



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



# ANNUAL REPORT 2013-2014

**NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA**

*Barjala, Jirania, Tripura, India - 799046*

*Website : [www.nita.ac.in](http://www.nita.ac.in)*

**PAPERS TO BE LAID ON THE TABLE OF LOK SABHA/ RAJYA SABHA**

**ANNUAL REPORT AND ANNUAL ACCOUNTS  
2013-2014**

(AUTHENTICATED)

MINISTER OF STATE IN THE  
MINISTRY OF HUMAN RESOURCE DEVELOPMENT

NEW DELHI  
DATED:



**NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**

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# ANNUAL REPORT

2013 – 2014



*NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA*

## **1.0 INTRODUCTION**

National Institute of Technology Agartala, a Centrally Funded Institution is one of the thirty National Level Technical Institutes in India. The Institute's vision is "to help to improve the economic development of the country particularly 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 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 study and facilities for research in MCA, M. Sc., MBA and also Ph.D along with Post-Doctoral Fellowship programs in various fields of specializations of Engineering, Science and Humanities & Social Science. The School of Hydro Informatics has been introduced and the School of Management has also been started to produce management professionals, skilled with analytical and administrative ability.

The Institute has a dedicated Training and Placement Cell for organizing Industrial Training, Study Tours, and Apprenticeship Training for the pass out 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 Boys' Hostels and 1 Girls' Hostel. The institute looks forward to accommodate students into another Boy's hostel complex with boarding capacity of 1500 students in the near future. The students take active part in all sorts of activities held in cultural 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 Cultural fest called 'Moksha' and the Annual Techno-Management Fest 'AAYAM' that witness spontaneous participation of students. And different Clubs such as Robotic Club, Soft Skill 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 and 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 is being 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' Hostels 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:**

- To complete the construction of Academic Blocks and Administrative Blocks.
- 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, Science, 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 656 to 757 for the academic session 2010-2011. 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. The Rural Development Department of the Govt. of Tripura carried out the renovation work of the existing buildings after conversion to the NIT. 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 a certain interval & 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 Central 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.
- (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 Deptt. & 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 23<sup>rd</sup> 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 the 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<sup>o</sup> C in the winter season to a maximum of 35<sup>o</sup> 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. 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 and is aided with picturesque surroundings.



A well-equipped Medical Unit with three 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 28<sup>th</sup> 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 has 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 Placements**

The Institute has a Training and Placement Cell under Training and Placement Officer with supporting staff. The Training and Placement Cell 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.

#### **2.5 Games and Sports**

The students actively participate in all co-curricular activities like Games and Sports, Debate, Cultural-Functions, Essay Competition, Drama Competition, 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 belonging to the 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 has 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)

Sl. No.	Name and Designation of the Members
1	Prof. P. N. Singh, Chairman of the BOG, NIT Agartala, Former Director, NIT Karnataka, Surathkal (Karnataka).
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	Shri K. Ambuly, 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, Dept. of Computer Science and Technology, BESU, Shibpur.
9	Prof. Sekhar Datta, Professor, Tripura Institute of Technology, Narsingarh, Tripura.
10	Dr. R. P. Sharma, Professor, Civil Engineering Dept., NIT Agartala.
11	Shri John Debbarma, Assistant Professor, Department of Mechanical



	Engineering, NIT, Agartala.
12	Mr. Sumanta Chakrabarti, Registrar is the Secretary of BOG.

**Members of the Finance Committee**

<b>Sl. No.</b>	<b>Name and Designation of the Members</b>
1	Prof. P. N. Singh, Chairman of the BOG, NIT Agartala, Former Director, NIT Karnataka, Surathkal (Karnataka).
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	Shri John Debbarma, Assistant Professor, Department of Mechanical Engineering, NIT, Agartala.
7	Mr. Sumanta Chakrabarti, Registrar is the Member Secretary of FC.

**Members of the Building and Works Committee**

<b>Sl. No.</b>	<b>Name and Designation of the Members</b>
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	The Chief Engineer (NEZ-II), CPWD..
5	Shri Asit Bhaumik, Addl. Chief Engineer, PWD, Govt. of Tripura.
6	Shri Kajal Banik, Executive Engineer, Electrical Inspectorate, Govt. of Tripura.
7	Dr. R. P. Sharma, Professor, Civil Engineering Dept., NIT Agartala.
8	Mr. Sumanta Chakrabarti, Registrar is the Member Secretary of BWC.

**Members of the Senate**

<b>Sl. No.</b>	<b>Name and Designation of the Members</b>
1	Prof. (Dr.) Gopal Mugeraya, Director, NIT Agartala (Tripura) – Chairman of the Senate.
2	Prof. Nilanjana Gupta, Dean, Faculty of Arts, Jaduvpur University.
3	Prof. Kehar Singh, Department of Physics, IIT Delhi.
4	Prof. Kamakhya Prasad Ghatak, Department of Electronics Science, NIT Agartala (Tripura).

5	Dr. Subhas Chandra Saha, Professor, NIT Agartala.
6	Dr. Umesh Mishra, Professor, NIT Agartala.
7	Dr. Ajit Kumar Roy, Professor, NIT Agartala.
8	Prof. Monoj Mitra, Prof. of Metallurgy & Dean of Engineering, Jadavpur University.
9	Prof. R. P. Sharma, Civil Engineering Department, NIT Agartala (Tripura).
10	Mr. Sumanta Chakrabarti, Registrar is the Member Secretary of the Senate.

### 3.2 Number of Meetings of the Authorities

During the period under report the numbers 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	: 4 Nos.
D.	Senate	: 2 Nos.

### 3.3 Staff Position

#### 3.3.1 Names of Director, Registrar, Deans and HODs

DIRECTOR	: Prof. (Dr.) Gopal Mugeraya.
REGISTRAR	: Mr. Sumanta Chakraborty.

#### DEANS:

		<u>Name of the Dean</u>
Dean (Planning & Development)	:	Dr. A. K. Chakraborty
Dean (Academic)	:	Prof. R. P. Sharma
Dean (Faculty Welfare)	:	Prof. K. P. Ghatak
Dean (Research & Consultancy)	:	Dr. A. Saha
Dean (Administration)	:	Dr. D. Bhattacharya
Dean (Student Affairs)	:	Dr. R. S. Panua

#### Heads of the Departments/ Schools:

		<u>Name of the HODs</u>
Mechanical Engineering	:	Dr. Prasun Chakraborti
Civil Engineering	:	Dr. Ratul Das.
Electrical Engineering	:	Dr. Priyanath Das.
Computer Science & Engineering	:	Dr. Paritosh Bhattacharjee.
Electrical & Communication Engineering	:	Dr. Shambhu Nath Pradhan



Electronics & Instrumentation Engineering	:	Dr. Dibyendu Ghoshal
Production Engineering	:	Dr. G.Ravi Kiran Sastry
Chemical Engineering Department	:	Smt. Soma Nag (Nondi)
School of Hydro- Informatics Engineering	:	Dr. Manish Pal
Masters in Computer Application	:	Dr.Paritosh Bhattacharjee.
School of Management	:	Dr. Debasish Neogi
Humanities and Social Science	:	Dr. Debasish Neogi.
Mathematics	:	Dr. U.K. Bera
Physics	:	Dr. J. N. Roy
Chemistry	:	Dr. Saroj Kumar Das

#### Head of Central Services, Facilities and Section:

Central Library	:	Mr. Kanu Ranjan Roy
Medical Officer	:	(i) Dr. Tapan Kr. Datta. (ii) Dr. Dhurjati Debbarma. (iii) Dr. Parimal Chakraborty.
Chief Warden	:	Dr. R. K. Yadav
Faculty In-charge (Workshop)	:	Sri Barnik Saha Roy.
Training & Placement Officer	:	Sri Anirban Bhattacharya
C-DAC Co-ordinator	:	Sri Nirmalya Kar
Centre Co-ordinator of QIP	:	Prof. K. P. Ghatak
Centre Co-ordinator of TEQIP	:	Dr. A. Saha

#### Engineering Unit:

Estate Engineer (Civil)	:	Sri P. C. Das
Estate Engineer (Elect.)	:	Sri S. Chowdhury

### 3.3.2 List of Faculty Members

#### 3.3.2.1 Regular faculty members

Sl. No.	Name	Designation	Department	Date of Joining
1.	Prof. Gopal Mugeraya	Director		10-10-2013
2.	Dr. S. C. Saha	Professor	Mech. Engg.	01-04-2006
3.	Dr. Umesh Mishra	Professor	Civil Engg.	03-10-2008
4.	Prof. Richi Prasad Sharma	Professor	Civil Engg.	01-04-2006
5.	Dr. Ajit Kumar Ray	Professor	Hum. & Soc. Sc.	02-07-2010
6.	Dr. Swapan Bhowmik	Assoc. Prof.	Mech. Engg.	01-04-2006
7.	Dr. Prasun Chakrabarty	Assoc. Prof.	Mech. Engg.	01-04-2006
8.	Dr. Ajoy kumar Das	Assoc. Prof.	Mech. Engg.	01-04-2006

9.	Dr. Rajsekhar Panua	Assoc. Prof.	Mech. Engg.	24-05-2010
10.	Dr. G.Ravi Kiran Sastry	Assoc. Prof.	Mech. Engg.	24-04-2012
11.	Dr. Sujit Kumar Pal	Assoc. Prof.	Civil Engg.	01-04-2006
12.	Dr. Manish Pal	Assoc. Prof.	Civil Engg.	01-04-2006
13.	Dr. Ratul Das	Assoc. Prof.	Civil Engg.	01-04-2006
14.	Dr.(Mrs.) Rama Deb Barma	Assoc. Prof.	Civil Engg.	01-04-2006
15.	Dr. Rup Narayan Roy	Assoc. Prof.	Elect. Engg.	01-04-2006
16.	Dr. Ardhendu Saha	Assoc. Prof.	Elect. Engg.	01-04-2006
17.	Dr. Priyanath Das	Assoc. Prof.	Elect. Engg.	01-04-2006
18.	Dr. Ajoy Kr. Chakraborty	Assoc. Prof.	Elect. Engg.	15-07-2010
19.	Sri Diptendu Bhattacharya	Assoc. Prof.	Com. Sc. & Engg.	01-04-2006
20.	Dr. Ram Naresh Rai	Assoc. Prof.	Prod. Engg.	25-06-2010
21.	Dr. Dibyendu Ghoshal	Assoc. Prof.	Electronics & Commu. Engg.	29-04-2010
22.	Dr. Debasish Bhattacharya	Assoc. Prof.	Mathematics	01-04-2006
23.	Dr. Uttam Kr.Bera	Assoc. Prof.	Mathematics	01-09-2010
24.	Dr. Paritosh Bhattacharya	Assoc. Prof.	Mathematics	27-03-2012
25.	Dr. Aparna Nath	Assoc. Prof.	Physics	01-04-2006
26.	Dr. Jitendra Nath Roy	Assoc. Prof.	Physics	12-04-2010
27.	Dr. Saroj kumar Das	Assoc. Prof.	Chemistry	01-04-2006
28.	Dr. Tarun Kumar Mishra	Assoc. Prof.	Chemistry	09-04-2012
29.	Dr. Debasish Neogi	Assoc. Prof.	Hum. & So. Sc.	22-08-2008
30.	Sri John Deb Barma	Asst. Prof.	Mech. Engg.	01-04-2006
31.	Sri Pritam Das	Asst. Prof.	Mech. Engg.	01-04-2006
32.	Sri Abhik Majumder	Asst. Prof.	Mech. Engg.	01-04-2006
33.	Sri Madhujit Deb	Asst. Prof.	Mech. Engg.	01-04-2006
34.	Sri Barnik Saha Roy	Asst. Prof.	Mech. Engg.	01-04-2006
35.	Sri Pankaj kumar Das	Asst. Prof.	Mech. Engg.	01-04-2006
36.	Sri Arindam Majumder	Asst. Prof.	Mech. Engg.	20-04-2010
37.	Sri.Rahul Banerjee	Asst. Prof.	Mech. Engg.	12-04-2010
38.	Sri Ankuran Saha	Asst. Prof.	Mech. Engg.	21-05-2012
39.	Sri R.K. Bhogendra Meiti	Asst. Prof.	Mech. Engg.	29-06-2012
40.	Sri Ajoy Biswas	Asst. Prof.	Mech. Engg.	01-07-2007 23-07-2012
41.	Dr. Subrata kumar Ghosh	Asst. Prof.	Mech. Engg.	07-06-2012
42.	Smt. Lipika Haldar	Asst. Prof.	Civil Engg.	01-04-2006
43.	Dr. (Mrs) Sima Ghosh	Asst. Prof.	Civil Engg.	01-04-2006
44.	Sri Rajib Saha	Asst. Prof.	Civil Engg.	01-04-2006
45.	Sri Gopinandan Dey	Asst. Prof.	Civil Engg.	01-04-2006
46.	Sri Jayanta Pal	Asst. Prof.	Civil Engg.	01-04-2006
47.	Sri Nilotpal Deb Barma	Asst. Prof.	Civil Engg.	01-04-2006
48.	Mrs. Tara Sen	Asst. Prof.	Civil Engg.	12-04-2010
49.	Dr. Sanjay Paul	Asst. Prof.	Civil Engg.	24-05-2012



50.	Mr. Animesh Debnath	Asst. Prof.	Civil Engg.	21-06-2012
51.	Mr Sushant Kr. Biswal	Asst. Prof.	Civil Engg.	21-06-2012
52.	Dr. Surajit Das	Asst. Prof.	Civil Engg.	16-05-2012
53.	Sri Dipankar Sarkar	Asst. Prof.	Civil & Trans. Engg.	01-04-2006
54.	Sri Debdulal Tripura	Asst. Prof.	Civil & Trans. Engg.	01-04-2006
55.	Sri Partha Pratim Sarkar	Asst. Prof.	Civil & Transp. Engg.	08-09-2008
56.	Smt Anindita Jamatia	Asst. Prof.	Elect. Engg.	01-04-2006
57.	Sri Abaniswar Chakraborti	Asst. Prof.	Elect. Engg.	01-04-2006
58.	Smt Sumita Deb	Asst. Prof.	Elect. Engg.	01-04-2006
59.	Sri Prabir Ranjan Kasari	Asst. Prof.	Elect. Engg.	01-04-2006
60.	Smt Minakshi Deb Barma	Asst. Prof.	Elect. Engg.	01-04-2006
61.	Sri Bikram Das	Asst. Prof.	Elect. Engg.	01-04-2006
62.	Dr. Subhadeep Bhattacharjee	Asst. Prof.	Elect. Engg.	13-04-2010
63.	Mr. Prasenjit Debnath	Asst. Prof.	Elect. Engg.	30-07-2010
64.	Ms. Joyshree Das	Asst. Prof.	Elect. Engg.	11-10-2012
65.	Dr. Aniruddha Bhattacharya	Asst. Prof.	Elect. Engg.	12-12-2012
66.	Mr. Biman Kumar Saha Roy	Asst. Prof.	Elect. Engg.	28-02-2013
67.	Sri Mrinal Knt. Debbarma	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
68.	Sri Swapan Deb Barma	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
69.	Sri Nikhil Deb Barma	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
70.	Sri Kunal Chakma	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
71.	Smt Smita Das	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
72.	Sri Dwijen Rudra Pal	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
73.	Sri Suman Deb	Asst. Prof.	Com. Sc. & Engg.	01-04-2006
74.	Sri Anupam Jamatia	Asst. Prof.	Comp. Sc. & Engg.	01-04-2006
75.	Sri Tribid Deb Barma	Asst. Prof.	Comp. Sc. & Engg.	01-04-2006
76.	Mr. Nirmalya Kar	Asst. Prof.	Comp. Sc. & Engg.	29-07-2010
77.	Mr. Ashim Saha	Asst. Prof.	Comp. Sc. & Engg.	12-10-2012
78.	Sri Manik Bhowmik	Asst. Prof.	Electronics & Comm. Engg.	01-04-2006
79.	Sri Biman Deb Barma	Asst. Prof.	Electronics & Comm. Engg..	01-04-2006
80.	Dr. Aniruddha Mandal	Asst. Prof.	Electronics & Comm. Engg.	12-04-2010
81.	Sri. Kamalesh Debnath	Asst. Prof.	Electronics & Comm. Engg.	12-04-2010
82.	Dr. Sambhu Nath Pradhan	Asst. Prof.	Electronics &	28-05-2010



			Comm. Engg.	
83.	Sri Anirban Bhattacharya	Asst. Prof.	Electronics & Comm. Engg.	21-05-2012
84.	Sri Somnath Roy Choudhury	Asst. Prof.	Electronics & Comm. Engg.	21-05-2012
85.	Mrs. Tamasi Moyra (Panua)	Asst. Prof.	Electronics & Comm. Engg.	13-06-2012
86.	Ms. Madhuparna Chakraborty	Asst. Prof.	Electronics & Comm. Engg.	22-06-2012
87.	Mr. Mitra Barun Sarkar	Asst. Prof.	Electronics & Comm. Engg.	15-06-2012
88.	Sri Atanu Chowdhury	Asst. Prof.	Electronics & Inst. Engg.	22-09-2008
89.	Mr. Jayanta Kr. Rakshit	Asst. Prof.	Electronics & Inst. Engg.	23-08-2010
90.	Sri Prasenjit Datta	Asst. Prof.	Prod. Engg.	01-04-2006
91.	Sri Kishan Choudhuri	Asst. Prof.	Prod. Engg.	18-09-2008
92.	Sri Swarup Paul	Asst. Prof.	Prod. Engg.	20-02-2009
93.	Dr. Rabindra Nath Barman	Asst. Prof.	Prod. Engg.	12-04-2010
94.	Ms. Seena P.	Asst. Prof.	Prod. Engg.	13-05-2010
95.	Dr. Vidyut Dey	Asst. Prof.	Prod. Engg.	01-06-2012
96.	Mr. Uttam Kumar Mandal	Asst. Prof.	Prod. Engg.	28-05-2012
97.	Mrs. Soma Nag	Asst. Prof.	Chemical Engg.	14-06-2010
98.	Dr. Tarun Knt. Bandyopadhyay	Asst. Prof.	Chemical Engg.	04-05-2012
99.	Dr. Srimanta Ray	Asst. Prof.	Chemical Engg.	04-05-2012
100.	Dr. Kalyan Gayen	Asst. Prof.	Chemical Engg.	04-05-2012
101.	Mr. Dwipayan Sen	Asst. Prof.	Chemical Engg.	16-07-2012
102.	Dr. Ajay kumar Manna	Asst. Prof.	Chemical Engg.	17-12-2012
103.	Sri Apu kumar Saha	Asst. Prof.	Mathematics	01-04-2006
104.	Dr. (Mrs) Baby Bhattacharya	Asst. Prof.	Mathematics	06-02-2009
105.	Dr. Rajesh kr. Yadav	Asst. Prof.	Physics	06-09-2010
106.	Dr. Suvra Prakash Mondal	Asst. Prof.	Physics	01-11-2012
107.	Dr. Biswajit Saha	Asst. Prof.	Physics	30-11-2012
108.	Dr. (Mrs.) Mitali Saha	Asst. Prof.	Chemistry	12-04-2010
109.	Dr. Keisham Surjit Singh	Asst. Prof.	Chemistry	26-07-2010
110.	Dr. Gyanabati Khuraijam	Asst. Prof.	Hum. & Soc. Sc.	07-05-2010
111.	Dr. Anirban Dutta	Asst. Prof.	School of Management	06-11-2012
112.	Dr. Mrinmoy Majumder	Asst. Prof.	School of Hydro. Info. Engg.	17-11-2012



