



राष्ट्रीय प्रौद्योगिकी संस्थान अगरतला
NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA
An Institute of National Importance



ANNUAL REPORT 2015-2016

National Institute of Technology Agartala
Jirania, Tripura - 799046.
www.nita.ac.in

ANNUAL REPORT

2015 – 2016



**NATIONAL INSTITUTE OF TECHNOLOGY
AGARTALA**

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1.0 INTRODUCTION

National Institute of Technology Agartala, a Centrally Funded Institution is one of the thirty one National Level Technical Institutes in India. The Institute's vision is "to help to improve the economic development of the country particularly of the Institutes of the North-Eastern States, through the pursuit of excellence in technical education, research, consultancy and training". The Institute has marked an important footprint in this short span of time after its conversion from the erstwhile Tripura Engineering College to NIT Agartala in the year 2006. Situated in the lap of nature, NIT Agartala has embarked on a journey to make its presence felt in the map of Technical education and innovation in the country. Presently at the Under Graduate Level, B. Tech Degree Courses are offered in Civil Engineering, Mechanical Engineering, Electrical Engineering, Computer Science & Engineering, Electronics & Communication Engineering, Production Engineering, Chemical Engineering, Electronics & Instrumentation Engineering and Bio Engineering, out of which seven branches also offer Post-Graduate courses. The Institute also offers courses of higher study in computer applications, science subjects and management programmes, MCA, M. Sc., MBA. To promote fundamental research, it also has Ph.D along with Post-Doctoral Fellowship programs in various fields of specializations of Engineering, Science and Humanities & Social Sciences. The School of Management has also been started to produce management professionals, skilled with analytical and administrative ability.

The Institute has a dedicated Center for Career Development for organizing on campus placements process, Industrial Training, Study Tours, and Apprenticeship Training for the final year students. The Institute has several highly sophisticated laboratories empowered with the latest technical equipments that aim at catering the state of the art research. The Institute has a well-equipped workshop that provides centralized facilities for conducting classes at the undergraduate level and also meets the requirements of any state of the art project work and consultancy initiatives. The Library of the Institute is equipped with the latest RFID systems and dedicated digital section with online access to numerous international journals of repute and e-books from different online portals and subjects to quench the needs of our students and researchers.

The Institute has both Boys' and Girls' Hostel facilities. Students are accommodated in four Boy's Hostels and 1 Girls' Hostel. The institute looks forward to accommodate students into another Boy's hostel complex with boarding capacity of 1500 students before the start of the new academic session. The students take active part in all sorts of activities held in cultural and technical festivals in and outside the campus. The NITA Student Gymkhana is a very active student organization that acts as a link between the students and the administration. The Gymkhana Club promotes the objectives of fostering extra-curricular activities and works for the welfare of students. Every year the students of NIT Agartala organize the Annual Techno-Cultural fest called 'Advaitam' that witnesses spontaneous participation of students. And different Clubs such as Robotic Club, Soft Skills Development Club, Electronic Club, Music Club, Drama Club, Photographic Club, Art & Culture Club have been formed for encouraging the students to take part and develop themselves in various fields.

The entire NIT Agartala is sprawled over 365 acres of lush green land in nature's lap. Massive construction works are going on with a rapid pace to equip it fully with the entire infrastructure.

Virtual class room through 4 Mbps High definition video conferencing has been established under the second phase of the Pilot project launched by NICSI, New Delhi to connect IITs, IISc, TIFR and NITs through NKN and, a Multimedia centre has been developed to cater to the needs of the CDAC curricula. Having regard to the concern for the environment, Solar panels have been installed with a 90% subsidy by MNRE for street lights and other Emergency loads like Hospital, Guest House, Girls' Hostel etc. The entire campus of NIT Agartala is a Wi-Fi campus where internet facilities can be accessed from anywhere at any point of time. NIT Agartala is the first NIT to have started Kendriya Vidyalaya within its campus to provide education to the local people as well as the children of the faculty members and other staff members staying within the campus. NIT Agartala looks forward to work for a future that would empower our young generation with a quality technical education that will help them take greater responsibility to take our country forward.

1.1 Objectives:

The National Institute of Technology Agartala is an Institution of National Importance set up by Govt. of India. The mission of the Institution is :

- To develop professional attitude.
- To make good human beings possessing professional ethics.
- To make responsible citizens with social commitment.
- To develop entrepreneurial spirit among young professionals.
- To foster research and attitude for development.
- To ensure all round growth, fostering and developing better commitment in terms of both technological advancement and development.

1.2 Goal:

Institutional Goal – Short term and Long term

The target of the Institute is to achieve Short Term Goals within 5 years and the Long Term Goals within 10 years.

Short term goals:

- Academic Blocks and Administrative Blocks have already been inaugurated and will be operational soon.
- To complete the construction of Students' Hostels and Staff Quarters.
- Installation and commissioning of sub-station for reliable and quality power supply in the campus.
- To construct roads & other amenities as proposed in the master plan.
- To procure adequate laboratory equipment and machineries for UG and PG classes.
- To develop modern laboratories for Central Research Facilities and consultancy activities.
- Upgradation of existing campus to the wide network to provide continuous high broadband internet connectivity.

- Upgradation of existing library with modern facilities namely RFID, digital library, library management system, connectivity to e-journals and e-books of reputed publications.
- Creation of all infrastructural and other facilities such as a boundary wall, all weather internal roads with footpath and well planned campus to be developed keeping in view the architectural landscaping and beautification.
- Entrepreneurship development aided with Technology Incubation.

Long Term Goals:

- To make it one of the leading technological Institutions not only in India, but also in the world map of technical Institutes.
- To attract large number of foreign students.
- To produce high quality research scholars in all professional areas.
- To attract high quality experienced faculty members of national and international standards.
- To strengthen Industry Institute partnership linkages.
- To extend facilities in terms of technology transfer for developing infrastructural facilities of the Region.
- To establish community development centres for nurturing and motivating the local talents and resources.
- To establish different Schools / Centres in the emerging Science, Technology and other related professional areas.
- To establish IPR centre and IIPC.
- To establish itself as an Educational Hub in the North-East Region.

1.3 Education System:

The National Institute of Technology Agartala offers B. Tech, MCA, MBA, M. Tech., M. Sc. (courses in Physics, Chemistry and Mathematics) and Ph.D. courses in Engineering, Technology, Sciences, Humanities & Social Sciences.

The Institute has introduced a new curriculum in the line of IITs where more number of elective subjects are offered to make the system flexible. The Institute follows a credit based system for academic evaluation. It offers Industrial training and projects as a part of the education system and students are also encouraged to take part in various activities through NSS, NCC, Sports and other co-curricular activities for their social and personality development.

1.4 New Initiatives:

The number of seats have been increased from 757 to 867 for the academic session 2013-2014. The PG programmes have been aimed to fulfil the requirement of Tripura and North East as a whole. The campus has been partially made residential with four boys' hostels and one girls' hostel. A fully residential campus will be developed with modern facilities for overall requirement of the Institute within 3 years.

The Institute gets a 33 KV dedicated power supply through Tripura State Electricity Corporation Limited for uninterrupted supply in the campus. Some other initiatives taken for augmenting the Institute with more infrastructure facilities are the construction of the following:

- (1) Up-gradation of the internal main road with both side footpath including side drain, electric post, bus stop, sitting arrangement at certain intervals & conduit from main gate – 1 to auxiliary gate -2 via housing and boys' hostel & auxiliary gate -2 to main gate -1 and auditorium to existing play ground (old) at NIT Agartala.
- (2) Revamping of lakes, water harvesting and beautification of water bodies in NIT Agartala.
- (3) CCTV Surveillance System, LAN networking and telephone/ intercom system in Central Library at NIT Agartala.
- (4) HVAC System in Cental Library at NIT Agartala.
- (5) Internet Connection in Transportation Engineering Laboratory & Water Resource Engineering Laboratory of Civil Engineering Department (New Workshop).
- (6) Area Development works in and around Central Plaza, Academic Zone, NIT Agartala in progress.
- (7) Construction of Laboratory to conduct the experiment of Geotechnical Engineers for Ph. D. Scholars at NIT Agartala.
- (8) Supply, Installation, Testing & Commissioning of 15 (fifteen) lifts in Administrative Building 1 & 2, School of Management, International Guest House, Academic Block (ECE Dept. & DoNER), Central Library and Director's Bungalow at NIT Agartala.

2.0 AN OVERVIEW

A brief overview about the Institute is furnished in this section.

2.1 Historical Background:

National Institute of Technology Agartala, a Centrally Funded Institution was set up to impart quality technical education into various levels of higher learning. It may be mentioned here that the 23rd February 2006 is a Red Letter Day in the history of Tripura Engineering College as well as in the State of Tripura as the Union Cabinet approved the proposal of the State Government for conversion of Tripura Engineering College to National Institute of Technology, a fully Central Government funded Institution with Deemed to be University status.

The Institute (i.e. erstwhile Tripura Engineering College) was established in 1965 with the three traditional branches of Civil, Electrical and Mechanical Engineering. It was initially affiliated to Calcutta University and had the same curriculum structure and examination system at par with Bengal Engineering College (presently Bengal Engineering and Science University, Shibpur). After the establishment of Tripura University, the Institute was then affiliated to Tripura University w.e.f. 1987.

2.2 Location:

The Institute is located on a site, 20 km. away from the capital city of Agartala and 4 km. away from National Highway (NH-44) connecting Agartala to Shillong. Agartala is linked to the rest of the country by road and rail-link via Silchar and Guwahati. It has got direct air link to New Delhi, Kolkata, Guwahati, Silchar, Imphal, Mumbai, Bangalore and Chennai. NIT Agartala is situated at 91°21'22.681" E (E 339387.823 m.) longitudes and 23°50'26.906" N (N 2637495.384 m.) latitude at a height of 43.786 metres above the sea level. The climate in the institute campus is moderate. The temperature varies from a minimum 6^o C in the winter season to a maximum of 35^o C in the summer season. The area has an approximate annual rainfall of 2200 mm.

The Institute is connected to the National Highway with all weather-metalled roads. Regular bus and jeep services are available from Agartala city to College Chowmuhani (NH 44 junction) near the Institute. Auto-rickshaw services are also available on the route from College Chowmuhani to the Institute and back. Direct regular bus service from Agartala (Nagerjola) to NIT Campus via Ranirbazar is now available. The nearest railway station at Jirania is about 2.5 km. from the Institute. The Institute also has its own bus service for campus dwellers.

2.3 Campus and Common Facilities:

The campus of the Institute is spread over an area of 365 acres, set amidst a sprawling landscape of natural quietness. It presents a spectacle of harmony in modern architecture, natural beauty aided with picturesque surroundings.

A well-equipped Medical Unit with four Medical Officers, two Pharmacists and other supporting staff is available in the campus for rendering medical care to the students, staff and other inmates

of the campus. In case of emergency, arrangements are made for transferring the patients to the Jirania Primary Health Centre which is 4 km. away from the campus or to the State Hospital in Agartala. An ambulance service is also provided for students and staff.

A full-fledged Branch of State Bank of India named SBI NIT Agartala Branch is functioning in the Institute campus with the Core Banking facility since 28th March 2008. The SBI has opened an ATM counter in the Institute campus. Teachers, staff, students and local inhabitants are getting benefit out of it. With the introduction of nationalized Banking facility in the campus, a long pending demand of the students and staff of the Institute has been fulfilled. Two ATM counters one by CANARA Bank and the other by Punjab National Bank have also been operating in the campus. CANARA Bank opened their branch in the Institute's premises.

The Tripura Gramin Bank has a branch operating from the Institute campus named as NIT Agartala Branch. The campus also has a Sub-Post Office by the name "NIT Agartala" having PIN: 799 046.

2.4 Initiatives for Research & Development:

NIT Agartala has performed well in culturing of academic and research environment within its wide area of specialization offered by faculty members of different departments. In this respect, an MOU is signed between NIT Agartala and CSIR NCL Pune on 30th May 2015 for students exchange and joint collaborative research. This will definitely bring a new era of research in the Institute as expected.

The social responsibility of NIT Agartala could not be denied at any sector and an MOU between the Ministry of Housing and Urban Poverty Alleviation (MHUPA) and NIT Agartala was signed on 15th February 2016. This MOU is mainly aimed for giving expertise and housing designs in case specific to be identified by State and Central departments. Preparation of manuals & guidelines, technical audit of DPR's, technical training of engineers etc are also covered under this MOU. The identification and transplantation of global best practice in regard to adoption of new designed and techniques, mechanism for testing and accepting materials, arrangement for pilot testing and demonstration and giving expertise related to slum reevaluation through the Urban Housing are also included in the MOU.

As NIT Surathkal and NIT Warangal belong to the same family of 31 NIT's, NIT Agartala signed an MOU with both of them in regard to internship, joint research, students exchange and joint guidance of PhD/ M.Tech students. This will help to cover the loopholes of research area where NITs can supplement each other by providing adequate manpower and proper guidance.

For better development of soft skills, most of the IIT's have formed an MOU with "Pariksha" for soft skills development and providing skills related signed to placement interview. In this connection, NIT Agartala being the 1st NIT to sign an MOU with the same organization and online tests are carried on regular intervals under the supervision of the Career Development Centre, NIT Agartala.

2.5 Placements:

The Institute has a Centre for Career Development (CCD) under the Chairmanship of Prof. U. Mishra with supporting staff. The CCD helps the students to get proper placements in various Public and Private Sector Organizations by arranging the campus interviews. Study Tours and Industrial Trainings are also organized by this Cell.

2.6 Games and Sports:

The students actively participate in all co-curricular activities like Games and Sports, Debates, Cultural-Functions, Essay Competitions, Drama Competitions, Rallies on various themes, NSS programmes, etc. being sponsored by the State Government and Central Government and other statutory bodies and also by the institute authority. N.S.S. or N.C.C. is a compulsory subject for all students of first year.

3.0 ADMINISTRATION

3.1 Introduction:

Recognizing the growing need of quality technical education in the North Eastern Region, the Union Cabinet approved the proposal of the State Government for the conversion of the erstwhile Tripura Engineering College to National Institute of Technology, to a fully Central Government funded Institution with Deemed to be University status on 23rd February, 2006. The Ministry of Human Resource Development, Government of India issued the official notification No. F. 26-20/2004/TS-III dated 10.03.2006 that marked the emergence of National Institute of Technology Agartala with effect from 01.04.2006.

National Institute of Technology Agartala (NITA) is an autonomous statutory organization set up by NIT ACT. ***NIT Act and first Statutes framed under the ACT have provision for 4 Authorities. Board of Governors*** (BOG) is the highest authority, responsible for overall administration and control of the Institution. Under the supervision of BOG, three (3) other authorities work in different areas for proper supervision, maintenance and implementation of decisions and policies of the Institution. The other authorities are (1) Finance Committee, (2) Building & Works Committee and (3) Senate. The functions, responsibilities, powers of BOG, Finance Committee, Building & Works Committee and Senate are provided in the NIT ACT and Statutes.

Members of the Board of Governors (BOG)

| <i>Sl. No.</i> | <i>Name and Designation of the Members</i> |
|-----------------------|--|
| 1 | Padma Shri Deepak B. Phatak, Chairperson, BOG, NIT Agartala and Professor, Department of Computer Science & Engineering, IIT Bombay. |
| 2 | Prof. (Dr.) Gopal Mugeraya, Director, NIT Agartala (Tripura). |
| 3 | The Special Secretary/ Additional Secretary/ Joint Secretary dealing with Technical Education, Department of Higher Education, Ministry of Human Resource Development, Govt. of India. |
| 4 | The Financial Adviser, Department of Higher Education, Ministry of Human Resource Development, Govt. of India. |
| 5 | The Secretary to the Govt. of Tripura, Dept. of Higher Education, Tripura. |
| 6 | Prof. Nitindra Nath Som, Former Professor of Civil Engineering & Dean, Faculty of Engineering & Technology, Jadavpur University, Kolkata, West Bengal. |
| 7 | Prof. A. Srinivasan, Dean of Faculty Affairs, IIT Guwahati, Assam. |
| 8 | Prof. (Mrs.) Uma Bhattacharya, Department of Computer Science and Technology, BESU, Shibpur. |
| 9 | Shri Alok Roy Choudhury, Additional Chief Engineer, PWD, Govt. of Tripura, Agartala, Tripura. |
| 10 | Prof. R. P. Sharma, Professor, Civil Engineering Department, NIT Agartala. |
| 11 | Dr. John Debbarma, Assistant Professor, Department of Mechanical Engineering, NIT, Agartala. |
| 12 | Dr. D. Bhattacharya, Registrar (in-charge), Secretary of BOG. |

Members of the Finance Committee

Sl. No. Name and Designation of the Members

- 1 Padma Shri Deepak B. Phatak, Chairperson, BOG, NIT Agartala and Professor, Department of Computer Science & Engineering, IIT Bombay.
- 2 Prof. (Dr.) Gopal Mugeraya, Director, NIT Agartala (Tripura).
- 3 The Joint Secretary dealing with NITs or his nominee, Department of Higher Education, Ministry of Human Resource Development, Govt. of India.
- 4 The Financial Advisor or his nominee, Department of Higher Education, Ministry of Human Resource Development, Govt. of India.
- 5 Prof. Nitindra Nath Som, Former Professor of Civil Engineering & Dean, Faculty of Engineering & Technology, Jadavpur University, Kolkata, West Bengal.
- 6 Dr. John Debbarma, Assistant Professor, Department of Mechanical Engineering, NIT, Agartala.
- 7 Dr. D. Bhattacharya, Registrar (in-charge), Member Secretary of FC.

Members of the Building and Works Committee

Sl. No. Name and Designation of the Members

- 1 Prof. (Dr.) Gopal Mugeraya, Director, NIT Agartala (Tripura) – Chairman of the BWC.
- 2 The Dy. Director or Dy. Secretary, Department of Higher Education, Ministry of Human Resource Development, Govt. of India.
- 3 The Dean (P&D), NIT Agartala.
- 4 Shri Asit Bhaumik, Addl. Chief Engineer, PWD, Govt. of Tripura.
- 5 Shri Kajal Banik, Executive Engineer, Electrical Inspectorate, Govt. of Tripura.
- 6 Prof. R. P. Sharma, Professor, Civil Engineering Department, NIT Agartala.
- 7 Dr. D. Bhattacharya, Registrar (in-charge), Member Secretary of BWC.

Members of the Senate meeting

Sl. No. Name and Designation of the Members

- 1 Prof. (Dr.) Gopal Mugeraya, Director, NIT Agartala (Tripura), Chairman of the Senate.
- 2 Prof. A. Vasudeva Adhikari, Prof. of Chemistry, NITK, Surathkal.
- 3 Prof. Saji Gopinath, Indian Institute of Management, Kozhikode, Kerala.
- 4 Prof. Subhas Chandra Saha, Professor, NIT Agartala.
- 5 Prof. Umesh Mishra, Professor, NIT Agartala.
- 6 Prof. Monoj Mitra, Prof. of Metallurgy & Dean of Engineering, Jadavpur University.
- 7 Prof. R. P. Sharma, Civil Engineering Department, NIT Agartala (Tripura).
- 8 Dr. D. Bhattacharya, Registrar (in-charge), Member Secretary of the Senate.

3.2 Number of Meetings of the Authorities

During the period under report, the number of meetings held by various authorities are mentioned below:

| | | |
|----|------------------------------------|----------|
| A. | Board of Governors | : 4 Nos. |
| B. | Finance Committee Meeting | : 2 Nos. |
| C. | Building & Works Committee Meeting | : 3 Nos. |
| D. | Senate | : 4 Nos. |

3.3 Staff Position

3.3.1 Name of Director, Registrar, Deans and HoDs

| | |
|-----------------------|-------------------------------|
| DIRECTOR | : Prof. (Dr.) Gopal Mugeraya. |
| REGISTRAR (in-charge) | : Dr. Debasish Bhattacharya |
| DY. REGISTRAR (Admn) | : Mr. Sumanta Chakraborti |

| <u>Deans:</u> | <u>Name of the Deans</u> |
|----------------------------------|--------------------------|
| 1) Dean (Academic) | : Dr. Ajoy Kumar Das |
| 2) Dean (Faculty Welfare) | : Dr. Ardhendu Saha |
| 3) Dean (Planning & Development) | : Dr. Ratul Das |
| 4) Dean (Allumni) | : Dr. Prasun Chakraborty |
| 5) Dean (Student Affairs) | : Dr. Priyanath Das |
| 6) Dean (Research & Consultancy) | : Dr. Ram Naresh Rai |

| <u>Heads of the Departments/Schools</u> | <u>Name of the HODs</u> |
|---|---------------------------------|
| 1) Civil Engineering | : Dr. Manish Pal |
| 2) Electrical Engineering | : Dr. Ajoy Chakraborty |
| 3) Mechanical Engineering | : Dr. Swapan Bhounik |
| 4) Computer Science & Engineering | : Dr. Mrinal Kanti Debbarma |
| 5) Electronics & Communication Engineering | : Mr. Atanu Choudhury |
| 6) Production Engineering | : Dr. G. R. K. Sastry |
| 7) Physics | : Dr. (Mrs.) Aparna Nath |
| 8) Chemistry | : Dr. Tarun Kr. Misra |
| 9) Mathematics | : Dr. Uttam Kr. Bera |
| 10) Humanities & Social Science | : Dr. Debasis Neogi |
| 11) Chemical Engineering | : Dr. Srimanta Ray |
| 12) Electronics & Instrumentation Engineering | : Dr. Jayanta Kumar Rakshit |
| 13) Bio Engineering | : Dr. Tarun Kanti Bandopadhyaya |
| 14) School of Management | : Dr. Anirban Dutta |

Head of Central Services, Facilities and Sections:

| | | |
|------------------------------|---|--|
| Medical Officer | : | (i) Dr. Tapan Kr. Datta. (ii) Dr. Dhurjati Debbarma. (iii) Dr. Parimal Chakraborty. (iv) Dr. Sushanta Chakma. |
| Chairman, CCD | : | Prof. U. Mishra |
| Senior Librarian | : | Mr. Kanu Ranjan Roy |
| Chief Warden | : | Dr. R. K. Yadav |
| Faculty In-charge (Workshop) | : | Dr. Madhujit Deb |
| C-DAC Co-ordinator | : | Sri Nirmalya Kar |
| Centre Co-ordinator of QIP | : | Dr. R.S. Panua |
| Centre Co-ordinator of TEQIP | : | Dr. Ardhendu Saha |
| Engineering Unit: | | |
| Estate Engineer (Civil) | : | Sri P. C. Das |

3.3.2 List of Faculty Members**3.3.2.1 Regular faculty members**

| <i>Sl. No.</i> | <i>Name</i> | <i>Designation</i> | <i>Department</i> | <i>Date of Joining</i> |
|----------------|---------------------------|--------------------|----------------------------|------------------------|
| 1. | Prof. Gopal Mugeraya | Director | | 10-10-2013 |
| 2. | Prof. S. C. Saha | Professor | Mech. Engg. | 01-04-2006 |
| 3. | Prof. Umesh Mishra | Professor | Civil Engg. | 03-10-2008 |
| 4. | Prof. Richi Prasad Sharma | Professor | Civil Engg. | 01-04-2006 |
| 5. | Dr. Swapan Bhowmik | Assoc. Prof. | Mech. Engg. | 01-04-2006 |
| 6. | Dr. Prasun Chakrabarty | Assoc. Prof. | Mech. Engg. | 01-04-2006 |
| 7. | Dr. Ajoy Kumar Das | Assoc. Prof. | Mech. Engg. | 01-04-2006 |
| 8. | Dr. Rajsekhar Panua | Assoc. Prof. | Mech. Engg. | 24-05-2010 |
| 9. | Dr. G.Ravi Kiran Sastry | Assoc. Prof. | Mech. Engg. | 24-04-2012 |
| 10. | Dr. Sujit Kumar Pal | Assoc. Prof. | Civil Engg. | 01-04-2006 |
| 11. | Dr. Manish Pal | Assoc. Prof. | Civil Engg. | 01-04-2006 |
| 12. | Dr. Ratul Das | Assoc. Prof. | Civil Engg. | 01-04-2006 |
| 13. | Dr.(Mrs.) Rama Deb Barma | Assoc. Prof. | Civil Engg. | 01-04-2006 |
| 14. | Dr. Rup Narayan Roy | Assoc. Prof. | Elect. Engg. | 01-04-2006 |
| 15. | Dr. Ardhendu Saha | Assoc. Prof. | Elect. Engg. | 01-04-2006 |
| 16. | Dr. Priyanath Das | Assoc. Prof. | Elect. Engg. | 01-04-2006 |
| 17. | Dr. Ajoy Kr. Chakraborty | Assoc. Prof. | Elect. Engg. | 15-07-2010 |
| 18. | Dr. Diptendu Bhattacharya | Assoc. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 19. | Dr. Ram Naresh Rai | Assoc. Prof. | Prod. Engg. | 25-06-2010 |
| 20. | Dr. Dibyendu Ghoshal | Assoc. Prof. | Electronics & Commu. Engg. | 29-04-2010 |
| 21. | Dr. Debasish Bhattacharya | Assoc. Prof. | Mathematics | 01-04-2006 |

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|-----|-----------------------------|--------------|------------------|--------------------------|
| 22. | Dr. Uttam Kr.Bera | Assoc. Prof. | Mathematics | 01-09-2010 |
| 23. | Dr. Paritosh Bhattacharya | Assoc. Prof. | Mathematics | 27-03-2012 |
| 24. | Dr. Aparna Nath | Assoc. Prof. | Physics | 01-04-2006 |
| 25. | Dr. Saroj Kumar Das | Assoc. Prof. | Chemistry | 01-04-2006 |
| 26. | Dr. Tarun Kumar Mishra | Assoc. Prof. | Chemistry | 09-04-2012 |
| 27. | Dr. Debasis Neogi | Assoc. Prof. | Hum. & So. Sc. | 22-08-2008 |
| 28. | Dr. John Deb Barma | Asst. Prof. | Mech. Engg. | 01-04-2006 |
| 29. | Dr. Pritam Das | Asst. Prof. | Mech. Engg. | 01-04-2006 |
| 30. | Sri Abhik Majumder | Asst. Prof. | Mech. Engg. | 01-04-2006 |
| 31. | Dr. Madhujit Deb | Asst. Prof. | Mech. Engg. | 01-04-2006 |
| 32. | Sri Barnik Saha Roy | Asst. Prof. | Mech. Engg. | 01-04-2006 |
| 33. | Sri Pankaj Kumar Das | Asst. Prof. | Mech. Engg. | 01-04-2006 |
| 34. | Sri Arindam Majumder | Asst. Prof. | Mech. Engg. | 20-04-2010 |
| 35. | Dr. Rahul Banerjee | Asst. Prof. | Mech. Engg. | 12-04-2010 |
| 36. | Sri Ankuran Saha | Asst. Prof. | Mech. Engg. | 21-05-2012 |
| 37. | Sri R.K. Bhogendra Meitei | Asst. Prof. | Mech. Engg. | 29-06-2012 |
| 38. | Dr. Ajoy Biswas | Asst. Prof. | Mech. Engg. | 01-07-2007 23-07-2012 |
| 39. | Dr. Subrata kumar Ghosh | Asst. Prof. | Mech. Engg. | 07-06-2012 |
| 40. | Smt. Lipika Halder | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 41. | Dr. (Mrs) Sima Ghosh | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 42. | Dr. Rajib Saha | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 43. | Sri Gopinandan Dey | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 44. | Sri Jayanta Pal | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 45. | Sri Nilotpal Deb Barma | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 46. | Dr. Tara Sen | Asst. Prof. | Civil Engg. | 12-04-2010 |
| 47. | Dr. Sanjay Paul | Asst. Prof. | Civil Engg. | 24-05-2012 |
| 48. | Dr. Animesh Debnath | Asst. Prof. | Civil Engg. | 21-06-2012 |
| 49. | Sri Sushant Kr. Biswal | Asst. Prof. | Civil Engg. | 21-06-2012 |
| 50. | Dr. Surajit Das | Asst. Prof. | Civil Engg. | 16-05-2012 |
| 51. | Sri Dipankar Sarkar | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 52. | Dr. Debdulal Tripura | Asst. Prof. | Civil Engg. | 01-04-2006 |
| 53. | Dr. Partha Pratim Sarkar | Asst. Prof. | Civil Engg. | 08-09-2008 |
| 54. | Smt Anindita Jamatia | Asst. Prof. | Elect. Engg. | 01-04-2006 |
| 55. | Sri Abaniswar Chakraborti | Asst. Prof. | Elect. Engg. | 01-04-2006 |
| 56. | Dr. Sumita Deb | Asst. Prof. | Elect. Engg. | 01-04-2006 |
| 57. | Sri Prabir Ranjan Kasari | Asst. Prof. | Elect. Engg. | 01-04-2006 |
| 58. | Smt Minakshi Deb Barma | Asst. Prof. | Elect. Engg. | 01-04-2006 |
| 59. | Sri Bikram Das | Asst. Prof. | Elect. Engg. | 01-04-2006 |
| 60. | Dr. Subhadeep Bhattacharjee | Asst. Prof. | Elect. Engg. | 13-04-2010 |
| 61. | Sri Prasenjit Debnath | Asst. Prof. | Elect. Engg. | 30-07-2010 |
| 62. | Ms. Joyshree Das | Asst. Prof. | Elect. Engg. | 11-10-2012 |
| 63. | Dr. Aniruddha Bhattacharya | Asst. Prof. | Elect. Engg. | 12-12-2012 |
| 64. | Dr. Biman Kumar Saha Roy | Asst. Prof. | Elect. Engg. | 28-02-2013 |
| 65. | Dr. Mrinal Knt. Debbarma | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |

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|------|---------------------------------|-------------|----------------------|------------|
| 66. | Dr. Swapan Deb Barma | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 67. | Sri Nikhil Deb Barma | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 68. | Sri Kunal Chakma | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 69. | Smt Smita Das | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 70. | Sri Dwijen Rudra Pal | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 71. | Sri Suman Deb | Asst. Prof. | Com. Sc. & Engg. | 01-04-2006 |
| 72. | Sri Anupam Jamatia | Asst. Prof. | Comp. Sc. & Engg. | 01-04-2006 |
| 73. | Sri Tribid Deb Barma | Asst. Prof. | Comp. Sc. & Engg. | 01-04-2006 |
| 74. | Sri Nirmalya Kar | Asst. Prof. | Comp. Sc. & Engg. | 29-07-2010 |
| 75. | Sri Ashim Saha | Asst. Prof. | Comp. Sc. & Engg. | 12-10-2012 |
| 76. | Sri Manik Bhowmik | Asst. Prof. | Elect. & Comm. Engg. | 01-04-2006 |
| 77. | Sri Biman Deb Barma | Asst. Prof. | Elect. & Comm. Engg. | 01-04-2006 |
| 78. | Sri. Kamalesh Debnath | Asst. Prof. | Elect. & Comm. Engg. | 12-04-2010 |
| 79. | Dr. Sambhu Nath Pradhan | Asst. Prof. | Elect. & Comm. Engg. | 28-05-2010 |
| 80. | Sri Anirban Bhattacharya | Asst. Prof. | Elect. & Comm. Engg. | 21-05-2012 |
| 81. | Sri Somnath Roy Choudhury | Asst. Prof. | Elect. & Comm. Engg. | 21-05-2012 |
| 82. | Mrs. Tamasi Moyra (Panua) | Asst. Prof. | Elect. & Comm. Engg. | 13-06-2012 |
| 83. | Dr. Madhuparna Chakraborty | Asst. Prof. | Elect. & Comm. Engg. | 22-06-2012 |
| 84. | Sri Mitra Barun Sarkar | Asst. Prof. | Elect. & Comm. Engg. | 15-06-2012 |
| 85. | Sri Atanu Chowdhury | Asst. Prof. | Elect. & Inst. Engg. | 22-09-2008 |
| 86. | Dr. Jayanta Kr. Rakshit | Asst. Prof. | Elect. & Inst. Engg. | 23-08-2010 |
| 87. | Sri Prasenjit Datta | Asst. Prof. | Prod. Engg. | 01-04-2006 |
| 88. | Dr. Kishan Choudhuri | Asst. Prof. | Prod. Engg. | 18-09-2008 |
| 89. | Sri Swarup Paul | Asst. Prof. | Prod. Engg. | 20-02-2009 |
| 90. | Ms. Seena P. | Asst. Prof. | Prod. Engg. | 13-05-2010 |
| 91. | Dr. Vidyut Dey | Asst. Prof. | Prod. Engg. | 01-06-2012 |
| 92. | Dr. Uttam Kumar Mandal | Asst. Prof. | Prod. Engg. | 28-05-2012 |
| 93. | Mrs. Soma Nag | Asst. Prof. | Chemical Engg. | 14-06-2010 |
| 94. | Dr. Tarun Knt. Bandyopadhyay | Asst. Prof. | Chemical Engg. | 04-05-2012 |
| 95. | Dr. Srimanta Ray | Asst. Prof. | Chemical Engg. | 04-05-2012 |
| 96. | Dr. Kalyan Gayen | Asst. Prof. | Chemical Engg. | 04-05-2012 |
| 97. | Sri Dwipayana Sen | Asst. Prof. | Chemical Engg. | 16-07-2012 |
| 98. | Dr. Ajay kumar Manna | Asst. Prof. | Chemical Engg. | 17-12-2012 |
| 99. | Dr. Apu kumar Saha | Asst. Prof. | Mathematics | 01-04-2006 |
| 100. | Dr. (Mrs) Baby Bhattacharya | Asst. Prof. | Mathematics | 06-02-2009 |
| 101. | Dr. Rajesh kr. Yadav | Asst. Prof. | Physics | 06-09-2010 |
| 102. | Dr. Suvra Prakash Mondal | Asst. Prof. | Physics | 01-11-2012 |
| 103. | Dr. Biswajit Saha | Asst. Prof. | Physics | 30-11-2012 |
| 104. | Dr. (Mrs.) Mitali Saha | Asst. Prof. | Chemistry | 12-04-2010 |
| 105. | Dr. Keisham Surjit Singh | Asst. Prof. | Chemistry | 26-07-2010 |
| 106. | Dr. Gyanabati Khuraijam | Asst. Prof. | Hum. & Soc. Sc. | 07-05-2010 |
| 107. | Dr. Anirban Dutta | Asst. Prof. | School of Management | 06-11-2012 |
| 108. | Dr. Mrinmoy Majumder | Asst. Prof. | Civil Engg. | 17-11-2012 |

3.3.2.2 Contractual faculty members.

| <i>Sl. No.</i> | <i>Name</i> | <i>Designation</i> | <i>Department</i> | <i>Date of Joining</i> |
|----------------|----------------------------|--------------------|----------------------|------------------------|
| 1. | Prof. Bidyut Bhattacharjee | Professor | Elect. & Comm. Engg. | 17-01-2013 |
| 2. | Ms. Moumita Majumder | Asst. Prof. | Comp. Sc. & Engg. | 18-08-2010 |
| 3. | Ms. Lalita Kumari | Asst. Prof. | Comp. Sc. & Engg. | 18-08-2010 |
| 4. | Ms. Sharmistha Majumder | Asst. Prof. | Comp. Sc. & Engg. | 24-08-2011 |
| 5. | Ms. Priyanka Sarkar | Asst. Prof. | Comp. Sc. & Engg. | 01-04-2013 |
| 6. | Sri Dhruvajyoti Bhowmik, | Asst. Prof. | Comp. Sc. & Engg. | 01-04-2013 |
| 7. | Sri Parthasarathi De | Asst. Prof. | Comp. Sc. & Engg. | 08-04-2013 |
| 8. | Ms. Purbani Kar | Asst. Prof. | Comp. Sc. & Engg. | 10-07-2014 |
| 9. | Sri Tamal Biswas | Asst. Prof. | Comp. Sc. & Engg. | 10-07-2014 |
| 10. | Sri Kishore Kr. Dhar | Asst. Prof. | Comp. Sc. & Engg. | 10-07-2014 |
| 11. | Sri Prashant Bhardwaj | Asst. Prof. | Comp. Sc. & Engg. | 10-07-2014 |
| 12. | Ms. Tannistha Pal | Asst. Prof. | Comp. Sc. & Engg. | 10-07-2014 |
| 13. | Sri Sanjib Debnath | Asst. Prof. | Comp. Sc. & Engg. | 10-07-2014 |
| 14. | Sri Rajib Chowdhuri | Asst. Prof. | Comp. Sc. & Engg. | 11-07-2014 |
| 15. | Sri Subhajit Deb | Asst. Prof. | Civil Engg. | 06-08-2010 |
| 16. | Ms. Tillotama Chakraborty | Asst. Prof. | Civil Engg. | 30-08-2011 |
| 17. | Ms. Nabanita Bhowmik | Asst. Prof. | Civil Engg. | 06-12-2012 |
| 18. | Sri Abhijit Debnath | Asst. Prof. | Civil Engg. | 06-12-2012 |
| 19. | Ms. Subhra Das | Asst. Prof. | Civil Engg. | 12-12-2012 |
| 20. | Sri Dibyendu Paul | Asst. Prof. | Civil Engg. | 07-10-2014 |
| 21. | Sri Litan Dey | Asst. Prof. | Civil Engg. | 17-07-2014 |
| 22. | Ms. Sadria Begam | Asst. Prof. | Civil Engg. | 14-07-2014 |
| 23. | Ms. Dipika Debnath | Asst. Prof. | Civil Engg. | 10-10-2014 |
| 24. | Sri Chirabrata Debnath | Asst. Prof. | Civil Engg. | 14-07-2014 |
| 25. | Sri Suman Debnath | Asst. Prof. | Civil Engg. | 22-03-2016 |
| 26. | Ms. Paramita Majumder | Asst. Prof. | Civil Engg. | 21-01-2015 |
| 27. | Ms. Nabina Khanam | Asst. Prof. | Civil Engg. | 22-01-2015 |
| 28. | Sri Ratnadeep Modak | Asst. Prof. | Civil Engg. | 21-01-2015 |
| 29. | Sri Sukanta Chakraborty | Asst. Prof. | Civil Engg. | 07-07-2015 |
| 30. | Sri Debashish Karmakar | Asst. Prof. | Civil Engg. | 09-03-2016 |
| 31. | Sri Bibhab Kr. Lodh | Asst. Prof. | Chemical Engg. | 05-08-2011 |
| 32. | Dr. Abhijit Mandal | Asst. Prof. | Chemical Engg. | 21-01-2013 |
| 33. | Dr. Mriganka Sekhar Manna | Asst. Prof. | Chemical Engg. | 17-07-2014 |
| 34. | Dr. Chandan Kr. Das | Asst. Prof. | Chemical Engg. | 14-07-2014 |
| 35. | Dr. Sudev Das | Asst. Prof. | Chemical Engg. | 11-08-2014 |
| 36. | Dr. Susmita Roy | Asst. Prof. | Mathamatics Dept. | 01-08-2011 |
| 37. | Dr. Debjit Dutta | Asst. Prof. | Mathamatics Dept. | 21-07-2014 |
| 38. | Dr. Sankar Prasad Mondal | Asst. Prof. | Mathamatics Dept. | 22-07-2014 |
| 39. | Dr. Ravi Shankar Kumar | Asst. Prof. | Mathamatics Dept. | 17-07-2015 |
| 40. | Dr. Mantu Das | Asst. Prof. | Mathamatics Dept. | 17-07-2014 |

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|-----|------------------------------|----------------|----------------------|--------------------------|
| 41. | Dr. Abhijit Baidya | Teaching Asst. | Mathamatics Dept. | 23-08-2010 |
| 42. | Dr. Jayanta Debnath | Teaching Asst. | Mathamatics Dept. | 01-08-2011 |
| 43. | Dr. Pinki Majumder | Teaching Asst. | Mathamatics Dept. | 01-08-2011 |
| 44. | Ms. Jayasree Chakraborty | Teaching Asst. | Mathamatics Dept. | 05-09-2012 |
| 46. | Ms. Sudipa Choudhury | Teaching Asst. | Mathamatics Dept. | 29-07-2015 |
| 47. | Dr. Poulomi De | Teaching Asst. | Mathamatics Dept. | 13-08-2015 |
| 48. | Sri Subharaj Paul | Teaching Asst. | Physics Dept. | 01-08-2012 |
| 49. | Dr. Rakesh Roy | Asst. Prof. | Physics Dept. | 17-07-2013 |
| 50. | Dr. Manash Kr. Paul | Asst. Prof. | Physics Dept. | 16-07-2010 17-10-2012 |
| 51. | Dr. Sanjay Kr. Mandal | Asst. Prof. | Physics Dept. | 05-11-2012 |
| 52. | Dr. Thingujam Kiranmala Devi | Asst. Prof. | Physics Dept. | 21-07-2014 |
| 53. | Dr. Nandini Roy | Asst. Prof. | Physics Dept. | 23-07-2014 |
| 54. | Dr. Biswajit Paul | Asst. Prof. | Physics Dept. | 20-07-2015 |
| 55. | Dr. Santanu Chakraborty | Asst. Prof. | Physics Dept. | 13-07-2015 |
| 56. | Sri. Durbadal Debroy | Asst. Prof. | Mech. Engg. | 03-08-2011 |
| 57. | Sri Aparesch Datta | Asst. Prof. | Mech. Engg. | 03-08-2011 |
| 58. | Dr. Abhishek Paul | Asst. Prof. | Mech. Engg. | 03-08-2011 |
| 59. | Dr. Ashis Acharjee | Asst. Prof. | Mech. Engg. | 11-07-2014 |
| 60. | Ms. Mitali Debnath | Asst. Prof. | Mech. Engg. | 14-07-2014 |
| 61. | Sri Arindam Sinha | Asst. Prof. | Mech. Engg. | 14-07-2014 |
| 62. | Ms. Moutoshi Singha Roy | Asst. Prof. | Mech. Engg. | 29-07-2015 |
| 63. | Dr. Sagnik Pal | Asst. Prof. | Mech. Engg. | 30-07-2015 |
| 64. | Sri Dipak Ch. Das | Asst. Prof. | Mech. Engg. | 30-07-2015 |
| 65. | Dr. Joydeep Roy | Asst. Prof. | Mech. Engg. | 07-03-2016 |
| 66. | Dr. Prasenjit Dey | Asst. Prof. | Mech. Engg. | 07-03-2016 |
| 67. | Sri Krishanu Gupta | Asst. Prof. | Mech. Engg. | 07-03-2016 |
| 68. | Ms. Sharmistha Sharma | Asst. Prof. | Elect. Engg. | 12-08-2009 |
| 69. | Sri Diptanu Das | Asst. Prof. | Elect. Engg. | 08-08-2011 |
| 70. | Ms. Saheli Roy | Asst. Prof. | Elect. Engg. | 12-08-2009 |
| 71. | Sri Bhaskar Bhattacharjee | Teaching Asst. | Elect. Engg. | 18-03-2009 |
| 72. | Ms. Nivedita Laskar | Asst. Prof. | Elect. Engg. | 15-11-2012 |
| 73. | Sri Diptanu Dey | Asst. Prof. | Elect. Engg. | 14-07-2014 |
| 74. | Sri Saptadip Saha | Asst. Prof. | Elect. Engg. | 11-07-2014 |
| 75. | Sri Arup Ratan Bhowmik | Asst. Prof. | Elect. Engg. | 11-07-2014 |
| 76. | Dr. Nabamita Goswami | Asst. Prof. | Elect. Engg. | 11-07-2014 |
| 77. | Sri Bishop Debbarma | Asst. Prof. | Prod. Engg. | 24-08-2010 |
| 78. | Sri Sujay Chakraborty | Asst. Prof. | Prod. Engg. | 01-08-2011 |
| 79. | Ms. Pushparenu Bhattacharjee | Asst. Prof. | Prod. Engg. | 08-08-2013 |
| 80. | Sri Nabarun Biswas | Asst. Prof. | Prod. Engg. | 11-07-2014 |
| 81. | Sri Debashis Podder | Asst. Prof. | Prod. Engg. | 18-07-2014 |
| 82. | Sri Shiladitya Chakraborty | Teaching Asst. | Elect. & Comm. Engg. | 25-07-2008 |

| | | | | |
|------|----------------------------|----------------|------------------------|------------|
| 83. | Sri Suvojit Acharjee | Asst. Prof. | Elect. & Comm. Engg. | 14-07-2014 |
| 84. | Mrs. Priyanka Chowdhury | Asst. Prof. | Elect. & Comm. Engg. | 13-08-2014 |
| 85. | Ms. Anindita Goswami | Asst. Prof. | Elect. & Comm. Engg. | 20-08-2014 |
| 86. | Sri Apangshu Das | Asst. Prof. | Elect. & Comm. Engg. | 10-08-2012 |
| 87. | Sri Abhishek Nag | Asst. Prof. | Elect. & Comm. Engg. | 13-07-2015 |
| 88. | Sri Partha Kr. Deb | Asst. Prof. | Elect. & Comm. Engg. | 02-07-2015 |
| 89. | Sri Puspendu Bikash Saha | Asst. Prof. | Elect. & Comm. Engg. | 02-07-2015 |
| 90. | Dr. Srijita Basumallick | Asst. Prof. | Chemistry Dept. | 14-07-2014 |
| 91. | Dr. Rajarshi Banik(Roy) | Asst. Prof. | Chemistry Dept. | 20-01-2015 |
| 92. | Dr.Subojit Das | Asst. Prof. | Chemistry Dept. | 24-07-2014 |
| 93. | Dr. Jhinuk De | Asst. Prof. | Chemistry Dept. | 12-01-2015 |
| 94. | Dr. Chitraniva Datta | Asst. Prof. | Chemistry Dept. | 03-08-2015 |
| 95. | Dr. Sajal Kundu | Asst. Prof. | Chemistry Dept. | 29-07-2015 |
| 96. | Mr. Mithun Chakraborty | Teaching Asst. | Chemistry Dept. | 07-08-2014 |
| 97. | Sri Manojit Roy | Teaching Asst. | Chemistry Dept. | 07-08-2014 |
| 98. | Sri Bidyasagar Debnath | Teaching Asst. | Hum. & So. Sc. | 04-08-2008 |
| 99. | Dr. Kaju Nath | Asst.Prof. | Hum. & So. Sc. | 24-07-2014 |
| 100. | Ms. Emily Sharma | Teaching Asst. | Hum. & So. Sc. | 01-09-2014 |
| 101. | Sri Nabendu Debnath | Teaching Asst. | Hum. & So. Sc. | 01-09-2014 |
| 102. | Dr. Anuradha Nongmaithem | Asst.Prof. | Hum. & So. Sc. | 25-07-2014 |
| 103. | Sri Prasenjit Ghorai | Asst.Prof. | Elect. & Instru. Engg. | 08-08-2011 |
| 104. | Ms. Priyanka Dey | Asst. Prof. | Elect. & Instru. Engg. | 13-08-2012 |
| 105. | Ms. Priyanka Roy Goswami | Asst. Prof. | Elect. & Instru. Engg. | 06-02-2012 |
| 106. | Sri Rupam Gupta Roy | Asst. Prof. | Elect. & Instru. Engg. | 11-07-2014 |
| 107. | Sri Rajesh Sharma | Asst. Prof. | Elect. & Instru. Engg. | 21-07-2014 |
| 108. | Ms. Pikaso Pal | Asst. Prof. | Elect. & Instru. Engg. | 11-07-2014 |
| 109. | Ms. Aparupa Kar | Asst. Prof. | Elect. & Instru. Engg. | 11-07-2014 |
| 110. | Dr. Dijendra Nath Roy | Asst. Prof. | Bio-Engg. | 28-01-2013 |
| 111. | Dr. Biswanath Bhunia | Asst. Prof. | Bio-Engg. | 04-03-2013 |
| 112. | Dr. Tridib Kr.Bhowmik | Asst. Prof. | Bio-Engg. | 13-06-2013 |
| 113. | Dr. Sreerup Banerjee | Asst. Prof. | Bio-Engg. | 21-07-2014 |
| 114. | Dr. Deeplina Das | Asst. Prof. | Bio-Engg. | 21-07-2014 |
| 115. | Dr. Abhijit Chatterjee | Asst. Prof. | Bio-Engg. | 14-07-2015 |
| 116. | Ms. Hrijuta Datta | Asst. Prof. | Bio-Engg. | 10-07-2015 |
| 117. | Dr. Muthusivarampandian M | Asst. Prof. | Bio-Engg. | 10-07-2015 |
| 118. | Dr. Rajib Mallik | Asst. Prof. | School of Management | 22-05-2013 |
| 119. | Dr. Sonit Dutta | Asst. Prof. | School of Management | 23-05-2013 |
| 120. | Dr. Mili Kar | Asst. Prof. | School of Management | 07-08-2013 |
| 121. | Dr. Pradeep Kr.Behera | Asst. Prof. | School of Management | 21-07-2014 |
| 122. | Dr. Amlanbrata Chakraborty | Asst. Prof. | School of Management | 21-07-2014 |

3.3.3 List of employees - other than faculty members

3.3.3.1 Regular non-teaching staff of the institute

| Sl. No. | Name | Designation | Department/ Section | Date of Joining |
|---------|-------------------------|-------------------------|---------------------|-----------------|
| 1. | Mr. Sumanta Chakrabarti | Dy. Registrar | O/o the Registrar | 12-08-2011 |
| 2. | Mr. Tanmoy Ghoshal | Asst. Registrar (Acad.) | Academic Section | 07-09-2012 |
| 3. | Sri Suman Karmakar | Technical Assistant | Elect. Engg. Deptt | 01-04-2006 |
| 4. | Sri Subhankar Chakma | Technical Assistant | Civil Engg. Dept. | 01-04-2006 |
| 5. | Sri Jyoti Lal Debbarma | Stenographer (SG-II) | O/o the Director | 01-04-2006 |
| 6. | Sri Sanjoy Deb Rupini | Sr. Assistant | Estt. Sec. | 01-04-2006 |
| 7. | Sri Tarun Debbarma | Sr. Assistant | Stip. & Scholarship | 01-04-2006 |
| 8. | Smt. Bakul Debbarma | Sr. Assistant | Estt. Section | 01-04-2006 |
| 9. | Sri Narayan Ch. Banik | Sr. Assistant | Accounts Section | 01-04-2006 |
| 10. | Sri Sajal Kr. Dey | Sr. Assistant | Cash Section | 01-04-2006 |
| 11. | Sri Pradip Kr. Majumder | Jr. Assistant | Academic Section | 01-04-2006 |
| 12. | Sri Sukhen Saha | Jr. Assistant | Academic Section | 01-04-2006 |
| 13. | Sri Dharendra Debnath | Jr. Assistant | Library | 01-04-2006 |
| 14. | Sri Dilip Kr. Ghosh | Sr. Technician | Workshop | 01-04-2006 |
| 15. | Sri Sukhendu Debbarma | Sr. Technician | Elect. Engg. | 01-04-2006 |
| 16. | Sri Nirmal Saha | Attendant (SG-II) | Mech. Engg. | 01-04-2006 |
| 17. | Sri Bijan ch Debnath | Group - C | Civil Engg. | 22-09-1980 |
| 18. | Sri Ratan Debnath | Group - C | Directors' Office | 22-09-1980 |
| 19. | Sri Dhanu Rn. Saha | Group - C | Medical Unit | 05-12-1980 |
| 20. | Sri Manik Chakraborty | Group - C | Civil Engg. | 26-06-1982 |
| 21. | Sri Ratan Modi | Group - C | CSE | 04-02-1981 |
| 22. | Sri Niranjan Ghosh | Group - C | Mech. Engg. | 08-12-1980 |
| 23. | Sri Jahar Debnath | Group - C | Dean (P&D) | 15-09-1987 |
| 24. | Smt. Brihalata Debbarma | Group - C | Civil Engg. | 06-07-1992 |
| 25. | Smt. Uma Saha | Group - C | Exam. Sec. | 31-07-1996 |
| 26. | Sri Dilip Debbarma | Group - C | Estt. Sec. | 22-12-1990 |
| 27. | Smt. Sonalaxmi Debbarma | Group - C | Estt. Sec. | 04-05-1998 |
| 28. | Sri Nepal Debnath | Group - C | Acad. Sec. | 14-08-1997 |
| 29. | Sri Bishu Debbarma | Group - C | Prod. Engg. | 17-05-1999 |
| 30. | Smt. Urmila Debbarma | Group - C | Estt. Sec. | 18-01-2003 |

3.3.3.2 List of contractual non-teaching staff of the institute

| Sl. No. | Name | Designation | Department/ Section | Date of Joining |
|---------|-------------------------------|---------------|---------------------|-----------------|
| 1. | Sri Sajal Kr. Ganguly (Retd.) | P.S | O/o the Director | 02-06-2008 |
| 2. | Sri Bidyut Kr. Ghosh | Jr. Assistant | O/o the Director | 12-12-2008 |
| 3. | Smt. Shampa Pal (Bhowmik) | Jr. Assistant | O/o the Director | 02-02-2010 |
| 4. | Sri Nabendra Nath Mukherjee | Admn. Officer | O/o the Registrar | 12-03-2010 |

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|-----|--------------------------------------|-----------------------|-------------------|------------|
| | (Retd.) | | | |
| 5. | Sri Tanumoy Paul | Jr. Assistant | O/o the Registrar | 19-06-2006 |
| 6. | Smt. Sumitra Roy | Jr. Assistant | O/o the Registrar | 12-12-2008 |
| 7. | Sri Sanjib Debbarma | Helper | O/o the Registrar | 15-07-2009 |
| 8. | Mrs. Kaninika Banik | Receptionist | O/o the Registrar | 11-11-2011 |
| 9. | Sri Asit Baran Bhatt. (Retd) | Accounts Offi. | Accts. Section | 01-06-2009 |
| 10. | Sri Rajesh Kn. Majumder | Accountant | Accts. Section | 21-11-2007 |
| 11. | Sri Dhruva Lal Banik (Retired) | Accountant | Accts. Section | 05-08-2011 |
| 12. | Sri Jagat jyoti Roy (Retd.) | AR.(Finance) | Accts. Section | 07-01-204 |
| 13. | Ms Aparna Nath | Accountant | Accts. Section | 18-08-2010 |
| 14. | Sri Dulal Ch. Das (Retired) | U.D.C. | Accts. Section | 07-05-2007 |
| 15. | Sri Kartik Ch. Debnath (Retired) | Gr.-D | Accts. Section | 01-05-2007 |
| 16. | Sri Manish Dey | Accountant | Accts. Section | 03-02-2014 |
| 17. | Sri Tapan Kr. Rakshit (Retd.) | Finance Officer | Accts. Section | 06-01-2012 |
| 18. | Sri Shyamal Purakayastha (Retd.) | Audit Officer | Accts. Section | 07-01-2014 |
| 19. | Sri Subrata Chakraborty | Audit officer | Accts. Section | 05-12-2011 |
| 20. | Sri Satya Ranjan Chakraborty (Retd.) | Section Officer | Estt. Section | 17-02-2012 |
| 21. | Sri Kritisundar Saha | Office Assistant | Estt. Section | 01-08-2013 |
| 22. | Sri Jadulal Debnath (Retd.) | Sr. Assistant | Estt. Section | 02-09-2015 |
| 23. | Sri Benimadav Bhowmik (Retd.) | U.D.C. | Estt. Section | 03-10-2006 |
| 24. | Sri Tapan Debnath (Retd.) | Technician | Estt. Section | 10-06-2015 |
| 25. | Sri Pradip Rn. Deb (Retd.) | Sr. Assistant | Estt. Section | 15-09-2015 |
| 26. | Sri Milan Ch. Sarkar (Retd.) | Asst. Reg. | Acad. Section | 03-08-2009 |
| 27. | Sri Hari Sadhan Sen (Retd.) | Sr. Assistant | Estt. Section | 11-09-2015 |
| 28. | Sri Kabir Deb | Jr. Assistant | Acad. Section | 04-06-2007 |
| 29. | Ms. Krishna Rani Deb | Jr. Assistant | Acad. Section | 21-06-2011 |
| 30. | Ms. Susmita Sharma | Tech. Assistant | Acad. Section | 03-09-2014 |
| 31. | Sri Sukdeb Chakraborty (Retd.) | Superintendent | Exam. Sec. | 01-06-2007 |
| 32. | Ms. Payel Sarkar | Sr. Assistant | Exam. Sec. | 05-07-2011 |
| 33. | Sri Sourav Mahajan | Jr. Assistant | Exam. Sec. | 12-12-2008 |
| 34. | Sri Himangshu Paul (Retd.) | Section Officer (Pur) | Purchase Section | 26-09-2011 |
| 35. | Sri Nabin Chandra Kundu | Lib. Asst. | Purchase Section | 01-04-2010 |
| 36. | Smt. Joydipa Bhattacharya | Jr. Assistant | Purchase Section | 01-03-2012 |
| 37. | Sri Partha Biswas | Estate Manager | Estate Section | 12-12-2008 |
| 38. | Sri Jitendra Debnath (Retd.) | Sr. Assistant | Estate Section | 03-03-2015 |
| 39. | Sri Ajit Saha (Retd.) | Attendant | Estate Section | 04-12-2015 |
| 40. | Sri Rajesh Kr. Modak (Retd.) | Jr. Engineer | Estate Section | 16-09-2011 |
| 41. | Sri Nakul Ch. Debnath (Retd.) | Plumber | Estate Section | 01-05-2008 |
| 42. | Sri Sudhangshu Kr. Bhowmik (Retd.) | Plumber | Estate Section | 04-11-2009 |
| 43. | Sri Sankar Debbarma | Work Asst. | Estate Section | 11-07-2009 |
| 44. | Sri Sanjib Chakraborty | Opt (Auditorium) | Estate Section | 27-06-2011 |
| 45. | Sri Basab Kanti Bhattacharjee | J. E. (Civil) | Estate Section | 03-09-2012 |

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|-----|-----------------------------|----------------------------|----------------|------------|
| 46. | Sri Rakesh Tripura | Mason | Estate Section | 10-12-2012 |
| 47. | Sri Pradip Sutradhar | Carpenter | Estate Section | 10-12-2012 |
| 48. | Sri Biswajit Das | Helper | Estate Section | 10-12-2012 |
| 49. | Sri Sanjib Sarkar | Helper | Estate Section | 10-12-2012 |
| 50. | Sri Milan Karmakar | Helper | Estate Section | 10-12-2012 |
| 51. | Sri Paresh Ch.Das (Retd.) | A.E.E. | Estate Section | 02-08-2013 |
| 52. | Sri Narayan Ch.Saha (Retd.) | A.E.E. | Estate Section | 02-08-2013 |
| 53. | Sri Ranjan Roy Chowdhury | A.E.E. | Estate Section | 02-08-2013 |
| 54. | Sri Dhruva Jyoti Sarkar | J.E. | Estate Section | 25-06-2014 |
| 55. | Sri Manik Bhowmik | J.E. | Estate Section | 23-06-2014 |
| 56. | Sri Ripan Banik | J.E. | Estate Section | 01-07-2014 |
| 57. | Sri Bankim Ch. Pal (Retd.) | A.E.E. | Estate Section | 13-06-2014 |
| 58. | Sri Bapan Debroy | A.E.E. | Estate Section | 20-06-2014 |
| 59. | Sri Debu Debnath | Work Assistant | Estate Section | 13-06-2014 |
| 60. | Sri Dipanjan Saha | J.E. | Estate Section | 16-12-2014 |
| 61. | Sri Rajesh Sarkar | J.E. | Estate Section | 16-12-2014 |
| 62. | Sri Rajkishor Sutradhar | J.E. | Estate Section | 17-12-2014 |
| 63. | Sri Bimal Krishna Debnath | A.E.E. | Estate Section | 02/09/2010 |
| 64. | Sri Sumit Debnath | J.E. | Estate Section | 05-09-2014 |
| 65. | Sri Deep Majumder | J.E. | Estate Section | 08-09-2014 |
| 66. | Sri Hare Krishna Debnath | Operator | Estate Section | 09-11-2010 |
| 67. | Sri Ranjit Sharma | Helper | Estate Section | 09-11-2010 |
| 68. | Sri Rajib Chakraborty | Helper | Estate Section | 09-11-2010 |
| 69. | Sri Chanki Paul | Helper | Estate Section | 09-11-2010 |
| 70. | Sri Pradip Das | Electrician | Estate Section | 01-12-2011 |
| 71. | Sri Arabinda Das | Electrician | Estate Section | 01-12-2011 |
| 72. | Sri Sujit Debnath | Lineman | Estate Section | 01-12-2011 |
| 73. | Sri Amar Krishna Saha | Helper | Estate Section | 01-12-2011 |
| 74. | Sri Subir Namasudra | Helper | Estate Section | 01-12-2011 |
| 75. | Sri Pabitra Shil | Electrician | Estate Section | 08-08-2012 |
| 76. | Sri Krishan Debnath | Lineman | Estate Section | 02-08-2012 |
| 77. | Sri Krishna Ch. Saha | Lineman | Estate Section | 03-08-2012 |
| 78. | Sri Uttam Kr.Debnath | Lineman | Estate Section | 07-08-2012 |
| 79. | Sri Parimal Debnath | Helper | Estate Section | 03-08-2012 |
| 80. | Sri Biswajit Debbarma | Helper | Estate Section | 03-08-2012 |
| 81. | Sri Rajib Deb | Helper | Estate Section | 16-06-2014 |
| 82. | Sri Kamal Charan Debnath | Supervisor | Estate Section | 16-06-2014 |
| 83. | Sri Matilal Tanti | Operator | Estate Section | 16-06-2014 |
| 84. | Sri Manitosh Sarkar | Operator | Estate Section | 16-06-2014 |
| 85. | Sri Litan Sarkar | Jr. Assistant | TPO | 16-07-2010 |
| 86. | Sri Debanjan Bhattacharjee | Training & Placement Astt. | TPO | 02-09-2014 |
| 87. | Sri Dyanojyoti Kar | Accountant | TPO | 15-09-2015 |
| 88. | Sri Sukanta Goswami | Jr. Assistant | Dean (FW) | 19-12-2008 |
| 89. | Sri Kanu Ranjan Roy (Retd.) | Sr. Librarian. | Library | 01-09-2009 |

