Sil and A. K. Das, Emerging Technologies in Data Mining and Information Security, A survey on rice plant disease identification using image processing and data mining techniques, Springer, pp. 365-376, 2019.

H. Bhaumik, S. Bhattacharyya, S.Chakraborty, Machine Learning for Big Data Analysis Key frame Slection for video Indexing using Approximate In Minimal Spanning tree. DeGruyter (Germany), SCI, pp. 31-68, July, 2019.

#### EE

R.R. Pathak, A. Sengupta, Modelling and Simulation in Science, Technology and Engineering Mathematics: Advances in Intelligent Systems and Computing, Springer, 2019.

C. K. Chanda, D. Bose, Encyclopedia of Renewable and Sustainable Materials Challenges of Employing Renewable Energy for reducing Green House Gases (GHGs) and Carbon footprint, Elsevier, SCI, pp. 346-365, January, 2019.

C. K. Chanda, D. Bose, Encyclopedia of Renewable and Sustainable Materials Optimal, Operation of Renewable Distributed Generators (DGs) and its Environmental Benefits, Elsevier, pp. 619-627, January, 2019.

S. Ghosh, J. K. Das, C. K. Chanda, Energy Systems, Drives and Automations, A Unique Case Study on Real-Valued Cost Analysis of a Small Solar Plant, Springer, pp. 683-696, 2020. S. K. Tiwary, J. Pal, C. K. Chanda, Energy Systems, Drives and Automations ANN-Based Faster Indexing with Training-Error Compensation for MW Security Assessment of Power System, Springer, pp. 35-46, 2020.

D. Sarkar, M. Chakrabarty, A. De and S. Goswami, Computational Advancement in Communication Circuits and Systems - Lecture Notes in Electrical Engineering Emergency Restoration Based on Priority of Load Importance Using Floyd Warshall Shortest Path Algorithm, Springer, Scopus, pp. 59-72, July, 2019.

P. Das, S. Chanda S and A. De, Computational Advancement in Communication Circuits and Systems - Lecture Notes in Electrical Engineering Artificial Intelligence-Based Economic Control of Micro-grids: A Review of Application of IoT, Springer, Scopus, pp. 145-155, July, 2019.

R. Mukherjee and A. De, Innovations in Electrical and Electronic Engineering. Lecture Notes in Electrical Engineering (LNEE) Transient Stability-Based Security State Classification of Power System Networks Using Kohonen Neural Network Springer, Scopus, pp. 49-59 July, 2020.

#### ES

B.P. Mukhopadhyay, Janmadwishotoborse Bidyasagar, Unish Shotoker Bangali Samaj o Ishwarchandra Bidyasagarer Juktibadi Bhabna Ananda Publishers, pp. 115-145, September, 2020.

 B. P. Mukhopadhyay, Jal niyejantrana Jal niyekichukotha, National Book Agency Private Limited, pp. 7-38, September, 2019

A. Bera, B. P. Mukhopadhyay, S. Biswas, Gully Erosion Studies from India and Surrounding Regions Assessment of Gully Erosion and Estimation of Sediment Yield in Siddheswari River Basin, Eastern India, Using SWAT Model, Springer Nature, Switzerland, pp. 279-293, 2019

#### ETC

D. Acharyya and P. Bhattacharyya, Functional Nanomaterials: Advances in Gas Sensing Technologies Functionalization of Graphene and its Derivatives for Developing Efficient Solid-State Gas Sensors: Trends and Challenges, Springer Nature Pte. Ltd. SCI, UK, 2020

D. Dutta, S. Agarwal, V. Kumar, M. Raj, B. Ray and A. Banerjee, VLSI Design and Test Design of Current Mode Sigmoid Function and Hyperbolic Tangent Function, Springer Nature Singapore Pte Ltd, Scopus, pp. 47-60, August, 2019

#### HSS

S. Bandyopadhyay, Social Movements - concepts, experiences and concerns, The Dynamic Triad: State, Market and Social Movement, SAGE Publishing, pp. 52-63, January, 2020

#### IT

A. Banerjee and S. P. Maity, Green Engineering and Technology: Innovations, Design and Architectural ImplementationOn Energy Harvesting in Green Cognitive Radio Networks, Green Engineering and Technology: Innovations, CRC Press, T & F Group, Scopus, 2020

Sk. R. Islam, R. Sinha, S. P. Maity and A. K. Ray, Machine Learning for Healthcare Applications, Deep Learning on Symptoms in Disease Prediction, Scopus, Wiley, 2020

A. Paul and Santi P. Maity, Advances in Intelligent Computing, Studies of Computational Intelligence Differential Evolution in PFCM Clustering for Energy Efficient Cooperative Spectrum Sensing, Springer, Scopus, pp. 77-101, 2019.

S. Chinara, R. Naskar, J. Bakas, S. N. Mishra Dr. S. Pal, Dr. V. Diaz, Dr. D-N Le (Ed.), "IoT: Security and Privacy Paradigm (Chapter-12, pp. 257)", Illegitimate EPR Modification: A major threat in IoT based healthcare system and its remedy through blind forensic measures CRC Press, Taylor and Francis Group, pp. 257, 2020.

#### Math

M. Chowdhury, P. Das, Mathematical Analysis and Applications in Modeling Global Exponential Stability of Non-autonomous Cellular Neural Network Model with Time Varying Delays, Springer Nature Singapore Pte Ltd. 2020, pp. 187-196, March, 2020.

P. Das, S. Mukherjee and P. Das, Recent Advances in Intelligent Information Systems and Applied Mathematics Dynamics of Effector -Tumor- Interleukin-2 Interactions with Monod-Haldane Immune Response and Treatments Springer Nature Switzerland AG 2020, pp. 598-609, February, 2020.

S. Moi, S. Biswas, and S. Pal(Sarkar), Neutrosophic Operational Research: Methods and Applications Neutrosophic linear differential equation with a new concept of neutrosophic derivative, Springer Nature, Scopus, 2020. M. Rahaman, S. P. Mondal, S. Alam, A. Ahmadian, , S. Salahshour, Advances in Intelligent Systems and Computing Application of fractional calculus on the inventory control problem, Springer Nature, 2020.

#### MET

M. Ghosh, A. Ghosh and A. Roy Reference Module in Materials Science and Materials Engineering Renewable and Sustainable Materials in Automotive Industry Elsevier, Chapter no. 11461, page 1-18 April, 2019.

M. Ghosh, A. Ghosh and A. Roy, H. Kumar, and G. Saha, Green Approaches in Chemistry for Sustainable Drug Design, Antibacterial and Antimicrobial Coating on Metal Substrate by Cold Spraying: Present and Future Perspective Elsevier, Chapter 2, pp. 15-45, 2020.

D. Das and K.K. Ray Encyclopedia of Iron, Steel, and Their Alloys, Cryogenic Treatment CRC Press, Taylor & Francis Group.

#### Mining

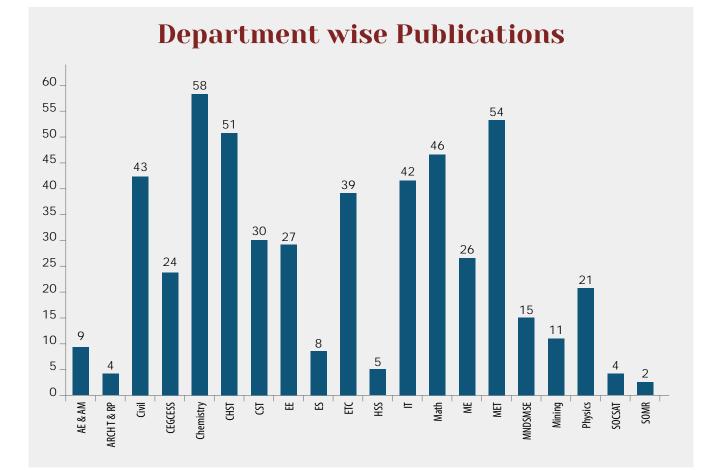
A. Mukhopadhyay, S. De, and M. Assadi, Sustainable Energy Technology and Policies, Role of Carbon capture and storage in meeting the climate mitigation target, Springer.

#### MND SMSE

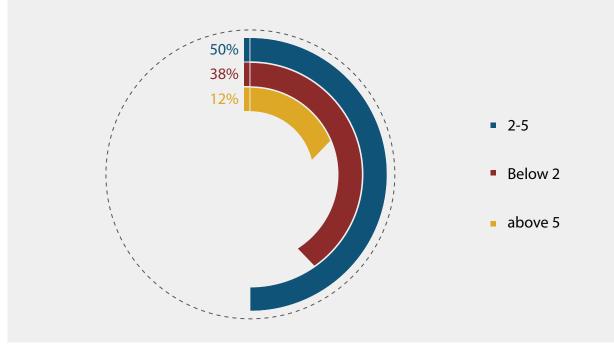
A. Biswas, N.R. Bandyopadhyay, A. Sinha, *Mechanical and Dynamic Mechanical Properties of Unsaturated Polyester Resin-Based Composites*, in: Sabu Thomas, Mahesh Hosur, Cintil Jose Chirayil (Eds.), Unsaturated Polyester Resin: Fundamentals, Design.

#### SOMR

G. Roy, H. J. Saji, S. Das, S. Bhaumik, Modeling and Control of Electric Linear Actuator for Driving Knee Joint of a Lower Body Exoskeleton IGI Global, 1-300, 2020.



Impact Factor wise publications pie chart





## Annual Accounts 2019-20

BALANCE SHEET AS ON 31ST MARCH, 2020

			Amount in Rupees
Sources of Funds	Schedule	Current Year	Previous Year
Corpus/Capital Fund	1	2,347,320,330	2,431,328,059
Designated/Earmarked/Endowment Funds	2	799,061,207	277,500,576
Current Liabilities & Provisions	3	506,849,213	445,814,699
Total		3,653,230,751	3,154,643,333

Application of Funds	Schedule		Current Year	Previous Year
Fixed Assets	4		1,440,066,183	1,307,296,551
- Tangible Assets		1,398,950,247		-
- Capital Work in Progress		-		
- Intangible Assets		41,115,936		-
Investments from Earmarked/Endowment Funds	5		718,141,219	231,890,763
- Long Term		692,769,040		
- Short Term		25,372,179		
Investments - Others	6		13,407,756	383,719,404
Current Assets	7		1,414,732,594	1,179,362,859
Loans, Advances & Deposits	8		66,882,998	52,373,755
Total			3,653,230,751	3,154,643,333

Contingent Liabilities and Notes to Accounts 24	Contingent Liabilities and Notes to Accounts	24
---	--	----

Dy. Registrar (Finance)

Registrar

Director

(D. Bandhopadhyay) Proprietor M.No - 057861 Debasis Bandyopadhyay & CO. Chartered Accountants

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2020

			Amount in Rupee
Particulars	Schedule	Current Year	Previous Year
INCOME			
Academic Receipts	9	219,863,725	221,283,432
Grants/Subsidies	10	1,343,301,977	1,210,942,813
Income from Investments	11	3,160,590	24,336,222
Interest earned	12	27,010,053	16,536,813
Other Income	13	26,167,684	21,084,409
Prior Period Income	14	13,122,569	6,586,654
Total (A)		1,632,626,597	1,500,770,343
EXPENDITURE			
Staff Payments & Benefits (Establishment expenses)	15	1,015,332,673	910,308,298
Academic Expenses	16	203,249,284	197,966,682
Administrative Expenses	17	119,129,352	120,455,129
Transportation Expenses	18	1,074,077	1,191,615
Repairing & Maintenance	19	35,202,088	22,020,319
Depreciation		157,984,283	132,706,976
Finance Costs	20	218,790	38,207
Other Expenses	21	212,798	-
Prior Period Expenses	22	2,755,082	2,429,230
Total (B)		1,535,158,426	1,387,116,456
Balance being excess of Income over Expenditure (A-B)		97,468,170	113,653,887
Transfer to/from Designated Fund			
Building fund			
Others (specify)			
Balance being Surplus/(Deficit) carried to Capital Fund		97,468,170	113,653,887

Significant Accounting Policies	23
Contingent Liabilities And Notes To Accounts	24

Dy. Registrar (Finance)

Registrar

Director

(D. Bandhopadhyay) Proprietor M.No - 057861 Debasis Bandyopadhyay & CO. Chartered Accountants

RECEIPTS AND PAYMENTS ACCOUNTS FOR THE YEAR ENDED 31st MARCH 2020

	Pacointe	Current Year	Previous Year		Payments	Current Year	mount in Rupees Previous Year
	Receipts	Current Year	Previous fear	1	-	Current fear	Previous fear
I	Opening Balances a) Cash Balances		6,650	1	Expenses a) Establishment	1,019,685,233	912,494,152
	a) Cash Balances	-	0,000		Expenses	1,019,085,233	912,494,152
	b) Bank Balances				b) Academic	199,786,791	196,880,039
	D) Dalik Dalances				Expenses	199,700,791	190,000,039
	i. in Current	92,395,599	135,244,258		c) Administrative	111,514,094	121,046,315
	Accounts	72,070,077	100,211,200		Expenses	111,011,071	121,010,010
	ii. Savings	487,052,850	390,096,273		d) Transporatation	1,074,077	1,191,615
	Accounts	107,002,000	0,0,0,0,2,0		Expenses	1,071,077	1,1,1,1,010
	iii. Howrah	-	255,847,174		e) Repairs &	34,270,699	22,014,537
	Treasury PF				Maintenance		
	c) Cheques in	-	-		f) Prior Period	-	115,149
	hand				Expenses		
					g) Other Expenses	218,788	-
	Grants Received				Payments against	1,724,709	1,794,673
					Earmarked/		
					Endowment Funds		
	a) From Govt. of	1,702,700,000	950,000,000				
	India						
	b) From State	-	-		Payments againsts	300,925,439	447,094,360
	Govt.				Sponsored/Scheme		
	c) From UGC-Non	-	-				
	Plan						
	d) Form Other	-	-	IV	Payments against	41,987,941	48,564,962
	Sources				Sporsored/		
	(Details)				Fellowship/		
					Scholarship		
	Academic Receipts	218,453,226	221,278,360	V	Investments and		
					Deposits made		
					a) Out of	6,129,396	6,524,917
					Earmarked/		
					Endowments Funds		
IV	Receipts against	13,406,971	23,867,505		b) Out of		
IV	Earmarked/	13,400,771	23,007,303		Own Funds		
	Endowment Funds				(Investments-		
					Others)		
V	Receipts againsts	309,639,723	658,715,209	VI	Term Deposits with	-	-
	Sponsored/Scheme				Schedule Banks		
VI	Receipts against	40,557,149	47,102,474	VII	Expenditure on		
	Sporsored/				Fixed Assets and		
	Fellowship/				Capital Works-in-		
	Scholarship				progress		
					a) Fixed Assets	182,665,086	174,529,052
VII	Income on				b) Capital Works-		
	Investments from				in-Progress		

RECEIPTS AND PAYMENTS ACCOUNTS FOR THE YEAR ENDED 31st MARCH 2020 (....Contd.)