## 3.3.2.2 Contractual faculty members.

Sl. No.	Name	Designation	Department	Date of Joining
1.	Ms. Moumita Majumder	Asstt. Prof.	Comp. Sc. & Engg.	18-08-2010
2.	Ms. Lalita Kumari	Asstt. Prof.	Comp. Sc. & Engg.	18-08-2010
3.	Ms. Sharmistha Majumder	Asstt. Prof.	Comp. Sc. & Engg.	24-08-2011
4.	Ms. Priyanka Sarkar	Asstt. Prof.	Comp. Sc. & Engg.	01-04-2013
5.	Ms. Hrituparna Paul	Asstt. Prof.	Comp. Sc. & Engg.	01-04-2013
6.	Mr. Dhrubajyoti Bhowmik,	Asstt. Prof.	Comp. Sc. & Engg.	01-04-2013
7.	Mr. Parthasarathi De	Asstt. Prof.	Comp. Sc. & Engg.	08-04-2013
8.	Mr. Jayanta Pal	Asstt. Prof.	Comp. Sc. & Engg.	01-04-2013
9.	Mr. Subhajit Deb	Asstt. Prof.	Civil Engg.	06-08-2010
10.	Ms. Nabanita Bhowmik	Asstt. Prof.	Civil Engg.	06-12-2012
11.	Sri Abhijit Debnath	Asstt. Prof.	Civil Engg.	06-12-2012
12.	Ms. Subhra Das	Asstt. Prof.	Civil Engg.	12-12-2012
13.	Mr. Bibhab Kr. Lodh	Asstt. Prof.	Chemical Engg.	05-08-2011
14.	Mr. Abhijit Mandal	Asstt. Prof.	Chemical Engg.	21-01-2013
15.	Sri Abhijit Baidya	Teaching Asstt.	Maths. Dept.	23-08-2010
16.	Dr. Susmita Roy	Asstt. Prof.	Maths. Dept.	01-08-2011
17.	Mr. Jayanta Debnath	Teaching Asstt.	Maths. Dept.	01-08-2011
18.	Ms. Pinki Majumder	Teaching Asstt.	Maths. Dept.	01-08-2011
19.	Ms. Jayasree Chakraborty	Teaching Asstt.	Maths. Dept.	05-09-2012
20.	Ms. Sohini Goswami	Teaching Asstt.	Physics Dept.	18-08-2009
21.	Mr. Subharaj Paul	Teaching Asstt.	Physics Dept.	01-08-2012
22.	Mr. Rakesh Roy	Asstt. Prof.	Physics Dept.	17-07-2013
23.	Dr. (Mrs). Puja Dey	Asstt. Prof.	Physics Dept.	12-08-2013
24.	Dr. Manash Kr. Paul	Asstt. Prof.	Physics Dept.	16-07-2010 17-10-2012
25.	Dr. Sanjay Kr. Mandal	Asstt. Prof.	Physics Dept.	05-11-2012
26.	Dr. Dipak Sen	Asstt. Prof.	Mech. Engg.	02-08-2010
27.	Sri Dibyendu Das	Asstt. Prof.	Mech. Engg.	12-08-2009
28.	Mr. Shahanwaz Khan	Asstt. Prof.	Mech. Engg.	03-08-2011
29.	Sri. Durbadal Debroy	Asstt. Prof.	Mech. Engg.	03-08-2011
30.	Sri Aparesh Datta	Asstt. Prof.	Mech. Engg.	03-08-2011
31.	Sri. Abhishek Paul	Asstt. Prof.	Mech. Engg.	03-08-2011
32.	Ms. Sharmistha Sharma	Asstt. Prof.	Elect. Engg.	12-08-2009
33.	Mr. Diptanu Das	Asstt. Prof.	Elect. Engg.	08-08-2011
34.	Dr. Bidyut Kr. Bhattacharya	Professor	Elect. Engg.	17-01-2013

35.	Ms. Saheli Roy	Asstt. Prof.	Elect. Engg.	12-08-2009
36.	Mr. Bhaskar Bhattacharjee	Teaching Asstt.	Elect. Engg.	18-03-2009
37.	Ms. Nivedita Laskar	Asstt. Prof.	Elect. Engg.	15-11-2012
38.	Mr. Bishop Debbarma	Asstt. Prof.	Prod. Engg.	24-08-2010
39.	Mr. Sujay Chakraborty	Asstt. Prof.	Prod. Engg.	01-08-2011
40.	Ms. Pushparenu Bhattacharjee	Asstt. Prof.	Prod. Engg.	08-08-2013
41.	Mr. Shiladitya Chakraborty	Teaching Asstt.	Electronics & Comm. Engg.	25-07-2008
42.	Mr. Narayan Debnath	Teaching Asstt.	Chemistry Dept.	01-08-2011
43.	Dr. Subrata Das	Asstt. Prof.	Chemistry Dept.	08-08-2011
44.	Mr. Bidhyasagar Debnath	Teaching Asstt.	Hum. & So. Sc.	04-08-2008
45.	Ms. Tillotama Chakraborty	Asstt. Prof.	Hydro. Info. Engg.	30-08-2011
46.	Mr. Prasenjit Ghorai	Asstt. Prof.	Electronics & Instrumentation Engg.	08-08-2011
47.	Mr. Apangshu Das	Asstt. Prof.	Electronics & Instrumentation Engg.	10-08-2012
48.	Ms. Priyanka Dey	Asstt. Prof.	Electronics & Instrumentation Engg.	13-08-2012
49.	Ms. Priyanka Roy Goswami	Asstt. Prof.	Electronics & Instrumentation Engg.	06-02-2012
50.	Dr. Dijendra Nath Roy	Asstt. Prof.	Bio-Engg.	28-01-2013
51.	Dr. Biswanath Bhunia	Asstt. Prof.	Bio-Engg.	04-03-2013
52.	Dr. Tridib Kr. Bhowmik	Asstt. Prof.	Bio-Engg.	13-06-2013
53.	Dr. Rajib Mallik	Asstt. Prof.	School of Management	22-05-2013
54.	Dr. Sonit Dutta	Asstt. Prof.	School of Management	23-05-2013
55.	Ms. Mili Kar	Teaching Asstt.	School of Management	07-08-2013

### 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	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	Electrical Engg. Department	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 Jadulal Debnath	Assistant (SG-I)	Establishment Section	01-04-2006
7.	Sri Akhil Debbarma	Accountant	Accounts Section	01-04-2006
8.	Sri Sanjoy Deb Rupini	Sr. Assistant	Estt. Section	01-04-2006
9.	Sri Tarun Debbarma	Sr. Assistant	Stipend & Scholarship and Trng. & Placement	01-04-2006
10.	Smt. Bakul Debbarma	Sr. Assistant	Estt. Section	01-04-2006
11.	Sri Jitendra Debnath	Sr. Assistant	Estate Section	01-04-2006
12.	Sri Narayan Ch. Banik	Sr. Assistant	Accounts Section	01-04-2006
13.	Sri Saljal Kr. Dey	Sr. Assistant	Cash Section	01-04-2006
14.	Sri Pradip Kr. Majumder	Jr. Assistant	Academic Section	01-04-2006
15.	Sri Sukhen Saha	Jr. Assistant	Academic Section	01-04-2006
16.	Sri Dharendra Debnath	Jr. Assistant	Library	01-04-2006
17.	Sri Tapan Deb Nath	Technician	Estt. Section	01-04-2006
18.	Sri Dilip Kr. Ghosh	Sr. Technician	Workshop	01-04-2006
19.	Sri Pabitra Acharjee	Technician	Workshop	01-04-2006
20.	Sri Jagadish Ch. Bhoumik	Sr. Technician	Electronics & Comm. Engg.	01-04-2006
21.	Sri Sukhendu Debbarma	Sr. Technician	Elect. Engg.	01-04-2006
22.	Sri Nirmal Saha	Attendant (SG-II)	Mech. Engg.	01-04-2006
23.	Smt. Mana Rani Das(Bahadur)	Group - C	TPO	20-06-1987
24.	Sri Bhusan Sarkar	Group - C	Mech. Engg.	04-12-1980
25.	Sri Ajit Saha	Group - C	Estate Sec.	26-06-1982
26.	Sri Sovan Ch. Deb	Group - C	Prod. Engg.	03-02-1981
27.	Sri Manindra Sarkar	Group - C	Library	20-05-1981
28.	Sri Rajkishore Ghosh	Group - C	Elect. Engg.	26-06-1982
29.	Sri Bijan ch Debnath	Group - C	Civil Engg.	22-09-1980
30.	Sri Ratan Debnath	Group - C	Directors' Office	22-09-1980
31.	Sri Dhanu Rn. Saha	Group - C	Medical Unit	05-12-1980
32.	Sri Manik Chakraborty	Group - C	Civil Engg.	26-06-1982
33.	Sri Ratan Modi	Group - C	CSE Dept.	04-02-1981
34.	Sri Niranjana Ghosh	Group - C	Mech. Engg.	08-12-1980
35.	Sri Jahar Debnath	Group - C	Dean (P&D)	15-09-1987
36.	Smt. Brihalata Debbarma	Group - C	Civil Engg.	06-07-1992
37.	Smt. Uma Saha	Group - C	Exam. Sec.	31-07-1996
38.	Sri Dilip Debbarma	Group - C	Estt. Sec.	22-12-1990
39.	Smt. Sonalaxmi Debbarma	Group - C	Estt. Sec.	04-05-1998
40.	Sri Nepal Debnath	Group - C	Acad. Sec.	14-08-1997
41.	Sri Bishu Debbarma	Group - C	Prod. Engg.	17-05-1999

42.	Smt. Urmila Debbarma	Group - C	Estt. Sec.	18-01-2003
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### 3.3.3.2 List of contractual non-teaching staff of the institute

Sl. No.	Name	Designation	Department	Date of Joining
1.	Sri Sajal Kr. Ganguly (Rtd.)	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 (Rtd.)	Admn. Officer	O/o the Registrar	12-03-2010
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. (Retired)	Accounts Officer	Accounts Section	01-06-2009
10.	Sri Rajesh Kn. Majumder	Accountant	Accounts Section	21-11-2007
11.	Mr. Dhruba Lal Banik (Retired)	Accountant	Accounts Section	05-08-2011
12.	Sri Subrata Chakraborty	Audit officer	Accounts Section	05-12-2011
13.	Ms Aparna Nath	Accountant	Accounts Section	18-08-2010
14.	Sri Dulal Ch. Das (Retired)	U.D.C.	Accounts Section	07-05-2007
15.	Sri Kartik Ch. Debnath (Retired)	Gr.-D	Accounts Section	01-05-2007
16.	Sri Tapan Kr. Rakshit (Rtd.)	Finance Officer	Accounts Section	06-01-2012
17.	Mr. Shyamal Purakayastha (Rtd.)	Audit Officer	Accounts Section	07-01-2014
18.	Mr. Jagat Jyoti Roy (Rtd.)	A.R.(Finance)	Accounts Section	07-01-2014
19.	Sri Satya Ranjan Chakraborty (Rtd.)	Section Officer	Establishment Section	17-02-2012
20.	Mr. Kritisundar Saha	Office Assistant	Establishment Section	01-08-2013
21.	Sri Benimadav Bhowmik (Rtd.)	U.D.C.	Establishment Section	03-10-2006
22.	Sri Milan Chandra Sarkar	Asstt. Reg.	Academic Section	03-08-2009
23.	Sri Kabir Deb	Jr. Assistant	Academic Section	04-06-2007
24.	Ms. Krishna Rani Deb	Jr. Assistant	Academic Section	21-06-2011
25.	Sri Sukdeb Chakraborty (Rtd.)	Superintendent.	Exam. Sec.	01-06-2007
26.	Ms. Payel Sarkar	Sr. Assistant	Exam. Sec.	05-07-2011



27.	Sri Sourav Mahajan	Jr. Assistant	Exam. Sec.	12-12-2008
28.	Mr. Himangshu Paul (Rtd.)	Section Officer(Pur)	Purchase Section	26-09-2011
29.	Sri Nabin Chandra Kundu	Lib. Asstt.	Purchase Section	01-04-2010
30.	Smt. Joydipa Bhattacharya	Jr. Assistant	Purchase Section	01-03-2012
31.	Sri Partha Biswas	Estate Manager	Estate Section	12-12-2008
32.	Mr. Rajesh Kr. Modak (Rtd.)	Jr. Engineer	Estate Section	16-09-2011
33.	Smt. Tapasi Debnath	Jr. Engineer	Estate Section	24-04-2009
34.	Mrs. Sanju Debnath	Draftsman	Estate Section	12-12-2008
35.	Sri Nakul Ch. Debnath (Rtd.)	Plumber	Estate Section	01-05-2008
36.	Sri Papai Kanti Ghosh	Clerk-Cum-Typist	Estate Section	15-11-2010
37.	Sri Sudhangshu Kr. Bhowmik (Rtd.)	Plumber	Estate Section	04-11-2009
38.	Sri Sankar Debbarma	Work Asstt.	Estate Section	11-07-2009
39.	Mr. Sanjib Chakraborty	Opt (Auditorium )	Estate Section	27-06-2011
40.	Mr. Basab Kanti Bhattacharjee	Jr. Engineer (Civil)	Estate Section	03-09-2012
41.	Sri Rakesh Tripura	Mason	Estate Section	10-12-2012
42.	Sri Pradip Sutradhar	Carpenter	Estate Section	10-12-2012
43.	Sri Biswajit Das	Helper	Estate Section	10-12-2012
44.	Sri Sanjib Sarkar	Helper	Estate Section	10-12-2012
45.	Sri Milan Karmakar	Helper	Estate Section	10-12-2012
46.	Mr. Paresh Ch. Das	A.E.E.	Estate Section	02-08-2013
47.	Mr. Narayan Ch. Saha	A.E.E.	Estate Section	02-08-2013
48.	Mr. Ranjan Roy Chowdhury	A.E.E.	Estate Section	02-08-2013
49.	Mr. Bimal Krishna Debnath	Jr. Engineer	Estate Section	02/09/2010
50.	Sri Hare Krishna Debnath	Operator	Estate Section	09-11-2010
51.	Sri Debashis Debnath	Operator	Estate Section	09-11-2010
52.	Sri Ranjit Sharma	Helper	Estate Section	09-11-2010
53.	Sri Rajib Chakraborty	Helper	Estate Section	09-11-2010
54.	Sri Chanki Paul	Helper	Estate Section	09-11-2010
55.	Mr. Pradip Das	Electrician	Estate Section	01-12-2011
56.	Mr. Arabinda Das	Electrician	Estate Section	01-12-2011
57.	Mr. Sujit Debnath	Lineman	Estate Section	01-12-2011
58.	Mr. Amar Krishna Saha	Helper	Estate Section	01-12-2011
59.	Mr. Subir Namasudra	Helper	Estate Section	01-12-2011
60.	Sri Biswajit Das	Supervisor	Estate Section	07-08-2012
61.	Sri Pabitra Shil	Electrician	Estate Section	08-08-2012
62.	Sri Krishan Debnath	Lineman	Estate Section	02-08-2012



63.	Sri Krishna Ch. Saha	Lineman	Estate Section	03-08-2012
64.	Sri Uttam Kr. Debnath	Lineman	Estate Section	07-08-2012
65.	Sri Parimal Debnath	Helper	Estate Section	03-08-2012
66.	Sri Biswajit Debbarma	Helper	Estate Section	03-08-2012
67.	Mr. Litan Sarkar	Jr. Assistant	TPO	16-07-2010
68.	Sri Sukanta Goswami	Jr. Assistant	Dean (FW)	19-12-2008
69.	Sri Kanu Ranjan Roy (Rtd.)	Sr. Librarian.	Library	01-09-2009
70.	Sri Shymal Kanti Deb (Rtd.)	Librarian	Library	01-06-2007
71.	Sri Anirban Sharma Roy	Lib. Asstt.	Library	30-01-2012
72.	Sri Dipankar Das	Jr. Assistant	Library	18-12-2008
73.	Sri Govinda Chandra Shil (Rtd.)	Jr. Assistant	Library	13-04-2010
74.	Sri Anupam Pal	Sports Officer	Dean (SW)	16-08-2007
75.	Sri Sukanta Ghoswami	Phy. Edu. Off.	Dean (SW)	16-08-2007
76.	Ms. Rumita Saha	Hostel Supervisor	Dean (SW)	01-08-2012
77.	Ms. Mahuya Biswas	Hostel Supervisor	Dean (SW)	10-02-2010
78.	Mr. Ajoy Bhowmik	Hostel Supervisor	Dean (SW)	16-02-2010
79.	Mr. Rabindra Das	Hostel Supervisor	Dean (SW)	10-02-2010
80.	Sri Sukrit Prasad Dutta	Hostel Supervisor	Dean (SW)	30-07-2012
81.	Sri Satyajit Das	Hostel Supervisor	Dean (SW)	30-07-2012
82.	Sri Debashish Biswas	Foreman	Workshop	04-08-2008
83.	Sri Manojit Das	Foreman/Instructor	Workshop	18-09-2008
84.	Sri Koushik Debroy	Foreman	Workshop	01-01-2009
85.	Sri Debabrata Sen (Rtd.)	Head Ins.	Workshop	01-01-2008
86.	Sri Arup taru Roy	Instructor	Workshop	19-08-2009
87.	Sri Ranju Kr. Singh	Instructor	Workshop	19-08-2009
88.	Sri Biswajit Debnath	Instructor	Workshop	19-08-2009
89.	Sri Jiban Chandra (Rtd.)	Sr. Engine Operator	Workshop	19-03-2012
90.	Sri Basudeb Banik	Tech.	Workshop	22-12-2008
91.	Sri Sujit Kumar Bhowmik	Skilled Asstt.	Workshop	18-09-2008
92.	Sri Shubhendu Debbarma	Jr. Tech.	Workshop	19-08-2009
93.	Sri Chinmoy Dey	Jr. Tech.	Workshop	19-08-2009
94.	Sri Nikhil Ch. Karmakar (Rtd)	Gr.-D	Workshop	01-06-2007
95.	Sri Bishnupada Das	Driver	Workshop	19-11-2008



96.	Sri Babul Ch. Deb	Driver	Workshop	16-07-2009
97.	Sri Gopal Ch. Das	Driver	Workshop	16-07-2009
98.	Sri Sajal Saha	Driver	Workshop	01-02-2011
99.	Sri Sachindra Ch. Das (Rtd)	Gr. D	Mech. Engg.	01-02-2009
100.	Mr. Kishore Das (M/E)	Lab. Asstt.	Mech. Engg.	25-08-2010
101.	Mr. Pinku Saha (M/E)	Lab. Asstt.	Mech. Engg.	26-08-2010
102.	Sri Sukanta Paul	Lab. Inst.	Civil Engg.	20-08-2009
103.	Mr. Abhijit Giri	Technical Asstt	Civil Engg.	13-08-2010
104.	Mr. Suman Nandi	Lab. Asstt.	Civil Engg.	10-08-2010
105.	Ms Manisha Deb	Lab. Asstt.	Civil Engg.	13-08-2010
106.	Sri Prasenjit Dutta	Technical Assistant	Civil Engg.	06-12-2012
107.	Ms. Papia Banik	Technical Assistant	Civil Engg.	06-12-2012
108.	Sri Sankar Paul	Technical Assistant	Civil Engg.	13-12-2012
109.	Sri Pramod Pal	Instructor	Production Engg.	04-09-2009
110.	Sri Biswanath Karmakar	Jr. Tech	Production Engg.	04-09-2009
111.	Smt. Sima Das	Sr. Ins.	Elect. Engg.	19-08-2009
112.	Smt. Tapa Saha	Tech.Supp. Staff	Elect. Engg.	25-07-2008
113.	Sri Kabir Bhowmik	Sr. Ins.	Elect. Engg.	19-08-2009
114.	Sri Ajit Deb	Lab. Tech	Elect. Engg.	19-08-2009
115.	Mr. Debabrata Bhattacharya	Technical Asstt	Elect. Engg.	09-08-2010
116.	Mr. Jayanta Chowdhury	Technical Asstt	Elect. Engg.	10-07-2012
117.	Mr. Pranab Majumder	Technical Asstt	Elect. Engg.	16-07-2012
118.	Sri Kamal Kn. Pal	System Admin.	Com. Sc. & Engg.	15-12-2008
119.	Mr. Pattha Sarathi Bhattacharjee	Network Admin.	Com. Sc. & Engg.	15-09-2011
120.	Mr. Suman Saha	Lab / Tech Assistant	Com. Sc. & Engg.	09-08-2010
121.	Mr. Viki Datta	Lab / Tech Assistant	Com. Sc. & Engg.	14-09-2011
122.	Sri Malay Paul	Lab / Tech Assistant	Com. Sc. & Engg.	13-03-2012
123.	Sri Rabindra Ch. Das (Retired)	Gr. D	Com. Sc. & Engg.	20-04-2009
124.	Sri Gautam Rakshit	MIS (Administrator)	Com. Sc. & Engg.	06-12-2012
125.	Mr. Dhruva Narayan Das	Technical Asstt	Chemical Engg.	09-08-2010
126.	Mr. Dipankar Goswami	Technical Asstt	Chemical Engg.	06-09-2011