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|------|----------------------------------|-----------------|-----------------|------------|
| 90. | Sri Shymal Kanti Deb (Retd.) | Librarian | Library | 01-06-2007 |
| 91. | Sri Anirban Sharma Roy | Lib. Asst. | Library | 30-01-2012 |
| 92. | Sri Dipankar Das | Jr. Assistant | Library | 18-12-2008 |
| 93. | Sri Govinda Chandra Shil (Retd.) | Jr. Assistant | Library | 13-04-2010 |
| 94. | Ms. Atrayee Podder | Library Asst. | Library | 30-01-2012 |
| 95. | Sri Bidyut Choudhuri | Library Asst. | Library | 14-09-2015 |
| 96. | Ms. Purnima Singha | Library Asst. | Library | 14-09-2015 |
| 97. | Ms. Rupa Debnath | Library Asst. | Library | 24-09-2015 |
| 98. | Ms. Jayeeta Paul | Library Asst. | AA & IR Section | 14-10-2015 |
| 99. | Sri Anupam Pal | Sports Officer | Dean (SW) | 16-08-2007 |
| 100. | Sri Sukanta Ghoswami | Phy. Edu. Off. | Dean (SW) | 16-08-2007 |
| 101. | Ms. Rumita Saha | Hostel Super. | Dean (SW) | 01-08-2012 |
| 102. | Ms. Mahuya Biswas | Hostel Super. | Dean (SW) | 10-02-2010 |
| 103. | Sri Ajoy Bhowmik | Hostel Super. | Dean (SW) | 16-02-2010 |
| 104. | Sri Rabindra Das | Hostel Super. | Dean (SW) | 10-02-2010 |
| 105. | Sri Sukrit Prasad Dutta | Hostel Super. | Dean (SW) | 30-07-2012 |
| 106. | Sri Satyajit Das | Hostel Super. | Dean (SW) | 30-07-2012 |
| 107. | Sri Sanjoy Ghosh | Hostel Super. | Dean (SW) | 05-09-2014 |
| 108. | Sri Subrata Ghosh | Hostel Super. | Dean (SW) | 05-09-2014 |
| 109. | Sri Prasanta Rn. Deb | Hostel Super. | Dean (SW) | 08-07-2015 |
| 110. | Sri Debashish Biswas | Foreman | Workshop | 04-08-2008 |
| 111. | Sri Manojit Das | Foreman | Workshop | 18-09-2008 |
| 112. | Sri Koushik Debroy | Foreman | Workshop | 01-01-2009 |
| 113. | Sri Debabrata Sen (Retd.) | Head Ins. | Workshop | 01-01-2008 |
| 114. | Sri Arup taru Roy | Instructor | Workshop | 19-08-2009 |
| 115. | Sri Ranju Kr. Singh | Instructor | Workshop | 19-08-2009 |
| 116. | Sri Biswajit Debnath | Instructor | Workshop | 19-08-2009 |
| 117. | Sri Jiban Chandra (Retd.) | Sr. Engine Opt. | Workshop | 19-03-2012 |
| 118. | Sri Basudeb Banik | Tech. | Workshop | 22-12-2008 |
| 119. | Sri Sujit Kumar Bhowmik | Skilled Asst. | Workshop | 18-09-2008 |
| 120. | Sri Shubendu Debbarma | Jr. Tech. | Workshop | 19-08-2009 |
| 121. | Sri Nikhil Ch. Karmakar (Retd.) | Gr.-D | Workshop | 01-06-2007 |
| 122. | Sri Kishore Das | Lab. Asst. | Mech. Engg. | 25-08-2010 |
| 123. | Sri Pinku Saha | Lab. Asst. | Mech. Engg. | 26-08-2010 |
| 124. | Sri Bishnupada Das | Driver | Workshop | 19-11-2008 |
| 125. | Sri Babul Ch. Deb | Driver | Workshop | 16-07-2009 |
| 126. | Sri Gopal Ch. Das | Driver | Workshop | 16-07-2009 |
| 127. | Sri Sajal Saha | Driver | Workshop | 01-02-2011 |
| 128. | Sri Sachindra Ch. Das (Retd.) | Gr. D | Mech. Engg. | 01-02-2009 |
| 129. | Sri Gautam Acharjee | Technician | Mech. Engg. | 28-07-2015 |
| 130. | Sri Gobinda Ch. Das (Retd.) | Technician | Mech. Engg. | 27-07-2015 |
| 131. | Sri Subrajit Sen | Technical Asst. | Mech. Engg. | 27-07-2015 |
| 132. | Sri Sandipan Deb | Technical Asst. | Mech. Engg. | 28-07-2015 |
| 133. | Sri Prasenjit Majumder | Technical Asst. | Mech. Engg. | 28-07-2015 |
| 134. | Sri Abhijit Giri | Technical Asstt | Civil Engg. | 13-08-2010 |

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|------|----------------------------------|------------------|----------------|------------|
| 135. | Sri Suman Nandi | Lab. Asst. | Civil Engg. | 10-08-2010 |
| 136. | Ms Manisha Deb | Lab. Asst. | Civil Engg. | 13-08-2010 |
| 137. | Sri Prasenjit Dutta | Technical Asstt | Civil Engg. | 06-12-2012 |
| 138. | Sri Sankar Banik | Technical Asstt | Civil Engg. | 13-12-2012 |
| 139. | Sri Uddhab Ch.Nath | Technical Asstt | Civil Engg. | 28-07-2015 |
| 140. | Sri Riman Bhowmik | Technician | Civil Engg. | 28-07-2015 |
| 141. | Sri Pramod Pal | Instructor | Prod. Engg. | 04-09-2009 |
| 142. | Sri Biswanath Karmakar | Jr. Tech | Prod. Engg. | 04-09-2009 |
| 143. | Sri.Raju Singha | Technical Asst. | Prod. Engg. | 08-09-2014 |
| 144. | Sri Sukanta Das | Technical Asst. | Prod. Engg. | 08-09-2014 |
| 145. | Sri Vishal Paul | Technician | Prod. Engg. | 08-09-2014 |
| 146. | Sri Prasenjit Debnath | Technician | Prod. Engg. | 08-09-2014 |
| 147. | Sri Subhan Ch. Deb (Retd.) | Attendant | Prod. Engg. | 15-02-2016 |
| 148. | Smt. Sima Das | Sr. Ins. | Elect. Engg. | 19-08-2009 |
| 149. | Smt. Tapa Saha | Tech.Supp. Staff | Elect. Engg. | 25-07-2008 |
| 150. | Sri Kabir Bhowmik | Sr. Ins. | Elect. Engg. | 19-08-2009 |
| 151. | Sri Ajit Deb | Lab. Tech | Elect. Engg. | 19-08-2009 |
| 152. | Sri Debabrata Bhattacharya | Technical Asstt | Elect. Engg. | 09-08-2010 |
| 153. | Sri Jayanta Chowdhury | Technical Asstt | Elect. Engg. | 10-07-2012 |
| 154. | Sri Pranab Majumder | Technical Asstt | Elect. Engg. | 16-07-2012 |
| 155. | Sri Debanjan Nag | Technical Asst. | Elect. Engg. | 28-07-2015 |
| 156. | Ms. Sudipa Aine | Technical Asst. | Elect. Engg. | 30-07-2015 |
| 157. | Sri Subal Das | Technical Asst. | Elect. Engg. | 31-07-2015 |
| 158. | Sri Balaram Das | Technical Asst. | Elect. Engg. | 30-07-2015 |
| 159. | Sri Rajkishore Ghosh (Retd.) | Attendant | Elect. Engg. | 01-08-2016 |
| 160. | Sri Suman Shil | Technician | Elect. Engg. | |
| 161. | Sri Kamal Kn. Pal | System Admin. | CSE Deptt. | 15-12-2008 |
| 162. | Sri Pattha Sarathi Bhattacharjee | Network Admin. | CSE Deptt. | 15-09-2011 |
| 163. | Sri Suman Saha | Lab / Tech Asst. | CSE Deptt.. | 09-08-2010 |
| 164. | Sri Viki Datta | Lab / Tech Asst. | CSE Deptt. | 14-09-2011 |
| 165. | Sri Malay Paul | Lab / Tech Asst. | CSE Deptt. | 13-03-2012 |
| 166. | Sri Saikat Bhattacharjee | Lab / Tech Asst. | CSE Deptt. | 29-07-2015 |
| 167. | Sri Sanjoy Podder | Lab / Tech Asst. | CSE Deptt. | 29-07-2015 |
| 168. | Sri Dhurjati Chakraborty | Lab / Tech Asst. | CSE Deptt. | 29-07-2015 |
| 169. | Sri Joydip Deb | Lab / Tech Asst. | CSE Deptt. | 29-07-2015 |
| 170. | Sri Rabindra Ch. Das (Retd.) | Gr. D | CSE Deptt. | 20-04-2009 |
| 171. | Sri Dhruba Narayan Das | Technical Asst. | Chemical Engg. | 09-08-2010 |
| 172. | Sri Dipankar Goswami | Technical Asstt | Chemical Engg. | 06-09-2011 |
| 173. | Sri Joydeep Das | Technical Asst. | Chemical Engg. | 28-07-2015 |
| 174. | Sri Kaushik Das | Technical Asst. | Chemical Engg. | 28-07-2015 |
| 175. | Sri Mrinmoy Sarma | Technical Asst. | Chemical Engg. | 28-07-2015 |
| 176. | Sri Jitendra Debbarma | Technician | Chemical Engg. | 28-07-2015 |
| 177. | Sri Samir Debbarma | Technician | Chemical Engg. | 28-07-2015 |
| 178. | Ms. Sangita Patari | Lab. Asstt | Physics | 22-09-2011 |
| 179. | Sri Pijush kn. Datta (Retd.) | Lab. Asstt | Physics | 03-08-2009 |

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|------|---------------------------------|------------------|------------------|------------|
| 180. | Mrs.Madhuri Debnath | Lab. Asstt | Physics | 17-07-2013 |
| 181. | Mr. Krishna Deb | Lab. Asstt | Physics | 17-07-2013 |
| 182. | Sri Sarit Chakraborty | Lab. Asstt | Physics | 29-07-2015 |
| 183. | Sri Rajesh Debnath | Lab. Asstt | Physics | 29-07-2015 |
| 184. | Sri Dulal Chakraborty (Retd.) | Group – D | Chemistry | 01-01-2011 |
| 185. | Sri Satyajit Ghosh | Lab,Asst. | Chemistry | 07-09-2012 |
| 186. | Sri Sudip Paul | Lab,Asst. | Chemistry | 31-07-2015 |
| 187. | Sri Himadri Paul | Lab,Asst. | Chemistry | 29-07-2015 |
| 188. | Ms. Poulami Ghosh | Tech. Asst. | ECE | 09-12-2011 |
| 189. | Sri Dipesh Debnath | Technician | ECE | 02-01-2012 |
| 190. | Sri Abhijit Chakraborty | Technical Asst. | ECE | 10-08-2010 |
| 191. | Sri Jagadish Ch. Bhowmik (Retd) | Technician | ECE | 25-07-2014 |
| 192. | Sri Badal Debnath | Technical Asst. | ECE | 27-07-2015 |
| 193. | Sri Arindam Debnath | Technical Asst. | ECE | 27-07-2015 |
| 194. | Mrs. Poulomi Dey | Technical Asst. | ECE | 27-07-2015 |
| 195. | Sri Raju Majumder | Technical Asst. | ECE | 27-07-2015 |
| 196. | Sri Sanjib Das | Technician | ECE | 27-07-2015 |
| 197. | Sri Nirmal Sarkar | Technician | ECE | 27-07-2015 |
| 198. | Sri Alvin Debbarma | Technical Asst. | ECE | 27-07-2015 |
| 199. | Sri Anjan Das | Technical Asst. | EIE | 06-02-2012 |
| 200. | Ms.Sunam Jannat | Lab. Technician | EIE | 14-08-2012 |
| 201. | Sri Samir Rajuyar | Technician | EIE | 28-07-2015 |
| 202. | Sri Paban Sarkar | Technical Asst. | EIE | 21-09-2015 |
| 203. | Dr. Tapan Kr. Datta (Retd.) | Medical Off. | Medical Unit | 22-01-2009 |
| 204. | Dr. Parimal Chakraborty (Retd.) | Medical Off. | Medical Unit | 01-02-2012 |
| 205. | Dr. Amal Kumar Sinha (Retd.) | Medical Off. | Medical Unit | 12-12-2013 |
| 206. | Dr.Sushanta Chakma | Medical Off. | Medical Unit | 19-03-2015 |
| 207. | Sri Rajesh Karmakar | Pharmacist | Medical Unit | 17-04-2008 |
| 208. | Ms.Supriya Das | Pharmacist | Medical Unit | 27-09-2012 |
| 209. | Sri Dipen Majumder | Technician | Medical Unit | 22-12-2008 |
| 210. | Ms. Sabita Biswas | Staff Nurse | Medical Unit | 12-12-2013 |
| 211. | Ms.Chayanika Das | Lab.Technician | Medical Unit | 06-01-2014 |
| 212. | Md. Ismail Hussain | Lab.Tech. | Medical Unit | 07-01-2014 |
| 213. | Mr.Rajat Saha | GDA cum Dresser | Medical Unit | 04-03-2015 |
| 214. | Sri Dipak Kr. Pal | Security Officer | Admn. | 19-08-2011 |
| 215. | Sri Sanjit Debbarma | Helper | Guest House | 15-07-2009 |
| 216. | Sri Suman Rudra Pal | Off. Asst. | Dean (P&D) | 19-08-2008 |
| 217. | Mrs. Sanju Debnath | Draftsman | Dean (P&D) | 12-12-2008 |
| 218. | Smt. Sulekha Sarkar | Cook | Transit House | 06-05-2011 |
| 219. | Sri Bappi Das | Helper/Cook | Transit House | 01-02-2011 |
| 220. | Sri Ritabrata Roy | Technical Asst. | Hyd. Info. Engg. | 02-08-2012 |
| 221. | Ms.Subhra Chowdhury | Technical Asst. | Bio-Engg. | 24-12-2012 |
| 222. | Ms. Debarpita Choudhury | Technical Asst. | Bio-Engg. | 03-08-2015 |
| 223. | Sri V.C.Mathai | Technical Asst. | MHRD | 12-11-2009 |

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|------|----------------------|----------------------|--------------------|------------|
| 224. | Sri Sourabh Roy | Tech. Asst. | Virtual Class Room | 14-03-2014 |
| 225. | Sri Ratan Majumder | Accts. Asst. (TEQIP) | TEQIP | 10-12-2012 |
| 226. | Ms.Baishakhi Saha | Tech. Support Staff | MIS Opt. | 20-05-2013 |
| 227. | Sri Sujoy Dey | Office Assistant | TEQIP | 16-06-2014 |
| 228. | Sri Pramathesh Banik | Asst. Prog. (Tech) | MIS Section | 03-11-2014 |
| 229. | Sri Sandanlal Saha | Cook-cum-Caretaker | | |

3.3.3.3 List of Retired/ Expired Faculty/ Staff Members

| Sl. No. | Name | Designation | Department | Date of Expire/ retire |
|---------|------------------------|------------------|---------------|------------------------|
| 1. | Sri Satya Ranjan Saha | Group-D | | 30-11-2008 |
| 2. | Sri Sachindra Ch.Das | Group-D | | 31-01-2009 |
| 3. | Sri Kerali Ch.Das | Group-D | | 31-03-2009 |
| 4. | Sri Rabindra Ch.Das | Group-D | | 31-03-2009 |
| 5. | Sri Ananta Chakraborty | Group-D | | 31-01-2010 |
| 6. | Dr. N.C. Paul | Associate Prof. | | 12-10-2009 (Expired) |
| 7. | Sri Dulal Chakraborty | Group-D | | 30-11-2010 |
| 8. | Smt. Sabitri Debbarma | Group-D | | 28-06-2011(Expired) |
| 9. | Sri Jiban Chandra | Sr. Operator | | 31-01-2012 |
| 10. | Sri Adalat Harizan | Group – C | | 30-06-2012 |
| 11. | Sri Nirmal Ch. Das | Group-C | | 20-07-2012 (Expired) |
| 12. | Sri Ajit Debbarma | Group – C | | 31-01-2014 |
| 13. | Sri Ashis Sarkar | Asst. Prof. | Mech. Engg. | 14-02-2014 |
| 14. | Smt. Prembala Debnath | Group-C | | 31-02-2014 |
| 15. | Sri Bhusan Sarkar | Group – C | | 31-01-2015 |
| 16. | Smt. Mana Rani Das | Group-C | | 31-01-2015 |
| 17. | Sri Jitendra Debnath | Sr. Asst. | | 28-02-2015 |
| 18. | Sri Tapan Debnath | Technician | Estt.Section | 31-05-2015 |
| 19. | Sri Jadulal Debnath | Assistant (SG-I) | Estt.Section | 31-08-2015 |
| 20. | Sri Sobhan Ch.Deb | Group – C | Prod. Engg. | 31-01- 2016 |
| 21. | Sri Ajit Saha | Group-C | Estt. Section | 30-11-2015 |

3.4 RTI and Vigilance Cell:

The Institute has an RTI Cell under the Appellate Authority of the Director, NIT Agartala. Dr. Debasis Neogi is the Central Public Information Officer. Dr. Paritosh Bhattacharya is CVO (Chief Vigilance Officer) of the Institute.

4.0 ACADEMIC PROGRAMMES AND AWARD OF DEGREES

4.1 Introduction:

The Institute (i.e. erstwhile Tripura Engineering College) was established in 1965 with three branches in UG level viz Civil, Electrical and Mechanical Engineering. It was initially affiliated to Calcutta University and had the same curriculum structure and examination system of Bengal Engineering College, like other institutes affiliated to the University. After the establishment of Tripura University, the institute got affiliated to the new Tripura University. Degree course in Computer Science & Engineering was started from the academic session 1999-2000. Three new branches viz. Electrical & Electronics Engineering (now Electronics & Communication Engineering), Production Engineering and Civil & Transportation Engineering were introduced in this Institute during 2005-2006 session. Two more new courses viz. Electronics & Instrumentation and Chemical Engineering were also introduced in undergraduate level from the Academic Session 2010-11. From the Academic Session 2012-13 Bio Engineering at the undergraduate level has been started in the Institute.

The Institute is administered by the Director of the Institute under the direct supervision of the Board of Governors (BoG) of the Institute, headed by the Chairman as the Institute is registered under Societies Registration Act, 1860. The policies of academic activity are determined by the SENATE of the Institute with prior approval of the Board of Governors (BoG) and implemented through Dean(Academic). The Planning and Development of the institute are implemented through Dean (P&D). All the student related affairs are looked after by the Dean (SW). The Registrar of the Institute is the custodian of all records of the Institute. All administrative order/notifications are issued by the Registrar. The Registrar is responsible to the Director for proper implementation of all the policies of the Institute.

The Institute has taken up development programmes in a massive scale. These development activities have been going on for the last 9 years. The developmental works include modernization of the Laboratories, augmentation of computer facilities, modernization of Library, construction of Boys' & Girls' Hostels, construction of Academic and Administrative buildings, construction of building of Kendriya Vidyalaya, construction of Guest House & Director's Bungalow, construction of staff quarters, renovation of Auditorium, construction of internal roads and Institute gates, Computer Science & Engineering Building, Library Building etc. Further presently a 1500 capacity Boys' Hostel Building and Sports Complex have been taken up for construction and the works are progressing fast. Apart from this continuing education cell, national level research centre in selected areas like Geo-technology and Information Technology and energy sectors have been established. Industry Institute Linkage has been revamped for catering to the needs of industrialization of the region at large and the State in particular.

A Master Plan has already been prepared for total infrastructural development of the institute so that the institute may have facilities of international standard.

The Institute, which is an Institute of national importance and a centre of excellence has a total intake of 867 at undergraduate level. A total number of 121 seats at the undergraduate level have been earmarked for the candidates to be admitted under Direct Admission of Students Abroad

(DASA) scheme. Out of the total seats of B.Tech, 50% seats are reserved for the candidates of Tripura and the remaining 50% of seats are for the candidates from the other states of India. The candidates who qualify Joint Entrance Examination (JEE)-Main conducted by CBSE are admitted to this Institute as per seat allotment by Central Seat Allocation Board (CSAB).

4.2 Admission Procedure:

Admission in the undergraduate programme is made on the basis of allotment of seats in the (9) branches of Engineering along with dual degree programme in engineering and science through Central Seat Allocation Board (CSAB) based on the performance of the candidates in Joint Entrance Examination (JEE)-Main.

Students are admitted in undergraduate programme under Home State and All India quota. In M. Tech, candidates are admitted as per allotment of seats under common counselling on the basis of result in GATE Examination. Candidates are also admitted in M. Tech against the vacant seats on the basis of a test conducted by the Institute.

In MCA candidates are admitted as per allotment of seats by NIMCET based on the performance of the candidates in the NIMCET Examination conducted for the purpose.

In M. Sc in Physics, Chemistry and Mathematics, eligible candidates are admitted on the basis of a test conducted by the Institute for the purpose of selection.

Candidates are admitted in MBA programme as per selection made by the Institute on the basis of performance of the candidates in the qualifying examination like CAT, CMAT.

Candidates of Ph.D. are admitted based on their performance in the test (written or oral) conducted by the Institute for selection.

4.3 Admission 2015-2016:

TABLE 1.A – Fresh Admission

| Sl. No. | Department | B. Tech | BS-MS | BT-MT | M. Tech | MCA | MBA | M. Sc | Ph. D |
|---------|-------------|---------|-------|-------|---------|-----|-----|-------|-------|
| 1 | Civil | 171 | 00 | 00 | 51 | 00 | 00 | 00 | 12 |
| 2 | Mechanical | 88 | 00 | 00 | 40 | 00 | 00 | 00 | 06 |
| 3 | Electrical | 85 | 00 | 00 | 30 | 00 | 00 | 00 | 04 |
| 4 | CSE | 89 | 00 | 00 | 10 | 16 | 00 | 00 | 00 |
| 5 | ECE | 83 | 00 | 00 | 25 | 00 | 00 | 00 | 02 |
| 6 | Production | 56 | 00 | 00 | 06 | 00 | 00 | 00 | 06 |
| 7 | Chemical | 48 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 8 | EIE | 46 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 9 | Bio-Engg. | 24 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 10 | Physics | 00 | 13 | 00 | 00 | 00 | 00 | 07 | 05 |
| 11 | Chemistry | 00 | 11 | 00 | 00 | 00 | 00 | 09 | 01 |
| 12 | Mathematics | 00 | 8 | 00 | 00 | 00 | 00 | 05 | 03 |

| | | | | | | | | | |
|--------------|---------------|-----|----|----|-----|----|----|----|----|
| 13 | Engg. Physics | 00 | 00 | 11 | 00 | 00 | 00 | 00 | 00 |
| 14 | MBA | 00 | 00 | 00 | 00 | 00 | 24 | 00 | 00 |
| Total | | 690 | 32 | 11 | 162 | 16 | 24 | 21 | 39 |

[Note: CSE - Computer Science and Engineering, ECE - Electronics and Communication Engineering, EIE - Electronics and Instrumentation Engineering, Engg. Physics - Engineering Physics.]

TABLE 1.B - Total No. of students admitted during the year includes the following:

| | | | | |
|------------------------|-----|-----------------------|--------|----|
| Schedule Caste | 142 | QIP | M.Tech | 19 |
| Schedule Tribes | 142 | | Ph.D | 00 |
| Physically Handicapped | 12 | Sponsored | M.Tech | 09 |
| Total | 296 | Project | Ph.D | 00 |
| | | External Registration | Ph.D | 00 |

4.4 Course-wise enrollment with Sex and Caste break-up:

TABLE 2 – Admitted students in B. Tech, 1st Semester.

| | | CE | ME | EE | CSE | ECE | EIE | CHE | PE | BIO |
|---|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| From the State of Tripura: | | | | | | | | | | |
| OP | Boys | 37 | 23 | 9 | 17 | 17 | 14 | 7 | 17 | 3 |
| | Girls | 10 | 0 | 13 | 6 | 7 | 3 | 8 | 5 | 4 |
| | Total | 47 | 23 | 22 | 23 | 24 | 17 | 15 | 22 | 7 |
| OPPH | Boys | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Total | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SC | Boys | 13 | 7 | 6 | 4 | 6 | 4 | 5 | 6 | 2 |
| | Girls | 2 | 0 | 2 | 3 | 2 | 1 | 0 | 2 | 1 |
| | Total | 15 | 7 | 8 | 7 | 8 | 5 | 5 | 8 | 3 |
| SCPH | Boys | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ST | Boys | 21 | 14 | 8 | 10 | 10 | 3 | 4 | 1 | 3 |
| | Girls | 7 | 0 | 5 | 4 | 4 | 1 | 2 | 2 | 1 |
| | Total | 28 | 14 | 13 | 14 | 14 | 4 | 6 | 3 | 4 |
| STPH | Boys | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| From the various part of the country except the State of Tripura | | | | | | | | | | |
| OP | Boys | 36 | 22 | 14 | 18 | 16 | 7 | 6 | 7 | 1 |
| | Girls | 3 | 0 | 5 | 3 | 4 | 0 | 0 | 1 | 2 |
| | Total | 39 | 22 | 19 | 21 | 20 | 7 | 6 | 8 | 3 |
| OPPH | Boys | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 |

| | | | | | | | | | | |
|-----------------------|--------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| SC | Boys | 12 | 7 | 6 | 6 | 6 | 3 | 4 | 4 | 1 |
| | Girls | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| | Total | 12 | 7 | 7 | 7 | 6 | 3 | 4 | 4 | 1 |
| SCPH | Boys | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ST | Boys | 6 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 6 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 |
| STPH | Boys | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OBC | Boys | 21 | 12 | 11 | 12 | 7 | 6 | 7 | 7 | 3 |
| | Girls | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| | Total | 22 | 12 | 11 | 12 | 8 | 7 | 8 | 7 | 3 |
| OBCPH | Boys | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| | Girls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| Total intake capacity | | 184 | 90 | 90 | 90 | 92 | 61 | 60 | 90 | 30 |
| Total admitted | | 171 | 88 | 85 | 89 | 83 | 46 | 48 | 56 | 24 |
| Total vacant | | 13 | 2 | 5 | 1 | 9 | 15 | 12 | 34 | 6 |

TABLE 3 – Admitted students in M. Tech 1st Semester

| | | CE | ME | EE | CSE | EC | PE | CH |
|-------|--------------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
| OP | Boys | 34 | 18 | 14 | 03 | 08 | 04 | 00 |
| | Girls | 02 | 01 | 03 | 02 | 04 | 00 | 00 |
| | Total | 36 | 19 | 17 | 05 | 12 | 04 | 00 |
| OPPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| OBC | Boys | 08 | 13 | 07 | 00 | 05 | 02 | 00 |
| | Girls | 01 | 01 | 00 | 01 | 00 | 00 | 00 |
| | Total | 09 | 14 | 07 | 01 | 05 | 02 | 00 |
| OBCPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| SC | Boys | 04 | 06 | 04 | 03 | 03 | 00 | 00 |
| | Girls | 01 | 00 | 00 | 00 | 02 | 00 | 00 |
| | Total | 05 | 06 | 04 | 03 | 05 | 00 | 00 |
| SCPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| ST | Boys | 01 | 01 | 02 | 01 | 02 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 01 | 00 | 00 |
| | Total | 01 | 01 | 02 | 01 | 03 | 00 | 00 |

| | | | | | | | | |
|-----------------------|--------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| STPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Total intake capacity | | 110 | 56 | 64 | 18 | 36 | 18 | 10 |
| Total admitted | | 51 | 40 | 30 | 10 | 25 | 6 | 0 |
| Total vacant | | 59 | 16 | 34 | 8 | 11 | 12 | 10 |

TABLE 4 – Admitted students in BS-MS, BT-MT, M. Sc, MCA and MBA 1st Semester

| | | BSMS | BTMT | M. Sc. (Math.) | M. Sc. (Phy.) | M. Sc. (Chem.) | MCA | MBA |
|---|--------------|-------------|-------------|---------------------------|--------------------------|---------------------------|------------|------------|
| From the State of Tripura: | | | | | | | | |
| OP | Boys | 10 | 02 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 06 | 04 | 00 | 00 | 00 | 00 | 00 |
| | Total | 16 | 06 | 00 | 00 | 00 | 00 | 00 |
| OPPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| SC | Boys | 02 | 01 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 03 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 05 | 01 | 00 | 00 | 00 | 00 | 00 |
| SCPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| ST | Boys | 03 | 01 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 03 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 06 | 01 | 00 | 00 | 00 | 00 | 00 |
| STPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| From the various part of the country except the State of Tripura | | | | | | | | |
| OP | Boys | 02 | 01 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 01 | 00 | 00 | 00 | 00 | 00 |
| | Total | 02 | 02 | 00 | 00 | 00 | 00 | 00 |
| OPPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| SC | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| SCPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| ST | Boys | 01 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 01 | 00 | 00 | 00 | 00 | 00 | 00 |

| | | | | | | | | |
|------------------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Total | 02 | 00 | 00 | 00 | 00 | 00 | 00 |
| STPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| OBC | Boys | 1 | 1 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 0 | 0 | 00 | 00 | 00 | 00 | 00 |
| | Total | 01 | 01 | 00 | 00 | 00 | 00 | 00 |
| OBCPH | Boys | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| Total intake capacity | | 60 | 20 | 00 | 00 | 00 | 00 | 00 |
| Total admitted | | 32 | 11 | 00 | 00 | 00 | 00 | 00 |
| Total vacant | | 28 | 09 | 00 | 00 | 00 | 00 | 00 |

TABLE 4.A– Admitted students in BS-MS, BT-MT, M. Sc, MCA and MBA 1st Semester

| | | M. Sc. (Math.) | M. Sc. (Phy.) | M. Sc. (Chem.) | MCA | MBA |
|------------------------------|--------------|-------------------|------------------|-------------------|-----------|-----------|
| OP | Boys | 04 | 02 | 01 | 06 | 05 |
| | Girls | 01 | 01 | 04 | 00 | 08 |
| | Total | 05 | 03 | 05 | 06 | 13 |
| OPPH | Boys | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 |
| SC | Boys | 00 | 00 | 00 | 03 | 04 |
| | Girls | 00 | 00 | 01 | 00 | 00 |
| | Total | 00 | 00 | 01 | 03 | 04 |
| SCPH | Boys | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 |
| ST | Boys | 00 | 00 | 00 | 01 | 02 |
| | Girls | 00 | 00 | 00 | 01 | 00 |
| | Total | 00 | 00 | 00 | 02 | 02 |
| STPH | Boys | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 |
| OBC | Boys | 00 | 03 | 02 | 05 | 05 |
| | Girls | 00 | 01 | 01 | 00 | 00 |
| | Total | 00 | 04 | 03 | 05 | 05 |
| OBCPH | Boys | 00 | 00 | 00 | 00 | 00 |
| | Girls | 00 | 00 | 00 | 00 | 00 |
| | Total | 00 | 00 | 00 | 00 | 00 |
| Total intake capacity | | 10 | 10 | 10 | 40 | 30 |
| Total admitted | | 5 | 7 | 9 | 16 | 24 |
| Total vacant | | 05 | 03 | 01 | 24 | 16 |

4.5 Students/ Scholars Enrolment:

The total number of students on roll in various programmes of the Institute in the academic year 2015-2016 are given below:

TABLE 5 – Students on roll

| Sl. No. | Department | B. Tech | BS-MS | BT-MT | MCA | M. Tech. | M. Sc. | MBA | Ph. D |
|--------------|----------------------|-------------|-----------|-----------|-----------|------------|-----------|-----------|------------|
| 1 | Civil | 672 | 00 | 00 | 00 | 151 | 00 | 00 | 46 |
| 2 | Mechanical | 369 | 00 | 00 | 00 | 84 | 00 | 00 | 35 |
| 3 | Electrical | 338 | 00 | 00 | 00 | 87 | 00 | 00 | 37 |
| 4 | CSE | 332 | 00 | 00 | 83 | 21 | 00 | 00 | 15 |
| 5 | ECE | 327 | 00 | 00 | 00 | 59 | 00 | 00 | 37 |
| 6 | Production | 233 | 00 | 00 | 00 | 16 | 00 | 00 | 12 |
| 7 | Chemical | 171 | 00 | 00 | 00 | 08 | 00 | 00 | 04 |
| 8 | EIE | 181 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 9 | BIO-Eng | 76 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| 10 | Physics | 00 | 23 | 00 | 00 | 00 | 14 | 00 | 16 |
| 11 | Chemistry | 00 | 31 | 00 | 00 | 00 | 15 | 00 | 11 |
| 12 | Mathematics | 00 | 32 | 00 | 00 | 00 | 11 | 00 | 18 |
| 13 | Eng. Physics | 00 | 00 | 35 | 00 | 00 | 00 | 00 | 00 |
| 14 | HSS | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 09 |
| 15 | School of Management | 00 | 00 | 00 | 00 | 00 | 00 | 41 | 00 |
| Total | | 2699 | 86 | 35 | 83 | 426 | 40 | 41 | 240 |

The above total includes the following:

| | | | | |
|------------------------|------|--------------------------------|----------|----|
| DASA (Indian origin) | 00 | QIP | M. Tech. | 0 |
| Scheduled Castes | 592 | | Ph. D. | 0 |
| Scheduled Tribes | 439 | Sponsored | M. Tech. | 09 |
| Physically Handicapped | 39 | Project | Ph. D. | 0 |
| Women students | 459 | External Registration | Ph. D. | 0 |
| Total | 1529 | Registration Kept Alive | Ph. D. | 0 |
| | | Part Time Programme (M. Tech.) | | 0 |

SC/ ST/ OBC/ OPPH Students on roll as on 31-03-2016:

| Sl. No. | Programme | SC | ST | OBC | OPPH |
|---------|-----------|-----|-----|-----|------|
| 1. | B. Tech. | 485 | 384 | 709 | 02 |
| 2. | BS-MS | 15 | 13 | 24 | 01 |
| 3 | BT-MT | 05 | 02 | 11 | 00 |
| 2. | MCA | 08 | 02 | 32 | 00 |
| 3. | M. Tech. | 56 | 37 | 88 | 01 |

| | | | | | |
|--------------|---------------|-----|-----|-----|----|
| 4. | M. Sc. | 01 | 01 | 13 | 00 |
| 5. | MBA | 05 | 04 | 06 | 00 |
| 6. | Ph. D. | 29 | 14 | 47 | 01 |
| Total | | 604 | 457 | 930 | 5 |

The branch/ discipline-wise and year-wise details of students in B. Tech. and M. Tech. programmes are given below:

TABLE 6 – Students on roll at Undergraduate level

| Sl. No. | Branch | 2015 | 2014 | 2013 | 2012 | others |
|--------------|---------------------------------|-------------|-------------|-------------|-------------|-----------|
| 1 | Civil Engineering | 672 | 715 | 683 | 513 | 00 |
| 2 | Mechanical Engineering | 369 | 370 | 359 | 285 | 00 |
| 3 | Electrical Engineering | 338 | 358 | 334 | 226 | 00 |
| 4 | Computer Sc. & Engg. | 332 | 306 | 285 | 236 | 00 |
| 5 | Electronics & Comm. Engineering | 327 | 324 | 314 | 284 | 00 |
| 6 | Transportation Engg | 00 | 00 | 00 | 00 | 00 |
| 7 | Production Engineering | 233 | 239 | 165 | 115 | 00 |
| 8 | Electronics & Inst.Engg. | 181 | 184 | 198 | 100 | 00 |
| 9 | Chemical Engineering | 171 | 167 | 139 | 71 | 00 |
| 10 | Bio Engineering | 76 | 64 | 42 | 22 | 00 |
| 11 | Physics (BS-MS) | 23 | 16 | 05 | 00 | 00 |
| 12 | Chemistry (BS-MS) | 31 | 23 | 08 | 00 | 00 |
| 13 | Math (BS-MS) | 32 | 24 | 10 | 00 | 00 |
| 14 | Engineering Physics (BT-MT) | 35 | 29 | 14 | 00 | 00 |
| Total | | 2820 | 2819 | 2556 | 1852 | 00 |

TABLE 7 – Students on roll at Post Graduate level

| Sl. No. | Programme | Branch | Specialization | 2015 | 2014 | 2013 | Total |
|---------|-----------|-------------------|-----------------------------|------|------|------|-----------|
| 01. | M.Tech | Civil Engineering | Geotechnical Engineering | 22 | 35 | 27 | 84 |
| | | | Structural Engineering | 33 | 34 | 26 | 93 |
| | | | Environmental Engineering | 22 | 29 | 17 | 68 |
| | | | Transportation Engineering | 29 | 33 | 26 | 88 |
| | | | Water Resources Engineering | 14 | 16 | 07 | 37 |
| | | | Seismic Science & | 11 | 14 | 07 | 32 |

| | | | | | | | |
|-----|--------|----------------------------|-----------------------------------|----|----|----|------------|
| | | | Engineering | | | | |
| | | | Hydro Informatics Engineering | 20 | 23 | 22 | 65 |
| 02. | | Mechanical Engineering | Thermal Science & Engineering | 32 | 34 | 27 | 93 |
| | | | Manufacturing Technology | 28 | 34 | 26 | 88 |
| | | | Machine Design | 12 | 15 | 07 | 34 |
| | | | Automotive Engineering | 12 | 16 | 08 | 36 |
| 03. | | Electrical Engineering | Power Electronics & Drives | 24 | 35 | 25 | 84 |
| | | | Power System Engineering | 28 | 33 | 25 | 86 |
| | | | Instrumentation Engineering | 23 | 33 | 26 | 82 |
| | | | Integrated Energy System | 12 | 16 | 09 | 37 |
| 04. | | Computer Sc. & Engineering | Computer Sc. & Engineering | 21 | 31 | 28 | 80 |
| 05. | | Electronics & Comm. Engg. | VLSI & Nano Technology | 28 | 35 | 28 | 91 |
| | | | Communication Engineering | 31 | 34 | 27 | 92 |
| 06. | | Production Engg. | Computer integrated manufacturing | 16 | 20 | 23 | 59 |
| 07. | | Chemical Engg. | Chemical Engg. | 08 | 14 | 07 | 29 |
| 08. | M. Sc. | | Physics | 15 | 17 | 15 | 47 |
| | | | Chemistry | 16 | 11 | 11 | 38 |
| | | | Mathematics | 10 | 12 | 11 | 33 |
| 09. | MBA | | Business Administration | 41 | 30 | 30 | 101 |
| 10 | MCA | | Computer Application | 48 | 68 | 65 | 181 |

4.6 Examination & Evaluation:

Evaluation of the performance of the students is regarded as the most important academic activity in any educational institution. In NIT Agartala, evaluation of the students is made by both written examination and viva-voce test.

Apart from this the performance of the students is also evaluated through internal assessment. In every semester one Mid-Term and End-Term examinations are conducted. Apart from this, class tests and viva-voce tests for all subjects are also taken.

Marks are awarded to the students in each subject and on the basis of that Semester Performance Index (SPI) is calculated. Taking the result of both Mid-Term and End-Term Examination, Cumulative Performance Index (CPI/CGPA) is calculated.

Finally, the performance of a student is evaluated through written examination, class test, viva-voce test, practical examination, attendance and above all the behaviour of the students.

4.7 Course Offered:

TABLE 8 - No of Courses Offered

| Sl. No. | Programme | Total No of Branches/ Specialization |
|---------|-----------|--------------------------------------|
| 1 | B.Tech | 09 |
| 2 | BT-MT | 01 |
| 3 | BS-MS | 03 |
| 4 | M.Tech | 20 |
| 5 | MCA | 01 |
| 6 | MBA | 03 |
| 7. | M.Sc | 03 |
| 8. | Ph.D | 11 |

4.8 Convocation :

The National Institute of Technology Agartala organized its 8th Convocation on 14th November 2015. Prof. Anil D. Sahasrabudhe, Chairman, AICTE, adorned the 8th Convocation Ceremony as the Chief Guest.

In the 8th Convocation, Institute awarded B. Tech. Degree to a total number of 590 students.

Branch wise results are given as under:

Civil Engineering: 20 students passed with Distinction, 104 passed with First class and 39 with Second class.

Mechanical Engineering: 15 students passed with Distinction, 67 students passed with First class and 6 with second class.

Electrical Engineering: 21 students passed with Distinction, 58 students passed with First class and 18 with Second class.

Computer Science & Engineering: 6 students passed with Distinction, 48 students passed with First class and 12 with second class.

Electronics and Communication Engineering: 14 students passed with Distinction, 53 students passed with First class and 10 with Second class.

Electronics and Instrumentation Engineering: 3 students passed with Distinction, and rest 28 students passed with First class.

Production Engineering: 05 students passed with Distinction, 30 students passed with First class and 03 students passed with Second class.

Chemical Engineering: 04 students passed with Distinction, 21 students passed with First class 05 student passed with Second class.

M. Tech Degree was awarded to a total number of 222 students in the 8th convocation.

Branch wise results are given as under: Civil Engineering: 71 students passed. Mechanical Engineering: 39 students passed. Electrical Engineering: 55 students passed. Computer Sc. & Engineering: 15 students passed. Electronics & Communication Engineering: 25 students passed. Production Engineering: 10 students passed Chemical Engineering: 07 students passed.

M. Sc Degree was awarded to a total number of 16 students in the 8th convocation.

Subject wise results are given as under: Physics: 08 students passed. Chemistry: 04 students passed. Mathematics: 04 students passed.

MCA Degree was awarded to a total number of 10 students.

MBA Degree was awarded to a total number of 10 students.

Institute awarded 21 scholars for Ph.D Degree - 13 in Engineering, 4 in Science and 4 in Humanities and Social Sciences in the 8th Convocation.

4.8.1 Introduction:

TABLE 9 – Degree awarded

| Sl. No. | Department | B. Tech | MCA | M. Tech. | M. Sc. | MBA | Ph. D. |
|----------------|---------------------------------|----------------|------------|-----------------|---------------|------------|---------------|
| 1 | Civil Engineering | 163 | 00 | 71 | 00 | 00 | 00 |
| 2 | Mechanical Engineering | 88 | 00 | 39 | 00 | 00 | 00 |
| 3 | Electrical Engineering | 97 | 00 | 55 | 00 | 00 | 00 |
| 4 | Computer Sc. & Engineering | 66 | 00 | 15 | 00 | 00 | 00 |
| 5 | Electronics & Comm. Engineering | 77 | 00 | 25 | 00 | 00 | 00 |
| 6 | Production Engineering | 38 | 00 | 10 | 00 | 00 | 00 |
| 7 | Electronics & Inst.Engineering | 31 | 00 | 00 | 00 | 00 | 00 |
| 8 | Chemical Engineering | 30 | 00 | 07 | 00 | 00 | 00 |
| 9 | Physics | 00 | 00 | 00 | 08 | 00 | 00 |

| | | | | | | | |
|----|----------------------|----|----|----|----|----|----|
| 10 | Chemistry | 00 | 00 | 00 | 04 | 00 | 00 |
| 11 | Mathamatics | 00 | 00 | 00 | 04 | 00 | 00 |
| 12 | Computer Application | 00 | 10 | 00 | 00 | 00 | 00 |
| 13 | School of Management | 00 | 00 | 00 | 00 | 10 | 00 |
| 14 | Ph.D. | 00 | 00 | 0 | 00 | 00 | 21 |

With this convocation, the total number of degrees awarded by the Institute is 869, the details of which are given below:

| Sl. No. | Programme | No. of Students |
|--------------|-----------|-----------------|
| 01. | Ph. D. | 21 |
| 02. | M. Tech. | 222 |
| 03. | MCA | 10 |
| 04. | MBA | 10 |
| 05. | M. Sc. | 16 |
| 06. | B. Tech. | 590 |
| Total | | 869 |

4.8.2 Convocation Prizes:

The following are the details of Prizes awarded to the students at the 8th Convocation:

| Name of the Prize | Name of Students | Branch Name |
|---|-----------------------------|---|
| Gold Medal for Institute Topper (UNDER GRADUATE) | Sankha Subhra Bhattacharjee | Electronics & Communication Engineering |
| Gold Plated Silver Medal to Branch Toppers (UNDER GRADUATE) | Sirshendu Das | Civil Engineering |
| | Abhishek Patel | Mechanical Engineering |
| | Mouli Karmakar | Electrical Engineering |
| | Sujata Sinha | Computer Science & Engineering |
| | Siddhartha Singh | Electronics & Instrumentation Engineering |
| | Souradeep Kundu | Production Engineering |
| | Abhishek Shishodia | Chemical Engineering |

| Programme | Name of the Prize | Name of students/ Persons | Branch Name | Specialization |
|-----------|--|---------------------------|-------------------|---------------------|
| M.Tech | Gold Medal for Institute Topper (POST-GRADUATE) | Jothiarun D | Civil Engineering | Structural |
| | Gold Plated Silver Medal to Branch Toppers (POST-GRADUATE) | Kamble Akash Uttam | Mechanical Engg | Manufacturing Engg. |
| | | Rinalini Lahon | Electrical Engg | Power System |
| | | Prantik Biswas | Computer | Computer |

| | | | | |
|------|--|----------------------|-----------------------------------|-----------------------------------|
| | | | Science & Engg | Science & Engg |
| | | Priyansha Bhowmik | Electronics & Communication Engg. | Micro Electronics & VLSI |
| | | Pushpendra Gupta | Production Engg. | Computer Integrated Manufacturing |
| | | Sutapa Bhattacharjee | School of Hydro-informatics | Hydro-Informatics |
| MCA | Gold Plated Silver Medal to Branch Toppers | Dhiman Deb | Computer Application | |
| MBA | Gold Plated Silver Medal to Branch Toppers | Rupa Rani | School of Management | |
| M.Sc | Gold Plated Silver Medal to Branch Toppers | Saikat Bhattacharjee | Chemistry | |
| | | Susmita Debnath | Physics | |
| | | Birojit Das | Mathematics | |

5.0 BIO ENGINEERING DEPARTMENT

5.1 Introduction :

The Department of Bio Engineering was started in the academic year of 2012-13 with sanctioned intake capacity of 30 (thirty) students in the undergraduate level i.e. 4 years Bachelor of Technology (B. Tech Programme) in Bio Engineering to contribute the fascinating and emerging area of biological sciences. The department is committed to excellence in teaching, research and service to the Nation. Presently, Dr. Tarun Kanti Bandyopadhyay (Head, Bio Engineering) is supervising all the activities to ensure the progress of this department. The department has excellent facilities in terms of class rooms and UG laboratories. Within four years, the department has set up some important laboratory courses viz., Biochemistry Lab, Microbiology Lab, Immunology Lab, Genetics Lab and Bioinformatics Lab. In future the department will also start M. Tech. and Ph. D programme. The academic staffs of this department have various backgrounds in engineering. This is a reflection of the multidisciplinary and integrative approach in Bio Engineering research and education. The department has framed the course curriculum based on the need of today's industries. The course includes Molecular Biology, Biochemical Engineering, Biosensors, Bio-Fluid Mechanics, Bioinformatics and Computational Biology, Tissue Engineering and Regenerative Medicine, Therapeutic Delivery Systems, Biomedical Imaging and Instrumentation, Drug Design and Development, Nano-Biotechnology, Bioprocess Engineering, Metabolic Engineering, and Biomechanics, etc. The undergraduate programme provides strong fundamental knowledge and practical based learning methodology in engineering and life sciences. It imparts training for students to make them competent, motivated engineers and scientists. This course offers a huge scope to the next generation students for their better career in India and abroad as well.



Biochemistry Lab



Students performing in Immunology Lab



Students performing in Biochemistry Lab



Students performing in Microbiology Lab

5.2 Academic Programme:

The department offers courses in Under Graduate programme leading to B. Tech degree under Bio Engineering (4 years) from July 2012.

Students on Roll:

| Programme | 1 st semester | 3 th semester | 5 th semester | 7 th semester | Others | Total |
|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------|-------|
| B. Tech. | 15 | 21 | 12 | 17 | NIL | 65 |
| Total | 15 | 21 | 12 | 17 | NIL | 65 |

5.3 Lab Facilities:

The Bio-Engineering Department has Genetics, Immunology, Bioinformatics, Environmental Engineering, Mass Transfer, Biochemistry, Microbiology, Bioprocess Engineering, Reaction Engineering, Fluid Mechanics and Numerical Methods Laboratories.

5.4 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No. | Co-ordinators | Title | Period |
|---------------------------|---|--|--|
| Short Term Courses | | | |
| 1. | Tridib Kumar Bhowmick Sreerup Banerjee | “Nanomedicine: Applications, Challenges and Perspectives” under MHRD GIAN scheme | 28 th March-2 nd April, 2016 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of Faculty | Title | Period |
|---------------------------|-----------------------|---|--|
| Workshop: | | | |
| 1. | Abhijit Chatterjee | Symposium on “Modern applications of electron microscopy in interdisciplinary research” | 19 th March, 2016 |
| Short term Course: | | | |
| 1. | Abhijit Chatterjee | TEQIP short term course on “Soil Health and Food Security” | 7 th -11 th December, 2015 |
| 2. | Tridib Kumar Bhowmick | Two week ISTE STTP on “Environmental Studies” organized by IIT Bombay. | 2 nd – 12 th June, 2015. |

Honours and Awards obtained:

| Sl. No. | Name of Faculty | Name of Award | Awarded by | Award for | Date |
|---------|-----------------------|-----------------------|----------------------------|-------------------------------------|------|
| 1. | Dr. Dijendra Nath Roy | Young Scientist Award | DST (SERB), Govt. of India | Start up Research Grant for Project | 2015 |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level | Year |
|----------------------|-------------------------------|--|------|
| ISTE/ CSI and others | | | |
| 1. | Dr. Dijendra Nath Roy | Corporate Life Member of Institute of Engineers (India) | 2015 |
| 2. | Dr. Dijendra Nath Roy | Life Member of Indian Science Congress Association | 2012 |
| 3. | Dr. Deeplina Das | Life Member LIFE MEMBER-(LM 1309), Biotech Research Society, India-(BRSI). | 2013 |
| 4. | Dr. Deeplina Das | LIFE MEMBER-(LM 3228), Society of Biological Chemists India-(SBC). | 2013 |
| 5. | Dr. Deeplina Das | Corporate Life Member of Institute of Engineers (India)-(IEI) | 2014 |
| 6. | Dr. Tridib Kumar Bhowmick | Member of Institute of Engineers (India)-(IEI) | 2015 |
| 7. | Dr. Biswanath Bhunia | Associate Member , Indian Institute of Chemical Engineers (IChE) | 2011 |
| 8. | Dr. Biswanath Bhunia | Member, The Institution of Engineers (India) | 2015 |
| 9. | Dr. Biswanath Bhunia | Chartered Engineer (India), The Institution of Engineers (India) | 2015 |
| 10. | Dr. Tarun Kanti Bandyopadhyay | Member , Indian Institute of Chemical Engineers (IChE) | 2015 |

5.5 Research and Consultancy :**Sponsored Research Projects:**

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|--|-------------|--------------------|-------------------|---|
| 1. | The role of endocrine disrupting chemicals (EDCs) on estrogen receptors (Ers) using molecular docking. | 2014 - 2017 | DST | 17 | Dr. Biswanath Bhunia (PI) |
| 2 | Identification and characterization of intracellular and extracellular | 2014- 2017 | DBT, Govt of India | 60.39 | Dr. Kalyan Gayen (PI), Dr. Dijendra Nath |

| | | | | | |
|---|--|-----------|----------------------------|-----|---|
| | cues for phase shifting from acidogenesis to soventogenesis in <i>Clostridium acetobutylicum</i> | | | | Roy (CO-PI), Dr. Biswanath Bhunia (CO-PI) |
| 3 | Biofilm Inhibitor Development | 2016-2019 | DST (SERB), Govt. of India | 19 | Dr. Dijendra Nath Roy (PI) |
| 4 | Anti Snake venom drug Development | 2015-2016 | IEI (India) | 0.3 | Dr. Dijendra Nath Roy (PI) |

Research Publications:

| | |
|--|------|
| Total No. of papers published in Refereed National Journals | : 01 |
| Total No. of papers published in Refereed International Journals | : 07 |
| Total No. of papers presented in National Conference | : 01 |
| Total No. of papers presented in International Conferences | : 01 |
| Total No. of patents | : 01 |

In Refereed National Journals:

1. P. Choudhury P and B. Bhunia, 'Industrial application of Lipase: A Review', Biopharm Journal, 1, 41-47, (2015).

In Refereed International Journals:

1. G. Ashmita, K. Saumyakanti, M. Madhumanti, H. Gopinath, T. O N, S. Supreet, B. Tridib and G. Kalyan, 'Progress towards isolation of strains and genetically engineered strains of microalgae for production of biofuel and other value added chemicals: A review', Energy Conversion and Management, 113, 104-118, (2016).
2. U.S. Uday, P. Choudhury, T.K. Bandyopadhyay and B. Bhunia, 'Classification, mode of action and production strategy of xylanase and its application for biofuel production from water hyacinth', International journal of biological macromolecules, 82, 1041-1054, (2016).
3. T.K. Bandyopadhyay and Das Sudip, 'CFD Analysis for Flow of Liquids in Coils', Journal of The Institution of Engineers (India): Series E, 97, 9-18, (2015).
4. D. Deeplina and G. Arun, 'Antioxidant activity and γ -aminobutyric acid (GABA) producing ability of probiotic *Lactobacillus plantarum* DM5 isolated from Marcha of Sikkim', LWT-Food Science and Technology, 61, 263-268, (2015).
5. B. Rwivoo, D. Deeplina and G. Arun, 'Heteropolysaccharides from Lactic Acid Bacteria: Current Trends and Applications', Journal of Probiotic and Health, 4, 1-6, (2016)
6. K. Vikram, M. Muthusivaramapandian, P. Basavaraj and D. Debasish, 'Synchronized growth and neutral lipid accumulation in *Chlorella sorokiniana* FC6 IITG under continuous mode of operation', Bioresource technology, 200, 770-779, (2016).
7. R. Dijendra Nath and G. Ritabrata, 'Drugs of abuse and addiction: A slippery slope toward liver injury', Chemico-Biological Interactions, 255, 92-105, (2015).

In Proceedings of National Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|-------------------------|--------------------------|--|
| “Indian Chemical Engineering Congress” | IIT Guwahati | Ashmita Ghosh | 27 th -30 th December, 2015. |

In Proceedings of International Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|-------------------------|--|--|
| “New Horizons in Biotechnology (NHBT)” | CSIR-NIIST Trivandrum | R. Vineeta, K. Anabarasu, M. Muthusivaramapandian, N. Santosh, D. Debasish and S. Sanjeeva | 22 nd – 25 th November, 2015 |

Patent Published:

| Inventor Name | Year | Title | Patent application no. |
|--|---|--|------------------------|
| U.S. Uday, P. Choudhury, T.K. Bandyopadhyay and B. Bhunia. | Indian patent filing on 19 th February, 2016 | An Acidophilic xylanases enzyme with broad pH activity <i>from Aspergillus niger</i> . | 201631005766 |

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|--|--|--|
| 1. | Dr. Pradip Singh Rathod, Director, NIH International Center of Excellence for Malaria Research for South Asia (MESA, South Asia ICEMR). | 27 th November, 2015 | Interaction with faculties and visiting departmental facilities |
| 2. | Laura Chery, Program Manager of NIH International Center of Excellence for Malaria Research for South Asia (MESA, South Asia ICEMR) from University of Washington. | 27 th November, 2015 | Interaction with faculties and visiting departmental facilities |
| 3. | Prof. G Srinikethan, (Professor, in Dept. of Chemical Engineering, NIT Surathkal. | 3 rd -4 th March, 2016 | He had a detailed interaction with the Faculty members and HOD regarding the course curriculum. |
| 4. | Dr. Anjan Nan, (Assistant Professor in School of Pharmacy, University of Maryland, Eastern Shore, USA) | 28 th March – 2 nd April, 2016 | Conducted a one week course “Nanobiotechnology (Nanomedicine: Applications, Challenges and Perspectives)” under MHRD Scheme on Global Initiative on Academic Network (GIAN). |

5.6 Institute – Industry Collaboration :

1. Dr. Tarunkanti Bandyopadhyay , HoD, Bio Engineering has taken an initiative to collaborate with Dr. Saswata Goswami, Scientist E, Center of Innovative and Applied Bioprocessing (CIAB), Mohali 160071, Punjab and CIAB, Mohali for several multiinstitute project.
2. Dr. Tarunkanti Bandyopadhyay, HoD, Bio Engineering and Dr. Biswanath Bhunia, have also started to collaborate with Prof. Tamal Mandal, Professor, Department of Chemical Engineering, NIT Durgapur, India. One multi institute joint project proposal has been planed to submit to funding agency.

5.7 Industrial Consultancy and Sponsored Research :

There is no industrial consultancy in the department. However, one sponsored project is completed and two sponsored projects are going on in the department. In near future it is required to start industrial consultancy.

5.8 Other Activities :

Research Activities: The department of Bio Engineering is aiming vibrant research activity for technical development, especially in north east region of India. Still Department of Bio Engineering has not started Ph.D. programme. However, faculties are actively engaged to supervise the Ph.D. scholars of other departments of NIT Agartala or other Institutes.

Dr. Biswanath Bhunia- Visiting Faculty, Department of Biotechnology & Bioinformatics at North Eastern Hill University, Shillong from 1st - 5th June, 2015.

Dr. Abhijit Chatterjee - Funds awarded (12000 USD) for implementation of Global Initiative for Academic Network (GIAN) programme on 12th January, 2016.

Student Activities:

- IEI Student Chapter namely Agartala NIT Students' Chapter (Bio) was set up at the Bio Engineering Department. The students are actively engaged.
- Students presented model and poster in “ADVAITAM, NIT Agartala, (Techno Cultural Fest) 10th -14th February, 2016.
- Placement for Bio Engineering students 81% of the students from the batch 2012-2016 were placed in various companies/organizations via on-campus placement process in which around 19% were placed in core companies.

Training

The department has already taken initiative for training of the students in several Industries, Research Lab, IIT and NIT Etc.