_	Descripto	0	Dural V		Demonstra		Amount in Rupee
	Receipts	Current Year	Previous Year		Payments	Current Year	Previous Year
	a) Earmarked/ Endowment Funds	30,534,266	11,196,961				
	b) Other Investments	34,055	-	VIII	Other Payments including Statutory Payments	268,307,102	230,782,27
VIII	Interest Received on			IX	Refunds of Grants	-	
	a) Bank Deposits	1,209,375	1,444,148				
	b) Loans & Advances	-	-	Х	Deposit and Advances	50,647,644	26,497,13
	c) Savings Bank Accounts	27,010,053	16,536,813				
	d) Providend Fund	-	-	XI	Other Payments (including Finance Cost)		69,61
IX	Investments Encashed	-	35,013,560	XII	Other Payments (including prior period /write off)	-	
Х	Other Income (Including Prior Period Income)	17,884,392	20,059,709	XIII	Adjustment of Howrah Treasury PF a/c	-	236,909,01
				XIV	Closing Balances		
XI	Deposit and Advances	26,850,357	24,599,519		a) Cash Balances	-	
					b) Bank Balances		
XII	Miscellaneous Receipts including Statutory Receipts	293,137,313	214,947,638		i. in Current Accounts	145,373,022	92,395,59
					ii. Savings Accounts	896,555,308	487,052,85
XIII	Any Other Receipts	-	-		iii. Howrah Treasury PF	-	
					c) Cheques in hand	-	
	Total	3,260,865,329	3,005,956,252		Total	3,260,865,329	3,005,956,25

Dy. Registrar (Finance)

Registrar

Director

(D. Bandhopadhyay) Proprietor M.No - 057861 Debasis Bandyopadhyay & CO. Chartered Accountants

SCHEDULE - 1 CORPUS FUND / CAPITAL FUND

			Amount in Rupees
	Particulars	Current Year	Previous Year
	Balance at the beginning of the year	2,431,328,059	2,113,758,564
Add :	Contributions towards Corpus / Capital Fund	-	-
Add :	Grants from UGC, Government of India and State Government to the extent utilized for capital expenditure	208,337,632	173,259,615
Add :	Assets Purchased out of Earmarked Funds\Assets Purchased out of Sponsored Projects, where ownership vests in the institutions	62,559,692	30,785,736
Add :	Assets Donated / Gifts received	-	-
Add :	Other Additions / (Deletions - Transfer to Earmarked Fund - Sch 2)	(452,373,222)	(129,743)
Add :	Excess of Income over Expenditure transferred from the Income & Expenditure Account	97,468,170	113,653,887
	Total	2,347,320,330	2,431,328,059
Deduct :	Deficit transferred from the Income & Expenditure Account		
	Balance at the end of the year	2,347,320,330	2,431,328,059

Amount in Rupees

1,794,223 9,000,000 10,794,223 277,500,576

#### SCHEDULE - 2 DESIGNATED / EARMARKED / ENDOWMENT FUNDS

1 2

3

4

5

6

7

8

9

Previous Year

249,094,673

24,489,341

13,755,322

955,463

Fund wise A. Particulars B. Utilization / Expenditure towards objective funds breakup b) Additions d) Accrued e) Interest f) Other Total (A) i) Capital ii) Revenue a) Opening c) Income Total (B) Closing Expenditure Expenditure Transferred balance during the from interest on on additions balance at Savings year investments investments/ (specify to the year end Schedule (A-B) made of the advances Bank a/c nature) 3(a) funds Fund - NSS 357,338 370,598 59,446 59,446 311,152 13,260 Corpus Fund 452,373,222 22,306,095 474,679,317 474,679,317 - Future Development 27,962,130 118,613 197,071,410 380,493 196,690,918 Institutional 155,862,310 13,128,358 380,493 Development Fund Students' 315.862 28.947 344.809 116.940 116.940 227.870 Welfare Fund Corpus Fund 14,531,734 139,913 15,414,108 15,414,108 742,462 a/c Teqip Faculty 718,286 33,871 1,062 753,219 753,219 Development Fund - a/c Teqip 718.286 723,429 723.429 Equipment 4.081 1.062 Replacement Fund - a/c Teqip Maintenance 1,198,094 1,256 19,545,789 19,545,789 18,346,440 Fund - a/c Teqip Depreciation 7,501,996 499,925 2,962 8,004,883 8,004,883 Fund - a/c Teqip 10 Staff 8,596,157 573,101 8 9,169,266 9,169,266 Development Fund - a/c Teqip 11 Endowment 5,130,958 70,552,167 160,000 7,629,931 330,116 78,672,214 5,130,958 73,541,256 Funds Current Year 277,500,576 465,661,580 60,949,688 518,586 118,613 804,749,043 5,687,836 5,687,836 799,061,207

288,294,799

~	
G	
2	
0	
Ŧ	
<u></u>	
Ë	
AN	
ш	
Ş	
Ē	
S	
(5	
ž	
2	
Ш	
Ζ	
5	
ш	
Ч	
Ш	
E	
Ĕ	
E	
ž	
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY	
I	
9	
<b></b>	

# SCHEDULE - 2A ENDOWMENT FUNDS

Sub-schedule to support the figures in the column "Endowment Funds" in the schedule "Earmarked / Endowment Funds" forming part of the Balance Sheet

										Amo	Amount in Rupees
Sr.	Name of the Endowment	Opening	<b>Opening Balance</b>	Additions during the year	ing the year	P	Total	Expenditure		<b>Closing Balance</b>	0
No.		Endowment	Accumulated Interest	Endowment	Interest	Endowment (3+5)	Accumulated Interest (4+6)	on the object during the year	Endowment	Accumulated Interest	Total (10+11)
-	2	£	4	ß	9	7	œ	6	10	11	12
-	Von Newman Scholarship Fund	53,747	20,453		3,276	53,747	23,729		53,747	23,729	77,476
2	Dr. S. P. Brambha Memorial Merit Scholarship Fund	106,895	40,669		6,520	106,895	47,189		106,895	47,189	154,084
e	Prabir Sengupta Memorial Prize Fund	7,599	4,555		755	7,599	5,309		7,599	5,309	12,908
4	Renu Chakraborty V. L. Fund	55,737	22,466		3,344	55,737	25,810		55,737	25,810	81,547
വ	Dr. Fazlue Kader Memorial Scholarship Fund	115,629	70,812		11,472	115,629	82,284		115,629	82,284	197,913
9	J. N. Neogi Students' Benefit Fund	72,248	44,246		7,168	72,248	51,414		72,248	51,414	123,662
4	Sunita Memorial Prize Fund	15,407	9,435		1,529	15,407	10,964		15,407	10,964	26,371
ω	Dr. B. N. Dey Scholarship Fund	37,519	22,975		3,722	37,519	26,697		37,519	26,697	64,217
6	Kunja Kusum Scholarship Fund	77,444	29,466		4,724	77,444	34,190		77,444	34,190	111,634
10	Sanat Kanta Nirmalya Basini Biswas Golden Jubilee Scholarship Fund	20,087	8,092		1,204	20,087	9,296		20,087	9,296	29,383
1	Prof. N. N. Sen Memorial Scholarship Fund	39,432	15,008		2,404	39,432	17,412		39,432	17,412	56,844
12	Acharya P. C. Roy Scholarship	91,587	34,842		5,584	91,587	40,426		91,587	40,426	132,013
13	Ramlal Nandy & Ganoda Sundari Nandy Memorial Scholarship Fund	46,928	17,860		2,860	46,928	20,720		46,928	20,720	67,648
14	Liluah Iron Works Ltd. Scholarship	46,928	18,625		2,860	46,928	21,485		46,928	21,485	68,413
15	R & K Ahmed Merit Scholarship	56,769	21,601		3,460	56,769	25,061		56,769	25,061	81,830

_	
G	
<b>N</b>	
2	
Ξ	
IDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY	
9	
A	
Щ	
Z	
Щ	
SC	
5	
μį.	
Ë	
5	
E	
Ľ,	
<b>IUTE OF</b>	
Ë	
Ę	
E	
ź	
z	
IA	
P	

SCHEDULE - 2A ENDOWMENT FUNDS (... Contd)

Amount in Rupees

Sr.	Name of the Endowment	Opening Balance	Balance	Additions during the year	ing the year	I	Total	Expenditure		<b>Closing Balance</b>	
No.		Endowment	Accumulated Interest	Endowment	Interest	Endowment (3+5)	Accumulated Interest (4+6)	on the object during the year	Endowment	Accumulated Interest	Total (10+11)
-	2	£	4	ъ	9	7	œ	6	10	11	12
16	The President of India Gold Medal	56,769	(3,356)		3,460	56,769	104		56,769	104	56,873
17	Alumni Donation Seminar Series	352,521	204,817	1	33,031	352,521	237,848		352,521	237,848	590,369
18	Jogesh Chandra Banerjee Memorial Scholarship Fund	478,376	182,012		29,172	478,376	211,184		478,376	211,184	689,560
19	Anir Burnwal Memorial Merit cum Means Scholarship Fund	107,110	40,254		6,568	107,110	46,822		107,110	46,822	153,932
20	Jaya Smriti Puroskar (BESUS)	24,189	9,694	1	2,241	24,189	11,935	4,000	24,189	7,935	32,123
21	BEC (55) Scholarship Fund	281,033	180,727	1	23,286	281,033	204,013	1	281,033	204,013	485,046
22	BEC Sholarship	100,592	37,474	1	28,505	100,592	65,979	100,000	100,592	(34,021)	66,571
23	BECA - 1964	230,040	139,447	1	22,741	230,040	162,188	I	230,040	162,188	392,228
24	Prof. S. C. Dasgupta Gold Medal	143,098	58,768	I	14,309	143,098	73,077	8,545	143,098	64,532	207,630
25	Jaya Smriti Puroskar	21,374	11,085	1	2,041	21,374	13,126	I	21,374	13,126	34,500
26	Siddhananada Memorial Lecture	53,875	47,807	1	7,125	53,875	54,932	1	53,875	54,932	108,807
27	BESU Endowment Fund	5,000,000	2,180,663	1	485,972	5,000,000	2,666,635	1	5,000,000	2,666,635	7,666,635
28	Prabodh Chandra Mitra Scholarship Fund	153,625	29,904	I	6,150	153,625	36,054	20,000	153,625	16,054	169,679
29	Dhaibat Ghosh Memorial Scholarship	433,732	251,975	I	42,998	433,732	294,972	I	433,732	294,972	728,704
30	Prof. P. C. Mitra Memorial Award	51,458	(17,635)	I	5,119	51,458	(12,516)		51,458	(12,516)	38,943
31	Bijoy Ashu Chair Professor Fund	10,048,394	3,519,814	I	1,436,416	10,048,394	4,956,230	I	10,048,394	4,956,230	15,004,624
32	Prabodh Kumar Chatterjee Fund	194,000	30,931	T	7,700	194,000	38,631	I	194,000	38,631	232,631

E AND TECHNOLOGY
AND
SCIENCE /
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY
<b>U</b>
INSTITUTE OF
INDIAN

SCHEDULE - 2A ENDOWMENT FUNDS (... Contd)

Amount in Rupees

											VIIIOUIII III VUDGES
Sr.	Name of the Endowment	Opening	<b>Opening Balance</b>	Additions during the year	ing the year	P	Total	Expenditure		<b>Closing Balance</b>	
No.		Endowment	Accumulated Interest	Endowment	Interest	Endowment (3+5)	Accumulated Interest (4+6)	on the object during the year	Endowment	Accumulated Interest	Total (10+11)
٦	2	ĸ	4	2	9	7	80	6	10	11	12
33	Rai Sahib Amulya Chandra Mitra Endowment Fund	300,000	65,405	I	23,594	300,000	89,000	1	300,000	89,000	389,000
34	Rai Sahib Amulya Chandra Mitra Endowment Fund	200,000	164,894	1	9,240	200,000	174,134	1	200,000	174,134	374,134
35	S. C. Dasgupta Memorial Fund	1,100,000	858,009	1	125,055	1,100,000	983,064	1	1,100,000	983,064	2,083,064
36	Prabodh Kumar Chatterjee Fund	50,000	85,870	1	3,000	50,000	88,870	1	50,000	88,870	138,870
37	Madhusudan Bhattacharjee Memorial Fund	215,000	12,250	1	12,000	215,000	24,250	12,000	215,000	12,250	227,250
38	B. K. Bose Lecture Fund	225,000	56,989		1	225,000	56,989	1	225,000	56,989	281,989
39	Students Reward Programme Fund	1,650,000	128,215	T	000'66	1,650,000	227,215	60,000	1,650,000	167,215	1,817,215
40	Sougata Mukherjee Memo. Award for Excellence Fund	509,507	87,938		30,572	509,507	118,510		509,507	118,510	628,017
41	Suhas Choudry Swimming Excellence Prize Fund	122,132	(4,248)		8,164	122,132	3,916		122,132	3,916	126,048
42	Ujjal Dasgupta Scholarship Corpus Fund	1,361,590	93,854	•	91,006	1,361,590	184,860		1,361,590	184,860	1,546,450
43	GAABESU Admission Grant - 2	582,400	179,088		34,944	582,400	214,032	I	582,400	214,032	796,432
44	Prof A K Seal Gold Medal	100,000	17,314	'	9,256	100,000	26,570	8,545	100,000	18,025	118,025
45	BEC Prize	207,870	28,380		'	207,870	28,380	1	207,870	28,380	236,250
46	Students' Welfare Fund	455,000	(139,138)		28,947	455,000	(110,191)	344,810			T
47	Dastur Fund	2,105,000	(1,328,040)			2,105,000	(1,328,040)	776,960	1	I	1
48	TATA Steel Chair Professor	818,006	(98,926)			818,006	(98,926)	I	818,006	(98,926)	719,080
49	Corpus Fund - a/c Teqip	9,382,833	5,148,901		882,375	9,382,833	6,031,275	15,414,108			ı
50	Faculty Development Fund - a/c Teqip	518,576	199,710		34,933	518,576	234,643	753,219			

SCHEDULE - 2A ENDOWMENT FUNDS (... Contd)