127.	Ms. Sangita Patari	Lab. Asstt.	Physics	22-09-2011
128.	Sri Pijush kn. Datta (Rtd.)	Lab. Asstt	Physics	03-08-2009
129.	Sri Dulal Chakraborty (Rtd.)	Retd. Group – D	Chemistry	01-01-2011
130.	Sri Satyajit Ghosh	Lab,Asstt.	Chemistry	07-09-2012
131.	Ms. Poulami Ghosh	Tech. Asstt.	Electronics & Comm. Engg.	09-12-2011
132.	Mr. Dipesh Debnath	Technician	Electronics & Comm. Engg.	02-01-2012
133.	Mr. Abhijit Chakraborty	Technical Asstt.	Electronics & Comm. Engg.	10-08-2010
134.	Sri Anjan Das	Technical Asstt.	Electronics & Inst. Engg.	06-02-2012
135.	Ms.Sulakshana Banik	Lab. Technician	Electronics & Inst. Engg.	13-08-2012
136.	Ms.Sunam Jannat	Lab. Technician	Electronics & Inst. Engg.	14-08-2012
137.	Dr. Tapan Kr. Datta (Rtd.)	Medical Off.	Medical Unit	22-01-2009
138.	Dr. Parimal Chakraborty (Rtd.)	Medical Off.	Medical Unit	01-02-2012
139.	Sri Rajesh Karmakar	Pharmacist	Medical Unit	17-04-2008
140.	Ms.Supriya Das	Pharmacist	Medical Unit	27-09-2012
141.	Sri Dipen Majumder	Technician	Medical Unit	22-12-2008
142.	Dr. Amal Kumar Sinha (Rtd.)	M.O.	Medical Unit	12-12-2013
143.	Ms. Sabita Biswas	Staff Nurse	Medical Unit	12-12-2013
144.	Ms.Chayanika Das	Lab.Technician	Medical Unit	06-01-2014
145.	Md. Ismail Hussain	Lab.Tech.	Medical Unit	07-01-2014
146.	Sri Dipak Kr. Pal	Security Officer	Admn.	19-08-2011
147.	Sri Sanjit Debbarma	Helper	Guest House	15-07-2009
148.	Sri Suman Rudra Pal	Off. Asstt.	Dean (P&D)	19-08-2008
149.	Smt. Sulekha Sarkar	Cook	Transit House	06-05-2011
150.	Sri Bappi Das	Helper/Cook	Transit House	01-02-2011
151.	Sri Ritabrata Roy	Technical Asstt.	Hydro. Infor. Engg.	02-08-2012
152.	Ms. Lipika Sarkar	Technical Asstt.	Bio-Engg.	28-12-2012
153.	Ms.Subhra Chowdhury	Technical Asstt.	Bio-Engg.	24-12-2012
154.	Mrs. Madhuri Debnath	Lab. Assistant	Physics	17-07-2013
155.	Mr. Krishna Deb	Lab. Assistant	Physics	17-07-2013
156.	Mr.V.C.Mathai	Technical Asst.	MHRD	12-11-2009
157.	Mr.Sourabh Roy	Tech. Asstt.	Virtual Class Room	14-03-2014
158.	Mr.Ratan Majumder	Accounts Asst.	TEQIP	10-12-2012



		(TEQIP)		
159.	Ms. Baishakhi Saha	Tech. Support Staff	MIS Opt.	20-05-2013

### 3.3.3.3 List of Retired/ Expired Faculty/ Staff Members

Sl. No.	Name	Designation	Department	Date of Expire/ retire
1.	Mr. Asis Sarkar	Asstt. Prof.	Mech. Engg.	14-02-2014 (Expired)
2.	Mr. Ajit Debbarma	Group – C	Estt. Sec.	01-02-2014 (Retired)
3.	Smt. Prembala Debnath	Group-C	ECE Dept.	01-03-2014 (Retired)

### 3.4 RTI and Vigilance Cell:

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

#### **4.0 ACADEMIC PROGRAMMES AND AWARD OF DEGREES**

##### **4.1 Introduction:**

National Institute of Technology, Agartala is a centrally funded institution set up to impart quality Technical Education at various levels. This Institute came into existence on 23<sup>rd</sup> February 2006 upon the approval of the proposal of the State Government for conversion of Tripura Engineering College to National Institute of Technology as a Centrally funded Institution with the status of deemed University by the Union Cabinet.

The Ministry of Human Resources Development (MHRD) issued the official notification No. F. 20-20/2004/TS III/ dated 10.03.2006, for conversion of Tripura Engineering College, Agartala to National Institute of Technology Agartala w.e.f. 01.04.2006. This is the 20<sup>th</sup> NIT in India and 2<sup>nd</sup> in the North-Eastern region.

The Institute (i.e. erstwhile Tripura Engineering College) was established in 1965 with three branches of engineering at undergraduate level viz Civil, Electrical and Mechanical Engineering. It was initially affiliated to Calcutta University and had the curriculum and examination system at par with the Bengal Engineering College (presently Bengal Engineering and Science University, Shibpur). After the establishment of Tripura University, the Institute was affiliated to the new Tripura University. The course of Bachelor of Engineering in Computer Science & Engineering was started in 1999-2000. Three new courses viz. Electrical & Electronics, Production and Civil & Transportation Engineering were introduced in this Institute during 2005-2006. Two more new courses viz. Electronics & Instrumentation and Chemical Engineering were introduced from the academic session 2010-11. Besides the undergraduate courses the Institute is also running various Post-graduate programmes like M.Tech, MCA, M.Sc, MBA, BT-MT, BS-MS and Ph.D.

The Institute is administered by the Director of the Institute under the direct supervision of the Board of Governors (BOG) which is headed by the Chairman of the Board of Governors. The institute is registered under Societies Registration Act, 1860. The policy for academic activity is made through SENATE with prior approval of the Board of Governors and implemented through Dean (Academic). The Planning and Development of the Institute are implemented through Dean (P & D) and the Students' Affairs are looked after by Dean (Students Welfare). The Registrar is the custodian of all records of the Institution and all administrative orders are issued through the Registrar and he is responsible to the Director for proper implementation of the policy matters of the Institute.

##### **4.2 Admission Procedure:**

Admission in B.Tech 1<sup>st</sup> Semester is made on the basis of allotment of seats in 8 branches of engineering by CCB/Central Seat Allocation Board (CSAB) based on the performance of the candidates in AIEEE/Joint Entrance Examination (JEE). Students are admitted in B.Tech 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 into the 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 2013-2014:

**Table 1 – Fresh Admission (UG, PG and Others programme)**

Sl. No.	Department	B. Tech.	M. Tech	MCA	MBA	M. Sc.	Ph.D.
1.	CE	182	75	00	00	00	00
2.	ME	88	41	00	00	00	00
3.	EE	82	47	00	00	00	00
4.	CS	79	17	35	00	00	00
5.	EC	85	35	00	00	00	00
6.	PE	74	13	00	00	00	00
7.	CH	49	07	00	00	00	00
8.	PH	00	00	00	00	09	00
9.	CY	00	00	00	00	04	00
10.	MA	00	00	00	00	07	00
11.	AE	00	08	00	00	00	00
12.	HE	00	11	00	00	00	00
13.	ES	00	09	00	00	00	00
14.	SCE	00	07	00	00	00	00
15.	SOM	00	00	00	13	00	00
16.	EI	52	00	00	00	00	00
17.	BE	24	00	00	00	00	00
18.	BSMS	35	00	00	00	00	00
19.	BTMT	15	00	00	00	00	00
	<b>TOTAL</b>	<b>765</b>	<b>270</b>	<b>35</b>	<b>13</b>	<b>20</b>	<b>00</b>

Total No. of students admitted during the year includes the following:

Scheduled Castes	180	Q.I.P.	M. Tech.	00
Scheduled Tribes	122		Ph. D.	00
Physically Handicapped	7	Sponsored	M. Tech.	05
		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 and MCA 1<sup>st</sup> Semester**

		CE	ME	EE	CSE	ECE	EIE	PE	CHE	BIO	BSMS	BTMT
From the State of Tripura:												
OP	Boys	35	21	14	19	17	14	15	09	05	04	03
	Girls	09	01	08	04	07	03	06	06	02	01	01
	<b>Total</b>	<b>44</b>	<b>22</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>17</b>	<b>21</b>	<b>15</b>	<b>07</b>	<b>05</b>	<b>04</b>
OP PH	Boys	01	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
OB	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
OB PH	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
SC	Boys	12	07	02	06	04	03	05	04	01	01	02
	Girls	03	01	04	02	03	02	03	01	02	00	00
	<b>Total</b>	<b>15</b>	<b>08</b>	<b>06</b>	<b>08</b>	<b>07</b>	<b>05</b>	<b>08</b>	<b>05</b>	<b>03</b>	<b>01</b>	<b>02</b>
SCP H	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
ST	Boys	22	12	05	00	03	00	00	00	00	00	00
	Girls	06	01	05	02	06	00	00	00	00	00	00
	<b>Total</b>	<b>28</b>	<b>13</b>	<b>10</b>	<b>02</b>	<b>09</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
STP H	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
<b>Total</b>												
From the various part of the country except the State of Tripura												
OP	Boys	44	24	20	19	22	12	22	15	06	12	05
	Girls	00	00	03	02	02	02	01	01	01	03	01



	<b>Total</b>	<b>44</b>	<b>24</b>	<b>23</b>	<b>21</b>	<b>24</b>	<b>14</b>	<b>23</b>	<b>16</b>	<b>07</b>	<b>15</b>	<b>06</b>
OP PH	Boys	03	00	00	01	00	01	01	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>03</b>	<b>00</b>	<b>00</b>	<b>01</b>	<b>00</b>	<b>01</b>	<b>01</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
OB	Boys	25	12	10	11	12	07	11	05	04	08	02
	Girls	00	00	03	01	01	01	00	02	00	00	00
	<b>Total</b>	<b>25</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>08</b>	<b>11</b>	<b>07</b>	<b>04</b>	<b>08</b>	<b>02</b>
OB PH	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
SC	Boys	15	07	04	08	05	04	04	04	01	03	00
	Girls	00	00	00	00	00	01	03	00	01	01	01
	<b>Total</b>	<b>15</b>	<b>07</b>	<b>04</b>	<b>08</b>	<b>05</b>	<b>05</b>	<b>07</b>	<b>04</b>	<b>02</b>	<b>04</b>	<b>01</b>
SCP H	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
ST	Boys	07	02	04	03	03	02	03	00	01	02	00
	Girls	00	00	00	01	00	00	00	02	00	00	00
	<b>Total</b>	<b>07</b>	<b>02</b>	<b>04</b>	<b>04</b>	<b>03</b>	<b>02</b>	<b>03</b>	<b>02</b>	<b>01</b>	<b>02</b>	<b>00</b>
STP H	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
<b>Total intake capacity in each Branch</b>		<b>184</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>92</b>	<b>61</b>	<b>90</b>	<b>60</b>	<b>30</b>	<b>60</b>	<b>20</b>
<b>Total admitted in each Branch</b>		<b>182</b>	<b>88</b>	<b>82</b>	<b>79</b>	<b>85</b>	<b>52</b>	<b>74</b>	<b>49</b>	<b>24</b>	<b>35</b>	<b>15</b>
<b>Total vacant in each Branch</b>		<b>2</b>	<b>2</b>	<b>8</b>	<b>11</b>	<b>7</b>	<b>9</b>	<b>16</b>	<b>11</b>	<b>6</b>	<b>25</b>	<b>5</b>

Table 3 – Admitted students in MCA 1<sup>st</sup> Semester

From all over the country		MCA
OP	Boys	09
	Girls	06
	<b>Total</b>	<b>15</b>
OPPH	Boys	00
	Girls	00
	<b>Total</b>	<b>00</b>
OB	Boys	14
	Girls	02

	<b>Total</b>	<b>16</b>
OBPH	Boys	00
	Girls	00
	<b>Total</b>	<b>00</b>
SC	Boys	03
	Girls	01
	<b>Total</b>	<b>04</b>
SCPH	Boys	00
	Girls	00
	<b>Total</b>	<b>00</b>
ST	Boys	00
	Girls	00
	<b>Total</b>	<b>00</b>
STPH	Boys	00
	Girls	00
	<b>Total</b>	<b>00</b>
<b>Total intake capacity</b>		<b>40</b>
<b>Total Admitted</b>		<b>35</b>
<b>Total vacant</b>		<b>05</b>

Table 3 – Admitted students in M. Tech 1<sup>st</sup> Semester

		CE	ME	EE	CSE	EC	PE	CH	AE	HE	ES	SCE
<b>From all over the country:</b>												
OP	Boys	31	19	20	09	12	05	03	05	07	05	03
	Girls	04	01	07	02	04	02	02	00	02	01	02
	<b>Total</b>	<b>35</b>	<b>20</b>	<b>27</b>	<b>11</b>	<b>16</b>	<b>07</b>	<b>05</b>	<b>05</b>	<b>09</b>	<b>06</b>	<b>05</b>
OPPH	Boys	00	00	00	00	01	00	0	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>01</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
OB	Boys	15	11	10	02	08	02	01	01	01	01	01
	Girls	01	01	04	01	02	00	00	00	00	00	00
	<b>Total</b>	<b>16</b>	<b>12</b>	<b>15</b>	<b>03</b>	<b>10</b>	<b>02</b>	<b>01</b>	<b>01</b>	<b>01</b>	<b>01</b>	<b>01</b>
OBPH	Boys	00	00	01	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>01</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
SC	Boys	10	07	05	02	04	02	01	01	01	00	00
	Girls	02	00	01	00	02	00	00	00	00	01	01
	<b>Total</b>	<b>12</b>	<b>07</b>	<b>06</b>	<b>02</b>	<b>06</b>	<b>02</b>	<b>01</b>	<b>01</b>	<b>01</b>	<b>01</b>	<b>01</b>
SCPH	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
	Boys	05	02	03	00	02	01	00	01	00	00	00



ST	Girls	02	00	01	01	00	01	00	00	00	01	00
	<b>Total</b>	<b>07</b>	<b>02</b>	<b>04</b>	<b>01</b>	<b>00</b>	<b>02</b>	<b>00</b>	<b>01</b>	<b>00</b>	<b>01</b>	<b>00</b>
STPH	Boys	00	00	00	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00	00	00	00
	<b>Total</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>	<b>00</b>
Total intake capacity in each Branch		<b>82</b>	<b>46</b>	<b>54</b>	<b>18</b>	<b>36</b>	<b>18</b>	<b>10</b>	<b>10</b>	<b>18</b>	<b>10</b>	<b>10</b>
Total admitted in each Branch		<b>70</b>	<b>41</b>	<b>52</b>	<b>17</b>	<b>35</b>	<b>13</b>	<b>07</b>	<b>08</b>	<b>11</b>	<b>09</b>	<b>07</b>
Total vacant in each Branch		<b>12</b>	<b>05</b>	<b>02</b>	<b>01</b>	<b>01</b>	<b>05</b>	<b>03</b>	<b>02</b>	<b>07</b>	<b>01</b>	<b>03</b>

Table 4 – Admitted students in M. Sc. 1<sup>st</sup> Semester

		Math.	Phy.	Chem.	MBA
<b>From all over the country:</b>					
OP	Boys	5	5	1	4
	Girls	0	0	1	6
	<b>Total</b>	<b>5</b>	<b>5</b>	<b>2</b>	<b>10</b>
OPPH	Boys	0	0	0	0
	Girls	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
OB	Boys	1	2	1	0
	Girls	0	1	0	1
	<b>Total</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>
OBPH	Boys	0	0	0	0
	Girls	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SC	Boys	1	1	1	2
	Girls	0	0	0	0
	<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>
SCPH	Boys	0	0	0	0
	Girls	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
ST	Boys	0	0	0	0
	Girls	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
STPH	Boys	0	0	0	0
	Girls	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total intake capacity in each Branch		<b>10</b>	<b>10</b>	<b>10</b>	<b>30</b>

Table 5 – Admission statistics : UG Programme: Course-wise

Sl. No.	Name of the state	CE	ME	EE	CSE	ECE	EIE	CHE	PE	BIO	BS-MS (CHEM)	BS-MS (PHY)	BS-MS (MATH)	BT-MT (PHY)	TOTAL
1	AP	14	5	13	7	20	7	4	10	3	2	2	6	2	95
2	AR	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3	AS	0	1	0	0	0	1	2	1	0	0	0	0	0	5
4	BH	33	14	10	10	9	7	6	12	0	2	0	1	0	104
5	CG	0	1	1	1	0	1	0	0	0	0	0	0	0	4
6	CH	1	0	0	0	0	0	0	0	0	1	0	0	0	2
7	DL	2	2	0	0	2	0	0	0	0	0	0	0	1	7
8	GJ	0	0	1	0	0	1	0	0	0	0	0	0	0	2
9	HR	1	0	0	0	0	2	1	0	1	0	0	0	0	5
10	JR	6	1	2	1	2	1	1	3	0	0	0	0	0	17
11	KL	0	0	0	1	0	0	0	1	0	0	1	0	0	3
12	MG	0	0	0	0	0	0	0	1	0	0	0	0	0	1
13	MH	0	1	1	0	0	0	1	2	0	1	1	0	2	9
14	MP	2	0	1	1	1	2	0	1	0	1	0	1	0	10
15	PB	0	0	0	1	1	0	0	0	0	0	0	0	0	2
16	RJ	18	8	2	9	1	2	7	6	1	0	0	0	0	54
17	SK	0	0	0	0	0	0	0	0	0	1	0	0	0	1
18	TN	0	0	0	0	0	0	0	1	1	0	1	0	0	3
19	TR	88	43	38	33	40	22	20	29	10	1	1	4	6	335
20	UP	14	12	12	15	8	5	7	6	8	1	3	2	2	95
21	UR	2	0	0	0	1	0	0	0	0	0	0	0	0	3
22	WB	1	0	1	0	0	1	0	0	0	1	1	0	2	7
Grand Total		182	88	82	79	85	52	49	74	24	11	10	14	15	765

#### 4.5 Students/ Scholars Enrolment:

The total number of students on roll in various programmes of the Institute in the academic year 2013-2014 are given below:

TABLE 6 – Students on roll

Sl. No.	Department	B. Tech	BS-MS	BT-MT	MCA	M. Tech.	M. Sc.	MBA	Ph. D
1.	Civil Engg	683				103			24
2.	Mech. Engg.	359				60			33
3.	Electrical Engg.	334				76			29
4.	Computer Sc. & Engg.	285			65	28			15
5.	Electronics & Communication Engg.	314				55			42
6.	Production Engg.	165				23			05



7.	Electronics & Instrumentation	198							
8.	Chemical Engineering	139				07			03
9.	Bio Engineering	42							
10.	Hydro Informatics								09
11.	Automotive Engg.					08			
12.	Seismic Sc & Engg.					07			
13.	Energy System					09			
14.	Physics (BS-MS)		5				15		10
15.	Chemistry (BS-MS)		8				11		11
16.	Mathematics (BS-MS)		10				11		21
17.	Engineering Physics (BTMT)			14					
18.	School of Management							30	
19.	Humanities & So. Sc.								15

The above total includes the following:

DASA (Indian origin)	Nil	QIP	M. Tech.	00
Scheduled Castes	570		Ph. D.	00
Scheduled Tribes	388	Sponsored	M. Tech.	13
Physically Handicapped	36	Project	Ph. D.	Nil
Women students	508	External Registration	Ph. D.	00
		Registration Kept Alive	Ph. D.	00
		Part Time Programme (M. Tech.)		00

**SC/ ST/ OBC/ OPPH Students on roll as on 31-03-2014**

Sl. No.	Programme	SC	ST	OBC	OPPH
1.	B. Tech.	466	336	666	17
2.	MCA	10	01	23	00
3.	M. Tech.	62	31	95	01
4.	M. Sc.	04	00	10	00
6.	MBA	05	03	03	00
7.	Ph. D.	26	17	25	00
<b>Total</b>		<b>573</b>	<b>388</b>	<b>822</b>	<b>18</b>

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

**TABLE 7 – B. Tech. Students on roll**

Sl. No.	Branch	2013	2012	2011	2010	others	Total
1	Civil Engineering	683	513	493	380	00	2069

2	Mechanical Engineering	359	285	289	262	00	1195
3	Electrical Engineering	334	226	284	245	00	1089
4	Computer Sc. & Engg.	285	236	236	231	00	988
5	Electronics & Comm. Engineering	314	284	284	260	00	1142
6	Transportation Engg	00	00	14	53	00	67
7	Production Engineering	165	115	115	113	00	508
8	Electronics & Inst.Engg.	198	100	100	56	00	454
9	Chemical Engineering	139	71	71	37	00	318
10	Bio Engineering	42	22	00	00	00	64
11	Physics(BS-MS)	5	00	00	00		5
12	Chemistry(BS-MS)	8	00	00	00		8
13	Math(BS-MS)	10	00	00	00		10
14	Engineering Physics(BT-MT)	14	00	00	00		14
15	MCA	65	37	26	07	05	131

TABLE 8 – M. Tech Students on roll

Sl. No.	Department	Specialization	2013-14	2012-13	Total
01.	Civil Engineering	Geotechnical Engg.	27	18	45
		Structural Engg	26	20	46
		Environmental Engg	17	--	17
		Transportation Engg	26	20	46
		Water Resource Engg	07	--	07
02.	Mechanical Engineering	Machine Design Engg.	07	--	07
		Thermal Sc. & Engg	27	20	47
		Manufacturing Technology	26	19	45
03.	Electrical Engineering	Power System Engg.	25	18	43
		Power Electronics & Drives	25	12	37
		Instrumentation Engg	26	14	40
04.	Computer Sc. & Engineering	Computer Sc. & Engineering	28	23	51
05.	Electronics & Communication Engineering	Communication Engg.	27	--	27
		VLSI & Nano Technology / Micro Electronics & VLSI Technology	28	20	48
06.	Production	Computer Integrated	23	--	23



	Engineering	Manufacturing			
07.	Chemical Engineering	Chemical Engineering	07	--	07
08.	Automotive Engineering	Automotive Engineering	08	--	08
09.	Seismic Sc. & Engineering	Seismic Sc. & Engineering	07	16	23
10.	Energy System	Integrated Energy System	09	--	09
11.	Hydro Informatics Engineering	Hydro Informatics Engineering	22	--	22

TABLE 9 – M. Sc. &amp; MBA Students on roll

Sl. No.	Department	2013-14	2012-13	Total
01.	Physics Department	15	12	27
02.	Mathematics Department	11	12	23
03.	Chemistry Engineering	11	13	24
04.	School of Management	30	17	47

#### 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 other End-Term examination are conducted. This apart, class tests are also taken. For all subjects viva-voce test is also taken. Marks are awarded to the students in each subject and on the basis of that Semester Grade Point Average (SGPA) is calculated. Taking the result of both Mid-Term and End-Term Examination Cumulative Grade Point Average (CGPA) is calculated. In brief the performance of a student is evaluated through written examination, class test, viva-voce test, practical examination, attendance and above all the behavior of the students.