6.0 CIVIL ENGINEERING DEPARTMENT

6.1 Introduction:

The Department of Civil Engineering was started since the inception of the institute in 1965. Presently the department offers M.Tech. courses in Structural Engineering, Geotechnical Engineering, Transportation Engineering, Water Resources Engineering, Environmental Engineering, Seismic Science & Engineering and Hydro Informatics Engineering. The Civil Engineering Department has produced many technocrats who are serving the country successfully. The Department has 21 (twenty one) nos. of regular faculty members and 15 (fifteen) nos. of contractual faculty members. Almost all the faculty members are involved with different consultancy, research and developmental works along with administrative activities of the Institute.

The department provides students with the fundamental knowledge and problem solving skills in the field of Civil Engineering required for a fulfilling career and to create and disseminate knowledge to improve Civil Engineering research, education and practice.

The department is presently associated with different developing activities as well as innovation of construction materials. Some of the faculty members are coordinating different technical bodies of the state, Tripura and the region.

The department has been involved with many research works and produced some excellent outcome. The department also offers Ph.D. programme and the main areas of research include Geotechnical Engineering, Structural Engineering, Water Resources Engineering, Environmental Engineering and Transportation Engineering. The department also handles consultancy works and projects with the state & central Government organizations.



Civil Engineering Department

6.2 Academic Programme:

B. Tech (Civil Engineering), M. Tech. (Structural Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Water Resources Engineering, Seismic Science & Engineering and Hydro Informatics Engineering) and Ph. D.

A. Students on Roll:

| Programme | 1 st semester | 3 rd semester | 5 th semester | 7 th semester | Others | Total |
|--------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|-------|
| B.Tech. | 148 | 169 | 162 | 181 | - | 660 |
| M.Tech. | 46 | 51 | - | - | - | 97 |
| Ph. D. | - | - | - | - | - | 44 |
| Total | | | | | | 801 |

6.3 Lab Facilities:

The Civil Engineering Department has Geotechnical Engineering, Structural Engineering, Concrete, Transportation Engineering, Environmental Engineering, Solid Mechanics, Surveying, Engineering Geology, Civil Engineering Computer, Water Resources Engineering, Civil Engineering Drawing and Hydraulics Laboratories.



Structural Engineering Laboratory



Geotechnical Engineering Laboratory



Environmental Engineering Laboratory



Solid Mechanics Laboratory



Water Resources Engineering Laboratory

6.4 Faculty and other Activities:**Short-Term Courses / Workshops / Seminar / Symposia / Conferences / Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:**

| Sl. No. | Name of the Faculty | Title | Period |
|-------------------------------|--|--|--|
| Workshop(Organized) | | | |
| 1 | Dr. Manish Pal, Dr. Partha Pratim Sarkar, Mr. Dipankar Sarkar. | Recent Trends in Transportation Engineering, | 18 th -19 th March, 2016 |
| Seminar: | | | |
| 1 | Dr. Debdulal Tripura | “Challenges faced by working Engineers & Building performance – Nepal Earthquake and aftershocks-2015” | 8 th February, 2016 |
| 2 | Dr. Manish Pal, Dr. Partha Pratim Sarkar, Mr. Dipankar Sarkar. | One day course on Smart City. | 13 th October, 2015 |
| Conference organized : | | | |
| 1 | Dr. Rajib Saha | North East Student Geocongress 2016 | 22 nd January, 2016 |

Visits Abroad by Faculty:

| Sl. No. | Name of Faculty | Country Visited | Date | Purpose of Visit |
|---------|----------------------|----------------------|---|--------------------|
| 1 | Dr. Mrinmoy Majumder | United Arab Emirates | 27 th -31 st December, 2015 | Paper presentation |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level |
|---------|------------------|---|
| 1 | Dr. Umesh Mishra | <ul style="list-style-type: none"> A life member of Indian society for Technical Education with No LM 18347 A senior member of IACSIT –No 80336897 Fellow of Institution of Members –No F-113657-3 Question setter/Examiner/moderator to BPUT Rourkel, OUAT Bhubaneswar, KIIT Deemed university, Bhubaneswar VSSUT Burla and TPSC, Agartala Member nominated by S & T Dept. To central Govt for of State Level Environment Impact Assessment Authority 2009 Consulting member to urban Development Dept Govt of ORISSA for the verification of Bids for JNNURM- 2005 & many other Water supply projects |

| | | |
|---|-------------------------|--|
| | | <ul style="list-style-type: none"> • Member in the tripura Science Congress Agartala |
| 2 | Dr. Richi Prasad Sharma | <ul style="list-style-type: none"> • The Institution of Engineers (India),(Fellow) • The Indian Society for Technical Education(Life Member) • ASCE(Member) • Indian Building Congress(Life Member) |
| 3 | Dr. Sujit Kumar Pal | <ul style="list-style-type: none"> • FIE (India), Institution of Engineers (India) (F-017838-8) • MIE (India), Institution of Engineers (India) (M-061672-3) • Membership of International Society for Soil Mechanics and Geotechnical Engineering • Life membership of Indian Building Congress (ML-5008) • Life membership of Indian Geotechnical Society (LM-2809) • Life membership of Indian Society for Technical Education (LM-19358) • Chartered Engineer (Civil Engineering), Institution of Engineers (India) • Student Chapter membership of Institution of Engineers (India) during UG Course in KREC, Surathkal (Presently, NITK, Surathkal) • Executive Committee member, Agartala Local Centre (Presently, Tripura State Centre) |
| 4 | Dr. Manish Pal | <ul style="list-style-type: none"> • Life membership of IRC since 2008 • Life membership of IBC since 2010 |
| 5 | Dr. Ratul Das | <ul style="list-style-type: none"> • Member of American Society of Civil Engineers (ASCE), USA • Life Member of Indian Water Resources Society (IWRS), INDIA • Life Member of Indian Society for Earthquake Technology (ISET), INDIA • Life member of Indian Buildings Congress (IBC),INDIA • FIE, INDIA |
| 6 | Dr. Rama Debbarma | <ul style="list-style-type: none"> • Member of American Society of Civil Engineers (ASCE), USA • FIE,India |
| 7 | Dr. Sima Ghosh | <ul style="list-style-type: none"> • The Institution of Engineers (India) (Associate member) • Indian Geotechnical Society(Member) • American Society of Civil Engineers (Affiliated member) |
| 8 | Dr. Rajib Saha | <ul style="list-style-type: none"> • Associate Member, Institution of Engineers India • Life Member, Indian Geotechnical Society • Member, ISSMGE Society • Coordinator, State Resource Institute Earthquake Training for Engineers • Faculty Advisor (Students Chapter), Institution of Engineers India |
| 9 | Dr. Sanjay Paul | <ul style="list-style-type: none"> • Member, Indian Geotechnical Society |

| | | |
|----|--------------------------|---|
| | | <ul style="list-style-type: none"> • Member, Institute of Engineers (India) |
| 10 | Mrs. Lipika Halder | <ul style="list-style-type: none"> • Associate Member of IEI, Membership No. AM/093049/3 IEI |
| 11 | Mr. Gopinandan Dey | <ul style="list-style-type: none"> • Life membership of IBC since 2010 • Life membership of ICI since 2009 |
| 12 | Mr. Joyanta Pal | <ul style="list-style-type: none"> • Life membership of IBC since 2010 • Life membership of ICI since 2009 |
| 13 | Dr. Debdulal Tripura | <ul style="list-style-type: none"> • Indian Society for Technical Education (ISTE), India, Life Member • American Society of Civil Engineer (ASCE), USA • American Society for Testing & Materials (ASTM), USA • Structural Engineering Institute (SEI), USA • American Concrete Institute (ACI), USA • Earthquake Engineering Research Institute (EERI), USA • Architectural Engineering Institute (AEI), USA • National Information Centre of Earthquake Engineering (NICEE), India |
| 14 | Dr. Partha Pratim Sarkar | <ul style="list-style-type: none"> • Life membership of IRC since 2009 The Institution of Engineers (India) |
| 15 | Mr. Dipankar Sarkar | <ul style="list-style-type: none"> • Life membership of Indian Road Congress • Life member of ISTE |
| 16 | Dr. Tara Sen | <ul style="list-style-type: none"> • The Institution of Engineers (India) |
| 17 | Dr. Susant Kumar Biswal | <ul style="list-style-type: none"> • ISH • NFMFP |
| 18 | Mr. Nilotpal Debbarma | <ul style="list-style-type: none"> • ISH • IWRS |

6.5 Design and development Activities:

- In the structural Analysis laboratory, a setup for the casting of pre-stressed concrete beams has been developed.
- Existing ITS setup of Transportation Engineering Lab. is modified to test the resilient modulus of bituminous concrete.
- A setup is prepared in Transportation Engineering Lab. to check the rate of infiltration through bituminous concrete.
- A temperature control chamber is prepared in Transportation Engineering Lab.

6.6 Research and Consultancy:

The department is engaged in performing various testing related to the Railway Department, PWD, NCCL, PMGSY projects, NBCC, CPWD, Airport Authority of India, Agricultural Department, BRO and many more. Faculties are engaged in research works and publishing research papers in different national and international reputed journals.

Sponsored Research Projects:

| Sl. No. | Title | Period | Funding agency | Amount (in lakhs) | Co-ordinators |
|---------|---|---------|----------------|-------------------|----------------|
| 1 | Reliability based Seismic Design of Structures incorporating Soil Structure Interaction | 3 years | DST | 26.41 | Dr. Rajib Saha |

Industrial Consultancy:

| Sl. No. | Industry | Amount (Rs.) |
|---------|--|--------------------|
| 1 | CPWD | 10112.00 |
| 2 | CPWD | 10112.00 |
| 3 | NCC Ltd. | 8090.00 |
| 4 | NCC Ltd. | 2022.00 |
| 5 | PWD (R & B) Kunjaban, Agartala, Tripura | 28500.00 |
| 6 | PWD (R & B) Panisagar Sub-div., Tripura | 28625.00 |
| 7 | N F Railway, Agartala, Tripura | 51525.00 |
| 8 | PWD (R & B) Central-III SD, Agartala, Tripura | 28625.00 |
| 9 | PWD (R & B) Central-III SD, Agartala, Tripura | 28500.00 |
| 10 | PWD (R & B) Panchartal SD, Tripura | 57250.00 |
| 11 | PWD (R & B) Panchartal SD, Tripura | 28625.00 |
| 12 | NBCCL, New Delhi (Zonal Office: Agartala, Tripura) | 57250.00 |
| | TOTAL | 3,39,236.00 |

Research Publications:

Total No. of papers published in Refereed International Journals : 25
 Total No. Of papers presented in National Conference : 08
 Total No. Of papers presented in International Conferences : 08

In Refereed International Journals:

- (1) Saha, R., Halder, S., and Dutta, SC; 'Journal of civil engineering and management, Taylor and Francis'; 'Seismic Response of Soil-Pile Raft-Structure System'; 2015; Vol 21:02, Pg. 144-164, <http://dx.doi.org/10.3846/13923730.2013.802716>.
- (2) Saha, R., Halder, S., and Dutta, SC; 'Structural Engineering and Mechanics, Techno Press'; 'Effect of raft and pile stiffness on seismic response of soil-pile raft-structure system'; 2015, Vol. 15(1), Pg. 161-189; doi: <http://dx.doi.org/10.12989/sem.2015.55.1.161>.
- (3) Saha, R., Dutta, SC., and Halder, S.; 'Earthquake Engineering and Engineering Vibrations Springer'; 'Influence of Dynamic Soil-Pile Raft- Structure Interaction: An Experimental Approach'; 2015, Vol. 14(4), Pg. 625-645, doi: 10.1007/s11803-015-0050-1.
- (4) Das, B., Saha, R., Halder S.; 'Geotechnical Special Publication, ASCE'; 'Probabilistic Seismic Design of Soil-Pile Raft-Superstructure System'; 2015, Pg. 217-226, 10.1061/9780784479087.022
- (5) Debnath, A., Thapa, R., Chattopadhyay, K. K., & Saha, B; 'Separation Science and Technology'; 'Spectroscopic Studies on Interaction of Congo Red with Ferric Chloride in

- Aqueous Medium for Wastewater Treatment'; 2015; Vol. 50; Pg. 1684-1688, ISSN: 0149-6395.
- (6) Debnath, A., Majumder, M., & Pal, M; 'Water Resources Management'; 'A cognitive approach in selection of source for water treatment plant based on climatic impact', 2015, Vol. 29, Pg. 1907-1919; ISSN: 0920-4741 (Print) 1573-1650 (Online).
 - (7) Swarup Biswas and Umesh Mishra, 'BioMed Research International'; "Treatment of Copper Contaminated Municipal Wastewater by Using UASB Reactor and Sand-Chemically Carbonized Rubber Wood Sawdust Column," 28-Dec-15, Article ID 5762781, doi:10.1155/2016/5762781.
 - (8) Soma Nag, Abhijit Mondal, Umesh Mishra, Nirjhar Bar, Sudip Kumar Das; 'Desalination & water Treatment'; "Removal of chromium(VI) from aqueous solutions using rubber leaf powder: batch and column studies"; Aug, 2015, Vol. 57, DOI: 10.1080/19443994.2015.1083893.
 - (9) Swarup Biswas and Umesh Mishra; 'Journal of Chemistry'; "Calcium Pretreated Hevea brasiliensis Sawdust for Copper Removal: Batch and Column Study"; 2015, Article ID 495257, doi:10.1155/2015/495257 .
 - (10) Swarup Biswas and Umesh Mishra; 'Journal of Chemistry'; "Continuous Fixed-Bed Column Study and Adsorption Modeling: Removal of Lead Ion from Aqueous Solution by Charcoal Originated from Chemical Carbonization of Rubber Wood Sawdust," 2015; Article ID 907379; doi:10.1155/2015/907379.
 - (11) Debasree Purkayastha, Mrinmoy Majumder, Sumanta Chakrabarti; 'Pollution'; "Collection and recycle bin location-allocation problem in solid waste management: A review", 2015, Vol. 1, Pg. 175-191.
 - (12) Rama Debbarma and Subrata Chakraborty; 'Structural Engineering and Mechanics'; "Robust design of liquid column vibration absorber in seismic vibration mitigation considering random system parameters", 2015, Vol. 53(6), Pg. 1127-1141.
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 - (14) Sahabhaumik, A. Debbarma, R., 'Int. J. Emerging Tech. Advanced Engg.'; "Seismic vibration control of buildings using viscoelastic dampers and base isolation system."; 2015; Vol. 5(5), Pg. 415-423.
 - (15) Vignesh Chellappan and Das S; 'International Journal of Applied Engineering Research'; "Optimization of Composite Laminates using Simulated Annealing Algorithm using different Failure Criteria", Nov', 2015; doi: 19/10/13861-13868.
 - (16) Saha, A and Majumder, M, 'Applied Mathematics and Computation'; "Median based conversion of SGPA into percentage by cognitive methods"; Sept' 2015, Vol. 266, 1, Pg. 1153 -1162, ISSN 0096-3003.
 - (17) arkar A, and Majumder M; 'Journal of Advanced Agricultural Technologies'; "Opportunities and Challenges in Sustainability of Vertical Eco-Farming: A Review"; Dec' 2015; Vol. 2, No. 2, doi: 10.12720/joaat.2.2.98-105.
 - (18) Majumder M, Das S, Chakraborty T, 'International Journal of Grid and Distributed Computing'; "Identification and Mitigation of Difficulties in Hydro - Power Generation in Tripura using MCDM and Cost Effective Analysis"; Oct-15; Vol. 8, No.5; Pg. 183-196; <http://dx.doi.org/10.14257/ijgcd.2015.8.5.18>.

- (19) Das, B., Saha, R., Haldar S; 'Soil Dynamics and Earthquake Engineering'; "Effect of in-situ variability of soil on seismic design of piled raft supported structure incorporating dynamic soil-structure-interaction"; 2016; Vol. 85, Pg. 251–268.
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- (22) Debnath, A., Deb, K., Das, N. S., Chattopadhyay, K. K., & Saha, B; 'Journal of Dispersion Science and Technology'; "Simple Chemical Route Synthesis of Fe₂O₃ Nanoparticles and Its Application for Adsorptive Removal of Congo Red From Aqueous Media: Artificial Neural Network Modeling"; 2016, Vol. 37; Pg. 775-785; Print ISSN: 0193-2691 Online ISSN: 1532-2351.
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- (24) D. Tripura and K.D. Singh; 'Structures and Buildings (Proceedings of Institution of Civil Engineers (ICE) UK)'; "Cement-stabilized rammed earth square column in compression", 2016, Vol 169 (4), Pg. 298-311; – DOI: 10.1680/jstbu.14.00122 (SCI).
- (25) Ghosh, S, Chakraborty, T., Saha, S., Majumder, M and Pal. M; 'Renewable and Sustainable Energy Reviews'; "Development of the location suitability index for wave energy production by ANN and MCDM techniques"; Jun-16; Vol. 59 (2016); Pg. 1017-1028.

In Proceedings of National Conference:

| Authors | Journal/ Proceeding name | Title of paper | Publication Date(dd/ mm/yyyy) | Page no |
|---------------------------------------|--|---|--|--------------|
| Sadrita Dutta and Dr. Sujit Kumar Pal | Indian Geotechnical Conference, IGC-2015 | Study of Column Constructed by Pond Ash and Plastic Threads Installed in Silty-Clay Soil | 17 th - 19 th December, 2015 | IGC 2015-416 |
| Tanaya Deb and Dr. Sujit Kumar Pal | Indian Geotechnical Conference, IGC-2015 | 2D Model Study on Slip Surface around Belled Anchor Pile under Uplift in Cohesionless Soil | 17 th - 19 th December, 2015 | IGC 2015-415 |
| Bipul Sen and Dr. Sujit Kumar Pal | Engineering Problems and Application of Mathematics 2016 | Influence of Finer Fraction and Water Table on Compaction and Consolidation characteristics of Soils of Agartala City | 2016 | 39 |

| | | | | |
|--|---|--|--------------------------------|---------|
| Saha R and Chanda D. | Proceedings of North East Students Geo Congress 2016 , NIT Agartala, India. | Dynamic response of pile foundation considering in-situ variability of soil and modeling uncertainty | 22 nd January, 2016 | |
| Mallik P., and Saha R | Proceedings of North East Students Geo Congress 2016 , NIT Agartala, India. | Parametric Study on Failure of Bridge structures in the Liquefied Soil | 22 nd January, 2016 | |
| Brahma U., and Saha R | Proceedings of North East Students Geo Congress 2016 , NIT Agartala, India. | An experimental study on the dynamic response of rigid model container with foam as boundaries | 22 nd January, 2016 | |
| Sruthi Rath, Dipankar Sarkar | NES Geocongress 2016 | Utilization of phosphogypsum as subgrade modifier | 22 nd January, 2016 | 315-323 |
| Priyadarshini Saha Chowdhury, Sonu Kumar, Suman Debnath, Dipankar Sarkar | NES Geocongress 2016 | Evaluation of the Nano material Mixed soil as subgrade material | 22 nd January, 2016 | 76-85 |

In Proceedings of International Conference:

| Journal/ Proceeding name/ Place of the Conference | Title of paper | Name of the participants | Publication Date (dd/mm/yyyy) |
|--|---|-------------------------------------|--|
| Soil Dynamics and Earthquake Engineering | Effect of in-situ variability of soil on seismic design of piled raft supported structure incorporating dynamic soil-structure-interaction. | Das, B., Saha, R., Halder S. | 2016 |
| The International Reviewer | Concrete dynamic response of pile foundation supported structure considering in-situ variability of soil and modeling uncertainty | Chanda, D. and Saha, R. | 2016 |

| | | | |
|---|--|---|------------------------------|
| Geotechnical Special Publication, ASCE. | Appraisal of in-situ variability and modeling uncertainty of dynamic soil-piled raft-structure interaction on seismic response: A probabilistic approach | Saha, R., Pal A., Halder S. | 2016 |
| Journal of Dispersion Science and Technology | Simple Chemical Route Synthesis of Fe ₂ O ₃ Nanoparticles and Its Application for Adsorptive Removal of Congo Red From Aqueous Media: Artificial Neural Network Modeling | Debnath, A., Deb, K., Das, N. S., Chattopadhyay, K. K., & Saha, B | 2016 |
| Arabian Journal for Science and Engineering | Potential of Fuzzy-ELECTRE MCDM in Evaluation of Cyanobacterial Toxins Removal Methods | Debnath, A., Majumder, M., & Pal, M. | 2016 |
| Journal of Urban Planning and Development | Quantification and Analysis of Land-Use Effects on Travel Behavior in Smaller Indian Cities: Case Study of Agartala | Partha Pratim Sarkar, Mallikarjuna Chunchu | 21 st March, 2016 |
| Advances in materials Science and Engineering | Evaluation of the Properties of Bituminous Concrete Prepared from Brick-Stone Mix Aggregate | Dipankar Sarkar, Manish Pal, Ashoke K. Sarkar, and Umesh Mishra | Jan-16 |
| Structures and Buildings (Proceedings of Institution of Civil Engineers (ICE) UK) | “Cement-stabilized rammed earth square column in compression.” | D. Tripura and K.D. Singh | 2016 |

Monograph publications:

- Majumder, M., 10th March 2016. Minimization of Climatic Vulnerabilities on Mini-hydro Power Plants: Fuzzy AHP, Fuzzy ANP Techniques and Neuro-Genetic Model Approach, ISBN: 978- 9812873132, Springer, Singapore.
- Roy, U. and Majumder, M., 6th January 2016, Vulnerability of Watersheds to Climate Change Assessed by Neural Network and Analytical Hierarchy Process, ISBN: 978-9812873439, Springer, Singapore.

- Majumder, M., 6th May 2015, Impact of Urbanization on Water Shortage in Face of Climatic Aberrations, ISBN: 978-9814560726, Springer, Singapore.

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|--|---|--|
| 1 | Prof. Bhargab Maitra, Professor, I.I.T. Kharagpur | 9 th – 12 th May, 2015 | To serve as an External Examiner of 4th Semester, M.Tech. (Transportation Engg.) under Civil Engg. Deptt. |
| 2 | Prof. D.K. Baidya, Professor, I.I.T. Kharagpur | 10 th – 12 th May, 2015 | To serve as an External Examiner of 4th Semester, M.Tech. (Geotechnical Engg.) under Civil Engg. Deptt. |
| 3 | Prof. Satyabrata Choudhury, Professor, NIT Silchar | 10 th – 12 th May, 2015 | To serve as an External Examiner of 4th Semester, M.Tech. (Structural Engg.) under Civil Engg. Deptt. |
| 4 | Prof. Somnath Mukherjee, Professor, Jadavpur University | 10 th -12 th May, 2015 | To serve as an External Examiner of 4th Semester, M.Tech. (Environmental & Hydro Informatics Engg.) under Civil Engg. Deptt. |
| 5 | Prof. Kalyan Kr. Bhar, Professor, IISER, Kolkata | 12 th – 13 th May, 2015 | To serve as an External Examiner of 4th Semester, M.Tech. (Water Resources Engg.) under Civil Engg. Deptt. |
| 6 | Prof. Laxman N Nandagiri Professor, National Institute of Technology, Karnataka, Surathkal | 15 th September, 2015 | To present a lecture on “Placement of Civil Engineering Students”. |
| 7. | Prof. Virendra Kumar Paul Professor, Department of Building Engineering and Management, School of Planning and Architecture, Delhi | 16 th September, 2015 | Presented a lecture on “Emerging Technologies in construction.” |
| 9 | Dr. Gajanan M. Sabnis, Emeritus Professor, Howard University, Washington DC, USA | 7 th - 8 th October, 2015 | Presented a series of Lecture Program related to technical writing and emerging trends in Civil Engineering |
| 8 | Dr. N.C.Ghosh, Scientist-G & Head, Ground Water division, National Institute of Hydrology, Roorkee, Uttarakhand | 16 th October, 2015 | Lecture on “Ground Water Prospect and Challenges of India”. |

6.7 Institute –Industry Collaboration:

The department is engaged in R&D activities in collaboration with different eminent industrial houses. Both the undergraduate and postgraduate students are actively participating in these collaborative activities.

6.8 Industrial Consultancy and Sponsored Research:

Sponsored research and industrial consultancy works are being taken up by the department to find out innovative strategies to mitigate natural disasters and also for the upliftment of the society at large.

6.9 Other Activities:

- I. This department is acting as a nodal department of the State Disaster Management Programme.
- II. STA in PMGSY.

7.0 CHEMICAL ENGINEERING DEPARTMENT

7.1 Introduction:

The Department of Chemical Engineering along with its modern laboratory facilities offers premier technical support to the students and the faculty members to improve their technical skills and build upon their knowledge. Sufficient propulsive and proactive faculty members are rendering their best services to build up the real educational atmosphere and academic journey. Research laboratories are being developed as per present day cutting edge technology. Mrs Soma Nag is the HoD of the department. The department is also mentoring the Bio Engineering Department since its inception and Dr. T.K.Bandyopadhyay, Assistant Professor of this department is acting as HoD for the Department of Bio Engineering.

The department had framed the course curriculum based on the need of today's industries and updates the entire course curriculum on a regular basis by organizing workshops, which are attended by the academicians and technologists from IITs, NITs and institutes of national repute. The department is exploring research opportunities in the field of Biofuels, Systems Biology, Nanotechnology, Computational fluid dynamics, Environmental Engineering and waste treatment, Adsorption, Polymer and rubber, Catalytic reactor, Membrane separation, Membrane distillation, Liquid membrane, Artificial intelligence in Chemical Engineering from the existing faculty members. Faculty members had initiated their research work after being funded by several funding authorities such as DBT, DST, AICTE, TIFAC.

Faculty members are encouraged to attend abroad workshops/seminars to enrich their knowledge through inter and intra scientific fraternity interactions. This year several faculty members have also visited various universities, IITs and other institutes to attend seminars, workshops and lectures. Presently, the department is furnished with more than hundred peer reviewed journals, conference publications/proceedings and several book chapters.



Along with the academic curriculum of the department, the students are also involved in several cultural, technical and sports events. Every year students from the department of Chemical Engineering actively participate in Advaitam, the techno-cultural fest of NITA, and receive hearty appreciation. Our students have also shown their spark at the Inter NIT Sports Tournament held at NIT Calicut and NIT Allahabad. Alongside classes, we also organize an

annual branch picnic where teachers and students come together to spend a day in a refreshing and jovial mood. Recently the Department has also formed the Association of Chemical Engineering Students (ACES) where the students hold events to nurture the all-round development of themselves through several activities such as Group Discussions, Seminars, Quizzes and Aptitude sessions, Industrial Visits etc.

More than 60% B.Tech students are placed through campus recruitments and many of them have excelled in various competitive exams like GATE, GRE etc and joined foreign universities and universities of national importance for higher education. The departmental students are employed at SHARP, Vedanta, IBM, Infosys, mu-sigma, Oracle, CGI, IOCL etc. Most of the current students have also taken interns at institutes like IITs, ICTs and industries like Oil industry, metal processing industries, food processing industries etc.

7.2 Academic Programme :

The department offers courses for Under Graduate programme leading to B. Tech degree under Chemical Engineering (4 years), M.Tech degree in Chemical Engineering (2 years) and Doctoral degree in Engineering.

Students on Roll:

| Programme | 1st semester | 3rd semester | 5th semester | 7th semester | Others | Total |
|------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------|--------------|
| B. Tech. | 46 | 45 | 45 | 46 | - | 182 |
| M. Tech | - | 06 | - | - | - | 06 |
| Ph. D. | - | 01 | 03 | - | - | 04 |
| Total | 46 | 52 | 48 | 46 | - | 192 |

• Lab Facilities :

The Chemical Engineering Department has Fluid Mechanics, Mechanical Operation, Heat Transfer, Mass Transfer, Fuel & Combustion, Reaction Engg., Process Design, Environmental Engg. and Chemical Process Control Laboratories.

7.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No. | Co-ordinators | Title | Date |
|---------|---------------|--|--|
| 01. | Dr. Sudev Das | National Workshop on “Advances in Two Phase Flow and Heat Transfer” sponsored by TEQIP | 25 th to 26 th March, 2016 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| S. N. | Name of Faculty | Title | Period |
|--------------------|------------------------------|--|---|
| Workshop: | | | |
| 1. | Mrs. Soma Nag | Workshop on “Environmental studies” by sponsored IIT Bombay | 2 nd – 12 th June, 2015 |
| | | Workshop on “Techniques in Bioinformatics” sponsored by TEQIP , NITA | 7 th - 8 th August, 2015 |
| 2. | Dr.Kalyan Gayen | Workshop on “Advances in Algal Biotechnology” | 21 st November, 2015 |
| 3. | Mr. Bibhab Kumar Lodh | Workshop on “Environmental studies” by sponsored IIT Bombay | 2 nd - 12 th June, 2015 |
| 4. | Dr. Mriganka Sekhar Manna | Workshop on “Advances in Two Phase Flow and Heat Transfer” sponsored by TEQIP , NITA | 25 th - 26 th March, 2016 |
| 5. | Dr. Sudev Das | Workshop on “Advances in Two Phase Flow and Heat Transfer” sponsored by TEQIP , NITA | 25 th - 26 th March, 2016 |
| | | Workshop on “Recent Advancement in Soft Computing Techniques” organized by NIT Agartala | 29 th -31 th January, 2016 |
| | | Workshop on “National Workshop on Techniques in Bioinformatics” organized by DBT and NIT Agartala. | 7 th -8 th August, 2015 |
| Conference: | | | |
| 1 | Dr. Srimanta Ray | "Fabrication and characterization of an immobilized titanium dioxide (TiO ₂) nanofiber photo catalyst", International Conference on Recent Advances In Nano Science And Technology, | 8 th -10 th July, 2015 |
| 2. | Mrs. Soma Nag | Adsorption of Cr(VI) from aqueous solutions on coconut shell powder in fixed bed column", CHEMCON2015, Accepted for oral presentation at IIT Guwahati, India, | 27 th -30 th December, 2015 |
| | | "Removal of Chromium (VI) from Aqueous Solutions using Rubber Leaf Powder: batch, column and ANN studies" , Golden Jubilee International Conference on Recent Advances in Chemical and Biochemical Engineering Durgapur, India | 2 nd - 4 th October, 2015 |
| 3. | Dr. Tarunkanti Bandyopadhyay | Optimization of nutritional and physiochemical requirements on acidic xylanase production from Aspergillus niger KP874102.1, ICABET | 3 rd March,2016 |
| | | CFD analysis of Non-Newtonian fluid flow through curved geometry. Golden Jubilee International Conference & Recent Developments in Chemical and Biochemical Engineering GJIC – 2015 organized by, | 2 nd - 4 th October, 2015 |

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|--------------------|-----------------------|---|---|
| | | NIT, Durgapur | |
| 4 | Dr. Kalyan Gayen | Enzymatic hydrolysis of pre-treated liquid for the production of fermentable sugar from Banana Pseudo stem (Musa acuminata) organized by , HIT, Kolkata, India | 20 th -22 nd January, 2016 |
| | | “Isolation of potential microalgae/cyanobacteria from Tripura and biochemical characterization, CHEMCON 2015, IIT Guwahati | 27 th -30 th December, 2015 |
| | | “Elementary mode analysis for butanol production from fermentable sugars from lignocellulosic biomass, CHEMCON 2015, IIT Guwahati | 27 th -30 th December, 2015 |
| | | Acid pretreatment for the production of fermentable sugars from Banana Pseudo stem (Musa acuminata) CHEMCON 2015, IIT Guwahati | 27 th -30 th December, 2015 |
| | | Isolation of potential microalgae/cyanobacterial strains from north-east region of India for biodiesel and other value added products | 21 st November, 2015 |
| 5 | Dr. Sudev Das | National Conference on “30th National Convention of Production Engineer and National Seminar on Sustainable Manufacturing” organized by IEI and NIT Agartala | 18 th -19 th July, 2015 |
| | | National Conference on “Technological Innovations, Design, and Sustainable Product Development in Handloom and Textile Industry” Organized by Tripura State Centre, Institute of Engineer (India | 7 th -08 th March, 2015 |
| 6 | Mr. Bibhab Kumar Lodh | 68th Annual Session of Indian Institute of Chemical Engineers, CHEMCON 2015, IIT Guwahati, India | 27 th -30 th December, 2015 |
| 7 | Dr. M.S. Manna | Optimization Of Parameters For The Efficient Extraction Of Catechins From Tea Leaves And Prediction Through ANN, CHEMCON 2015, IIT Guwahati, India | 27 th -30 th December, 2015 |
| | | Stability Analysis Of Supported Liquid Membrane (SLM) Through Transportation Of Phenol, CHEMCON 2015, IIT Guwahati, India. | |
| | | Development Of Nano-Electrocatalysts For Electrochemical Reduction Of CO ₂ To Fuel, CHEMCON 2015, IIT Guwahati, India | |
| Short Term Course: | | | |
| 01 | Dr. Sudev Das | Three Month Off-Campus Outreach Certificate Programme “ Remote Sensing, Geographical Information System & Global Navigation Satellite System”, Organized by National Natural Resources Management System. | 10 th August - 27 th November, 2015 |
| | | Two Week ISTE STTP on Environmental Studies, Under the National Mission on Education through ICT. | 2 nd - 12 th June, 2015 |

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|----|---------------|---|------------------------------|
| 02 | Mrs. Soma Nag | MHRD | 10 th April, 2015 |
| | | Recent Trends on Physics of Matter: A Quest for Interdisciplinary Functionality organized by NIT Agartala | |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level | Year |
|----------------------|--------------------------------|---|-----------|
| ISTE/ CSI and others | | | |
| 1 | Soma Nag | Member, IE(I) | 1991 |
| 2 | Dr.Tarun Kanti Bandhyopadhyaya | Member, IChE | 1994 |
| 3 | Dr. Srimanta Ray | Canadian Association of Water Quality, Canada | 2010 |
| 4 | Dr. Kalyan Gayen | Member, IChE, IE(I) | 2012 |
| 5 | Mr Bibhab Kumar Lodh | Member, IChE, IE(I) | 2012 |
| 6. | Dr. Ajoy Kr Manna | Member, IChE, | 2009 |
| 7. | Dr. Mriganka Sekhar Manna | Member, IChE, IE(I) | 2014 |
| 8. | Dr. Sudev Das | Member ISHMT, IE(I) | 2012,2015 |

7.4 Research and Consultancy:**Sponsored Research Projects:**

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|---|-----------|--|-------------------|----------------------|
| 1 | Isolation and characterization of micro-organisms/micro-algae from north east region and eastern Coal mines for bio-sequestration of CO ₂ and its utilization towards generation of bio-fuel | 2013-16 | Department of Biotechnology (DBT), India | 68.9 | Dr. K Gayen (PI) |
| 2 | Identification and characterization of intracellular and extracellular cues for phase shifting from acidogenesis to solventogenesis in <i>Clostridium acetobutylicum</i> | 2014-2017 | Department of Biotechnology (DBT), India | 60.39 | Dr. Kalyan Gayen, PI |

Research Publications:

| | | |
|--|---|----|
| Total No. of papers published in Refereed International Journals | : | 07 |
| Total No. of papers published in Refereed National Journals | : | 01 |
| Total No. of papers presented in National Conference | : | 03 |
| Total No. of papers presented in International Conferences | : | 08 |
| Total No. of patents | : | 03 |

In Refereed National Journals:

| Name of the Authors published in National Journals | Title of the Journals | Date of Publication of the paper | Issue/Volume No./Page No. |
|---|---|---|----------------------------------|
| T. K. Bandyopadhyay and S. K. Das | Journal of The Institution of Engineers (India): Series E | 30 th March, 2016 | Issue 1, Volume 97, pp 9–18 |

In Refereed International Journals:

| Name of the Authors published in International Journals | Title of the Journals | Date of Publication | Issue/Volume No./Page No. |
|---|--|---------------------------------|-----------------------------------|
| Sudev Das, D.S. Kumar, Swapan Bhaumik; | Applied Thermal Engineering | 10 th December, 2015 | Volume 96, Pages 555–567 |
| Soma Nag, Abhijit Mondal, Umesh Mishra, Nirjhar Bar, Sudip Kumar Das | Desalination and Water Treatment | 1 st September, 2015 | Issue 36, Volume 57, 16927-16942. |
| T. K. Bandyopadhyay, Suman Debnath, Apu Kumar Saha, Mrinmoy Majumder; | International Journal of Mathematics and Computation | 2015 | Issue No. 4, Volume 26 |
| Ajay K. Manna, Parimal Pal; | Chemical Engineering and Processing: Process Intensification | 10 th November, 2015 | Volume 99, Pages 51–57 |
| Kamal Kumar Bhatluri, Mriganka Sekhar Manna, Alope Kumar Ghoshal, Prabirkumar Saha; | Journal of Hazardous Materials | 15 th December, 2015 | Volume 299, Pages 504–512 |
| Kamal Kumar Bhatluri, Sushma Chakraborty, Mriganka Sekhar Manna Alope Kumar Ghoshala and Prabirkumar Saha | RSC Adv. | 8 th October, 2015 | Vol 5, Pages 88331-88338. |
| Aman Kumar, Mriganka Sekhar Manna, Alope Kumar Ghoshal, Prabirkumar Saha; | Journal of Environmental Chemical Engineering | 1 st March, 2016 | Issue 1, Volume 4, Pages 943–949. |

In Proceedings of National Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|--------------------------------|--|---|
| National Conference On Recent Trends In Chemical Engineering And Chemical Technology | LIT Nagpur, | Pathak A.H., Bibhab Kumar Lodh, Tarun K. Bandyopadhyay | 27 th -28 th February, 2016 |
| Advances in Algal Biotechnology | IIT Bombay, India | Saumyakanti Khanra, Ashmita Ghosh, O. N. Tiwari, Tridi Kumar Bhowmick and Kalyan Gayen | 21 st November, 2015 |
| Recent developments in chemical and biochemical engineering, Golden Jubilee International Conference | NIT, Durgapur | Tarun Kanti Bandyopadhyay, Suman Debnath, Apu Kumar Saha | 2 nd - 4 th October, 2015 |

In Proceedings of International Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|--------------------------------|---|---|
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Soumya Deep Das Bibhab Kumar Lodh, Tarun K. Bandyopadhyay | 27 th -30 th December, 2015 |
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Aniruddha Das, Debika Choudhury, Tridib Kumar Bhowmick, Dijendra Nath Roy, Supreet Saini and Kalyan Gayen | 27 th -30 th December, 2015 |
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Tarun Kanti Bandyopadhyay, Suman Debnath, Apu Kumar Saha | 27 th -30 th December, 2015 |
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Soma Nag, Umesh Mishra, Sudip Kumar Das | 27 th -30 th December, 2015 |
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Ashmita Ghosh, Tridib Kumar Bhowmick , Saumyakanti Khanra, Madhumanti Mondal, Gopinath Halder, O. N. Tiwari and Kalyan Gayen | 27 th -30 th December, 2015 |
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Dibyajyoti Haldar, Saikat Biswas, Dwaipayan Sen and Kalyan Gayen | 27 th -30 th December, 2015 |

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|---|----------------------|---|--|
| International Conference on Advances in Bioprocess Engineering and Technology (ICABET), | HIT, Kolkatta, India | Dibyajyoti Haldar, Saikat Biswas, Dwaipayan Sen and Kalyan Gayen, | 20 th -22 nd , January, 2016 |
| 68th Annual Session of Indian Institute of Chemical Engineers (CHEMCON 2015) | IIT Guwahati | Shishodia, K. Kumar, M.S. Manna | 27 th -30 th December, 2015 |
| | | Aman Kumar, M.S. Manna, A.K. Ghoshal, P. Saha | |
| | | J. Hazarika, M.S. Manna, L. Aheshala | |

Patent Published:

| <i>Inventor Name</i> | <i>Year</i> | <i>Title</i> | <i>Published source</i> | <i>Patent version no.</i> | <i>Patent application no.</i> |
|--|-------------|---|---|---------------------------|-------------------------------|
| S. Ray; D. Das; R. Bhattacharjee | 2015 | A Membrane Independent Offgrid Hybrid Power System | Date of filing: 7 th January, 2016 | | IN 2016310005 86 |
| Manna Mriganka Sekhar | 2015 | Separation of heavy metals from waste water by electrodeposition integrated supported liquid membrane | Date of filing: 2015 | | 733/KOL/20 15 |
| Uday U. S. , Bandyopadhyay T. K. , Bhunia B. | 2015 | Acidophilic xylanases enzyme with broad pH activity from <i>Aspergillus niger</i> . | Indian patent filing on 19 th February, 2016 | | 2016310057 66 |

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|----------------|--|---------------------------------|-------------------------|
| 1. | Dr Arunabha chowdhury, Chief Manager, ONGC Tripura Asset | 25 th March, 2016 | As External Expert |
| 3. | Prof. G Srinikethan, NIT Karnataka | 29 th February, 2016 | As Mentor |

8.0 CHEMISTRY DEPARTMENT

8.1 Introduction :

The Department of Chemistry aims to be the best provider of chemical education within the Northeast region and to be a leader in research, publications and scholastic excellence. We are committed to providing a stimulating learning environment for our students, courses that are relevant and an experience that is world-class whether judged by local or international standards. Our goal is to present the content of chemistry set in a current and relevant context for engineers. As this is a support course taken usually in the first year, we also have goals related to the improvement of skill levels pertaining to the use of technology and communication. We add to this a conscious effort to foster attitudes of lifelong learning and appreciation for chemistry as a core of knowledge.

The Chemistry department believes in and supports the study, teaching and understanding of chemical principles across a wide spectrum of areas: inorganic, organic, physical. Dedicated to excellence in graduate and undergraduate education, the chemistry faculty teaches all lab sections and evaluates and grades all assignments. Our department believes chemistry occupies a central position in the physical sciences. The faculty and staff of the Chemistry department complement their love of teaching and learning with a strong sense of community. Our department functions as an active community of educators and interacts closely with our students. Working collaboratively, we strive to develop better capabilities in science and a better understanding of the learning process. Most importantly, we sincerely hope our students acquire the skills and confidence to become lifelong learners.

8.2 Academic Programme :

The Department of Chemistry conducts B.Tech courses, 5-year integrated BS-MS, 2 years M.Sc. programme in Chemistry. Department has offered Engineering Chemistry for first and second semester students of various engineering branch run in our institute. Department also offers Advanced Engineering Chemistry for 4-semester Chemical Engineering Department. The department has started 5 year integrated BS-MS dual programme from 2013 academic session. The course curriculum and syllabus was formulated with the help of Professors from reputed institutions of our country like IISc. Bangalore, IIT Kharagpur etc. The department has an intake capacity of 10 students per session for MSc. programme and 20 students per session for dual BS-MS programme. Department has also enrolled for Ph.D. programme in Chemistry every year depending on the availability of seats.

Semester wise number of students

| Course | Semester | Number of students |
|-----------|----------|--------------------|
| M.Sc | I | 09 |
| M.Sc | III | 07 |
| BSMS Dual | I | 03 |
| BSMS Dual | III | 09 |
| BSMS Dual | V | 15 |
| BSMS Dual | VII | 06 |

The Department has developed infrastructure for carrying out the research work in various fields such as natural product chemistry, organic synthesis, organometallic chemistry, coordination chemistry, Green chemistry, bioinorganic and nanotechnology.

8.3 Lab Facilities :

B.Tech laboratory has been well developed with necessary equipments and furniture. Since MSc Chemistry curriculum has been started, the department has developed separate laboratory for B.Tech, BS-MS and MSc courses with necessary equipments like water purification system, Muffle furnace, stirrers, pH-meter, sonicator, steambath, etc. In addition, the department has an instrument laboratory equipped with UV-vis, Spectrofluorimeter, Dynamic Light Scattering, Zeta-potential analyser, IR-spectroscopy, Solar energy device, Cyclic voltammeters, Differential Scanning Calorimeter, etc.



Departmental Lab facilities

8.4 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of Faculty | Title | Period |
|---------|-------------------|---|--|
| 1 | Dr. Tarun K Misra | “New Frontiers in Chemistry from Fundamentals to Applications (NFCFA 2015)” sponsored by Department of Chemistry, BITS Pilani, Goa. | 18 th -19 th December, 2015 |
| 2 | | “International Conference on Recent Trends in Analytical Chemistry (ICORTAC-2015)” sponsored by Department of Analytical Chemistry, University of Madras. | 28 th -30 th December, 2015 |

| | | | |
|---|-----------------|---|--|
| 3 | Dr. Mitali Saha | “International conference on emerging trends in science and engineering research (ETSER-2015)” sponsored by Department of basic sciences and humanities, National Institute of Technology, Manipur, India | 2 th -4 th December, 2015 |
| 4 | Dr. K. S. Singh | International Conference on Applied Chemistry, Houston, USA | 17 th -18 th October, 2016 |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | ISTE/ CSI and others | Level | Year |
|---------|------------------------|--|-------------|--------------|
| 1. | Dr. Saroj Kr.Das | Indian Chemical Society | Life Member | 1995 |
| 2. | Dr. Tarun K. Misra | Indian Science Congress Association; Indian Chemical Society | Life Member | 2013 2014 |
| 3. | Dr. K. S. Singh | Indian Science Congress Association | Life Member | 2007 |
| 4. | Dr. Mitali Saha | Indian Carbon Society | Life member | 2011 |
| 5. | Mr. Mithun Chakraborty | Tripura Chemical Society | Life Member | 2012 |

8.5 Research and Consultancy :

Sponsored Research Projects:

| Sl. No. | Title | Period | Funding Agency | Amount (in lacs) | Co-ordinators |
|---------|---|-----------|---|------------------|--------------------|
| 1. | Design an efficient method for the synthesis of some RNA nucleobases | 2012-2015 | Department of BioTechnology | 47.37 | Dr. Saroj Kr. Das |
| 2. | Metal nanoparticle with a knack for anion/molecular recognition: Synthesis, water dispersion, sensing and bio-conjugation | 2014-2016 | Department of Science and Technology- Nanomission | 40.73 | Dr. Tarun K. Misra |
| 4. | Nano material based solar cell. | 2012-2015 | Central Power Research Institute | 25.00 | Dr. Mitali Saha |

Research Publications:

Total No. of papers published in Referred International Journals : 12

In Refereed International Journals:

| Sl. No | Name of the Authors published in International Journals | Title of the Journals | Date of the publication | Issue/Volume No./ Page No. |
|--------|--|-----------------------|-------------------------|-------------------------------|
| 1 | S. Roy, I. Oyarzabal, J. Vallejo, J. Cano, E. Colacio, A. Bauza, A. Frontera, A.M. Kirillov, M G. B. | Inorganic Chemistry | 2016 | 10.1021/acs.inorgchem.6b01087 |

| | | | | |
|----|---|---|------------------------------|----------------|
| | Drew and S. Das, | | | |
| 2 | R. Banik, S. Roy, A. M. Kirillov, A. Bauza, A. Frontera, A. Rodriguez-Dieguez, J. M. Salas, W. Maniukiewicz, S. K. Das, S. Das, | Crystal Engineering Communication | 2016 | 18, 5647–5657. |
| 3 | M. Roy, S. Roy, N.M. Devi, C.B. Singh and K.S. Singh, | Journal of Molecular Structure | 2016 | 439, 164-172 |
| 4 | S. Roy, A. Bauza, A. Frontera, F. Schaper, R. Banik, A. Purkayastha, B.M. Reddy, B. Sridhar, M.G.B. Drew, S.K. Das and S. Das | Inorganica Chimica Acta | 2016 | 440, 38-47. |
| 5 | D. Debnath, A. Purkayastha, R. Choudhury and T. K. Misra | Journal of the Chinese Chemical Society | 7 th March, 2016 | 63, 553-640 |
| 6 | R. Choudhury, A. Purakayastha, D. Debnath and T. K. Misra; | Journal of Molecular Recognition | 16 th March, 2016 | 29, 451-461 |
| 7 | C. Debnath, D. Debnath and T. K. Misra | Journal of Indian Chemical Society | 2015 | 92, 1337-1347 |
| 8 | A. Dutta, S. Das, A. Paul, and A. Chattopadhyay | Journal of Nanoparticle Research | 10 th , June 2015 | 17, 260-260 |
| 9 | D. Debnath, S. Roy S. B. –H. Li, C. –H. Lin and T. K. Misra | Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy | 2015 | 140, 185-197 |
| 10 | R Banik, S Roy, A Bauza, A Frontera and S Das | RSC Adv., | 2015 | 5, 10826 |
| 11 | S. Roy, A. Bauza, A. Frontera, R. Banik, A. Purkayastha, M. G. B. Drew, B. Sridhar, B. M. Reddy, S. K. Das and S. Das, | Crystal Engineering Communica | 2015 | 17, 3912-3916. |
| 12 | R. Banik, S. Roy, A. Bauza, A. Frontera, A. Rodríguez-Diéguez, J. M. Salas, A. M. Kirillov, S. Chowdhury, S. Kr. Das and Subrata Das, | Inorg. Chim. Acta, | 2015 | 435, 178–186. |

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|--------------------------------------|----------------------------|---|
| 1 | Prof. M.K.Singh, TU, Tripura | 13 th May, 2015 | External Examiner of M.Sc (4 th sem.) Project Work |

9.0 COMPUTER SCIENCE AND ENGINEERING DEPARTMENT

9.1 Introduction:

The Department of Computer Science and Engineering of National Institute of Technology Agartala offers undergraduate and postgraduate programme in Computer Science and Engineering where students are encouraged to acquire knowledge with an integrated thinking on education, research & development, application and training. The students are provided knowledge to understand the fundamentals of basic sciences and humanities, knowledge in interdisciplinary areas, innovation, problem solving abilities, intellectual, honest and professional ethics and capacity for team work in national and international environment. The first undergraduate batch rolled out in the year 2003. Since its inception in 1999, the department has always been recognized for excellence.



Department of Computer Science and Engineering

9.2 Academic Programme:

This Institute offers courses of study and facilities for research leading to B.Tech, M.Tech, MCA and Ph.D under Computer Science & Engineering. The department currently offers the following programmes:-

Under Graduate Programmes:

- B.Tech in Computer Science & Engineering (Total 8 Semesters / 4 years).

Post Graduate Programmes:

- M.Tech in Computer Science & Engineering (Total 4 Semesters / 2 years)
- MCA (Total 6 Semesters / 3 years)
- Ph.D

9.2.1 Students Enrolled :

| <i>Programme</i> | <i>1st semester</i> | <i>3rd semester</i> | <i>5th semester</i> | <i>7th semester</i> | <i>Total</i> |
|------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------|
| B. Tech | | 86 | 83 | 77 | 246 |
| M. Tech | 9 | 12 | | | 21 |
| Ph. D. | | | | | 15 |
| MCA | 15 | 31 | 34 | | 80 |
| Total | | | | | 362 |

9.3 Lab Facilities :

The Computer Science & Engineering Department has Central Computing, Software Engineering, Computer Programming, Digital Electronics & Microprocessor, System Programming, Data Analytics, DBMS, AI & HCI, Information Security, Multimedia & Web Technology, Project and Data Communication & Computer Network.

9.4 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

Short Term Courses:

| Sl. No. | Co-ordinators | Title | Period |
|----------------|----------------------|--|---|
| 1 | Mr. Suman Deb | 2 Days National Workshop On “Human Computer Interaction”(worked as Co-Cordinators) | 15 th -16 th February, 2016 |
| | | 2 Days National Workshop on” Android Apps Development”(worked as Co-Cordinators) | 10 th – 11 th March, 2016 |
| | | 2 Days National Conference On” Assistive Technology For Persons With Disabilities”(worked as Co-Cordinators) | 20 th -21 st February 2016 |

| | | | |
|---|----------------|--|---|
| | | One day workshop “Intel HPC code modernization” (Parallelization)(Technical committee member) | 6 th August 2015 |
| | | 1 day workshop on “Study Connec”t(worked as Co-Cordinators) | 15 th July 2015 |
| 2 | Mr. Ashim Saha | 1 day Workshop on “INTEL HPC Code Modernization (Parallelization)” | 6 th August, 2015. |
| 3 | Mr. Ashim Saha | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March, 2016 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Workshop:

| Sl. No. | Name of Faculty | Title | Period |
|---------|---------------------------|--|--|
| 1 | Dr. Mrinal Kanti Debbarma | Two days’ workshop on “Optics and Photonics” at NIT Agartala | 8 th - 9 th Oct, 2015. |
| | | 30 th Indian Engineering Congress by the Institution of Engineers, India, Guwahati, Assam. | 17 th - 20 th Dec, 2015 |
| | | “TEQIP – II Management Capacity Enhancement Programme” conducted by Indian Institute of Management Tiruchirappalli from | 18 th - 22 nd Jan, 2016. |
| | | Two days National Workshop on “Human Computer Interaction” at NIT Agartala. | 15 th - 16 th Feb, 2016. |
| | | Two days National workshop on “Android App Development” at NIT Agartala during | 10 th and 11 th March, 2016 |
| 5 | Mrs. Smita Das | One week short term training on “Advanced Engineering optimization through intelligent techniques” | 22 nd – 26 th June, 2015 |
| 6 | Mr. Dwijen Rudrapal | ICON-2015 | 11 th – 14 th December, 2015 |
| 7 | Mr. Anupam Jamatia | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March, 2016 |
| 8 | Mr. Suman Deb | CELDA-2015: 12th International Conference on “Cognition and Exploratory Learning in Digital Age” | 24 th – 26 th October, 2015. |
| | | ERCICA-2015: Third International Conference on “Emerging Research in Computing, Information, Communication and Applications, “ | 31 st July – 1 st August, 2015 |
| 8 | Mr. Ashim Saha | Two days National Workshop on “Human Computer Interaction” at NIT Agartala. | 15 th - 16 th Feb, 2016. |

| | | | |
|----|--------------------------|--|--|
| 9 | Mrs. Moumita Majumder | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| 10 | Mrs. Lalita Kumari | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| 11 | Miss Sharmistha Majumder | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| | | “SKANI101x: Basic 3D animation”using Blender | 18 th Feb – 14 th April,2016 |
| 12 | Mr. Dhrubojyoti Bhowmik | One day workshop on “Intel HPC code Modernization” | 6 th August, 2015 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| 15 | Mr. Pathasarathi De | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| 16 | Mrs. Priyanka Sarkar | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| 17 | Mr. Prashant Bhardwaj | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| 18 | Mr. Tamal Biswas | One day workshop on “Intel HPC code Modernization” | 6 th August, 2015 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |
| 19 | Mr. Sanjib Debnath | One day workshop on “Intel HPC code Modernization” | 6 th August, 2015 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March,2016 |

| | | | |
|----|------------------------|---|---|
| 20 | Mr. Rajib Chowdhuri | One day workshop on “Intel HPC code Modernization” | 6 th August, 2015 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March, 2016 |
| 21 | Mr. Kishore Kumar Dhar | One day workshop on “Intel HPC code Modernization” | 6 th August, 2015 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March, 2016 |
| 22 | Miss Tannistha Pal | Workshop on “Emerging Areas in Wireless Network and Communication “ | 1st -2nd August, 2015 |
| | | Workshop on “Big Data Analytics” | 20 th -21 st August, 2015 |
| | | Workshop on “Computational Aspects of Inflammatory Pain Related Diseases” | 20 th November, 2015 |
| | | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March, 2016 |
| 23 | Miss Purbani Kar | 2 Days National Workshop on “Human Computer Interaction” | 15 th -16 th Feb, 2016 |
| | | 2 Days National Workshop on “Android Apps Development” | 10 th – 11 th March, 2016 |
| | | One day workshop on “Intel HPC code Modernization” | 6 th August, 2015 |

Visits Abroad by Faculty:

| Sl.No | Name of the Faculty | Place visited | Date | Purpose |
|-------|---------------------|-------------------|-----------------|---|
| 1. | Mr. Nirmalya Kar | Maynooth, Ireland | Oct 24-26, 2015 | To present paper in the 12th International Conference on Applied Computing, Maynooth University, Ireland |
| 2. | Mr. Suman Deb | Maynooth, Ireland | Oct 24-26, 2015 | To attend conference CELDA-2015:: 12th International Conference on Cognition and Exploratory Learning in Digital Age 2015 |

9.5 Design and Development Activities

The Department added new feathers in its cap during this session. Inauguration of the new CSE building, Departmental Labs, developing Apps and eye-catching projects are worth mentioning in this segment. Below are the important Design and Development Activities in CSE during 2015-2016 session:

1. Inauguration of Bharat Ratna Dr. A.P.J. Abdul Kalam Block, NIT Agartala, Department of CSE by Shri Tathagata Roy, Hon'ble Governor of Tripura in presence of Prof Khaleda Ekram, Vice-Chancellor, BUET, Bangladesh; Padma Shri D.B. Pathak, Chairman, BOG, NIT Agartala and Professor Gopal Mugeraya, Director, NIT Agartala, on August 14th, 2015.
2. Inauguration of Artificial Intelligence and Human Computer Interaction Laboratory, Bharat Ratna Dr. A.P.J. Abdul Kalam Block, NIT Agartala, Department of CSE by Shri Tathagata Roy, Hon'ble Governor of Tripura in presence of Prof Khaleda Ekram, Vice-Chancellor, BUET, Bangladesh; Padma Shri D.B. Pathak, Chairman, BOG, NIT Agartala and Professor Gopal Mugeraya, Director, NIT Agartala, on August 14th, 2015.
Lab I/C: Mr. Suman Deb.
3. Inauguration of C-DAC and NIT Agartala Supercomputing Centre at NIT Agartala marking the first of the iconic PARAM Supercomputing Facility to be set up in the state of Tripura in a joint collaboration between C-DAC, Ministry of Communications and IT, Govt. of India and NITA, Ministry of Human Resource Development, Govt. of India on March 09, 2016 by Shri Manik Sarkar, Hon'ble Chief Minister of Tripura.
Lab I/C: Mr. Nirmalya Kar.
4. NIT MCA Common Entrance Test – 2015-16 official website and Android Apps designed and developed by CSED NIT, Agartala.
Web Portal & Apps Developer: Mr. Ashim Saha.
5. Additional Infrastructure Set for NMEICT Classes.
Faculty Advisor: Mr. Suman Deb.
6. Audio-Visual Content Preparation and Broadcast Set Up funded by NMEICT.
Faculty Advisor: Mr. Suman Deb.
7. Designing Agricultural Status Monitoring System on Android Platform funded by IEI Student Project.
Faculty Advisor: Mr. Suman Deb.
8. Designing Low Cost Android Home Automation System under AI and HCI Lab, CSED, NIT, Agartala.
Faculty Advisor & Lab I/C: Mr. Suman Deb.
9. Conducting Winter School for designing long range RF Control for remotely operated light vessels.
Faculty Advisor: Mr. Suman Deb.