81,550 Amount in Rupees 84,138 2,876,775 151,455 155,667 125,000 357,958 13,897,722 7,086,085 150,172 11,148,115 73,541,257 Accumulated Total (10+11) 12 **Closing Balance** 25,000 (8,545) 1,245,396 5,831,342 34,138 55,667 641,823 (49,828) (33,450) 176,775 10,426 19,339,717 Interest 11 50,000 54,201,540 115,000 160,000 8,066,380 100,000 100,000 9,902,719 2,700,000 347,532 6,444,262 200,000 Endowment 10 8,545 55,859,719 17,718 8,545 9,856 685,500 24,000 723,429 19,545,789 8,004,883 9,169,266 160,000 on the object Expenditure during the year ი 43,360,824 65,523 25,000 10,426 204,853 Endowment Accumulated Interest (4+6) 9,294,025 3,994,559 4,572,729 5,831,342 34,138 801,823 1,930,896 (24,905) 200,775 (32,110) ∞ Total 160,000 7,960,047 86,040,150 50,000 9,902,719 115,000 2,700,000 160,000 518,576 8,066,380 100,000 100,000 347,532 10,251,765 4,010,324 6,444,262 200,000 4,596,537 (3+5) 7 5,143 4,945 10,426 1,199,350 9,593 643,632 573,109 936,030 145,800 502,887 319,333 Additions during the year Interest و Endowment 160,000 പ 482,490 Endowment Accumulated 29,193 55,930 25,000 54,975 35,400,778 199,710 8,094,675 3,491,672 3,999,620 4,895,312 (32,110) 1,287,264 (24,905) Interest **Opening Balance** 4 9,902,719 85,880,150 518,576 115,000 10,251,765 4,010,324 8,066,380 100,000 6,444,262 2,700,000 347,532 4,596,537 50,000 100,000 200,000 m Tarun Kanti Ghosh Memorial Name of the Endowment Aveek Guha Memorial Gold Sayantan Biswas Memorial Prof. P. C. Mitra Memorial Equipment Replacement Staff Development Fund K K Pal Chaudhuri Arch Amiya Basu Endowment Mitra, Sindhubala Mitra Maintenance Fund - a/c Depreciation Fund - a/c Arun Ch Mitra, Ganesh Provat Chandra Neogi Total Besus Foundation Donation-Alumni 61 Alpona Banerjee Fund - a/c Tegip 2 Memorial Fund (GAABESU) Award - 2 a/c Teqip Tegip Tegip Fund 63 62 64 65 53 56 Sr. No. 51 58 54 60 -52 55 57

SCHEDULE - 3 CURRENT LIABILITIES & PROVISIONS

		F	Amount in Rupees
	Particulars	Current Year	Previous Year
4	CURRENT LIABILITIES		
	1. Deposits from staff	-	-
	2. Deposit from students	13,376,233	12,069,900
	3. Sundry Creditors		
	a) For Goods and Services		
	b) Others		
	4. Deposit - Others (including EMD, Security Deposit)	2,586,615	2,376,293
	5. Statutory Liabilities (TDS, WC Tax, CPF, GIS, NPS)		
	a) Overdue		
	b) Others	22,035,925	2,729,246
	6. Other Current Liabilities		
	a) Salaries	-	-
	b) Receipts against sponsored projects	412,909,016	403,485,209
	c) Receipts against sponsored fellowships and scholarships	22,060,012	18,576,005
	d) Unutilized Grants	46,851	46,851
	e) Grants in advance		
	f) Other funds		
	g) Audit Fees	600,000	600,000
	h) Other liabilities [Miscellaneous Recoveries]	3,264,402	1,103,672
	i) Other liabilities [Professional Charges]	236,000	212,400
	j) Other liabilities [Electricity Charges]	2,137,492	2,836,064
	k) Other liabilities [E-Journal / E-Books]	15,334,301	-
	I) Other liabilities [Manpower Hiring]	3,122,177	-
	m) Other liabilities [Security Service]	5,051,678	-
	n) Other liabilities [PWD/CPWD]	2,309,452	
	n) Other liabilities [Miscellaneous Receipts - suspenses / sources to be traced]	1,779,059	1,779,059
	Total (A)	506,849,213	445,814,699
	PROVISIONS		
	1. For taxation		
	2. Gratuity		
	3. Superannuation Fund		
	4. Accumulated Leave Encashment		
	5. Trade Warranties / Claims		
	6. Others (Specify)		
	Total (A)	-	-
	Total (A + B)	506,849,213	445,814,699

**SCHEDULE - 3(A)** SPONSORED PROJECTS

	Amount in Rupe								
Sr.	Name of the Project	Opening Bala	ance	Receipts /	Total	Expenditure	Closing Bala	ince	
No.		Credit	Debit	Recoveries during the year		during the year	Credit	Debit	
1	2	3	4	5	6	7	8	9	
1	Research Project Accounts	372,425,866	-	162,598,771	535,024,637	159,711,224	375,313,413	-	
2	Consultancy Fund	25,511,383	-	40,747,055	66,258,438	35,160,682	31,097,756	-	
3	Testing Fees Fund	5,547,960	-	959,365	6,507,325	9,479	6,497,846	-	
		-	-		-		-	-	
	Total	403,485,209	-	204,305,191	607,790,400	194,881,384	412,909,016	-	

#### **SCHEDULE - 3(B)** SPONSORED FELLOWSHIPS AND SCHOLARSHIPS

						Amo	unt in Rupees
Sr.	Name of Sponsor	Opening	Balance	Transactions of	luring the year	Closing	Balance
No.		Credit	Debit	Credit	Debit	Credit	Debit
1	2	3	4	5	6	7	8
2	CSIR - Fellowship and Contingency	576,758	-		5,000	571,758	-
3	Inspire Faculty -DST	2,292,013	-	8,031,670	11,783,488	-	(1,459,805)
4	Inspire Fellowship -DST	2,661,512	-	17,282,896	12,761,373	7,183,035	-
5	QIP Contingency	15,000	-			15,000	-
8	UGC BSR Research fellowship	-	(1,093,406)			-	(1,093,406)
10	National Scholar Science - ST	-	-	76,800	51,200	25,600	-
11	UGC Fellowship Post Doctoral	760,058	-	-	-	760,058	-
12	UGC Raman Fellowship Post Doctoral	4,302,068	-			4,302,068	-
13	Other Miscelleneous Grant - DST	244,662	-	690,982	570,427	365,217	-
14	Other Misc. Receipts -CSIR	70,860	-			70,860	-
15	Other Misc. Receipts	1,725,021	-			1,725,021	-
16	Faculty Recharge Program (UGC)	-	(3,237,919)	-	3,562,194	-	(6,800,113)
18	INSA Scientist (Others)	-	-	100,000	99,843	157	-
19	UGC Research Awardee	172,233	-			172,233	-
21	Visvesvaraya Phd Fellowship	1,742,191	-	14,345,004	12,841,415	3,245,780	-
22	UGC D S Kothari Fellowship	777,846	-			777,846	-
23	Gian Course	838,286	-	29,797		868,083	-
24	Stipend - Means cum Merit Scholarship	107,200	-		107,200	-	-
25	Other Miscelleneous Grant - State	75,000	-			75,000	-
26	NREF	1,517,136	-		313,000	1,204,136	-
27	Post Doctoral Fellow (DST-SERB)	698,161	-			698,161	-
	Total	18,576,005	(4,331,325)	40,557,149	42,095,140	22,060,012	(9,353,324)

SCHEDULE - 3(C) UNUTILIZED GRANTS FROM UGC, GOVERNMENT OF INDIA AND STATE GOVERNMENTS

				Amount in Rupees
			Current Year	Previous Year
A	Plan Grants : Government of India	1		
	Balance b/f		(152,137,796)	(72,235,368)
	Add : Reversal of Utilization of Gr	ant shown last year	-	4,300,000
	Add : Grants during the year		1,352,700,000	1,300,000,000
		Total (a)	1,200,562,204	1,232,064,632
	Less : Refunds		-	
	Less : Utilized for Revenue Expen	diture	1,343,301,977	1,210,942,813
	Less : Utilized for Capital Expend	iture	208,337,632	173,259,615
		Total (b)	1,551,639,609	1,384,202,428
	Unutilized carried forward (a-b)	Transferred to Schedule 7, being excess expenditure over sanctioned amount	(351,077,405)	(152,137,796
В	UGC Grants - Plan			
	Balance b/f			
	Add : Receipts during the year			
		Total (c)	-	
	Less : Refunds			
	Less : Utilized for Revenue Expen	diture		
	Less : Utilized for Capital Expend	iture		
	· · ·	Total (d)	-	
	Unutilized carried forward (c-d)		_	
С	UGC Grants - Non Plan			
	Balance b/f		-	
	Add : Receipts during the year		-	
		Total (e)	-	-
	Less : Refunds			
	Less : Utilized for Revenue Expen	diture	_	
	Less : Utilized for Capital Expend		-	
		Total (f)	-	
	Unutilized carried forward (e-f)		_	
D	Grants from State Government			
	Balance b/f		46,851	46,851
	Add : Receipts during the year		-	
		Total (g)	46,851	46,85
	Less : Refunds			-,
	Less : Utilized for Revenue Expen	diture	_	
	Less : Utilized for Capital Expend			
		Total (h)	_	
	Unutilized carried forward (g-h)		46,851	46,85
		Total (A+B+C+D)	(351,030,554)	(152,090,945
	Less : Deficit amount as per Part		(351,077,405)	(152,137,796
		d Total (B+C+D)	46,851	46,851

|--|

SI No.	Assets Heads		Gross Block					Depreciation			Net Block	llock
		Opening Balance	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deduction / Adjustments	Total Depreciation	31-03-2019	31-03-2020
_	Land [leasehold]	385,170			385,170				•	1	385,170	385,170
5	Site Development	310,181			310,181				•	T	310,181	310,181
8	Buildings	557,616,502	13,814,527		571,431,029	2%	46,424,482	11,392,005		57,816,488	511,192,019	513,614,541
4	Roads and Bridges	902,405			902,405	2%	49,090	18,048	I	67,138	853,315	835,267
D	Tubewells & Water Supply	8,232,569	5,564,291	I	13,796,860	2%	444,649	274,996	1	719,646	7,787,920	13,077,214
9	Sewerage & Drainage											
7	Electrical Installation and Equipments	167,314,308	6,184,605		173,498,913	5%	27,223,183	8,540,384		35,763,567	140,091,125	137,735,346
8	Plant & Machinery	159,011,606			159,011,606	5%	39,752,902	7,950,580	•	47,703,482	119,258,705	111,308,125
6	Scientific & Laboratory Equipments	411,820,130	118,402,333	1	530,222,463	8%	94,384,994	42,417,797	1	136,802,791	317,435,136	393,419,672
10	Office Equipments	29,887,251	18,456,730	1	48,343,981	7.5%	5,329,871	3,625,799	31,125	8,986,795	24,557,380	39,357,186
7	Audio Visual Equipments	804,605	75,600	1	880,205	7.5%	125,500	66,015	1	191,516	679,105	688,689
12	Computers & Peripherals	125,706,050	29,151,121	1	154,857,171	20%	67,249,500	26,151,090		93,400,590	58,456,550	61,456,581
13	Furniture, Fixtures & Fittings	94,639,526	11,554,187	1	106,193,713	7.5%	26,491,979	7,964,529	1	34,456,508	68,147,547	71,737,205
14	Vehicles	375,838			375,838	10%	187,919	37,584	•	225,503	187,919	150,335
15	Library Books & Scientific Journals	92,105,831	15,526,300	1	107,632,131	10%	41,564,186	10,763,213	430,000	52,757,399	50,541,645	54,874,732
16	Small Value Assets	384,115	24,700		408,815		384,113	24,699		408,812	2	3
	Total (A)	1,649,496,088	218,754,394	•	1,868,250,482		349,612,370	119,226,740	461,125	469,300,235	1,299,883,718	1,398,950,247
17	Capital Work in Progress (B)	1	1	1						1	I	
si.	Intangible Assets	Opening	Additions	Deductions	<b>Closing Balance</b>	Rate of	Amortization	Amortization	Deduction /	Total	Net V	Net Value
o N		balance				Depreciation	Upening Balance	tor the year	Adjustments	Amortization	31-03-2019	31-03-2020
18	Computer Software	17,022,076	15,094,803		32,116,879	40%	13,985,790	8,592,032	(529,921)	22,047,901	3,036,286	10,068,978
19	E-Journals	62,693,986	44,350,474		107,044,460	40%	58,317,439	30,165,510	(12,485,448)	75,997,501	4,376,547	31,046,958
20	Patents	1										
	Total (C)	79,716,062	59,445,277	•	139,161,339		72,303,229	38,757,542	(13,015,369)	98,045,402	7,412,833	41,115,936
Gra	Grand Total (A + B +C)	1.729.212.150	278.199.671	1	2 007 411 821		121 015 500	157 094 202	(12 554 244)	002 376 233	1 207 206 661	1 110 066 103

SCHEDULE - 44 PLAN

											A	Amount in Rupees
SI No.	. Assets Heads		<u></u>					Depreciation			Net Block	lock
		Opening Balance	Additions	Deductions	Closing Balance	Rate of Depreciation	Opening Balance	Depreciation for the year	Deduction / Adjustments	Total Depreciation	31-03-2019	31-03-2020
	Land [leasehold]	385,170		'	385,170					1	385,170	385,170
5	Site Development	1		'			1			1		
m	Buildings	526,485,740	13,814,527	1	540,300,267	2%	44,593,744	10,806,005		55,399,749	481,891,995	484,900,517
4	Roads and Bridges	902,405		1	902,405	2%	49,090	18,048		67,138	853,315	835,267
2	Tubewells & Water Supply	7,432,569	5,564,291	1	12,996,860	2%	397,603	259,937		657,540	7,034,966	12,339,320
6	Sewerage & Drainage	1		1		2%				I	1	1
2	Electrical Installation and Equipments	ו 144,185,302	6,184,605	1	150,369,907	5%	23,484,279	7,518,495		31,002,775	120,701,023	119,367,132
œ	Plant & Machinery	158,406,181		1	158,406,181	5%	39,601,545	7,920,309		47,521,854	118,804,636	110,884,327
6	Scientific &	157,408,354	49,382,184	1	206,790,538	8%	29,270,096	16,543,243	1	45,813,339	128,138,258	160,977,199
	Equipments											
10	Office Equipments	29,018,881	18,456,730	'	47,475,611	7.5%	5,129,317	3,560,671	31,125	8,721,113	23,889,564	38,754,498
5	Audio Visual Equipments	804,605	75,600	1	880,205	7.5%	125,500	66,015	1	191,516	679,105	688,689
12	Computers & Peripherals	107,828,739	28,408,406	1	136,237,145	20%	56,044,468	22,427,085		78,471,553	51,784,271	57,765,592
13	Furniture, Fixtures & Fittings	83,950,628	11,554,187	1	95,504,815	7.5%	23,232,417	7,162,861		30,395,278	60,718,211	65,109,537
14	Vehicles	375,838		1	375,838	10%	187,919	37,584	1	225,503	187,919	150,335
15	Library Books & Scientific Journals	90,819,668	15,427,125	1	106,246,793	10%	41,135,382	10,624,679	430,000	52,190,061	49,684,286	54,056,732
16	Small Value Assets	384,115	24,700	1	408,815	100%	384,113	24,699	I	408,812	2	3
	Total (A)	1,308,388,196	148,892,355	•	1,457,280,551		263,635,475	86,969,632	461,125	351,066,232	1,044,752,721	1,106,214,319
17	Capital Work in Progress (B)	•	1							1	1	
s, s	Intangible Assets	Opening Balance	Additions	Deductions	Closing Balance	Rate of Depreciation	Amortization Opening Balance	Amortization for the year	Deduction / Adjustments	Total Amortization	Net Value 31-03-2019	alue 31-03-2020
18	Computer Software	16,858,351	15,094,803		31,953,154	40%	13,822,066	8,592,032	(529,921)	21,884,177	3,036,285	10,068,977
19	E-Journals	62,693,986	44,350,474		107,044,460	40%	58,317,439	30,165,510	(12,485,448)	75,997,501	4,376,547	31,046,958
20	Patents	1								ı	•	
	Total (C)	79,552,337	59,445,277	•	138,997,614		72,139,505	38,757,542	(13,015,369)	97,881,678	7,412,832	41,115,935
Gra	Grand Total (A + B +C)	1,387,940,533	208,337,632	1	1,596,278,165		335,774,980	125,727,175	(12,554,244)	448,947,911	1,052,165,553	1,147,330,254