#### 4.7 Convocation:

The National Institute of Technology Agartala celebrated its 6<sup>th</sup> Convocation on 1<sup>st</sup> March 2014. Dr. S.S.Mantha, Chairman, AICTE was the Chief Guest in the 6<sup>th</sup> Convocation Ceremony. In the 6<sup>th</sup> Convocation, 4 nos. of scholars from Engineering and Science were awarded Ph.D degree. Apart from this, 353 B.Tech Students, 82 M.Tech Students, 19 M.Sc Students and 7 MCA Students were also awarded degree in the 6<sup>th</sup> Convocation Ceremony.

## 4.7.1 Introduction:

TABLE 10 – Degree awarded

Sl. No.	Department	B. Tech.	MCA	M. Tech.	M. Sc.	Ph. D.
1.	Civil Engineering	100		24		1
2.	Mechanical Engineering	57		13		
3.	Electrical Engineering	58		21		
4.	Computer Sc. & Engineering	42	07	11		
5.	Electronics & Communication Engineering	53		10		
6.	Electronics & Instrumentation Engineering	21				
7.	Production Engineering	08				
8.	Chemical Engineering	14				
9.	Hydro Informatics Engineering			03		
10.	Physics				6	1
11.	Chemistry				6	
12.	Mathematics				7	1
13.	Humanities & Social Sciences					1

With this convocation, the total number of degrees awarded so far by the Institute is 465, the details of which are given below:

Sl. No.	Programme	No.
01.	Ph. D.	04
02.	M. Tech.	82
03.	B. Tech.	353
04.	MCA	07
05.	M. Sc.	19
06.	MBA	00

## 4.7.2 Convocation Prizes:

The following are the details of Prizes awarded to the students (UG) at the 6<sup>th</sup> Convocation:

Name of the Prize	Name of students/ persons
Institute Gold Medal	Puloma Dwibedi
Medal to Branch Toppers	Dibyatonu Chattopadhyay
	Suman Bhowmik
	Ankita Mazumder
	Abhishek Kumar
	Amit Kumar Sarkar
	Pritam Dhar



The following are the details of Prizes awarded to the students (PG) at the 6<sup>th</sup> Convocation:

Name of the Prize	Name of students/ persons
Institute Gold Medal	Shantanu Datta
Medal to Branch Toppers	Antaripa Bhadra
	Menaka Attmaja Ray
	Momai Dey
	Kunal Chakma
	Debanjali Nath
	Swati Singh
	Chayanika Debnath
	Sidip Debnath
	Jinto Johnson

## **5.0 BIO ENGINEERING DEPARTMENT**

### **5.1 Introduction:**

The department of Bio Engineering is committed to excellence in teaching, research and service to the Nation. This department was set up in the academic year of **2012-13** with sanctioned intake capacity of 30 (thirty) students in the undergraduate level. The department has a plan to set up the excellent facilities in terms of class rooms, UG laboratories and research laboratories. Within few months, the department has started to procure all the major instruments for undergraduate laboratories (Biochemistry, Microbiology, Immunology, Genetics lab) with around twenty five (25) equipments. With the help of Chemical Engineering Department, a number of laboratory facilities are already available such as Fluid Mechanics, Mass Transfer, Reaction Engineering and Numerical Method lab for this department. The Department has framed the course curriculum based on the need of today's scenario. The students of this department are always encouraged for academic and industrial research with advanced and updated knowledge to face the modern challenges.

### **5.2 Academic Programme:**

The department offers the course of Under Graduate programme leading to B. Tech degree in Bio Engineering (4 years duration).

### **5.3 Lab Facilities:**

Procurement of instruments has been started for setting up of Bio-Chemistry lab.



## 6.0 CIVIL ENGINEERING DEPARTMENT

### 6.1 Introduction:

The Department of Civil Engineering was started since the inception of the institute in 1965. Initially the institute was affiliated to University of Calcutta and thereafter re-affiliated to Tripura University in 1987. The Institute is approved by AICTE, New Delhi. Presently this department is offering M.Tech. courses in Structural Engineering, Geotechnical Engineering, Highway & Traffic Engineering, Water Resources Engineering and Environmental Engineering. The Civil Engineering Department of the Institute has produced many technocrats who are serving the country successfully. The Department has 21 (twenty one) nos. of regular faculty members and 7 (seven) nos. of visiting 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 has been involved with many research works and produced some excellent outcome. The department also offers Ph.D. program 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.



Environmental Engineering Laboratory



Transportation Engineering Laboratory

### 6.2 Lab Facilities:

Sl. No.	Name of the Laboratories	Available Floor Area (sq. m)	Maximum Batch Size	No. of Experiments			
				Prescribed		Conducted	
				U.G.	P.G.	U.G.	P.G.
1	Geotechnical Engineering	139.00	20	16	18	16	18
2	Structural Engineering	130.64	20	25	13	25	13
3	Concrete	100.00	20	16	8	16	8
4	Transportation Engineering	207.68	20	09	10	09	10
5	Environmental	207.68	20	17	21	17	21

	Engineering						
6	Solid Mechanics	70.00	20	07	06	07	06
7	Surveying	100.00	20	07	NIL	07	NIL
8	Engineering Geology	107.68	20	06	NIL	06	NIL
9	Civil Engineering Computer	70.00	20	05	NIL	05	NIL
10	Water Resources Engineering	207.68	20	11	06	11	06
11	Civil Engineering Drawing	60.00	20	06	NIL	06	NIL
12	Hydraulics	100.00	20	11	NIL	11	NIL

### 6.3 Activities of Faculty:

**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
<b>Workshop:</b>			
1	Dr Sanjay Paul	Advanced Numerical Techniques using Matlab	07-09 October, 2013
<b>Symposia:</b>			
1	Rajib Saha	International Symposium on Advances in Foundation Engineering (ISAFE2013)	Held on 5-6 December 2013, in SINGAPORE
<b>Conference:</b>			
1	Deb Dulal Tripura	International Journal of Arts and Sciences (IJAS) Conference, Harvard University, Boston, USA.	24.05.2013 – 31.05.2013
2	Gopinandan Dey	2nd international conference on civil engineering and materials (ICCEM 2013), Hong Kong	July 06-07, 2013

### Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1	Deb Dulal Tripura	USA	May 24-31, 2013	International Conference
2	R. Debbarma	Zurich, Switzerland,	Oct. 12-13, 2013	International Conference
3	Dr. Ratul Das	Zurich, Switzerland,	Oct. 12-13, 2013	International Conference
4	Rajib Saha	Singapore	Dec. 5-6, 2013	International Symposium



5	Gopinandan Dey	Hong Kong, China	July 04-07, 2013	For presenting paper in conference
6	Joyanta Pal	Zurich, Switzerland,	Oct. 12-13,2013	International Conference

#### Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	Level	Year
ISTE / CSI and others			
1	Dr. Rama Debbarma	Grade: A.M. ASCE (9830200)	2014
2.	Dr. Ratul Das	Grade: A.M. ASCE (9830125)	2014

#### 6.4 Design and development Activities:

In the structural analysis laboratory, a setup for the casting of pre-stressed concrete beam has been developed.

#### 6.5 Research and Consultancy:

The department is engaged in performing various tests related to the PMGSY project associated with NBCE, CPWD and BRO. Faculties are engaged in research works and publishing research papers in different national and international journals.

#### Industrial Consultancy:

Sl. No.	Name of the Faculty	Title	Industry	Amount (Rs)
1	G.N.Dey & R.Saha	Consultancy (Mix Design: M-25)	PWD, Agartala	16856
2	G.N.Dey & R.Saha	Consultancy (Mix Design: M-30)	Bridge & Roof Co.	16854
3	S.K. Pal, M.Pal, G.N. Dey, J. Pal, R. Saha, D. Tripura, S.Paul	Consultancy (Mix Design: M-25) & Testing (Miscellaneous Materials)	PWD, Khayerpur	55506
4	G. N. Dey, R. Saha, J. Pal	Consultancy (Mix Design: M-25)	NBCCL	33708
5	S.K. Pal, M.Pal, G.N. Dey, J. Pal, R.Saha, D.Tripura, S.Paul	Consultancy (Mix Design: M-30)	IL&FS	16854
6	S.K. Pal, M.Pal, G.N. Dey, J.	Consultancy (Mix Design: M-30,35)	NBCCL	50562

	Pal, R. Saha, D. Tripura, S. Paul			
7	S.K. Pal, M. Pal, G.N. Dey, J. Pal, R. Saha, D. Tripura, S. Paul	Consultancy (Mix Design: M-25)	THCB	16854
8	G.N. Dey, R. Saha	Consultancy (Mix Design: M-30)	PWD, Dharmanagar	33708
9	G.N. Dey, R. Saha	Consultancy (Mix Design: M-35)	PWD, Khayerpur	16854
10	S.K. Pal, M. Pal, G.N. Dey, J. Pal, R. Saha, D. Tripura, S. Paul	Consultancy (Mix Design: M- 25,30,35)	HSCL	50562
11	D. Tripura	Consultancy (Mix Design: M-30)	Bridge & Roof Co.	16854
12	D. Tripura	Consultancy (Mix Design: M- 25,30,35)	N.F. Railway	16854
13	G.N. Dey, R. Saha	Consultancy (Mix Design: M-25)	NBCCL	16854
14	S. Paul; R. Saha; J. Pal	Consultancy (Tower Fdn Design)	BSNL	50562
15	D. Tripura, S. Paul, R. Debbarma	Consultancy (Proof Checking)	S.K. Das Con Co	56180
16	G.N. Dey & S. Paul	Consultancy (Mix Design: M-30)	PWD, Dharmanagar	50562
17	G.N. Dey & R. Saha	Consultancy (Mix Design: M-30)	PWD, Udaipur	16875
18	G.N. Dey & S. Paul	Consultancy (Mix Design: M-25)	R & B, Agartala	16854
19	Deb Dulal Tripura	Construction of Terminal Building in Jolaibari Railway station	NRF Railways	8000000
20	Rajib Saha	Consultancy service in connection to construction of boundary wall at residential area of the power plant project, OTPC, Palatana, Tripura	ONGC Tripura Power Company Ltd.	33708

**Research Publications:**

Total No. of papers published in Refereed National Journals	: 02
Total No. of papers published in Refereed International Journals	: 15
Total No. Of papers presented in National Conference	: 06
Total No. Of papers presented in International Conferences	: 06



**In Refereed National Journal:**

Name of the Authors published in National Journals	Title of the Journals	Date of publication of the paper	issue/Volume No./Page No.
Ghosh, S. and Saha, A. (2014),	Indian Geotechnical Journal, Springer, <i>Active Earth Pressure on Retaining Wall Supporting c-<math>\Phi</math> Back-fill Considering Rayleigh Wave</i>	Accepted on 16th March. 2014.	
Pal, M., and Sarkar, D.,	Indian Highways, IRC <i>Study of Noise Pollution at Different Intersection at Agartala City</i>	October, 2013	Page: 33-39

**In Refereed International Journals:**

Name of the Authors published in National Journals	Title of the Journals	Date of publication of the paper	issue/Volume No./Page No.
Debbarma, R. and Hazari, S.,	ISSN 2250-2459, ISO 9001:2008 Certified Journal, <b>Title of the paper:</b> <i>Mass Distribution of Multiple Tuned Mass Dampers for Vibration Control of Structures Under Earthquake Load</i>	August 2013.	Volume 3, Issue 8
Bhattacharjee, E., Halder, L., and Sharma, R.P.,	International Journal of Advanced Structural Engineering, Springer open Journal, <b>Title of the paper:</b> <i>An Experimental Study on Tuned Liquid Damper for Mitigation of Structural Response</i>	2013	5:3
Pal, S.K. and Ghosh, A.	International Journal of Geomechanics, <b>Title of the paper:</b> <i>Volume Change Behavior of Fly Ash-Montmorillonite Clay Mixtures</i>	Published online on February, 2013 and final publication on February 1, 2014	Manuscript Number: GMENG-R 461, ISSN: 1532-3641 and eISSN: 1943-5622

Das, P. and Pal, S.K.	Electronic Journal of Geotechnical Engineering (EJGE). <b>Title of the paper:</b> <i>A Study of the Behaviour of Stone Column in Local Soft and Loose Layered Soil</i>	Published on 19 May, 2013	ISSN 1089-3032, Vol. 18 [2013], Bundle I, pp-1777 to 1786,
Datta, R. and Pal, S.K.	Electronic Journal of Geotechnical Engineering (EJGE). <b>Title of the paper:</b> <i>Laboratory Investigation on Bearing Capacity Behaviour of Pond Ash Reinforced with Geotextile Grid</i>	Published on 11 May, 2013	ISSN 1089-3032, Vol. 18 [2013], Bundle H, pp-1631 to 1640,
Saha, S. and Pal, S.K.	Electronic Journal of Geotechnical Engineering (EJGE). <b>Title of the paper:</b> <i>Influence of Fly Ash on Unconfined Compressive Strength of Soil and Fly Ash Layers Placed Successively</i>	Published on 09 May, 2013	ISSN 1089-3032, Vol. 18 [2013], Bundle H (Published on 09 May, 2013), pp-1593 to 1602,
Laskar, A. and Dr. Pal, S.K.	Electronic Journal of Geotechnical Engineering (EJGE). <b>Title of the paper:</b> <i>Effects of Waste Plastic Fibres on Compaction and Consolidation Behaviour of Reinforced Soil</i>	Published on 09 May, 2013	ISSN 1089-3032, Vol. 18 [2013], Bundle H (Published on 09 May, 2013), pp-1547 to 1558
Tripura, D.D. & Sharma, R.P.	International journal of sustainable Engineering, Taylor & Francis, UK.	13 March, 2014	Vol.7 issue -1, Page-23-33
Ghosh, S. and Datta, N.	International Journal of Engineering Inventions <b>Title of the paper:</b> <i>Passive Force on Retaining Wall Supporting <math>\Phi</math> Backfill Considering Curvilinear Rupture Surface</i>	2013	ISSN: 2278-7461, ISBN: 2319-6491, Volume 1, Issue 10 pp: 35-42
Ghosh, S. and Deb, S.	IJRET, <b>Title of the paper:</b> <i>Pseudo-Static Passive Response</i>	2013	ISSN 2319-1163, pp 254-265



	<i>of Retaining Wall Supporting C-<math>\Phi</math> Backfill</i>		
Saha, A. and Ghosh, S.	International Journal of Emerging Technology and Advance Engineering , <b>Title of the paper:</b> <i>Non-linear Rupture Surface and Response of Retaining wall under Static Loading Condition during Active state of Equilibrium</i>	2013	ISSN 2250-2459, ISO 9001:2008, Vol. 3, Issue 6
Ghosh, S. and Saha, A.	International Journal of Geomechanics, ASCE <b>Title of the paper:</b> <i>Nonlinear Failure Surface and Pseudo-Dynamic Passive Resistance of Battered-faced Retaining Wall Supporting c-<math>\Phi</math> Backfill</i>	Accepted on 5th August 2013	
Saha, A. and Ghosh, S.	International Journal of Geotechnical Engineering, <b>Title of the paper:</b> <i>Pseudo-Dynamic Passive Resistance of Battered-Faced Retaining Wall supporting c-<math>\Phi</math> Backfill Considering Rayleigh Wave</i>	Accepted on 15th Nov. 2013:	
Dey, G.N., and Pal, J.	International Journal of Engineering and Technology	August 2013	Vol. 5, No. 4, pp. 523-526
Munshi, S., Dey, G.N., and Sharma, R.P.	International Journal of Engineering and Technology	October 2013	Vol. 5, No. 5pp.603-606

**In Proceedings of National Conference:**

Name of the Conference	Place of the Conference	Name of the Participants	Date/Duration
Proceedings of Indian Geotechnical Conference, IGC-2013 <b>Title of the paper:</b> <i>Effect of Random Inclusion of Waste Plastic Fibers on</i>	Indian Institute of Technology, Roorkee, India	Arpan Laskar and Dr. Sujit Kumar Pal	22 - 24 December, 2013

<i>Engineering Behaviours of Reinforced Soil</i>			
The 29 <sup>th</sup> National Convention of Civil Engineers. IEI, <b>Title of the paper:</b> <i>Sesmic vibration control of structures using multiple Tuned Mass Dampers</i>	Meghalaya state centre, Shillong	Sanjoy Hazari, Rama Debbarma	11 -12 Nov., 2013
Proceedings of Indian Geotechnical Conference, IGC-2013 <b>Title of the paper:</b> <i>Compaction and Consolidation Characteristics of Fly Ash mixed with Locally Available Soil of Tripura</i>	Indian Institute of Technology, Roorkee, India,	Arpita Bhattacharyya and Dr. Sujit Kumar Pal	22 - 24 December, 2013
Proceedings of Indian Geotechnical Conference, IGC-2013 <b>Title of the paper:</b> <i>Physical and Engineering Properties of Montmorillonite Clay</i>	Indian Institute of Technology, Roorkee, India,	Dr. Sujit Kumar Pal and Dr. Ambarish Ghosh	22 - 24 December, 2013
Proceeding 1 <sup>st</sup> National Conference on Recent Trends in Engineering and Technology (NCONET 13), 23 <sup>rd</sup> Invited Lecture February, JIT, <b>Title of the paper:</b> <i>Seismic Vulnerability of Residential Buildings in Agartala City – A Case Study</i>	Coimbatore, pp. 15.	Halder, L., Banik, R. and Debnath.S	2013
State Engineer's Association of Tripura- Annual General Conference	Udaipur	Rajib Saha and Sumana Saha	May 2013

## In Proceedings of International Conference:

Name of the Conference	Place of the Conference	Name of the Participants	Date/Duration
International Conference on Structural Engineering and Mechanics (ICSEM-2013)	Rourkela, India	S Chakraborty and R Debbarma	20-22 December , 2013



International Conference on Advances in Civil, Structural and Environmental Engineering (ACSEE-2013)	Zurich, Switzerland,	R Debbarma and S Chakraborty	12-13 Oct.,2013
International Journal of Arts and Sciences (IJAS) Conference	Harvard University, Boston, USA.	Deb Dulal Tripura	24-31 May,2013
International Conference, (ACSEE-2013) <b>Title of the paper:</b> <i>Impact of Urbanization on Rainfall-Runoff Response and an integrated Approach for Urban Storm Water Drainage Systems of Central Agartala – A Case Study</i>	Zurich, Switzerland,	Dr. Ratul Das	12-13 Oct.,2013
International Symposium on Advances in Foundation Engineering (ISAFE2013)	SINGAPORE	Rajib Saha	5-6 DECEMBER, 2013
International Conference on Advances in Civil, Structural and Environmental Engineering (ACSEE-2013)	Zurich, Switzerland,	Joyanta Pal	12-13 Oct,2013

## Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1	Prof. Laxman Nanda Giri, Department of Applied Mechanics and Hydraulics, National Institute of Technology, Surathkal	26 April, 2014	Expert speaker and question paper moderation
2	Prof. Ashim Kanti Dey, Civil Engineering Department, NIT Silchar	26 April, 2014	Expert speaker and question paper moderation
3	Dr. Pankaj Kumar Roy, Associate Professor, School of Water Resource Engineering, Jadavpur University.	26 April, 2014	Expert speaker and question paper moderation
4	Er. R.K. Majumdar, Director Urban development department, Tripura.	29 April, 2014	Expert for conducting Comprehensive viva voce for B.Tech. Final year.