9.6 Industrial Consultancy and Sponsored Research

Sponsored Research: The worth mentioning research activities under this segment are:

| | |
|----|--|
| 1. | Project Title: Capacity Building by establishment of C-DAC's High Performance Computing solution- Supercomputer in a Box "PARAM Shavak" at National Institute of Technology, Agartala for engineering study, research and skill development on parallel Computing. Co-Investigator: Mr. Nirmalya Kar. Total Project Outlay: 48.36 Lakhs. |
| 2. | Project: TEQIP sponsored IEI Project. Faculty Advisor: Mr. Suman Deb. Project Grant: 20000/- |
| 3. | National Workshop Grant. Faculty Coordinator: Mr. Suman Deb. Workshop Grant: 2 Lakhs 40 Thousand. |
| 4. | NMEICT Grant. Remote Centre Coordinator: Mr. Suman Deb. Workshop Grant: 2 Lakhs 80 Thousand. |

Research Publications:

Total No. of papers published in Refereed International Journals : 07
 Total No. of papers published in National Conference : 01
 Total No. of papers published in International Conference : 18

In Refereed International Journals:

| Name of the Authors published in National Journals | Title of Journals | Date of publication of the paper | Issue/Volume No/Page No. |
|--|---|--|--------------------------------------|
| Sanchali Das, Nikhil Debbarma | 2 nd International conference on Data engineering: International Journal of Applied Engineering Research | 22 nd -24 th Jan, 2015 | Vol-10, No.86, ISSN:0973-4562 |
| Anurag De, Ashim Saha, Dr. M.C Pal | Elsevier Procedia of Computer Science | 25 Mar, 2015 | Volume 45, Page-282-289 |
| Parthasarathi De, Dr. Dibyendu Ghoshal | International Journal of Innovations in Engineering and Technology (IJIET) | August, 2015 | Volume 5, Issue 4, ISSN: 2319 – 1058 |
| Parthasarathi De, Dr. Dibyendu Ghoshal | International Journal of Innovations in Engineering and Technology (IJIET) | August, 2015 | Volume 5, Issue 4, ISSN: 2319 – 1058 |
| Mr. Mrinal Kanti Deb Barma, Miss | International Journal Of Applied Engineering Research, | 2015 | Vol. 10, No. 86, pp. 82-86, Issn |

| | | | |
|--|--|------|--------------------|
| Piyali Kar; Mr. Sudipta Roy; Mr. S.K Sen | 2015 | | 0973 – 4562 |
| S. Debbarma and K. P. Ghatak | International Journal of Reviews in Theoretical Science | 2015 | Vol. 3, pp. 1–129. |
| S. Debbarma and K. P. Ghatak | International Journal of Nano-science and Nanotechnology | 2015 | Vol. 15, pp. 1–30. |

In Proceedings of National Conference

| Name of the Conference | Place of the Conference | Name of the participants | Date/Duration |
|---|---|---|---|
| IEEE DST Sponsored National Conference on Recent Trends in Data Mining and Data Warehousing | Aditya Institute of Technology and Management, Andra Pradesh. | M. K. Debbarma, DVLN Somyalulu, Rayanoothala Praneetha Sree | 24 th -25 th , November, 2015 |

In Proceedings of International Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/Duration |
|--|---|--|--|
| IEEE Colossal Data Analysis & Networking (CDAN 2016) | Medicaps Group of Institution, Indore, Madhya Pradesh | Rajib Chowdhury, M. K. Deb Barma | 18 th - 19 th March, 2016 |
| IEEE International Conference on Internet of Things and Applications (IOTA 2016) | Maharashtra Institute of Technology, Pune, India | M. K. Deb Barma | 22 th -24 th January, 2016 |
| Proceedings of 2nd IEEE International Conference on Engineering and Technology (ICETECH) | Rathinam Technical Campus, Coimbatore, India | Priyadarshini Lamabam and Kunal Chakma | 17 th -18 th March, 2016 |
| 2nd IEEE International Conference on Engineering and Technology (ICETECH) | Rathinam Technical Campus, Coimbatore, India | Bidipto Chakraborty , Kunal Chakma and Anjan Mukherjee | 17 th -18 th March, 2016 |

| | | | |
|---|---|---|--|
| 12th International Conference on Natural Language Processing (ICON-2015) | IIITM-Kerala, Trivandrum | Dwijen Rudrapal, Anupam Jamatia, Kunal Chakma, Amitava Das, Björn Gambäck | 11 th – 14 th December, 2015 |
| Proceedings of 10th Recent Advances in Natural Language Processing (RANLP-15) | Hissar, Bulgaria | Dwijen Rudrapal, Amitava Das, Baby Bhattacharya | 5 th -6 th September, 2015 |
| Information Systems Design and Intelligent Applications,(INDIA 2016), Springer India | Visakhapatnam, India | Mitali Sinha, Suman Deb and Sonia Nandi | 8 th -9 th January, 2016 |
| Information Systems Design and Intelligent Applications,(INDIA 2016), Springer India | Visakhapatnam, India | Mitali Sinha, Suman Deb and Sonia Nandi | 8 th -9 th January, 2016 |
| Information Systems Design and Intelligent Applications,(INDIA 2016), Springer India | Visakhapatnam, India | Sonia Nandi, Suman Deb, Mitali Sinha | 8 th -9 th January, 2016 |
| Information Systems Design and Intelligent Applications,(INDIA 2016), Springer India | Visakhapatnam, India | Sonia Nandi, Suman Deb,Mitali Sinha | 8 th -9 th January, 2016 |
| 12th International Conference on Cognition and Exploratory Learning in Digital Age (CELDA 2015), | Maynooth, Greater Dublin, Ireland | Suman Deb, Subir Saha, Paritosh Bhattacharya | 24 th – 26 th October,2015 |
| 12th International Conference on Applied Computing(AC 2016) | Maynooth, Greater Dublin, Ireland | Nirmalya Kar, Bhaskar Biswas, Subhrajyoti Deb, Baby Bhattacharya | 24 th – 26 th October, 2015 |
| IEEE International Conference on Advances in Computer Engineering and Applications (ICACEA- 2015) | Ghaziabad, UP, India | Anurag De and Ashim Saha | 19 th - 20 th March, 2015 |
| IEEE International Conference on Green Computing and Internet of Things (ICGCIoT-2015), | Galgotias College of Engineering & Technology (GCET), Greater Noida | Mameeta Pukhrambam,Arundhati Das, Ashim Saha | 8 th -10 th October, 2015 |

| | | | |
|---|---|---|--|
| IEEE International Conference on Green Computing and Internet of Things (ICGCIoT-2015), | Galgotias College of Engineering & Technology (GCET), Greater Noida | Arundhati Das, Mameeta Pukhrambam, Ashim Saha | 8 th -10 th October, 2015. |
| 3rd International Conference on Electronics and Communication Systems (ICECS), 2016 | Coimbatore | Lalita kumari, Mr.J L Raheja | 25 th -26 th February, 2016. |
| International Symposium on Advanced Computing and Communication (ISACC) | Assam University | Sanjib Debnath , Abhishek Majumder, | 14 th -15 th September, 2015 |

Distinguished Visitors to the Departments:

| SL NO. | RESOURCE PERSON | PURPOSE OF VISIT | DATE |
|--------|---|---|----------------------------------|
| 1 | Shri Tathagata Roy, Hon'ble Governor, Tripura Prof. Khaleda Ekram, VC, BUET, Bangladesh | Inauguration of New Department of Computer Science and Engineering Building | 14 th October, 2015 |
| 2 | Prof. A.D. Sahasrabudhe, Chairman, AICTE Padma Shri D.B. Phatak, Chairman, BOG, NITAgartala | Inauguration of innovation & research centre | 14 th November , 2015 |
| 3 | Members Of North East Council | Developmental interaction with faculty members of CSE Department | February , 2016 |
| 4 | Prof. Anupam Basu, Dept Chairman & Head, Cet Prof – In – Charge, Media Lab Asia – IIT Kharagpur Lab Dr. Sameer S Sahasrabudhe – Research Scientist, Dept. Of CSE, IIT Bombay Dr. Samit Bhattacharya – Asst. Prof, Dept. Of Cse, IITGuwahati Dr. Subhasis Bhaumik, Professor & Head – Aerospace Dept. & Coordinator – School Of Mechatronics & Robotics, | Two days national workshop on ‘Human Computer Interaction’ | February , 2016 |

| | | | |
|---|---|---|------------------------------|
| | IIST Shibpur | | |
| | Aditya Marathe – Industry Product Demonstration | | |
| 5 | Himanshu Das, NIEPMD Director | National level Conference on “Assistive Technology” | February, 2016 |
| 6 | Shri Manik Sarkar, Hon’ble Chief Minister, Tripura | Inauguration of C-DAC Param Super Computing Centre | 9 th March, 2016 |
| | Dr. Hemant Darbari, Executive Director, C –DAC Pune | | |
| 7 | Prof(Dr) Ram Shankar Katheria, Minister Of State For Human Resource Development | Contribution of CSE department in the growth of North East India | March, 2016 |
| 8 | Md. Faiz Arif Khan, Rcpl (Hp Education Partner) | Two days national workshop on “Android APP. Development” | March, 2016 |
| 9 | Prof. Swapan Bhattacharya, Jadavpur University | For revising & updating the syllabus of UG and PG of CSE department | 14 th March, 2016 |
| | Prof. Chandan Majumder, Jadavpur University | | |

9.7 Institute – Industry Collaboration:

The worth mentioning activities during 2015-16 are:

| | |
|----|---|
| 1. | One day Workshop on “INTEL HPC Code Modernization (Parallelization)” organized in collaboration with INTEL, HP, CSED NIT Agartala on 6 th August, 2015. Workshop Coordinator: Mr. Ashim Saha. |
| 2. | 2 Days National Workshop on “Android Apps Development” organized in collaboration with HP, CSED NIT Agartala on 10 th – 11 th March, 2016. Workshop Coordinator: Mr. Ashim Saha. |
| 3. | NIT agartala has signed an MoU with Centre for Development of Advance Computing (C-DAC), a scientific society under the Ministry of Communications and IT, Government of India on 29 th October, 2009 at Agartala for encouraging industry-academia partnership for research and development as well as facilitating high end training programmes in Information and Communication Technologies . As a result the CSED earned this season, two Supercomputers. Coordinator: C-DAC Centre of Excellence, NIT Agartala. |

| | |
|----|---|
| 4. | Consultancy Project endorsed by Department of Agriculture, State Agriculture Research Station, Govt. of Tripura. Project Coordinator: Mr. Suman Deb. |
| 5. | NUGENIX sponsored Human Machine Interaction Workshop during 15-16 th Feb, 2016. Workshop Coordinator: Mr. Suman Deb. |

9.8 Other Activities:

C-DAC Satellite Centre, NIT Agartala:

Towards boosting industry-academia partnership for research and development as well as facilitating high end training programmes in Information and Communication Technologies, the National Institute of Technology, Agartala has signed an MoU with Centre for Development of Advanced Computing (C-DAC), a scientific society under the Ministry of Communications and IT, Government of India on October 29, 2009 at Agartala. About C-DAC Satellite Centre, NIT Agartala the MoU envisages strategic collaboration between the two organizations for research and development in areas such as e-Learning, semantic web etc., and high-end non-formal training programmes in Information and Communication Technologies. The various programmes which will be conducted include Diploma in Advanced Computing (DAC), Diploma in Wireless & Mobile Computing (WiMC), Diploma in VLSI Design (DVLSI), and Diploma in Advanced Computer Arts (DACA). The certificate diploma programmes will also be conducted for the students. These programmes include the Advanced Diploma in Information Technology (ADIT), Diploma in Information Technology (DIT). These high-end career oriented IT training programmes designed and developed by the Advanced Computing School of C-DAC will assist the students in moulding their skills based on the requirements of the IT industry thereby providing an advantage in placements and in their career path. The syllabi of the programmes are designed based on industry inputs and the IT training programmes have been developed taking the latest technologies in consideration.

On 09th March, 2016 CDAC has launched CDAC-NITA PARAM Supercomputing Facility at CSE Department of NIT Agartala. This is the 1st iconic PARAM Supercomputing Facility which has been set up in the state of Tripura in joint collaboration between the Centre of Development of Advanced Computing (C-DAC), Ministry of Communications and IT, Government of India and NIT Agartala, Ministry of Human Resource Development, Government of India.

The creation of PARAM Supercomputing infrastructure at NIT Agartala will enable the institute to begin and pursue interdisciplinary research in various engineering domains by modern computational research methodologies where the focus will be on accuracy with the clear purpose of decision making. This Supercomputer will be used as a tool for carrying out modelling, simulation and data analysis (modern R&D methodologies) in multiple science and engineering domains. Research Scholars can obtain fast modelling and Simulations results of very real life complex problem statements of their research in diverse field of applications. By educating and training the students (both undergraduate and graduate) in this area, the institute will serve the purpose of capability building thus catering to the growing need for simulation and

data driven decision making in problems of national and state importance. This new PARAM Supercomputing Facility at NIT Agartala is equipped with the latest processing and accelerator technology from the world leading organizations Intel and NVIDIA and can be easily referred to as the world's most compact and energy efficient supercomputing solution. Supercomputers are key to new reforms in all social sectors of the economy from manufacturing, defense, power, agriculture, communications, engineering sciences, banking, seismic data sciences, weather and climate prediction, Biotechnology, Drug Discovery, Early warning for natural calamities, Big Data analysis, life sciences, data mining, and so on.

10.0 ELECTRICAL ENGINEERING DEPARTMENT

10.1 Introduction:

Department of Electrical Engineering is one of the enriched and primogenital branches of engineering of the National Institute of Technology (NIT), Agartala (formerly Tripura Engineering College, Govt. of Tripura). This Department has been fulfilling the need of the state Tripura as well as the nation by developing technical manpower in Electrical Engineering field since its inception in 1965. In this long 50 years of its journey, being a pivotal branch of the then Tripura Engineering College, this department has witnessed many ups and downs. Still, it has produced a great number of capable electrical engineers who in turn spread their talent around various parts of the globe thereby enhancing the image of the institute in general and branch in particular.

The Electrical Engineering Department started with an annual intake of 20 seats in 1965 and consecutively increased to 40 in 1981. After conversion of the Tripura Engineering College into National Institute of Technology (NIT) in 2006, not only the intake has been increased to 90 but also this conversion has given a golden opportunity to the department to be flourished in all the probable ways in order to boost up the teaching learning process.



10.2 Academic Programme:

Electrical Engineering Department has progressed noticeably with annual intake of 90 for 4 years (8 semesters) B.Tech program and annual intake of 54 for 2 years (4 semesters) M. Tech. programme. Apart from B.Tech. and M. Tech. Electrical Engineering department started Ph.D programme from 2008 academic session. The first batch of M.Tech in Electrical Engineering has been started in 2008 with specialization in Power Electronics & Drives. Considering the aspiration of the students and keeping in view the present trend of employment opportunity in Power & Industrial sector and also faculty necessity in academic field, two more specializations, namely (a) Power System and (b) Instrumentation have also been introduced in M.Tech curriculum of Electrical Engineering from the academic session 2010-2011. The first batch of students of both the specializations has successfully completed their course. Therefore presently the department is offering M.Tech in the following specializations viz. (a) Power System, (b) Instrumentation and (c) Power Electronics & Drives. Similarly, an excellent response has been obtained for Ph.D programme. Several candidates from academic arena and industry have shown their interests for pursuing their Ph.D work in the Department of Electrical Engineering and enrolled their names in the programme. At present 30 nos. of candidates are carrying out their Ph. D work in the department. It is worth to be mentioned here that the opportunity of this higher learning has opened up an avenue for the in-house faculties and staff to obtain higher degrees for their professional development without any need to go outside the state. Some seats are reserved for institutional candidates in this regard.

The number of students in Electrical engineering semester wise for the year 2015-16 are as follows:

Students on Roll:

| Programme | 1 st semester | 2 nd semester | 3 rd semester | 4 th semester | 5 th semester | 6 th semester | 7 th semester | Total |
|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------|
| B.Tech | 96 | 96 | 89 | 89 | 68 | 68 | 79 | 585 |
| M.Tech | 30 | 30 | 47 | 47 | | | | 154 |

Academic Programme Goals:

The Electrical Engineering Department has goals for undergraduate, graduate as well as Ph.D programme. In the 2015-16 session 4 students got enrolled in PhD Programme.

The Undergraduate Programme *goal* is to develop specialized proficiencies in the concepts, methods, and tools required for entry level positions in Electrical Engineering (EE) and for graduate and professional studies.

The Master's Programme goal is to develop specialized proficiencies in the concepts, methods, and tools required for intermediate level positions in Electrical Engineering and other professions and for PhD studies. Students may carry out their thesis work, under the guidance of renowned and experienced faculty members from other reputed technical institutes.

The Doctoral Programme *goal* is to develop specialized proficiencies in the concepts, methods, and tools required for high level positions and leadership in Electrical Engineering and other professions. Coursework and teaching experience are considered to be a significant part of graduate education.

10.3 Faculty and their activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No. | Co-ordinators | Title | Period |
|--------------------|-----------------------------|---|--|
| Short Term Courses | | | |
| 1. | Dr. Aniruddha Bhattacharya | “Stability modeling and analysis of power system including large renewable energy sources Overview” under GIAN | 30 th December, 2015-08 th January, 2016 |
| 2. | Dr. Subhadeep Bhattacharjee | “Distributed Energy Resources for Power Generation” | 5 th – 7 th April, 2016 |
| 3. | Dr. Ajoy Kumar Chakroborty | Workshop on “Power System Beyond 2020”, NIT-Agartala” | 17 th -18 th August, 2015 |
| 4. | Dr .Ardhendu Saha | Workshop on “Optics and Photonics”, NIT-Agartala” | 8 th -9 th October, 2015 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of Faculty | Title | Period |
|------------------|-----------------------------|--|---|
| Workshop: | | | |
| 1. | Dr. Subhadeep Bhattacharjee | ‘Power System Beyond 2020’ | 17 th -18 th August, 2015 |
| | | ‘Optics and Photonics’ | 8 th -9 th October, 2015 |
| 2. | Mr. Diptanu Das | ‘Power System Beyond 2020’ ‘Optics & Photonics’ | 17 th -18 th August, 2015 8 th -9 th October, 2015 |
| 3. | Mrs.Nivedita Laskar | ‘Power System Beyond 2020’ ‘Optics & Photonics’ | 17 th -18 th August, 2015 8 th -9 th October, 2015 |
| 4. | Ms.Sharmistha Sharma | ‘Power System Beyond 2020’ ‘Optics & Photonics’ | 17 th -18 th August, 2015 8 th -9 th October, 2015 |
| 5. | Mrs. Minakshi Deb Barma | ‘Power System Beyond 2020’ | 17 th – 18 th August, 2015 |
| | | ‘Optics & Photonics’ | 8 th – 9 th October, 2015 |

| | | | |
|---------------------------|-----------------------------|---|--|
| | | ‘Recent trends on power electronics & drives’ | 21 st – 22 nd November, 2015 |
| 6. | Dr.Sumita Deb | ‘Power System Beyond 2020’ | 17 th – 18 th August, 2015 |
| | | ‘Optics & Photonics’ | 8 th – 9 th October, 2015 |
| | | ‘Recent trends on power electronics & drive’ | 21 st – 22 nd November, 2015 |
| 7. | Mr.Saptadip Saha | ‘Power System Beyond 2020’ | 17 th -18 th August,2015 |
| | | ‘Optics & Photonics’ | 8 th -9 th October, 2015 |
| Conference: | | | |
| 1. | Mrs. Minakshi DebBarma | ‘Numerical Analysis of Destructive Interference Effect Due to Nonlinear Law of Reflection in a Wedge Shaped Zinc Telluride Slab for Total Internal Reflection Quasi Phase Matching Basesd Broadband Second Harmonic Generation’ | 9 th – 11 th September, 2015 |
| | | ‘Broadband Second Harmonic Generation using Total Internal Reflection Quasi Phase Matching for ppp, pss and spp Polarization Configurations’ | 9 th – 11 th September, 2015 |
| 2. | Dr. Sumita Deb | ‘Numerical Analysis of Destructive Interference Effect Due to Nonlinear Law of Reflection in a Wedge Shaped Zinc Telluride Slab for Total Internal Reflection Quasi Phase Matching Basesd Broadband Second Harmonic Generation’ | 9 th – 11 th September, 2015 |
| | | ‘Broadband Second Harmonic Generation using Total Internal Reflection Quasi Phase Matching for ppp, pss and spp Polarization Configurations’ | 9 th – 11 th September, 2015 |
| Short term Course: | | | |
| 1. | Dr. Subhadeep Bhattacharjee | Faculty Development Programme for ‘Management Capacity Enhancement, IIM-Raipur’ | 7 th -12 th September, 2015 |
| 2. | Dr. Sumita Deb | “Advanced Engineering Optimization through Intelligent Techniques (AEOTIT)” | 22 nd – 26 th June, 2015 |

| | | | |
|----|--------------------------|--|--|
| | | Gian course on “Stability Modelling & Analysis of Power System including large renewable energy sources” | 30 th December, 2015- 8 th January, 2016 |
| | | “Phoenix”- 2016 | 29 th February, - 4 th March, 2016 |
| 3. | Mrs. Minakshi Deb Barma | “Advanced Engineering Optimization through Intelligent Techniques (AEOTIT)” | 22 nd – 26 th June, 2015 |
| | | Gian course on “Stability Modelling & Analysis of Power System including large renewable energy sources” | 30 th December, 2015- 8 th January, 2016 |
| | | “Phoenix”- 2016 | 29 th February - 4 th March, 2016 |
| 4. | Dr. Biman Kumar Saha Roy | “Stability Modelling and Analysis of Power System including Large Renewable Energy Sources” – Under GIAN | 30 th December, 2015— 8 th January, 2016 |
| 5. | Mr. Diptanu Das | “Stability Modelling & Analysis of Power System including Large Renewable Energy Sources”(Under-GAIN) | 30 th December, 2015- 8 th January, 2016 |
| 6. | Ms. Sharmistha Sharma | “Stability Modelling & Analysis of Power System including Large Renewable Energy" Sources(Under-GAIN) | 30 th December, 2015-8 th January, 2016 |

Visits Abroad by Faculty:

| Sl. No. | Name of Faculty | Country Visited | Date | Purpose of Visit |
|---------|--------------------|-----------------|--|--------------------------|
| 1. | Dr . Ardhendu Saha | Canada | 9 th -11 th June, 2015 | For attending Conference |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level | Year |
|----------------------|-----------------------------|--|----------------------|
| ISTE/ CSI and others | | | |
| 1. | Dr. Rup Narayan Ray | IE(I)-Member, ISTE – LM and INDIAN SCIENCE CONGRESS ASSOCIATION Member | 1998 1992 1993 |
| 2. | Dr. Priyanath Das. | ISTE Member, IE(I) | 2009 |
| 3. | Dr. . Ardhendu Saha | ISTE Member IACS (Life Member), | 2009 1999 |
| 4. | Dr. Ajoy Chakroborty | MIET(UK), MISTE, FIE(1) | |
| 5. | Mrs. Anindita Jamatia. | ISTE Member | 2009 |
| 6. | Mr Abanishwar Chakraborty | ISTE Member | 2009 |
| 7. | Dr. Sumita Deb. | ISTE, Life Member Institute of Engineers (India), Graduate G-547504-0 | 2009 2008. |
| 8. | Mrs. Minakshi Deb Barma. | ISTE Life Member Institute of Engineers (India) | 2009 |
| 9. | Mr Prabir Ranjan Kasari | ISTE, LM 62058, IEEE | 2009 |
| 10. | Mr Bikram Das. | ISTE(LM/ 62063), IEEE(India) associate member(AM099384-3) , Solar Energy Society of India (LM/1459/2010) | 2010 |
| 11. | Dr. Subhadeep Bhattacharjee | MISTE, MIETE(I) | |
| 12. | Dr. Bidyut K Bhattacharyya | IEEE Member and Fellow | 1988 |
| 13. | Dr. Aniruddha Bhattacharya | Member of IEEE | 2015 |
| 14. | Mr. Diptanu Das | Associate Member Institute of Engineers(India) | 2009 |
| 15. | Mr. Saptadip Saha | Associate Member (AMIE) Institute of Engineers(India) | 2015 |

10.4 Research and Consultancy :

| Sl. No. | Name of the Faculty | Subject of Consultancy |
|---------|-----------------------------|--|
| 1. | Dr. Subhadeep Bhattacharjee | Resource person of State Technical Support Agency (STSA) for preparing Integrated Cluster Action Plan (ICAP) for RD Department under National Rurban Mission (NRuM). |

Sponsored Research Projects:

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|---|---------|----------------|-------------------|---------------------------------------|
| 1. | “Fabrication of nanostructure based solar cell/ photodetector with organic/inorganic materials” | 2015-17 | IEI | 0.85 | Mr.Saptadip Saha Dr. Priyanath Das |
| 2. | “Multilevel inverter based single stage grid connected solar photovoltaic system” | 2015-16 | CDA-C(T) | 19.14 | Mr Abanishwar Chakraborty |
| 3. | “Non contact Multi-directional vibration sensor using 2D position sensitive detector “ | 2016-18 | ISRO | 33.89 | Dr .Ardhendu Saha |

Research Publications:

| | | |
|--|---|----|
| Total No. of papers published in Refereed International Journals | : | 25 |
| Total No. of papers presented in National Conference | : | 05 |
| Total No. of papers presented in International Conferences | : | 13 |

In Refereed International Journals:

- (1) A.R.Bhowmik, A.K.Chakraborty, ‘Solution of optimal power flow using non dominated sorting oppositional based gravitational search algorithm’, Journal, 64, 1237–1250, ISSN: 0142-0615, (2015).
- (2) A.R.Bhowmik, A.K.Chakraborty , ‘NSMOOGSA for solving optimal reactive power dispatch problem’, Journal, ISSN: 0142-0615, 2015.
- (3) B. Bhattacharya, A.K. Chakraborty , ‘A Three Phase Four Leg Inverter with a Single Vector Quantity as Control Signal’, Journal , 10, 17, 37679-37684, ISSN 0973-9769,(2015).
- (4) B. Bhattacharya, A.K. Chakraborty, ‘Three Dimensional Space Vector Modulation Theory: Practices without Proofs’, Journal, 6, 1, ISSN: 2088-8708, (2016).
- (5) T. Bhattacharya, A.K. Chakraborty, Kaushik Pal, ‘Influence of Environmental Dust on the Operating characteristics of the Solar PV Module in Tripura’, India, Journal, Vol. 4 (3), 141-144, ISSN (Online) : 2319-6890, (2015).
- (6) T. Bhattacharya, A.K. Chakraborty, Kaushik Pal, ‘Statistical Analysis of the Performance of Solar photovoltaic Module with the Influence of Different Meteorological parameters in Tripura’, India, Journal, 4 (3), 137-140, ISSN (Online) : 2319-6890, (2015).
- (7) Minakshi Deb Barma, Sumita Deb, Ardhendu Saha ‘ Broadband fractional total internal reflection quasi phase matching based second harmonic generation in reverse tapered isotropic semiconductor considering the effect of nonlinear reflection’, SCIE (Journal of Nonlinear Optical Physics & Materials), 24, 155041-12155041-16,ISSN: 0218-8635, Online ISSN: 1793-6624,(2015).

- (8) Chittaranjan Nayak, Ardhendu Saha, 'Early detection of acute dehydration using one dimensional photonic device', *Optik-International Journal for Light and Electron Optics* 2016,127 , 5462–5465, ISSN 0030-4026, (2016).
- (9) Rishu Raj, Nikhil Kumar, Sachin Kumar, Sumita Deb, Ardhendu Saha, 'Quasi-phase matched broadband difference frequency generation in the mid-infrared region using total internal reflection in a tapered gallium arsenide (GaAs) slab' , *Optik-International Journal for Light and Electron Optics*, Elsevier, 126 , 2917-2924,ISSN: 0030-4026, (2015).
- (10) Sumita Deb, Ardhendu Saha 'Fractional quasi phase matched broadband second harmonic generation in a tapered zinc telluride slab using total internal reflection considering the effect of nonlinear law of reflection'. *Optik-International Journal for Light and Electron Optics*, Elsevier, 126, 3371-3375 , ISSN: 0030-4026, (2015).
- (11) S. Bhattacharjee, S.Acharya, 'Performative analysis of an eccentric solar–wind combined system for steady power yield', *Energy Conversion and Management (Elsevier) (Journal)*, 108 (2016) , 219-232, ISSN: 0196-8904, (2016).
- (12) S. Bhattacharjee, S.Acharya, 'PV-wind hybrid power option for a low wind topography', *Energy Conversion and Management (Elsevier) (Journal)*, 89 (2015), 942-954, ISSN: 0196-8904, (2015).
- (13) Sharmistha Sharma, Subhadeep Bhattacharjee ,Aniruddha Bhattacharya, 'Grey Wolf Optimization for Optimal Sizing of Battery Energy Storage Device to Minimize Operation Cost of Micro-Grid', *SCI expanded journal IET Generation, Transmission & Distribution*, 10, 625 – 637, ISSN No.1751-8695, (2016).
- (14) K. Bhattacharjee, A. Bhattacharya, S. Halder nee Dey, 'Backtracking Search Optimization Based Economic Environmental Power Dispatch Problems', *Journal*, 73, 830-842, ISSN: 0142-0615, (2015).
- (15) Sharmistha Sharma, Subhadeep Bhattacharjee ,Aniruddha Bhattacharya, 'Quasi- Oppositional Swine Influenza Model Based Optimization with Quarantine for Optimal Allocation of DG in Radial Distribution Network', *International Journal of Electrical Power and Energy Systems*, Elsevier, 74, 348–373,ISSN No. 0142-0615,(2015).
- (16) Saheli Ray, Aniruddha Bhattacharya, Subhadeep Bhattacharjee, 'Differential Search Algorithm for Reliability Enhancement of Radial Distribution System', *Journal: Electric Power Components and systems (Taylor & Francis)*, 44, 29-42, 1532-5008 print / 1532-5016 online,(2016).
- (17) S. Ray, A. Bhattacharya, S. Bhattacharjee, 'Optimal allocation of distributed generation and remote control switches for reliability enhancement of a radial distribution system using oppositional differential search algorithm', *The Journal of Engineering (IET)*, doi: 10.1049/joe.2015.0097, 1-15 , ISSN 2051-3305, (2016).
- (18) S. Sharma, S. Bhattacharjee ,A. Bhattacharya, 'Operation cost minimization of a Micro-Grid using Quasi-Oppositional Swine Influenza Model Based Optimization with Quarantine', *Ain Shams Engineering Journal (Elsevier)*, doi:10.1016/j.asej.2015.09.007, ISSN: 2090-4479 ,(2016).
- (19) S. Ray, A. Bhattacharya, S. Bhattacharjee, 'Optimal Placement of Switches in a Radial Distribution Network for Reliability Improvement', *International Journal of Electrical Power and Energy Systems (Elsevier)* , 76(2016), 53-68, ISSN: 0142-0615, (2016).
- (20) Saheli Ray, Aniruddha Bhattacharya, Subhadeep BHattacharjee, 'Optimal allocation of distributed generation and remote control switches for reliability enhancement of a radial distribution system using oppositional differential search algorithm', *Journal: The Journal*

- of Engineering (IET), 1-15, ISSN:2051-3305 (online), (2015), 5th November, 2015 (online).
- (21) S. Ray, A. Bhattacharya, S. Bhattacharjee, 'Differential search algorithm for reliability enhancement of radial distribution system', *Electric Power Components and Systems* (Taylor & Francis), 44(1), 29-42, ISSN:1532-5008 (Print), 1532-5016 (Online), (2016).
 - (22) Saheli Ray, Aniruddha Bhattacharya, Subhadeep BHattacharjee, 'Optimal Placement of Switches in a Radial Distribution Network for Reliability Improvement', *Journal: International Journal of Electric Power and Energy Systems* (Elsevier), 74, 53-68, ISSN: 0142-0615,(2015).
 - (23) Sharmistha Sharma, Subhadeep Bhattacharjee ,Aniruddha Bhattacharya, 'Solution of Multi-Objective Optimal DG Placement Problem using Swine Influenza Model Based Optimization (SIMBO)', *AMSE JOURNALS –2015-Series: Advances C*, 70, 46-70, (2015).
 - (24) Debasree Saha , Asim Datta , Biman Kumar Saha Roy , Priyanath Das , 'A comparative study on the computation of directional overcurrent relay coordination in power systems using PSO and TLBO based optimization', *Journal (Engineering Computations)*, Vol-33, pp.603 – 621 SCI 0264-4401,(2015).
 - (25) Siddhartha Sankar Deb, Diptanu Das,Prasenjit Debnath, 'PSIM based design of an inbuilt solar powered mobile phone battery charging system', *International Journal of Electronics Circuits And Systems*, 4, 18-24, 2277-5870, (2015).

In Proceedings of National Conference:

- (1) Abanishwar Chakraborti, 'An improvised sensor design for Automatic solar tracking system' national conference on Engineering Problems and Application of Mathematics, NIT Agartala, 2016.
- (2) Arnab Sarkar, J. Satheesh Reddy, Abanishwar Chakraborti,' Comparison of Sine PWM and Space vector PWM for Grid Connected Single Stage Solar System using 3 Level Inverter', NIT Agartala,2016.
- (3) Sayantan Bhattacharya, Amal C Sunny, Abanishwar Chakraborty, 'Efficiency Augmentation of a BLDC Motor During Braking', NIT Agartala, 2016.
- (4) Manish Choudhury,Prabir Ranjan Kasari, Bikram Das, Abanishwar Chakrabarti, 'Controller Design of Grid-Connected Multilevel Inverter', NIT Agartala, 2016.
- (5) Rupak Datta, Rajeeb Dey, Abanishwar Chakraborti & Baby Bhattacharya, 'Delay Dependent Stability Condition for Continuous Time Linear System with an interval Time-varying Delay via Wirtinger based Integral Inequality', NIT Agartala, 2016.

In Proceedings of International Conference:

- (1) Kaushik Ranjan Das, Diptanu Das, Joyashree Das, 'Optimal tuning of PID controller using GWO algorithm for speed control in DC motor', *International Conference on Soft Computing Techniques and Implementations (ICSCTI)*,Manavrachana International University,Faridabad, , 108-112, 978-14673-6790-5, 8-10 Oct. 2015.
- (2) B. Bhattacharya, A. K. Chakraborty, 'Mathematical Vector Quantity Modulated Three Phase Four Leg Inverter, Proceeding', *Visakhapattanam* 2. 38, 383-393, 8-9th January, 2016.

- (3) B. Bhattacharya, A.K. Chakraborty, 'Determination of α , β & γ -Components of a Switching State without Clarke Transformation', Kolkata, Proceeding, 28-30th January, 2016.
- (4) Prasad Kumar Swain, Nabamita Goswami, Ardhendu Saha, 'Enhanced lateral shifts with Gaussian beam and Laguerre-Gaussian beam in presence of surface plasmon resonance', International Conference on Microwave Optical and Communication Engineering, IIT Bhuvaneshwar, 18-20th December 2015.
- (5) Naiwrita Dey, M Suresh, Sampa Das and Ardhendu Saha, 'Implementation of SPI interface on FPGA Using LabVIEW to Communicate with MEMS sensors', 6th IEEE International Conference on Communication Systems and Network Technologies (CSNT-2016), Chandigarh, 10th January, 2016.
- (6) Kishor Das, Nabamita Goswami, Ardhendu Saha, 'Surface Plasmon Resonance Enhanced Temperature Effect on Goos-Hanchen Shift and Imbert-Federov Shift with Silver Nano Layer in SiO₂ Prism', 4th International Conference on Frontiers in Nanoscience and Technology (COCHIN NANO 2016)", University of science and technology, cochin, 20-23rd February 2016.
- (7) Sumita Deb, Minakshi Deb Barma, 'Numerical Analysis of Destructive Interference Effect Due to Nonlinear Law of Reflection in a Wedge Shaped Zinc Telluride Slab for Total Internal Reflection Quasi Phase Matching Based Broad band Second Harmonic Generation', Conference (2015 Twelfth International Conference on Wireless and Optical Communications Networks (WOCN)), Bangalore, 978-1-4673-9276-1, September 2015.
- (8) D. Adhya, S. Bhattacharjee, S. Acharya, 'Back surface cooling of photovoltaic panel – an experimental investigation', Proc. 6th IEEE International Conference on Power Systems, 2016 (ICPS 2016), Delhi, 4-6th March 2016.
- (9) S. Acharya, S. Bhattacharjee, D. Adhya, 'Solar thermal-wind-spring storage hybridized system for steady power yield', Proc. 6th IEEE International Conference on Power Systems, 2016 (ICPS 2016), Delhi, 4-6 March, 2016.
- (10) Bishwajit Dey, Sharmistha Sharma, 'Energy Management of Microgrids with Renewables using soft computing techniques', 12th IEEE India International Conference, INDICON 2015, on Electronics, Energy, Environment, Communication, Computer, Control, (E3- C3), Jamia Millia Islamia, New Delhi, 1-6, 978-1-4673-7398-2, 17-20th Dec. 2015.
- (11) Soumesh Chatterjee, Biman Kr. Saha Roy, 'An analytic method for allocation of Distributed Generation in radial distribution system', Proceeding, (12th IEEE India International conference INDICON), Delhi, 1-5, 978-1-4673-7398-2, December 2015.
- (12) Debasree Saha, Asim Datta, Biman Kumar Saha Roy, Priyanath Das, 'Optimal Coordination of DOCR in interconnected Power Systems', Proceeding (2nd International Conference on Control, Instrumentation, Energy and Communication 2016), Kolkata, 978-1-5090-0035-7, January 2016.
- (13) A. Sarkar, S. Reddy, B. Das, P. R. Kasari, A. Saha, A. Chakrabarti, 'Multilevel inverter based single stage grid connected solar PV', Green Computing and Internet of Things (ICGCIoT), Galgotia college of Engineering and technology, Greater Noida, 1217-1222, 10.1109/ICGCIoT.2015.7380649, October 2015.

Book Published:

| Name of the Authors published | Title of the Books | Date of publication | Issue/ Volume No./ Page No |
|-------------------------------|--|---------------------|----------------------------|
| Dr. Subhadeep Bhattacharjee | 'Solar Electricity Generation', (ISBN 978-81-8487-404-4), Narosa Publishing House, New Delhi | 2015 | - |

Patent Published:

| Inventor Name | Year | Title | Published Source | Patent version No | Patent Application no. |
|--|------|---|---|-------------------|-----------------------------|
| S. Bhattacharjee, S. Acharya, and A. Das | 2015 | A heat-free composite daylight ingesting system | Controller General of Patents, Designs & Trademarks, Department of Industrial Policy & Promotion, Ministry of Commerce and Industry | - | 652/KOL/2015 |
| Saptadip Saha Dr. Priyanath Das | 2016 | A multiple power source based electrical drive | Intellectual Property India, Govt. of India patent office. | CBR No. 2167 | 201631005530 (under review) |

Distinguished Visitors to the Departments:

| Sl No. | Name of the Visitors & Designation | Date of visit | Purpose of visit |
|--------|---|----------------------------|------------------------------|
| 1. | Dr. Swapan Kumar Goswami, Professor, Department of Electrical Engineering, Jadavpur University, Kolkata | 15 th May, 2015 | For M.Tech Thesis evaluation |
| 2. | Dr. Shymal Kumar Bhadra, Scientist G [Gr. IV(6)], Fibre Optics and Photonic Laboratory, Central Glass & Ceramic Research Institute, Kolkata | 15 th May, 2015 | For M.Tech Thesis evaluation |
| 3. | Prof. D.Kastha, Professor, Dept. Of Electrical Engineering, IIT-Kharagpur | 15 th May, 2015 | For M.Tech Thesis evaluation |
| 4. | Tapas Roy, Manager CESE Ltd. | 2015 | Viva Voce, B.Tech |

10.5 Institute – Industry Collaboration:

Dr. Subhadeep Bhattacharjee is the key initiator as well as Officer in-charge of the Solar Radiation Resource Assessment (SRRA) Station at NIT-Agartala, set up in accordance with the

MoU between C-WET (presently National Institute of Wind Energy) and NIT-Agartala as a part of National Project on Solar Radiation Resource Assessment.

10.6 Other Activities :

- Dr. S. Bhattacharjee: Associate Dean (P&D), NIT-Agartala
- Outstanding and Recognized Reviewer of many venerated journals such as *Applied Energy* (Elsevier) (Impact Factor: 6.222), *Energy Conversion and Management* (Elsevier) (Impact Factor: 4.631), *Renewable Energy* (Elsevier) (Impact Factor: 4.068), *International Journal of Electrical Power and Energy Systems* (Elsevier) (Impact Factor: 2.718), *International Journal of Sustainable Energy* (Taylor & Francis), *Sustainable Energy Technologies and Assessments* (Elsevier) (Impact Factor: 1.089), *Journal of Renewable and Sustainable Energy* (American Institute of Physics, AIP), *Journal of the Institution of Engineers (India) (Series-B)* (Springer), *Smart Science* (Taylor & Francis), etc.
- Member of the Board of Post Graduate Studies (BPGS) of NIT-Agartala/ Technical Member of Vidyalaya Management Committee of Kendriya Vidyalaya, NIT-Agartala for the session 2014-17/ Member of the Library Committee of NIT-Agartala/ Member of the Library Purchase Committee of NIT-Agartala/ Member of the Departmental Post Graduate Program Committee (DPPC) of Electrical Engineering/ Member of the DPPC of Computer Science Engineering/ Member of the Departmental Purchase Committee/ Chairman and member of a number of Doctoral Committees, NIT-Agartala and many more institutional involvements.

11.0 ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

11.1 Introduction:

The Department of Electronics & Communication Engineering (E.C.E) was established in 2007. Since its inception the Department is growing in multidimensional direction in context to UG & PG teaching aspects. The department offers a wide range of courses which address almost the entire arena covering VVLSI, Nano-electronics, Modern era of Communication, Fabrication and Characterization of Nano Scaled Devices, Image Processing, Advance Microwave Electronics, Bio-Signal Processing, Non-Linear System Science to mention a few. The department aims to create competent Electronic and Communication Engineers to serve the needs of modern advance technology and the nation as a whole. The department always updates the entire course curriculum on a regular basis after discussion with academicians from institute of national repute and technologists from various renowned organizations by which our students can compete with the best with respect to knowledge and ability in the business and face the modern challenges of today's Electronics and allied industries and institutions where change is the norm. Among all branches of Engineering Sciences, Electronics and Communication Engineering changes at extreme fast pace, so fast that which is brand new product for today becomes obsolete in the very next day with respect to science and engineering of this branch. Considering all the said aspects, the department possesses a qualified and experienced team of faculty members to carry out its legacy. The major thrust areas of the department are VLSI and Nano-Technology, Nano-Electronics, Microwave, Image Processing, Optoelectronics, Control Engineering and Communication Systems. The Department is deeply involved in multidimensional aspects of teaching and research under the able leadership of Mr. Atanu Chowdhury, the present H.O.D. The Department offers Ph.D courses in Nano-electronics, Microwave, VLSI, and Image Processing, to name a few. The students of this branch have been placed in various reputed R&D organizations and eminent companies in India and abroad.

11.2 Academic Programme:

The department of Electronics & Communication Engineering currently offers the following programmes:-

Under Graduate programme: B.Tech in Electronics & Communication Engineering (4 years).

Post Graduate programmes: M.Tech (2 years) in two specializations-

- (i) VLSI Design
- (ii) Communication Engineering.

The Department also offers Ph.D courses in Nano-electronics, Microwave, VLSI, Image Processing, Bio-Signal Processing, to name a few.

| <i>Program</i> | <i>1st / 2nd Semester</i> | <i>3rd / 4th Semester</i> | <i>5th / 6th Semester</i> | <i>7th / 8th Semester</i> | <i>Other Semester</i> | <i>Total</i> |
|----------------|---|---|---|---|---------------------------|--------------|
| B.Tech | 79 | 78 | 95 | 78 | NA | 330 |
| M.Tech | 12 | 10 | NA | NA | NA | 22 |

| | | | | | | |
|---------------------------------------|----|----|-----|----|----|----|
| (VLSI Design) | | | | | | |
| M.Tech (Communication Engineering) | 11 | 13 | NA | NA | NA | 24 |
| Ph.D | 02 | 03 | NIL | 10 | 15 | 30 |



Communication Engineering Laboratory



VLSI Laboratory

11.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No | Co-ordinators | Title | Period |
|---------------------------|--|---|---|
| Short Term Courses | | | |
| 1 | Mr. Mitra Barun Sarkar and Dr. Sambhu Nath Pradhan | “Challenges & Opportunities of Emerging Nanotechnology for VLSI Nano electronics” | 1 day (21 st January, 2016) |
| 2 | Ms. Madhuparna Chakraborty and Dr. Sambhu Nath Pradhan | “2 –Day Familiarization Workshop on Nanofabrication Technologies” | 2 days (15 th –16 th February, 2016) |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of Faculty | Title | Period |
|------------------|-------------------------|--|--|
| Workshop: | | | |
| 1. | Dr. Dibyendu Ghoshal | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 2 | Dr. Sambhu Nath Pradhan | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 3 | Mr. Manik Bhowmik | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 4 | Mr. Atanu Choudhury | “2 –Day Familiarization Workshop on | 2 days (15 th –16 th |

| | | | |
|-----|---------------------------|--|--|
| | | Nanofabrication Technologies “ | February, 2016) |
| 5 | Mr. Kamalesh Debnath | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February,2016) |
| 6 | Mr. Biman Debbarma | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 7 | Mr. Somnath Roychoudhury | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 8 | Mr. Anirban Bhattacharjee | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 9 | Dr.Tamosi Moyra | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 10 | Mr.Mitra Barun Sarkar | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 11 | Mr.Madhuparna Chakraborty | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 12 | Mrs.Priyanka Choudhury | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 13 | Ms.Anandita Goswami | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 14 | Mr. Subhajit Acharjee | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February, 2016) |
| 15 | Dr. Bishankabrata Bhowmik | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February,2016) |
| 16 | Mr. Apangshu Das | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February,2016) |
| 17. | Mr. Abhishek Nag | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February,2016) |
| 18. | Mr. Partha Kumar Deb | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February,2016) |
| 19. | Mr. Puspendu Bikas Saha | “2 –Day Familiarization Workshop on Nanofabrication Technologies “ | 2 days (15 th –16 th February,2016) |
| 20. | Mr. Manik Bhowmik | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 21. | Mr. Atanu Chowdhury | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI nanoelectronics.” | 1day (21 st January, 2016) |
| 22. | Mr.Kamalesh Debnath | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 23. | Dr. Dibyendu Ghoshal | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI | 1day(21 st January, 2016) |

| | | | |
|-----|---------------------------|---|---|
| | | Nanoelectronics.” | |
| 24. | Mr. Biman Debbarma | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 25. | Mr. Anirban Bhattacharjee | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 26. | Mr. Somnath Roychoudhury | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 27. | Ms.Madhuparna Chakraborty | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day(21 st January, 2016) |
| 28. | Dr.Tamosi Moyra | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 29. | Mrs. Priyanka Choudhury | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.” | 1day (21 st January, 2016) |
| 30. | Mr.Subhajit Acharjee | “One day National Workshop on challenges & opportunities of Emerging Nanotechnology for VLSI Nanoelectronics.”. | 1day (21 st January, 2016) |
| 31 | Mr.Mitra Barun Sarkar | “Challenges & Opportunities of Emerging Nanotechnology for VLSI Nano electronics” | 1day (21 st January, 2016) |
| 32. | Ms.Madhuparna Chakraborty | BLENDED MOOC WORKSHOP ON “Signals & Systems” | 6 months(July 2015-December 2015) |
| 33. | Mr.Anirban Bhattacharjee | BLENDED MOOC WORKSHOP ON “Signals & Systems” | 6 months(July 2015-December 2015) |
| 34. | Mr.Atanu Choudhury | “National Workshop on “Techniques in Bio-informatics” | 7 th - 8 th August, 2015 |
| 35. | Dr. Sambhu Nath Pradhan | “Knowledge Dissemination Programme on Embedded System Design” | 5 days (25 th – 29 th May, 2015). |
| 36. | Mr.Biman Debbarma | “Knowledge Dissemination Programme on Embedded System Design” | 5 days (25 th – 29 th May, 2015). |

| | | | |
|---------------------------|------------------------|---|--|
| 37. | Dr.Sambhu Nath Pradhan | “IEP on System Level Design on Platform FPGAs” | 3 days (7 th -9 th December, 2015) |
| 38. | Mr.Mitra Barun Sarkar | “Familiarization Workshop on Nanofabrication Technologies”. | 2 days (15 th - 16 th , February 2016) |
| Conference: | | | |
| 1. | Dr.Sambhu Nath Pradhan | 2 nd IEEE International Conference on Recent Trends in Information Systems at Jadavpur University | 3 days (09 th -11 th July, 2015) |
| 2. | Dr.Sambhu Nath Pradhan | IEEE International Conference on Microelectronics, Computing and Communication (MicroCom 2016) at NIT Durgapur. | 3 days (23 th -25 th , January 2016) |
| 3. | Mr.Mitra Barun Sarkar | 4 th National Conference on Materials ,devices and Circuits in Communication Technology | 3 days (19 th -20 th February, 2016) |
| Training: | | | |
| 1. | Mr.Mitra Barun Sarkar | Management Capacity Enhancement Programme (MCEP) for TEQIP Institutions at IIM Lucknow Noida Campus | 5 days (27 th - 31 th July, 2015). |
| Short term Course: | | | |
| 1. | Mr.Mitra Barun Sarkar | “NEMS and Nanophotonics (CNNP STC- 2015) “at IIT Madras | 2 days (25 th -26 th September, 2015) |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level | Year |
|-----------------------------|-------------------------|------------------|-----------|
| ISTE/ CSI and others | | | |
| ISTE | Mr.Atanu Chowdhury | Life Member | 2010-2011 |
| ISI | Mr. Atanu Chowdhury | Life Member | 2010-2011 |
| IEI | Mr.Atanu Chowdhury | Associate Member | 2009-2010 |
| ISTE | Mr. Manik Bhowmik | Life Member | 2010-2011 |
| AMIE | Dr. Tamasi Moyra | Life Member | 2000-2013 |
| GIST | Dr. Sambhu Nath Pradhan | Fellow | 2012 |
| IAENG | Mr. Mitra Barun Sarkar | Member, IAENG | 2012 |

11.4 Research and Consultancy:

A good number of projects (funded by DST/AICTE/DeitY etc.) are currently running in the ECE Department.

Sponsored Research Projects:

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|---|-----------|------------------------------------|-------------------|---------------------|
| 1 | Microcontroller Based Instrumentation for studying Complex Bio-electrical Impedance of fruits | 2015-2016 | The Institute of Engineers (India) | 0.60 | Mr. Atanu Chowdhury |

Research Publications:

| | |
|--|-------------|
| Total No. of papers published in Refereed International Journals | : 09 |
| Total No. of papers presented in National Conference | : 1 |
| Total No. of papers presented in International Conferences | : 21 |
| Total No. of Books published | : 1 |
| Total No. of patents | : 1 (Filed) |

In Refereed International Journals:

- (1) Suvojit Acharjee, Sayan Chakrabarty, Wahiba Ben Abdessalem, Karaa, Ahmad Taher Azar, Nilanjan Dey; "ECG Signal compression using Ant Weight Lifting Algorithm for Tele-monitoring"; 'Journal of Medical Imaging and Health Informatics'; 2/1/2016, 2156-7018, 244-251.
- (2) A. Das and S. N. Pradhan; "Shared Reed-Muller Decision Diagram based Thermal-Aware AND-XOR Decomposition of Logic Circuits", 'Journal of VLSI Design, Hindawi publication'; 29/3/2016, 2016, 1-14.
- (3) T. Majumder, K. Debnath, S. Dhar, J. J. L. Hmar and S. P. Mondal; "Nitrogen-Doped Graphene Quantum Dot-Decorated ZnO Nanorods for Improved Electrochemical Solar Energy Conversion"; 'Energy Technology Wiley online library'; 3/29/2016, 4, 8, 950-958.
- (4) D. Nath, P. Choudhury and S. N. Pradhan; "Hybrid Approach of Within-Clock Power Gating (WCPG) and Normal Power Gating to Reduce Power"; "Journal of Circuits, Systems, and Computers (JCSC), World Scientific Publishing"; 19/1/2016, 5, 25, 1650044-1 – 26.
- (5) A. Nag and S. N. Pradhan; "An Autonomous Clock Gating Technique in Finite State Machines Based on Registers Partitioning"; 'Journal of Circuits, Systems, and Computers (JCSC), World Scientific Publishing'; 21/12/2015, 5, 25, 1650033-1 -21.
- (6) P. Choudhury and S. N. Pradhan; "Power-Area Trade-off in Power Gated FSM Synthesis"; 'International Journal of Circuits and Architecture Design', Inderscience Publishers'; 2016, 1, 2, 13-29.
- (7) S Saha, A Mondal, B , Choudhuri, T Goswami, M B Sarkar, K Chattopadhyay; "Band Gap Tailoring of TiO₂ Nanowires by Nitrogen Doping Under N₂/Ar Plasma Environment"; 'Journal Of Nanoscience And Nanotechnology'; 1/5/2015, 5, 15, 395 1-5.
- (8) Syed Mukulika Dinara, Sanjay Kr. Jana, Saptarsi Ghosh, Partha Mukhopadhyay, Rahul Kumar, Apurba Chakraborty, Shekhar Bhattacharya and Dhrubis Biswas; "Enhancement of Two dimensional electron gas concentrations due to Si₃N₄ passivation on Al_{0.3}Ga_{0.7}N/GaN heterostructure: strain and interface capacitance analysis", "AIP Advances"; 22/04/2015, 5, 047136 1-11.

- (9) S.N Pradhan, A. Chakraborty, A. Nag and D. Nath, “Layout Oriented Look up Table Based Dual Threshold Approach to Reduce Leakage”; “International Journal of Computer Aided Engineering and Technology, Inderscience Publication”; 1/5/2015, Vol.7 ,456 – 480.

In Proceedings of National Conference:

1. Mitra Barun Sarkar, "Defect States Analyses of E-Beam Evaporated TiO₂ and SiO_x Thin Films Structures for Application in Photo detectors" 4th National conference on Materials, Devices and Circuits in Communication Technology (MDCCT 2016) , IETE Burdwan Sub Centre (Burdwan University), (19th -20th February, 2016).
2. Kasturi Gogoi, Mitra Barun Sarkar, Nitesh Soni and Paritosh Bhattacharya, “A novel design of dual frequency SIW slot antenna”, National Conference on Materials, Devices and Circuits in Communication Technology 2016 (MDCCT 2016), IETE Burdwan Sub Centre and Department of Physics, The University of Burdwan, 52-55, (19th -20th February, 2016).

In Proceedings of International Conference:

1. T. Sarkar, S. Chakraborty and S. N. Pradhan, “Short Survey on Low Power Design and Scan Based VLSI Testing”, IEEE ICCCA-2015, Galgotias University, Greater Noida, 82-92, 15th -16th May, 2015.
2. AA. Purkayastha, S. Roy Choudhury and S. N. Pradhan, “A Genetic Algorithm Approach for Hybrid ALU Design”, IEEE ICCCA-2015, Galgotias University, Greater Noida, 15th -16th May, 2015.
3. T. Sarkar, S. Chakraborty and S. N. Pradhan, “A New Technique For Leakage Power Reduction In Testing of Digital Circuits”, IEEE International Conference on Nano-electronics, Circuits & Communication Systems NCCS-2015, Ranchi, 9th -10th May , 2015.
4. A. Nag and S. N. Pradhan, “An Autonomous Power and Clock Gating Technique in SRAM Based FPGA ”, IEEE International Conference on Nano-electronics, Circuits & Communication Systems NCCS-2015, Ranchi, 9th -10th May , 2015.
5. P. Choudhury, D. Nath, V. Rai and S. N. Pradhan, “Thermal Aware AND-OR-XOR Network Synthesis”, VLSI Design and Test VDAT-2015, Nirma University campus, Ahmedabad, Gujarat, 1-6, 26-29th June, 2015.
6. A. Das and S. N. Pradhan, “Thermal aware FPRM based AND-XOR network synthesis of logic circuits”, ReTIS, Jadavpur University, 497-502, 9th -11th July, 2015.
7. S. N. Pradhan and P. Choudhury, “Low power and high testable Finite State Machine synthesis”, IEMCOM-2015, Vancouver, BC, 1-5, 15th -17th October, 2015.
8. S. N. Pradhan, V. Rai and A. Chakraborty, “Design of High Speed and Low Power Full Adder in SubThreshold Region”, MicroCom 2016, NIT Durgapur, 22th -25th Jan, 2016.
9. N. Tripathi and S. N. Pradhan, “Power Efficient Design of All Digital Phase Locked Loop”, WiSPNET 2016, Chennai, 23th-25th March, 2016 .
10. A. Chowdhury, Nizamudheen VK , T. K. Bera, D. Ghoshal & B. Chakraborty, “A study on the Impedance Variation in Banana during ripening using AD5933 based impedance spectrometer with LabVIEW”, 2016 IEEE International Conference on Smart Structures and Systems ICSSS-2016, Saveetha Engineering college, Chennai, India, 85-90, 23th-24th March, 2016.

11. P. Das, A. Bhattacharjee, S. Pathak, "Performance Analysis of TLS-Esprit and QR 4th TLS- Esprit algorithm for Direction of Arrival Estimation", 4th International Conference on Communication and Signal Processing ICCSP-2015, Tamil Nadu ,April 2015.
12. Sourav Roy, Puspendu Bikash Saha and Manik Bhowmik, "Rectangular Patch Antenna for Wireless LAN Frequency With Periodic DGS Structure" ICCSP 2015, Tamilnadu, 2th-4th April, 2015.
13. Puspendu Bikash Saha, Sourav Roy, and Manik Bhowmik, "Improvement of Parallel Coupled Bandpass Filter Using Coupled Closed Loop Square Resonator Structure", International Conference on Signal Processing and Integrated Networks, ICCSP 2015, Tamilnadu, 2th-4th April, 2015.
14. Sourav Roy, Puspendu Bikash Saha and Manik Bhowmik, "Compact Microstrip Parallel Coupled Bandpass Filter With A Centre Frequency of 2.4 GHz Suitable For Bluetooth And GPS Communications", ICCSP 2015, Tamilnadu, 2th-4th April, 2015.
15. Partha Kumar Deb, Tamasi Moyra, Priyansha Bhowmik, "Return loss and bandwidth enhancement of microstrip antenna using Defected Ground Structure (DGS)", SPIN2015, Amity University, Noida, 27th April, 2015.
16. Partha Kumar Deb, Tamasi Moyra, Priyansha Bhowmik, "Dual band multilayer E-shape microstrip patch antenna for C-band and X-band", SPIN2015, Amity University, Noida, 27th April, 2015.
17. Apurba Chakraborty, Partha Mukhopadhyay, Saptarsi Ghosh, Ankush Bag, Mihir K. Mahata, Rahul Kumar, Subhashis Das, Palash Das, Sanjay K Jana and Dhruves Biswas, "Eradication of Trapping Effect in AlGaIn/InGaIn/GaN heterostructure by Fermi level Elevation", IWPSD 2015, IISC Bengaluru, 7th -9th Dec-2015.
18. Apurba Chakraborty, Saptarsi Ghosh, Aprtha Mukhopadhyay, Syed Mukullika Dinara, Ankush Bag, Mihir Mahata and Dhruves Biswas, "Trapping characteristics comparison between AlGaIn/InGaIn/GaN and AlGaIn/GaN heterostructure by conductance measurement" MRS FALL, Boston, 29th November– 4th December, 2015.
19. Brij Bhushan Chowdhury ; Ratul De ; Manik Bhowmik, "A novel design for circular patch fractal antenna for multiband applications", 3rd International Conference on Signal Processing and Integrated Network, Amity University, Noida, 449 – 453, 11th -12th Feb. 2016.
20. Manik Bhowmik ; Brij Bhushan Chowdhury ; Ratul De, "Circular Patch antenna with modified Swastika shaped slot for multiband applications", 3rd International Conference on Signal Processing and Integrated Network, Amity University, Noida, 525-528, 11th - 12th Feb. 2016.
21. Ratul De, Brij Bhushan Chowdhury , Manik Bhowmik "A novel design of dual frequency SIW slot antenna" 3rd International Conference on Signal Processing and Integrated Network, Amity University, Noida, 445 – 448, 11th -12th Feb. 2016.