TECHNOLOGY
AND
SCIENCE
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY
Р Г
INSTITUTE
INDIAN

SCHEDULE - 4B NON-PLAN

5			Gross Block									
		Opening	Additions	Deductions	Closing Balance	Rate of	Opening	Depreciation for	Deduction /	Total	31-03-2019 3:	31-03-2020
		Balance				Depreciation	Balance	the year	Adjustments	Depreciation		
	Land				I		I	I		I	I	
	Site Development	1		•	I		I	I		I	I	
	Buildings	31,130,762			31,130,762	2%	1,830,738	586,000		2,416,738	29,300,024	28,714,024
	Roads and Bridges							1		T		
	Tubewells & Water Supply	800,000			800,000	2%	47,046	15,059		62,105	752,954	737,895
	Sewerage & Drainage	1	1		1		1			T		
	Electrical Installation	18,869,238			18,869,238	5%	2,691,225	808,901		3,500,126	16,178,013	15,369,112
	and Equipments											
	Plant & Machinery				I		I	I		I	,	
	Scientific & Laboratory Equipments	r		1			1	1		1		1
	Poffice Equipments						1	1		1		
	Audio Visual Equipments	1		1	1		1	1		1	I	
	Computers & Peripherals	1		1	1		1	1		1		
	Furniture, Fixtures & Fittings	1		1	1		1	1		1	I	1
	Vehicles							I		I		
	Library Books & Scientific Journals	I		1			1	1			I	
	Small Value Assets				1			I		I	1	
1	Total (A)	50,800,000			50,800,000		4,569,009	1,409,960		5,978,970	46,230,991	44,821,030
	Capital Work in Progress (B)				1						I	
	Intangible Assets	Opening Balance	Additions	Deductions	Closing Balance	Rate of Depreciation	Amortization Opening Balance	Amortization for the year	Deduction / Adjustments	Total Amortization	Net Value 31-03-2019 31	alue 31-03-2020
	Computer Software				-					'	,	
	E-Journals				I					I	,	
	Patents				I					1	1	1
	Total (C)	•	•	•	I		I	I	•	I	I	I
1	Grand Total (A + B +C)	50,800,000	•	•	50,800,000		4,569,009	1,409,960	•	5,978,970	46,230,991	44,821,030

<b>TECHNOLOGY</b>
E AND 1
<b>G</b> SCIENCI
GINEERIN
<b>TUTE OF EN</b>
<b>INSTITUT</b>
INDIAN

SCHEDULE - 4C INTANGIBLE ASSETS

											Amo	Amount in Rupees
S			<b>Gross Block</b>	ck				Depreciation			Net B	Net Block
No.	Heads	Opening Balance	Additions	Opening Additions Deductions Balance	Closing Balance	Closing Rate of Opening Balance Depreciation Balance	Opening Balance	Depreciation for the year	Deduction / Total Adjustments Depreciation	Total Depreciation	31-03-2019	31-03-2020
<del>~</del>	Patents & Copyrights				1					1	I	1
5	Computer Software				1					1	1	1
с	E-Journals				-					1	1	I
		-	•	1	I			1	I	I	I	I

# SCHEDULE - 4(C)(i) PATENTS AND COPYRIGHTS

Amount in Rupees

							-
	Particulars	Opening	Additions	Gross	Amortization		Net Block
		Balance				31/03/2019	31/03/2019 31/03/2020
A	Patent Granted						
	1. Balance as on 31/03/2014 of Patents obtained in 2010-11			1		1	
	(Original Value - Rs. )						
	2. Balance as on 31/03/2014 of Patents obtained in 2011-12			1		1	
	(Original Value - Rs. )						
	3. Balance as on 31/03/2014 of Patents obtained in 2012-13			1		I	
	(Original Value - Rs. )						
	4. Patents granted during the current year			I		I	
	Total	1			1	1	1

Amount in Rupees

			A distance		A sector sectors		
	rantonars	Uperiing Balance	Additions	<b>G</b> ross		31/03/2019	Net DIOCK Net DIOCK 31/03/2019 31/03/2020
ш	Patents Pending in respect of Patents applied for						
	1. Expenditure incurred during the year 2009-10 to 2011-12						
	2. Expenditure incurred during the year 2012-13						
	3. Expenditure incurred during the year 2013-14						
	Total						

βG
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY
TECI
AND
NCE
SCIE
RING
NEE
ENGI
ОГ
Ë
STIT
N
IDIA
$\leq$

SCHEDULE - 4D OTHERS

SI.	Assets Heads		Gross Block					Depreciation	tiation		Net	Net Block
No.		Opening	Additions	Deductions	<b>Closing Balance</b>	Rate of	Opening	Depreciation for	Deduction /	Total	31-03-2019	31-03-2020
		Balance				Depreciation	Balance	the year	Adjustments	Depreciation		
-	Land	I			1			1		1	1	•
2	Site Development	310,181	I	•	310,181		1	I		1	310,181	310,181
с	Buildings				1		1	1				1
4	Roads and Bridges	1	1		1		1	1		1		1
പ	Tubewells & Water	I	1		1		I	1		1		1
	Supply											
9	Sewerage & Drainage				1		1	1				1
7	Electrical Installation	4,259,768	1		4,259,768	5%	1,047,679	212,988		1,260,667	3,212,089	2,999,101
	and Equipments											
œ	Plant & Machinery	605,425	1		605,425	5%	151,356	30,271		181,628	454,069	423,798
6	Scientific & Laboratory	254,411,776	69,020,149	1	323,431,925	8%	65,114,898	25,874,554		90,989,452	189,296,878	232,442,473
	Equipments											
10	Office Equipments	868,370	I		868,370	7.5%	200,555	65,128		265,682	667,816	602,688
1	Audio Visual	1		1	1			1		1	1	1
	Equipments											
12	Computers &	17,877,311	742,715	1	18,620,026	20%	11,205,032	3,724,005		14,929,037	6,672,279	3,690,989
	Peripherals											
13	Furniture, Fixtures &	10,688,898	1		10,688,898	7.5%	3,259,562	801,667		4,061,230	7,429,336	6,627,668
	Fittings											
14	Vehicles	I	I	1	1		T	I		I	1	1
15	Library Books &	1,286,163	99,175		1,385,338	10%	428,804	138,534		567,338	857,359	818,000
	Scientific Journals											
16	Computer Software	163,725	I	1	163,725	40%	163,724	I	1	163,724	~	
17	E Journals		1		1	40%	1	1		1		1
	Total	290,471,617	69,862,039	•	360,333,656		81,571,610	30,847,148	ı	112,418,757	208,900,007	247,914,899
18	Capital Work in				1					1		1
	Progress	_										
	Cunnel Total	213 127 000			01000000				_		100 000	

Note : The additions during the year include additions from :

Gifted

Earmarked Funds	1
Sponsored Projects / Consultancy Funds	69,862,039
Own Funds	1
	69,862,039

### SCHEDULE - 5 INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS

			Amount in Rupees
		Current Year	Previous Year
1	In Central Government Securities		
2	In State Government Securities		
3	Other Approved Securities		
4	Shares		
5	Debentures and Bonds		
6	Term Deposits with Banks	718,141,219	231,890,763
7	Others (to be specified)		
	Total	718,141,219	231,890,763

### **SCHEDULE - 5A** INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS (FUND WISE)

		,	Amount in Rupees
		Current Year	Previous Year
1	Endowment Funds	53,124,937	50,498,889
2	Earmarked Funds / Sponsored Projects	665,016,282	181,391,874
	Total	718,141,219	231,890,763

# **ANNEXURE - 1** I TO SCHDULE - 5A (1)

### ENDOWMENT FUND FIXED DEPOSITS AS AT 31.03.2020

SI.	Name of Endowment	Account No.	Date of Deposit	Rate of	Closing B	Balance as on 31.03	.2020	Date of
No.	Fund		/ Reinvestment (Current)	Interest (Current)	Principal Amt.	Accumulated Int.	TOTAL	Maturity
1	Von Newman Scholarship Fund	0171100443029	9/12/2018	6%	53,747.00		53,747.00	9/12/2023
2	Dr. S. P. Brambha Memorial Merit Scholarship Fund	0171100442992	9/12/2018	6%	106,895.00		106,895.00	9/12/2023
3	Probir Sengupta Memorial Prize Fund	0171100433112	10/31/2017	6%	11,302.38	1,605.76	12,908.14	10/31/2022
4	Renu Chakraborty V. L. Fund	0171100433105	10/31/2017	6%	55,737.00		55,737.00	10/31/2022
5	Dr. Fazlur Kader Memorial Scholarship Fund	0171100442800	9/12/2018	6%	186,441.15	11,471.80	197,912.95	9/12/2023
6	J. N. Neogi Students' Benefit Fund	0171100442862	9/12/2018	6%	113,019.65	10,641.88	123,661.53	9/12/2023
7	Sunita Memorial Prize Fund	0171100442879	9/12/2018	6%	24,100.96	2,270.30	26,371.26	9/12/2023
8	Dr. B. N. Dey Scholarship Fund	0171100442886	9/12/2018	6%	58,692.05	5,524.80	64,216.85	9/12/2023
9	Kunja Kusum Scholarship Fund	0171100442961	9/12/2018	6%	77,444.00		77,444.00	9/12/2023
10	Sarat Kanta Nirmalya Basini Biswas Golden Jubilee Scholarship Fund	0171100433099	11/1/2017	6%	20,087.00		20,087.00	01-11-2022
11	Prof. N. N. Sen Memorial Scholarship Fund	0171100443074	9/12/2018	6%	39,432.00		39,432.00	9/12/2023

SI.	Name of Endowment	Account No.	Date of Deposit	Rate of	_Closing E	Balance as on 31.0		Amount in Rupee Date of	
No.	Fund		/ Reinvestment	Interest	Principal Amt.	Accumulated	TOTAL	Maturity	
			(Current)	(Current)		Int.			
12	Acharya P. C. Roy	0171100443012	9/12/2018	6%	91,587.00		91,587.00	9/12/2023	
	Scholarship								
13	Ramlal Nandy &	0171100442947	9/12/2018	6%	46,928.00		46,928.00	9/12/2023	
	Genoda Sundari								
	Memorial Scholarship								
	Fund								
14	Liluah Iron Works Ltd.	0171100443043	9/12/2018	6%	47,693.00		47,693.00	9/12/2023	
	Scholarship								
15	R & K Ahmed Merit	0171100443036	9/12/2018	6%	56,769.00		56,769.00	9/12/2023	
	Scholarship								
16	The President of India	0171100443050	9/12/2018	6%	56,769.00		56,769.00	9/12/2023	
	Gold Medal								
17	Alumni Donation	0171100433075	10/31/2017	6%	494,631.89	95,735.91	590,367.80	10/31/2022	
	Seminar Series								
18	Jogesh Chandra	0171100443081	9/12/2018	6%	478,376.00		478,376.00	9/12/2023	
	Banerjee Memorial								
	Scholarship Fund								
19	Anil Burnwal Merit cum	0171100303499	8/8/2017	6%	109,469.00		109,469.00	8/8/2022	
	Means Scholarship								
	Fund								
20	Jaya Smriti Puroskar	0171100404736	8/8/2017	6%	33,205.03	5,918.20	39,123.23	8/8/2022	
	(BESUS)								
21	BECA - 1964	0171100441964	9/12/2018	6%	358,557.67	33,669.85	392,227.52	9/12/2023	
22	Prof. S. C. Dasgupta	1532100009461	11/9/2017	6%	213,244.50	27,781.33	241,025.83	8/8/2022	
	Gold Medal	1500100000170	0/0/0017			5 000 1 /	05 100 50	0.00.0000	
23	Jaya Smriti Puroskar	1532100009478	8/8/2017	6%	30,411.43	5,088.16	35,499.59	8/8/2022	
24	Dhaibat Ghosh	1532100058113	4/23/2017	6%	624,203.68	104,500.29	728,703.97	4/23/2022	
25	Memorial Scholarship	1522100047540	9/28/2017	6 1 6 0/	250,000,00		250,000,00	0/20/2020	
25	Prabodh Kumar	1532100047560	9/28/2017	6.16%	250,000.00		250,000.00	9/28/2020	
26	Chatterjee Fund - 1 Rai Sahib Amulya	1532100047588	9/28/2017	6.16%	341,445.63	45,758.31	387,203.94	9/28/2020	
20	Chandra Mitra	1552100047588	7/20/2017	0.1076	341,445.05	45,750.51	307,203.94	9/20/2020	
	Endowment Fund								
27	Rai Sahib Amulya	1532100047579	9/28/2017	6.16%	300,000.00		3,00,000.00	9/28/2020	
21	Chandra Mitra	1332100047377	12012011	0.1070	300,000.00		3,00,000.00	12012020	
	Endowment Fund								
28	S. C. Dasgupta	1532100047384	9/23/2017	6.16%	1,879,185.14	253,878.80	2,133,063.94	9/23/2020	
20	Memorial Fund	1002100017001	112012011	011070	1,0,7,100111	200,070100	2,100,000,1	112012020	
29	Prabodh Kumar	1532100058122	9/12/2018	6.00%	50,000.00		50,000.00	4/23/2021	
	Chatterjee Fund - 2				,		,		
30	Madhusudan	1532100062116	9/12/2018	6.00%	200,000.00		200,000.00	7/12/2021	
	Bhattacharjee Memorial								
	Fund								
31	B. K. Bose Lecture	1532100068998	9/12/2018	6.00%	225,000.00		225,000.00	2/8/2021	
	Fund								
32	Sougata Mukherjee	1532100089751	12/13/2018	6.00%	509,507.00		509,507.00	12/13/2020	
	Memo. Award for								
	Excellence Fund								
33	Students Reward	1532100089760	12/13/2018	6.00%	1,650,000.00		1,650,000.00	9/13/2020	
	Programme Fund								
34	Suhas Choudry	1532100055888	4/22/2019	6.50%	127,549.00		127,549.00	4/22/2020	
	Swimming Excellence								
	Prize Fund								