**6.6 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.

**6.7 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.

**6.8 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 is committed to excellence in teaching, research and service to the Nation. The department offers B.Tech, M.Tech and PhD programme in Chemical engineering. The intake capacity is 60(sixty) students in the undergraduate level and 10 (ten) students in M.Tech level. The department has excellent facilities in terms of UG laboratories and research laboratory. The Department has 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. Lectures are arranged from industry people to get the actual need of the industry. The students are molded to compete with the best with respect to knowledge and ability in the business and face the modern challenges.

The department is mentoring the Bio –Engineering Department and Mrs Soma Nag is acting as the HOD of the Bio-Engineering department.



Mechanical Operation Lab



Fluid Mechanics Lab

### 7.2 Academic Programme:

The department offers courses in Under Graduate programme leading to B. Tech degree under Chemical Engineering (4 years), M.Tech (2 years)(started from 2013) and doctoral programme.

### 7.3 Lab Facilities:

Sl. No.	Name of the Laboratories	Available Floor Area(m <sup>2</sup> )	Maximum Batch Size	Weekly hours required as per curricula	No. of Experiments		Recurring Expenditure (Allotted per year)
					Prescribed	Conducted	
1	Fluid Mechanics Laboratory	35.5	30	3X2	10	10	Rs 10,000.00

2	Mechanical Operation Laboratory	35.5	30	3X2	10	10	Rs 50,000.00
3	Heat Transfer Laboratory	35.5	30	3	10	10	Rs 30,000.00
4	Mass Transfer Laboratory	35.5	30	3	10	08	Rs 1,00,000.00
5	Fuel & Combustion Laboratory	35.5	30	3	10	10	Rs 1,00,000.00
6	Reaction Engg Laboratory	35.5	30	3	10	10	Rs 50,000.00
7	Process Design Laboratory	50.0	60	6	10	10	Rs 10,000.00
8	Environmental Engg Lab	35.5	30	3X2	10	10	Rs 20,000.00

#### 7.4 Activities of Faculty:

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

Sl. No.	Co-ordinators	Title	Date
1	Soma Nag, Asst Prof & HOD Dr Srimanta Ray, Asst Prof Mr. Bibhab Lodh, Asst Prof.	Two days National Workshop on "Promotion and Knowledge Transfer for value Addition of Rubber in Tripura" sponsored by TIFAC (DST) New Delhi	17-18 July 2013 at NIT Auditorium, NIT Agartala
2	Mrs Soma Nag, HOD Dr Srimanta Ray, Asst Prof Dr Ajay K Manna, Asst Prof.	Recent Trends & Advances in Chemical Engineering – Concepts and Applications. (TEQIP II sponsored)	14.06.2013
Short Term Course			
3	Dr Kalyan Gayen, Asst Prof Dr Dwaipayan Sen, Asst Prof Mr Bibhab Lodh, Asst Prof Mr Abhijit Mondal, Asst Prof	Advanced Numerical Techniques Using Matlab. (TEQIP II sponsored)	7-9th October, 2013



**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	Soma Nag	<ol style="list-style-type: none"> <li>1. Two day workshop on Energy Management in Chemical, Petrochemical and Allied Industries</li> <li>2. One day National workshop on Recent Trends &amp; Advances in Chemical Engineering – Concepts and Applications</li> <li>3. Contemporary and Future Perspective of Bioengineering in Medical Sciences and Technology, organized by Physics Department, NIT Agartala, India</li> <li>4. 15<sup>th</sup> Asian Chemical Congress at Singapore</li> </ol>	<p>31.5.13 &amp; 01.6.13 by IChE at Kolkata</p> <p>14<sup>th</sup> June 2013 at NIT Agartala</p> <p>9th July, 2013 at NIT Agartala</p> <p>19-23 August 2013 at Singapore</p>
2	Dr. Tarun Kanti Bandhyopadhyay	<ol style="list-style-type: none"> <li>1. Two day workshop on Energy Management in Chemical, Petrochemical and Allied Industries</li> <li>2. Two day National Workshop on “Promotion and Knowledge Transfer for value Addition of Rubber in Tripura” sponsored by TIFAC (DST) New Delhi</li> </ol>	<p>31.5.13 &amp; 01.6.13 by IChE at Kolkata</p> <p>17-18 July 2013 at NIT Agartala</p>
3	Dr Kalyan Gayen	<ol style="list-style-type: none"> <li>1. One day National workshop on Recent Trends &amp; Advances in Chemical Engineering – Concepts and Applications</li> <li>2. Two day National Workshop on “Promotion and Knowledge Transfer for value Addition of Rubber in Tripura” sponsored by TIFAC (DST) New Delhi</li> </ol>	<p>14<sup>th</sup> June 2013 at NIT Agartala</p> <p>17-18 July, 2013 at NIT Agartala</p>

4	Dr. Srimanta Ray	<ol style="list-style-type: none"> <li>1. One day National workshop on Recent Trends &amp; Advances in Chemical Engineering – Concepts and Applications</li> <li>2. Two day National Workshop on “Promotion and Knowledge Transfer for value Addition of Rubber in Tripura” sponsored by TIFAC (DST) New Delhi</li> <li>3. Contemporary and Future Perspective of Bioengineering in Medical Sciences and Technology, organized by Physics Department, NIT Agartala, India</li> </ol>	<p>14<sup>th</sup> June 2013 at NIT Agartala</p> <p>17-18 July, 2013 at NIT Agartala</p> <p>9<sup>th</sup> July, 2013 at NIT Agartala</p>
5	Dr Dwaipayan Sen	<ol style="list-style-type: none"> <li>1. Two day National Workshop on “Promotion and Knowledge Transfer for value Addition of Rubber in Tripura” sponsored by TIFAC (DST) New Delhi</li> </ol>	<p>17-18 July, 2013 at NIT Agartala</p>
6	Mr. Bibhab Lodh	<ol style="list-style-type: none"> <li>1. One day National workshop on Recent Trends &amp; Advances in Chemical Engineering – Concepts and Applications.</li> <li>2. Two day National Workshop on “Promotion and Knowledge Transfer for value Addition of Rubber in Tripura” sponsored by TIFAC (DST) New Delhi.</li> <li>3. Contemporary and Future Perspective of Bioengineering in Medical Sciences and Technology, organized by Physics Department, NIT Agartala, India</li> </ol>	<p>14<sup>th</sup> June 2013 at NIT Agartala</p> <p>17-18 July, 2013 at NIT Agartala</p> <p>9<sup>th</sup> July, 2013 at NIT Agartala</p>



7	Dr. Ajay Kumar Manna	<ol style="list-style-type: none"> <li>1. One day National workshop on Recent Trends &amp; Advances in Chemical Engineering – Concepts and Applications</li> <li>2. Two day National Workshop on “Promotion and Knowledge Transfer for value Addition of Rubber in Tripura” sponsored by TIFAC (DST) New Delhi</li> <li>3. MATLAB and Its Application in Digital Image Processing and Pattern Recognition” organized by Computer Science &amp; Engg. Dept., NIT, Agartala</li> <li>4. Advanced Numerical Techniques Using Matlab. (TEQIP II sponsored)</li> </ol>	<p>14<sup>th</sup> June 2013 at NIT Agartala</p> <p>17-18 July, 2013 at NIT Agartala</p> <p>29-30<sup>th</sup> November (2013) (National Workshop)</p> <p>7-9 Oct, 2013</p>
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**Visits Abroad by Faculty:**

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1	Mrs Soma Nag	Singapore	19-23 August 2013	Presenting research paper in International Conference

**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

**7.5 Research and Consultancy:****Sponsored Research Projects:**

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	RPS on Development an	2011-14	AICTE	16.00	S.Nag and

	alternative route for stabilizing and process of natural rubber latex				Srmanta Ray
2	Developing an off-grid hybrid power system	2012- 2014	AICTE	17.00	Dr. S. Ray (Co-PI)
3	Isolation and characterization of micro-organisms/micro-algae from north east region and eastern Coal mines for bio-sequestration of CO <sub>2</sub> and its utilization towards generation of bio-fuel	2013-16	DBT	68.9	Dr K Gayen (PI)
4	Engineering Zymomonas mobilis for the efficient production of biofuels from lignocellulosic biomass	2011-14	DBT	16.00	Dr K Gayen (Co-PI)

#### Research Publications:

Total No. of papers published in Refereed International Journals	:	10
Total No. of papers presented in Conference/Seminar	:	2

#### In Refereed Journals:

##### Dr Kalyan Gayen

1. Manish Kumar, Supreet Saini, **Kalyan Gayen**, "Elementary mode analysis reveals that *Clostridium acetobutylicum* modulates its metabolic strategy under external stress", *Molecular BioSystems* (Royal Society of Chemistry, UK), Published online (2014)
2. Manish Kumar, Supreet Saini, **Kalyan Gayen**, "Acetone-Butanol-Ethanol (ABE) fermentation analysis using only high performance liquid chromatography", *Analytical Methods* (Royal Society of Chemistry, UK), 6 (3), 774-781 (2014)
3. Meghna Rajvanshi, **Kalyan Gayen**, K. V. Venkatesh, "Lysine overproducing *Corynebacterium glutamicum* is characterized by a robust linear combination of two optimal phenotypic states", *Systems and Synthetic Biology*, 7, 51-62 (2013)
4. Manish Kumar, **Kalyan Gayen**, Supreet Saini, "Role of extracellular cues to trigger the metabolic phase shifting from acidogenesis to solventogenesis in *Clostridium acetobutylicum*", *Bioresource Technology*, 138, 55-62 (2013)
5. Yogesh Goyal, Manish Kumar, **Kalyan Gayen**, "Metabolic engineering for enhanced hydrogen production: A review", *Canadian Journal of Microbiology*, 59, 59-78 (2013)



**Dr Dwaipayan Sen**

1. Santanu Sarkar, **Dwaipayan Sen**, Ankur Sarkar, Sangita Bhattacharjee, Sibdas Bandopadhyay, Sourja Ghosh, Chiranjib Bhattacharjee, "Modeling aspects of Carbon dioxide Capture technologies using Porous Contactors: a Review", *Environmental Technology*, 2014 (Accepted Publication).
2. Sirsha Putatunda, **Dwaipayan Sen**, Ankur Sarkar, Ranjana Chowdhury, Debasish Sarkar, Chiranjib Bhattacharjee, "Two indigenous high sheared membrane modules' performance expatiation for the ultrafiltration of polyethylene glycol ", *RSC Advances*, 4, 6435–6446 (2014).
3. Arnab Baksi, Sirsha Putatunda, **Dwaipayan Sen**, Ankur Sarkar, Chiranjib Bhattacharjee, "Protocol development for the carbohydrate quantification in black liquor with brix refractometer", *Journal of The Institution of Engineers (India): Series E*, 93(2), 69-74 (2013).
4. **Dwaipayan Sen**, Santanu Sarkar, Sangita Bhattacharjee, Sibdas Bandopadhyay, Sourja Ghosh, Chiranjib Bhattacharjee, "Simulation of the effect of various operating parameters for the effective separation of carbon dioxide into an aqueous caustic soda solution in a packed bed using lattice Boltzmann simulation, *Industrial Engineering and Chemistry Research*, 52(4), 1731-1742 (2013).

**Abhijit Mondal**

1. **A. Mondal**, A. Bhowal, S. Datta, "Gas-Liquid sensible heat transfer in spray and packed bed under a centrifugal field", *Industrial & Engineering Chemistry Research*, 52(1), 499-506 (2013)

**7.6 Distinguished Visitors to the Departments:**

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Prof Sidhartha Datta, Pro Vice Chancellor, Jadavpur University	19.7.2013	As expert
2.	Prof Abhijit Bhowal, Professor, Deptt of Chemical Engg, Jadavpur University	04.07.2013	As expert
3.	Dr Supreet Sainy Assistant Professor Bombay IIT	7-9.10.2013	As speaker

**7.7 Industrial Consultancy and Sponsored Research:****Industrial Consultancy:**

Natural rubber is an important forest product of the state . Tripura is the second largest grower of natural rubber next to Kerala. However, most of the rubber is sold in intermediate form of smoke sheet without any value addition. The department is actively engaged in promotion of rubber sector in Tripura, especially for creation of technical manpower & local enterprise promotion for value addition of rubber within the state in association with

Rubber Board. With sponsorship from TIFAC , New Delhi (DST) one workshop was organized at NITA Campus.

**Research:** The department of Chemical Engineering is aiming vibrant research activity for technical development, especially in north east region of India. Broad research activities from the exiting faculty members are:

- Value addition of Rubber in Tripura with TIFAC, New Delhi
- Industrial Waste Treatment
- Environmental Engineering
- Adsorption
- Computational Fluid Dynamics
- Multiphase Flow
- Petroleum and petrochemical Engineering
- Bio fuels
- Systems Biology
- Fermentation Technology
- Catalytic Reactor



## 8.0 CHEMISTRY DEPARTMENT

### 8.1 Introduction:

Department was started since the inception of the Institute. It has sufficient infrastructure to run the under graduate and post graduate courses including research work. Faculty members of the department are actively engaged in the teaching, research and other administrative responsibilities as assigned by the institute.

### 8.2 Academic Programme:

Department of Chemistry has conducted B.Tech courses, 5-year integrated BS-MS, 2 years M.Sc. program in chemistry. Department has offered Engineering Chemistry for first and second semester students of various engineering branch run in our institute. Department also offered Advanced Engineering Chemistry for 4-semester Chemical Engineering department. Department has started 5 year integrated BS-MS dual program 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. Department has intake capacity of 10 students per session for MSc. program and 30 students per session for dual BS-MS program. Department has also enrolled for Ph.D. program in chemistry every year depending on the availability of seats.

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. Chemistry Department has organized TEQIP sponsored workshop on Materials and Green Chemistry. During the workshop eminent resources from different reputed institutes of our country participated and delivered lectures. More than 100 participants from different institute attended the workshop. Besides Department has also conducted several lecture programs to interact faculty members, research scholar and PG students with the eminent persons.

### 8.3 Lab Facilities:

B.Tech laboratory has been well developed with necessary equipments and furniture. Since Integrated MSc course in Chemistry has started, the department is in the process to develop separate laboratory for B.Tech, BS-MS and MSc courses with well furnished furniture. The laboratory is equipped with UV-Visible, Cyclic voltammeters, Differential Scanning Calorimeter, Muffle furnace, Polarizing microscope and other necessary instruments for running B.Tech, BS-MS and MSc programs.

S. No	Name of the laboratories	Available Floor Area (sq.m)	Maximum batch size	Weekly hours requires as per curricula	No. of experiments		Recurring expenditure (Allotted per year)
					Prescribed	Conducted	
1.	Lab-1(UG)	14.8m x 6.5m = 86.2 sq. m	35	28	12	08	1.2 Lakhs
2.	Lab-2 (PG)	14.8m x 6.5m =	NA	NA	NA	NA	2 Lakhs

	and Research)	86.2 sq. m					
3.	Lab-3 (Instrument)	10.65mx6.47m =68.90 sq. m	NA	NA	NA	NA	0.4 Lakhs



Departmental activities Workshop/Seminar



Research Lab



## Departmental Instrumental Facilities

## 8.4 Activities of Faculty:

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

Sl No.	Invitee Lecturer	Date	Seminar	Organized By
1.	Prof. B.C. Ranu IACS, Kolkata	29-30, Nov., 2013	Work-Shop on Materials & Green Chemistry	Chemistry Department



2.	Prof. P. Pramanik IIT Kharagpur	29-30, Nov., 2013	Work-Shop on Materials & Green Chemistry	Chemistry Department
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**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
<b>Training:</b>			
1.	Dr. K.S. Singh	IASc.-INSA-NASI, Summer Research Fellowship	23. 05.2013 to 09.07.2013.

**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. T. 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.	Dr. Subrata Das	Indian Science Congress Association	Annual Member	2011
6.	Mr. Narayan Debnath	Tripura Chemical Society	Member	2012

**8.5 Research and Consultancy :**  
**Sponsored Research Projects:**

Sl. No.	Title	Period	Funding Agency	Amount (in lacs)	Co-ordinators	Remarks
1.	Synthesis, Characterization----- ---amino acid and benzoic acid related systems	2010-2013	DST	19.06	Dr. K. S Singh	On going Extension requested till March, 2015
2.	Modernisation of Laboratories Under Chemistry Department	2010-2011	AICTE (MODRO BS)	7.55	Dr. Saroj Kr. Das	Completed

3.	Development of carbon nanomaterials from starch materials	2011-2014	AICTE(RPS)	18.20	Dr. Mitali Saha	On going
4.	Development of Nano structured material composition for next generation solar cells	2012-2015	CPRI	25.00	Dr. Mitali Saha	Ongoing
5.	Preparation of nanomaterials for Cholesterol biosensor	2012-2014	AICTE(RPS)	19.40	Dr. Mitali Saha	On going
6.	Nucleophilic addition reaction of uracil ring for the synthesis of bio-active compounds.	2012-2014	AICTE(RPS)	16.00	Dr. Subrata Das	On going
7.	Design of efficient method for the synthesis of RNA nucelobases.	2013-2016	DBT	62.49	Dr. Subrata Das	On going
8.	Nitroso-Diels-Alder (NDA) reaction for the synthesis of some Heterocyclic compounds.	2014-2017	DST	13.00	Dr. Subrata Das	On going

**Research Publications:**

Total No. of papers published in Refereed National Journals : 02

Total No. of papers published in Refereed International Journals : 10

**In Refereed National Journals:**

1. K. S. Singh, S. S. Devi, M. Roy, W. R. Devi, *J. Indian Chem. Soc.* 91 (2014) 943 -950.
2. T. K. Misra, D. Debnath, T. H. Chen, *J. Indian Chem. Soc.* 91 (2014) 835-844.

**In Refereed International Journals:**

1. P. Gayen, T. K. Misra, C. Sinha, *J. Spectros. Dyn.* 4 (2014) 1-8.
2. K. S. Singh, M. Roy, S. S. Devi, W. R. Devi, *J. Appl. Chem.* 4 (2013) 31-40.
3. K. S. Singh, M. Roy, S. S. Devi, *Int. J. Sci. Res.*, 3 (2014) 50 -52.
4. Mitali Saha, Soma Das, *J Nanostruct. Chem.* 4, 94, 2014.
5. Mitali Saha, Soma Das, *J Nanostruct Chem* 4, 102, 2014.
6. Prasant Sutradhar, Narayan Debnath and Mitali Saha, *Adv. Manuf.* 1, 357-361, 2013.
7. Monica Debbarma, Soma Das, Mitali Saha, *Adv. Manuf*, 1, 183-186, 2013.