Patent Filed:

| <i>Inventor Name</i> | <i>Year</i> | <i>Title</i> | <i>Published source</i> | <i>Patent version no.</i> | <i>Patent application no.</i> |
|-----------------------------|--------------------|-------------------------------|--------------------------------|----------------------------------|--------------------------------------|
| Mitra Barun Sarkar | 20-11-2015 | A touch pad based device with | Filed | Filed | 1185/KOL/2015 dated 20-11- |

| | | | | | |
|--|--|---|--|--|------|
| | | integratedelectronics tool provide in authentication for user | | | 2015 |
|--|--|---|--|--|------|

Distinguished Visitors to the Departments:

| <i>Sl. No.</i> | <i>Name of the Visitors and Designation</i> | <i>Date of Visit</i> | <i>Purpose of Visit</i> |
|-----------------------|--|---|--------------------------------|
| 1 | Dr. Anup Dandapat, Asso. Prof, NIT, Meghalaya | 12 th - 13 th May, 2015 | M.Tech Thesis Evaluation |
| 2 | Prof. U. Sripathi, Professor, NIT Karnataka, Surathkal | 19 th -20 th November, 2015 | Syllabus Revision |
| 3 | Prof. S. R. Bhadra Chaudhuri, Professor, IEST, Shibpur | 19 th -20 th November, 2015 | Syllabus Revision |
| 4 | Prof. Madhu Mutyam, IIT Madras | 21 st January, 2016 | One day Workshop |
| 5 | Sr. Scientist Pankaj B Agarwal, CEERI Pilani | 21 st January, 2016 | One day Workshop |
| 6 | Prof. Saurabh Lodha, IIT Bombay | 14 th -16 th February, 2016 | INUP, 2 day's Workshop |
| 7. | Dr. Udayan Ganguly, IIT Bombay | 14 th -16 th February, 2016 | INUP, 2 day's Workshop |
| 8 | Dr. Swaroop Ganguly, IIT Bombay | 14 th -16 th February, 2016 | INUP, 2 day's Workshop |
| 9 | Dr. Sushobhan Avasthi, IIT Bombay | 14 th -16 th February, 2016 | INUP, 2 day's Workshop |
| 10 | Prof. Anil Kottanthriyal, IIT Bombay | 14 th -16 th February, 2016 | INUP, 2 day's Workshop |
| 11 | Prof. Satyabrata Jit, Professor, IIT BHU | 30 th March, 2016 | PhD. Thesis Evaluation |
| 12 | Prof. Subir Kumar Sarkar, Professor, Jadavpur University | 30 th March, 2016 | PhD. Thesis Evaluation |

12.0 ELECTRONICS & INSTRUMENTATION ENGINEERING DEPARTMENT

12.1 Introduction :

The Department of Electronics and Instrumentation Engineering (EIE) has been in existence since July 2009 with its first batch graduating in May 2013. The undergraduate course provides a dynamic foundation to the students in EIE. The main objective of the department is to convey quality education and to motivate the students towards practical applications of the field. The department is supported by various well-equipped laboratories to meet the requirement of the undergraduate students. The Department has qualified and experienced faculty and staff members to develop highly competing young engineers, scientist and management professionals of international standard. Best endeavour is always being put forward for the recruitment of qualified and competent faculty members from all over the country to achieve all round growth at par with any other famous Institute. Special attention is being taken to build the character of students with social commitment and turn them into responsible citizens.

12.2 Academic Programme:

Students on Roll:

| Programme | 1st/2nd semester | 3rd/4th semester | 5th/6th semester | 7th/8th semester | Others | Total |
|------------------|---|---|---|---|---------------|--------------|
| B. Tech. | 43 | 39 | 46 | 49 | 0 | 177 |
| M. Tech | NA | NA | NA | NA | NA | 0 |
| Ph. D. | NA | NA | NA | NA | NA | 0 |
| Total | | | | | | 177 |

12.3 Lab Facilities :

Electronics and Instrumentation Engineering Department is now becoming well-equipped with the laboratories. But a few number of common laboratories of Electrical Engineering and Electronics and Communication Engineering Departments are jointly being used for the routine laboratory classes of the students. The Industry oriented two new laboratories 'DCS & PCS' and 'Hydraulic & Pneumatic' control system are already set up in our department. The name of the Laboratories are Network Analysis and Synthesis, Electrical Measurement and Measuring Instruments, Analog Electronic Circuits, Programming in C, Instrumentation Devices –I, Digital Electronics, Numerical Methods and Analysis, Industrial Instrumentation, Electronic Instrumentation and Measurement, Linear Control Systems, Process Control –I, Power Electronics, Microprocessor and microcontroller, Process Control-II, Digital Signal Processing, Digital Image Processing Lab (Elective-I), Telemetry & Remote Control and Industrial Automation & Control Lab (Elective-II).



Some photos of laboratory equipments.

12.4 Research and Consultancy :

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|--|------------------------------|---|
| 1. | Mr. Shubhasish Kar, Scientist 'D', Electronic Test and Development Centre, Ministry of Communication, Department of Information Technology, Govt of India | 17 th April, 2015 | To conduct Grand Viva of 8 th Semester B.Tech |

13.0 HUMANITIES & SOCIAL SCIENCES DEPARTMENT

13.1 Introduction :

The ultimate objective of any education system is to produce human capital who will be responsible citizen, besides excelling in his/her own domain. To produce a complete technocrat, only technical knowledge seldom serves the purpose. He/ she has to be socially aware with a compassionate human faculty. The Department of Humanities & Social Sciences was established with an objective of making an engineer enlightened with adequate knowledge of his/ her surroundings. The approach of the Department has always been interdisciplinary.

13.2 Academic Programme :

The Department of Humanities and Social Sciences offers undergraduate courses in English, Costing, Economics and Management for the B. Tech. students and English for BS-MS as well as BT-MT. The department also offers postgraduate courses in Economics to the M.Tech. students, English and Management to the MCA student and English and Economics to the MBA students. Besides that the Department is also running Ph.D. programme.

13.3 Lab Facilities :

The Department of Humanities and Social Sciences has a language communication skills and multimedia lab which is developed in collaboration with CACM, IIT Kharagpur. The lab which functions on a carefully designed software ISILS WIRELESS interconnects all the students in the classroom into an integrated and active mode of learning facilitating spontaneous interaction among the students themselves along with the instructor. The lab concerns to bypass the traditional lecture-based mode of learning and aims at rendering an interactive classroom atmosphere with technological support to help students come to terms with the anxiety of second language learning and channelize their latent linguistic competence into developing communication skills.

13.4 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No. | Name of Faculty | Title | Period |
|---------|------------------------------------|--|---|
| 1 | Dr. Debasis Neogi (Coordinator) | Two Days Workshop on Sustainable Development in Rural Areas | 04 th -05 th March, 2016 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Workshop: | | | | |
|--------------------|---|--|--|--|
| Sl. No. | Name of Faculty | Title of the Workshop | | Period |
| 1. | Dr. Gyanabati Khuraijam (As Resource Person) | Two Days Workshop on “Sustainable Development in Rural Areas” | | 04 th -05 th March, 2016 |
| 2 | Dr. Anuradha Nongmaithem | Two Days Workshop on “Sustainable Development in Rural Areas” | | 04 th -05 th March, 2016 |
| 3 | Dr. Kaju Nath | Two Days Workshop on “Sustainable Development in Rural Areas” | | 04 th -05 th March, 2016 |
| 4 | Mr. Bidyasagar Debnath | Two Days Workshop on “Sustainable Development in Rural Areas” | | 04 th -05 th March, 2016 |
| 5 | Mr. Nabendu Debnath | Two Days Workshop on “Sustainable Development in Rural Areas | | 04 th -05 th March, 2016 |
| 6 | Ms. Emily Sharma | Two Days Workshop on “Sustainable Development in Rural Areas” | | 04 th -05 th March, 2016 |
| Conference: | | | | |
| Sl. No. | Name of Faculty | Title of the Paper | Title of the Seminar/ Conferences | Period |
| 1 | Dr. Debasis Neogi | Exploring the Linkage between Infrastructural Growth and Entrepreneurship Development: A Study with Special Reference to Rubber Industry | UGC Sponsored National Seminar on “Infrastructure Development in India with special reference to the North Eastern States” | 09 th -10 th October, 2015 |
| 2 | Dr. Debasis Neogi | Social Sector Expenditure in Tripura: A Study on Status and Pattern of Government Expenditure in Education and Health Sector | UGC Sponsored National Seminar on “Infrastructure Development in India with special reference to the North Eastern States” | 09 th -10 th October, 2015 |
| 3 | Dr. Kaju Nath | Social Sector Expenditure in Tripura: A Study on Status and Pattern of Government Expenditure in Education and Health Sector | UGC Sponsored National Seminar on “Infrastructure Development in India with special reference to the North Eastern States” | 09 th -10 th October, 2015 |

| | | | | |
|---|---------------------|--|--|--|
| 4 | Mr. Nabendu Debnath | Social Sector Expenditure in Tripura: A Study on Status and Pattern of Government Expenditure in Education and Health Sector | UGC Sponsored National Seminar on “Infrastructure Development in India with special reference to the North Eastern States” | 09 th -10 th October, 2015 |
|---|---------------------|--|--|--|

13.5 Research and Consultancy :

Research Publications:

| | |
|--|------|
| Total No. of papers published in Refereed International Journals | : 09 |
| Total No. of papers presented in National Conference | : 04 |
| Total No. of Books published | : 01 |
| Total No. of Chapters in Edited Book published | : 01 |

In Refereed International Journals:

- (1) Debasis Neogi, ‘Poverty and earning compulsions for the family have pushed children out of schools: a study in dropouts in basic education level in north-east India’, International Journal of Social Economics, 42 (10), 946-958, (2015).
- (2) Debasis Neogi, ‘Testing Sigma and Unconditional Beta Convergence of GDP for SAARC Countries: Can Inclusion of China Further Consolidate the Convergence?’ Global Business Review, 16 (5), 845-855, (October, 2015).
- (3) G. Khuraijam, and Y. O. Singh, ‘Amitav Ghosh’s A Circle of Reason: A Clash between Superstition and Scientific Reason’, Khazar Journal of Humanities and Social Sciences, 18, 5-17, (September, 2015).
- (4) Anuradha Nongmaithem, ‘An Exclusive Interview with Dr. S. Thaninleima’, Journal of Humanities and Social Science, 21 (3), 28-30, (March, 2015).
- (5) Anuradha Nongmaithem, ‘Re-Reading of Shange’s for colored girls who have considered suicide when the rainbow is enuf’, Research Chronicler Journal, 3, 35-41, (2015).
- (6) Anuradha Nongmaithem, ‘Betsey Brown: A Reading’, International Journal of Research in Engineering, IT and Social Sciences, 5, 1-8, (2015).
- (7) Anuradha Nongmaithem, ‘Soft Skills and Its Importance in Students’ Lives’, International Journal of Multidisciplinary Research Review, 1, 186-188, (2015).
- (8) Anuradha Nongmaithem; ‘Feminism: An unfinished project in Manipur’, International Journal of English Language, Literature and Humanities, 10 (3), 278-285, (December, 2015).
- (9) Anuradha Nongmaithem, ‘Soft Skill: A Challenge’, International Journal of English Language, Literature and Translation Studies, 3, 127-129, (2016).

In Proceedings of National Conference:

| <i>Name of the Conference</i> | <i>Name of the Paper</i> | <i>Place of the Conference</i> | <i>Name of the participants</i> | <i>Date/ Duration</i> |
|--|--|--|--|--|
| UGC Sponsored National Seminar on “Infrastructure Development in India with special reference to the North Eastern States” | Exploring the Linkage between Infrastructural Growth and Entrepreneurship Development: A Study with Special Reference to Rubber Industry | Womens College, Agartala, Tripura, India | Mr. Sankha Pallab Chakrabarty, Dr. Debasis Neogi | 09 th -10 th October, 2015 |

Books Published:

| <i>Name of the Authors</i> | <i>Title of the Book</i> | <i>Name of the Publisher</i> | <i>Year of Publication</i> |
|-----------------------------------|---|--|-----------------------------------|
| Kaju Nath | Economics of Fisheries in North East India: Opportunities and Challenges (ISBN 9351251500/ 9789351251507) | Concept Publishing Company (P) Ltd. New Delhi- 110 059 | 2016 |

Chapters in Edited Book:

| <i>Name of the Authors published</i> | <i>Title of the paper</i> | <i>Title of the Book</i> | <i>Date of publication of the Book</i> | <i>Page No.</i> |
|---|---|--|---|------------------------|
| Gyanabati Khurajam and Yumnam Oken Singh | Adaptation: A Journey from Words to Visuals | R. K. Narayan’s <i>The Guide</i> : Film Adaptation and Re-creation of a New Text. Ed. Srikrishna Rai and Anugamini Rai. ISBN(13):978-1-4438-7466-3 | 2015 | Pp 81-91 |

Distinguished Visitors to the Department:

| <i>Sl. No.</i> | <i>Name of the Visitors and Designation</i> | <i>Date of Visit</i> | <i>Purpose of Visit</i> |
|-----------------------|---|--|--|
| 01 | Dr. Amit Kar Senior Scientist Indian Council of Agricultural Research New Delhi. | 12 th – 14 th July, 2015 | External Expert for PhD. Viva Voce Examination |

14.0 MECHANICAL ENGINEERING DEPARTMENT

14.1 Introduction

The Department of Mechanical Engineering at NIT Agartala was formed in 1965, when the institute started as a State Engineering College by the name of Tripura Engineering College. Currently, the department has more than 363 students in the B.Tech. programme, 87 students in the M. Tech. programme and 30 Scholars in the Ph.D. programme, which are supported by 31 faculty members and 24 staff.

Since its inception, the department has always been recognized for excellence in academics. Over the years, the department has strengthened its research activities, introduced new M.Tech academic programme and contributed to the society by taking part in consultancy work. The focus of the department has been in developing the state-of-art computational and experimental facilities for teaching and research. The department comprises of about 16 laboratories equipped with sophisticated instruments.

The major research areas include advanced/ non-traditional machining processes, aerodynamics, bearing design, CAD/CAM, combustion, composites, computational contact impact analysis, computational fluid mechanics, computational mechanics, convection, refrigeration systems, energy conservation fatigue, wear and failure analysis, finite element methods, fracture mechanics, heat transfer, internal combustion engines, materials processing and characterization, metal casting, metal forming, multi-phase flows, nano-fluids, propulsion, renewable energy, robotics, rotordynamics, soft computing in design and manufacturing, welding, tribology, turbomachines, turbulence, vibration etc.

14.1.1 Motivation

“To produce high quality Mechanical Engineers with techno-managerial ability to contribute in Industry and Research areas maintaining professional ethics and values.”

14.1.2 Aim

- To create knowledge through research in the science and technology of mechanical engineering; to share knowledge through educational programmes and the dissemination of our new discoveries; and to develop the professional potential of faculty, staff, and students.
- To offer an inviting, nurturing, and challenging environment, this is responsive to the intellectual, social, and cultural needs of a diverse learning community.
- To have research portfolio encompassing traditional areas of mechanical engineering, as well as emerging and interdisciplinary ones.
- To foster creativity and critical thinking skills through research and design experiences.

14.2 Academic Programme

| Program | 1 st Sem | 3 rd Sem | 5 th em | 7 th Sem | Total |
|-------------|---------------------|---------------------|--------------------|---------------------|-------|
| B.Tech | 88 | 96 | 91 | 88 | 363 |
| M. Tech | 39 | 48 | --- | --- | 87 |
| Ph. D. | | | | | 30 |
| Grand Total | | | | | 480 |

14.3 Lab Facilities:

The Mechanical Engineering Department has Vibration, Mechanical Measurement & Metrology, Refrigeration & Air conditioning, Computational Lab-1 & 2, Tribology, Thermal Power, Wind Tunnel, IC Engine, Strength Of Material, Fluid Mechanics, Heat Transfer, CNC Machine and FMS Laboratories.



14.4 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No. | Co-ordinators | Title | Period |
|--------------------|--|---|--|
| Workshops | | | |
| 1. | Dr. Swapan Bhaumik & Dr. Debasish Neogi | Two days National Workshop on “Sustainable Development in Rural Areas.” | 4 th -5 th March, 2016. |
| 2 | Dr. Ajay Biswas and Dr. Subrata Kr Ghosh | Two days National Workshop on “3D Printing and Laser Application in Manufacturing Processes.” | 11 th -12 th March, 2016 |
| 3 | Prof. S.C. Saha and Dr. Swarup Pal | Two days National Workshop on “Product Design and Development.” | 11 th -12 th March, 2016 |
| 4 | Dr. Swapan Bhaumik, Mr. Abhik Majumder and Mr. Sudev Das | Two days National Workshop on “Advances in Two-Phase Flow and Heat Transfer.” | 25 th -26 th March, 2016 |
| Seminar: | | | |
| 1. | Dr. Swapan Bhaumik | One day Seminar on “Good Governance in Educational Institutions”. Keynote Speaker-Professor Ashok Mishra | 9 th April, 2015 |
| 2. | Dr. Swapan Bhaumik | Lecture on “Nature's Niche in Applied Problem Solving.” by Prof. (Dr.) Kalyanmoy Deb, Koenig Endowed Chair Professor, Michigan State University, USA | 24 th July, 2015 |
| 3 | Dr. Swapan Bhaumik | One day Session on Interaction among Faculty Members, Alumni and students of Mech. Engg. Deptt. | 13 th August, 2015 |
| 4. | Dr. Swapan Bhaumik | One day Seminar on “Entrepreneurship And Industrial Growth”. Chief Guest: Md. Alamgir Kabir Chairman, GPH Ispat Ltd. & Additional Managing Director, M.I. Cement Factory Ltd. (Crown Cement) Dhaka, Bangladesh | 12 th November, 2015 |
| 5. | Mr. Dipak Chandra Das | One day Seminar on “Basic Psychrometry & Fan and Blower.” | 10 th March, 2016 |
| 6. | Mr. Dipak Chandra Das | Installation/inauguration of “ISHRAE (Indian Society of Heating, Refrigerating and Air Conditioning Engineers) Student Chapter” | 10 th March, 2016 |
| Conference: | | | |
| 1. | Dr. Swapan Bhaumik along with Production | Two days National Convention on “Sustainable Manufacturing”. | 18 th -19 th July, 2015 |

| | | | |
|----|--|---|--|
| | Engg. Deptt., NITA & Tripura State Centre of IEI | Chief Guest –Professor Goutam Biswas, Director, IIT Guwahati | |
| 2. | Dr. Swapan Bhaumik and Dr. Subrata Kumar Ghosh | Two days National Mechanical Engineering Conclave: “Boosting for Academic, Research, Innovation and Socio-economic development in the region of all NITs of India”. Guests – Professor Rajat Gupta, Director, NIT Srinagar & Dr. D N Reddy, Former Chairman, Recruitment, DRDO, New Delhi, | 9 th - 10 th October, 2015 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of Faculty | Title | Period |
|----------------------------|--|---|---|
| Workshop: | | | |
| 1. | Mr. Krisanu Gupta, Mr. Prasenjit Dey, Dr. Joydeep Roy, Dr. Abhishek Paul. | “Sustainable development in rural areas.” | 04 th -05 th March, 2016 |
| 2. | Mr. Arindam Sinha Miss Moutoshi Singha Roy. Miss Mitali Debnath. Dr. Swapan Bhaumik, Dr. G.R.K Shastri, Dr. Madhujit Deb, Dr. Joydeep Roy, Mr. Krisanu Gupta, Mr. Prasenjit Dey, | “3D Printing and Laser Application in Manufacturing Processes.” | 11 th -12 th March, 2016 |
| 3. | Dr. Joydeep Roy, Dr. Swapan Bhaumik, Dr. G.R.K Shastri, Dr. Madhujit Deb, Mr. Krisanu Gupta, Mr. Prasenjit Dey, | “Product Design and Development.” | 11 th -12 th March, 2016 |
| 4. | Mr. Dipak Chandra Das | National Workshop on “Advances in Two-Phase Flow and Heat Transfer” | 25 th -26 th March, 2016 |
| Short-Term Courses: | | | |
| 1. | Mr. Dipak Chandra Das | Two-week ISTE STTP on “Thermodynamics (BMWME209X)” conducted by IIT Bombay. | 16 th July 2015 – 21 st December, 2015) |

| | | | |
|----|--|---|---|
| 2. | Mr.Durbadal Debroy, Dr. Abhishek Paul | Two - week ISTE STTP on "Environmental Studies" | 2 nd June 2015-12 th June 2015 |
| 3. | Dr. G. R. K. Sastry | Ninth Faculty Development Program under TEQIP-II For Achieving Academic Excellence, IIM Raipur | 07 th - 12 th September, 2015 |

Visits Abroad by Faculty:

| Sl. No. | Name of Faculty | Country Visited | Date | Purpose of Visit |
|---------|-----------------------|------------------------|--|--|
| 1. | Dr. Swapan Bhaumik | Chittagong, Bangladesh | 02 nd -4 th December, 2015 | Participated in Rotary Day Celebration as the Secretary of Rotary Club of Agartala City |
| 2. | Dr. Ajoy Kumar Das | Venice, Italy | 22 nd -23 rd June, 2015 | To present research paper orally in The International Conference on Applied Simulation Modeling and Analysis |
| 3. | Dr. John Deb Barma | Venice, Italy | 22 nd -23 rd June, 2015 | To present research paper orally in The ICMSE 2015: 17th International Conference on Manufacturing Science and Engineering |
| 4. | Dr. Barnik Saha Roy | Venice, Italy | 22 nd -23 rd June, 2015 | To present research paper orally in The 18th International Conference on Fluids and Thermal Systems Engineering |
| 5. | Dr.Prasun Chakraborti | Bangladesh | 01 st -05 th August, 2015 | Proposed MOU with BUET Bangladesh |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level | Year |
|----------------------|-----------------------|--------------|------|
| ISTE/ CSI and others | | | |
| 1 | Dr.Swapan Bhaumik | Member, ASME | 2015 |
| 2 | Dr. Ravi Kiran Sastry | Member, ASME | 2015 |

14.5 Research and Consultancy :**Sponsored Research Projects:**

| Sl. No. | Title | Period (Years) | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|--|----------------|-------------------|-------------------|--------------------------------------|
| 1. | Parametric Optimization and Heat Transfer Study During Submerged Arc Welding | 3 | AICTE , NEW DELHI | 10 | Dr. Ajay Biswas & Dr. Swapan Bhaumik |
| 2. | Modrob Project Titled | 3 | AICTE , | 12 | Dr. Ajay Biswas |

| | | | | | |
|-----|---|---|---------------|-------|---|
| | “Modernization of Fitting Shop, Carpentry And Machine Shop” | | DELHI | | |
| 3. | Feasibility Study Of Nano Particle Based Two Phase Air Water Heat Exchanger | 3 | AICTE | 12.8 | Mr. Abhik Majumder |
| 4. | Study of Heat Transfer Microstructure in Friction stir welding | 3 | AICTE | 8 | Dr. S.C.Saha & Dr. JohnDeb Barma |
| 5. | Integrated Modeling and Experimental verification of Friction stir welding of 6 xxx series of aluminum alloy with dissimilar metals: Process, Microstructure & properties | 3 | AICTE | 17.65 | Dr. S.C. Saha & Mr. Barnik Saha Roy |
| 6. | Tribological study of Bio Materials for Human Joints | 3 | RPS,AICTE | 18 | Dr. Prasun Chakraborti |
| 7. | Study of Tribological Properties of Cylinder liner ring combination with alternative fuel & Diesel. | 3 | RPS,AICTE | 18 | Dr. Prasun Chakraborti & Mr. Pankaj Kumar Das |
| 8. | Modernization of Heat Transfer Laboratory. | 3 | AICTE | 12 | Dr. Swapan Bhaumik |
| 9. | Experimental & Computational Study of Fluid Flow through Buffles | 3 | AICTE | 13 | Dr. R.S. Panua |
| 10. | Studies on the Drag between the Slipper and the Swashplate in an Axial Piston Pump | 3 | RPS, AICTE | 9 | Dr. Prasun Chakraborti & Mr. Kishan Chaudhury |
| 11. | Development of an artificial intelligence model to simulate the performance and emission characteristics of a diesel engine operating in dual fuel mode with biodiesel and CNG under various EGR strategies | 3 | AICTE | 19.7 | Dr. Rahul Banerjee |
| 12. | Modernization of Tribology Lab under Mechanical Engg. Deptt. | 3 | AICTE | 15 | Dr. Prasun Chakraborti |
| 13. | FIST Project | 5 | DST,NEW DELHI | 224 | Dr. Swapan Bhaumik(HoD) |
| 14. | Study And Investigation Of The Effect Of Greenhouse In Drying Perforated Bricks | 1 | IEL,KOLKATA | 0.30 | Dr. Swapan Bhaumik-Student Project |
| 15. | Study And Experimental Investigation Of Utilization Of | 1 | IEL,KOLKATA | 0.20 | Dr. Swapan Bhaumik- |

| | | | | | |
|--|---|--|--|--|-----------------|
| | Wastage Of Bamboo Based Industry At Bamboo Park, Ramchandranagar, Agartala. | | | | Student Project |
|--|---|--|--|--|-----------------|

Industrial Consultancy:

| Sl. No. | Name of the Faculty | Title | Industry | Amount (Rs) |
|---------|--|--|---|-------------|
| 1. | Majority of Faculties and supporting staff of the Department | Third party Inspection of 20,000 Nos of Girls Bi-Cycle F.17(50-01)/SE/Engg/2015/597-98 | Education Department, Government of Tripura | 3,14,875.00 |
| 2. | Prof. Pankaj Kr. Das, Dr. Swapan Bhaumik & other few faculty members | Testing of TMT Bar | PWD, UDD, GOT | 3,25,000.00 |
| 3. | Dr. John Deb Barma | Capacity and Process Assessment after expansion/modernization of Project | Greenply Industries Ltd., Tizit, Nagaland | 85,000.00 |

Research Publications:

| | |
|--|------|
| Total No. of papers published in Refereed International Journals | : 34 |
| Total No. of papers presented in National Conference | : 01 |
| Total No. of papers presented in International Conferences | : 07 |

In Refereed International Journals:

- (1) Prasenjit Dey, Ajoy Kumar Das, "Numerical analysis and prediction of unsteady forced convection over a sharp and rounded edged square cylinder", 'Journal of Applied Fluid Mechanics'; Vol. 9 (3), pp. 1189-1199, 15th April, 2015.
- (2) Abhijit Sarkar, Aparesh Dutta, Prasenjit Dey, R.N. Rai, S.C. Saha, "A Numerical Approach For Modelling Thermal Profiles And Effects Of Process Parameters On It In Submerged Arc Welding Of AISI 1518 Grade Steel", 'Journal of Thermal Engineering'; Vol. 1, pp. 505-516, May, 2015.
- (3) Prasenjit Dey, Ajoy Kumar Das; "Numerical analysis of drag and lift reduction of square cylinder", 'Engineering Science and Technology, an International Journal'; Vol. 18(4), pp. 758-768, 11th June 2015.
- (4) Prasenjit Dey, Abhijit Sarkar, Ajoy Kumar Das, "Prediction of Unsteady Mixed Convection Over Circular Cylinder in the Presence of Nanofluid- A Comparative Study of ANN and GEP", 'Journal of Naval Architecture and Marine Engineering'; Vol. 12 (1), pp. 21-35, June, 2015.
- (5) Dr. Prasun Chakraborti, Nabarun Biswas, P Dhar, "Transient CFD Analysis Of 3-Lobe Bearings at 60000 and considering various roughness parameters rpm for A Gas Turbine", 'Procedia Engineering'; Vol. 105, pp. 225-231, 11th June 2015.

- (6) Dipak Chandra Das, Koushik Ghosh and Dipankar Sanyal; “A Scale Analysis Model for Film Boiling Heat Transfer on a Vertical Flat Plate with Wide Applicability”, ‘International Journal of Heat and Mass Transfer’; Vol. 90, pp. 40–48, 15 June, 2015.
- (7) Bikash Choudhuri, Ruma Sen, S.K. Ghosh, S.C. Saha, “Modelling and multi-response optimization of wire electric discharge machining parameters using response surface methodology and grey–fuzzy algorithm”, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, vol. 0, 8 Aug 2016.
- (8) Abhijit Sarkar, R.N.Rai, S.C.Saha, “A study of parametric effect of thermal profile of submerged arc welding process”, ‘Journal of Naval Architecture and Marine Engineering’; Vol. 12, pp. 43-56, June, 2015.
- (9) Barnik Saha Roy, Tanmoy Medhi, S.C.Saha, “Material Flow Modeling in Friction Stir Welding of AA6061-T6 Alloy and Study of the Effect of Process Parameters”, ‘International Journal of Environmental, Chemical, Ecological, Geological and Geophysical Engineering’; Vol. 6, pp. 636-644, June, 2015.
- (10) Madhujit Deb, G.R.K. Sastry, P.K. Bose, Rahul Banerjee, “An experimental study on combustion, performance and emission analysis of a single cylinder, 4-stroke DI-diesel engine using hydrogen in dual fuel mode of operation”, ‘International Journal of Hydrogen Energy’; Vol. 34 (27), pp. 8586–8598, July 2015.
- (11) Manoj Kr. Triveni, Rajsekhar Panua, Dipak Sen, “Natural Convection in a Partially Heated Triangular Cavity with Different Configurations of Cold Walls”, ‘Arabian journal for science and engineering’; Vol. 40 (11), pp. 185-193, July, 2015.
- (12) Sumit Roy, Ajoy Kumar Das, Vivek Singh Bhadouria, Santi Ranjan Mallik, Rahul Banerjee, Probir Kumar Bose; “Adaptive-neuro fuzzy inference system (ANFIS) based prediction of performance and emission parameters of a CRDI assisted diesel engine under CNG dual-fuel operation”, ‘Journal of Natural Gas Science and Engineering’; Vol. 27 (1), pp. 274–283, August 2015.
- (13) Madhujit Deb, Abhishek Paul, Durbadal Debroy, G. R. K. Sastry, Raj Sekhar Panua, P. K. Bose, Rahul Banerjee; “An experimental investigation of performance-emission trade off characteristics of a CI engine using hydrogen as dual fuel”, ‘Energy’; Vol. 88, pp. 974-974, August 2015.
- (14) Rahul Banerjee, Sumit Roy, Probir Kumar Bose; “Hydrogen-EGR synergy as a promising pathway to meet the PM–NO_x–BSFC trade-off contingencies of the diesel engine: A comprehensive review”, ‘International Journal of Hydrogen Energy’; Vol. 40(37), pp. 12824–12847, August 2015.
- (15) Udayan Majumder, Prasun Chakraborti, Rahul Banerjee, Bishop Debbarma; “Experimental study on the role of ethanol on performance emission trade-off and tribological characteristics of a CI engine”, ‘Renewable Energy’; Vol. 86, pp. 972-984, September 2015.
- (16) G.R.K. Sastry, J. K. Panda, P. Dutta, “A Study with Diesel Additives and Fish Methyl Ester on Diesel Engine at Full Load Condition”, ‘Applied Mechanics and Materials’; Vol. 789-790, pp. 179-183, September 2015.
- (17) P. Dutta, S.C. Panja, G.R.K. Sastry, “An Investigation of Machining Time and Surface Roughness in Wire-EDM for Inconel 800”, ‘Applied Mechanics and Materials’; Vol. 789, pp. 20-24, September 2015.
- (18) Amitav Chakraborty, Sumit Roy, Rahul Banerjee, “An experimental based ANN approach in mapping performance-emission characteristics of a diesel engine operating in dual-fuel

- mode with LPG”, ‘Journal of Natural Gas Science and Engineering’; 28, pp. 15-30, November 2015.
- (19) Revati Rani, Niranjana Kumar, Alexey T Kozakov, Alexandrovich K Googlev, KamatchiJothiramalingamSankaran, Pankaj Kr. Das, Siaram Dash, Ashok Kumar Tyagi, I-Nan Lin; “Superlubrication properties of ultra-nanocrystalline diamond film sliding against a zirconia ball”, Vol. 5 (122), pp. 100663-100673, November 2015.
- (20) Nabanita Banik, Vidyut Dey, G R K Sastry; “A review on the effect of humidity & its prevention upon bamboo-fiber green composites”; ‘South Asian Journal of Engineering & Technology (SAJET)’; Vol. 2(1), pp. 24-30, 21st November 2015.
- (21) Biswajit Das, S. Roy, R. N. Rai, S. C. Saha, “Study on Machinability of in-situ Al-4.5%Cu-TiC Metal Matrix Composite–Surface Finish, Cutting Force Prediction using ANN”, ‘CIRP Journal of Manufacturing Science and Technology’; Vol. 12, pp. 67-78, November, 2015.
- (22) Prasenjit Dey, Ajoy Kumar Das; “A utilization of GEP (gene expression programming) metamodel and PSO (particle swarm optimization) tool to predict and optimize the forced convection around a cylinder”, ‘Energy’; Vol. 95 (2016), pp. 447-458, 6th Dec, 2015.
- (23) Tanmoy Medhi, Barnik Saha Roy, Subodh Debbarma, S.C. Saha; “Thermal Modeling and the effect of process parameters in friction stir welding”, ‘Materials Today: Proceedings’; Vol. 2, pp. 3178-3187, September, 2015.
- (24) Rahul Banerjee, Bishop Debbarma, Sumit Roy, Prasun Chakraborti, Probir Kumar Bose, “An experimental investigation on the potential of hydrogen–biohol synergy in the performance-emission trade-off paradigm of a diesel engine”; ‘International Journal of Hydrogen Energy’; Vol. 41(5), pp. 3712–3739, January 2016.
- (25) Arindam Majumder, Abhishek Majumder, “Standard Deviation Method Based PSO:: An Instigated Approach to Optimize Multi-Objective Manufacturing Process Parameters”, ‘International Journal of Swarm Intelligence Research (IJSIR)’; Vol. 7 (2), pp. 15-35, January, 2016.
- (26) M. Triveni, R. Panua and D. Sen; “Effects of Variant Positions of Cold Walls on Natural Convection in a Triangular Cavity”; ‘Journal of Applied Fluid Mechanics’; Vol. 9 (1), pp. 185-193, January, 2016.
- (27) Prasenjit Dey, Ajoy Kumar Das; “Heat Transfer Enhancement around a Cylinder – A CFD Study of Effect of Corner Radius and Prandtl Number”; ‘Int. J. Chem. React. Eng.’, Vol. 14 (2), pp. 587–597, 24th February, 2016.
- (28) S. Roy, A K Das, R Banerjee; “Grey-Fuzzy Taguchi approach for multi-objective optimization of performance and emission parameters of a single cylinder CRDI engine coupled with EGR”, ‘International Journal of Automotive Technology’; Vol. 17(1), pp. 1-12, February 2016.
- (29) Gupta P, Roy J, Rai RN, Rao AP, Saha SC; “Effect of B₂O₃ containing fluxes on the microstructure and mechanical properties in submerged arc welded mild steel plates”; ‘Materials Science and Engineering’; Vol. 114 (1), p. 012102, February 2016.
- (30) Arindam Majumder, Dipak Laha; “A New Cuckoo Search Algorithm for 2-Machine Robotic Cell Scheduling Problem with Sequence-Dependent Setup Times”; ‘Swarm and Evolutionary Computation’; Vol. 28, pp. 131–143, 11th March, 2016.
- (31) Divyprakash C Pal, Abhik Majumder; “Numerical study of fin-tube type heat exchanger with delta winglets”; ‘Frontiers in Heat and Mass Transfer’; Vol. 7 (1), pp. 1-9, March 2016.

- (32) Partha Pratim Saikia, Abhik Majumder; “Performance Study Continuous Helical Baffle Shell and Tube Heat Exchanger With Central Low Pressure Regions”; ‘Journal of Thermal Science and Engineering Applications’; Vol. 8 (3), p. 031002, March 2016.
- (33) Das, Sudev; Durbba, S.K; and Bhaumik, Swapan; “Experimental study of nucleate pool boiling heat transfer of water on silicon oxide nanoparticle coated copper heating surface”; ‘Applied Thermal Engineering (Elsevier)’; Vol. 96, pp. 555-567, March 2016.
- (34) Das, Sudev; Bhaumik, Swapan; “Experimental study of nucleate pool boiling heat transfer using water on thin film Surface”; ‘Iranian Journal of Science & Technology: Transactions of Mechanical Engineering (Springer)’; Vol. 40(1), pp 21-29, March 2016.

In Proceedings of National Conference:

- (1) Ajay Biswas, Abhijit Bhowmik,” Study of optimal process condition of Submerged Arc Welding at zero degree celsius and thirty degree celsius plate temperature”, The 30th National Convention of Production Engineers (NCPR-2015), 18th-19th, July 2015

In Proceedings of International Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|---|-------------------------------------|---|--|
| International Conference on Applied Simulation Modeling and Analysis | Venice, Italy | Barnik Saha Roy, T Medhi, S C Saha | 22 nd -23 rd June, 2015 2 days |
| 17th International Conference on Manufacturing Science and Engineering | Venice, Italy | Sheetal Kumar Parwar, John Deb Barma, Arindam Majumder | 22 nd -23 rd June, 2015 2 days |
| 18th International Conference on Fluids and Thermal Systems Engineering | Venice, Italy | Ajoy Kumar Das, Prasenjit Dey | 22 nd -23 rd June, 2015 2 days |
| ICME 2015 | BUET, Bangladesh | Prasun Chakraborti, Nabarun Biswas, Ankuran Saha, Srijit Biswas | 18 th – 20 th December 2015 3 days |
| 7th ISEES International Workshop on Sustainable Energy, Environment & Safety with Railway Centric Theme | IIT Kanpur, Kalyanpur Kanpur | Prasun Chakraborti, Bishop Debbarma, Rahul Banerjee. | 21 st - 23 rd December, 2015 3 days |
| 5th International Conference of Materials Processing and Characterization (ICMPC 2016) | GRIET, Hyderabad, India | Arindam Majumder, Dipak Laha | 13 th -12 th March 2016 2 days |
| International Conference on Recent Trends in Engineering and Material Sciences (ICEMS) | Jaipur National University, Jaipur, | Mukul Ray Sandipan Deb and | 17 th -19 th March, 2016 3 days |

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|--|-------------------|---------------|--|
| Title of paper: Experimental investigation of nucleate pool boiling heat transfer of R134a on TiO ₂ coated TF surface | Rajasthan, India, | SwapanBhaumik | |
|--|-------------------|---------------|--|

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|---|---------------------------------------|---|
| 1. | Prof. (Dr.) Anil Sahasrabudhe Chairman, AICTE, New Delhi | 14 th November, 2015 | Visited department in connection with delivering Convocation address |
| 2. | Mr.Tarak Saha Group General Manager ONGC (Mumbai) | 23 rd February, 2016 | To visit Alma matter and have interaction with present students |
| 3. | Prof (Dr.) S. Garimella, Director and Dean, Institute of Management, NirmaUniversity,Ahmedabad, Gujrat | 4 th March, 2016 | To deliver Expert Lectures on Entrepreneurship Development in Rural Areas. |
| 4. | Mr.UtpalBiswas ,Zonal Chair - East The Indian Society of Heating Refrigerating and Air Conditioning Engineers (ISHRAE) | 10 th March, 2016 | To handover the Charter of newly formed ISHRAE Student Chapter at ME Deptt. |
| 5. | Mr.Prabir Kumar Sen HV & AC Consultant Kolkata ISHRAE | 10 th March, 2016 | To deliver Expert Lectures |
| 6. | Dr. G. Saravana Kumar, Associate Professor, Department of Engineering Design, Indian Institute of Technology Madras. | 11 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 7. | Mr.Pradip Kumar Biswas General Manager (RH)-TBG (East) IDBI Bank, Kolkata | 11 th March, 2016 | To visit Alma matter and have interaction with present students |
| 8. | Dr.Pulak M. Pandey, Associate Professor, Department of Mechanical Engineering, I.I.T. Delhi | 11 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 9. | Dr. N R Dhar Professor BUET,Dhaka | 12 th March, 2016 | For delivering expert lecture in TEQIP |

| | | | |
|-----|--|---------------------------------|--|
| 10. | Prof. (Dr.) A K Nath, Professor, Mechanical Engineering Dept., IIT Kharagpur, West Bengal. | 12 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 11. | Dr.Prashant Kumar Jain, Associate Professor in Mechanical Engineering, IIITDM Jabalpur, Madhya Pradesh, India. | 12 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 12. | Dr. V K Agarwal Professor, ChEd,IITRoorkee | 25 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 13. | Dr. Rishi Raj Asst. Professor Dept. of Mechanical Engineering IIT Patna | 25 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 14. | Prof. Prasanta Kumar Das Prof. & Head of the Department Dept. of Mechanical Engineering IIT Kharagpur | 26 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 15. | Dr. A K Nayak,Scientist H+, Reactor Engg. Divn. BARC, Mumbai | 26 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |
| 16. | Dr. Ravi Kumar Professor Dept. of Mechanical Engineering IIT Roorkee | 26 th March, 2016 | For delivering expert lecture in TEQIP Sponsored Workshop |

14.6 Other Activities :

1. Dr. Ravi KiranSastry, FIE Associate Professor and Dr. John Debbarma,Assistant Professor has been nominated in Vidhyalaya Management Committee in respect of KendriyaVidyalaya,NITAgartala for a period of Three Years w.e.f. 11th February, 2016 as Eminent Educationist.
2. As Chairman, Tripura State Centre, IEI, Dr. SwapanBhaumik, Associate Professor & Head, Mech. Engg. Deptt. organised the following programme from 1st April,2015 to October 18,2015.
3. Lecture Programme on “Project Management” on 1st April, 2015 at Institution Building, P.N. Complex, Agartala where Er. N.K. Dutta, FIE, Past Chairman, The Institution of Engineers (India), Agartala Local Centre and Engineer-in- Chief & Secretary (Retd.), PWD, Govt. of Tripura, Er. P.K. Debnath, FIE, Past Chairman, The Institution of Engineers (India), Tripura State Centre and Chief Engineer (Retd.), PWD (WR), Govt. of Tripura Er. ChamanLal, FIE, Chief Quality Coordinator & Director, NRRDA, Ministry of Rural Development, Govt. of India Er. S.D. Sharma, FIE, Executive Director, N.B.C.C. Ltd. Mr. V N PremAnand, MBCS, Fellow CPD institute (UK), MIEEE(USA),MIITP(NZ), Member

Royal Society of New Zealand, Contributing Member-International Association of Software Architects(IASA).Member and Faculty Institute Of Directors has graced the programme as Chief Guest, Guest of Honour, Guest of Honour. Special Guest and Expert Speaker respectively.

4. Lecture Programme on “Creativity and Innovations in Engineering Organizations” on 10th April, 2015 at Institution Building, P.N. Complex, Agartala where Professor Ashok Misra, Eminent Educationist and Former Director, IIT Bombay and Professor GopalMugeraya, FIE, Director, NIT Agartalahas graced the Occasion as Chief Guest and Guest of Honour respectively.
5. One-Day National Seminar on “Sensitization On Application Of Jute Geotextile (JGT) In Civil Engineering Constructions” on 28th April, 2015 at PragnaBhawan, Agartala where Er. S.D. Sharma, FIE, Executive Director, N.B.C.C. Ltd, Prof. BiplabHalder, FIE, Pro Vice-chancellor, The ICFAI University Tripura, Mr. DipankarMahto, Secretary, National Jute Board, Mr. T. Sanyal, Chief Consultant, NJB, Mr. P.K. Chaudhury, Principal Technologist, NJB-IJIRA Geotech Cell, Mr. Monimoy Das, Technical Officer, NJB-IJIRA Geotech Cell, Mr. A.K. Khastagir, Project Manager, NJB, Prof. S. K. Ghosh, DJFT, IJT, CU, Dr. JayantaSen, FOSET, Mr. Maloy Dev, Managing Director, Civil Engineering Consultancy Services Pvt. Ltd., Mr. Ranbir Singh, Dy. Chief Engineer, NE Frontier Railway, Mr. Sunil Bhowmik, Engineer-in-Chief, PWD, Tripura has graced the programme as different capacity.
6. Observance of “National Technology Day – 2015” on 12th May, 2015 at Institution Building, P.N. Complex, Gurkhabasti where Er. D P Singh, Chief General Manager, NE Circle- I, BSNL, Shillong, and Er. J. Ravichandra, General Manager, Telecom, BSNL, Tripura SSA, has graced the programme as Chief Guest and Expert Speaker respectively.
7. Observance of “World Telecommunication and Information Society Day- 2015” on 17th May, 2015 at Institution Building, P.N. Complex, Gurkhabasti on the theme of *Telecommunications and ICTs: Drivers of Innovation* where Er. U.C. Bhowmik, Dy. General Manager, B.S.N.L., Tripura SSA, Agartala and Er. Suman Deb, Assistant Professor, CSE Department, NIT Agartalahas graced the programme as Keynote Speaker and Expert Speaker respectively.
8. Observance of “World Environment Day- 2015” on 5th June, 2015 at Institution Building, P.N. Complex, Gurkhabasti on the theme of *Seven Billion Dreams. One Planet. Consume with Care* where Dr. Mihir Kr. Das, Scientist “C”, Tripura State Pollution Control Board, Agartala, Dr. Sourabh Deb, Assistant Professor, Department of Forestry and Biodiversity, Tripura University and Er. R.K. Majumdar, FIE, Former Director, Urban Development Department, Govt. of Tripura has graced the programme as Keynote Speaker, Expert Speakers respectively.
9. Workshop on “Career Opportunity in Engineering Education and Centralised Admission Process- 2015 in CFTIs” on 28th June, 2015 at Institution Building, P.N. Complex,

- Gurkhabasti where Dr. SwapanBhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre has made Power Point Presentation.
10. Thirtieth National Convention of Production Engineers' and National Seminar on "Sustainable Manufacturing." On July 18-19, 2015 at Visvesvaraya Auditorium, NIT Agartala where Prof. GoutamBiswas, Director, Indian Institute of Technology Guwahati, and Prof. G.L. Datta, Former Professor & Dean of IIT Kharagpur& Ex. Chancellor of K L University, Andhra Pradesh has graced the programme as Chief Guest and Guest of Honour respectively.
 11. Seminar on "Green Technology for Road Construction" on 5th September, 2015 at Institution Building, P.N. Complex, Gurkhabasti where Er. Subhas Roy, Former Vice President, HCC and Former Executive Director, NHPC Ltd., Dr. P.K. Jain, Chief Scientist and Advisor, Pavement Engineering Area & Coordinator, Academy of Scientific and Innovative Research, CSIR-Central Road Research Institute, New Delhi, Er. R.K. Majumdar, FIE (IAS-Retd), Former Director, Urban Development Department, Govt. of Tripura & Chairman (Elect), IEI, Tripura State Centre, and Dr.ParthaPratimSarkar, Assistant Professor, Civil Engineering Department, NIT Agartala has graced the programme as Guest of Honour, Keynote Speaker and Expert Speakers respectively.
 12. Observance of "48th Engineers' Day -2015 during August 29 - September 15, 2015" at different places through different programmes in a befitting manner, such as Debate, Quiz & Extempore Speech Competition, Workshop, Discussion Programmes, Plantation, Mass Rally, Blood Donation Camp & Seminar on "Engineering Challenges for Knowledge Era" where ShriTathagata Roy, FIE, Hon'ble Governor of Tripura, ShriBadalChoudhury, Hon'ble Minister for PWD (R & B/WR), Health etc. Department, Tripura, Prof. GopalMugeraya, FIE, Director, National Institute of Technology Agartala and Prof. LakshmanNandagiri, Professor, Department of Applied Mechanics and Hydraulics, National Institute of Technology Karnataka, Surathkal was present in the Seminar as Inaugurator, Chief Guest, Guest of Honour and Keynote Speaker respectively.
 13. Observance of "World Habitat Day – 2015" on 5th October, 2015 at Institution Building, P.N. Complex, Gurkhabasti on the theme of "*Public Spaces for All*" whereEr. R.K. Majumdar, FIE (IAS-Retd), Former Director, Urban Development Department, Govt. of Tripura & Chairman (Elect), IEI, Tripura State Centre andEr. N.K. Dutta, FIE, Former Engineer-in-Chief & Secretary, PWD, Govt. of Tripura & Past Chairman, IEI, Agartala Local Centre and Er. SubhashChowdhury, FIE, Former Director & CEO, Tripura Renewable Energy Development Agency & Past Chairman, IEI, Agartala Local Centre has graced the programmeas Expert Speaker and Guest Speakers respectively.
 14. Inauguration of Silver Jubilee Floor of Tripura State Centre, IEI on 14th October, 2015 at Institution Building, P.N. Complex, Gurkhabasti where Dr. L.V. Muralikrishna Reddy, FIE, President, IEI Inaugurated the Silver Jubilee Floor in presence of other dignitaries.
 15. Seminar on "Challenges and Role of Women Engineers in the Development of Tripura" on 18th October, 2015 at Institution Building, P.N. Complex, Gurkhabasti where Smt. Purnima

Roy, Chairman, Women's Commission, Tripura, Dr. ElaLodh, Former Director, Department of Health, Govt. of Tripura, and Er. SimaSaha, MIE, Executive Engineer, PWD has graced the programme as Chief Guest, Guest of Honour and Expert Speaker respectively.

14.7 Gallery



Welcome address One Day Workshop on Good Addressing during One Day Workshop on Good Governance in Education System Governance in Education System



*Inaugural Session Inaugural Session 30th NCPE & National Seminar
TEQIP -II Sponsored Two Days Workshop on Sustainable Manufacturing*

15.0 MATHEMATICS DEPARTMENT

15.1 Introduction:

The journey of Mathematics Department of NIT Agartala has started from the inception of this Institute. Department of Mathematics gripped the power and diversity of Mathematics by combining pure and applied part of it in one place. It is focused on providing a comprehensive curriculum for undergraduate, postgraduate and Ph. D students. The Department is now actively pursuing research embracing both areas of pure and applied mathematics. The department has produced eleven Ph. D students till now and eighteen more students are pursuing their Ph. D under it. The faculty members of this Department teach Mathematics to under graduate and postgraduate students of different Engineering Branches along with the two years M.Sc. degree course (Mathematics) and 5-years Integrated M.Sc. programme in Mathematics (BS-MS programme). Project of M. Sc students and BS-MS students inculcated under the supervision of faculty members.

The Department has qualified faculty members consisting of three Associate Professors, two Assistant Professors, nine contractual Assistant Professors and four Teaching Assistants. In their pursuit of research the faculty members have covered a vast area such as Operation research, Transportation Problems, Inventory Control, Fuzzy topology, Fuzzy Clustering, Fuzzy Logic, Neuro-fuzzy logic system, Grey-fuzzy logic, Fuzzy dynamic programming, Fuzzy decision making, Rough Set, Numerical Analysis, Computational Fluid Dynamics, Mathematical and computational biology, Bio-informatics, Fluid Mechanics.

The entire family of teaching faculty is energetically engaged in research in their individual fields, and numerous research papers are being published in various journals of repute.



15.2 Academic Programme :

| Sl. No. | Academic Programme Conducting | Intake Capacity | Started From |
|---------|------------------------------------|-----------------|----------------|
| 1 | 5 years BS-MS in Mathematics | 20 | 2013 |
| 2 | M.Sc. in Mathematics. | 10 | 2010 |
| 3 | Ph. D | - | 2008 |
| 4 | B. Tech Mathematics (All Branches) | 1550 | From inception |
| 5 | M. Tech Mathematics (All Branches) | 80 | 2009 |

| | | | |
|---|-----------------|----|------|
| 6 | MCA Mathematics | 40 | 2009 |
| 7 | MBA Mathematics | 30 | 2012 |

Also Mathematics Department is imparting compulsory UG curriculum in Engineering Mathematics in 1st, 2nd and 3rd semester of all the Departments of NITA. Apart from these courses, the department is taking the courses like Numerical Methods and Analysis (4th Semester EE, 5th Semester ECE), Operation Research & Mathematical foundation (MCA-2nd and 4th), courses on Higher Engineering Mathematics in M. Tech curriculum (CE, ME and ECE), Business Statistics and Mathematics in M.B.A.

15.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminar/ Symposia/ Conferences organized by the faculty members:

| Sl. No. | Co-ordinators | Title | Period |
|--------------------|---|--|---|
| Short Term Courses | | | |
| 1 | Dr. Paritosh Bhattacharya and Dr. U.K. Bera | National Workshop on “Techniques in Bioinformatics” | 7 th -8 th August, 2015 |
| 2 | Dr. U.K. Bera and Dr. Paritosh Bhattacharya | National Workshop on “Recent Advancement in Soft Computing Techniques” | 29 th - 31 st January, 2016 |
| 3 | Dr. Apu Kumar Saha | “Computational Study on Fluid Transport Phenomena” | 5 th - 7 th February, 2016 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of Faculty | Title | Period |
|-------------|-----------------------|---|---|
| Seminar: | | | |
| 1. | Dr. Apu kumar Saha | “Advances in Mathematical Sciences” | 22 nd December, 2015 |
| 2. | Dr. Baby Bhattacharya | “Advances in Mathematical Sciences” | 22 nd December, 2015 |
| 3. | Dr. Susmita Roy | “Advances in Mathematical Sciences” | 22 nd December, 2015 |
| Conference: | | | |
| 1. | Dr. Baby Bhattacharya | International Conference on “Emerging Trends in Science And Engineering Research” | 2 nd -4 th December, 2015 |
| 2. | Dr. Baby Bhattacharya | The Fifth International Conference on “Neural, Parallel, and Scientific Computations” | 27 th -30 th May, 2015 |
| Training: | | | |

| | | | |
|----|-----------------|--|---|
| 1. | Dr. Susmita Roy | “Advanced Engineering Optimization Through Intelligent Techniques” | 21 st - 25 th March, 2016 |
|----|-----------------|--|---|

Visits Abroad by Faculty:

| Sl. No. | Name of Faculty | Country Visited | Date | Purpose of Visit |
|---------|-----------------------|-----------------|--|------------------------------------|
| 1 | Dr. Baby Bhattacharya | USA | 24 th May- 5 th June, 2015 | To attend International Conference |

15.4 Research and Consultancy :**Sponsored Research Projects:**

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|---|--|----------------|-------------------|----------------------|
| 1. | Transportation Problems For Breakable/Deteriorating Items Under Constraints In Uncertain Environment. | Three Years (March 2015 to February 2018) | DST | 15.61 | Dr. Uttam Kumar Bera |
| 2. | Fund For Improvement Of S & T Infrastructure | 5 Years (Grant on 19 th November, 2015) | DST | 49.00 | HoD Mathematics |

Research Publications:

| | | |
|--|---|----|
| Total No. of papers published in Refereed International Journals | : | 32 |
| Total No. of papers presented in National Conference | : | 1 |
| Total No. of papers presented in International Conferences | : | 3 |

In Refereed International Journals:

- (1) A. Baidya, U.K. Bera, and M. Maiti, ‘Breakable Fuzzy Multi-Stage Transportation Problem’, Journal of the Operations Research Society of China, 1(3), 53-67, (2015).
- (2) A. Baidya, U.K. Bera, and M. Maiti, ‘Interval Oriented Entropy Based Multi-item Solid Transportation Problem with Budget and Breakability’, International Journal of Applied and Computational Mathematics, 1(2), 279-292, (2015).
- (3) P. De, H. Mondal, And U. K. Bera, ‘Effects of mixed convective flow of a nanofluid with internal heat generation, thermal radiation and chemical reaction’, Journal of Nanofluids, 4(3), 375-384, (2015).

- (4) P. De, H. Mondal, and U. K. Bera, 'Heat and mass transfer in a hydromagnetic nanofluid past a non-linear stretching surface with thermal radiation', *Journal of Nanofluids*, 4(2), 230-238, (2015).
- (5) S.P.Mondal, Susmita Roy, B.Das,' Numerical Solution of First Order Linear Differential Equations in Fuzzy Environment by Runge-Kutta-Fehlberg Method and its Application', *International Journal of Differential Equation*, Vol. 2016, 1-14, (2015).
- (6) S.P.Mondal and T.K.Roy, 'Second order linear differential equation in fuzzy environment and its Application', *Annals of Fuzzy Mathematics*, Vol. 3, 1-28, (2015).
- (7) S. Debnath, J. Debnath, D. Bhattacharya, 'On Some Sequence Spaces of IFNs', *Bulletin of Kerala Mathematics Association*, 12(2), 125-133, (2015).
- (8) A. Mitra, P. Bhattacharya And K. K. Dhar, 'Experimental Study on Shape and Rise Velocity Of Small Bubbles in Stagnant Water', *Journal Of Mechanics Of Continua And Mathematical Sciences*, 9(2), 1396-1402, (2015).
- (9) S. Chakrabartty, A. Mondal, P. Chakrabarti, S.K. Singh, A. K. Saha and P. Singh, 'Synthesis of biocompatible TiO₂ nanodots: Glancing angle deposition technique' *Journal of nano science and nano technology*, 15, 1-6, (2015).
- (10) A. K. Saha and M. Majumder, 'Median based conversion of SGPA into percentage by cognitive methods', *Applied Mathematics and Computation*, 266, 1153–1162, (2015).
- (11) A. Baidya, U.K. Bera, and M. Maiti, 'Multi-Stage Multi-Objective Solid Transportation Problem for Disaster Response Operation with Type-2 Triangular Fuzzy Variables', *Hacettepe Journal Of Mathematics And Statistics*, 45(5), 1485-1518, (2016).
- (12) A. Baidya, U.K. Bera, and M. Maiti, 'The grey linear programming approach and its application to multi-objective multi-stage solid transportation problem', *OPSEARCH*, 53(3), 500-522, (2016).
- (13) A. Baidya, U.K. Bera, and M. Maiti, 'Uncertain Multi-Objective Restricted Solid Transportation Problem with Budget and Vehicle Cost', *U.P.B. Sci. Bull., Series C*, 78(1), 161-174, (2016).
- (14) P. De, H. Mondal, And U. K. Bera, 'Dual solutions of heat and mass transfer of nanofluid over a stretching/shrinking sheet with thermal radiation', *Meccanica*, 51(1), 117-124, (2016).
- (15) Dipana Jyoti Mohanty, Ravi Shankar Kumar and A. Goswami, 'A two-warehouse inventory model for non-instantaneous deteriorating items over stochastic planning horizon', *Journal of Industrial and Production Engineering*, 33(8), 516-532 (2016).
- (16) Ravi Shankar Kumar, Alok Choudhury, A. Goswami and M.K. Tiwari, 'Designing multi-period supply chain network considering risks and emission: A multi-objective approach', *Annals of Operations Research*, (16 March, 2016).
- (17) Dipana Jyoti Mohanty, Ravi Shankar Kumar And A. Goswami, 'An improved inventory model with random review period and temporary price discount for deteriorating items', *International Journal of System Assurance Engineering and Management*, 7(1), 62-72, (2016).
- (18) Ravi Shankar Kumar, Karthik Kondapaneni, Goswami, and M.K. Tiwari, 'Multi-objective modeling of production and pollution routing problem with time window: A self-learning particle swarm optimization approach', *Computers & Industrial Engineering*, 99, 29-40, (2016).
- (19) B.Das, Susmita Roy, R.N. Rai, S.C. Saha, 'Study on the machinability behaviour of in situ Al-4.5%Cu-TiC metal matrix composite-it's surface finish and cutting force

- prediction using ANN', *Cirp: Journal Of Manufacturing Science And Technology* (Elsevier), 12, 67–78,(2016).
- (20) B. Das, Susmita Roy, R.N. Rai, S.C. Saha, 'Development of an in-situ synthesized multi-component reinforced Al-4.5%Cu-TiC metal matrix composite by FAS technique – Optimization of process parameters', *Journal Of Engineering Science And Technology: An International Journal* (Elsevier), 19 (1), 279-291, (2016).
 - (21) P. Majumder, U. K. Bera, And M. Maiti, 'An EPQ model for two warehouse in unremitting release pattern with two level trade credit period concerning both supplier and retailer ', *Applied Mathematics And Computation*, 274, 430-458,(2016).
 - (22) S.Paul, S.P.Mondal and P. Bhattacharya, 'Numerical solution of Lotka Volterra Prey Predator model by using Runge-Kutta-Felhberg method and Laplace Adomian decomposition method', *Alexjendria Engineering Journal*, Vol. 55, 613-617,(2016).
 - (23) S.P.Mondal, D.K.Viswakarma and A.K.Saha, 'Solution of Fuzzy Difference Equation Based by Lagrange Multiplier Method, *Journal of Soft Computing and Applications*', *Journal of Soft Computing And Applications*, Vol. No. 1, 11-27,(2016).
 - (24) S.Paul, S.P.Mondal and P.Bhattacharya, ' Discussion on Fuzzy Quota Harvesting Model in Fuzzy Environment: Fuzzy Differential Equation Approach', *Modeling Earth Systems And Environment*, Vol. 2 No. (70),1-15,(2016).
 - (25) Sankar Prasad Mondal, ' Differential equation with interval valued fuzzy number and its Applications', *International Journal Of Systems Assurance Engineering*, Vol. 7, No. 3, 370-386,(2016).
 - (26) S. Debnath, B.C Das, D.Bhattacharya, J. Debnath, 'Regular Matrix Transformation on Triple Sequence Spaces', *Boletim Da Sociedade Paranaense De Matematica*, 35(1), 85-96,(2016).
 - (27) S. Debnath, J. Debnath, D. Bhattacharya, 'On Rough I–Convergent Sequence Spaces of Fuzzy Numbers defined by Sequences of Orlicz Function and Matrix Transformation' ,*New Trends In Mathematical Sciences*, 4(1), 184-192, (2016).
 - (28) A. Paul, B.Bhattacharya, 'New Types of Functions and Separation Axiom by γ -Open sets in fuzzy Bitopological spaces' *Malaysian Journal Of Mathematical Sciences*, 9,397–407, (2016)
 - (29) Amrit Das, Uttam Kumar Bera and Barun Das, 'A Solid Transportation Problem With Mixed Constraint In Different Environment', *Journal Of Applied Analysis And Computation*, 6(1), 179-195, (2016).
 - (30) Amrit Das, Uttam Kumar Bera and Manoranjan Maiti, 'Defuzzification of trapezoidal type-2 fuzzy variables and its application to solid transportation problem' , *Journal of Intelligent and Fuzzy Systems*; 30 ,2431-2445,(2016)
 - (31) Amrit Das, Uttam Kumar Bera and Manoranjan Maiti, 'A profit maximizing solid transportation model under rough interval approach', *IEEE Transaction on Fuzzy System*, (2016)
 - (32) S.Chakrabartty, A.Mondal and A.K. Saha, 'Effect of Annealing on Optical, Electrical and Charge Trapping Properties of TiO₂ NPs Arrays', *Journal of nanoscience and nanotechnology*, 16, 1-7, (2016).