SI.	Name of Endowment	Account No.	Date of Deposit	Rate of	Closing F	Balance as on 31.0		mount in Rupees Date of	
No.	Fund	Account No.	/ Reinvestment	Interest	Principal Amt.	Accumulated	TOTAL	Maturity	
110.	T unu		(Current)	(Current)	i morpui vinti	Int.	TOTAL	Maturity	
35	Ujjal Dasgupta Scholarship Corpus Fund	1532100055912	22/04/2019	6.50%	1,421,977.00		1,421,977.00	22/04/2020	
36	GAABESU Admission Grant - 2	1532100055930	9/12/2018	6%	582,400.00		582,400.00	3/14/2021	
37	Prof. P. C. Mitra Memorial Award	1532100070364	12/3/2017	6%	77,077.12	14,190.81	91,267.93	12/3/2022	
38	Prof. P. C. Mitra Memorial Award	1532100090632	9/26/2018	6.00%	151,594.09	13,928.69	165,522.78	9/26/2023	
39	K. K. Pal Chaudhuri Arch.	1532100084640	7/2/2018	6.00%	77,077.12	7,061.12	84,138.24	7/2/2023	
40	Prof. A. K. Seal Gold Medal	23690310006207	11/26/2018	6.35%	139,238.00	12,283.95	151,521.95	8/26/2019	
41	Prof. Amiya Basu Endowment Fund - 1	23690310011904	11/23/2018	6.75%	3,150,000.00		3,150,000.00	11/23/2021	
42	Prof. Amiya Basu Endowment Fund - 2	1532100194853	12/26/2019	6.50%	1,658,787.00		1,658,787.00	12/26/2020	
43	B.E.C. (55) Scholarship Fund	23690310006481	6/27/2019	6.60%	467,275.00	15,783.25	483,058.25	6/27/2020	
44	Prabodh Chandra Mitra Scholarship Fund	2369031006504	27/06/2019	6.60%	92,322.00	4,692.75	97,014.75	27/06/2020	
45	Siddhananda Memorial Lecture Fund	23690310006573	03/07/2019	6.60%	107,089.00	5,433.00	112,522.00	03/07/2020	
46	BESU Endowment Fund	23690310006498	6/27/2018	6.60%	7,265,208.00	369,157.50	7,634,365.50	6/27/2020	
47	BESU Endowment Fund	23690310011584	9/9/2018	6.60%	29,005.00	3,263.58	32,268.58	9/9/2019	
48	B.E.C. (55) Scholarship Fund	23690310011577	9/9/2018	6.60%	1,866.00	203.92	2,069.92	9/9/2019	
49	Bijoy Ashu Chair Professor Fund	10382034315	8/30/2016	7.00%	113,490.00		113,490.00	8/30/2019	
50	Bijoy Ashu Chair Professor Fund	34205796198	6/15/2019	7.00%	7,034,672.00	400,191.00	7,434,863.00	6/15/2020	
51	Bijoy Ashu Chair Professor Fund	34205799520	6/15/2019	7.00%	7,034,673.00	400,189.00	7,434,862.00	6/15/2020	
52	Alpona Banerjee Memorial Endowment Fund	1532100196833	08/02/2017	6.50%	9,902,000.08		9,902,000.08	08/02/2027	
53	Provat Chandra Neogi Memorial Endowment Fund - 1	1532100243766	02/06/2018	6.00%	4,50,000.00		4,50,000.00	02/06/2028	
54	Provat Chandra Neogi Memorial Endowment Fund - 2	1532100255615	26/09/2018	6.00%	2,250,000.00		2,250,000.00	26/09/2028	
55	Tarun Kanti Ghosh Memorial	1532100286817	7/30/2019	6.00%	347,532.00		347,532.00	7/30/2024	
		GRAND TOTAL			5,12,74,712.57	18,50,223.96	5,31,24,936.53		

# ANNEXURE - II TO SCHDULE - 5A (2)

### EARMARKED FUND FIXED DEPOSITS AS AT 31.03.2020

SI.	Name of Endowment	Name of Endowment Account No.	Date of Deposit	Rate of	Closing Balance as on 31.03.2020			Date of	
No.	Fund		/ Reinvestment (Current)	Interest (Current)	Principal Amt.	Accumulated Int.	TOTAL	Maturity	
1	BESUS Project Fund	1532100055985	09-03-2018	6.16%	2,500,000.00	-	2,500,000.00	3/9/2021	
2	BESUS Project Fund	1532100055994	09-03-2018	6.16%	2,500,000.00	-	2,500,000.00	3/9/2021	
3	BESUS Project Fund	1532100056009	09-03-2018	6.16%	2,500,000.00	-	2,500,000.00	3/9/2021	
4	BESUS Project Fund	1532100056018	09-03-2018	6.16%	2,500,000.00	-	2,500,000.00	3/9/2021	
5	BESUS Project Fund	1532100056027	09-03-2018	6.16%	2,500,000.00	-	2,500,000.00	3/9/2021	
5	BESUS Project Fund	1532100066413	25-08-2018	4.25%	14,581,422.22	927,001.11	15,508,423.33	8/25/2021	
7	BESUS Project Fund	1532100066477	25-08-2018	4.25%	14,581,422.22	927,001.11	15,508,423.33	8/25/2021	
3	BESUS Project Fund	1532100066440	25-08-2018	4.25%	14,581,422.22	927,001.11	15,508,423.33	8/25/2021	
)	BESUS Project Fund	1532100046419	28-09-2018	6.26%	9,000,000.00	-	9,000,000.00	9/28/2021	
		SUB TOTAL			65,244,266.66	2,781,003.33	68,025,269.99		
1	BESUS Overhead Fund	1532100036786	09-03-2020	6.25%	500,000.00	-	500,000.00	3/9/2023	
2	BESUS Overhead Fund	1532100036795	09-03-2020	6.25%	500,000.00	-	500,000.00	3/9/2023	
3	BESUS Overhead Fund	1532100036801	09-03-2020	6.25%	500,000.00	-	500,000.00	3/9/2023	
4	BESUS Overhead Fund	1532100036810	09-03-2020	6.25%	500,000.00	-	500,000.00	3/9/2023	
5	BESUS Overhead Fund	1532100036829	09-03-2020	6.25%	500,000.00	-	500,000.00	3/9/2023	
6	BESUS Overhead Fund	1532100036838	09-03-2020	6.25%	500,000.00	-	500,000.00	3/9/2023	
7	BESUS Overhead Fund	1532100045669	28-09-2018	6.16%	520,712.00	-	520,712.00	9/28/2021	
8	BESUS Overhead Fund	1532100045702	28-09-2018	6.16%	520,712.00	-	520,712.00	9/28/2021	
9	BESUS Overhead Fund	1532100050193	21-11-2017	6.16%	6,810,936.04	1,056,230.69	7,867,166.73	11/21/2020	
20	BESUS Overhead Fund	1532100052924	28-09-2018	6.16%	846,009.58	75,924.30	921,933.88	9/28/2021	
21	BESUS Overhead Fund	1532100052933	28-09-2018	6.16%	1,692,019.15	155,226.66	1,847,245.81	9/28/2021	
22	BESUS Overhead Fund	1532100055958	14-03-2018	6.16%	4,254,325.96	567,088.78	4,821,414.74	3/14/2021	
23	BESUS Overhead Fund	1532100055967	14-03-2018	6.16%	4,254,325.96	567,852.76	4,822,178.72	3/14/2021	
24	BESUS Overhead Fund	1532100088406	29-08-2019	6.50%	5,186,009.21	1,329,988.12	6,515,997.33	8/29/2022	
25	BESUS Overhead Fund	1532100071390	17-12-2018	6.75%	6,450,258.21	2,057,457.77	8,507,715.98	12/17/202	
26	BESUS Overhead Fund	1532100071406	17-12-2018	6.75%	6,450,258.21	2,057,457.77	8,507,715.98	12/17/202	
27	BESUS Overhead Fund	1532100071372	17-12-2018	6.75%	1,290,050.37	266,158.95	1,556,209.32	12/17/202	
28	BESUS Overhead Fund	1532100102414	19-02-2020	6.25%	5,791,583.85	1,224,923.48	7,016,507.33	2/19/2023	
9	BESUS Overhead Fund	1532100105484	31-03-2020	6.25%	2,574,037.27	522,599.05	3,096,636.32	3/31/2023	
80	BESUS Overhead Fund	1532100120920	22-10-2017	6.00%	9,652,639.75	1,509,158.45	11,161,798.20	10/22/2020	
		SUB TOTAL			59,293,877.56	11,390,066.78	70,683,944.34		
31	BESUS Foundation	23690310007990	02-08-2017	6.40%	1,514,430.98	274,269.30	1,788,700.28	4/28/2020	
2	BESUS Foundation	23690310011676	07-06-2019	6.50%	7,464.00	396.09	7,860.09	4/12/2021	
3	Corpus Fund	23690310006405	17-06-2019	6.60%	10,655,020.38	570,805.83	11,225,826.21	6/17/2020	
4	Corpus Fund	1532100142847	12-09-2019	6.25%	795,034.07	12,824.62	807,858.69	9/12/2020	
35	Maintenance Fund	23690310006436	17-06-2019	6.60%	17,279,357.37	924,912.88	18,204,270.25	6/17/2020	
36	Maintenance Fund	1532100142816	12-09-2019	6.25%	1,185,925.82	51,013.00	1,236,938.82	9/12/2020	
37	Equipment Replacement Fund	1532100142823	12-09-2019	6.25%	650,914.33	41,645.60	692,559.93	9/12/2020	
38	Faculty Development	1532100142830	12-09-2019	6.25%	692,559.93	29,790.61	722,350.54	9/12/2020	

# ANNEXURE - II TO SCHDULE - 5A (2)

# EARMARKED FUND FIXED DEPOSITS AS AT 31.03.2020 (...Contd.)

SI.	Name of Endowment	Account No.	Date of Deposit	Rate of	Closing	Balance as on 31.0	3.2020	Date of
No.	Fund		/ Reinvestment (Current)	Interest (Current)	Principal Amt.	Accumulated Int.	TOTAL	Maturity
39	Staff Development Fund	23690310006412	17-06-2019	6.60%	8,588,277.34	460,073.75	9,048,351.09	6/17/2020
40	Depreciation Fund	23690310006429	17-06-2019	6.60%	7,491,703.64	401,330.73	7,893,034.37	6/17/2020
41	B.E. College - General Fund A/c	1532100046932	14-09-2017	6.00%	10,000,000.00	-	10,000,000.00	9/14/2020
42	BEC General Fund	23690310008157	17-08-2017	6.40%	77,219.66	15,230.30	92,449.96	5/26/2020
43	BEC General Fund	23690310011669	07-07-2019	6.50%	1,972.00	93.03	2,065.03	5/27/2021
44	BEC General Fund	23690310008140	17-08-2017	6.40%	6,365,080.00	1,110,752.80	7,475,832.80	5/13/2020
45	BEC General Fund	23690310011515	05-07-2019	6.50%	15,998.00	763.82	16,761.82	5/23/2021
46	BEC General Fund	23690310008133	17-08-2017	6.40%	5,537,613.00	966,359.07	6,503,972.07	5/13/2020
47	BEC General Fund	23690310007983	02-08-2017	4.75%	57,285,775.00	7,260,489.15	64,546,264.15	4/28/2020
48	BEC General Fund	23690310011645	05-06-2019	6.50%	143,599.00	7,645.36	151,244.36	4/8/2021
49	BEC General Fund	23690310007976	02-08-2017	4.75%	21,132,021.00	2,678,379.63	23,810,400.63	4/28/2020
50	BEC General Fund	23690310011638	05-06-2019	6.50%	52,972.00	2,820.49	55,792.49	4/8/2021
51	BEC General Fund	23690310007969	02-08-2017	4.75%	48,120,001.00	6,098,861.41	54,218,862.41	4/28/2020
52	BEC General Fund	23690310011621	05-06-2019	6.50%	120,623.00	5,740.44	126,363.44	4/8/2021
53	BEC General Fund	23690310007952	02-08-2017	4.75%	25,460,318.00	3,226,909.79	28,687,227.79	4/28/2020
54	BEC General Fund	23690310011614	05-06-2019	6.50%	63,821.00	3,036.78	66,857.78	4/8/2021
55	BEC General Fund	23690310007945	02-08-2017	4.75%	12,730,152.00	1,613,462.89	14,343,614.89	4/28/2020
56	BEC General Fund	23690310007938	02-08-2017	4.75%	21,641,271.00	2,742,873.42	24,384,144.42	4/28/2020
57	BEC General Fund	23690310011591	05-06-2019	6.50%	54,248.00	2,580.36	56,828.36	4/8/2021
58	Institute General Fund	23690310006061	13-05-2019	5.75%	39,875,995.00	2,049,937.00	41,925,932.00	5/13/2020
59	Institute General Fund	23690310011324	16-06-2019	6.35%	83,789.00	3,343.00	87,132.00	1/29/2020
60	IIEST-Student Fee Collection Fund	23690310017302	31-10-2017	4.75%	126,289,893.00	15,286,833.00	141,576,726.00	10/31/2020
61	BESU	34087266649	05-02-2020	6.80%	7,268,527.00	507,007.00	7,775,534.00	2/5/2021
62	BESU	34087253584	05-02-2020	6.80%	7,268,527.00	507,007.00	7,775,534.00	2/5/2021
63	BESU	34087265125	05-02-2020	6.80%	7,268,527.00	507,007.00	7,775,534.00	2/5/2021
64	BESU	34087241863	05-02-2020	6.80%	7,268,526.00	507,007.00	7,775,533.00	2/5/2021
65	BESU	34087247413	05-02-2020	6.80%	7,268,526.00	507,007.00	7,775,533.00	2/5/2021
66	BESU	34087250572	05-02-2020	6.80%	7,268,526.00	507,007.00	7,775,533.00	2/5/2021
67	BESU	31688180670	12-06-2019	6.75%	563,435.00	33,176.00	596,611.00	3/8/2020
68	BESU	31744729481	01-11-2016	7.00%	7,688,415.00	1,612,618.00	9,301,033.00	7/29/2019
		SUB TOTAL	1		475,776,057.52	50,531,010.15	526,307,067.67	
		GRAND TOTAL			600,314,201.74	64,702,080.26	665,016,282.00	