8. Mitali Saha and Soma Das, Advanced Science, Engineering and Medicine, 5(7), 645-648, 2013.
9. S. Das, S. J. Kalita, P. Bharali, B. K. Konwar, B. Das, A. J. Thakur, "Nucleophilic addition of 6-aminouracil derivatives using 'green surfactant' isolated from *P. aeruginosa* OBP1 in water at room temperature" *ACS-Sustainable Chemistry and Engineering*, 2013, 1 (12), pp 1530–1536.
10. S. Roy and S. Das,\* "5-(6-amino-1,2,3,4-tetrahydro-1,3-dimethyl-2,4-dioxypyrimidin-5-yl)-1,3-dimethyl-1H-chromeno[2,3-d] pyrimidine-2,4(3H,5H)-dione, 3.5-hydrate" *Acta Cryst.* 2013, E69, o974–o975.

#### *In Proceedings of National Conference:*

1. 101<sup>st</sup> Indian Science Congress, University of Jammu, Rupak Banik, Subhadip Roy, Subrata Das, Jammu University, 2014.
2. 101<sup>st</sup> Indian Science Congress, University of Jammu, S. S. Devi, M. Roy, W. R. Devi, K. S. Singh, Jammu University, 2014.

#### *In Proceedings of International Conference:*

1. International Conference on Powder, Granule and Bulk Solids: Innovations and Applications, M. Roy, W.R. Devi, K. S. Singh, Thapar University, Patiala, 28-11-2013 to 30-11-2013.
2. International Conference on Powder, Granule and Bulk Solids: Innovations and Applications, S. S. Devi, M. Roy, W.R. Devi, K. S. Singh, Thapar University, Patiala, 28-11-2013 to 30-11-2013.

#### *Distinguished Visitors to the Departments:*

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Pro.B.C. Ranu IACS, Kolkata	20-11-2013 to 30-11-2013	To deliver lecture as resource person on workshop Materials and Green Chemistry
2.	Prof. P. Pramanik IIT Kharagpur	20-11-2013 to 30-11-2013	To deliver lecture as resource person on workshop Materials and Green Chemistry
3.	Prof. Tara Shankar Pal IIT Kharagpur	21-05-2013 to 22-05-2013	Formulation of Integrated 5 year BS-MS Chemistry syllabus
4.	Prof. P. Das IISc. Bangalore	21-05-2013 to 22-05-2013	Formulation of Integrated 5 year BS-MS Chemistry syllabus

#### **8.6 Other Activities:**

**Indian patent:** Patent No: 1455/MUM/2014. **Inventor:** S. Das, A. Sarkar & Abhimunya, **Title:** "METHOD AND SYSTEM FOR REDUCING POLLUTANTS IN EXHAUST EMISSIONS OF INTERNAL COMBUSTION ENGINES"

## **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 fundamental of basic sciences and humanities, knowledge in inter-disciplinary 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 & 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



**9.3 Lab Facilities :**

Sl. No.	Name of The laboratories	Available Floor Area (Sq.M)	Maximum Batch Size	Weekly Hours Required As Per Curricula	No. of Experiments	
					Prescribed	Conducted
1	CC Lab	800	48			80
2	CP Lab	600	35			75
3	Hardware Lab	400	10			
4	Software Engineernig Lab	400	10	10	20	17

**9.4 Activities of Faculty:**

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

**Short Term Courses:**

Sl. No.	Co-ordinators	Title	Period
1	Mr Ashim Saha Mr Jayanta Pal	A workshop on "PHP & MySQL" under Spoken Tutorial Project conducted by IIT Bombay.	2013-14
		A workshop on "Linux" under Spoken Tutorial Project conducted by IIT Bombay at NIT Agartala	2013-14
		A workshop on "Latex" under Spoken Tutorial Project conducted by IIT Bombay at NIT Agartala	2013-14
2	Ashim Saha	Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala.	29/11/2013 to 30/11/2013
		TWO - WEEK ISTE WORKSHOP on Cyber Security Under the National Mission on Education through ICT (MHRD, Govt. of India)	2013-14
3	Mr Mrinal Kanti Debbarma	TWO - WEEK ISTE WORKSHOP on Computer Networking Under the National Mission on Education through ICT (MHRD, Govt. of India)	2013-14
4	Mr Nirmalya Kar	Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala.	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "AIGORITHMS FOR MOBILE AND PERVASIVE COMPUTING	24/02/2014 to 26/02/2014

**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	Mr Mrinal Kanti Debbarma	ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013
		Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
2	Mr Nikhil Debbarma	ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013
		Research Issues and Simulation Tools in Wireless Technologies.	23/09/2013 to 27/09/2013
1	Mr Tribid Debbarma	ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013
		Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
2	Mr. Kunal Chakma	Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014



3	Mr Anupam Jamatia	Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
4	Mr Nirmalya Kar	ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013
5	Mr Ashim Saha	National Workshop on "MATLAB and Its Application in Digital Image and Signal Processing" to be held at IIIT, Allahabad	March 07 and 08, 2013
		National Workshop on "Biometrics and Privacy Protection 2013" held at MNIT Jaipur .	December 23- 25, 2013
6	Ms Sharmistha Majumder	ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013
		Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
7	Mrs Priyanka Sarkar	Research Issues and Simulation Tools in Wireless Technologies.	23/09/2013 to 27/09/2013
		ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013.
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
8	Ms Hrituparna Paul	Research Issues and Simulation Tools in Wireless Technologies.	23/09/2013 to 27/09/2013
		ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013.

		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
9	Mr Dhrubojyoti Bhowmik	ISTE workshop on Database Management Systems (DBMS2013MAIN).	21/05/2013 to 31/05/2013.
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
		Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		3 days FDP on Video Image Processing jointly organized by ETCE department & ECSU, ISI Kolkata.	24/01/2014 to 26/01/2014
10	Mr. Jayanta Pal	ISTE workshop on Database Management Systems (DBMS2013MAIN).	21/05/2013 to 31/05/2013.
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014
		Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		3 days FDP on Video Image Processing jointly organized by ETCE department & ECSU, ISI Kolkata.	24/01/2014 to 26/01/2014
11	Mr. Parthasarathi De	ISTE workshop on Database Management Systems (DBMS2013MAIN)	21/05/2013 to 31/05/2013
		Two days National Workshop on "MATLAB and Its Application in Digital Image Processing and Pattern Recognition" at NIT Agartala	29/11/2013 to 30/11/2013
		Three days North-East ISI-NIT Agartala Spring School on "ALGORITHMS FOR MOBILE AND PERVASIVE COMPUTING"	24/02/2014 to 26/02/2014



**Conference:**

Sl. No.	Name of Faculty	Title	Period
1	Mr Mrinal Kanti Debbarma	International Conference on Computer Networks and Information Technology (ICCNIT 2013), Bangkok	29/06/2013 to 30/06/2013,
		ACEEE International Conference on Multimedia Processing, Communication and Information Technology (MPCIT 2013), Shimoga, Karnataka.	19/12/2013 to 20/12/2013
2	Mr. Nirmalya Kar	3rd ACM MobiHoc workshop on Pervasive wireless healthcare (MobileHealth '13), Bangalore, India	29/07/2013 to 01/08/2013
		2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), Sydney, Australia.	17/06/2013 to 18/06/2013
3	Ashim Saha	"Seventh International Conference on Image and Signal Processing (ICIP-2013)" Bangalore, INDIA	August 9 <sup>th</sup> to 11 <sup>th</sup> , 2013,
		2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), Sydney, Australia.	17/06/2013 to 18/06/2013
4	Ms. Sharmistha Majumder	International Conference on Technology for Education T4E 2013, held at IIT Kharagpur	18/12/2013 to 20/12/2013

**Visits Abroad by Faculty:**

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1	Mr Mrinal Kanti Debbarma	Thailand	29/06/2013 to 30/06/2013	To present paper in the International Conference on Computer Networks and Information Technology (ICCNIT 2013)
2	Mr Nirmalya Kar	Sydney, Australia	17/06/2013 to	To present paper in the 2nd International Conference on Human

			18/06/2013	Computer Interaction, Education & Information Management System (ICHCEIMS 2013), Sydney, Australia.
3	Mr Ashim Saha	Sydney, Australia	17/06/2013 to 18/06/2013	To present paper in the 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), Sydney, Australia.

**In Refereed International Journals:**

**By Mr. Mrinal Kanti Debbarma**

1. Jhunu Debbarma, **M. K. Debbarma**, Sudipta Roy and Rajat K. Pal “Cross Layer Architecture Resource Accessibility Control in Mobile Ad-hoc Networks,” Ellixir International Journal ISSN: 2229-712X, 57, April 2013, 14197-14201

**By Mr. Swapan Debbarma**

1. M.Mitra, M. Chakraborty, S. Debbarma, S. Chakraborty, S. K Sen , B. Chatterjee and K.P.Ghatak “ On the Carrier Contribution to the Elastic constants in Ultra-Thin Films of III-V and Optoelectronic Materials in the Presence of Intense Electric Field” Quantum Matter 3, 3 (2014).
2. P. Bhardwaj, S. Debbarma “A Study of Methods Involved In Voice Emotion Recognition” International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 2, February 2014.
3. K. P. Ghatak, Swapan Debarma, “Quantum Confinement and the Diffusivity Mobility Ratio”, Rev. Theor. Sci. 2(2) 2014.
4. K. P. Ghatak, S. Bhattacharya, A. Mondal, Swapan Debarma, P. Ghorai, and A. Bhattacharjee, “On the Fowler-Nordheim Field Emission from Quantum-Confined Optoelectronic Materials in the Presence of Light Waves” Quantum Matter 2, (6) 25-41 (2013).
5. Swapan Debbarma , KP Ghatak, PK Bose, S Bhattacharya, A Bhattacharjee, D De, S Ghosh, N Paitya, Simple Theoretical Analysis of the Fowler Nordehim Field Emission from Qunatum Confined Optoelectronic Materials, Quantum Matter, American Scientific Publishers (ASP), Volume-2, Issue-2, (83-101), April 2013.



**By Mr. Nikhil Debbarma**

1. Nikhil Debbarma, Gautam Nath and Hillol Das, "Analysis of Data Quality and Performance Issues in Data Warehousing and Business Intelligence", *International Journal of Computer Application*, Volume: 79 (15), October 2013, pg. 20-26.
2. H. Paul, Priyanka Sarkar, "A Survey: High Speed TCP Variants in Wireless Networks", *International Journal of Advance Research in Computer Science and Management Studies*, Volume 1, Issue 7, 2013, pg. 142-148.

**By Mr. Nirmalya Kar**

1. Ashim Saha, Hillol Das, Nirmalya Kar and M C Pal, "An Approach of Extracting Facial Components for Facial Expression Detection using Fiducial Point Detection", *International Journal of Computer Applications(IJCA)* Vol. 80, No. 10, pp: 49-53, October 2013. Published by Foundation of Computer Science, New York, USA, ISSN: 0975-8887, IJCA. DOI: 10.5120/13901-1923.
2. Nirmalya Kar, Atanu Majumder, Ashim Saha, Suman Deb, Dr. Mukul Chandra Pal, "Data Security And Cryptography Based On DNA Sequencing", 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 24-32, ISSN:2091-1610.
3. Ashim Saha, Vimal Vijayakumar, Nirmalya Kar, Dwijen Rudrapal, Nikhil Debbarma, "C2DMPush - An implementation of Android Cloud to Device Messaging Technology", 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 33-39, ISSN:2091-1610.
4. Suman Deb, Ashim Saha and Nirmalya Kar, "An Augmented Human Computer Interaction System by Effective Use of Eye Blink Pattern", 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 50-58, ISSN:2091-1610.
5. Gautam Rakshit, Ashim Saha, Suman Deb, Nirmalya Kar, A Two Round Block Cipher Symmetric Key Cryptography Based On Key Stream, 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 40-49, ISSN:2091-1610.

**By Mr. Ashim Saha**

1. Ashim Saha, Hillol Das, Nirmalya Kar and M C Pal, "An Approach of Extracting Facial Components for Facial Expression Detection using Fiducial Point Detection", *International Journal of Computer Applications(IJCA)* Vol. 80, No. 10, pp: 49-53, October 2013. Published by Foundation of Computer Science, New York, USA, ISSN: 0975-8887,IJCA. DOI: 10.5120/13901-1923.
2. Nirmalya Kar, Atanu Majumder, Ashim Saha, Suman Deb, Dr. Mukul Chandra Pal, "Data Security And Cryptography Based On DNA Sequencing", 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 24-32, ISSN:2091-1610.
3. Ashim Saha, Vimal Vijayakumar, Nirmalya Kar, Dwijen Rudrapal, Nikhil Debbarma, "C2DMPush - An implementation of Android Cloud to Device Messaging Technology", 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 33-39, ISSN:2091-1610.
4. Suman Deb, Ashim Saha and Nirmalya Kar, "An Augmented Human Computer Interaction System by Effective Use of Eye Blink Pattern", 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 50-58, ISSN:2091-1610.
5. Gautam Rakshit, Ashim Saha, Suman Deb, Nirmalya Kar, A Two Round Block Cipher Symmetric Key Cryptography Based On Key Stream, 2nd International Conference on Human Computer Interaction, Education & Information Management System (ICHCEIMS 2013), June 17-18, 2013, Sydney, Australia. Published in *International Journal of Information Technology & Computer Science(IJITCS)* Vol. 10, No. 3, pp. 40-49, ISSN:2091-1610.

**By Ms. Priyanka Sarkar**

1. H. Paul, Priyanka Sarkar, "A study and comparison of OLSR, AODV and ZRP routing protocols in ad hoc networks", *International Journal of Research in Engineering and Technology*, Volume: 02 Issue: 08, 2013, pg. 370-374.
2. H. Paul, Priyanka Sarkar, "A Survey: High Speed TCP Variants in Wireless Networks", *International Journal of Advance Research in Computer Science and Management Studies*, Volume 1, Issue 7, 2013, pg. 142-148.



**By Ms. Hrituparna Paul**

1. H. Paul, Priyanka Sarkar, "A study and comparison of OLSR, AODV and ZRP routing protocols in ad hoc networks", International Journal of Research in Engineering and Technology, Volume: 02 Issue: 08, 2013, pg. 370-374.
2. H. Paul, Priyanka Sarkar, "A Survey: High Speed TCP Variants in Wireless Networks", International Journal of Advance Research in Computer Science and Management Studies, Volume 1, Issue 7, 2013, pg. 142-148.
3. Anish Kumar Saha, Hrituparna Paul, Partha Partim De, "Integration of Caching and Prefatching in Proxy server", International Journal of Engineering Research & Technology (IJERT), Vol. 3 Issue 3, March - 2014, ISSN: 2278-0181

**By Mr Parthasarathi De**

Bapi Saha, Dr Dibyendu Ghoshal, Parthasarathi De "A NOVEL APPROACH FOR THE RECOGNITION OF THE FACES OF EUNUCHS" International Journal of Advance Electronics and Instrumentation Engineering Vol 2, Issue 7 July 2013.

**In Proceedings of National Conference:**

**By Mr. Mrinal Kanti Debbarma**

1. M. K. Debbarma, Jhunu Debbarma, Santanu Kumar Sen, Sudipta Roy "Neighbour Based Distance Vector Routing Protocols for Mobile Adhoc Networks" published in the proceedings of National Seminar on Energy Science and Engineering (NSESE 2013), 29-30, Nov, 2013, TIT, Narshinghar.
2. Jhunu Debbarma, M. K. Debbarma, Sudipta Roy, R. K. Pal "An Energy-efficient framework for performance evolution of MANETs" published in the proceedings of National Seminar on Energy Science and Engineering (NSESE 2013), 29-30, Nov, 2013, TIT, Narshinghar.

**In Proceedings of International Conference:**

**By Dr. Paritosh Bhattacharya**

1. P. Bhattacharya, S. Paul, K.S.Choudhury "Different growth models in population dynamics and its exponential regression" in International Conference on Emerging Research in Computing, Information, Communication and Applications (ERCICA 2013) from 2-3 August 2013 at NitteMeenakshi Institute of Technology, Bangalore. (Elsevier Conference)
2. P. Bhattacharya, Abhishek Pal, S.P.maiti "Study of various Routing Metric In Wireless Mesh Network and comparison according to various tuning parameters" in Fifth International Conference on Advances in Recent Technologies in Communication and Computing, ARTCom 2013 from 20-21 September 2013, Bangalore (Elsevier Conference)



3. P. Bhattacharya, Abhishek Pal, S.P.Maiti "Eigen value and its comparison with different RBF neuralNetworks" in International Conference on Recent Trends in Communication and Computer Networks - ComNet 2013 from Nov 08-09, 2013; Hyderabad, India(Elsevier Conference)
4. P. Bhattacharya, Abhishek Pal, S.P.maiti "Mathematical Modelling and Comparison of Eigen Valuewith Different Radial Basis Functions in Neural Network" in 7<sup>th</sup> InternationalConference on Advanced Computing and Communication Technologies (ICACCT<sup>TM</sup>-2013)in association with INDERSCIENCE Publishers,UK, IETE and TechnicallyCo-sponsored by Computer Society Chapter IEEE, Delhi Section at Asia Pacific Institute of InformationTechnology SD India, Panipat (Haryana) on16th November 2013.
5. P. Bhattacharya, S.Das, U.K.bera "Visualization of streamlines with their velocity profiles" in International Conference Energy System Modeling and Optimization Conference (ESMOC 2013) from December 9-11, 2013, NIT Durgapur, India.
6. P. Bhattacharyhek Pal, S.P.maiti "Eigen values of colour images and their comparison with various Radial Basis Functions" in IEEE 2<sup>nd</sup> International Conference on Computing, Communication and Sensor Network (Ca, AbhisCSN 2013) from 22<sup>nd</sup> -24<sup>th</sup> Dec , 2013, Kolkata
7. A. Debberma, P.Bhattacharya, B. Purakayasta "Stemmer for Resource Scarce Language using String Similarity Measure" in IEEEInternational Conference on Reliability Optimization & Information Technology (ICROIT 2014) from 6-8 February 2014, New Delhi.
8. P. Bhattacharya, S. Paul, K.S.Choudhury "Ecological Networks, Structure, Interaction. Strength & Stability on different Prey predator Models" in 3<sup>rd</sup> International Symposium on Complex Dynamical Systems and Applications (CDSA 2014) from March 10 -12, 2014 at Indian Statistical Institute, Kolkata. Kolkata

By Mr. Mrinal Kanti Debbarma

1. **M. K. Debbarma**, Jhunu Debbarma, S. K. Sen, Sudipta Roy "DVRX: A Novel Approach in DVR based Routing Protocol for a MANET", ACEEE International Conference on Multimedia Processing, Communication and Information Technology (MPCIT 2013), Dec 19-20, 2013,PP-85-90,DOI: 03.AETS.2013.4.45, Shimoga, Karnataka.
2. Jhunu Debbarma, **M. K. Debbarma**, S. K. Sen, Sudipta Roy, R. K. Pal., "A Cross-layer Interaction Framework for Performance Evaluation of Mobile ad hoc Networks" ACEEE International Conference on Multimedia Processing, Communication and Information Technology (MPCIT 2013), Dec 19-20, 2013,PP-91-97, DOI: 03.AETS.2013.4.46, Shimoga, Karnataka.
3. **M. K. Debbarma**, Jhunu Debbarma, S. K. Sen, Sudipta Roy "A DVR- based Routing Protocol with Special Neighbours for Mobile Ad-Hoc Networks", published in the



proceedings of IEEE International Symposium on Computational and Business Intelligence (ISCBI 2013), August 24-25, New Delhi, PP- 235-238 .

4. **M. K. Debbarma, Rajib Chowdhuri, Nikhil Debbarma, S. K. Sen, Sudipta Roy** “Enhancing the Performance of AODV using Node Remaining Energy and Aggregate Interface Queue Length”, published in the proceedings of IEEE International Symposium on Computational and Business Intelligence (ISCBI 2013), August 24-25, New Delhi, . PP-77-80.
5. **Suman Deb, Mrinal Kanti Debbarma, ST Reddy, Ujjwal Baidya**, “Effective use of dense optical flow for path recognition” 2013 IEEE Second International Conference on Image Information Processing (ICIIP), December 9 - 11, 2013, Jaypee University of Information Technology, Wagnaghat, Shimla, Himachal Pradesh, INDIA
6. **M. K. Debbarma, Rajib Chowdhuri, S. K. Sen, Sudipta Roy** “Comparison of Performance Metrics of DVR protocol using Networks Node Remaining Energy and Aggregate Interface Queue Length”, published in the proceedings of Elsevier Seventh International Conference on Communication Network (ICCN 2013), August 9-11, Bangalore . Vol 3, PP-198-206, 2013,
7. **Jhunu Debbarna, M. K. Debbarma, N. Debbarma, Sudipta Roy, R. K .Pal** “An Energy –Efficient Protocol for Power Conservation in Mobile Ad-hoc Networks”, published in the proceedings of IEEE International Symposium on Computational and Business Intelligence (ISCBI 2013), August 24-25, New Delhi PP- 239-242, .
8. **Jhunu Debbarma , Mrinal Kanti Debbarma, Sudipta Roy, Rajat K. Pal**, “Energy Management System in Mobile Ad hoc-Networks through Cross-layer framework” published in the proceedings of IEEE Workshop on Computational Intelligence Theories, Applications and Future Directions, 14 July, 2013 IIT Kanpur.
9. **M. K. Debbarma, Santanu K. Sen, Sudipta Roy** “Effective Performance Analysis of DVR-based Routing Protocols with Random Way Point in MANET” published in the proceedings of International Conference on Computer Networks and Information Technology (ICCNIT 2013), Bangkok, Thailand, 29-30, June,2013.