In Proceedings of National Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|---|--------------------------|---------------------------------|
| National Seminar on Advances in Mathematical Sciences. | Gauhati University, Guwahati-781014, Assam in collaboration with the Assam Academy of Mathematics | Dr. Susmita Roy | 22 nd December, 2015 |

In Proceedings of International Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|------------------------------------|--------------------------|---|
| International conference on “recent trends in engineering and material sciences (ICEMS-2016)” | Jaipur national university, Jaipur | Dipanjana Sengupta | 17 th -19 th March, 2016 |
| International Conference on “Emerging Trends In Science And Engineering Research (Etser-2015)” | NIT Manipur | Dr. Baby Bhattacharya | 2 nd -4 th December, 2015 |
| The Fifth International Conference on “Neural, Parallel, And Scientific Computations” | Atlanta, USA | Dr. Baby Bhattacharya | 27 th -30 th , May 2015 |

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|---|--|---|
| 1 | Dr. Debabrata Datta Scientist H ⁺ , BARC, Head Radiological Physics & Advisory Divison of Health, Safety & Environment Group | 7 th -8 th August, 2015 | National Workshop on “Techniques in Bioinformatics”, Invited Talk |
| 2 | Prof.(Dr) S.P. Maity IEST, Shibpur | 7 th -8 th August, 2015 | National Workshop on “Techniques in Bioinformatics”, Invited Talk |
| 3 | Prof. Suman Chakraborty Associate Dean, SRIC Professor Mechanical Engineering Head, Medical Science & Technology, IIT Kharagpur. | 5 th – 7 th February, 2016 | Workshop on “Computational Study on Fluid Transport Phenomena” , Invited Talk |
| 4 | Prof. Somnath Bhattacharya Professor, Mathematics IIT Kharagpur. | 5 th – 7 th February, 2016 | Workshop on “Computational Study on Fluid Transport Phenomena”, Invited Talk |
| 5 | Prof. Pradeep G. Siddheshwar | 5 th – 7 th | Workshop on |

| | | | |
|---|--|--|--|
| | Professor of Mathematics and Director, Planning, Monitoring & Evaluation Board Bangalore University. | February, 2016 | “Computational Study on Fluid Transport Phenomena”, Invited Talk |
| 6 | Prof. Durga Charan Dalal Professor, IIT Guwahati. | 5 th – 7 th February, 2016 | Workshop on “Computational Study on Fluid Transport Phenomena”, Invited Talk |

15.5 Other Activities:

- (i) Number of Students (year-wise) who qualified in SLET: One (2015)

16.0 PHYSICS DEPARTMENT

16.1 Introduction:

The Physics Department is as old as NIT Agartala (NITA in 2006, formerly Tripura Engineering College) itself - a venerable forty six years of age, established in 1965. Since then, the mandate of the Department is to conduct teaching courses for students of engineering disciplines and conduct interdisciplinary studies, especially with engineering departments. The faculty members are engaged in rendering the post graduate and engineering undergraduates with the fundamental knowledge of physics and problem solving skills, requisite for a bright career, and striving tirelessly to improve the education further.

16.2 Academic Programme:

- The department currently offers the course of Engineering Physics to 1st and 2nd semesters of engineering undergraduates (B.Tech) and Material Science to the 4th semester engineering undergraduates of Electrical branch.
- The department also offers 10 semester BT-MT programme and BS-MS programme dual degree programmes in Engineering Physics. The dual degree programme affords undergraduate students which enhances the opportunity to broaden their studies and improve their career prospects.
- The department runs 4 semester master's degree programme (M.Sc) in Physics. The unique course structure of M.Sc. (Physics) blends well the areas of contemporary and applied physics to create post-graduates who are equally comfortable with science and technology.
- The department has also runs the PhD (Physics) programme in different topics, within the major thrust areas of *Applied Optics & Photonics, Plasma Physics, Theoretical Condensed Matter Physics, Liquid Crystals Atmospheric Science, General Relativity, Cosmology & Thin film, and Nanotechnology.*

A. Students on Roll:

| Programme | 1 st semester | 3 rd semester | 5 th semester | 7 th semester | Total |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------|
| B. Tech. | 621 | | | | 621 |
| B.Tech-M.Tech (Dual Degree) | 10 | 11 | 13 | 24 | 58 |
| B.S-M.S | 7 | 11 | 7 | 11 | 36 |
| M. Sc. | 7 | 7 | | | 14 |
| Ph. D. | 5 | 3 | | 3 | 8 |
| Total | 650 | 32 | 20 | 38 | 737 |

16.3 Lab Facilities:

The name of the Laboratories of the department are UG laboratories (2), BT-MT 2nd - 7th semester laboratories (5), BS-MS 2nd - 7th semester laboratories (5) and PG Laboratories (3)

16.4 Faculty and their activities:

Short-Term courses/Workshops/Seminars/ Symposia/ Conferences/ training attended by the faculty in Academic Institutions and Public Sector Undertakings:

| Sl. No. | Name of the faculty | Title | Period |
|---------------------------|---------------------|---|--|
| Workshop: | | | |
| 1 | Dr. R. K. Yadav | Management capacity enhancement programme under TEQIP | 07 th -12 th September, 2015 |
| 2 | Dr. R. K. Yadav | Optics and photonics | 08 th -09 th October, 2015 |
| Conference: | | | |
| 1 | Dr. Biswajit Saha | Department of Atomic Energy-Solid State Physics Symposium | 21 st -25 th December, 2015 |
| Short term course: | | | |
| 1 | Dr. Biswajit Saha | Two Week ISTE STTP on "Environmental Studies" | 02 nd -12 th June, 2015 |

16.5 Research and Consultancy:

Research Collaboration:

- Collaboration with Prof. K.E. Zoiros, Department of Electrical and Computer Engineering, Light wave Communications Research Group, Xanthi-Greece
- Collaboration with Department of Physics & Meteorology, IIT Kharagpur, India.
- UGC-DAE CSR Indore, Khandwa Road, Indore, India
- Oakland University, Michigan, USA.
- IIT Indore, Indore, India

Sponsored Research Projects:

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|--|-----------|---------------------|-------------------|-------------------|
| 1. | Investigation on synthesis processes and physical characterization of Cu based oxide thin film as p-type semiconductor material and to functionalize it for Photo voltaic applications | 2014-2017 | DST, Govt. of India | 19.20 | Dr. Biswajit Saha |

| | | | | | |
|----|---|---------|------|---|--|
| 2. | Vertically Aligned CuInS ₂ or CuInS ₂ -ZnS Decorated ZnO Nanowires for Flexible Hybrid Photovoltaic Devices | 3 years | CSIR | 25.00 | Dr. Suvra Prakash Mondal (PI) and Dr. Jitendra Nath Roy (Co-PI) |
| 3. | Investigation of Multiple Double Layer Dynamics and Physical Characterization of Double Layer Plasma in a Magnetic Mirror Device for Application in Plasma Based Propulsion Systems | 3 years | DST | 27.50 (20 lakhs approved for equipment) | Dr. Jitendra Nath Roy (PI) and Dr. Manash Kumar Paul (Co-PI) |

Research Publications:

| | |
|--|------|
| Total No. of papers published in Refereed International Journals | : 16 |
| Total No. of papers published in National Conference | : 03 |
| Total No. of papers published in International Conference | : 04 |

In Referred International Journals:

- (1) S. Patari, T.K.Devi, A. Nath, Journal of Molecular Liquids, 215, 244-252, (2015).
- (2) S. Patari, S. Chakraborty, A. Nath; Liquid Crystal, 43(3), 1017-1027, (2016).
- (3) A. Debnath, K. Deb, N. S. Das, K. K. Chattopadhyay and B. Saha, Journal of Dispersion Science and Technology, 37(6), 775-785, (2015).
- (4) K. L. Bhowmik, K. Deb, A. Bera, R. K. Nath, B. Saha, Journal of Physical Chemistry, 120, 5855–5860, (2016).
- (5) E. M. Kumar, B. Prajapat, B. Saha, R. Thapa; International Journal of Hydrogen Energy, 41(06), 3928-3939, (2016).
- (6) A. Debnath; A. Thakur; K. L. Bhowmik; A. Bera; B. Saha, Advanced Science Letters, 22(01), 242-245, (2016).
- (7) A. Debnath, K. Deb, K. K. Chattopadhyay and B. Saha, Desalination and Water Treatment, 57(29), 13549-13560, (2015).
- (8) A. Debnath, M. Majumder, M. Pal, N. S. Das, K. K. Chattopadhyay & B. Saha, Journal of Dispersion Science and Technology, 37(12), 1806-1818, (2016).
- (9) Jehova Jire L Hmar, Tanmoy Majumder, Sourav Dhar, Suvra Prakash Mondal, Thin Solid Films, 612, 274–283, (2016).
- (10) Tanmoy Majumder, Suvra Prakash Mondal, Journal of Electroanalytical Chemistry, 769, 48-52, (2016).
- (11) T Majumder, K Debnath, S Dhar, JIL Hmar, SP Mondal, Energy Technology, 4, 950 – 958, (2016).
- (12) JIL Hmar, T Majumder, SP Mondal, Thin Solid Films, 598, 243-251, (2016).
- (13) JIL Hmar, T Majumder, JN Roy, SP Mondal, Materials Science in Semiconductor Processing, 40,145-151, (2015).
- (14) JIL Hmar, T Majumder, JN Roy, SP Mondal, Journal of Alloys and Compounds, 651, 82-90, (2015).

- (15) Kiranmala Thingujam, Ayon Bhattacharjee, Basana Choudhury, Roman Dabrowski, Optical Review, 23(3), 409-419, (2016).
 (16) Sohini Goswami, Sushmita Saha, R. K. Yadav, Physica E: Low-dimensional Systems and Nanostructures, 74, 175-92, (2015).

In Proceedings of National Conference:

| Name of the Conference | Place of the conference | Name of the Participants | Date/ Duration |
|---|-------------------------|-----------------------------|---|
| MRSI North East Symposium on Advanced Materials for Sustainable Applications. Jorhat Guwhati.2015 | Jorhat Guwhati | Sangita patari, Aparna Nath | 18 th -21 st February, 2016 |
| International Conference on Materials Science & Technology 2016 | New Delhi | Sangita patari, Aparna Nath | 1 st -5 th March, 2016 |
| National conference on Engineering problems and Application of Mathematics.EPAM-2016.NITA | NIT Agartala | Sangita patari, Aparna Nath | 11 th -12 th June, 2016 |

In Proceedings of International Conference:

| Name of the Conference | Place of the conference | Name of the Participants | Date/ Duration |
|---|-------------------------|--------------------------|---|
| Nano 2015 | Tamil Nadu, India | A. Bera | 7 th -10 th December, 2015 |
| Nano 2015 | Tamil Nadu, India | K. Deb | 7 th -10 th December, 2015 |
| Department of Atomic Energy-Solid State Physics Symposium | Noida, India | B. Saha | 21 st -25 th December, 2106 |
| Department of Atomic Energy-Solid State Physics Symposium | Noida, India | A Bera | 21 st -25 th December, 2106 |

16.6 Other Activities :

(i) His Excellency Governor of Tripura has appointed Dr. Biswajit Saha as Scientific/Technical Expert in introducing and examining the security features of Hologram to be procured by government of Tripura.

(ii) Dr. Biswajit Saha has been appointed as observer of the Common Medical Service Examination 2015, by the Union Public Service Commission (UPSC) Government of India.

17.0 PRODUCTION ENGINEERING DEPARTMENT

17.1 Introduction:

Production Engineering Department was established in the year of 2005 while it was Tripura Engineering College (Presently National Institute of Technology) and is approved by AICTE. Presently the department offers Bachelor of Technology in Production Engineering and M.Tech in Computer Integrated Manufacturing as well as Doctoral Programme where students are encouraged to acquire knowledge facilities with an integrated thinking about education research & development, production and training. The students are provided knowledge to understand the fundamentals of basic sciences and humanities, inter disciplinary knowledge, innovation, creative and problem solving abilities, intellectual honest and professional ethics, capacity for team work in inter disciplinary, national and international environment. It also helps the students to understand society, culture and global processes. The department helps to induce entrepreneurship interest in students. Also to align and educate our students from Production Engineering Department to improve their fundamental Knowledge to bring innovative technology and to build products either by themselves or by working with various industries to boost economic condition of our county and also North-East part of India.

The Department has seven numbers of permanent faculty and five numbers of contractual faculty members. All faculties are deeply involved in academic, research and administrative responsibilities of the Institute.

17.2 Academic Programme:

Presently department is offering B.Tech, M.Tech & Ph.D, with the following number of enrolment in different semesters:

| Programme | No. of Students | | | | Total |
|-------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------|
| | 1st semester | 3rd semester | 5th semester | 7th semester | |
| B. Tech. (Intake capacity 90) | 65 | 45 | 60 | 55 | 225 |
| M. Tech (Intake capacity 15) | 06 | 06 | -- | --- | 12 |
| Ph. D. | 06 | 01 | 0 | 05 | 12 |
| Total | 77 | 52 | 60 | 60 | 249 |

17.3 Lab Facilities:

Production Engineering Department is well equipped with the following laboratories. The laboratories are exclusively used for the regular practical classes of students, research work, and consultancy.

1. Metallographic Laboratory
2. Non Traditional Machining Laboratory
3. CNC and Robotics Laboratory
4. Ergonomics and condition monitoring Laboratory
5. CAD/ CAM Laboratory
6. Metal Forming and Metal Casting Laboratory
7. Mechanics of Machine laboratory

8. Mechatronics Laboratory
9. Quality Engineering Laboratory

PICTURES OF EXISTING LABS



PICTURES OF NON TRADITIONAL MACHINING LABORATORY



PICTURES OF CNC, AUTOMATION AND ROBOTICS LABORATORY



PICTURE OF METALLOGRAPHY LABORATORY

PICTURE OF CAD/CAM LABORATORY

17.4 Faculty and their Activities:**Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences organized by the faculty members:**

| Sl. No. | Coordinators | Title | Period |
|----------------------------|--|--|--|
| Workshop | | | |
| 1. | Dr. S.C. Saha, Dr. Swarup Paul | “Product Design & Development” | 11 th -12 th March, 2016 |
| National Convention | | | |
| 1. | Dr. Swapan Bhounik, Dr. G.R.K. Sastry | “Production Engineering Convention on Sustainable Manufacturing” | 18 th -19 th July, 2015 |

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings

| Sl. No | Name of the Faculty | Title | Period |
|--------------------|--|--|--|
| Workshop: | | | |
| 1. | Dr. Kishan Choudhuri, Mr. Sujoy Chakraborty, Mr. Bishop Debbarma, Dr. U.K. Mandal, Miss. Pushparenu Bhattacharjee, Mr. Nabarun Biswas, Mr. Debashis Podder | “Product Design & Development” | 11 th -12 th March, 2016 |
| 2. | Mr. Debashis Podder | “3D Printing and Laser Application in Manufacturing Processes” | 11 th -12 th March, 2016 |
| Conference: | | | |
| 1. | Dr. Swarup Paul, Dr. U.K. Mandal | “2016 International Conference on Recent trends in Engineering & Materials Sciences” | 17 th -19 th March, 2016 |
| 2. | Dr. Kishan Choudhuri | “IRF International Conference, Jaipur” | 2 nd August, 2015 |

Fellowships of Academics and Professional Societies:

| Sl. No. | Name of Faculty | Level | Year |
|---------------------|----------------------|--|------------------------------|
| ISTE/CSI and others | | | |
| 1. | Mr. Prasenjit Dutta | Member (IEI) | 2015 |
| 2. | Dr. Kishan Choudhuri | i. Associate Member (IEI) ii. Member (ISTE) iii. Member (FOSET) | 2000 2004 2009 |
| 3. | Dr. Swarup Paul | i. Associate Member (IEI) ii. Member (ORSI) iii. Member (ISTE) iv. Member (TSI) | 2001 2008 2009 2011 |

| | | | |
|----|-------------------------------|------------------------|------|
| | | v. Member (SAE) | 2009 |
| | | vi. Member (FOSET) | 2010 |
| 4. | Dr. U.K Mandal | Member (IEI) | 2014 |
| 5. | Mr. Bishop Debbarma | Associate Member (IEI) | 2014 |
| 6. | Mr. Sujoy Chakraborty | Associate Member (IEI) | 2010 |
| 7. | Mr. Nabarun Biswas | Associate Member (IEI) | 2010 |
| 8. | Miss Pushparenu Bhattacharjee | Associate Member (IEI) | 2014 |
| 9. | Mr. Debashis Podder | Associate Member (IEI) | 2015 |

*IEI- The Institution of Engineers (India), *ISTE- The Indian Society for Technical Education, *FOSET- Forum of Science Engineering and Technology, *ORSI- Operational Research Society of India, *TSI- Tribology Society of India, *SAE- Society of Automotive Engineering.

17.5 Research and Consultancy:

Installed capacity and process assessment after expansion/ modernization project at Green Ply Industries Ltd, District Mon, Nagaland.

Sponsored Research Projects:

| Sl. No. | Title | Period | Funding Agency | Amount (in lakhs) | Co-ordinators |
|---------|---|-----------|----------------|-------------------|-------------------------------------|
| 1. | “Estimation of River Runoff in Haora River Basin with the Help of MCDM Environment” | 2015-2017 | IEI | 3.00 | Dr. U.K Mandal & Mr. Nabarun Biswas |
| 2. | “Condition monitoring of agri - diesel engines run by vegetable oils through tribo-analysis of used lubricants” | 2012-2017 | AICTE | 15.70 | Dr. Swarup Paul |
| 3. | “Studies on the drag between the slipper and the swash plate in an axial piston pump” | 2012-2017 | AICTE | 9.00 | Dr. Kishan Choudhuri |

Research Publications:

Total No. of papers published in Refereed International Journals : 10 (Ten)
Total No. of papers presented in International Conferences : 09 (Nine)

In Refereed International Journals:

| Name of the authors published in International Journals | Title of the Journals | Date of Publication of the Paper | Issue/Volume No./Page No. |
|---|--|----------------------------------|---------------------------|
| Dr. R.N. Rai | International Journal on Recent Technologies in Mechanical and Electrical Engineering (IJRMEE) | 1 st August, 2015 | ISSN 2349-7947 |

| | | | |
|---|--|---------------------------------|---------------------------------|
| Dr. Vidyut Dey | South Asian Journal of Engineering & Technology (SAJET) | 21 st November, 2015 | ISSN 2454-9614 |
| Dr. R.N. Rai | CIRP Journal of Manufacturing Science and Technology | 1 st January, 2016 | ISSN 1755-5817 |
| Dr. Vidyut Dey | International Journal on Recent Technologies in Mechanical and Electrical Engineering (IJRMEE) | 1 st August, 2015 | ISSN 2349-7947 |
| Dr. Swarup Paul | Renewable and Sustainable Energy Reviews | 15 th April, 2015 | Vol. 48, issue C, pages 256-263 |
| Dr. U.K. Mandal, Miss. Pushparenu Bhattacharjee | International Journal of Engineering Research and Science and Technology | 1 st February, 2016 | ISSN 2319-5991 |
| Mr. Bishop Debbarma | International Journal of Hydrogen Energy | 21 st December, 2015 | ISSN 0360-3199 |
| Mr. Bishop Debbarma | Renewable Energy | 3 rd September, 2015 | ISSN 0960-1481 |
| Mr. Debashis Podder | Transactions of the Indian Institute of Metals | 1 st October, 2015 | ISSN 0972-2815 |
| Mr. Bishop Debbarma | International Journal of mechanical & production Engineering | 1 st October, 2015 | ISSN 2320-2092 |

In Proceedings of International Conference:

| Name of the Conference | Place of the Conference | Name of the participants | Date/ Duration |
|--|-------------------------|----------------------------------|--|
| 5th International Conference of Materials Processing and Characterization (ICMPC 2016) | Hyderabad, India | Dr. R.N. Rai, Dr. Vidyut Dey | March, 2016 |
| IOP Conf. Series: Materials Science and Engineering | Kuala Lumpur, Malaysia | Dr. R.N. Rai | 12 th –14 th November 2015 |
| 7th ISEES International Workshop on Sustainable Energy, Environment & Safety with Railway Centric Theme | Lucknow, India | Mr. Bishop Debbarma | 21 st - 23 rd December, 2015 |
| International Conference on Recent Trends in Engineering & Material Sciences | Rajasthan | Dr. Swarup Paul, Dr. U.K. Mandal | 17 th -19 th March, 2016 |
| International Conference On Mechanical Engineering: Proceedings of the 11th International Conference on Mechanical Engineering (ICME 2015) | Bangladesh | Mr. Nabarun Biswas | January, 2016 |
| IRF International Conference | Jaipur, India | Dr. Kishan Choudhuri | 2 nd August, 2015 |

| | | | |
|--|------------------|--|----------------|
| Procedia Engineering | Bangladesh | Mr. Nabarun Biswas | December, 2015 |
| International Conference On Emerging Trends in Science Technology Engineering and Management | Hyderabad, India | Mr. Prasenjit Dutta, Mr. Sujoy Chakraborty, Mr. Nabarun Biswas | October, 2015 |
| International Journal of Engineering Technology, Management and Applied Sciences | JNU Delhi | Mr. Nabarun Biswas | March 2015 |

Distinguished Visitors to the Departments:

| Sl.No. | Name of the Visitors | Date of Visit | Purpose of Visit |
|--------|---------------------------|---|-----------------------------------|
| 1. | Prof. G.L. Datta | 18 th -19 th July, 2015 | Production Engineering Convention |
| 2. | Prof. Goutam Biswas | 18 th -19 th July, 2015 | Production Engineering Convention |
| 3. | Mr. R. C. Bairathi | 18 th -19 th July, 2015 | Production Engineering Convention |
| 4. | Prof. P.S. Parmer | 18 th -19 th July, 2015 | Production Engineering Convention |
| 5. | Dr. N.R. Dhar | 18 th -19 th July, 2015 | Production Engineering Convention |
| 6. | Prof. U.S. Dixit | 18 th -19 th July, 2015 | Production Engineering Convention |
| 7. | Er. Bhupal Gopala | 18 th -19 th July, 2015 | Production Engineering Convention |
| 8. | Prof. V.K. Jain | 18 th -19 th July, 2015 | Production Engineering Convention |
| 9. | Er. P. Ravindra Reddy | 18 th -19 th July, 2015 | Production Engineering Convention |
| 10. | Prof. Kalyanmoy Deb | 24 th July, 2015 | Lecture |
| 11. | Mr. V.P. Mahawar | 18 th -19 th July, 2015 | Production Engineering Convention |
| 12. | Dr. Ajay M. Sidpara | 18 th -19 th July, 2015 | Production Engineering Convention |
| 13. | Dr. H. Abdul Zubar | 18 th -19 th July, 2015 | Production Engineering Convention |
| 14. | Dr. Diptimayee Samantaray | 18 th -19 th July, 2015 | Production Engineering Convention |

17.6 Other Activities:

The Department has one yearly magazine named “Prodozone” where all the B.Tech, M.Tech & PhD students as well as all the faculty members share their articles. The “Student Chapter (IEI)” of Production Engineering Division has also been formed under the Faculty Advisor ship of Mr. Sujoy Chakraborty (Assistant Professor).

Industrial Visit with Students:

- 1. Raffila Industries Ltd, Budhjungnagar
- 2. OTPC, Udaipir, Tripura
- 3. Tripura Ispat, Budhjungnagar

18.0 SCHOOL OF MANAGEMENT

18.1 Introduction:

The School of Management has started its operation by offering PG course (MBA) since July 2012 with 14 students having background from varied disciplines with a motto to develop professionals skilled with analytical and administrative ability. Looking at the economic potential of the North-Eastern states, a management school was a logical extension to National Institute of Technology, Agartala.

Masters of Business Administration (MBA) programme (full time) was started with the purpose of administering quality management education to aspiring managers to mould them as competent professionals and good human beings equipped with social ethics.

The department has 06 (six) nos. of dedicated faculty members along with faculty members from allied departments. Faculty members and experts are invited from other reputed institutions and corporate to bring professionalism among the students by blending academic knowledge with corporate skills.



School of Management Building

18.2 Academic Programme:

Currently, School of Management is offering two year (four semesters) full time MBA programme. This programme provides an in-depth understanding to students in technical, human and conceptual skills necessary for a successful manager with specialization in different areas like Finance, Marketing, Human Resource and System. The teaching strategy for this programme oriented towards the application of knowledge with live cases and teaching aids. In the year 2015-16, the student strength of the department in MBA programme is 38 (Thirty Eight) for odd semester, consisting 23 in 1st semester and 15 in 3rd semester and also the student strength is same for even semester.

There is a six weeks Summer Internship Programme (SIP) for students, after completion of first year course to develop business acumen. The Department facilitates students to undergo paid

internships in various reputed government and private organizations viz. RBI, NEDFi, SBI, NABARD, ONGC, HDFC, ITC, Senrysa Technologies Pvt. Ltd. etc.

18.3 Faculty and their Activities:

Short-Term Courses/ Workshops/ Seminars/ Symposia/ Conferences/ Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:

Workshop

| Sl. No. | Name of Faculty | Title | Period |
|-----------|-----------------|---|---|
| Workshop: | | | |
| 1. | Dr. Sonit Dutta | Workshop on “Environmental Studies”, sponsored by IIT Bombay. | 2 nd -12 th June, 2015. |

Honours and Awards obtained: 01(one)

| Sl. No. | Name of Faculty | Name of Award | Awarded by | Award for | Date |
|---------|------------------|---|---|---|----------------------------------|
| 1. | Dr. Rajib Mallik | “International Education Excellence Award”. | International Business Council, (New Delhi) | Outstanding achievements in the field of education. | 20 th November, 2015. |

18.4 Design and Development Activities:

The department has initiated various programmes for developing the skills of students. The department has organized “**Corporate Lecture Series**”, where experts from different Industries have shared their valuable industry experience to the MBA students. The department has also organized various kinds of activities at departmental level like Business Quiz, Industry Presentation, Management Game, Mock –interview etc.

18.5 Research and Consultancy:

Research Publications:

Total No. of papers published in Refereed International Journals : 08

In Refereed International Journals :

- (1) M.Kar and P.Shil, ‘Performance of Selected Debt Oriented Mutual Funds Schemes in India: A Study in Comparison with the Market Portfolio Returns’, ISOR Journal of Business and Management, 17, 47-57, (2015).
- (2) P. K. Behera and K. Mukherjee, ‘Application of DEMATEL and MMDE for analyzing key influencing factors relevant to selection of supply chain coordination schemes’,

- International Journal of Information Systems & Supply Chain Management, 8, 51-72, (2015).
- (3) A.Chakraborty, 'Regulation and Deregulation of Cooperatives in context of Legal framework', International Journal of Research in Commerce & Management, 5, 51-53, (2015).
 - (4) R.Mallik, 'Current Status of Tripura Cooperative Milk Producers Union Limited (Gomati): An Overview', International Journal of Business and Administrative Research Review, 3, 217-223, (2015).
 - (5) A.Chakraborty, 'HR practices in Social Media and Associated aspects of Social capital', Scholars Journal of Economics, Business and Management, 2, 505-509, (2015).
 - (6) R.Mallik, 'Status of Microfinance and Self Help Groups (SHGs) In Tripura', International Journal of Management and Social Science Research Review, 1, 307-315, (2015).
 - (7) S.Dutta, 'Entrepreneurship Research: A Review', International Journal of Exclusive Management Research, 12, 26-41, (2015).
 - (8) M.Kar & P. Shil, 'A Comparative Study on Performance Evaluation of Selected Mutual Fund Open Ended Growth Schemes in India', Finance India, XXX, 173-188, (2016).

Distinguished Visitors to the Departments:

| Sl. No. | Name of the Visitors and Designation | Date of Visit | Purpose of Visit |
|---------|---|--------------------------------|---|
| 1 | Mr. N. P. Topno, General Manager & O-i-C, Reserve Bank of India, Agartala Branch. | 20 th July, 2015 | Guest Speaker in Corporate Lecture Series(CLS) |
| 2 | Mr. Sujon Krishna Roy, General Manager, Pran Beverages (India) Pvt. Ltd., Bodhjung Nagar, Agartala | 20 th July, 2015 | Guest Speaker in Corporate Lecture Series(CLS) |
| 3 | Mr. Biplabi Patnaik, Vice President and Circle Head, NE Circle, Axis Bank | 30 th July, 2015 | Guest Speaker in Corporate Lecture Series(CLS) |
| 4 | Mr. Ansuman Samantaray, Deputy Vice President & Circle Prime, Axis bank. | 30 th July, 2015 | Guest Speaker in Corporate Lecture Series(CLS) |
| 5 | Mr. Dibakar Ghosh, Assistant Vice President & Branch Head, Axis Bank, Agartala. | 30 th July, 2015 | Guest Speaker in Corporate Lecture Series(CLS) |

18.6 Institute – Industry Collaboration:

One day industrial visit was arranged for the management students on 04th February, 2016 at ONGC Tripura Power Company Ltd. (OTPC), Palatana, Udaipur in the Gomati district of Tripura to get insight of the various managerial and operational activities of this thermal power plant.

18.7 Other Activities:

All dedicated faculty members of the department are deeply involved in academic, research and administrative responsibilities of the Institute.

19.0 CENTRAL LIBRARY

19.1 Introduction :

The main motto of NITA library is to render better and modern services to the NITA library clientele. With this object in view, NITA library has already introduced modern techniques namely RFID technology which includes self check-in and check-out and started sections namely, digital library, periodical section for printed journals, foreign book collection section, reprography section. Recently it introduced OPAC (Online Public Access Catalogue) system in the library (LAN). It also intends to open non-book section providing internet (WAN) facility with institutional repositories and inter library loan services to facilitate its users and facility for online access of previous question papers for different UG & PG examinations to be available in near future.

19.2 Library Information Services Statistics:

| Item | 2014-2015 | 2015-2016 | Remarks |
|---------------------------------------|--|--------------------------------------|---|
| A. Collections: | | | |
| Books | 84323 (As per accession register : general=59546 & Book Bank=24777) | 84350 (As per Accession register) | Current physical book as per accession register 68436. As because 15914 nos of books fall under damaged, written off, missing, Accession dropped, torned etc. categories though officially may did not declare. |
| Ph. D. Theses | 04 | 37 | 59 Nos. M.Tech Dissertation added in 2014-15 |
| Pamphlets and Reports | Nil | 10 | |
| Current Periodicals by Subscription | 10 | 7 | |
| Current Periodicals by Exchange/ Gift | 310 | 67 | |
| C.D | Nil | 612 | |
| Total | 84647 | | |
| | | | |
| B. Membership: | | | |
| Staff | 04 | 17 | |
| Faculty | 53 | 16 | |
| Students | 991 | 864 | |
| Total | 1048 | | |
| | | | |
| C. Services : Circulation | | | |
| Number of | 51165 | 48912 | |

| | | | |
|-------------------------------------|---------------|-----------|--|
| Readers visited | | | |
| Number of Books/ Journals issued | 19562 | 19494 | 19494 No's of books have been issued in 2015-16 |
| Xerox charges collection | Rs.2613 | 419 | |
| | | | |
| D. Reservation of Books | | | |
| Registered | Nil | 585 | |
| | | | |
| E. Reprography Service | | | |
| Number of Xerox copies supplied | 3730 | 556 | |
| | | | |
| F. Expenditure on | | | |
| Printed Journals | Rs.13109 | Rs.21,104 | Rs. 21,104 up to 20/09/2016 |
| E-books | Nil | Nil | In 2015-16 subscription to e-resources has been made through ESS only. |
| E-journals | USD 100065.27 | Nil | |
| G. New Journals Added | Nil | 335 | 335 number of e-journals added through ESS. |

19.3 Binding Facilities :

There is no binding section in NIT, Agartala library. Torn books are bound through outside binder. A binding section may be opened in near future for binding the books and journals.

19.4 New Facilities/ Equipments added :

2014-15 : Data entry of books had been completed for 33,950 (as on 20/09/2016) to enrich the OPAC (Online Public Access Catalogue) system (LAN) in the library for searching the resources available in the library mainly under 3 (three) approaches Authors, Titles and Subjects.

19.5 Future Plan :

- Full computerization of NITA library.
- Starting documentation work and services on different subjects specially in science and engineering.
- Providing Inter Library Loan facility.
- Opening of Non book section.
- Starting a binding section in the library.
- Launching user-education programme.

- vii. Online question papers facility to be provided for different UG & PG examinations of NITA.
- viii. 24 x 7 library services will be provided namely digital library, OPAC (Online Public Access Catalogue) through WAN.
- ix. Whole library to be covered under CCTV surveillance.

19.6 Other activities:

The institute library has participated in the NDL project of MHRD, hosted at and executed by IIT Kharagpur. The registered members can browse through the rich contents of NDL portal covering multiple subject domains and find them extremely useful. Most of the users have already been registered under NDL and registration of the rest is under process.

20.0 STUDENT AMENITIES AND ACTIVITY**20.1 Hostels:**

The Institute has both Boys' and Girls' Hostel facilities. Students are accommodated in 4 Boys' Hostels and 1 Girls' Hostel. Present status of the Hostels is given below:

| <i>Name of the Hostel/ Unit</i> | <i>Hostel Seat Capacity</i> |
|---------------------------------|-----------------------------|
| Aryabhatta Hostel | 1024 |
| Howra Hostel | 128 |
| Dhalai Hostel | 90 |
| Gomati Hostel | 128 |
| Gargi (Girls Hostel) | 412 |

*One more boys' hostel of capacity 1500 is under construction.

20.2 Medical Facilities:

A well equipped Medical Unit with Four Medical Officers, two Pharmacists, two Nurse and other supporting staff is available in the campus for rendering medical care to the students, staff and other inmates of the campus. Presently we have two Ambulances in our Medical Unit. In case of emergency, arrangements are made for taking the patients to the Jirania Rural Hospital (Primary Health Centre) which is 4 k.m. away from the campus or to the State Hospital in Agartala which is around 30 k.m. from the campus.

20.3 NCC:

NITAgartala has applied for the NCC unit of 100 cadets for Boys and Girls. Already 50 no. seats are sanctioned for girls and it will start functioning from the month of August 2015

20.4 NSS:

The NSS Unit of NIT Agartala has 100 volunteers. The unit members find pleasure in going out of the routinised student-life and engage themselves in organizing various programmes. The march past of 26th January and of 15th August; tree plantations of 15th August, a rally on 1st December on World AIDS Day, Blood Donation Camp, Special Camp (Seven days- Art competition, Make dustbin, Awareness of bad effect of smoking & awareness on various social issues), Meditation & Yoga programme, Rashtriya Ekta Divas, Contribution to the Aremed Force Flag Day Fund, Campus Cleaning Programme & Swachh Bharat Abhiyaan. All were organized in the campus with great enthusiasm and zeal by the said unit.

20.5 Gymkhana:

The NITA Student Gymkhana is a very active student organization that acts as a link between the students and the administration. The Gymkhana promotes the objectives of fostering extra-curricular and co-curricular activities and welfare of students. The Gymkhana is managed by the

students, for the students, under the guidance and active participation of the faculty and staff members. It comprises of three committee viz. Cultural committee, Sports and Games committee and Technical Committee. In the hierarchy, individual secretaries of clubs and committees follow general secretaries. All the members of the Students' Gymkhana are elected by the students.

20.6 Games & Sports:

NIT Agartala has regular physical activities like Warming-up, Yoga, Meditation and Multi Gym Fitness programmes

2015-16:

The football team of NIT Agartala participated in the exhibition football match which was organized by Agartala Govt. Medical College on 15th August 2015.

The Table tennis & Chess (men & women) of NIT Agartala participated in the Inter NIT Tournament organized by NIT Silchar during 16-18 October 2015.

The Volleyball & Badminton team of NIT Agartala participated in the Inter NIT tournament (Men's) organized by the NIT Surat from 11-14 March 2016.

The Cricket & Basketball (men & women) team of NIT Agartala participated in the Inter NIT tournament (Men's) organized by the NIT Calicut from 26-29 March 2016.

A 32 member of contingent from NIT Agartala took part in the Inter NIT meet at NIT Rourkela during 12th February to 14th February, 2016. Competitions were held in Football, Kabadi, Kho-Kho (men).

In January, 2016, Annual Sports Week of NITA was organized. The Annual Athletic meet held during 23rd to 26th March, 2016. Students, both boys and girls, took part in athletics meet. In this events faculties, staff and their family also participated.

Every year Inter Departmental Sports Competition is organized and all the events are held throughout this academic calendar.

Sports section also organized State level Yoga competition on International Yoga day.

20.7 Techno-Cultural Activities (ADVAITAM 2016):

ADVAITAM 2016, The Annual Techno-Cultural fest was organized by the students of NIT Agartala in the month of February 2016 which witnessed spontaneous participation of students from different engineering colleges, universities, schools from the state and outside state of our country. Mega events like music, dance, instrument playing, drama competition and inter-college/school dance, band competition were held during the festival. Apart from this, technical events, such as, motivational talks by eminent speakers from industry/academia, different competitions on technical expertise at school and college levels, robotics shows, art & crafts

exhibition, cycleathon by daily casual labours etc. were taken place during the festival days. Mr. Virat Chatterjee, Vice President, Snapdeal, Miss. Sonal Kapoor, CEO of PROPASHAN, India foundation like entrepreneurs had graced the festival by delivering their motivational talks.

In the year 2016, ADVAITAM was held from 11th February to 15th February, 2016. During this programme, Saktipunj dance troop from NITA, ACEX DJ band from Goa entertained the campus with their scintillating performances. The fest witnessed a Mega Star night with the presence of Bollywood singer Monali Thakur and her troops.

20.8 Other Activities:

The students of NITA participated in the national level Technical Fest organized by different IITS and NITS. They are also actively engaged in different technical and cultural clubs like - Music, Photographic, Dance, Robotics, Magazine, Fine Arts, Drama Club, and Soft Skill development, Programming, Meditation, Science and Trekking Clubs.

21.0 TRAINING & PLACEMENT AND OTHER FACILITIES

A. Placement details for the year 2015-16:

To provide better career solutions to the students of NIT Agartala and to help them to turn employment challenges into opportunities, the Institute has taken an initiative to revamp its 'Training and Placement' section to a 'Centre for Career Development (CCD)'. The new centre started its functioning from December, 2015 with an aim to provide career development programme like soft skill training, foreign language certification, career counselling by professionals, industry-oriented workshops and lectures, leadership talks, management development programmes and facilitates industry-sponsored research besides providing placement and internship support to the students. The mission of the centre is to prepare every student of NIT Agartala to be career oriented instead of job oriented.

Details of the number of students placed during the period under report are given below as against those registered during 2015-2016:

| Sl. No | COMPANY | Number of students selected Branch wise/Course wise, (B.Tech, M.Tech, MBA, MCA, M.Sc) | | | | | | | | | | | | | | | | | |
|--------|-------------------------|---|----|----|----|----|----|----|----|----|----|-------------------------|----|----|----|----|----|----|-----|
| | | UG (B. Tech) All Branch | | | | | | | | | | PG (M. Tech) All Branch | | | | | | | MBA |
| | | CE | ME | EE | EE | EE | EE | EE | EE | EE | EE | EE | EE | EE | EE | EE | EE | EE | |
| 1 | L&T INFOTECH | - | - | - | 3 | - | - | - | - | 6 | - | - | - | - | - | - | - | - | 9 |
| 2 | Polaris | - | - | - | 3 | - | - | - | - | 8 | - | - | - | - | - | - | - | - | 11 |
| 3 | MuSigma | 2 | 4 | 2 | 3 | 2 | - | 3 | 2 | - | - | - | - | - | - | - | - | - | 18 |
| 4 | Tech Mahindra | 3 | 5 | 2 | 6 | 7 | 2 | 3 | 2 | - | - | - | - | - | - | - | - | 1 | 31 |
| 5 | IBM | 20 | 17 | 17 | 7 | 5 | 8 | - | 4 | - | 3 | 3 | - | 1 | - | - | - | - | 85 |
| 6 | Tata Motors | - | 6 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 7 |
| 7 | NCCL | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 |
| 8 | Infosys | 11 | 7 | 3 | 8 | 4 | 3 | 8 | 17 | 3 | 1 | 2 | 1 | 2 | - | 1 | - | 4 | 75 |
| 9 | Oracle | - | - | - | 2 | - | - | - | 4 | - | - | - | - | 1 | - | - | - | - | 7 |
| 10 | Johnson Control | - | - | 1 | 1 | 3 | - | - | 6 | - | - | - | 1 | - | - | - | - | - | 12 |
| 11 | Virtusa | - | 1 | 1 | 5 | 3 | - | - | 7 | - | - | - | - | - | - | - | 1 | - | 18 |
| 12 | XL Dynamics | 1 | 2 | 1 | 1 | 1 | 1 | 1 | - | 2 | - | - | - | - | - | - | - | - | 10 |
| 13 | HDFC Life | 2 | 1 | 5 | 1 | 2 | - | - | 3 | 1 | - | - | - | - | - | - | - | - | 15 |
| 14 | L&T ECC | 11 | 15 | 7 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 35 |
| 15 | Maruti Suzuki | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| 16 | Tata Technologies | - | 2 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 3 |
| 17 | Triconinfotech | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| 18 | Ashok Leyland | - | 2 | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | 3 |
| 19 | Mysis | - | - | 1 | - | - | - | - | 3 | - | - | - | - | - | - | - | - | - | 4 |
| 20 | Vedanta | - | 1 | 1 | - | - | 4 | - | - | - | - | - | - | - | - | - | - | - | 6 |
| 21 | Fiat | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| 22 | Subhros | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| 23 | Reliance Jio Technology | - | - | 2 | 9 | - | - | - | 2 | - | - | - | - | - | - | - | - | - | 13 |
| 24 | Reliance JioTelcom | - | - | - | 5 | - | - | - | 4 | - | - | - | - | - | - | - | - | - | 9 |
| 25 | Axis Bank | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 2 |
| 26 | Concept Education | 1 | 1 | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | 4 |
| 27 | KEC | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 |

| | International | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|--------------------|-----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|----|----|------|-----|-----------------|
| 28 | Immunoshop | - | - | - | - | - | - | - | 3 | - | - | - | - | - | - | - | - | 3 | 3.5 | | |
| 29 | Ramco Systems | - | 1 | - | - | 2 | - | 5 | 1 | - | - | - | - | - | - | - | - | 9 | 4 | | |
| 30 | SSZ Infotech | - | - | - | - | - | - | - | 4 | - | - | - | - | - | - | - | - | 4 | 2 | | |
| 31 | BPCL | - | 3 | 4 | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 11.5 | | |
| 32 | Mindtree | - | - | - | - | - | - | - | 6 | - | - | - | - | - | - | - | - | 6 | 7 | | |
| 33 | Ways2Capital | 4 | 3 | 2 | - | 3 | 4 | 6 | - | 3 | - | - | - | - | - | - | - | 25 | 3.45 | | |
| 34 | Mphasis | - | - | 1 | 7 | 5 | - | 4 | 1 | - | - | - | - | - | - | - | - | 18 | 4 | | |
| 35 | HPCL | - | 3 | 2 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | 8 | 10.5 | | |
| 36 | SAP Labs | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | 2 | 9 | | |
| 37 | CA Technologies | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 1 | 8 | | |
| 38 | Gammon India | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 8 | 4 | | |
| 39 | Technibuild | 8 | 1 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | - | 2 | 15 | 4 | |
| 40 | Capital Aim | 1 | 3 | 1 | 4 | - | 1 | 6 | 3 | 1 | - | 1 | - | - | - | - | 1 | 22 | 2.92 | | |
| 41 | Capital Via | - | - | - | - | - | - | 2 | - | 1 | - | - | - | - | - | - | - | 3 | 4.82 | | |
| 42 | Polmon Instruments | - | - | - | - | 1 | - | - | 1 | - | - | - | - | - | - | - | - | 2 | 3.25 | | |
| 43 | Wipro | - | - | 3 | 1 | 1 | - | - | 1 | - | - | - | - | - | - | - | - | 6 | 3.3 | | |
| 44 | Powergrid | 2 | - | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 11.5 | | |
| Total Offer | | 81 | 86 | 62 | 69 | 43 | 24 | 42 | 83 | 18 | 8 | 6 | 2 | 4 | 0 | 1 | 0 | 7 | 4 | 540 | Avg. Salary 4.9 |
| Actual no of students offered | | 60 | 57 | 47 | 52 | 35 | 24 | 33 | 56 | 17 | 8 | 6 | 2 | 4 | 0 | 1 | 0 | 7 | 3 | 412 | |
| Total No. of students (passed out) | | 149 | 93 | 83 | 72 | 50 | 42 | 60 | 76 | 21 | 93 | 48 | 43 | 34 | 7 | 6 | 12 | 34 | 15 | | |
| No of eligible students | | 101 | 82 | 62 | 63 | 39 | 24 | 45 | 57 | 19 | 94 | 48 | 43 | 34 | 7 | 6 | 12 | 34 | 15 | | |

CSE:Computer Science &Engg, ECE:Electronics & Communication Engg, ME:Mechanical Engg, PE:Production Engg, EE:Electrical Engg, EI:Electronics & Instrumentation Engg, CE:CivilEngg, CHE:ChemicalEngg, BIO:BioEngg.

B. Scholarships/ financial assistance:

The details of different categories of scholarships/financial assistance functioning at NIT Agartala during 2015-16 are mentioned below:

| Sl. No | Category of Stipend / Scholarship | | Rate of stipend P.M.(Rs.) | Income bar | No. of Students | Duration of the Stipend / Scholarship |
|-------------------|-----------------------------------|---------------|---------------------------|-------------|-----------------|---------------------------------------|
| B. Tech. students | | | | | | |
| 1 | Merit Stipend | Hosteller | 90 | 9000/- P.A | 4 | 10 month per year |
| | | Days' Scholar | 60 | | | |
| 2 | S C Stipend | Hosteller | 1200 | 2.5 lac P.A | 193 | 10 month per year |
| | | Days' Scholar | 550 | | | |
| 3 | S T Stipend | Hosteller | 820 | 2.5 lac P.A | ** | 10 month per year |
| | | Days' Scholar | 530 | | | |
| 4 | OBC Stipend | Hosteller | 750 | 1.0 lac P.A | ** | 10 month per year |
| | | Days' Scholar | 350 | | | |

| | | | | | | |
|---|----------------------------|-----|------|--------|----|-------------------|
| 5 | NEC Stipend | --- | 1000 | No Bar | ** | 10 month per year |
| 6 | Post Madhyamik Stip. | --- | 375 | No Bar | 32 | 10 month per year |

Note: ** Information /record not available with the stipend section due to implementation of Direct Benefit Transfer.

22.0 CAMPUS AMENITIES AND INFRASTRUCTURE DEVELOPMENT INITIATIVES

22.1 Introduction:

The Institute has gone through a rapid growth in its Infrastructure Development as per commitment in its strategic plan, a journey towards excellence. Converting an existing State Level Engineering Institute (Viz TEC) having infrastructure and logistic inadequacies into an institute of National excellence is a formidable challenge. But the growth process which has taken place during the last five years at NIT Agartala is an indication of growth oriented programmes and realistic planning in the right direction.

22.2 Major Works :

The Institute is spread over an area of 365 acres of land. The following major works have been completed.

| Sl. No. | Name of the Works | Rupees in Lakhs |
|---------|--|-----------------------------------|
| 1. | Construction of Boys' and Girls' Hostels, Dining and Common Rooms. | 11566.44 (Including deviation) |
| 2. | Construction of Market Complex. | 400.00 |
| 3. | Internal Road Development. | 1441.94 |
| 4. | Construction of Laboratories cum Canteen Building, Workshop and Academic Building. Construction of G+6 Academic Building | 5178.16 |
| 5. | Construction of Staff Housing, Guest House, Director's, Residence. | 6046.49 (Including deviation) |
| 6. | Construction of Central School. | 2395.00 |
| 7. | Construction of Administration Block I & II and Seminar Hall. | 3913.02 |
| 8. | Construction of School of Management Block. | 3637.28 |
| 9. | Construction of Computer Centre and Central Library. | 8009.14 |
| 10. | Construction of New Housing (H4A & H4B - two blocks consisting of 48 flats). | 2698.54 |
| 11. | Additional Floor of Central School. | 995.85 |
| 12. | Area development works in and around the campus. | 229.732 |

Work in progress :

The following works are in progress and will be completed very soon.

| Sl. No. | Name of the Works | Rupees in Lakhs |
|---------|---|-----------------|
| 1. | Construction of duplex housing (10 nos.). | 1055.50 |
| 2. | Construction of 1500 Capacity Boys Hostel. | 15243.00 |
| 3. | Construction of Sports Complex at NIT, Agartala | 5410.819 |

22.3 Housing Facilities :

As regards residential buildings, staff housing units having twenty four flats in each of H3A, H3B, H4A, H4B, H5 type housing and twelve flats in each of H2A, H2B type housing have been completed and are in use. New H4B2 and H4B3 type housing with 24 flats each are also completed.

22.4 Guest House :

There is one Old Guest House at NIT Agartala having 13 Nos. double bed living rooms. There is a Transit House at Agartala having two Single bed rooms, one double bed room and one conference hall. A new International Guest House having thirty three single bed rooms, ten suits and five VVIP suits has been constructed.

22.5 Hostel :

Boys' Hostels : Arryabhatta: 1024 Capacity, Howrah: 128 Capacity, Dhalai: 90 Capacity, Gomati: 128 Capacity, Girls Hostel: Gargi: 412 Capacity.

22.6 Bank :

1. State Bank of India, 2. Canara Bank, 3. Tripura Gramin Bank are operating in the NIT Agartala campus.

22.7 Post Office :

There is a Sub-Post Office in the NIT Agartala Campus.

23.0 TEQIP - II

Introduction:

The Technical Education Quality Improvement Programme (TEQIP) launched by the Government of India with the World Bank assistance to scale-up and support ongoing efforts to improve quality of Technical Education and enhance existing capacities of the institution to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at National and International levels. TEQIP is a long term Programme of 10-12 years duration planned to be implemented in 2-3 phases. The first phase of the TEQIP commenced in March 2003 and ended in March 2009. TEQIP phases II has been introduced in National Institute of Technology Agartala on 3rd August 2011. The overview of the TRQIP-II project of NIT Agartala is given as follows:

Project Progress – Expenditure Statement

| Fund Received | Status from 01.04.2015 – 31.03 2016 Rs. (in lakh) |
|---|--|
| GRANT Received | Nil |
| Previous Balance | 219.27 |
| Interest and other received | 8.29 |
| Total (A) | 227.56 |
| Expenditure Incurred Upto 31.03.2016 (B) | 140.83 |
| Unspent Balance (A-B) | 86.73 |

Project Progress – Expenditure Statement

| Sl. No | Category | Activity | Status from 01.04.2015 – 31.03 2016 Rs. (in lakh) |
|---------------|----------------------|---|--|
| 1 | Procurement | Procurement of goods (equipment, furniture, books, LRs, software and minor items) and civil works for improvement in teaching, training and learning facilities | Total: Rs. 57.20 |
| 2 | Assistantships | Provide Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines | Total: Rs.00.00 |
| 3 | R&D | Enhancement of R & D and institutional consultancy activities | Total: Rs. 5.12 |
| 4 | FSD | Faculty and staff development for improved competence | Total: Rs. 50.45 |
| 5 | I-I-I- Cells | Enhanced interaction with Industry | Total: Rs.00.00 |
| 6 | Capacity development | Institutional Management Capacity enhancement | Total: Rs. 4.63 |

| | | | |
|---|-----------------|---|-------------------|
| 7 | Reforms | Implementation of Institutional academic reforms by NBA for UG Program of CE,EE,ME | Total: Rs. 3.28 |
| 8 | Student support | Academic support for weak students (*Makeup Examinations and Supplementary Examination along with Summer Class are arranged for weak students. Faculties are paid Rs.1000 per credit upto Rs.4000 per subject in one year from Institute fund.) | Total: Rs. 0.00* |
| 9 | IOC | Incremental operating cost | Total : Rs. 20.15 |
| | | TOTAL | Rs. 140.83 |

Project Progress

Conference, Workshop etc. attended by faculty and students in India are as follows:

| | Particulars | 2015-16 |
|---------|--|---------|
| Faculty | Attended Conference / Workshop, etc. | 35 |
| | IIM Training attended by Administrator | 12 |
| Student | Attended Conference / Workshop, etc. | 75 |

Details of patent filed/applied funded by TEQIP-II are as follows:

| Sl. No. | Fund provided to the following faculties. | Designation with Department. | Patent title/patent details. |
|---------|---|---|---|
| 1. | Mr. Mitra Barun Sarkar | Assistant Professor, Department of E.C.E. of NIT Agartala. | A touch-pad based device with integrated electronic tool providing authentication for user. |
| 2. | Dr. Srimanta Ray | Assistant Professor, Department of ChE, NIT Agartala. | A membrane-independent off-grid hybrid power system. |
| 3. | Dr. Biswanath Bhunia | Assistant Professor, Department of Bio Engineering, NIT Agartala. | An acidophilic xylanase enzyme with broad pH activity from aspergillus niger. |

Following workshop/Training conducted under TEQIP-II:

| SL. No. | Topic of the Workshop/ Training. | Organized by the following Department | Duration |
|---------|---|--|---|
| 1. | Workshop on “Recent Trends in Transportation Engineering” | Civil Engineering | From 18 th to 19 th March 2016. |
| 2. | Two days workshop on “3D Printing and Laser application in Manufacturing Processes” | Mechanical Engineering | From 11 th to 12 th March, 2016 |
| 3. | Two days National Workshop on advances in Two-phase Flow and Heat Transfer. | Mechanical Engineering in association with Chemical Engineering. | From 25 th to 26 th March 2016 |

| | | | |
|-----|---|--|---|
| 4. | Two days International Workshop on “Product Design and Development” | Mechanical Engineering in association with Production Engineering. | From 11 th to 12 th March 2016. |
| 5. | Two days workshop on “Power System Beyond 2020” | Electrical Engineering | From 17 th to 18 th August 2015 |
| 6. | Two days Workshop on “Optics and Photonics”. | Electrical Engineering | From 8 th -9 th Oct, 2015 |
| 7. | Two days Workshop on “Recent Trends on Power Electronics” | Electrical Engineering | From 21 st to 22 nd November 2015 |
| 8. | One day National Workshop on “Challenges of Emerging Nanotechnology for VLSI Nanoelectronics” | Electronics and Communication Engineering | On 21.01.2016 |
| 9. | Three days National Workshop on “Recent Advancement in Soft Computing Techniques” | Mathematics | From 29 th to 31 st January 2016 |
| 10. | Computational Study on Fluid Transport Phenomena | Mathematics | From 5 th -7 th Feb 2016 |
| 11. | 2 days national workshop on Human Computer Interaction | Computer Science and Engineering | From 15 th to 16 th February 2016 |
| 12. | Training on “Office, Management using Information and Communication Technology” | TEQIP-II | January 2016 |

24.0 FINANCE & ACCOUNTS

24.1 Analysis of Plan and Non-Plan Grants :

| Head | 2015-16 | (Rs. In Lakhs) 2014-15 |
|-----------------------|----------------|----------------------------------|
| 1. Non- Plan | | |
| Income | | |
| Grant from MHRD | 2300.00 | 1500.00 |
| Total | 2300.00 | 1500.00 |
| Expenditure | | |
| Recurring | 5041.19 | 4092.54 |
| Total | 5041.19 | 4092.54 |
| 2. Plan | | |
| Grant from MHRD | 6499.60 | 7900.00 |
| Corpus Fund Transfers | | |
| Total | 6499.60 | 7900.00 |
| Expenditure | | |
| Non-Recurring | 7068.58 | 8524.23 |

24.1.1 Plan Fund

| Plan | (Rs in Lakhs) |
|-----------------------------------|----------------------|
| Opening Balance | : 1227.39 |
| Grant Sanctioned During 2015-2016 | : 6499.60 |
| Funds from other sources | : 30.07 |
| Total Available | : 7757.06 |
| Capital Expenses during 2015-2016 | |
| Building & Construction | : 6813.91 |
| Furniture & Fixtures | : 79.14 |
| Equipments | : 173.03 |
| Other Exp. | : 2.50 |
| Total Utilized | : 7068.58 |
| Unutilized Balance | : 688.48 |

24.1.2 Non-Plan Fund :

| Non – Plan | (Rs in Lakhs) |
|-----------------------------------|----------------------|
| Opening Balance | : 367.39 |
| Grant Sanctioned during 2015-2016 | : 2300.00 |
| Funds from other sources | : 2607.81 |
| Total Available | : 5275.20 |
| Expenditure during 2015 – 2016 | |
| Pay & Allowances | : 2531.08 |

| | | |
|------------------------------------|---|---------|
| Recruitment Benefits | : | 354.06 |
| Health Services | : | 1.87 |
| Student Scholarship | : | 773.53 |
| Administrative Expenses | : | 350.57 |
| Student Support Activities | : | 55.30 |
| House Keeping & Estate Maintenance | : | 681.91 |
| Water / Electricity | : | 292.87 |
| Total Utilized | : | 5041.19 |
| Unutilized Balance | : | 234.01 |

24.2 Establishment Expenditure :

| <i>Sl.No</i> | <i>Head</i> | <i>Amount (In Lakhs)</i> |
|--------------|---------------------|--------------------------|
| 1. | Pay & Allowance | 2531.08 |
| 2. | Retirement Benefits | 354.06 |

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भारतीय लेखा परीक्षा और लेखा विभाग,
INDIAN AUDIT AND ACCOUNTS DEPARTMENT
महालेखाकार (लेखा परीक्षा) का कार्यालय, त्रिपुरा, अगरतला
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TRIPURA, AGARTALA

पिन / PIN – 799006 फ़ैक्स / Fax – 0381-2350158

ई मेल / email: agautripura@cag.gov.in

Date: November 15, 2016

To
The Registrar
National Institute of Technology, Agartala,
Barjala, Jirania, Tripura (West),
Pin - 799046.

Subject:- SAR on the accounts of NIT, Agartala for the year 2015-16.

Sir,

I am sending herewith the Separate Audit Report on the accounts of the National Institute of Technology (NIT) for the year 2015-16 along with a Management letter for further action at your end.

Encl: As stated.