### **SCHEDULE - 6** INVESTMENT - OTHERS

# Amount in Rupees

		Current Year	Previous Year
1	In Central Government Securities	-	-
2	In State Government Securities	-	-
3	Other Approved Securities	-	-
4	Shares	-	-
5	Debentures and Bonds	-	-
6	Term Deposits with Banks	13,407,756	383,719,404
7	Others (to be specified)	-	-
	Total	13,407,756	383,719,404

### **SCHEDULE - 7** CURRENT ASSETS

	OULE - 7 CURRENT ASSETS		Amount in Rupees
		Current Year	Previous Year
1. Sto	ck :		
a)	Stores and Spares		
b)	Loose Tools		
c)	Publications		
d)	Laboratory chemicals, consumables and glass ware		
e)	Building Materials		
f)	Electrical Materials		
g)	Stationery		
2. Su	ndry Debtors :		
a)	Debts outstanding for a period exceeding six months		
b)	Others		
	MHRD Grant receivables [over and above sanctioned for the year]	351,077,405	152,137,796
c)	MHRD Grant receivables [sanctioned for the year]	-	350,000,000
d)	Any Other Receivables	6,092,100	119,006
3. Cas	sh and Bank balances :		
a)	With Scheduled Banks		
	- in Current Account	145,373,022	92,395,599
	- in Term Deposit Accounts	15,634,763	97,657,608
	- in Savings Accounts	896,555,304	487,052,850
b)	With Non-Scheduled Banks		
c)	Cash in hand	-	-
d)	Cheques in hand	-	-
4. Pos	t Office - Savings Accounts		
	Total	1,414,732,594	1,179,362,859

Note : Annexure A shows the details of Bank Accounts

### ANNEXURE - A

ANNI	EXURE - A		Amount in Rupees
		Current Year	Previous Year
I. Sa	vings Bank Account		
1	Grants from UGC a/c		
2	University Receipts a/c		
3	Scholarship a/c		
4	Academic Fee Receipts a/c		
5	Development (Plan) a/c		
6,7	Combined Entrance Exams (CBT) a/c		
8	UGC Plan Fellowship a/c		
9	Corpus Fund a/c (EMF)		
10	Sponsored Projects Fund a/c		
11	Sponsored Fellowship a/c		
12	Endowment & Chair a/c (EMF)		
13	UGC JRF Fellowship a/c (EMF)		
14	HBA Fund a/c (EMF)		
15	Conveyance a/c (EMF)		
16	UGC Rajiv Gandhi National Fellowship a/c (EMF)		
17	Deposit a/c		
18	Student Fund a/c		
19	Student Aid Fund a/c		
20	Plan Grants for specific schemes		
II. S	avings Bank Account		
111. 1	Ferm Deposit with Schedule Banks		
	Total		-

### ANNEXURE - A TO SCHDULE - 6 (6 ) & SCHEDULE - 7(3)(a)

GENERAL FUND FIXED DEPOSITS AS AT 31.03.2020

02.1	Amoun								
SI.	Name of Fund	Account No.	Date of	Rate of	Closing Ba	Closing Balance as on 31.03.2020			
No.			Deposit / Reinvestment (Current)	Interest (Current)	Principal Amt.	Accumulated Int.	TOTAL	Maturity	
1	BECSOMS	23690310006399	17/06/2019	6.60%	2,903,918.67	38,726.73	2,942,645.40	17/06/2020	
2	BECSOMS	1532100058900	07/02/2017	6.50%	9,900,000.00	-	9,900,000.00	07/11/2021	
3	BECSOMS	1532100058919	07/02/2017	6.50%	2,600,000.00	-	2,600,000.00	07/11/2021	
4	PDSIT	003414136321	05/04/2017	6.50%	13,516,352.94	-	13,516,352.94	05/04/2020	
5	PDSIT	003414101445	28/08/2016	6.50%	63,984.00	-	63,984.00	28/08/2019	
6	PDSIT	003414151586	04/03/2016	6.50%	7,989.26	-	7,989.26	05/03/2019	
7	PDSIT	003414110876	29/05/2017	6.50%	11,034.65	512.65	11,547.30	29/05/2021	
		GRAND TOTAL :			29,003,279.52	39,239.38	29,042,518.90		

### **SCHEDULE - 8** LOANS AND ADVANCES

			Amount in Rupee
		Current Year	Previous Year
1.	Advance to employee : (Non interest bearing)		
	a) Salary		
	b) Festival	193,200	191,600
	c) Medical Advance	1,750,854	1,703,810
	d) Other (to be specified)		
	- Advance to employees	274,557	538,337
2.	Long Term Advance to employees : (Interest bearing)	-	-
	a) Vehicle Loan	-	-
	b) Home Loan	-	-
	c) Other (to be specified)	-	-
3.	Advances and other amounts recoverable in cash or in kind or value to be received		
	a) On Capital Account	41,616,118	22,713,513
	b) to Suppliers	1,735,844	263,429
	c) Other (to be specified) - Advance Student Research Scholars	130,000	202,000
_	d) Other (to be specified) - Advance for Research Projects	129,609	8,117,611
	e) Other (to be specified) - Advance for Consultancy	10,080	70,034
	f) Other (to be specified) - Institute Development Fund	10,000	80,000
	g) Other-Miscellaneous	-	-
	h) Other-E Journals	-	5,001,115
4.	Prepaid Expenses	-	-
	a) Insurance	-	-
	b) Other Expenses	-	-
	Deposits	-	-
	a) Telephone	-	-
	b) Lease Rent	-	-
	c) Electricity	7,836,339	7,392,772
	d) AICTE, if applicable	-	-
	e) Other (to be specified) - against research projects	-	37,500
-	f) Other (to be specified) - against consultancy	-	54,850
	ncome Accrued		
	a) On investments from Earmarked / Endowment Funds	-	-
	b) On investments - Others	982,385	
	c) On Loans and Advances	-	
7.	Other - Current assets receivable from UGC / sponsored projects		
	a) Debit balances in Sponsored projects	-	
	b) Debit balances in Sponsored Fellowships & Scholarships	9,353,324	4,331,325
	c) Grants Receivables	-	
	d) Other Receivables from UGC	-	
8.	Claim Receivable		
	Advance Tax / Income Tax Deducted at Source receivable	2,860,688	1,675,859
	Total	66,882,998	52,373,755

**SCHEDULE - 9** ACADEMIC RECEIPTS

			Amount in Rupees		
		Current Year	Previous Year		
FEI	ES FROM STUDENTS				
Α.	Academic				
	1. Tuition Fees	166,116,103	168,073,692		
	2. Admission Fees	3,108,000	3,163,300		
	3. Enrolment Fees				
	4. Library Admission Fees				
	5. Laboratory Fees				
	6. Art & Craft Fees				
	7. Registration Fees				
	8. Course Fees	6,723,850	6,637,500		
	Total (A)	175,947,953	177,874,492		
В.	Examinations				
	1. Admission Test Fees	-	-		
	2. Annual Examination Fees				
	3. Mark sheet, Certificate Fees	502,250	-		
	4. Entrance Examination Fees	7,449,500	7,626,000		
	Total (B)	7,951,750	7,626,000		
C.	Other Fees				
	1. Identity Card Fees				
	2. Fine / Miscellaneous Fees	2,378,922	6,693,880		
	3. Medical Fees	-	-		
	4. Transportation Fees	-	-		
	5. Hostel Development Fees	12,483,400	11,627,400		
	Total (C)	14,862,322	18,321,280		
D.	Sale of Publications				
	1. Sale of Admission Forms	-	-		
	2. Sale of Syllabus, Question Papers etc				
	3. Sale of prospectus including admission forms				
	Total (D)	-	-		
Ε.	Other Academic Receipts				
	1. Registration fee for workshops, programmes, Student Activities Fees	5,072,900	3,269,900		
	2. Registration fees (Academic Staff College)	-	-		
	3. External Examination Fees Receipts	_	-		
	4. Convocation fees	1,135,300	561,260		
	5. Tuition Fees - Self Financing Course	-			
	6. Infrastructure Maintenance Fees	14,893,500	13,630,500		
	Total (E)	21,101,700	17,461,660		
	GRAND TOTAL (A+B+C+D+E)	219,863,725	221,283,432		

Amount in Rupees										
Particulars		Plan		Total Plan	Current Year	Previous Year				
	Govt of India	UGC Plan	State Govt Grant		Total	Total				
Balance B/F	(152,090,945)	-	46,851	(152,044,094)	(152,044,094)	(72,188,517)				
Add : Receipts during the year plus reversal	1,352,700,000		-	1,352,700,000	1,352,700,000	1,304,300,000				
Total	1,200,609,055	-	46,851	1,200,655,906	1,200,655,906	1,232,111,483				
Less : Refund					-	-				
Balance	1,200,609,055	-	46,851	1,200,655,906	1,200,655,906	1,232,111,483				
Less : Utilized for Capital expenditure (A)	208,337,632			208,337,632	208,337,632	173,259,615				
Balance	992,271,423	-	46,851	992,318,274	992,318,274	1,058,851,868				
Less : Utilized for Revenue expenditure (B)	1,343,301,977		-	1,343,301,977	1,343,301,977	1,210,942,813				
Balance C/F (C)	(351,030,554)	-	46,851	(350,983,703)	(350,983,703)	(152,090,945)				

### **SCHEDULE - 10** GRANTS / SUBSIDIES (IRREVOCABLE GRANTS RECEIVED)

### SCHEDULE - 11 INCOME FROM INVESTMENTS

			/	Amount in Rupees
Particulars	Earmarked / En	dowment Funds	Other Inv	estments
	Current Year	Previous Year	Current Year	Previous Year
1. Interest				
a. On Government Securities				
b. Other Bonds / Debentures				
2. Interest on Term Deposits	51,111,694	13,755,322	1,700,584	23,886,627
3. Income accrued but not due on Term Deposits /	9,837,994		982,385	-
Interest bearing advances to employees				
4. Interest on Savings Bank Accounts	518,586	955,463	-	-
5. Interest on Security Depsoits with CESC	-	-	443,566	418,459
6. Others (Specify) - Dividend			34,055	31,136
Total	61,468,274	14,710,785	3,160,590	24,336,222
Transferred to Earmarked / Endowment Funds	61,468,274	14,710,785	-	-
Balance	Nil	Nil		

### **SCHEDULE - 12** INTEREST EARNED

Juli	DULL - IZ INTEREST LARNED		Amount in Rupees
	Particulars	Current Year	Previous Year
1.	On Savings Accounts with scheduled banks	27,010,053	16,536,813
2.	On Loans		
	a. Employees / Staff	-	-
	b. Others	-	-
3.	On Debtors and Other Receivables	-	-
	Total	27,010,053	16,536,813

### SCHEDULE - 13 OTHER INCOME

		mount in Rupe
	Current Year	Previous Year
. Income from Land and Buildings		
1. Hostel Room Rent	7,838,417	7,304,597
2. Licence Fees	1,477,090	1,912,317
3. Hire Charges of Auditorium / Play ground / Convention Centre / Guest House etc.	2,450,145	1,435,729
4. Electricity Charges recovered	3,920,530	5,992,212
5. Water Charges recovered	-	
Total (A)	15,686,182	16,644,85
3. Sale Institute's Publications	-	
. Income from holding events		
1. Gross Receipts from annual function / sports carnival		
Less : Direct expenditure incurred on the annual function / sports carnival		
2. Gross Receipts from fetes		
Less : Direct expenditure incurred on the fetes		
3. Gross Receipts for Educational Tours		
Less : Direct expenditure incurred on the tours		
4. Others (to be specified and separately disclosed)		
- Course Fees	-	28,86
- Centre Fees for External Exams	5,000	
- Seminar Programme Fees receipts	1,624,244	1,568,488
- Refund of Processing Fees paid to UGC	7,500,000	
Total (C)	9,129,244	1,597,35
). Others		
1. Income from Consultancy and Instituional Development Fund	380,493	1,086,64
2. RTI Fees		
3. Income from Royalty		
4. Sale of application forms	563,805	1,241,97
5. Miscellaneous Receipts (Sale of tender forms, waste paper etc.)	291,585	493,68
6. Sale / Disposal of Assets / Scraps		
a. Owned Assets		
b. Assets received free of costs		
7. Grants / Donations from Institutions, Welfare Bodies and International Organizations		
8. Others (specify) - liabilities written back	116,375	19,89
Total (D)	1,352,258	2,842,20
GRAND TOTAL (A+B+C+D)	26,167,684	21,084,40

# SCHEDULE - 14 PRIOR PERIOD INCOME

			Amount in Rupees
	Particulars	Current Year	Previous Year
1.	Academic Receipts	107,200	525,600
2.	Income from Investments	-	-
3.	Interest earned	-	-
4.	Income from MHRD Grant	-	-
5.	Depreciation	13,015,369	-
6.	Other Income - Salary / Contribution for CMS	-	6,061,054
	Total	13,122,569	6,586,654

### SCHEDULE - 15 PRIOR PERIOD INCOME

						Amo	ount in Rupees		
	Particulars		Current Year			Previous Year			
		Plan	Others	Total	Plan	Others	Total		
a)	Salaries and Wages			-			-		
	- Central	859,457,983	-	859,457,983	816,653,543	-	816,653,543		
	- UGC	-	-	-	-	-	-		
	- Own sources and out of State Government Grant	-	18,044,028	18,044,028	-	30,592,974	30,592,974		
b)	Allowances and Bonus	-	44,800	44,800	4,641,099	36,384	4,677,483		
c)	Contribution to Provident Fund	2,320,430	-	2,320,430	1,945,775	-	1,945,775		
d)	Contribution to Other Fund (specify)	-	-	-	-	-	-		
e)	Staff Welfare Expenses	4,912,787	-	4,912,787	-	-	-		
f)	Retirement and Terminal Benefits	32,514,238	-	32,514,238	9,600,507	-	9,600,507		
g)	LTC Facility	7,936,195	-	7,936,195	4,687,201	-	4,687,201		
h)	Leave Salary	11,196,148	-	11,196,148	7,592,825	-	7,592,825		
i)	Children Education Allowance	7,047,000	-	7,047,000	2,258,453	-	2,258,453		
j)	Honorarium	-	629,959	629,959	-	921,111	921,111		
k)	Others (Specify) - CVP Payment	43,652,867	-	43,652,867	8,889,896	-	8,889,896		
I)	Others (Specify) - Composite Transfer and Packing	4,404	-	4,404	-	229,114	229,114		
I)	Others (Specify) - Pension Payment	27,571,834	-	27,571,834	22,259,416	-	22,259,416		
	Total	996,613,886	18,718,787	1,015,332,673	878,528,715	31,779,583	910,308,298		