**By Mr. Nikhil Debbarma**

1. **M. K. Debbarma, Rajib Chowdhuri, Nikhil Debbarma, S. K. Sen, Sudipta Roy** “Enhancing the Performance of AODV using Node Remaining Energy and Aggregate Interface Queue Length”, published in the proceedings of IEEE International Symposium on Computational and Business Intelligence (ISCBI 2013), August 24-25, New Delhi, . PP-77-80.
2. **Jhunu Debbarna, M. K. Debbarma, N. Debbarma, Sudipta Roy, R. K .Pal** “An Energy –Efficient Protocol for Power Conservation in Mobile Ad-hoc Networks”, published in the proceedings of IEEE International Symposium on Computational and Business Intelligence (ISCBI 2013), August 24-25, New Delhi PP- 239-242

**By Mr. Kunal Chakma**

1. N.Kar,Atanu Majumder,Ashim Saha,Anupam Jamatia,Kunal Chakma, M.C. Pal, "An improved data security using DNA sequencing" in MobileHealth '13 Proceedings of the 3rd ACM MobiHoc workshop on Pervasive wireless healthcare ,Pages 13-18 ,July 29, 2013, Bangalore,India

**By Smt. Smita Das**

1. Yadav, S.; Das, S.; Rudrapal, D., "A system to filter unsolicited texts from social learning networks," Fourth International Conference on Computing, Communications and Networking Technologies (ICCCNT), pp.1,5, doi: 10.1109/ICCCNT.2013.6726687, 4-6 July 2013.
2. Dwijen Rudrapal,Smita Das, Swapan Debbarma, "Improvisation of Biometrics Authentication and Identification through Keystrokes Pattern Analysis," 10th International Conference, ICDCIT, Lecture Notes in Computer Science, Volume 8337, pp 287-292, Bhubaneswar, India, February 6-9, 2014.
3. Dwijen Rudrapal, Smita Das, "Continuous Authentication Based on Language Redundancy Analysis and Keystrokes Dynamics," Advances in Engineering and Technology Series, ISSN: 2214-0344, Volume No 4, Page(s) 71 - 76, SearchDL ID03.AETS.2013.4.41, 2013.

**By Mr. Dwijen Rudrapal**

1. Yadav, S.; Das, S.; Rudrapal, D., "A system to filter unsolicited texts from social learning networks," Fourth International Conference on Computing, Communications and Networking Technologies (ICCCNT), pp.1,5, doi: 10.1109/ICCCNT.2013.6726687, 4-6 July 2013.
2. Dwijen Rudrapal,Smita Das, Swapan Debbarma, "Improvisation of Biometrics Authentication and Identification through Keystrokes Pattern Analysis," 10th International Conference, ICDCIT, Lecture Notes in Computer Science, Volume 8337, pp 287-292, Bhubaneswar, India, February 6-9, 2014.
3. Dwijen Rudrapal, Smita Das, "Continuous Authentication Based on Language Redundancy Analysis and Keystrokes Dynamics," Advances in Engineering and Technology Series, ISSN: 2214-0344, Volume No 4, Page(s) 71 - 76, SearchDL ID03.AETS.2013.4.41, 2013.

**By Mr. Anupam Jamatia**

1. Biman Debbarma, Sambhu Nath Pradhan, Anupam Jamatia. "Energy Comparison of Different NOC Routers". International Conference on Advances in Computing, Electronics and Communication - ACEC 12-13 October, 2013 in Zurich, Switzerland.
2. Nirmalya Kar, Atanu Majumder, Ashim Saha, Anupam Jamatia, Kunal Chakma, and Mukul Chandra Pal. An improved data security using DNA sequencing, In Proceedings of the 3rd



ACM MobiHoc workshop on Pervasive wireless healthcare (MobileHealth '13), Bangalore, India, July 29 - August 1, 2013, pp:13-18, DOI=10.1145/2491148.2491152, ISBN: 978-1-4503-2207-2.

**By Mr. Nirmalya Kar**

1. Prasenjit Das , Nirmalya Kar, An Improved Trusted Full Disk Encryption Model, Elsevier 7th International Conference on Data Mining and Warehousing(ICDMW-2013), Bangalore, India, 9-11 August 2013, Published in K. R. Venugopal (Ed.): Data Mining and Warehousing Vol 2, pp. 9-16, Elsevier Science and Technology Publications 2013, ISBN:978-93-5107-105-1, DOI: 03.elsevierst.2013.2.ICDMW2
2. Ashim Saha , Nirmalya Kar, An Approach of Facial Expression Recognition Based on Fuzzy Logic Principles and Facial Animation Parameters, Elsevier 7th International Conference on Image and Signal Processing(ICISP 2013), Bangalore, India, 9-11 August 2013, Published in K. R. Venugopal (Ed.): Image and Signal Processing Vol 4, pp. 71-77, Elsevier Science and Technology Publications 2013, ISBN:978-93-5107-106-8, DOI: 03.elsevierst.2013.4.ICISP8
3. Nirmalya Kar, Atanu Majumder, Ashim Saha, Anupam Jamatia, Kunal Chakma, and Mukul Chandra Pal. An improved data security using DNA sequencing, In Proceedings of the 3rd ACM MobiHoc workshop on Pervasive wireless healthcare (MobileHealth '13), Bangalore, India, July 29 - August 1, 2013, pp:13-18, DOI=10.1145/2491148.2491152, ISBN: 978-1-4503-2207-2.
4. L. D. Singh, P. Das, N. Kar, A Pre-processing Algorithm for Faster Convex Hull Computation, 4th International Conference on Future Generation Information Technology Summit, Amity University, Uttar Pradesh, India, 26-27 September 2013, proceeding Published in IET Digital Library, ISBN:978-1-84919-846-2, DOI:10.1049/cp.2013.2348.

**By Mr. Ashim Saha**

1. Ashim Saha , Nirmalya Kar, An Approach of Facial Expression Recognition Based on Fuzzy Logic Principles and Facial Animation Parameters, Elsevier 7th International Conference on Image and Signal Processing(ICISP 2013), Bangalore, India, 9-11 August 2013, Published in K. R. Venugopal (Ed.): Image and Signal Processing Vol 4, pp. 71-77, Elsevier Science and Technology Publications 2013, ISBN:978-93-5107-106-8, DOI: 03.elsevierst.2013.4.ICISP8
2. Nirmalya Kar, Atanu Majumder, Ashim Saha, Anupam Jamatia, Kunal Chakma, and Mukul Chandra Pal. An improved data security using DNA sequencing, In Proceedings of the 3rd ACM MobiHoc workshop on Pervasive wireless healthcare (MobileHealth '13), Bangalore, India, July 29 - August 1, 2013, pp:13-18, DOI=10.1145/2491148.2491152, ISBN: 978-1-4503-2207-2.

**By Ms Sharmistha Majumder:**

1. Majumder, S, "Online Discussion Based Learning on Google Blogger for Introductory Programming Course" in 2013 IEEE Fifth International Conference on Technology for Education (T4E), Pages: 143 - 14418-20 Dec. 2013.

**By Mrs Priyanka Sarkar:**

1. Priyanka Sarkar, H. Paul, "Comparative Performance Analysis of GZRP, AOMDV and DSR in MANETs", International Conference on Computational Intelligence and Information Technology – CIIT 2013, presented and will be published in IEEE.


**By Ms Hrituparna Paul:**

1. Priyanka Sarkar, H. Paul, "Comparative Performance Analysis of GZRP, AOMDV and DSR in MANETs", International Conference on Computational Intelligence and Information Technology – CIIT 2013, presented and will be published in IEEE.

**By Mr .Parthasarathi De :**

Parthasarathi De, Dr.Dibyendu Ghoshal and Paramita Malla."Iris Pattern Matching and Recognition for Eunuch in India by the Method of Cumulative Sum Based Change Analysis" International conference on Navigational Systems and Signal Processing Applications (NSSP-2013) at University College of Engineering and Technology, Acharya Nagarjuna University, Guntur, A.P. INDIA.

**Books published**

Name of the authors published	Title of the Books	Date of publication of the Book	Issue/Vol No/Page No
Mrinal Kanti Debbarma, Shailesh Tiwari, A. K. Misra,	Path Selection Strategy for Regression Testing: Software Metrics Based Approach (ISBN: 978-3-659-33630-0) 	2013	LAMBERT LAP LAMBERT Academic Publishing is a trademark of: AV Akademikerverlag GmbH & Co. KG Heinrich-Böcking- Str. 6-8 66121, Saarbrücken, Germany



## 9.5 Design and Development Activities

In order to meet challenges of rapid strides in technology and the diversity of emerging career Opportunities, the Department have identified these thrust areas of research and development:

- Algorithms and Complexity
- Artificial Intelligence and NLP
- Distributed Computing
- Embedded Systems
- Multimedia Systems
- Cryptography and Information Security
- Software and Systems Engineering
- Sensor Networks
- Wireless and Mobile Computing
- Image Processing
- Data base and data ware housing with data mining

The Department has demonstrated considerable strengths in areas such as computational topology, algorithm design and analysis. The Department has major contributions in the design of efficient algorithms for Mobile Adhoc Networks.

Areas of established strength in Artificial Intelligence include heuristic search, deduction, machine learning, and combinatorial optimization. Recent focus includes ambient intelligence, natural language processing, emotion recognition and formal verification.

Distributed computing is an area of emerging strength in the Department. Research facilities include

- Computer Programming Lab
- Networking Lab and AI Lab
- Data Communication Lab
- System Lab
- Software Engineering Lab
- Hardware Lab
- Embedded System Lab
- Analog and Digital Lab
- DBMS and Data Mining lab
- Image Processing Lab
- Central Computing Lab

### Research Publications:

Total No. of papers published in Refereed International Journals	:	15
Total No. of papers presented in National Conference	:	02
Total No. of papers presented in International Conferences	:	29

## **9.6 Institute – Industry Collaboration:**

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 a 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.

## **9.7 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 a 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 molding 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 –Going Project under CDAC:**

ADIT (Advanced Diploma in Information Technology) course for SC and OBC students under the Directorate for Welfare of SCs and OBCs (Planning Section).

**Mr Nirmalya Kar is acting as the Coordinator of the CDAC centre.**



## **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. 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 45 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. program. Apart from B.Tech. and M. Tech., Electrical Engineering department started Ph.D program 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 following specialization viz. (a) Power System, (b) Instrumentation and (c) Power Electronics & Drives. Similarly, an excellent response has been obtained for Ph.D program. 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 program. 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.

#### **Academic Program Goals:**

The Electrical Engineering Department has goals for undergraduate, graduate as well as Ph.D programs.

The *undergraduate program 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 program 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 program 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 Lab Facilities:

The department has adequate laboratory facilities for conducting experiments & developmental works by both U.G and P.G students.

Sl. No.	Name of the Laboratories	Available Floor Area (sq.m)	Max. Batch Size	Weekly Hours Required as per Curricula	No. of Experiments		Recurring Expenditure (Allotted Per year)
					Prescribed	Conducted	
1	Basic Electrical Laboratory	300 sq m	Total=90	30 Hrs.	8	8	Rs. 55000
2	Electrical Machines Laboratory	600 sq m Height – 9 m	Total=90 In four groups	8 hrs.	6	6	
3	Computer Programming & Simulation Lab	90 sq m	Total=100 In four groups	8 hrs.	12	10	
4	Process Control & Instrumentation Laboratory	75 Sq m	Total=90 In four groups	4hrs.	8	6	
5	High Voltage Engineering Lab	300 sq m Height – 9 m	Total=90 In four groups	8 hrs.	7	7	
6	Electrical Measurement Lab / Network Lab	200 sq m	Total=100 In four groups	8 hrs.	9	8	
7	Microprocessor & micro Controller Lab	150 sq m	Total=90 In four groups	8 hrs.	15	13	



8	Power Electronics & Electrical drives Lab	225 sq m + 100 sq m (additional for PG students.)	Total=90 In four groups	4hrs.	5	5	
9	Control system Lab	150 sq m	Total=90 In four groups	8 hrs.	20	15	
10.	Power System Lab	100 Sq.m	Total=100 In four groups	8 hrs.	8	8	
11.	DSP Lab	390 Sq m	Total=90 In four groups	8 hrs.	12	12	
12	Optics Lab	1638 Sqft	Total=90 In four groups	4hrs.			



**Power System Simulation Lab**



**High Voltage Lab**



**Optics Lab**



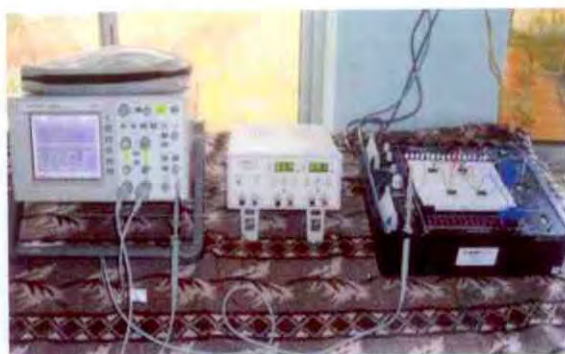
**DSP Lab**



**Process Control & Instrumentation Lab**



**Microprocessor Lab**



**Instrumentation Lab**

#### 10.4 Activities of Faculty:

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

Sl. No.	Co-ordinators	Title	Period
<b>Short Term Courses</b>			
1.	<b>Mr. Bhaskar Bhattacharya</b>	"In-House Custom Training Two Week Programme On Labview"	May 27-31, 2013 & July 08-12, 2013
2.	<b>Ms. Sharmistha Sharma and Dr. Jayanta Kumar Rakshit</b>	Student training program on "Field Instruments, PLC & DCS" conducted by Technical School of Yokogawa India Ltd.	17/05/2013 to 26/05/2013



*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
<b>Workshop:</b>			
1.	Dr. Sumita Deb	Analog Electronics	4 <sup>th</sup> -14 <sup>th</sup> June'2013 organized by IIT kharagpur, held at NIT, Agartala.
2.	Minakshi Deb Barma	Analog Electronics	4 <sup>th</sup> -14 <sup>th</sup> June'2013 organized by IIT kharagpur, held at NIT, Agartala.
3.	Mr. Bikram Das	Analog Electronics	4 <sup>th</sup> -14 <sup>th</sup> June'2013 organized by IIT kharagpur, held at NIT, Agartala.
4.	Mr. Prabir Ranjan Kasari	Analog Electronics	4 <sup>th</sup> -14 <sup>th</sup> June'2013 organized by IIT kharagpur, held at NIT, Agartala.
5.	Dr. S. Bhattacharjee	Workshop on 'Analog Electronics', conducted by IIT-Kharagpur	4 – 14 <sup>th</sup> June, 2013
		Workshop on 'Green energy & Economy', conducted by NIT-Agartala	6 – 7 <sup>th</sup> February, 2014
6.	Mr. Bhaskar Bhattacharya	Advances in multi-criteria decision making (MCDM) Techniques	January (13-14), 2014
<b>Conference:</b>			
1.	Dr. Subhadeep Bhattacharjee	International Conference on 'Advances in Computing, Electronics and Communication' at Zurich, Switzerland.	12 – 13 October, 2013
2.	Sharmistha Sharma, Dr. Subhadeep Bhattacharjee and Dr. Aniruddha Bhattacharya	Optimal Location and Sizing of DG to Minimize Loss of Distribution System Using SIMBO-Q Method	31 <sup>st</sup> January - 2nd February, 2014
3.	Dr. Bidyut Kr. Bhattacharyya	Time constant drawn by the device & the	2 days

		corresponding Noise for a Given Power Delivery Network .	
Training:			
1	Dr. Priyanath Das.	“In-House Custom Training Two Week Programme On Labview”	May 27-31, 2013 & July 08-12, 2013
1.	Mr. Bhaskar Bhattacharya	“In-House Custom Training Two Week Programme On Labview”	May 27-31, 2013 & July 08-12, 2013
2.	Ms. Saheli Ray	“In-House Custom Training Two Week Programme On Labview”	May 27-31, 2013 & July 08-12, 2013
3.	Mr. Diptanu Das	“In-House Custom Training Two Week Programme On Labview”	May 27-31, 2013 & July 08-12, 2013
4.	Ms. Sharmistha Sharma	Student training program on “ <b>Field Instruments, PLC &amp; DCS</b> ” conducted by Technical School of Yokogawa India Ltd.	17/05/2013 to 26/05/2013
Short term Course:			
	Dr. Bidyut Kr. Bhattacharyya	Power Delivery Network by NIT Surathkal	2 days

*Visits Abroad by Faculty:*

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1.	Mr. Bikram Das	Zurich, Switzerland	12-13 Oct'13	Paper presentation
2.	Dr. Subhadeep Bhattacharjee	Switzerland	10-13 Oct'13	Attending conference for paper presentation

*Fellowships of Academics and Professional Societies:*

Sl. No.	Name of Faculty	Level	Year
ISTE/ CSI and others			
1	Prof. B. Bhattacharyya	IEEE Fellow, Highest INTEL award given by GORDON MOORE & ANDY GROVE	
2	Dr. Rup Narayan Ray	IE(I)-Member, ISTE – LM and INDIAN SCIENCE CONGRESS ASSOCIATION	1998 1992 1993



		Member	
3	Dr. Priyanath Das.	ISTE Member, IE(I)	2009
4	Dr. Ardhendu Saha	ISTE Member IACS (Life Member),	2009 1999
5	Dr. Ajoy Chakroborty	MISTE, FIE(1)	
6	Mrs. Anindita Jamatia.	ISTE Member	2009
7	Mr. Abanishwar Chakroborty	ISTE Member	2009
8	Mrs. Sumita Deb.	ISTE, Life Member Institute of Engineers (India), Graduate G-547504-0	2009 2008.
9	Mrs. Minakshi Deb Barma.	ISTE Member	2009
10	Mr. Prabir Ranjan Kasari	ISTE, LM 62058, IEEE	2009
11	Mr. Bikram Das.	ISTE( LM/ 62063), IE(India) associate member (AM099384-3) , Solar Energy Society of India (LM/1459/2010)	2010
12	Dr. Subhadeep Bhattcharjee	MISTE, MIETE(I)	

**Name of student/ scholar attended Conference/ Seminar and Symposia abroad/ India:**

Sl. No.	Name of the Student/ Scholar	Program me	Name of the Conference/ Seminar/ Symposia	Date & Venue
Dr. Bidyut K. Bhattacharyya				
1	Suman Debnath	PhD	ICECT-June'23 <sup>rd</sup> 2013	Kanyakumar, India
Guide : Dr. Ajoy kumar Chakroborty				
1.	Arup Ratan Bhowmik	PhD	IEEE International Conference on Advanced Electronic Systems	Sep. 21-23, 2013, CSIR-Central Electronics Engineering Research Institute, Pilani, Rajasthan, India.
2.	Kampa Narendra Babu	M.Tech	IEEE international conference on circuit, power and computing technologies	March 20-21, 2014, Noorul Islam University, Tamilnadu, India.