Yours faithfully,

(T. I. Kubzar)

Deputy Accountant General (Audit)

**SEPARATE AUDIT REPORT OF THE COMPTROLLER AND AUDITOR
GENERAL OF INDIA ON THE ACCOUNTS OF THE NATIONAL INSTITUTE OF
TECHNOLOGY, AGARTALA FOR THE YEAR ENDED 31 MARCH 2016**

We have audited the attached Balance Sheet of the National Institute of Technology (NIT), Agartala as on 31 March 2016, 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 & Conditions of Service) Act, 1971. These financial statements are the responsibility of the management of the NIT, Agartala. 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 (C&AG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules and Regulations (Propriety and Regularity) and efficiency-cum-performance aspects etc., if any, are reported through Inspection Reports/C&AG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. **Based on our audit, we report that:**

- i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
- ii) The Balance Sheet, Income and Expenditure Account/ Receipt and Payment Account dealt with by this report have been drawn up in the format prescribed by the Ministry of Human Resources Development (MHRD), the 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 not been maintained by the NIT Agartala as far as it appears from our examination of such books.

iv) We further report that:

A. Balance Sheet

Application of Fund

| | | |
|--------------------------|-----------------|----------------|
| Capital Work-in-progress | (Plan Fund) | ₹ 450.72 crore |
| Capital Work-in-progress | (Non-Plan Fund) | ₹ 5.26 crore |

A. 1. The above heads were overstated by ₹ 175.43 crore due to not transferring 13 construction works¹ to Tangible Assets though these were already taken over by NIT, Agartala between January 2011 and May 2015 after completion of construction activities. This has also resulted in understatement of Tangible Assets by ₹ 169.19 crore (Plan: ₹ 168.49 crore and Non-plan: ₹ 0.70 crore) and understatement of accumulated depreciation by ₹ 6.24 crore (Plan: ₹ 6.16 crore and Non-plan: ₹ 0.08 crore).

| | | |
|--------------------------|-------------|----------------|
| Capital Work-in-progress | (Plan Fund) | ₹ 450.72 crore |
|--------------------------|-------------|----------------|

A. 2. The above is overstated by ₹ 7.37 crore for accounting of Mobilisation Advance paid to a contractor for construction of 1500 Capacity Boys' Hostel at NIT Agartala as Capital Work-in-Progress. This has also resulted in understatement of 'Loans, Advances & Deposits' by the ₹ 7.37 crore.

Corpus / Capital Fund and Liabilities

| | | |
|--|-------------|---------------|
| Designated / Earmarked/ Endowment Fund | Schedule -2 | ₹ 25.99 crore |
|--|-------------|---------------|

A. 3. The above is overstated by ₹ 25.99 crore as it includes closing balance of plan grant which was required to be booked as 'Current Liabilities and Provisions' under Schedule 3 in term of format of accounts approved by MHRD. This has also resulted in understatement of Current Liabilities by ₹ 25.99 crore.

Corpus /Capital Fund and Liabilities

| | | |
|---------------------------------|-------------|---------------|
| Current Liabilities & Provision | Schedule -3 | ₹ 47.95 crore |
|---------------------------------|-------------|---------------|

A.4. As per instructions given in the format of accounts notified by MHRD, the Provident Fund Account and the New Pension Scheme Account are owned by the members of those funds and not by the Institute. These accounts are required to be separated from the Institution's Account. NIT, Agartala has, however, incorporated balance of fund of these accounts in its annual accounts. This has resulted in overstatement of Current Liabilities by ₹ 6.46 crore (NPS: ₹ 6.40 crore and Staff Benefit Trust (GPF): ₹ 0.06 crore) with corresponding overstatement of current assets by similar amount i.e. ₹ 6.46 crore (Saving account: ₹ 0.07 crore and Fixed Deposits: ₹ 6.39 crore).

¹ (Plan Fund : 10 nos with value of ₹ 174.65 crore and Non Plan : 3 nos with value of ₹ 0.78 crore).

B. Income and Expenditure Account**Expenditure****Depreciation****Schedule - 4****₹ 7.81 crore**

B.1. The above head was understated by ₹ 9.78 crore due to short provisioning of depreciation for delay in capitalisation assets. This has also resulted in overstatement of Fixed Assets – Tangible Assets (Net Block) by ₹ 9.78 crore.

Prior Period Expenses**Schedule - 22****NIL**

B.2. The above is understated by ₹ 77.66 lakh due to incorrect accounting of repair and maintenance expenditure incurred during the year 2009-10 as Capital Work-in-Progress. This has also resulted in overstatement of Capital Work-in-Progress by ₹ 77.66 lakh.

C. General

1. The books of accounts of NIT, Agartala does not provide visible trail of transaction from its initial posting to the final accounts which ensures arithmetic accuracy, correctness and completeness of the annual accounts.

2. NIT, Agartala has accounted an amount of ₹ 55.92 crore as cost of construction of 'housing and guest house'. However, as per final bill, total cost of the work was ₹ 60.96 crore. The difference of ₹ 5.04 crore has not been reconciled.

3. NIT, Agartala did not furnish records of income tax exemption available to NIT (if any), Tax Deducted at source by the Bank on NIT's interest earning, return filed with income tax authority.

4. NIT, Agartala was established by converting Tripura Engineering College into a centrally funded institution vide decision of Union Cabinet dated 23 February 2006. The Institute has identified (October 2007) total net assets (comprising of land, buildings and others) of ₹ 16.08 crore. These assets, though in possession of NIT, Agartala, are yet to be incorporated in the accounts with corresponding liabilities. Further no correspondence was done with the State Government in this regard since October 2007.

5. As per the instructions contained in formats of accounts prescribed by MHRD under Schedule 23, Designated/ Earmarked/Endowment Funds are those fund which are set aside by the institute for identified purpose. Incomes on these items are credited to the respective fund accounts. Similarly, expenditures are also debited to fund accounts. NIT, Agartala has maintained 15 fund accounts² wherein related income/expenditure are credited/debited to the

² Project : ₹ 29.16 lakh, Retirement Benefit : ₹ 1062.42 lakh, Student Welfare : ₹ 15.38 lakh, Staff Development : ₹ 1.2 lakh, Institute Development : ₹ 690.31 lakh, Infrastructural Development : ₹ 85.37 lakh, Sponsored Project : ₹ 1018.95 lakh, Staff Welfare : ₹ 0.84 lakh, Departmental Promotional (Civil): ₹ 23.57 lakh, NSS Unit : ₹ 0.22 lakh, Director's Relief : ₹ 3.46 lakh, School of Continuing Education : ₹ 0.34 lakh, Guest House : ₹ 24.03 lakh, NIT Transit House :

respective fund account itself. These funds were, however, booked as current liabilities. Thus, there is inconsistency in accounting of these funds.

6. As per the instructions of MHRD contained in schedule 23 of prescribed format of account Straight Line Method of depreciation is required to be followed at the rate specified therein. Further, full depreciation is to be charged for the assets acquired during the period. The management has not complied with the instruction.

D. Grant-in-aid

During the year the institute has received ₹ 88 crore (Plan: ₹ 65 crore and Non Plan: ₹ 23 crore) from Government of India. An amount of ₹ 15.94 crore was lying unspent as on 1 April 2015. Further, internal income of the institute was ₹ 26.38 crore. Against total availability of ₹ 130.32 crore, the institute could utilise only ₹ 121.10 crore leaving unspent balance of ₹ 9.22 crore (Plan: ₹ 6.88 crore and Non-Plan: ₹ 2.34 crore) as on 31 March 2016.

E. Management letter

Deficiencies which have not been included in the Audit Report have been brought to the notice of the Management through a management letter issued separately for remedial action.


v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and 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 with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in *Annexure* to this Audit Report, give a true and fair view in conformity with accounting principles generally accepted in India:

- a. In so far as it relates to the Balance Sheet, of the state of affairs of the National Institute of Technology, Agartala as at 31 March 2016.
- b. In so far as it relates to Income and Expenditure Account of the deficit for the year ended on that date.

For and on behalf of the Comptroller and Auditor General of India

Place : Agartala
Date : 15-11-2016


Accountant General (Audit), Tripura

Annexure to the Separate Audit Report on the accounts of the National Institute of Technology, Agartala for the year 2015-16

Audit evaluation of internal control and internal audit system is summarised as under:

(1) Adequacy of internal audit system

Till the close of financial year 2015-16, there was no separate internal audit wing of the institute. A Chartered Accountant firm was appointed by the management for internal audit of annual accounts.

(2) Adequacy of internal control system

- (i) NIT, Agartala has not prepared its own accounting and internal control manual.
- (ii) All the assets belonging to NIT, Agartala are not brought into the accounts. Further, some of the civil works were not capitalised though the same were already taken over.
- (iii) While releasing temporary advance, expenditure head was booked. This may affect the recovery procedures as no outstanding amount was reflected against the advances.
- (iv) Proper accounting records are not maintained to indicate correctness of figures appearing in annual accounts.

(3) System of physical verification of fixed assets and inventory

The physical verification of assets and inventory indicate high value items lying as under non-working conditions (repairable or damaged). No action is being taken to address the issue.

Confidential



No. ECPA/NIT-SAR/2015-16/ 312

INDIAN AUDIT AND ACCOUNTS DEPARTMENT
OFFICE OF THE ACCOUNTANT GENERAL (AUDIT),
TRIPURA, AGARTALA
PIN – 799006

Phone: 0381 - 235 0031

FAX: 0381 - 235 0158

Email: agautripura@cag.gov.in

Dated: November 15, 2016

To
The Registrar,
National Institute of Technology, Agartala,
Barjala, Jirania, West Tripura, Pin: 799 046.

Subject: Management Letter on the annual accounts of the NIT, Agartala for the year ended 31 March 2016.

Sir,

Certification audit on the annual accounts of National Institute of Technology, Agartala for the year ended 31 March 2016 was taken up by this office under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers & Conditions of Service) Act, 1971. A Separate Audit Report (SAR) incorporating final comments of C&AG is issued along with this letter. Apart from the audit comments issued in SAR, audit has noticed three points which require management's action to ensure compliance to the instructions of MHRD with respect to preparation of annual accounts.

Yours faithfully,

Enclosed: As stated.


15/11/2016
Deputy Accountant General (Audit)

ANNEXURE TO THE MANAGEMENT LETTER

1. As per Schedule 9 of the format of accounts prescribed (17 April 2015) by MHRD, the Academic receipts are to be classified as Tuition fee, Admission fee, Enrolment fee, Library Admission fee, Laboratory fee, etc. However, the Institute booked the above amount under Academic receipts as income in the Income & Expenditure Account without item wise classification. Therefore, audit could not vouchsafe the income due to non-maintenance of item wise ledger accounts/non-availability of detailed break-up.
2. The management has applied 60 *per cent* depreciation on computer and accessories (worth ₹ 0.75 lakh) against 20 *per cent* as prescribed by MHRD.
3. The computer items of ₹ 10.75 lakh was booked under Machinery and Equipment instead of Computer and Accessories.


15/11/16
Sr. Audit Officer(Coml)



NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

ANNUAL ACCOUNTS 2015-16



KOUSHIK DEBNATH & ASSOCIATES
Chartered Accountants

Lenin Sarani, Old Municipality Road
Agartala, Tripura (West) 799001
cakoushik2012@gmail.com
Ph: 0381 2381007

National Institute of Technology (NIT), Agartala
Internal Audit Report for the Financial Year 2015-16

We have conducted the Internal Audit of the National Institute of Technology, Agartala for the financial year 2015-16 during the period from 01.04.2015 to 31.03.2016 and we report the following observations:

Observations:

1. Details of Funds received by NIT, Agartala during the financial year 2015-16 from MHRD, New Delhi.

For Plan Fund:

| Sl No. | Sanction Memo | Date of Sanction | Amount in lakhs |
|--------|-----------------------|------------------|-----------------|
| 1 | F.No.35-2/2015-TS III | 04.06.2015 | 1000.00 |
| 2 | F.No.35-2/2015-TS III | 28.09.2015 | 1500.00 |
| 3 | F.No.35-2/2015-TS III | 29.02.2016 | 3999.60 |
| | | | |
| | Total | | 6499.60 |

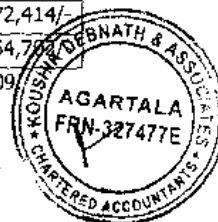
For Non-Plan Fund:

| Sl No. | Sanction Memo | Date of Sanction | Amount in lakhs |
|--------|-----------------------|------------------|-----------------|
| 1 | F.No.35-3/2015-TS III | 03.06.2015 | 800.00 |
| 2 | F.No.35-3/2015-TS III | 08.09.2015 | 1000.00 |
| 3 | F.No.35-3/2015-TS III | 16.12.2015 | 500.00 |
| | | | |
| | Total | | 2300.00 |

2. On verification of the Cash Book it is seen that the following bank accounts are maintained for Non-Plan fund by the Institute:

| Bank Name & Branch | Balance as per Cash Book as on 31.03.2016 |
|-----------------------------|---|
| SBI, NIT Agartala Br. | 2,19,33,333/- |
| Canara Bank, NIT Jirania Br | 4,48,955/- |
| Cash in hand | 2,72,414/- |
| | 2,26,54,702/- |

The Canara bank account is inoperative since 29.01.2009



3. The following bank accounts are maintained for Plan fund by the Institute:

| Bank Name & Branch | Balance as per Cash Book as on 31.03.2016 |
|-----------------------------|---|
| SBI, NIT Agartala Br. | 11,94,77,649/- |
| Canara Bank, NIT Jirania Br | 19,541/- |
| | 11,94,97,190/- |

The Bank reconciliation statement of the same shows that an uncleared cheque for Rs. 12,885/- issued on 18.08.2014 is still pending and should be reversed. The Canara bank account is inoperative since long.

4. It has been observed that Accounting Heads are mentioned in the Cash Book from 01.10.2015. Entries are booked on the basis of narrations in the Cash Book. Proper accounting heads always to be mentioned while booking entries in cashbook.
5. Temporary advances lying unadjusted as on 31.03.2016 amount to Rs.7,24,012/- (Annex enclosed). Efforts to be made to adjust those at the earliest.
6. Following are the list of unadjusted advances given to third parties as on 31.03.2016 from Plan fund:

| Name of Party/Agency | Amount (Rs) as on 31.03.2016 | Unadjusted since |
|----------------------|------------------------------|------------------|
| BSNL, Agartala | 1,72,764/- | 01.04.2015 |
| PHE, Agartala | 15,60,100/- | 01.04.2015 |
| THB, Agartala | 76,40,420/- | 01.04.2015 |
| DWS Deptt, Agartala | 26,95,300/- | 01.04.2015 |
| CPWD, Agartala | 16,14,84,092/- | 01.04.2015 |
| EPIL | 1,02,00,000/- | 01.04.2015 |
| Total | 18,37,52,676/- | |

7. Following are the list of unadjusted advances given to third parties as on 31.03.2016 from Non-Plan fund:

| Name of Party/Agency | Amount (Rs) as on 31.03.2016 | Unadjusted since |
|----------------------|------------------------------|------------------|
| RD, Agartala | 20,00,000/- | 01.04.2015 |



8. Fixed Assets:

- a. The Institute maintains Fixed Assets Register in excel (computerized).
- b. No insurance coverage for any fixed assets is taken.
- c. Subscription for e-books for 1 year are treated as Fixed Assets & depreciation charged @ 40% instead of full write off.
- d. As confirmed, the following head of items shown under CWIP as on 31.03.2016 are Assets those are already being put to use however due to non receipt of completion certificate those are yet to be capitalized.

| Name of Assets | Amount (Rs) as on 31.03.2016 |
|--|------------------------------|
| Construction of Watch tower & Security | 56,98,969/- |
| Construction of School of management | 39,31,79,862/- |
| Construction of Auditorium Building | 2,31,51,901/- |
| Construction of Housing & Guest House | 55,92,18,130/- |
| Construction of Admin Block & Seminar | 46,20,28,979/- |
| Construction of Central Library | 28,66,24,924/- |
| Construction of H4B Building | 17,98,21,209/- |
| Total | 190,97,23,974/- |

9. On verification of the bills pertaining to services rendered to the Institute for gardening/ security/ House keeping, it has been observed that service tax has been charged by the service providers to the Institute. Here reference should be made to Service Tax mega exemption notification 25/2012 (copy enclosed) which exempts Services provided to or by an educational institution in respect of education exempted from service tax, by way of,-

- (a) Auxiliary educational services; or
- (b) renting of immovable property;

Auxiliary educational services includes catering, security or cleaning or house-keeping services, transportation of students, faculty and staff, services relating to admission to, or conduct of examination by, such institution.

The Institute incurred Rs. 311.48 lakhs on Security Service, Rs. 58.46 lakhs on Gardening & Rs.170.99 lakh on Housekeeping during the financial year 2015-16.

We thankfully acknowledge the Co-operation extended by the Officers/officials of NIT Agartala in conducting the Internal Audit.

Date: 21.06.2016
Place: Agartala



KOUSHIK DEBNATH & ASSOCIATES
(Chartered Accountants)

(Koushik Debnath)
Mem: 064341

Annexure "A"

Details list of unadjusted Temporary Advance

| Sl. No | Name of Employee | Amount (Rs) |
|--------------|---------------------------|-------------------|
| 1 | Abhik Majumder | 5,000/- |
| 2 | Ajoy Kumar Das | 10,000/- |
| 3 | Anirban Bhattacharjee | 1,000/- |
| 4 | Anupam Jamatia | 28,000/- |
| 5 | Anupam Pal | 11,000/- |
| 6 | Apu Kumar Saha | 6,000/- |
| 7 | Ashim Saha | 29,000/- |
| 8 | Barnik Saha Roy | 1,47,375/- |
| 9 | Debabrata Sen | 18,000/- |
| 10 | Debasis Neogi | 5,000/- |
| 11 | Debasish Bhattacharya | 5,000/- |
| 12 | Dibyendu Ghoshal | 5,000/- |
| 13 | Dilip Debbarma | 30,000/- |
| 14 | Jahar Debbarma | 10,000/- |
| 15 | Jayanta Pal | 6,050/- |
| 16 | John Debbarma | 34,850/- |
| 17 | Madhujit Deb | 10,000/- |
| 18 | Manik Bhowmik | 8,985/- |
| 19 | Mrinal Debbarma | 12,000/- |
| 20 | Mrinmoy Majumder | 15,000/- |
| 21 | Prasun Chakraborty | 82,200/- |
| 22 | Priyanath Das | 5,000/- |
| 23 | Ram Naresh Rai | 5,000/- |
| 24 | Richi Prasad Sharma | 15,000/- |
| 25 | Sambhu Nath Pradhan | 14,400/- |
| 26 | Saroj Kumar Das | 5,000/- |
| 27 | Subrata Kumar Ghosh | 14,450/- |
| 28 | Sukanta Goswami-1 | 25,100/- |
| 29 | Suman Deb | 24,452/- |
| 30 | Swapan Debbarma | 33,000/- |
| 31 | Tanumoy Paul | 22,700/- |
| 32 | Tarun kanti Bandhopadhyay | 25,450/- |
| 33 | Umesh Mishra | 40,000/- |
| 34 | Uttam Kumar Bera | 15,000/- |
| Total | | 7,24,012/- |



| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | | |
|--|------------------------------|---------------------------|---|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | |
| BALANCE SHEET AS AT 31.03.2016 | | | |
| CORPUS / CAPITAL FUND AND LIABILITIES | Schedule | Current year 2015-2016 | Amount Rs Previous year 2014-2015 |
| CORPUS / CAPITAL FUND | 1 | 7037660735 | 6470012674 |
| DESIGNATED / EARMARKED / ENDOWMENT FUNDS | 2 | 259902337 | 262488947 |
| CURRENT LIABILITIES & PROVISION | 3 | 479508277 | 421684776 |
| GOVT FUND-DONOR PROJECT | | 112637000 | 112637000 |
| OTHERS INCOME- PLAN FUND | | 12551056 | 12551056 |
| GRANT FROM NMEICT | | 0 | 448873 |
| TOTAL | | 7902259405 | 7279823326 |
| ASSETS | | | |
| FIXED ASSETS | 4 | 6997203496 | 6411951118 |
| INVESTMENTS - FROM EARMARKED / ENDOWMENT FUNDS | 5 | 0 | 0 |
| INVESTMENTS OTHERS | 6 | 0 | 0 |
| CURRENT ASSETS | 7 | 573480845 | 597539237 |
| LOANS & ADVANCES PLAN FUND | 2(iii) | 324272301 | 262637806 |
| LOANS, ADVANCES & DEPOSITS | 8 | 7302763 | 7695163 |
| TOTAL | | 7902259405 | 7279823326 |
| SIGNIFICANT ACCOUNTING POLICIES | 23 | | |
| CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS | 24 | | |
| Asstt. Registrar (Finance) | Registrar | Director | |
| (Jagodyoti Roy) | (Dr. Debashish Bhattacharya) | (Dr. Gopal Mukherjee) | |
| Asstt. Registrar (Finance) | Registrar, | Director, | |
| N.I.T., Agartala. | N.I.T., Agartala. | N.I.T., Agartala. | |
| For | | | |
| KOUSHIK DEBNATH & ASSOCIATES | | | |
| (Chartered Accountants) | | | |
| (CA Koushik Debnath) | | | |
| Mem No: 064341 | | | |



Dr. Debasish Bhattacharya
Registrar,
NIT, Agartala

(Jagatjit Singh)
... Registrar (Finance)
... Punjab.

[illegible]

Dr. Debajish Bhattacharya
Registrar,
211 V. A. Road

Jupia Mugeraya
Director,
MOT, Agartala.

(Jagadipati Roy)
Asst. Registrar (Finance)
N.I.T. Agartala.

| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | | |
|--|---|----------|---------------------------|----------------------------|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | | |
| Particulars | | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| STUDENT WELFARE FUND | | | | |
| INCOME | | | | |
| 1. Opening Bank Balance (S.B. A/c) | | | 985732 | 740764 |
| 2. Income from Sales / Services | | | | |
| 3. Fees / Subscriptions | | | 605949 | 623267 |
| 4. Interest Earned | | | 38386 | 30930 |
| TOTAL | | | 1630067 | 1394961 |
| EXPENDITURE | | | | |
| Bank Charges | | | 92397 | 408904 |
| Closing Bank Balance (S.B. A/c) | 7 | | 1537670 | 985732 |
| TOTAL | | | 1630067 | 1394961 |
| NEW PENSION SCHEME-TIER-I FUND | | | | |
| INCOME | | | | |
| 1. Opening Balance: S.B. A/c | | | 35437 | 2805 |
| Fixed Deposit | | | 59333605 | 44353965 |
| 2. Income from Sales / Services | | | 0 | 0 |
| 3. Fees / Subscriptions | | | 0 | 0 |
| Employee / Employer's Contribution | | | 13816700 | 12769506 |
| Employee / Employer's Contribution-FD | | | 0 | 0 |
| 4. Interest Earned-S.B. Accounts | | | 19747 | 19326 |
| 5. Interest Earned-F.D. Accounts | | | 4542965 | 4382640 |
| TOTAL | | | 77748454 | 61528242 |
| EXPENDITURE | | | | |
| Fund transfer to CRA (NSDI) | | | 0 | 0 |
| Bank Charges | | | 13778680 | 2159200 |
| Fixed Deposit | 7 | | 0 | 0 |
| Bank Balance (S.B. A/c) | 7 | | 63876540 | 59333605 |
| | | | 93234 | 35437 |
| TOTAL | | | 77748454 | 61528242 |
| For | | | | |
| Koushik Debnath & Associates | | | | |
| (Chartered Accountants) | | | | |
| (CA Koushik Debnath) | | | | |
| Mem No: 06434 | | | | |
| For | | | | |
| Dr. Gopal Mukherjee | | | | |
| Director, | | | | |
| NIT, Agartala. | | | | |

| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | |
|--|----------|---------------------------|----------------------------|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | |
| RETIREMENT BENEFIT FUND | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| INCOME | | | |
| 1. Opening Balance: | | | |
| S.B. A/c | | 14963180 | 6776177 |
| Fixed Deposit | | 48013949 | 34459110 |
| 2. Income from Sales / Services- | | 0 | 0 |
| 3. Fees / Subscriptions | | 51442267 | 24466518 |
| 4. Fees / Subscriptions-FD | | 0 | 0 |
| 5. Interest Earned-S.B. Accounts | | 1094401 | 501800 |
| 6. Interest Earned-F.D. Accounts | | 3086343 | 3554839 |
| TOTAL | | 118600140 | 69758444 |
| EXPENDITURE (Pension/Gratuity) | | | |
| Bank Charges | | 12357619 | 6781315 |
| Fixed Deposit | | 0 | 0 |
| 7 | 7 | 86100292 | 48013949 |
| Bank Balance (S.B. A/c) | | 20142229 | 14963180 |
| TOTAL | | 118600140 | 69758444 |
| INSTITUTE DEVELOPMENT FUND | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| INCOME | | | |
| 1. Opening Balance: | | | |
| S.B. A/c | | 624121 | 15919251 |
| Fixed Deposit | | 47211782 | 20243575 |
| 2. Income from Sales / Services- | | 0 | 0 |
| 3. Fees / Subscriptions | | 17524311 | 8820800 |
| 4. Interest Earned-S.B. Accounts | | 496796 | 884070 |
| 5. Interest Earned-F.D. Accounts | | 3173908 | 1968207 |
| TOTAL | | 69030918 | 47836903 |
| EXPENDITURE | | | |
| Fixed Deposit | | 0 | 0 |
| 7 | 7 | 65385690 | 47211782 |
| Bank Balance (S.B. A/c) | | 3645228 | 624121 |
| TOTAL | | 69030918 | 47836903 |
| For | | | |
| KOUSHIK DEBNATH & ASSOCIATES | | | |
| (Chartered Accountants) | | | |
| (CA Koushik Debnath) | | | |
| Mem. No. 064241 | | | |
| (Jagabelli Moyn) | | | |
| Joint Registrar (Finance) | | | |
| Joint Registrar (Finance) | | | |
| Dr. Debashish Bhattacharya | | | |
| Director, | | | |
| NIT Agartala | | | |


| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | | |
|--|----------|---------------------------|----------------------------|--|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | | |
| STAFF WELFARE FUND | | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 | |
| INCOME | | | | |
| 1. Opening Balance: S.B. A/c | | 63867 | 53562 | |
| 2. Income from Sales / Services- | | 0 | 0 | |
| 3. Fees / Subscriptions | | 17712 | 8100 | |
| 4. Interest Earned-S.B.Accounts | | 2593 | 2205 | |
| TOTAL | | 84172 | 63867 | |
| Bank Balance (S.B. A/c) | 7 | 84172 | 63867 | |
| TOTAL | | 84172 | 63867 | |
| PROJECT FUND | | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 | |
| INCOME | | | | |
| 1. Opening Bank Balance (S.B. A/c) | | 4479422 | 3945111 | |
| 2. Income from Sales / Services- | | 0 | 0 | |
| 3. Fees / Subscriptions | | 1684072 | 1088427 | |
| 4. Interest Accrued-S.B. Accounts | | 159918 | 154802 | |
| TOTAL (A) | | 6323412 | 5188340 | |
| EXPENDITURE | | | | |
| Service Tax | | 178958 | 107116 | |
| Refund to Parties | | 0 | 0 | |
| Exp. & Distribution to Faculties & Staffs | | 3228031 | 600000 | |
| Bank Charges | | 230 | 1802 | |
| Fixed Deposit | | 0 | 0 | |
| Closing Bank Balance (S.B. A/c) | 7 | 2916193 | 4479422 | |
| TOTAL (B) | | 6323412 | 5188340 | |
| For | | | | |
| KOUSHIK DEBNATH & ASSOCIATES | | | | |
| (Chartered Accountants) | | | | |
| [CA Koushik Debnath] | | | | |
| Mem. No. 064341 | | | | |
| By Debash Bhattacharya | | | | |
| Registrar, | | | | |
| NIT, Agartala. | | | | |
| By Gopal Bhugaya | | | | |
| Director, | | | | |
| NIT, Agartala. | | | | |

| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | | | |
|--|----------|----------------|----------------|--|--|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | | | |
| <u>DEPARTMENTAL PROMOTIONAL FUND (CIVIL)</u> | | | | | |
| Particulars | Schedule | Previous year | | | |
| | | 2018-2019 | 2017-2018 | | |
| INCOME | | | | | |
| 1. Opening Balance: | | | | | |
| S.B. A/c | | 1839361 | 1690568 | | |
| 2. Income from Sales / Services- | | | | | |
| 3. Fees / Subscriptions | | 571633 | 81000 | | |
| 4. Interest Earned-S.B.Accounts | | 77355 | 67793 | | |
| TOTAL | | 2488349 | 1839361 | | |
| EXPENDITURE | | | | | |
| Bank Charges | | 131100 | 0 | | |
| Bank Balance (S.B. A/c) | 7 | 2357249 | 1839361 | | |
| TOTAL | | 2488349 | 1839361 | | |
| NSS UNIT | | | | | |
| INCOME | | | | | |
| 1. Opening Balance: | | | | | |
| S.B. A/c | | 7172 | 11172 | | |
| 2. Income from Sales / Services- | | | | | |
| 3. Fees / Subscriptions | | 46326 | 40121 | | |
| 4. Interest Earned-S.B.Accounts | | 1124 | 991 | | |
| TOTAL | | 54622 | 52284 | | |
| EXPENDITURE | | | | | |
| Bank Charges | | 32868 | 44800 | | |
| Bank Balance (S.B. A/c) | 7 | 21754 | 7172 | | |
| TOTAL | | 54622 | 52284 | | |
| For | | | | | |
| KOUSHIK DEBNATH & ASSOCIATES | | | | | |
| (Chartered Accountants) | | | | | |
| (CA Koushik Debnath) | | | | | |
| Memo No: 064341 | | | | | |
| Director | | | | | |
| Dr. Gopal Mugeraya | | | | | |
| Registrar, | | | | | |
| NIT, Agartala. | | | | | |

Ulaganathan, S.
Asst. Prof. of Finance
Ulaganathan, S.

| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | |
|--|----------|---------------------------|----------------------------|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | |
| SPONSORED PROJECT FUND | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| INCOME | | | |
| 1. Opening Balance: | | | |
| S.B. A/c | | 25463539 | 28448161 |
| Fixed Deposit | | 78478752 | 71476841 |
| 2. Income from Sales / Services | | 0 | 0 |
| 3. Fees / Subscriptions | | 22852532 | 18721961 |
| 4. Other Income | | 0 | 0 |
| 4. Interest Earned-S.B. Accounts | | 1035564 | 1077940 |
| 5. Interest Earned- F.D. A/c | | 2041627 | 7001911 |
| TOTAL | | 129872014 | 126726814 |
| EXPENDITURE | | | |
| Bank Charges | | 27976437 | 22738574 |
| | | 340 | 45949 |
| Fixed Deposit | 7 | 80520379 | 78478752 |
| Bank Balance (S.B. A/c) | 7 | 21374858 | 25463539 |
| TOTAL | | 129872014 | 126726814 |
| For | | | |
| KOUSHIK DEBNATH & ASSOCIATES | | | |
| (Chartered Accountants) | | | |
| (CA Koushik Debnath) | | | |
| Mem No: 064341 | | | |
| Jagdish Bhowmik | | | |
| Asst. Registrar (Finance) | | | |
| Dr. Gobas Mitter | | | |
| Director | | | |
| NIT, Agartala | | | |

| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | |
|--|----------|---------------------------|----------------------------|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | |
| STAFF BENEFIT TRUST (GPF) | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| INCOME | | | |
| 1. Opening Balance: S.B. A/c | | 98897 | 92391 |
| 2. Income from Sales / Services- | | 0 | 0 |
| 3. Fees / Subscriptions | | 5983500 | 5917000 |
| 4. Interest Earned-S.B.Accounts | | 22722 | 6706 |
| TOTAL | | 6105119 | 6016097 |
| EXPENDITURE | | | |
| Remittance | | 5472500 | 5917000 |
| Bank Charges | | 229 | 200 |
| Bank Balance (S.B. A/c) | 7 | 632390 | 98897 |
| TOTAL | | 6105119 | 6016097 |
| DIRECTOR'S RELIEF FUND | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| INCOME | | | |
| 1. Opening Balance: S.B. A/c | | 332482 | 319777 |
| 2. Income from Sales / Services- | | 0 | 0 |
| 3. Fees / Subscriptions | | 0 | 0 |
| 4. Interest Earned-S.B.Accounts | | 13432 | 12705 |
| TOTAL | | 345914 | 332482 |
| EXPENDITURE | | | |
| Bank Charges | | 0 | 0 |
| Bank Balance (S.B. A/c) | 7 | 345914 | 332482 |
| TOTAL | | 345914 | 332482 |
| For KOUSHIK DEBNATH & ASSOCIATES (Chartered Accountants) | | | |
| (CA Koushik Debnath) Mem. No. 064341 | | | |
| Dr. Debasis Bhattacharya Registrar, NIT, Agartala | | | |
| Dr. Gopal Mukherjee Director, NIT, Agartala | | | |


| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | |
|---|----------|--|----------------------------|
| INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2016 | | | |
| SCHOOL OF CONTINUING EDUCATION | | | |
| Particulars | Schedule | Current year 2015-2016 | Previous year 2014-2015 |
| INCOME | | | |
| 1. Opening Balance: S.B. A/c | | 32700 | 31450 |
| 2. Income from Sales / Services | | 0 | 0 |
| 3. Fees / Subscriptions | | 0 | 0 |
| 4. Interest Earned-S.B.Accounts | | 1321 | 1250 |
| TOTAL | | 34021 | 32700 |
| Bank Charges | | 0 | 0 |
| Bank Balance (S.B. A/c) | 7 | 34021 | 32700 |
| TOTAL | | 34021 | 32700 |
| GUEST HOUSE FUND | | | |
| INCOME | | | |
| 1. Opening Balance: S.B. A/c | | 1451148 | 643199 |
| 2. Income from Sales / Services | | 0 | 0 |
| 3. Fees / Subscriptions | | 881200 | 770150 |
| 4. Interest Earned-S.B.Accounts | | 70544 | 37949 |
| TOTAL | | 2402892 | 1451298 |
| EXPENDITURE | | | |
| Bank Charges | | 0 | 0 |
| Bank Balance (S.B. A/c) | 7 | 2402892 | 1451148 |
| TOTAL | | 2402892 | 1451298 |
| <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>For KOUSHIK DEBNATH & ASSOCIATES [Chartered Accountants]</p> <p>(CA Koushik Debnath) Mem No: 064341</p> </div> <div style="width: 45%; text-align: right;">  <p>Dr. Debashish Bhattacharya Registrar, NIT, Agartala</p> </div> </div> | | | |
| <p>(Signature) S. B. Debnath (Director)</p> | | <p>(Signature) Dr. Gopal Mukherjee Director, NIT, Agartala</p> | |

(Jahangir) Riaz
Asstt. Registrar (Finance)
J. T. Agartala.

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
|--|---------------------------|----------------------------|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2016 | | |
| | Current Year 2015-2016 | Previous Year 2014-2015 |
| SCHEDULE 1- CORPUS / CAPITAL FUND : | | |
| Balance as at the beginning of the year | 6470012674 | 4427264376 |
| Add Contributions towards Earmarked/ Endowment Fund | 652046174 | 2156970137 |
| Add (Deduct) balance of Net Income/ Expenditure transferred from the Income and Expenditure Account. | (84398113) | (124221839) |
| Add: Assets Donated/Gift Received | | |
| Add: Other Additions | | |
| BALANCE AS AT THE YEAR - END | 7037660735 | 6470012674 |

(Signature)
(Jagajit Roy)
Finance Officer (Finance)
Agartala

(Signature)
Dr. Gopal Bhugaya
Director,
MIT, Agartala



OFFICE OF THE SECRETARY (NON-GOV'T ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2016

| SCHEDULE 2- DESIGNATED / EARMARKED FUNDS | FUND- WISE BRAKE UP | | TOTALS |
|--|---------------------------|------------------|------------------|
| | Current Year 2015-2016 | Previous Year | |
| a) Opening Balance of the Funds | 134795272 | 0 | 134795272 |
| b) Additions to the Funds: | | | |
| i) Donations / Grants From AICTE | | | |
| Fund for Capital Assets(tr to Balance Sheet) | 649459564 | 6853318132 | 7502777696 |
| Less: Tr. To Corpus/Capital Fund | 652046174 | 6590829185 | 7242875359 |
| Net Fund for Capital Assets(tr to Balance Sheet) | (25,86,610) | 262488947 | 259902337 |
| Fund for Revenue Purpose(tr to Income & Expenditure A/C) | 500436 | 364860 | 865296 |
| ii) Income from Investments made on account of funds | | | 0 |
| iii) Other additions (specify nature) | | | 0 |
| a) Fund from DHE, Govt of Tripura(DONER Project) | 0 | 112637000 | 112637000 |
| b) Bank Interest(S.B. A/C)(Forming part of Sch.12) | 5342545 | 62761923 | 68104468 |
| iv) Others Income | 0 | 12551056 | 12551056 |
| v) Advance Received back from Parties | 0 | 0 | 0 |
| vi) Fund for Virtual Class Room | 0 | 1195524 | 1195524 |
| vii) Grant from NMEICT | 0 | 448873 | 448873 |
| TOTAL (a+b) | 138051643 | 452448183 | 590499826 |
| c) Utilisation / Expenditure towards objectives of funds | | | |
| i) Capital Expenditure | | | |
| -Fixed Assets | | | |
| Vehicle | | 1686081 | 1686081 |
| Electric Instalations | 472836 | 33422075 | 33894911 |
| Hostel Building, quarters etc | | 24896321 | 24896321 |
| Const. of Ladies Toilets | | 115284 | 115284 |
| Furniture & Fittings | 12107647 | 103321924 | 115429571 |
| Equipment & Machinery-Grass Cutter | | 40000 | 40000 |
| Computer & Accessories | 2645467 | 74744571 | 77390038 |
| Plant & Machinery | | 385000 | 385000 |
| Generator | | 51000 | 51000 |
| Machinery & Equipments-Air Conditioner | | 4961678 | 4961678 |
| Equipment & Machinery | 20253321 | 631046733 | 651300054 |
| EPBX Machine | | 409937 | 409937 |
| Books & Journals | | 3032073 | 3032073 |
| Const of Workshop | (8862268) | 23580479 | 14718211 |
| Const of Boundary Wall | (45291313) | 65421346 | 20130033 |
| Type II & III Quarters | 1829565 | 31148960 | 32978525 |
| Boundary Wall | 45291313 | 995600 | 46286913 |
| Admin Building & Class Room | | 18621297 | 18621297 |
| Const. of Auditorium Buildings | | 23151901 | 23151901 |
| Academic, Library Building | | 136098725 | 136098725 |



(Jagajyoti Roy)
 Assoc. Registrar (Finance)
 Agartala

Dr. Debashish Bhattacharya
 Registrar

Gopal Mugeraya
 Director

| | | | |
|--|------------------|-------------------|-------------------|
| Non-current Assets | 63193242 | 63193242 | 63193242 |
| Net Plant and Equipment | 441196 | 441196 | 441196 |
| Sports Equipments | 8862268 | 0 | 8862268 |
| Workshop | 1264545737 | 0 | 1264545737 |
| Boys & Girls Hostel | 192830778 | 0 | 192830778 |
| Internal Road | 40800000 | 0 | 40800000 |
| 33 KV Sub Station | 8105457 | 0 | 8105457 |
| Main Gate & Auxiliary Gate | 785976 | 0 | 785976 |
| Basket Ball | 8614183 | 0 | 8614183 |
| Central Stores | (189856629) | 213078320 | 23221691 |
| Const of Internal Road | (1264545737) | 1264545737 | 0 |
| Const of Boys & Girls Hostels | (8105457) | 9906684 | 1801227 |
| Const of Main Gate & Sub Gate | (356216) | 785976 | 429760 |
| Const of Basket Ball Court | 688081 | 5010888 | 5698969 |
| Const of Watch Tower & Security Barrack | 20000000 | 11943969 | 31943969 |
| Const of Market Complex | 18067500 | 375112362 | 393179862 |
| Const of School of Management | 114085244 | 10447478 | 10447478 |
| Const of Sewerage Treatment Plant (STP) | 41000000 | 436366415 | 550451659 |
| Const of Sports Complex | 17998976 | 291854872 | 332854872 |
| Const of Central School | 8782637 | 541219154 | 559218130 |
| Const of Housing & Guest House | (7047117) | 453246342 | 462028979 |
| Const of Admin Block & Seminar Hall | 75575470 | 286624924 | 286624924 |
| Const of Central Library | 299498887 | 7047117 | 0 |
| Const of Central Stores | (40800000) | 104245739 | 179821209 |
| Const of H4B Building | 4468282 | 426103823 | 725602710 |
| Const of 1500 Bedded Boys Hostel | (839910) | 42523002 | 42523002 |
| Const of Duplex Building | 550000 | 550000 | 550000 |
| Const. of Iron Removal Plant | 40800000 | 40800000 | 0 |
| Const. of Dedicated Power Supply(33KV) | 1400170 | 5868452 | 5868452 |
| Const of 500KVA Substation | 843020 | 3110 | 3110 |
| Const of Internal Electrification | 2306504 | 2306504 | 2306504 |
| Const. of Hostel Building | 5459883 | 5459883 | 5459883 |
| Const. of Admin Building & Class Room | 1018605 | 1018605 | 1018605 |
| Const of Multipurpose Building | 778822 | 778822 | 778822 |
| Const of Security barrack | 372575151 | 372575151 | 372575151 |
| Const of Computer Centre | 444800000 | 444800000 | 444800000 |
| Const of Lab cum Canteen, workshop & Academic Building | 10000000 | 0 | 10000000 |
| Const of Central Plaza | 652046174 | 6590829185 | 7242875359 |
| TOTAL | 652046174 | 6590829185 | 7242875359 |
| Less: Tr. to Fixed Assets (Schedule 4) | 0 | 0 | 0 |
| TOTAL (2A) | 652046174 | 6590829185 | 7242875359 |
| Others | | | |
| Advance to Parties(Schedule 2A) | 208900000 | 4349869456 | 4558769456 |
| Less: Adjustment Tr to Fixed Assets | 147265505 | 4087231650 | 4234497155 |
| Security Deposit to TREC | 61634495 | 262637806 | 324272301 |
| | 0 | 5100 | 5100 |

Dr. Gobal Mugeraya
Director,
NIT, Agartala

Dr. Debajish Bhattacharya
Registrar,
NIT, Agartala



Asst. Registrar (Finance)
NIT, Agartala

| | | | | |
|----------------------------------|-----------------|------------------|------------------|------------------|
| Stock in Transit: | | | | |
| Machinery & Equipments | 0 | 2649771 | 2649771 | 0 |
| Networking in Transit | 0 | 0 | 0 | 0 |
| Computer & Accessories | 0 | 0 | 0 | 0 |
| Furniture & Fittings in Transit | 0 | 0 | 0 | 0 |
| Exp. For Virtual Class Room | 0 | 0 | 0 | 0 |
| Exp. For NMEICT | 0 | 0 | 0 | 0 |
| TOTAL (2ii) | 61634495 | 265292677 | | 326927172 |
| III) Revenue Expenditure | | | | |
| -Other Administrative Expenses. | | | | |
| Misc. Expenses | 0 | 0 | 0 | 0 |
| Bank Charges | 436 | 114860 | 115296 | |
| NIT Transit House-Delhi | 500000 | 250000 | 750000 | |
| TOTAL (2iii) | 500436 | 364860 | 865296 | |
| GRNAD TOTAL (2i+2ii+2iii) | 62134931 | 265657537 | 327792468 | |
| Un-Spent Grant(Plan Fund) | 75916712 | 134795272 | | |

NOTE: Rs.5,00,436/- spent for revenue purpose which could not be capitalised. The said amount of Fund has been transferred to Income and Expenditure Account as Plan Fund-Revenue



(Legalised Copy)
Acad. Registrar (Finance)
NIT, Agartala

Dr. Debajit Bhattacharya
Registrar,
NIT, Agartala

Dr. Gopal Mugeraya
Director,
NIT, Agartala

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF SCHEDULE 2 AS AT 31.03.2016

| SCHEDULE 2 A- DETAILS OF ADVANCE TO PARTIES | Current Year | Previous Year | Adjustment | TOTAL |
|---|------------------|------------------|---------------------------|------------------|
| | 2015-2016 (1) | 2014-2015 (2) | tr to Fixed Assets (3) | (1+2-3) |
| Advance to: | | | | |
| R.D. Deptt(Const of Boundary Wall) | | 0 | | 0 |
| B.S.N.L.(Call User Group-CUG) | | 172764 | | 172764 |
| R.D. Deptt(Repairing of Administrative Building) | | 0 | | 0 |
| R.D. Deptt(Hostel Building & Others) | | 0 | | 0 |
| P.H.Effron Removal Plant | | 1560100 | | 1560100 |
| Tripura Housing Board(Academic Building, Library) | | 7640420 | | 7640420 |
| TSECL-Deductive Power Supply | | 0 | | 0 |
| R.D. Deptt(Auditorium) | | 0 | | 0 |
| R.D. Deptt(Boundary Wall & Septic Tank) | | 0 | | 0 |
| R.D. Deptt(Boundary Wall & Type IV) | | 0 | | 0 |
| R.D. Deptt(Multipurpose Buildings) | | 0 | | 0 |
| R.D. Deptt(Security Barrak) | | 0 | | 0 |
| R.D. Deptt(Const of Class Room) | | 0 | | 0 |
| BRTI(Internal Road Development) | | 0 | | 0 |
| DWS Deptt (Water Supply) | | 2695300 | | 2695300 |
| EPIL(Const of Workshop) | | 10200000 | | 10200000 |
| PWD Deptt (Electrification) | | 0 | | 0 |
| TSECL-DGM Jirania | | 0 | | 0 |
| R.D. Deptt(Renovation of Workshop) | | 0 | | 0 |
| S.D. Hardson Co(Equipments) | | 1265505 | 1265505 | 0 |
| Eastern Engg Corp(Equipments) | | 0 | | 0 |
| CPWD(Const of Central School) | 28200000 | 27945128 | 41000000 | 15145128 |
| CPWD(Const of H4B Building) | 60000000 | 101664821 | 75000000 | 86664821 |
| CPWD(Const of Duplex Building) | 25000000 | 18494402 | | 43494402 |
| CPWD(Const of Internal Road) | | 3379741 | | 3379741 |
| Bridge & Roof Co.(Const of Central Computer Centre & CSE I) | 68900000 | 67619625 | | 136519625 |
| Cadence Design System, Ireland | | 0 | | 0 |
| R.D. Deptt (Const of Market Complex) | 14000000 | 10000000 | 20000000 | 4000000 |
| CPWD (Const of Central Plaza) | 12800000 | 10000000 | 10000000 | 12800000 |
| TOTAL | 208900000 | 262637806 | 147265505 | 324272301 |



(Signature)
 Chartered Accountant
 Agartala

(Signature)
 Dr. Debashish Brahaicharya
 Registrar,
 NIT, Agartala

(Signature)
 T. C. Majumdar
 Director,
 NIT, Agartala

| SCHEDULE 3- CURRENT LIABILITIES AND PROVISIONS | | | (Amount - Rs.) | |
|--|-----------------|-----------------|----------------|--|
| | Current Year | Previous Year | | |
| | 2015-2016 | 2014-2015 | | |
| A) CURRENT LIABILITIES | | | | |
| 1) Acceptances | 0 | | | |
| 2) Sundry Creditors | | | | |
| For Plan Fund | 1675461 | 4054996 | | |
| For Non-Plan Fund | 12515203 | 9709749 | | |
| Outstanding Liabilities: | | | | |
| a) Travelling & Conveyance | 0 | 84507 | | |
| b) Academic Collection | 0 | 562500 | | |
| c) Transportation | 0 | 44964 | | |
| d) Scholarship | 0 | 6974644 | | |
| e) Repair & Maintenance | 0 | 32621 | | |
| f) Salaries & Wages | 21876653 | 19556371 | | |
| g) Electricity & Power | 2724145 | 2493363 | | |
| h) Telephone Expenses | 0 | 23947 | | |
| i) Children Edu Allowance | 1229677 | 0 | | |
| TOTAL (3A) | 40021139 | 43537662 | | |
| PROVISION: | | | | |
| a) Statutory Audit Fees-AG | 100000 | 0 | | |
| b) CCB, CCMT & Other Fees | 5759521 | 3278283 | | |
| c) Counselling Fees-Payable to Students | 100000 | 100000 | | |
| TOTAL (3B) | 5959521 | 3378283 | | |
| 3) Advances Received | | | | |
| a) Interest accrued but not due on: | 0 | 0 | | |
| a) Secured Loans/ borrowings. | 0 | 0 | | |
| b) Unsecured Loans/ borrowings. | 0 | 0 | | |
| TOTAL (3C) | 0 | 0 | | |
| 5) Statutory Liabilities: | | | | |
| a) Overdue | | | | |
| b) Others | | | | |
| Project Fund | 2916193 | 4479422 | | |
| New Pension Scheme-Tier-I Fund | 63969774 | 59369042 | | |
| Retirement Benefit Fund | 106242521 | 62977129 | | |
| Student Welfare Fund | 1537670 | 985732 | | |
| Staff Development Fund | 120379 | 120379 | | |
| Institute Development Fund | 69030918 | 47835903 | | |



Dr. Debashish Bhattacharya
Registrar,
Agartala

(As per Govt. Order)

| | | |
|--|------------------|------------------|
| E. D. Security Dept. | 31,19,533 | 85,00,382 |
| Infrastructural Development Fund | 8536882 | 8242959 |
| Sponsored Project Fund | 101895237 | 103942291 |
| Staff Welfare Fund | 84172 | 63867 |
| Departmental Promotional Fund (Civil) | 2357249 | 1839361 |
| NSS Unit | 21754 | 7172 |
| Staff Benefit Trust | 632390 | 98897 |
| Director's Relief Fund | 345914 | 332482 |
| School of Continuing Education | 34021 | 32700 |
| Guest House Fund | 2402892 | 1451148 |
| NT Transit House Fund | 284797 | 270327 |
| TEQP Fund | 9561800 | 22910066 |
| NSS Unit Prog. | 13182 | 13182 |
| Renewable Energy Club (TRED) | 0 | 24 |
| Stipend Payable to Students (Forming Part of Schedule 13A) | 395090 | 311005 |
| Fund from ST Welfare Deptt (Books) | 817500 | 817500 |
| Fund from SC Welfare Deptt (Books) | 27817 | 27817 |
| Fund for Rubber Processing | 156250 | 156250 |
| Fund for Virtual Class Room (Plan Fund) | 1195524 | 1195524 |
| TOTAL (3D) | 404229499 | 346986761 |
| 6) Other current Liabilities | | |
| i) Library Caution Money | | |
| Opening Balance | 22037500 | 16996500 |
| Add: This year | 4748000 | 5275000 |
| | 26785500 | 22271500 |
| Less: Payment this year | 3231952 | 234000 |
| TOTAL (3E) | 23553548 | 22037500 |
| ii) Loan from DHE (Staff Salaries) | 5629954 | 5629954 |
| iii) Earnest Money Deposit | 114616 | 114616 |
| TOTAL (3F) | 5744570 | 5744570 |
| TOTAL (I) | 479508277 | 421684776 |
| E. PROVISIONS | | |
| 1) For taxation | 0 | 0 |
| 2) Gratuity | 0 | 0 |
| 3) Superannuation / pension | 0 | 0 |
| 4) Accumulated Leave Encashment | 0 | 0 |
| 5) Trade Warranties / Claims | 0 | 0 |
| 6) Others (Specify) | 0 | 0 |
| TOTAL (II) | 0 | 0 |
| TOTAL (I+II) | 479508277 | 421684776 |

(Jagadish Roy)
Asstt. Registrar (Finance)
N.I.T. Agartala

Dr. Debashish Bhattacharya
Registrar,
N.I.T. Agartala

Sonal Mukherjee
Director

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | | | | | | | | | | | |
|--|--------------|---|---------------------------|----------------------------|--------------------------------|---------------------------------|------------------------------|------------------------------|--------------------------|----------------------------|-----------------------------|--|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | | | | | | | | | | |
| SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2016 | | | | | | | | | | | | |
| SCHEDULE 4 FIXED ASSETS | Rate of Depn | Cost/valuation at beginning of the year | GROSS BLOCK | | DEPRECIATION | | NET BLOCK | | | | | |
| | | | Additions during the year | Deductions during the year | Cost/valuation at the year-end | As at the beginning of the year | On Additions during the year | On deduction during the year | Total up to the year-end | As at the Current year-end | As at the Previous year-end | |
| TANGIBLE ASSETS | | | | | | | | | | | | |
| PLAN FUND | | | | | | | | | | | | |
| LAND | | | | | | | | | | | | |
| Freehold | | 0 | | | | | | | | | | |
| Leasehold | | | | | | | | | | | | |
| Building | 2% | 24896321 | | | 24896321 | 11372274 | 270481 | | 11642755 | 13353598 | 13524047 | |
| Ladies Toilet | 2% | 115284 | | | 115284 | 58245 | 1141 | | 59386 | 55898 | 57039 | |
| Furniture & Fittings | 7.5% | 103321924 | | | 115429571 | 28437445 | 5954858 | | 34392303 | 81037268 | 74884979 | |
| Machinery & Equipments | 5% | 631046733 | | 0 | 651300054 | 169888791 | 23482266 | | 193371057 | 457928997 | 461157942 | |
| Machinery & Equipments(Grass) | 5% | 40000 | | | 40000 | 25239 | 738 | | 25977 | 14023 | 14761 | |
| EPBX Machine | 5% | 409937 | | | 409937 | 227453 | 9124 | | 236577 | 173360 | 182484 | |
| Library Books | 10% | 3032073 | | | 3032073 | 3032073 | 0 | | 3032073 | 0 | 0 | |
| Machinery & Equipments(Air Con) | 5% | 4961678 | | | 4961678 | 2103656 | 142901 | | 2246357 | 2715121 | 2858922 | |
| Generator | 5% | 51000 | | | 51000 | 34099 | 845 | | 34944 | 16056 | 16901 | |
| Computer & Accessories | 20% | 74744571 | 2645467 | | 77390038 | 63254639 | 2766197 | | 66020836 | 11369202 | 11499932 | |
| Plant & Machinery(Tractor) | 10% | 385000 | | | 385000 | 264119 | 12088 | | 276207 | 108793 | 120881 | |
| Vehicle | 10% | 1686081 | | | 1686081 | 987175 | 69891 | | 1057066 | 629015 | 698906 | |
| ELECTRIC INSTALLATIONS | 5% | 33422075 | 472836 | | 33994911 | 10265855 | 1159286 | | 11425141 | 22497770 | 231563220 | |
| Type II & III Quarters(Buildings) | 2% | 31148960 | 1829565 | | 32978525 | 7166208 | 494757 | | 7660965 | 25317560 | 23982752 | |
| Boundary Wall | 2% | 995600 | 45291313 | | 46286913 | 392808 | 785616 | | 785616 | 45501297 | 602792 | |
| Admin Building & Class Room | 2% | 18621297 | | | 18621297 | 7346919 | 225488 | | 7572407 | 11048890 | 11274378 | |
| Academic Library Building | 2% | 136098725 | | | 136098725 | 32088965 | 2068195 | | 34757160 | 101341565 | 103409760 | |
| Networking(Equipments) | 7.5% | 63103243 | | | 63103243 | 13766759 | 3700236 | | 17466995 | 45636248 | 49335484 | |
| Sports Equipments | 5.0% | 0 | 441196 | | 441196 | | 18675 | | 18675 | 422521 | 0 | |
| Workshop | 2.0% | 0 | 8862268 | | 8862268 | | 132084 | | 132084 | 8730184 | 0 | |
| Boys & Girls Hostel | 2.0% | 0 | 1264545737 | | 1264545737 | | 18846928 | | 18846928 | 1245698909 | 0 | |
| Internal Road | 2.0% | 0 | 192830778 | | 192830778 | | 2873971 | | 2873971 | 189956807 | 0 | |
| 33 KV Sub Station | 5.0% | 0 | 40800000 | | 40800000 | | 50301 | | 50301 | 40749699 | 0 | |
| Main Gate & Auxiliary Gate | 2.0% | 0 | 8105457 | | 8105457 | | 120805 | | 120805 | 7984652 | 0 | |
| Basket Ball | 2.0% | 0 | 785976 | | 785976 | | 11714 | | 11714 | 774262 | 0 | |
| Central Stores | 2.0% | 0 | 8614183 | | 8614183 | | 128387 | | 128387 | 8485796 | 0 | |
| TOTAL (b) | | 1128080502 | 1607585744 | 0 | 2735665246 | 351312722 | 62934165 | 0 | 414246887 | 2321419359 | 776767780 | |
| NON-PLAN FUND | | | | | | | | | | | | |
| FURNITURE & FIXTURES | 7.5% | 894023 | 367805 | | 1261828 | 204660 | 65913 | | 270573 | 991255 | 689363 | |
| COMPUTER/PERIPHERALS | 20% | 1509825 | 75000 | | 1584825 | 1401818 | 42683 | | 1444501 | 140324 | 108007 | |
| ELECTRIC INSTALLATIONS | 5% | 45959882 | 2934573 | | 48894752 | 10303828 | 1897263 | | 12201091 | 36693661 | 35656054 | |
| EPBX Machine | 5% | 421438 | | | 421438 | 291917 | 6476 | | 298393 | 123045 | 129521 | |
| Water Purifier | 5% | 126406 | | | 126406 | 70845 | 2778 | | 73623 | 52763 | 59561 | |
| Fax Machine | 5% | 9000 | | | 9000 | 6017 | 149 | | 6166 | 2983 | 2983 | |
| INTERNET / V SET | 5% | 123291 | | | 123291 | 49677 | 3681 | | 53358 | 69933 | 73614 | |
| TOTAL (c) | | | | | | | | | | | | |
| NON-PLAN FUND | | | | | | | | | | | | |
| FURNITURE & FIXTURES | 7.5% | 894023 | 367805 | | 1261828 | 204660 | 65913 | | 270573 | 991255 | 689363 | |
| COMPUTER/PERIPHERALS | 20% | 1509825 | 75000 | | 1584825 | 1401818 | 42683 | | 1444501 | 140324 | 108007 | |
| ELECTRIC INSTALLATIONS | 5% | 45959882 | 2934573 | | 48894752 | 10303828 | 1897263 | | 12201091 | 36693661 | 35656054 | |
| EPBX Machine | 5% | 421438 | | | 421438 | 291917 | 6476 | | 298393 | 123045 | 129521 | |
| Water Purifier | 5% | 126406 | | | 126406 | 70845 | 2778 | | 73623 | 52763 | 59561 | |
| Fax Machine | 5% | 9000 | | | 9000 | 6017 | 149 | | 6166 | 2983 | 2983 | |
| INTERNET / V SET | 5% | 123291 | | | 123291 | 49677 | 3681 | | 53358 | 69933 | 73614 | |

Dr. Debashish Bhattacharyya

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Dr. Debashish Bhattacharya
Registrar,
NIT Agartala

Dr. Debashish Bhattacharya
Registrar,
NIT Agartala

Dr. Debashish Bhattacharya
Registrar (Finance),
NIT Agartala

| | | | | | | | | | |
|---|------|-------------------|-------------------|------------------|------------------|-----------------|------------------|-------------------|------------------|
| Hostel building, quarters etc | 2% | 19600000 | 95830 | 19500000 | 5319196 | 279616 | 5798512 | 13701188 | 13980804 |
| Sports Goods & Equipments | 5% | 1513679 | 75668 | 1609509 | 556294 | 50481 | 666775 | 1002734 | 957185 |
| Machinery & Equipments | 5% | 9560774 | 478038 | 9560774 | 3691779 | 323450 | 3415229 | 6145545 | 6468995 |
| Office Equipments | 7.5% | 692432 | 346216 | 692432 | 211555 | 36066 | 247621 | 444811 | 480877 |
| Medical Instruments | 7.5% | 125271 | 62635 | 125271 | 54510 | 5307 | 59317 | 65454 | 70761 |
| Medical Equipments | 5% | 38749 | 19374 | 38749 | 22043 | 835 | 22880 | 15869 | 16704 |
| Podium | 7.5% | 34000 | 16500 | 34000 | 13371 | 1547 | 14918 | 19082 | 20629 |
| Library Books | 10% | 16194683 | 809734 | 17761577 | 8959734 | 723924 | 9683658 | 8077919 | 7234949 |
| Type IV Quarters (Buildings) | 2% | 32047678 | 2332591 | 34380269 | 6018114 | 531493 | 6549607 | 27830662 | 26079664 |
| Networking (Equipments) | 7.5% | 2242620 | 107131 | 2242620 | 673282 | 117700 | 790982 | 1451638 | 1569338 |
| Auditorium Building | 2% | 14838699 | 741935 | 14838699 | 3754768 | 3976447 | 7731215 | 7107484 | 11083931 |
| Boundary Wall | 2% | 251005 | 12550 | 251005 | 46116 | 4098 | 50214 | 200791 | 204889 |
| TOTAL (H) | | 146083455 | 7372990 | 153456446 | 41249526 | 8069907 | 49319433 | 104137012 | 104833929 |
| TOTAL (H + B) | | 1274163957 | 1614958734 | 0 | 392562248 | 71004073 | 0 | 2425556371 | 881601709 |
| INTANGIBLE ASSETS | | | | | | | | | |
| NON-PLAN FUND | | | | | | | | | |
| Computer Software | | | | | | | | | |
| Books & Journals | 40% | 157390747 | 1842768 | 139233515 | 140258806 | 7126737 | 147385543 | 11847972 | 17131941 |
| Patents | | | | | | | | | |
| TOTAL | | 157390747 | 1842768 | 139233515 | 140258806 | 7126737 | 147385543 | 11847972 | 17131941 |
| ADJUSTMENT (TR. TO CAPITAL ASSETS) | | | | | | | | | |
| NET BLOCK | | | | | | | | | |
| CAPITAL WORK-IN-PROGRESS | | | | | | | | | |
| PLAN FUND | | | | | | | | | |
| Const. of Workshop | | 23580479 | 0 | 23580479 | 8862268 | 8862268 | 8862268 | 14718211 | 23580479 |
| Const. of Boundary Wall | | 65421346 | 0 | 65421346 | 45291313 | 45291313 | 45291313 | 20130033 | 65421346 |
| Const. of Boys & Girls Hostels | | 1264545737 | 0 | 1264545737 | 1264545737 | 1264545737 | 1264545737 | 0 | 1264545737 |
| Const. of Main Gate & Sub Gate | | 9906684 | 0 | 9906684 | 8105457 | 8105457 | 8105457 | 1801227 | 9906684 |
| Const. of Basket Ball Court | | 785976 | 429760 | 1215736 | 785976 | 785976 | 785976 | 429760 | 785976 |
| Const. of Watch Tower & Security Barracks | | 5010888 | 688081 | 5698969 | 0 | 0 | 5698969 | 5010888 | 5010888 |
| Const. of Market Complex | | 11943969 | 20000000 | 31943969 | 0 | 0 | 31943969 | 11943969 | 11943969 |
| Const. of School of Management | | 375112362 | 18067500 | 393179862 | 0 | 0 | 393179862 | 375112362 | 393179862 |
| Const. of Internal Road | | 213078320 | 2974149 | 216052469 | 192830778 | 192830778 | 192830778 | 23221691 | 213078320 |
| Const. of Auditorium Buildings | | 23151901 | 0 | 23151901 | 0 | 0 | 23151901 | 23151901 | 23151901 |
| Const. of Sewerage Treatment Plant (STP) | | 10447478 | 0 | 10447478 | 0 | 0 | 10447478 | 10447478 | 10447478 |
| Const. of Sports Complex | | 436366415 | 114085244 | 550451659 | 0 | 0 | 550451659 | 436366415 | 436366415 |
| Const. of Central School | | 291854872 | 41000000 | 332854872 | 0 | 0 | 332854872 | 291854872 | 291854872 |
| Const. of Housing | | 541219154 | 17998976 | 559218130 | 0 | 0 | 559218130 | 541219154 | 541219154 |
| Const. of Admin. Building | | 453246342 | 8782637 | 462028979 | 0 | 0 | 462028979 | 453246342 | 453246342 |
| Const. of Central Library | | 286624924 | 727156 | 286624924 | 0 | 0 | 286624924 | 286624924 | 286624924 |
| Const. of Central Stores | | 7047117 | 7774273 | 7774273 | 0 | 0 | 7774273 | 7047117 | 7047117 |
| Const. of Hall Building | | 104245739 | 75575470 | 179821209 | 0 | 0 | 179821209 | 104245739 | 104245739 |

Dr. Gopal Mugeraya
Director

Dr. Debashish Bhattacharya
Registrar

Dr. Anshu Roy
Asst. Registrar (Finance)

N.I.T., Agartala



| | | | | | | | |
|--|-------------------|-------------------|-----------|----------|----------|-------------------|-------------------|
| Const. of 1500 cap. Boys Hostel | 426103823 | 299496887 | 725602710 | 0 | 0 | 725602710 | 436103823 |
| Const. of Duplex Building | 42523002 | 550000 | 42523002 | 0 | 0 | 42523002 | 42523002 |
| Const. of Iron Removal Plant | 550000 | 40800000 | 550000 | 0 | 0 | 550000 | 550000 |
| Const. of Dedicated Power Supply | 40800000 | 4468282 | 40800000 | 40800000 | 0 | 40800000 | 40800000 |
| Const. of 500KVA Substation | 1400170 | 843020 | 5868452 | 0 | 0 | 5868452 | 1400170 |
| Const. of Internal Electrification | 843020 | 2306504 | 843020 | 839910 | 0 | 3110 | 843020 |
| Const. of Hostel Building | 2306504 | 5459883 | 2306504 | 0 | 0 | 2306504 | 2306504 |
| Const. of Admin. Building & Class room | 5459883 | 1018605 | 5459883 | 0 | 0 | 5459883 | 5459883 |
| Const. of Multipurpose Building | 1018605 | 778822 | 1018605 | 0 | 0 | 1018605 | 1018605 |
| Const. of Security Barrack | 778822 | 372575151 | 778822 | 0 | 0 | 778822 | 778822 |
| Const. of Computer Centre | 372575151 | 444800000 | 372575151 | 0 | 0 | 372575151 | 372575151 |
| Const. of Lab cum Captern, workshop & | 444800000 | 10000000 | 444800000 | 0 | 0 | 444800000 | 444800000 |
| Const. of Central Plaza | 0 | 0 | 10000000 | 0 | 0 | 10000000 | 0 |
| TOTAL (H) | 5462748683 | 614296142 | 0 | 0 | 0 | 1569835712 | 5462748683 |
| NON-PLAN FUND | | | | | | | |
| Const. of Market Complex | 43516120 | 0 | 43516120 | 0 | 0 | 43516120 | 43516120 |
| Const. of Admin. Building | 560651 | 0 | 560651 | 0 | 0 | 560651 | 560651 |
| Const. of Workshop | 387633 | 0 | 387633 | 0 | 0 | 387633 | 387633 |
| Const. of Electrification | 4751821 | 2121255 | 6873076 | 0 | 0 | 6873076 | 4751821 |
| Const. of Security Barrack | 1252560 | 0 | 1252560 | 0 | 0 | 1252560 | 1252560 |
| TOTAL (H) | 50468785 | 2121255 | 0 | 0 | 0 | 52590040 | 50468785 |
| TOTAL (H + H) | 5513217468 | 616417397 | 0 | 0 | 0 | 1569835712 | 5513217468 |
| GRAND TOTAL | 6944772172 | 2233218999 | 0 | 0 | 0 | 2180787575 | 6411951118 |

To be given as to cost of assets on hire purchase basis included above)

(Jagallipi Roy)
Joint Registrar (Finance)
N.I.T., Agartala.