# SCHEDULE - 15A EMPLOYEES RETIREMENT AND TERMINAL BENEFITS

			A	mount in Rupees
	Pension	Gratuity	Leave Encashment	Total
Opening Balance as on				
Addition : Capitalized value of Contributions received from other organizations				
Total (a)	-	-	-	-
Less : Actual Payment during the year (b)				
Balance available as on 31/03/ c = (a-b)	-	-	-	-
Provision required on 31/03 as per Acturial Valuation (d)				
A. Provision to be made in the current year (d-c)	-	-	-	-
B. Contribution to New Pension Scheme				
C. Medical reimbursement to retired Employees				
D. Travel to Hometown on Retirement				
E. Deposit Linked Insurance Payment				
Total (A+B+C+D+E)	-	-	-	-

# **SCHEDULE - 16** ACADEMIC EXPENSES

	Particulars		Current Year			Previous Year	
		Plan	Others	Total	Plan	Others	Total
a)	Laboratory expenses	3,441,098	3,913,308	7,354,406	2,997,176	1,239,966	4,237,142
b)	Field work / Participation in Conferences	406,586	-	406,586	809,058	-	809,058
c)	Expenses on Seminars / Workshops	1,081,487	38,664	1,120,151	1,054,579	-	1,054,579
d)	Payment to visiting faculty	1,258,717	209,100	1,467,817	6,959,747	2,734,433	9,694,180
e)	Examination	1,206,034	-	1,206,034	1,101,175	-	1,101,175
f)	Student Welfare expenses	251,430	1,169,917	1,421,347	428,714	-	428,714
g)	Admission expenses			-			-
h)	Convocation expenses	2,453,782	-	2,453,782	2,545,423	-	2,545,423
i)	Publications			-			-
j)	Stipend / means cum merit scholarship	-	-	-	-	-	-
k)	Subscrition expenses	857,513	29,500	887,013	408,500	-	408,500
I)	Others (sports/cultural/medal etc)	1,122,643	614,156	1,736,799	2,312,947	-	2,312,947
m)	Departmental Contingencies	11,365,446	1,216,525	12,581,971	7,568,043	597,851	8,165,894
n)	Inaugural/Special Pograme	271,175	234,994	506,169	1,503,038	-	1,503,038
0)	PHD and Other Fellowships (Institute)	166,796,619	-	166,796,619	156,537,395	-	156,537,395
p)	Research Project Expenditure - Recurring Expenses	-	765,447	765,447	4,245,211	1,760,008	6,005,219
q)	Institute Development Expenditure - Research Support		380,493	380,493		1,086,643	1,086,643
r)	Travelling And Conveyance	993,210	3,171,440	4,164,650	-	2,076,775	2,076,775
	Total	191,505,740	11,743,544	203,249,284	188,471,006	9,495,676	197,966,682

SCHEDULE - 17 ADMINISTRATIVE AND GENERAL EXPENSES

Amount in Ru						
Particulars		Current Year			<b>Previous Year</b>	
	Plan	Others	Total	Plan	Others	Total
A. Infrastructure						-
a) Electricity and power	35,389,036		35,389,036	35,381,615		35,381,615
b) Water Charges			-			-
c) Insurance			-			-
d) Rent, Rates and Taxes (including property tax)	-		-	-	10,951	10,951
B. Communication			-			-
e) Postage and Stationery	586,618		586,618	587,334	144,607	731,941
f) Telephone, Fax and Internet Charges	254,916	-	254,916	317,028	-	317,028
C. Others			-			-
g) Printing and Stationery (consumption)	1,213,007	-	1,213,007	1,518,643	-	1,518,643
h) Travelling and Conveyance Expenses	2,381,630	136,383	2,518,013	2,879,303	-	2,879,303
i) Hospitality	-	-	-	1,555,639	-	1,555,639
j) Auditors Remuneration	600,000	70,110	670,110	600,000	19,000	619,000
k) Professional Charges	1,081,586	-	1,081,586	1,505,870	-	1,505,870
I) Advertisement and Publicity	916,986	15,000	931,986	-	-	-
m) Magazines and Journals	-	-	-	-	-	-
n) Others (specify) - Hiring of Manpower	43,260,023	-	43,260,023	39,207,940	-	39,207,940
o) Guest House Expenses	-	2,034,492	2,034,492	-	826,777	826,777
p) Remuneration to Experts	-	-	-	-	-	-
q) Security Services	27,515,806	-	27,515,806	31,719,662	-	31,719,662
r) Others (specify) - Contingencies	2,164,254	216,641	2,380,895	1,503,697	531,291	2,034,988
s) Others (specify) - Administrative Charges - EPF	108,845	-	108,845	62,852	-	62,852
n) Meeting Expenses	1,076,268	107,751	1,184,019	1,645,774	437,146	2,082,920
Total	116,548,975	2,580,377	119,129,352	118,485,357	1,969,772	120,455,129

# SCHEDULE - 18 TRANSPORTATION EXPENSES

	Amount in Rupee							
	Particulars		Current Year			Previous Year		
		Plan	Others	Total	Plan	Others	Total	
1	Vehicles (owned by institution)			-			-	
	a) Running expenses	932,912		932,912	889,972	640	890,612	
	b) Repair & Maintenance	139,165	2,000	141,165	298,880	-	298,880	
	c) Insurance expenses			-			-	
2	Vehicles taken on rent / lease						-	
	Rent / lease and Running expenses			-			-	
3	Vehicle (Taxi) hiring expenses			-		2,123	2,123	
	Total	1,072,077	2,000	1,074,077	1,188,852	2,763	1,191,615	

### SCHEDULE - 19 REPAIRS & MAINTENANCE

301	Amount in Rupees						
	Particulars		Current Year			Previous Year	
		Plan	Others	Total	Plan	Others	Total
a)	Buildings (including Electrical maintenance)	22,946,537	-	22,946,537	8,572,206	-	8,572,206
b)	Furniture & Fixtures	76,293	-	76,293	712,458	-	712,458
c)	Plant & Machinery	-	-	-	-	-	-
d)	Office Equipment	745,810	172,211	918,021	1,068,972	176,890	1,245,862
e)	Computers & Softwares	1,920,917	104,654	2,025,571	2,329,363	-	2,329,363
f)	Laboratory & Scientific Equipments	1,381,600	-	1,381,600	2,424,168	3,776	2,427,944
g)	Audio Visual Equipments	-	-	-	-	-	-
h)	Cleaning Material & Services	-	-	-	-	-	-
i)	Book Binding Charges	-	-	-	-	-	-
j)	Gardening	-	-	-	-	-	-
k)	Estate Maintenance	7,854,066	-	7,854,066	4,788,768	-	4,788,768
I)	Others (specify) - PHE maintenance		-	-	1,943,718	-	1,943,718
	Total	34,925,223	276,865	35,202,088	21,839,653	180,666	22,020,319

# **SCHEDULE - 20** FINANCE COSTS

						A	mount in Rupees
Particulars		Current Year			Previous Year		
		Plan	Others	Total	Plan	Others	Total
a)	Bank Charges	-	218,790	218,790	-	38,207	38,207
b)	Interest on Term Loan		-	-		-	-
c)	Others (specify)			-			-
	Total	-	218,790	218,790	-	38,207	38,207

# **SCHEDULE - 21** OTHER EXPENSES

501	ILDOLE - 21 OTTIER EAFENSES					A	mount in Rupees	
	Particulars		Current Year			Previous Year		
		Plan	Others	Total	Plan	Others	Total	
a)	Provision for Bad and Doubtful Debts / Advances			-			-	
b)	Irrecoverable Balance written off			-			-	
c)	Grants / Subsidies to other institutions / organizations			-			-	
d)	Others (specify) - Fees and Interest on Sttautory Payment	-	212,798	212,798	-	-	-	
		-	-	-			-	
	Total	-	212,798	212,798	-	-	-	

# **SCHEDULE - 22** PRIOR PERIOD EXPENSES

	Amount in Rupees							
	Particulars		Current Year			Previous Year		
		Plan	Others	Total	Plan	Others	Total	
1	Establishment expenses	-	-	-	-	-	-	
2	Academic expenses			-			-	
3	Administrative expenses	-	119,006	119,006	994,279	-	994,279	
4	Transportation expenses			-			-	
5	Repairs & Maintenance - Civil	2,174,951	-	2,174,951	-	-	-	
6	Depreciation	461,125	-	461,125	1,434,951	-	1,434,951	
	Total	2,636,076	119,006	2,755,082	2,429,230	-	2,429,230	

IIEST Shibpur 200 Annual Report 2019\_20

### SCHEDULE - 23

# **Significant Accounting Policies:**

Indian Institute of Engineering Science and Technology is an Autonomous body. The Institute is financed by the Ministry of Human Resource and Development, Government of India through Plan and Non Plan. The Institute is also undertaken various research projects and consultancy works through its esteemed teachers and the assets created out of it is duly stated in this financial statements.

### **Financial Statements-**

The Institute prepared the following Financial Statements i.e. Balance Sheet and Income & Expenditure Account for the year ended as on 31st March 2020. The Common Accounting format as prescribed by the Ministry has been followed in drawing up those financial statements; however, in its first year the institute had its best endeavor to follow every line item of the said prescribed form, however, the same in some cases could not be strictly followed and will be incorporated in the ensuing financial year's statement.

### Accounting Concept-

The financial statement has been prepared under Historical Cost Convention unless otherwise stated and on the principal of going concern method.

### **Accounting Basis-**

The account is prepared under accrual basis of accounting, excepting the cases specifically stated in these significant accounting policies. Government grants & Subsidies are accounted for on accrual basis if reasonable assurance obtained for its definite future receipts.

### **Investment Accounting-**

The Institute has invested its fund available to its credit in fixed deposits with scheduled commercial banks and the same is stated at the face value plus accrued interest thereon.

### Governments Grants & Subsidies-

Government Grants / Subsidies receivable during the year under Non recurring head are being treated as Capital Receipts and accounting for under Corpus Fund to the extent utilized for capital expenditure.

Government Grants / Subsidies earmarked for certain purpose receivable during the year under any head and to be utilized by way of payment for that specific purpose are being treated as Capital Receipts & accounting for under Earmarked Fund.

Government Grants /Subsidies receivable during the year under Recurring head are being treated as Revenue receipts and accounted for as income under the head Grant/Subsidy to the extent the same has been utilized for the purpose for which the grant has been sanctioned.

### **Revenue Recognition -**

### **Tuition Fees**

Tuition fees, Sale of Admission Forms have been accounted for as and when actually received from the students. Fees actually paid to the mess authority, but not received by the Institute as on year end has been considered as receivable from mess authority.

### Interest Income -

Interest on savings bank account have been considered as income as and when the same is credited in bank account and interest accrued on fixed deposits have been accounted for at the end of the year.

### Fixed Assets and Depreciation Accounting -

Fixed Assets are valued at a cost of acquisition inclusive of inward expenses and incidental expenses. Condemned & unserviceable assets are written off in accounts as and when required.

Gifted / donated assets, if any, are valued at declared value where available; if not available, the value is estimated based on the present market value adjusted with reference to the physical condition of the assets. They are set up by credit to Capital fund and merged with fixed assets of the institute. Depreciation is charged at the rates applicable to the respective assets.

Books received as gifts, if any, are valued at selling prices printed on the books. Where they are not printed, the value is based on assessment.

Fixed assets are valued at cost less accumulated depreciation. Depreciation on fixed assets is provided on Straight line method at the following rates:

SI No	Particulars	Rate of Depreciation (p.a)
Ι	Building	2%
П	Roads & Bridges	2%
Ш	Tubewells and Water Supply	2%
IV	Electrical Installations & Equipments	5%
V	Plant & Machinery	5%
VI	Scientific and Laboratory Equipment	8%
VII	Office Equipment	7.5%
Х	Audio Visual Equipment	7.5%
XI	Computers & Peripherals	20%
XII	Furniture & Fixture	7.5%

SI No	Particulars	Rate of Depreciation (p.a)
XIII	Vehicles	10%
XIV	Library Books and Scientific Journals	10%
XV	Computer Software	40%
XVI	e-Journals	40%

Depreciation is provided for the whole year on additions during the year, irrespective the dates of addition.

Where an assets is fully depreciated, it will be carried at a residual value Re 1 in the balance sheet and will not be further depreciated. Thereafter, depreciation is calculated on the additions of each year separately at the rate of depreciation applicable for that asset head.

Assets created out of Earmarked Funds and funds of sponsored projects, where the ownership of such assets vests in the Institute, are set up by credit to Capital Fund and merged with the Fixed Assets of the Institute. Assets created out of Sponsored Project funds, where the ownership is retained by the sponsors but held and used by the institute are separately disclosed in the Notes on Accounts

### Inventories

The inventories of chemicals, stationery etc are not separately maintained and the whole quantity have been accounted for as consumed as and when purchased.

### **Retirement Benefits**

Provident fund of the employees has been deducted from salary and the same is being transferred to State Bank of India, Howrah Branch, which is being maintained by Howrah Treasury – I, Govt of West Bengal.

Other retirement benefits are accounted for as and when being actually incurred

### Earmarked / Endowment Funds

Earmarked funds created by the institute and Endowment funds received by the institute has been separately accounted for and also its corresponding investments and assets.

### **Sponsored Projects**

In respect of the ongoing sponsored projects, the amounts received from sponsors are credited to the head `Current Liabilities and Provisions – Current Liabilities – Other Liabilities – Receipts against ongoing projects". As and when expenditure is incurred / advances are paid against such projects, or the concerned project account is debited with allocated overhead charges, the liability account is debited.

In addition to the earmarked fund for the junior research fellowships funded by the University Grants Commission, Fellowships and Scholarships are also sponsored by various organizations. These are accounted in the same way as sponsored projects except that the expenditure generally is on disbursement of fellowships and scholarships, which may include allowances for contingent expenditure by the fellows and scholars.

The institute itself also awards fellowships and scholarships, which are accounted as Academic Expenses.

### Income Tax

The income of the Institute is exempt from Income Tax under section 10(23c)(iiiab) of the Income Tax Act, 1961. No provision for income tax is therefore made in the accounts.