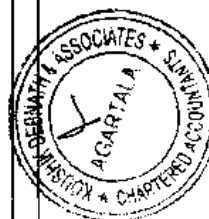
Dr. Debash Bhattacharya
Registrar,
N.I.T., Agartala.

(Signature)
Dr. Mugeroya
Director,
N.I.T., Agartala.

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2016

| | (Amount - Rs.) | |
|--|---------------------------|----------------------------|
| | Current Year 2015-2016 | Previous Year 2014-2015 |
| SCHEDULE 5- INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS: | | |
| 1) In Govt securities | 0 | 0 |
| 2) Other approved Securities | 0 | 0 |
| 3) Shares | 0 | 0 |
| 4) Deventures & Bonds | 0 | 0 |
| 5) Subsidiaries & Joint Ventures | 0 | 0 |
| 6) Others (to be specified) | 0 | 0 |
| TOTAL: | 0 | 0 |

| | (Amount - Rs.) | |
|---|---------------------------|----------------------------|
| | Current Year 2015-2016 | Previous Year 2014-2015 |
| SCHEDULE 6- INVESTMENTS - OTHERS | | |
| 1) In Govt securities | | |
| a) F.D. with Canara Bank, Agartala Br. | 0 | 0 |
| b) F.D. with S.B.I., NIT Agartala Br. | 0 | 0 |
| 2) Other approved Securities | | |
| 3) Shares | | |
| 4) Deventures & Bonds | | |
| 5) Subsidiaries & Joint Ventures | | |
| 6) Others (to be specified) | | |
| TOTAL: | 0 | 0 |



(Signature)
 Asstt. Registrar (Finance)
 N.I.T., Agartala.

(Signature)
 Dr. Debashish Bhattacharya
 Registrar,
 N.I.T., Agartala

(Signature)
 Debashish Bhattacharya
 Director,
 N.I.T., Agartala.

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
|---|---------------------------|----------------------------|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2016 | | |
| SCHEDULE 7 CURRENT ASSETS | Current Year 2015-2016 | Previous Year 2014-2015 |
| Current Assets: | | |
| 1) Inventories: | | |
| a) Stores and Spares | | |
| Stock in Transit | | |
| NON-PLAN FUND | | |
| PLAN FUND | | |
| Machinery & Equipments | 0 | 2649771 |
| b) Loose Tools | | |
| c) Stock in Trade | | |
| Finish Goods | | |
| Work in progress | | |
| Raw materials | | |
| 2) Sundry Debtors: | | |
| a) Debts Outstanding for a period exceeding six months | | |
| b) Others | | |
| Security Deposit with TSECL | 5100 | 5100 |
| 3) Cash balance in hand (including cheques / Drafts and Imprest | | |
| Closing Cash Balance- Non Plan | 272414 | 1523727 |
| Closing Cash Balance- Plan | 0 | 67780 |
| 4) Bank Balances: | | |
| a) With Scheduled Banks | | |
| - On Savings Account | | |
| Canara Bank- Non Plan A/c No- 876 | 448955 | 448955 |
| - On Savings Accounts | | |
| SBI, NITA Br.-Non Plan(A/c-30369892838) | 21933333 | 42214178 |
| SBI, NITA Br.-Plan(A/c-30358199684) | 119477649 | 181068495 |
| Canara Bank, Agt Br.- Plan (A/c-9007) | 19541 | 19541 |
| SBI, NITA Br.-N. P. S. Fund(A/c-30471674447) | 93234 | 35437 |



(Jagajyoti Roy)
Asstt. Registrar (Finance)
N.I.T., Agartala.

Dr. Debanshi Bhattacharya
Registrar,
N.I.T. Agartala

Dr. Goudi Mugeraya
Director,
N.I.T. Agartala.

| | | | |
|---|----------|------------------|------------------|
| SBI, NITA Br.-Project Fund(A/c-30533308751) | 2916193 | 4479422 | |
| SBI, NITA Br.-R. B. Fund(A/c-30693303036) | 20142229 | 14963180 | |
| SBI, NITA Br.-Student Welfare Fund(A/c-30534089717) | 1537670 | 985732 | |
| SBI, NITA Br.-Inst. Dev. Fund(A/c-30534091012) | 3645228 | 624121 | |
| SBI, NITA Br.-EMD & Security Deposit(A/c-30936141729) | 13271183 | 12459872 | |
| TGB, NITA Br.-Inf. Dev Fund(A/c-8026010030064) | 767724 | 708755 | |
| SBI, NITA Br.-SDP Fund(A/c-30773081908) | 21374858 | 25463539 | |
| SBI, NITA Br.-Staff Welfare Fund(A/c-30534092027) | 84172 | 63867 | |
| SBI, NITA Br.-DPF(Civil)(A/c-30534090278) | 2357249 | 1839361 | |
| SBI, NITA Br.-NSS Unit(A/c-30786417404) | 21754 | 7172 | |
| SBI, NITA Br.-Staff Benefit Trust(A/c-31509918149) | 632390 | 98897 | |
| SBI, NITA Br.-Director's Relief Fund(A/c-31536875510) | 345914 | 332482 | |
| SBI, NITA Br.-School of Cont. Edu.(A/c-30939795485) | 34021 | 32700 | |
| SBI, NITA Br.-Guest House Fund(A/c-31664487420) | 2402892 | 1451148 | |
| SBI, NITA Br.-NIT Transit House Fund(A/c-31092166195) | 284797 | 270327 | |
| SBI, NITA Br.-TEQIP Fund(A/c-32067844633) | 9561800 | 22910066 | 310477247 |
| - On Deposit Account(Including Margine Money) | | | |
| Fixed Deposit with SBI Agt Br.-General A/c | 3283715 | 3004085 | |
| Fixed Deposit with Canara Bank, Agt. Br.-General A/c | 26506381 | 22162525 | |
| Fixed Deposit with SBI Agt Br.-NPS Fund | 63876540 | 59333605 | |
| Fixed Deposit with SBI Agt Br.-RBF Fund | 86100292 | 48013949 | |
| Fixed Deposit with TGB NITA Br.-Inf. Dev Fund | 7769158 | 7534204 | |
| Fixed Deposit with TGB NITA Br.-SDP Fund | 80520379 | 78478752 | |
| Fixed Deposit with SBI Agt Br.-Moutoshi Kar Memorial | 30000 | 30000 | |
| Fixed Deposit with SBI Agt Br.-EMD & Security Deposit | 18378390 | 17046710 | |
| Fixed Deposit with TGB NITA Br.-Inst. Dev. Fund | 65385690 | 47211782 | 282815612 |
| b) With Non Scheduled banks | | | |
| - On Current Account | | | |
| - On Deposit Account | | | |
| - On Savings Accounts | | | |
| 5) Post office Savings Accounts: | | | |
| TOTAL | | 573480845 | 597539237 |



(Jagadipati Roy)
Asstt. Registrar (Finance)
N.I.T., Agartala.

Dr. Debashish Bhattacharya
Registrar,
N.I.T., Agartala

Dr. Gopal Mugeraya
Director,
NIT, Agartala.

ORIGINATOR'S INSTITUTION NAME: POST OFFICE SAVINGS
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

| SCHEDULE 7A: DETAILS OF FIXED DEPOSIT ACCOUNTS | | | | | | |
|--|-----------------|--------------------------|-----------------|---------------|--------------------|---------------------|
| Sl. No. | Date of Deposit | Certificate / Account No | Amount(Rs) | Maturity date | Maturity Value(Rs) | Name of Bank |
| i) General Accounts | | | | | | |
| 1 | 31.03.2015 | 30268531331 | 3239960 | 30.05.2016 | 3449799 | SBI Agt Br. |
| 2 | 31.03.2015 | 30772128735 | 43753 | 30.05.2016 | 46586 | SBI Agt Br. |
| 3 | 15.03.2016 | 2348401000863/5 | 8570697 | 15.03.2018 | 9992819 | Canara Bank, Agt Br |
| 3 | 26.03.2016 | 3248401000647/1 | 9568001 | 26.03.2018 | 11155603 | Canara Bank, Agt Br |
| 4 | 26.03.2016 | 3248401000648/1 | 8367683 | 26.03.2018 | 9756118 | Canara Bank, Agt Br |
| | | TOTAL | 29790096 | | 34400925 | |
| ii) Retirement Benefit Fund | | | | | | |
| 1 | 02.04.2014 | 30359168928 | 1956711 | 02.04.2017 | 2495068 | SBI, NITA Br. |
| 2 | 31.03.2015 | 503 | 3616008 | 08.06.2016 | 3692271 | TGB NITA Br. |
| 3 | 31.03.2015 | 504 | 3616008 | 08.06.2016 | 3692271 | TGB NITA Br. |
| 4 | 31.03.2015 | 505 | 2892805 | 08.06.2016 | 3169815 | TGB NITA Br. |
| 5 | 31.03.2015 | 506 | 2169606 | 08.06.2016 | 2377364 | TGB NITA Br. |
| 6 | 31.03.2015 | 507 | 146403 | 08.06.2016 | 1584908 | TGB NITA Br. |
| 7 | 31.03.2015 | 508 | 723909 | 08.06.2016 | 793229 | TGB NITA Br. |
| 8 | 06.02.2016 | 33642380099 | 3036066 | 06.02.2017 | 3264345 | SBI, NITA Br. |
| 9 | 06.02.2016 | 33642380191 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 10 | 06.02.2016 | 33642380351 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 11 | 06.02.2016 | 33642380500 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 12 | 06.02.2016 | 33642380634 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 13 | 06.02.2016 | 33642380736 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 14 | 06.02.2016 | 33642380872 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 15 | 06.02.2016 | 33642381004 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 16 | 06.02.2016 | 33642379708 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 17 | 06.02.2016 | 33642379822 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 18 | 06.02.2016 | 33642379866 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 19 | 06.02.2016 | 33642379968 | 1837839 | 06.02.2017 | 1958606 | SBI, NITA Br. |
| 20 | 12.03.2016 | 34783448095 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 21 | 12.03.2016 | 34783447976 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 22 | 12.03.2016 | 34783447885 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 23 | 12.03.2016 | 34783447772 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 24 | 12.03.2016 | 34783447727 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 25 | 12.03.2016 | 34783447705 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 26 | 12.03.2016 | 34783447568 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 27 | 12.03.2016 | 34783447477 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 28 | 12.03.2016 | 34783447400 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 29 | 12.03.2016 | 34783447297 | 1087748 | 12.03.2017 | 1159306 | SBI, NITA Br. |
| 30 | 25.02.2016 | 802614210358 | 1349067 | 25.02.2017 | 592872 | TGB NITA Br. |

Dr. Debashish Bhattacharya
Registrar,
N.I.T., Agartala

Dr. Debashish Bhattacharya
Registrar,
N.I.T., Agartala

Dr. Debashish Bhattacharya
Registrar,
N.I.T., Agartala

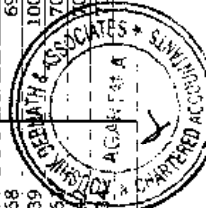
Dr. Debashish Bhattacharya
Registrar,
N.I.T., Agartala

| | | | | | | |
|--|------------|--------------|-----------------|------------|-----------------|-------------|
| 31 | 31.03.2016 | 35665978111 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| 32 | 31.03.2016 | 35665977821 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| 33 | 31.03.2016 | 35665977355 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| 34 | 31.03.2016 | 35665976930 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| 35 | 31.03.2016 | 35665976500 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| 36 | 31.03.2016 | 35665976124 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| 37 | 31.03.2016 | 35665975868 | 5000000 | 31.03.2017 | 5372475 | SBI NTA Br. |
| | | TOTAL | 86100292 | | 92408194 | |
| (ii) New Pension Scheme Fund-Tier-I | | | | | | |
| 1 | 02.04.2014 | 30359167844 | 2599167 | 02.04.2017 | 2599167 | SBI NTA Br. |
| 2 | 16.04.2014 | 30452528964 | 396300 | 16.04.2017 | 505545 | SBI NTA Br. |
| 3 | 03.09.2015 | 30477089620 | 176288 | 03.09.2016 | 183221 | SBI NTA Br. |
| 4 | 17.09.2015 | 30494319962 | 748709 | 17.09.2016 | 793488 | SBI NTA Br. |
| 5 | 23.10.2015 | 30536974539 | 784741 | 23.10.2016 | 835995 | SBI NTA Br. |
| 6 | 17.11.2015 | 30572693760 | 333789 | 17.11.2016 | 355602 | SBI NTA Br. |
| 7 | 27.01.2016 | 30659251769 | 309062 | 27.01.2017 | 329364 | SBI NTA Br. |
| 8 | 27.01.2016 | 30659223516 | 309062 | 27.01.2017 | 329364 | SBI NTA Br. |
| 9 | 13.02.2016 | 30679572359 | 308987 | 13.02.2017 | 329294 | SBI NTA Br. |
| 10 | 26.03.2016 | 30723233180 | 308283 | 26.03.2017 | 328570 | SBI NTA Br. |
| 11 | 18.04.2015 | 30741450409 | 284780 | 18.04.2016 | 306784 | SBI NTA Br. |
| 12 | 25.05.2015 | 30772790529 | 309398 | 25.05.2016 | 331962 | SBI NTA Br. |
| 13 | 11.06.2015 | 30790483174 | 31201 | 11.06.2016 | 340336 | SBI NTA Br. |
| 14 | 22.07.2015 | 30833062025 | 319057 | 22.07.2016 | 341447 | SBI NTA Br. |
| 15 | 26.08.2015 | 30869020196 | 319473 | 26.08.2016 | 341097 | SBI NTA Br. |
| 16 | 16.09.2015 | 30894559896 | 317767 | 16.09.2016 | 339284 | SBI NTA Br. |
| 17 | 26.10.2015 | 30935263512 | 317359 | 26.10.2016 | 338088 | SBI NTA Br. |
| 18 | 12.11.2015 | 30954910750 | 314034 | 12.11.2016 | 334553 | SBI NTA Br. |
| 19 | 18.12.2015 | 30995065723 | 3078647 | 18.12.2016 | 328078 | SBI NTA Br. |
| 20 | 27.01.2016 | 31036380751 | 319246 | 27.01.2017 | 340217 | SBI NTA Br. |
| 21 | 06.02.2016 | 31048976850 | 534672 | 06.02.2017 | 569804 | SBI NTA Br. |
| 22 | 26.03.2016 | 31110608821 | 335675 | 26.03.2017 | 357766 | SBI NTA Br. |
| 23 | 28.04.2015 | 31149019728 | 332672 | 28.05.2016 | 357810 | SBI NTA Br. |
| 24 | 03.06.2015 | 31195703339 | 502595 | 03.06.2016 | 539251 | SBI NTA Br. |
| 25 | 15.06.2015 | 31211169672 | 339963 | 15.06.2016 | 364760 | SBI NTA Br. |
| 26 | 29.07.2015 | 31295128285 | 170031 | 29.07.2016 | 181964 | SBI NTA Br. |
| 27 | 20.08.2015 | 31345275995 | 858046 | 20.08.2016 | 916024 | SBI NTA Br. |
| 28 | 23.09.2015 | 31438847121 | 507856 | 22.09.2016 | 542377 | SBI NTA Br. |
| 29 | 21.10.2015 | 31473911005 | 508899 | 21.10.2016 | 542135 | SBI NTA Br. |
| 30 | 12.11.2015 | 31498348868 | 695940 | 12.11.2016 | 741418 | SBI NTA Br. |
| 31 | 09.12.2015 | 31531900439 | 1001602 | 09.12.2016 | 1067349 | SBI NTA Br. |
| 32 | 18.01.2016 | 31590482766 | 702787 | 18.01.2017 | 748940 | SBI NTA Br. |
| 33 | 20.02.2016 | 31638619140 | 707372 | 21.02.2017 | 753876 | SBI NTA Br. |
| 34 | 24.03.2016 | 31683863342 | 704445 | 24.03.2017 | 750803 | SBI NTA Br. |

Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala

Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala

(Jagajyoti Roy)
Asst. Registrar (Finance)
NIT, Agartala



| | | | | | | |
|----|------------|--------------|-----------------|------------|-----------------|---------------|
| 35 | 10.04.2015 | 7053425 | 4354 | 10.04.2016 | 67806 | SBI, NITA Br. |
| 36 | 12.05.2015 | 31744689276 | 694554 | 12.05.2016 | 745210 | SBI, NITA Br. |
| 37 | 22.07.2015 | 31847516759 | 1395669 | 22.07.2016 | 1493647 | SBI, NITA Br. |
| 38 | 07.09.2015 | 31926034223 | 694370 | 07.09.2016 | 741381 | SBI, NITA Br. |
| 39 | 21.09.2015 | 31950663862 | 670136 | 21.09.2016 | 715687 | SBI, NITA Br. |
| 40 | 16.11.2015 | 32036725156 | 669175 | 16.11.2016 | 712908 | SBI, NITA Br. |
| 41 | 16.11.2015 | 32036500878 | 699974 | 16.11.2016 | 745720 | SBI, NITA Br. |
| 42 | 16.12.2015 | 32088124959 | 702299 | 16.12.2016 | 748407 | SBI, NITA Br. |
| 43 | 20.01.2016 | 32150080442 | 408779 | 20.01.2017 | 435626 | SBI, NITA Br. |
| 44 | 16.02.2016 | 32194047063 | 739020 | 16.02.2017 | 787596 | SBI, NITA Br. |
| 45 | 22.03.2016 | 322449818696 | 712191 | 22.03.2017 | 759057 | SBI, NITA Br. |
| 46 | 11.04.2015 | 32280294988 | 670577 | 11.04.2016 | 721251 | SBI, NITA Br. |
| 47 | 11.05.2015 | 32327269715 | 678158 | 11.05.2016 | 727618 | SBI, NITA Br. |
| 48 | 29.06.2015 | 32401165700 | 673430 | 29.06.2016 | 783076 | SBI, NITA Br. |
| 49 | 19.07.2015 | 32435516795 | 864136 | 19.07.2016 | 1002103 | SBI, NITA Br. |
| 50 | 30.08.2015 | 32509160200 | 981205 | 30.08.2016 | 951532 | SBI, NITA Br. |
| 51 | 22.09.2015 | 32560299037 | 981255 | 22.09.2016 | 1124320 | SBI, NITA Br. |
| 52 | 12.10.2015 | 32599643066 | 954695 | 12.10.2016 | 1017025 | SBI, NITA Br. |
| 53 | 16.11.2015 | 32659511373 | 1016401 | 16.11.2016 | 1082827 | SBI, NITA Br. |
| 54 | 07.12.2015 | 32697478395 | 1018999 | 07.12.2016 | 1085620 | SBI, NITA Br. |
| 55 | 11.01.2016 | 32764700868 | 991980 | 11.01.2017 | 1057111 | SBI, NITA Br. |
| 56 | 19.02.2016 | 32834658624 | 1157923 | 19.02.2017 | 1234042 | SBI, NITA Br. |
| 57 | 07.03.2016 | 32868656275 | 1103999 | 07.03.2017 | 1176614 | SBI, NITA Br. |
| 58 | 13.04.2015 | 32939260002 | 1008654 | 13.04.2016 | 1081649 | SBI, NITA Br. |
| 59 | 11.05.2015 | 32991319180 | 1032833 | 11.05.2016 | 1108164 | SBI, NITA Br. |
| 60 | 19.07.2015 | 33139988769 | 1072885 | 19.07.2016 | 1148177 | SBI, NITA Br. |
| 61 | 19.07.2015 | 33139997241 | 1063433 | 19.07.2016 | 1134061 | SBI, NITA Br. |
| 62 | 21.08.2015 | 33225984529 | 1098899 | 21.08.2016 | 1173279 | SBI, NITA Br. |
| 63 | 12.09.2015 | 33289675550 | 1038646 | 12.09.2016 | 1108971 | SBI, NITA Br. |
| 64 | 15.10.2015 | 33379020737 | 1116294 | 15.10.2016 | 1189187 | SBI, NITA Br. |
| 65 | 13.11.2015 | 33447651803 | 1160033 | 13.11.2016 | 1235839 | SBI, NITA Br. |
| 66 | 11.12.2015 | 33513368081 | 1157229 | 11.12.2016 | 1233196 | SBI, NITA Br. |
| 67 | 02.01.2016 | 33556271054 | 1166630 | 02.01.2017 | 1243206 | SBI, NITA Br. |
| 68 | 13.02.2016 | 33654581837 | 1145489 | 13.02.2017 | 1220778 | SBI, NITA Br. |
| 69 | 10.03.2016 | 33714504141 | 1146712 | 10.03.2017 | 1222142 | SBI, NITA Br. |
| 70 | 18.04.2015 | 33790534221 | 1053732 | 18.04.2016 | 1133360 | SBI, NITA Br. |
| 71 | 07.05.2015 | 33824424555 | 1119317 | 07.05.2016 | 1203901 | SBI, NITA Br. |
| 72 | 09.06.2015 | 33885767374 | 1119317 | 09.06.2016 | 1200958 | SBI, NITA Br. |
| 73 | 09.07.2015 | 33951373023 | 1137900 | 09.07.2016 | 1220736 | SBI, NITA Br. |
| 74 | 19.08.2015 | 34052685763 | 1171785 | 19.08.2016 | 1250964 | SBI, NITA Br. |
| 75 | 15.09.2015 | 34193289361 | 1159761 | 15.09.2016 | 1238294 | SBI, NITA Br. |
| 76 | 27.10.2015 | 34340260470 | 1213630 | 27.10.2016 | 1292904 | SBI, NITA Br. |
| 77 | 26.11.2015 | 34431831658 | 1199455 | 26.11.2016 | 1277865 | SBI, NITA Br. |
| 78 | 11.12.2015 | 34483805688 | 196523 | 11.12.2016 | 1275068 | SBI, NITA Br. |
| 79 | 14.01.2016 | 34601339748 | 194347 | 14.01.2017 | 1272772 | SBI, NITA Br. |
| | | TOTAL | 58876540 | | 68335095 | |

Dr. Gobai Mugeraya
Director,
NIT, Agartala

Dr. Debash Bhattacharya
Registrar,
NIT, Agartala

(Jugayodi Roy)
Asst. Registrar (Finance)
NIT, Agartala

| vii) Institute Development Fund | | | | | | |
|-----------------------------------|------------|---------------|-----------|------------|-----------|---------------|
| 1 | 31.03.2015 | 509 | 4339210 | 08.06.2016 | 4754726 | TGB NITA Br. |
| 2 | 31.03.2015 | 510 | 3616008 | 08.06.2016 | 3962271 | TGB NITA Br. |
| 3 | 31.03.2015 | 511 | 3616008 | 08.06.2016 | 3962271 | TGB NITA Br. |
| 4 | 31.03.2015 | 512 | 2892805 | 08.06.2016 | 3169815 | TGB NITA Br. |
| 5 | 31.03.2015 | 513 | 2169606 | 08.06.2016 | 2377364 | TGB NITA Br. |
| 6 | 31.03.2015 | 514 | 1446403 | 08.06.2016 | 1584908 | TGB NITA Br. |
| 7 | 31.03.2015 | 515 | 7239909 | 08.06.2016 | 7932229 | TGB NITA Br. |
| 8 | 06.02.2016 | 33642377597 | 1836211 | 06.02.2017 | 1956870 | SBI NITA Br. |
| 9 | 06.02.2016 | 33642378738 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 10 | 12.03.2016 | 34783371607 | 5438740 | 12.03.2017 | 5796531 | SBI, NITA Br. |
| 11 | 12.03.2016 | 34783371562 | 5438740 | 12.03.2017 | 5796531 | SBI, NITA Br. |
| 12 | 12.03.2016 | 34783371459 | 5438740 | 12.03.2017 | 5796531 | SBI, NITA Br. |
| 13 | 12.03.2016 | 34783371051 | 5438740 | 12.03.2017 | 5796531 | SBI, NITA Br. |
| 14 | 12.03.2016 | 34783369621 | 5438740 | 12.03.2017 | 5796531 | SBI, NITA Br. |
| 15 | 25.02.2016 | 8026142103596 | 713991 | 25.02.2017 | 770954 | TGB NITA Br. |
| 16 | 31.03.2016 | 356659690393 | 5000000 | 31.03.2017 | 5372475 | SBI, NITA Br. |
| 17 | 31.03.2016 | 35665969151 | 5000000 | 31.03.2017 | 5372475 | SBI, NITA Br. |
| 18 | 31.03.2016 | 35665968884 | 5000000 | 31.03.2017 | 5372475 | SBI, NITA Br. |
| TOTAL | | | 65385690 | | 70391094 | |
| viii) EMD & Security Deposit Fund | | | | | | |
| 1 | 06.02.2016 | 33642378772 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 2 | 06.02.2016 | 33642378909 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 3 | 06.02.2016 | 33642378976 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 4 | 06.02.2016 | 33642379038 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 5 | 06.02.2016 | 33642378107 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 6 | 06.02.2016 | 33642379232 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 7 | 06.02.2016 | 33642379301 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 8 | 06.02.2016 | 33642379436 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 9 | 06.02.2016 | 33642379538 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| 10 | 06.02.2016 | 33642379606 | 1837839 | 06.02.2017 | 1958606 | SBI NITA Br. |
| TOTAL | | | 18378390 | | 19586060 | |
| ix) Moutoshi Kar Memorial | | | | | | |
| 1 | 31.12.2015 | 34732977775 | 30000 | 07.11.2016 | 31833 | SBI NITA Br. |
| GRAND TOTAL | | | 351850545 | | 385078205 | |

Dr. Gopal Mugeraya
Director,
NIT, Agartala.

Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala



Chartered By
Agartala Registrar (Finance)
31.12.2015

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
|---|---------------------------|----------------------------|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2016 | | |
| SCHEDULE 8 LOAN, ADVANCES & DEPOSITS | Current Year 2015-2016 | Previous Year 2014-2015 |
| 1. Advance to employees: (Non-interest bearing) | | |
| a) Salary | 0 | |
| b) Festival | 0 | |
| c) Medical Advance | 0 | |
| d) Other (to be specified) | 0 | |
| 2. Long Term Advances 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 for value to be received. | | |
| a) On Capital account | | |
| Advance to: | | |
| RD Deptt(Hostel Repair & Maints) | 2000000 | 2000000 |
| RD Deptt(Electrification) | 0 | 2121255 |
| RD Deptt(Const of Security Barrack) | 0 | 0 |
| RD Deptt(Const of Market Complex) | 0 | 0 |
| b) Prepaid Expenses | | |
| Loan to NIMCET Fund | 2000000 | 4121255 |
| c) Others | | 0 |
| Temporary Advance to Sundry Parties | | |
| LTC Advance to Employees | 724012 | 1284332 |
| 4) INCOME ACCRUED | 172300 | 12000 |
| a) On Investment - Others. | | |
| i) Interest on Fixed Deposit-General A/c | 253372 | 2277578 |
| ii) Interest on Fixed Deposit-SDP Fund | 0 | 0 |
| 5) CLAIMS RECEIVABLE | | |
| Fund receivable from EMD A/c | | |
| - For Non Plan | 1602777 | 0 |
| - For Plan | 2550302 | 0 |
| TOTAL | 7302763 | 7695165 |

Dr. Gopal Mukherjee
Director,
NIT, Agartala.


Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala.



J. Janyaloy Roy
Acct. Registrar (Finance)
NIT, Agartala.

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
|--|---------------------------|----------------------------|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016 | | |
| SCHEDULE 9 - ACADEMIC RECEIPTS | Current Year 2015-2016 | Previous Year 2014-2015 |
| (Amount - Rs.) | | |
| 1) Academic Collection | 244218050 | 177216930 |
| 2) Annual Fees / Subscription | | |
| 3) Seminar / program Fees | | |
| 4) Consultancy Fees | | |
| 5) Others (Specify) | | |
| TOTAL | 244218050 | 177216930 |

[Signature]
(Institutional Rep)
Asst. Registrar (Finance)
NIT, Agartala



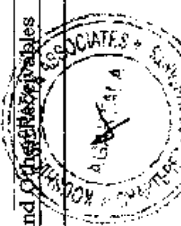
[Signature]
Sopa Mugeraya
Director,
NIT, Agartala

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
|--|---------------------------|--|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016 | | |
| | Current Year 2015-2016 | (Amount - Rs.) Previous Year 2014-2015 |
| SCHEDULE 10 - GRANTS / SUBSIDIES | | |
| (Irrevocable Grants & Subsidies received) | | |
| 1) Central Govt. | | |
| a) From MHRD- Non Plan | 2300000000 | 1500000000 |
| b) From AICTE | 0 | 0 |
| c) Central Counselling Fees-MHRD | 0 | 0 |
| 2) State Govt. | | |
| 3) Govt. Agencies | | |
| 4) Institution / Welfare bodies | | 0 |
| 5) International Organisations | | 0 |
| 6) others (Specify) | | 0 |
| TOTAL | 2300000000 | 1500000000 |
| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016 | | |
| | Current Year 2015-2016 | (Amount - Rs.) Previous Year 2014-2015 |
| SCHEDULE 11 - INCOME FROM INVESTMENTS | | |
| 1) On Term Deposits: | | |
| a) With scheduled Banks- Non-Plan Fund | | 0 |
| State Bank of India, NIT Agartala Br. | 0 | 0 |
| Canara Bank, Agartala Br. | 0 | 0 |
| b) With Non scheduled Banks | | |
| c) With Institutions | | |
| d) Others | | |
| 2) On Loans: | | |
| a) Employees / Staff | | |
| b) Others | | |
| 3) Interest on Debtors and Other Receivables | | 0 |
| TOTAL | 0 | 0 |

Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala

Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala

(Jalajyoti Roy)
Asstt. Registrar (Finance)
NIT, Agartala



A circular stamp with the text "KOUSHIK DEBNATH & ASSOCIATES" around the top inner edge and "CHARTERED ACCOUNTANTS" around the bottom inner edge. In the center, the word "AGARTALA" is written vertically. There are small stars on either side of the word "AGARTALA".

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | |
|---|---------------------------|--|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | |
| SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD / YEAR ENDED 31.03.2016 | | |
| | Current Year 2015-2016 | (Amount - Rs.) Previous Year 2014-2015 |
| SCHEDULE 13 - OTHER INCOME | | |
| A. Income from Land & Building | | |
| B. Sale of Institute's Publications | 0 | |
| C. Income from holding events | | |
| D. Others (Specify)- | | |
| a) Misc Income | 1624459 | 301074 |
| b) Recruitment Fees (Interview) | 0 | 0 |
| c) Sale of Tender Form | 0 | 0 |
| TOTAL | 1624459 | 301074 |
| SCHEDULE 14 - PRIOR PERIOD INCOME | | |
| | Current Year 2015-2016 | (Amount - Rs.) Previous Year 2014-2015 |
| 1. Academic Receipts | 0 | 0 |
| 2. Income from Investments | | |
| 3. Interest earned | | |
| 4. Others (Specify)- | | |
| TOTAL | 0 | 0 |

Dr. Gopal Mugeraya
Director,
NIT, Agartala.

Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala



(Chartered Accountant)
NIT, Agartala

| FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS) | | | |
|---|---------------------------|----------------------------|--|
| Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA | | | |
| SCHEDULES FORMING PART OF BALANCE SHEET FOR THE PERIOD/ YEAR ENDED 31.03.2016 | | | |
| SCHEDULE 13A - STIPEND FUND | Current Year 2015-2016 | (Amount - Rs.) | |
| | | Previous Year 2014-2015 | |
| RECEIPTS | 311005 | 458605 | |
| Opening Balance | | | |
| 1) State Govt.fund for Stipend | | | |
| a) SC & OBC Welfare Deptt | 0 | 0 | |
| b) SC Welfare Deptt-SC Stipend | 0 | 0 | |
| c) SDM-ST Stipend | 0 | 0 | |
| d) DHE- NEC Stipend | 0 | 0 | |
| e) Post Madhyamik & OBC | 0 | 0 | |
| f) ST Welfare Society | | | |
| 2) Govt. Agencies | | | |
| a) NEC-Shillong-National Scholarship | | | |
| b) NEC-Shillong-Stipend | 0 | 0 | |
| 3) Institution / Welfare bodies | | | |
| 4) Stipend-Other State | 2869255 | 4405082 | |
| TOTAL (i) | 3180260 | 4863687 | |
| EXPENDITURE | | | |
| NEC-Stipend | 0 | 0 | |
| Post Madhyamik Stipend | 0 | 0 | |
| Otherstate-Stipend | 2785170 | 4552682 | |
| Post Matric Scholarship-SC & OBC | 0 | 0 | |
| Post Matric Scholarship-ST | 0 | 0 | |
| LIG-Stipend | 0 | 0 | |
| Post Matric Scholarship-OBC | 0 | 0 | |
| Refund to SDM(ST Stipend) | 0 | 0 | |
| TOTAL (ii) | 2785170 | 4552682 | |
| Net Amount (Tr. to Schedule 3) | 395090 | 311005 | |



(Jagajyoti Roy)
Asstt. Registrar (Finance)
NIT, Agartala.

Dr. Debashis Bhattacharya
Registrar,
NIT, Agartala.

Supal Mukherjee
Director,
NIT, Agartala.

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016

| SCHEDULE 15 - STAFF PAYMENT & BENEFIT | [Amount - Rs.] | |
|---|---------------------------|----------------------------|
| | Current Year 2015-2016 | Previous Year 2014-2015 |
| a) Salaries and Wages | | |
| i) Regular Faculty & Staffs | 147852178 | 136063120 |
| ii) Contractual Faculty & Staffs | 96969677 | 73036364 |
| b) Allowances and Bonus | | 664812 |
| c) Contribution to Provident fund | | 0 |
| d) Contribution to other funds (Specify) | | |
| e) New Pension Scheme Fund-Tier-I | 6906683 | 6384753 |
| f) Staff Welfare Expenses | | 0 |
| g) Expenses on Employees Retirement and Terminal benefits | | 0 |
| h) LTC Facility | 2772293 | 3252538 |
| i) Medical Facility | 187435 | 192071 |
| j) Children Education Allowance | 2237283 | 759071 |
| kl) Other (Specify) | | |
| l) Telephone Re-imbursement | 105259 | 146733 |
| 2) CPDA | 3002396 | 5558496 |
| TOTAL | 260033404 | 226057958 |

| SCHEDULE 16 - ACADEMIC EXPENSES | [Amount - Rs.] | |
|---|---------------------------|----------------------------|
| | Current Year 2015-2016 | Previous Year 2014-2015 |
| a) Laboratory Expenses | 1804795 | 1257431 |
| b) Honorarium to Visiting Examiner & others | 2970613 | 3790827 |
| c) Expenses on Workshop | | 133380 |
| d) Convocation Expenses | 1454178 | 1989592 |
| e) Scholarship-Institute | 69511564 | 43794263 |
| f) Others (specify) | | 0 |
| 1) Contingency to PhD/M.Tech | 867070 | 567224 |
| 2) Expenses for Research Affairs | 277975 | 0 |
| TOTAL | 76896195 | 51532717 |



(Jagadipul Roy)
Asstt. Registrar (Finance)
N.I.T., Agartala.

Dr. Debajish Bhattacharya
Registrar,
N.I.T., Agartala.

Dr. Gopal Mukherjee
Director,
NIT, Agartala.

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016

| SCHEDULE 17 - ADMINISTRATIVE & GENERAL EXPENSES | [Amount - Rs.] | |
|---|---------------------------|----------------------------|
| | Current Year 2015-2016 | Previous Year 2014-2015 |
| a) Electricity and Power | 28600423 | 25277214 |
| b) Water Charges | | |
| c) Postage | 60000 | 109500 |
| d) Printing & Stationery | 781531 | 1495188 |
| e) Travelling & Conveyance Expenses | 3354004 | 2185595 |
| f) Expenses on Seminar | 1770605 | 260535 |
| g) Hospitality Expenses | 367335 | 479134 |
| h) Advertisement and publicity | 2648211 | 1560394 |
| i) Newspaper & Periodical | 21522 | 15060 |
| j) Telephone & Communication | 406515 | 478004 |
| k) Others (Specify) | | |
| 1) Miscellaneous Expenses | 100413 | 134468 |
| 2) Medicine Expenses | 1082075 | 1642600 |
| 3) Institution Membership Exp | | |
| 4) Recruitment expenses | | |
| 5) Liveries | | |
| 6) Security Services | 31148866 | 27223875 |
| 7) Gardening Expenses | 5846132 | 4982181 |
| 8) Sweeping & Cleaning | 17099106 | 13564537 |
| 9) Lawyer Fees | 218170 | 99450 |
| 10) Networking Expenses | | |
| 11) Games, Sports & Cultural Activity | 4670975 | 4583136 |
| 12) Internal Audit Fees | 28750 | 28500 |
| 13) Statutory Audit Fees-A.G. | 100000 | 389055 |
| 14) Rent to PWD-Agartala Transit House | | 34050 |
| 15) BOG Meeting Expenses | 2026241 | 740263 |
| 16) Cable Charges | 8500 | |
| 17) Expenses for Golden Jubilee | 428491 | 1185334 |
| 18) Networking/Vset Expenses | 4951288 | 252810 |
| TOTAL | 105719153 | 86720833 |



(Unaffiliated Roy)
 Registrar (Finance)
 Agartala.

Dr. Debashish Bhattacharya
 Registrar,
 NIT, Agartala.

Dr. Gobal Mugeraya
 Director,
 NIT, Agartala.

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016

| SCHEDULE 18 - TRANSPORTATION EXPENSES | | (Amount - Rs.) | |
|--|---------------------------|----------------------------|--|
| | Current Year 2015-2016 | Previous Year 2014-2015 | |
| a) Registration, Insurance etc. for new Car. | | 234268 | |
| b) Transportation Expenses | 257995 | 202267 | |
| c) Vehicle Repair & Maintenance | 484337 | 352360 | |
| d) Fuel Charges | 915388 | 1200836 | |
| e) Others (Specify) | | | |
| TOTAL | 1657720 | 1989731 | |

| SCHEDULE 19 - REPAIRS & MAINTENANCE | | (Amount - Rs.) | |
|--|---------------------------|----------------------------|--|
| | Current Year 2015-2016 | Previous Year 2014-2015 | |
| a) Repair & Maintenance | 4888311 | 2284031 | |
| b) Repairs & Maints-Electricals | 2217137 | 376243 | |
| c) Repair & Maintenance - Building | 2215381 | 1980750 | |
| d) Repair & Maintenance - Computer & Accessories | 2763908 | 1504687 | |
| e) Others (Specify) | | 0 | |
| TOTAL | 12084737 | 6145711 | |



(Jagadip Roy)
 Asstt. Registrar (Finance)
 N.I.T., Agartala

Dr. Debashish Bhattacharya
 Registrar,
 N.I.T., Agartala

(Signature)
 Dr. Gopal Mukherjee
 Director,
 N.I.T., Agartala

FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2016

| SCHEDULE 20 - FINANCE COSTS | | (Amount - Rs.) | |
|------------------------------------|-----------------------------------|------------------------------------|--|
| | Current Year 2015-2016 | Previous Year 2014-2015 | |
| a) Interest on Fixed Loans | 0 | 0 | |
| b) Interest on Other Loans | 0 | 0 | |
| c) Bank Commission | 6787 | 21355 | |
| d) Others (Specify) | 0 | 0 | |
| TOTAL | 6787 | 21355 | |

| SCHEDULE 21 - OTHER EXPENSES | | (Amount - Rs.) | |
|--|-----------------------------------|------------------------------------|--|
| | Current Year 2015-2016 | Previous Year 2014-2015 | |
| a) Provision for Bad and Doughtful Debts | 0 | 0 | |
| b) Irrecoverable Balance Written off | 0 | 0 | |
| c) Others (Specify) | 0 | 0 | |
| TOTAL | 0 | 0 | |

| SCHEDULE 22 - PRIOR PERIOD EXPENSES | | (Amount - Rs.) | |
|--|-----------------------------------|------------------------------------|--|
| | Current Year 2015-2016 | Previous Year 2014-2015 | |
| 1. Establishment Expenses | 0 | 0 | |
| 2. Academic Expenses | 0 | 0 | |
| 3. Administrative Expenses | 0 | 0 | |
| 4. Transportation Expenses | | | |
| 5. Repairs & Maintenance | | | |
| 6. Others (Specify) | | | |
| TOTAL | 0 | 0 | |



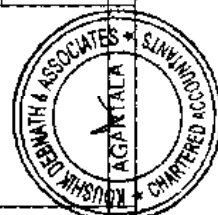
(Authorized Sign)
 A. C. C. Agartala

(Authorized Sign)
 Dr. Debanshi Bhattacharya
 Registrar,
 NIT Agartala

(Authorized Sign)
 Dr. Gopal Mugeraya
 Director,
 NIT, Agartala.

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
CASH FLOW STATEMENT FOR THE PERIOD/ YEAR ENDED 31.03.2016

| Particulars | Current Year 2015-16 | Previous Year 2014-15 |
|---|-------------------------|--------------------------|
| A. CASH FLOW FROM OPERATING ACTIVITIES | | |
| Susplus/(deficit) for the year | (8,43,98,113) | (12,42,21,839) |
| Less: Expenditure on other Fund (NMEICT) | 4,48,873 | 50,127 |
| Adjustments for the Non-operating Incomes/Expenses | | |
| Depreciation | 7,81,30,809 | 4,93,72,484 |
| Write offs | - | - |
| Interest expenses on Loans | 7,81,30,809 | 4,93,72,484 |
| (Increase)/Decrease in Current Asstes | (6,21,35,405) | (7,48,99,482) |
| Increase/(Decrease) in Current Liabilities | (4,96,702) | 1,37,10,90,014 |
| Net Cash Flow from Operating Activities | (6,93,48,284) | 1,29,61,90,532 |
| B. CASH FLOW FROM INVESTING ACTIVITIES | | |
| (Purchase)/Sale of Fixed Asstes | (66,33,02,064) | (2,20,77,42,184) |
| (Purchase)/Sale of Fixed Investments | - | (30,000) |
| Interest received | - | (2,20,77,72,184) |
| Net Cash Flow from Investing Activities | (66,33,02,064) | (2,20,77,72,184) |
| C. CASH FLOW FROM FINANCING ACTIVITIES | | |
| Additions to General Fund during the year | - | - |
| Grants/funds in nature of founders/promoters contribution | - | 1,24,35,176 |
| Endowment fund(principal sum) | 64,94,59,564 | 78,96,35,140 |
| Interest paid on Loans | 64,94,59,564 | 80,20,70,316 |
| Net Increase in Cash Equivalents (A+B+C) | (8,31,90,784) | (10,95,11,336) |
| Cash and cash Equivelants as at the beginning of F.Y. | 22,53,42,676 | 33,48,54,012 |
| Cash and Cash Equivelant at the end of the period | 14,21,51,892 | 22,53,42,676 |



(Signature of Director)
 Director
 NIT, Agartala

(Signature of Registrar)
 Registrar
 NIT, Agartala

(Signature of Director)
 Director
 NIT, Agartala

SCHEDULE-23**SIGNIFICANT ACCOUNTING POLICIES****1. INTRODUCTORY:**

The National Institute of Technology, Agartala is one among the Institutions of National Importance setup under the National Institutes of Technology Act, 2007 (No.29 of 2007) and supplemented by the first Statute prepared and declared by Government of India, Ministry of HRD, New Delhi Vide Gazette of India Part II Section 3 Sub Section (i) dated 23.04.2009.

The Government of India, Ministry of HRD, New Delhi releases funds to the Institute for both Plan and Non-Plan Expenses.

The Institute has prepared the Annual Accounts 2014-15 as per the format provided by the Ministry of HRD with the approval of the Comptroller and Auditor General of India and communicated to all NITs Vide Letter No. F.29-4/2012-IFD dated 17.04.2015.

2. ACCOUNTING CONVENTION:

The Financial Statements are prepared on the basis of Historical cost Convention unless otherwise stated and on the Accrual method of Accounting.

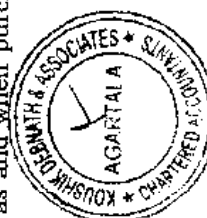
3. REVENUE RECOGNITION:

Tuition fee payable by students is accounted for on cash basis. Interest on term deposits is accounted on actual basis. Sale of application/ tender forms and other Misc Income are accounted on cash basis.

4. INVENTORY VALUATION:

The Institute is booking expenditure on spare parts, laboratory chemicals, consumables and other stores on cash basis as and when purchased and hence no closing stock for the same shown in the balance sheet.

(Signature)
Registrar,
NIT, Agartala.



(Signature)
Dr. Debansu Bhattacharya
Registrar,
NIT, Agartala.

(Signature)
Dr. Gobind Mugeraya
Director,
NIT, Agartala.

5. INVESTMENT:

No Investment except Fixed Deposit was made during the year under audit. Investments are valued at cost.

6. FIXED ASSETS:

Fixed Assets like equipments, furniture etc., are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses related to acquisition. The cost of building is taken on the basis of Completion Report. Cost of purchase of Library books, e-books are treated as fixed assets.

7. DEPRECIATION:

Depreciation is provided on Reducing Balance Method/Diminishing Return Method as per rates specified in the guidelines and format of Ministry of HRD, Government of India in respect of following Assets.

(i) Building- 2%, (ii) Electrical Installation- 5%, (iii) Plant and Machinery- 5%, (iv) Lab Equipment- 8%, (v) Office Equipment- 7.5%, (vi) Computer & Accessories- 20%, (vii) Furniture & Fittings- 7.5%, (viii) Vehicle- 10%, (ix) Library Books- 10% and (x) e-Books/e-Journal- 40%. However, depreciation has been charged on pro-rata basis.

8. GOVERNMENT GRANT/SUBSIDIES:

- i) Government Capital grants for setting up Projects are treated as Capital Receipts (the said grants are shown under the Head Earmarked/Endowment Fund)
- ii) Fixed Assets acquired out of specific grants are shown at their full value of acquisition.

9. RETIREMENT BENEFIT:

Provision towards Retirement Benefits payable has been made as per accrual basis for the year 2015-16.



(Signature)
Jagadish Roy
Registrar,
NIT, Agartala

(Signature)
Dr. Debashish Bhattacharya
Registrar,
NIT, Agartala

(Signature)
Dr. Gopal Mukherjee
Director,
NIT, Agartala

10. NEW PENSION SCHEME (NPS):

Employees' contribution to NPS along with matching contribution of the Institution has been deposited in a separate Bank Account and the NPS contributions are remitted to CRA (NSDL) on monthly basis regularly.

11. NIT Agartala is maintaining the following fund accounts separately:


| Sl. No | Name of Fund | Name of Bank, Branch | Account No |
|--------|---------------------------------------|-----------------------|---------------|
| 1 | New Pension Scheme | SBI, NIT Agartala Br. | 30471674447 |
| 2 | Project Fund | -do- | 30533908751 |
| 3 | Retirement Benefit Fund | -do- | 30693303036 |
| 4 | Student Welfare Fund | -do- | 30534089717 |
| 5 | Institute Development Fund | -do- | 30534091012 |
| 6 | EMD & Security Fund | -do- | 30936141729 |
| 7 | Sponsored Project Fund | -do- | 30773081908 |
| 8 | Staff Welfare Fund | -do- | 30534092027 |
| 9 | Departmental Promotional Fund (Civil) | -do- | 30534090278 |
| 10 | NSS Fund | -do- | 30786417404 |
| 11 | Staff Benefit Trust Fund | -do- | 31509918149 |
| 12 | Directors' Relief Fund | -do- | 31536875510 |
| 13 | School of Continuation Education | -do- | 30939795485 |
| 14 | Guest House Fund | -do- | 31664487420 |
| 15 | TEQIP Fund | -do- | 32067844633 |
| 16 | NIT Transit House Fund | SBI, Kuntaban Br | 31092166195 |
| 17 | Infrastructure Development Fund | TGB, NIT Agartala Br | 8026010030064 |


12. CAPITAL COMMITMENTS:

All major construction works are being executed by CPWD, RD Deptt. Government of Tripura, Bridge & Roof & functioning in the campus on deposit work basis. Certain construction works are also executed through process of tender.


Jyoti Roy
Asstt. Registrar (Finance)
NIT, Agartala




Dr. Debash Bhattacharya
Registrar,
NIT, Agartala


Dr. Mugeraya
Director,
NIT, Agartala

SCHEDULE -24 CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS**1. CONTINGENT LIABILITIES:**

NIL

2. CURRENT ASSETS, LOANS AND ADVANCES:

In the opinion of the Management, the current assets, loans and advances have a value on realization in the ordinary courses of business, equal at least to the aggregate amount shown in the Balance Sheet.

3. TAXATION:

The Income of the Institute is exempted from Income tax under section 10(23C) of the Income Tax Act 1961. Hence no provision has been made for Income tax.

4. FOREIGN CURRENCY TRANSACTION:

Expenditure is recorded at the prevailing rate on the date of the transaction based on demands raised by State Bank of India, Agartala Branch.

5. Corresponding Figures for the previous year have been regrouped/rearranged wherever necessary.

6. Schedules 1 to 23 are annexed to and form and integral part of the Balance Sheet as at 31.03.2016 and Income and Expenditure and Receipts and Payment Accounts for the year ended on that date.



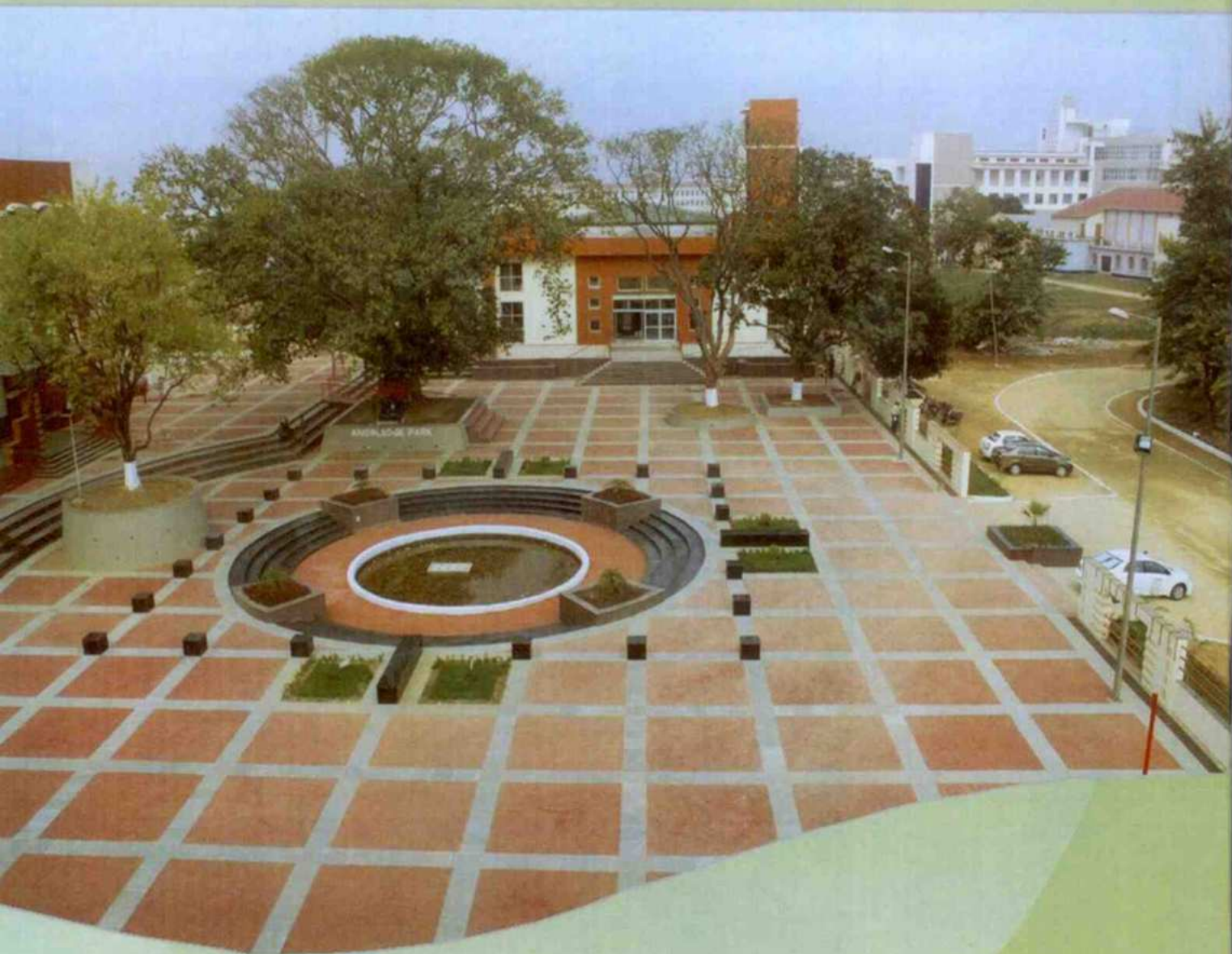
[Signature]
Registrar (Finance)
NIT, Agartala

[Signature]
Dr. Debashish Bhattacharya
Registrar
NIT, Agartala

[Signature]
Dr. Gopal Mugekaye
Director,
NIT, Agartala

NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

Barjala, Agartala, Tripura, India - 799046



Email: nita.director@gmail.com

Website: www.nita.ac.in