### SCHEDULE - 24

# **Contingent Liabilities & Notes on Accounts:**

- 1. Claims against the Institute suits Rs. Nil (Previous year Rs. Nil)
- 2. Previous year's figures have been regrouped / rearranged whenever deems fit.
- 3. Addition in the year to fixed assets purchased out of sponsored projects and earmarked fund for which the effective ownership lies with the institute and the institute is using the same for the purpose of the activities of the institute only :-

Plan Grant	Rs. 208,337,632		
Sponsored Projects	Rs. 69,862,039		

The assets have been set up by credit to Capital Fund

In the balance sheet as on 31st March 2014 and the balance sheet of earlier years, fixed assets created out of plan funds and fixed assets created out of non plan funds or other funds from sources were not exhibited distinctly.

### Disclosure on Library Books :-

4041 books worth Rs. 1,92,208 missing as per report submitted by a CA firm on physical verification of the library books as on 31/03/2017; the same could not be reduced from the written down value of the library books as per schedule 4 as the date of addition and consequent depreciation charged on the same could not be accurately ascertained;

- 4. The Institute is set up on land measuring 114 acres at Shibpur. The institute is an erstwhile state university and the title of the land rests with the Government of West Bengal. The title of the land is not yet transferred to the Institute's name and the state government has been approached to make the necessary transfer process. The value of land is taken as Nil in the balance sheet.
- 5. In the opinion of the management, the current assets, loans and advances and deposits have been valued on realization in the ordinary course, equal at least to the aggregate amount shown in the balance sheet.
- 6. In the endeavor of the institute to conform the prescribed common format to the best extent possible, the provident fund assets and liabilities have been taken out from the accounts and are being presented separately.
- 7. Corpus Fund for Future Development- A new earmarked fund has been created during the year, out of the fixed deposits made out of general funds over the year and the balance as on 31/03/2019 stood at Rs. 45,23,722.40.
- 8. The Institute paid Rs. 1 crore to the UGC for participating in the programme of acquiring status of Institution of Eminence and considered the payment as expenditure during the year 2017-18. As per the terms 75% of the same had been refunded back in February 2020 and the same has been considered as Other Income for the current year.

Schedules 1 to 24 are annexed to and form an integral part of the balance sheet as on 31st March 2020 and the Income and Expenditure account for the year ended as on that date.

Dy. Registrar (Finance)

Registrar

Director

(D. Bandhopadhyay) Proprietor M.No - 057861 Debasis Bandyopadhyay & CO. Chartered Accountants

### PROVIDENT FUND ACCOUNT

### Balance Sheet as at 31.03.2020

Liabilities	Amount	Assets	Amount
GPF		Recoverable Advance	63,771,059
Opening balance	350,033,716		
Add : Subscription received	61,836,700	Howrah Treasury a/c	373,684,271
Add : Interest	22,364,470		
Less : Withdrawal	5,165,268	Interest accrued as on 31/03/2020	28,165,939
(A)	429,069,618		
CPF			
Opening balance	3,140,584		
Add : Subscription received	968,667		
Add : Interest	242,551		
Less : Withdrawal	-		
(B)	4,351,802		
CPF (Institute Contribution)			
Opening balance	3,110,128		
Add : Subscription received	698,949		
Add : Interest	224,833		
Less : Withdrawal	-		
(C)	4,033,910		
Interest Reserve Account	28,165,939		
Total	465,621,269	Total	465,621,269

Dy. Registrar (Finance)

Registrar

Director

(D. Bandhopadhyay) Proprietor M.No - 057861 Debasis Bandyopadhyay & CO. Chartered Accountants

### PROVIDENT FUND ACCOUNT

### Receipts and Payments Account for the year ended 31.03.2020

Receipts	Amount	Payments	Amount
Opening Balance [11020301]	315,158,869	GPF Advance [07040100]	22,645,500
GPF Subscription [07010503]	60,754,600	GPF Withdrawal [07040300]	5,165,268
CPF Subscription [07010509]	968,667		
CPF Contribution by Employers [20030200]	698,949		
GPF Advance refund [07010504]	1,082,100		
Interest received [03020200]	22,831,854	Closing Balance [11020301]	373,684,271
Total	401,495,039	Total	401,495,039

# INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR

Income and Expenditure Account for the year ended 31.03.2020

Expenditure	Amount	Income	Amount
Interest credited to PF a/c	22,831,854	Interest accrued for the year	28,165,939
		Interest received for the year	22,831,854
Surplus / (Deficit)	28,165,939		
Total	50,997,793	Total	50,997,793

Dy. Registrar (Finance)

Registrar

Director

(D. Bandhopadhyay) Proprietor M.No - 057861 Debasis Bandyopadhyay & CO. Chartered Accountants



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/2019-20/IIEST/242

A copy of the Separate Audit Report, alongwith Annexure, on the accounts of the Indian Institute of Engineering Science and Technology, Shibpur, Howrah, for the financial year 2019-20, is forwarded to the Director, Indian Institute of Engineering Science and Technology, Shibpur, 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 the Parliament.

Two copies of the printed Annual Report, for the financial year 2019-20 (both English and Hindi Version), containing the Audited Accounts and the Separate Audit Report, along with Annexure, as laid before the Parliament, may please be forwarded to this Office, for necessary action at this end.

Encl.: As stated

Dy. Director (Inspection)

जि. आई. प्रेस विल्डिंग, 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



lincl.: As stated

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.

<u>No:</u> OA II (AB)/AR/2019-20/IIEST/24| Date: 12 02-2021

To The Secretary, Ministry of Education, 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 financial year 2019-20 Sir.

I am to forward herewith the Separate Audit Report, in the prescribed format, on the accounts of the Indian Institute of Engineering Science and Technology, Shibpur, Howrah, for the financial year 2019-20. A copy of the annual accounts of the organisation, for the financial year 2019-20, is also enclosed.

 Two copies of the Separate Audit Report (both English and Hindi Version), as presented before the Parliament, may please be forwarded to this office, for necessary action at this end.

3. The dates of laying of the audited accounts and the Separate Audit Report, for the financial years 2014-15 to 2019-20, on the Tables of both the Houses of Parliament, may also please be communicated to this office.

Yours faithfully,

(Deepak Narain)

(Deepak Narain) Director General of Audit Central: Kolkata

जि. आई. प्रेस विल्डिंग, 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 2020

We have audited the attached Balance Sheet of the Indian Institute of Engineering Science and Technology, Shibpur, Howrah, as at 31 March 2020, 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 in regard to compliance with extent Laws, Rules & Regulations (i.e. Propriety and Regularity aspects) 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 the 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:
  - 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 in this report, have been drawn up in terms of 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, insofar as it appears from our examination of books.
  - iv. We further report that:
  - **Comments on Accounts**
  - A. Balance Sheet
  - 1.1Liabilities:
  - 1.1.1Corpus/Capital Fund (Schedule-1): ₹234.73 crore

The above head, as well as 'Fixed Assets' (Schedule-4), were overstated by ₹6.26 crore, due to capitalization of assets worth ₹6.26 crore, procured out of the 'Sponsored Projects Fund', even though the ownership had not been transferred to the Institute. Despite a similar observation in the previous year's Audit Report, no corrective action was taken by the Institute.

**1.1.2** Designated/Earmarked/Endowment Fund (Schedule-2): ₹79.91 crore The Institute transferred an amount of ₹45.24 crore, from the 'Corpus/Capital Fund' (Schedule-1), to the 'Corpus Fund-Future Development' (Schedule-2), a newly created 'Earmarked Fund'. An amount of ₹2.23 crore was also added to the Fund, as Accrued Interest, bringing the closing balance of the fund to ₹47.47 crore. This diversion of funds from 'Corpus/Capital Fund' to the new 'Earmarked Fund' constituted a violation of the Format of Accounts prescribed by the MHRD, and led to overstatement of the 'Designated/Earmarked/Endowment Fund' (Schedule-2) by ₹47.47 crore. Consequently, the 'Corpus/Capital Fund (Schedule-1)', was also understated by the same amount.

### 1.2 Assets

### 1.2.1 Current Assets (Schedule-7):₹141.47 crore

The Institute, in violation of the instructions provided under the MHRD format, exhibited an amount of ₹35.10 crore, being excess expenditure over grants received, as 'MHRD Grant Receivable' under 'Grants/Subsidies' (Schedule-10), instead of adjusting the same from the internal receipts of the Institute. This resulted in overstatement of the 'Current Assets' (Schedule-7), and the 'Corpus/Capital Fund' (Schedule-1), by ₹35.10 crore.

1.2.2 The Institute did not write back 21 Time-barred cheques, amounting to ₹16.96 lakh, included in the Bank Reconciliation Statement (BRS). This resulted in understatement of the 'Current Assets' (Schedule-7), as well as the 'Current Liabilities and Provisions' (Schedule-3), by ₹16.96 lakh.

### B. Income & Expenditure:

### 2.1 Expenditure:

### 2.1.1 Depreciation (Schedule-4): ₹15.80 crore

Depreciation was short charged on 'Buildings', 'Tube wells &Water Supply', 'Electrical Installation & Equipments' and 'Computer & Peripherals', by ₹49.92 lakh. This resulted in understatement of the above head, and overstatement of the 'Excess of Income over Expenditure', by ₹49.92 lakh.

### C. General:

3.1 The Institute earned an amount of  $\gtrless1,41$  crore, on the Bank Account balance (SBI Account No: 33725727857), in the financial year 2019-20, wherein the Grants of the Institute were credited from the MHRD. It, however, booked the entire interest amount of  $\gtrless1.41$  crore, as the Institute's own Income. The Institute needs to segregate Interest carned out Government Grants, and to book the same as 'Unutilized Grants', refundable to the Ministry.

3.2 Despite mention in the previous year's Audit Report, identification and proper accounting of 'Miscellaneous Receipts – Suspense/Sources to be traced', amounting to ₹17.79 lakh, has been pending since long. The Institute may take appropriate steps in this regard.

3.3 Although mentioned in the earlier audit reports, Retirement Benefits were not provided as per the Actuarial method of valuation, in terms of AS-15, as well as the format of accounts prescribed by the MHRD.

### D. Grants-in-Aid:

The Institute is mainly funded by Grants-in-Aid from the Ministry of Human Resource Development (MHRD), Government of India. During the financial year 2019-20, it received total Grants of ₹135.27 crore (₹37.65 crore under 'GIA-General' & ₹97.62 crore under 'GIA-Salaries'). It, however, spent ₹155.16 crore (<u>Revenue Expenditure</u>: ₹134.33 crore and <u>Capital Expenditure</u>: ₹20.83 crore), resulting in excess expenditure of ₹19.89 crore. The excess expenditure was met out of the Internal Revenues of the Institute.

### E. Net Effect:

The net effect of the comments given in the preceeding paragraphs is that both the Assets and Liabilities were overstated by ₹41.19 crore, and the Excess of Income over Expenditure was overstated by ₹49.92 lakh, for the financial year ended on 31st March, 2020.

### F. Management Letter

Deficiencies not included in the Audit Report have been brought to the notice of the Director, IIEST, Shibpur, Howrah, 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 insofar as it relates to the Balance Sheet, of the state of affairs of the
   Indian Institute of Engineering Science and Technology, Shibpur,
   Howrah, as at 31 March 2020 and
- b. insofar as it relates to the Income and Expenditure Account of the Surplus, for the year ended on that date.

For and on behalf of the C&AG of India

Place: Kolkata Date: 11.02.2021

(Deepak Narain) Director General of Audit (Central) Kolkata

### Annexure

### A. Adequacy of Internal Audit System

The Internal Audit System of the Institute is inadequate, as it does not have any approved Internal Audit Manual in place, despite the existence of an Internal Audit Wing.

### B. Adequacy of Internal Control System

- The Institute did not have any plan for rotation of duties of employees dealing with Cash, Stocks and other valuables.
- Security Deposits/Fidelity Guarantees were not obtained in respect of employees handling valuables such as Cash and Stocks.
- iii. Insurance Covers, relating to Cash in Transit and Cash in Hand, were inadequate.
- iv. No separate register was maintained for entry of Post-dated cheques.
- v. Cheque Protectors were not used.
- vi. Identity Cards of the employees were neither being periodically renewed, nor were they received back at the time of their ceasing to be in service and prior to the final payment being made.
- vii. The Institute did not have any Centralized Purchase Department. Consequently, none of its departments could compile a list of pending purchase orders.
- viii. Receipts of materials were not evidenced by pre-numbered Goods Received Notes.
- ix. Confirmation of the balances of "Loans & Advances" was not being obtained on a periodical basis.
- x. As mentioned in the previous Audit Report also, the deficiencies in the customized software 'Campus Connect', relating to linking of the Annual Accounts with the Ledger and physical vouchers, led to notable difficulties and problems in finding the audit trail of transactions.
- xi. In case of some Fixed Deposits, it was found that the certificates had been issued by the concerned bank, in the name of the Registrar himself, instead of being issued in the name of the Institute. The Institute may take appropriate steps in this regard.

### C System of Physical Verification of Fixed Assets

The Institute did not maintain any dedicated 'Fixed Assets Register', in either the form of GFR-22 (GFR 2017), or in the form of any detailed list of Fixed Assets. Consequently, Audit could not ascertain the actual position and value of all the 'Fixed

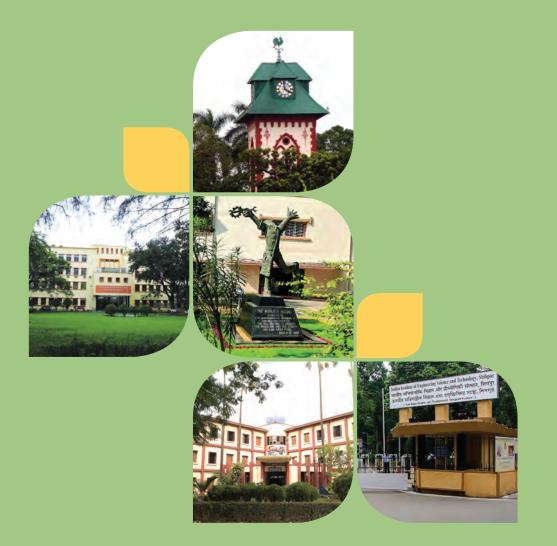
Assets' of the Institute. Moreover, the Institute had not conducted Physical Verification of its Fixed Assets and Inventories since the financial year 2014-15.

D Regularity in payment of Statutory Dues:

The Institute was regular in payment of its Statutory Dues.

# Notes







Indian Institute of Engineering Science and Technology, Shibpur Howrah - 711103, West Bengal, India www.iiests.ac.in