3.	Kampa Narendra Babu	M.Tech	IEEE international conference on green computing, communication and electrical and electronics engineering	March 6-8, 2014, Dr. N.G.P. Institute of technology, Coimbatore, India.
Guide : Dr. A.Saha				
1	Sampa Das, Smita Banik, Arijit Datta, Nabamita Goswami, Priyanka Dey, Ruma Debnath	PhD	Field Instruments, PLC & DCS	May (17-26) 2013 National Institute of Technology Agartala
2	Sampa Das, Smita Banik, Arijit Datta, Nabamita Goswami, Priyanka Dey, Ruma Debnath	PhD	Contemporary and Future Perspectives of Bio-Engineering in Medical Science and Technology.	9 <sup>th</sup> July 2013 National Institute of Technology Agartala
3	Nabamita Goswami, Sampa Das, Smita Banik, Arijit Datta	PhD	Advanced Engineering Optimization through Intelligent Techniques	27 <sup>th</sup> to 31 <sup>st</sup> January 2014, Sardar Vallabhbhai National Institute of Technology
4	Preeti Kumari, Ruma Debnath	PhD	Application of Soft Computing and Optimization Techniques in Engineering and Engineering Sciences	(4-8) th March 2014, NIT Durgapur
Guide: Dr. Subhadeep Bhattacharjee				
1	Shantanu Acharya	PhD	4 <sup>th</sup> International Conference on Advances in Energy Research	10 – 12 December'2013, IIT-Bombay
2	Sharmistha Sharma	PhD	International Conference on Control, Instrumentation, Energy and Communication (CIEC14)	January, 2014, Calcutta University
Guide: Dr. Aniruddha Bhattacharya				



1.	Sharmistha Sharma	IEEE Conference	International Conference on Control, Instrumentation, Energy & Communication (CIEC) 2014	31 <sup>st</sup> January-2 <sup>nd</sup> February 2014
2.	K. Bhattacharjee	IEEE Conference	1 <sup>st</sup> International Conference on Automation, Control, Energy and Systems (ACES) 2014	1-2 February 2014

### 10.5 Research and Consultancy:

#### Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1.	Development & OFF grid Hybrid Power System for remote communities on NE India	3 years (under process)	AICTE	17	Dr. Ajoy kumar Chakroborty & Mr. Srimanta Roy
2.	Improvement of efficiency of a grid connected photovoltaic system.	3 years (Extended)	AICTE	5	Minakshi Deb Barma & Dr. Sumita Deb
3.	Generation of Blue Laser Radiation by Frequency Tripling of Nd:YAG Laser Emitting Around 1.3 $\mu\text{m}$	3 years (Extended)	AICTE	20	Dr. Sumita Deb & Dr. Ardhendu Saha
4.	Optimizing Power Output through Hybrid Technology	2011 – 2014	DST, Govt. of India	19.34 lakh	Dr. Subhadeep Bhattacharjee

#### Research Publications:

Total No. of papers published in Refereed International Journals

: 03 (Bidyut K. Bhattacharyya)  
 03 (Dr. Ajoy Kr. Chakroborty)  
 02 (Dr. Ardhendu Saha)  
 05 (Dr. Subhadeep Bhattacharjee),  
 04 (Dr. A. Bhattacharya)  
 02 (Mr. Bikram Das)  
 02 (Mr. Prabir Rn. Kasari)

		02 (Mr. Abanishwar Chakraborty)
		01 (Dr. Sumita Deb)
		01 (Ms. Minakshi Deb Barma)
		01 Published, Accepted-one (Ms. Nivedita Laskar)
Total No. of papers presented in National Conference	:	01 (Mr. Bikram Das)
		01 (Mr. Prabir Rn. Kasari)
		01 (Mr. Abanishwar Chakraborty)
		01 (Dr. A. Bhattacharya)
Total No. of papers presented in International Conferences	:	02 (Bidyut K. Bhattacharyya)
		03 (Dr. Ajoy Kr. Chakraborty)
		05 (Dr. Ardhendu Saha)
		03 (Dr. Subhadeep Bhattcharjee)
		02 (Dr. A. Bhattacharya)
		02 (Mr. Bikram Das)
		02 (Mr. Prabir Rn. Kasari)
		02 (Mr. Abanishwar Chakraborty)
		01 (Ms. Sharmistha Sharma)

***In Refereed International Journals:***

Authors	Year	Paper Title	Journal Title	Volume, Page No.
Nabamita Goswami, Priyanka Dey, Ardhendu Saha	2014	Surface Plasmon Enhanced Ultra Low Threshold Second Harmonic Generation in Periodically Poled Whispering Gallery Resonator	Optik (Elsevier Journal)	Accepted Date : 11.03.2014  Reference : 13-1144
Nabamita Goswami, Aparupa Kar, Ardhendu Saha	2014	Long Range Surface Plasmon Resonance Enhanced Electro-Optically Tunable Goos-Hänchen Shift and Imbert-Fedorov Shift in ZnSe Prism	Optics Communication s (Elsevier Journal)	Accepted, <a href="http://dx.doi.org/10.1016/j.optcom.2014.05.042">http://dx.doi.org/10.1016/j.optcom.2014.05.042</a>



Sumita Deb, Ardhendu Saha	August 2013	Highly efficient broadband second harmonic generation in a tapered zinc telluride slab using total internal reflection fractional quasi phase matching	Optik-Elsevier	Vol. 124 Page No.- 2428-2431.
Ardhendu Saha and Sumita Deb	Accept date : 04.01.2 014	Broadband Second Harmonic Generation in a Double-Tapered Gallium Arsenide Slab using Total Internal Reflection Quasi Phase Matching	Optik-Elsevier	Accepted
Arup Ratan Bhowmik & A. K. Chakraborty	2014	Solution of optimal power flow using non dominated sorting multi objective gravitational search algorithm	International Journal of Electrical Power and Energy Systems	Vol. 62, pp. 323-334
Tulika Bhattacharjee & A. K. Chakraborty	2013	NSGAI Based Congestion Management in a Pool Based Electricity Market Incorporating Voltage and Transient Stability	Electric Power Components and Systems	Vol. 41, no. 10, pp. 990 – 1001
Tulika Bhattacharjee & A. K. Chakraborty	2013	An Application of Reference Point Based NSGAI for Power system Congestion Management Ensuring System Stability	IEEEJ Transactions on Electrical and Electronics Engg	Accepted for publication
Bikram Das, Prabir Rn. Kasari, Abanishwar Chakraborti, Prasul Jain, Sanjay Raghuwanshi and Pawan Kr. Navin	March – April 2013	Battery Energy Storage And Power Electronics Based Voltage And Frequency Controller For Wecs Connected To Grid.  ISSN 0976 – 6545(Print); ISSN 0976 – 6553(Online); Volume 4, Issue 2	International Journal of Electrical Engineering & Technology (IJEET)	283-292
Navonita Sharma, Abanishwar Chakraborti, Prabir Ranjan Kasari, Bikram Das	July- August 2013	Regenerative Loading System.  ISSN 0976 – 6545(Print); ISSN 0976 – 6553(Online); Volume 4, Issue 4	International Journal of Electrical Engineering & Technology (IJEET)	213-224

Bikram Das, Prabir Rn. Kasari, Abanishwar Chakraborti, Prasul Jain, Sanjay Raghuwanshi and Pawan Kr. Navin ""	March – April 2013	Battery Energy Storage And Power Electronics Based Voltage And Frequency Controller For Wecs Connected To Grid.  ISSN 0976 – 6545(Print); ISSN 0976 – 6553(Online);Volume 4, Issue 2	International Journal of Electrical Engineering & Technology (IJEET)	283-292
S.Bhattacharjee et al	Accept ed 21 Feb' 2014	Techno-economic performance evaluation of grid integrated PV-biomass hybrid power generation for rice mill	<i>Sustainable Energy Technologies and Assessments</i> (Elsevier) (ISSN: 2213- 1388)	7(2014), pp.6-16
S.Bhattacharjee et al	Accept ed 7 <sup>th</sup> Oct' 2013	Analysis of system performance indices of PV generator in a cloudburst precinct	<i>Sustainable Energy Technologies and Assessments</i> (Elsevier) (ISSN: 2213- 1388)	4(2013), pp.62-71
S.Bhattacharjee et al	July- Dec, 2013	Experimental investigation of photovoltaic generator in alfresco condition'	<i>International Journal of Renewable Energy</i> (ISSN 1905- 7172)	8(2),pp. 21- 36.
S.Bhattacharjee et al	Nov' 2013	A primogenius study on characterization of c-Si solar cell	<i>International Journal of Renewable Energy Technology</i> (Inderscience) (ISSN: 1757- 3971)	4 (4), pp. 370-390
S. Acharya and S.Bhattacharjee	Sept' 2013	Analysis and characterization of wind-solar-constant torque spring hybridized model	<i>Frontiers in Energy</i> (Springer)	Accepted.
K. Bhattacharjee, A. Bhattacharya,	March 2014	"Chemical Reaction Optimisation for different economic dispatch problems".	IET Generation Transmission & Distribution,	vol. 8, no. 3, pp. 530-541,



S. Halder nee Dey				
K. Bhattacharjee, A. Bhattacharya, S. Halder nee Dey	2014.	“Oppositional Real Coded Chemical Reaction Optimization for Different Economic Dispatch Problems”	International Journal of Electrical Power and Energy Systems (Elsevier),	vol. 54, no. 2, pp. 378-391.
K. Bhattacharjee, A. Bhattacharya, S. Halder nee Dey	2014	“Teaching Learning Based Optimization for Different Economic Dispatch Problems”;	Scientia Iranica, Transactions on Electrical Engineering,	Accepted, Article in Press.
K. Bhattacharjee, A. Bhattacharya, S. Halder nee Dey	2014	“Solution of economic emission load dispatch problems of power systems by Real Coded Chemical Reaction algorithm”	International Journal of Electrical Power and Energy Systems (Elsevier)	Accepted.
Nivedita Chakraborty & Minakshi Deb Barma	15 <sup>th</sup> January, 2014.	Modelling of Stand- Alone Wind Energy Conversion System using Fuzzy Logic Controller	IJIREEEICE	Volume 2, Issue 1, Page No. 861-868
Bidyut K. Bhattacharyya Nivedita Laskar and Suman Debnath, Sikha Bhattacharya	June 2013	Determination of Rate of Change of Current inside the 3GHz Silicon Chip for any given noise at 100Amp. Maximum saturation Current	International Journals of Electrical Energy	Volume-1, Issue-II
Bidyut K. Bhattacharyya, Nivedita Laskar and Debasis Baral,	February 2014	Innovative Scaling Method to Minimize Cost of Integrated Circuit Packages and Devices	IEEE-CPMT Transaction	Accepted

*In Proceedings of National Conference:*

Authors	Period	Paper Title	Conference Title	Venue
Medaibok Fancon, Bikram Das, Abanishwar Chakrabarti and Prabir	30 to 31 January'14	Comparison and Performance Analysis of VSI Fed Three Phase Induction Motor using Different PWM Techniques ISBN(13):978-93-392-0316-0; ISBN(10):93-392-0316-X;	Emerging Trends in Engineering And Sciences (ETES-2014)	Asansol Engg. College, Asansol.

<b>Ranjan Kasari,</b>		PP-204-212,		
<b>P.N. Das, A. Bhattacharya</b>	29-30 November 2013,	“Power System State Estimation Using Hybrid Differential Evolution”	National Conference NSESE 2013	TIT-Agartala, Tripura.

*In Proceedings of International Conference:*

Authors	Period	Paper Title	Conference Title	Venue
Nabamita Goswami, Ardhendu Saha, Aparupa Kar	Oct (25-26) 2013.	Surface Plasmon Resonance Enhanced Polarization Tunable Imbert-Fedorov Shift and Goos-Hanchen Shift	International conference on Nanotechnology, ICNT 2013, ISBN:978-81-927756-0-9, Page No:70.	Haldia, Kolkata
Nabamita Goswami, Aparupa Kar, Ardhendu Saha	Oct (25-26) 2013.	Electro-Optically Tunable Long Range Surface Plasmon Resonance Enhanced Longitudinal and Transverse Displacement in ZnSe Prism	International conference on Nanotechnology, ICNT 2013, ISBN: 978-81-927756-0-9, Page No:73.	Haldia, Kolkata
Nabamita Goswami, Ardhendu Saha	(5-8) Mar 2014	Reflected Second and Fourth Harmonic Generation in the Same Fused Silica Prism at a Fundamental Wavelength of 946 nm with Long Range Surface Plasmon	International conference on Optics & Opto-electronics (XXXVIII Symposium of The Optical Society of INDIA), ICOL-2014, Souvenir of ICOL-2014 PP-LAA-17	Dehradun, Uttarakhand
Nabamita Goswami, Aparupa Kar, Ardhendu Saha	(5-8) Mar 2014	Polarization Tunable Imbert-Fedorov Shift and Goos-Hanchen Shift with Surface Plasmon Resonance	International conference on Optics & Opto-electronics (XXXVIII Symposium of The Optical Society of INDIA), ICOL-2014, Souvenir of ICOL-2014 PP-NPP-04	Dehradun, Uttarakhand



Nabamita Goswami, Aparupa Kar, Ardhendu Saha	(5-8)Mar 2014	Long Range Surface Plasmon Resonance Enhanced Voltage Tunable Longitudinal and Transverse Displacement in ZnSe Prism	International conference on Optics & Opto-electronics (XXXVIII Symposium of The Optical Society of INDIA), ICOL-2014, Souvenir of ICOL-2014 PP-NPP-03	Dehradun, Uttarakhand
Arup Ratan Bhowmik, A. K. Chakraborty	Sep. 21-23, 2013	Placement of UPFC for Minimizing Active Power Loss and Total Cost Function by PSO Algorithm	IEEE international conference on advanced electronic systems	CSIR-CEERI, Pilani, Rajasthan, India.
Arup Ratan Bhowmik, A. K. Chakraborty, Kampa Narendra Babu	March 20-21, 2014	Multi Objective Optimal Power Flow Using NSMOGSA	IEEE international conference on circuit, power and computing technologies	Noorul Islam University, Kumaracoil, Tamilnadu, India.
Arup Ratan Bhowmik, A. K. Chakraborty, Kampa Narendra Babu	March 6-8, 2014	Non Dominated Sorting Gravitational Search Algorithm Based Optimal Power Flow with Emission and Non Smooth Cost Functions	IEEE international conference on green computing, communication and electrical and electronics engineering	Dr. N.G.P. Institute of technology, Coimbatore, India.
Bikram Das, Suvamit Chakraborty, Prabir Rn. Kasari, Abanishwar Chakraborti	12-13 Oct'13	Reverse regeneration technique of BLDC motor for Capacitor Charging. ISBN: 978-981-07-7965-8 DOI:10.3850/ 978-981-07-7965-8_02, PP-7-11	ACEC-2013	Zurich, Switzerland.
Bikram Das, Suvamit Chakraborty, Prabir Rn. Kasari, Abanishwar Chakraborti	31 <sup>st</sup> January - 2nd February, 2014	Novel Reverse regeneration technique of BLDC motor for Capacitor Charging.	IEEE Conference on Control, Instrumentation, Energy and Communication (CIEC 2014)	Technology Campus, Acharya Prafulla Chandra Siksha Prangan, University of Calcutta, JD-2, Sector-III, Salt Lake city,

				Kolkata, India
S. Bhattacharjee and S.Bhakta	10 -13 October, 2013	Predicted and Observed Analysis of Micro Photovoltaic Stand- alone Power Plant	International Conference on 'Advances in Computing, Electronics and Communication'	Zurich, Switzerland.
S. Bhattacharjee , S.Bhakta and S.Acharya	10 – 12 December '2013	Performance assessment and experimental investigation of 1.2 kW <sub>p</sub> PV power plant in different loading conditions	4 <sup>th</sup> International Conference on Advances in Energy Research	IIT-Bombay
S. Sharma, S.Bhattacharjee and A.Bhattacharya	January, 2014	Optimal location and sizing of DG to minimize loss of distribution system using SIMBO-Q method	International Conference on Control, Instrumentation, Energy and Communication (CIEC14)	Calcutta University
K. Bhattacharjee, A. Bhattacharya, S. Halder nee Dey	1-2 February 2014.	"Chemical Reaction Optimization Applied in Economic Dispatch Problems"	IEEE Conference ACES 2014	
Sharmistha Sharma, Dr. Subhadeep Bhattacharjee and Dr. Aniruddha Bhattacharya	31 <sup>st</sup> January - 2nd February, 2014	Optimal Location and Sizing of DG to Minimize Loss of Distribution System Using SIMBO-Q Method	IEEE Conference on Control, Instrumentation, Energy and Communication (CIEC 2014)	Technology Campus, Acharya Prafulla Chandra Sikhsha Prangan, University of Calcutta, JD-2, Sector- III, Salt Lake city, Kolkata, India



**Book:**

Author	Name of the Book	Publisher	Period
Dr. Subhadeep Bhattacharjee	Solar Electricity Generation	Narosa Publishing House, New Delhi	(Accepted for publication on 08.01.2014)
Bikram Das, Prabir Rn. Kasari, Abanishwar Chakraborti	Maximum Power Point Tracking For Solar Panels"	ISBN-13: 978-3-659-43563-8, ISBN-10: 3659435635; EAN: 9783659435638; LAP-Lambert Academic Publishing	(2013-08-02 )

**Distinguished Visitors to the Departments:**

Sl No	Name of the visitors & designation	Date of visit	Purpose of visit
1.	Dr. Chandan Kumar Chanda. Professor, EE Dept. BESU, Howrah	17.05.2013 to 19.05.2013	External Examiner for M.Tech (EE) 4 <sup>th</sup> sem
2.	Dr. P.K. Dutta , Professor, Department of Physics, IIT Kharagpur	17.05.2013 to 22.05.2013	External Examiner for M.Tech (EE) 4 <sup>th</sup> sem
3.	Dr. Sujit Biswas. Professor, EE Department. Jadavpur University	19.05.2013 to 22.05.2013	External Examiner for M.Tech (EE) 4 <sup>th</sup> sem
4.	Dr. Nidul Sinha, Professor, EE Department. NIT Silchar	21.11.2013 to 22.11.2013	Expert for taking M.Tech (EE) 4 <sup>th</sup> sem Project & Thesis Examination
5	Dr. A.K Das Chowdhury, Associate Professor, EE Department. TIT, Agartala	30.11.2013	Expert For Taking M.Tech (EE) 4 <sup>th</sup> Sem Project & Thesis Examination
6	Dr. P.B. Dattagupta, Ex-Professor and Head of EE Department, IIT-Kharagpur	03.07.2013 to 05.07.2013	To Deliver Lecture On The Topic "Some Aspects Of Electricity To Light And Light To Electricity Power Conversion" To The PG Students And Ph.D Scholars

**10.6 Other Activities:**

Electrical Engineering Department of NIT Agartala has introduced a student's chapter "Agartala NIT student's chapter" under Institute of Engineers India.

Here they have conducted two short term courses namely

i) Matlab Basics & Control Toolbox (NITA/IEI/STC/01)

ii) Engineering Drawing (NITA/IEI/STC/02)

- They have organised One day workshop on Indian Power Scenario by Power Grid Corporation India Limited where R.P.Samal, Director (Operation) PGCIL, was invited to a Deliver Lecture.
- They have also organised One day workshop by Er. G.Dey (AGM), Coal India Limited.
- Under the guidance of Mr. Bhaskar Bhattacharya (Teaching Assistant, NIT Agartala) the final year students visited Tripura Gas Based Project At Monarchak, Sonamura and Gomati Hydro Electric Power Plant, Tirthamukh.

***Students Awards:***

- Ms. Samima Aktar has received POSOCO POWER SYSTEM AWARD .



## 11.0 ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT

### 11.1 Introduction:

The Department of ECE was established in 2007 and Shri Manik Bhowmik was the first HOD of the then Electronics and Electrical Engineering. Since its inception the Department has grown in multidimensional direction with multidimensional UG & PG teaching aspects. The department offers a wide range of courses which address almost the entire arena covering VLSI, Nano-electronics, Fabrication and Characterization of Quantum Effect Devices, Advance Microwave Electronics, Non-Linear System Science, Modern era of Communication, 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 has deeply involved in multidimensional aspects of teaching and research under the able leadership of Dr. Sambhu Nath Pradhan, the present HOD. The Department offers PhD courses, full time as well as part time in Nano-electronics, Microwave, VLSI, Image Processing, to name a few. It may be noted that the students of this branch have been placed in various reputed R&D organizations, different eminent companies, in India and abroad.

### 11.2 Academic Programme:

This Institute offers courses of study and facilities for research leading to B.Tech, M.Tech and Ph.D under Electronics and Communication Engineering. The department currently offers the following programs:-

#### Under Graduate programmes:

B.Tech in Electronics & Communication Engineering (4 years)

#### Post Graduate programmes:

M.Tech in two specialization- (i) VLSI and NANO Electronics and (ii) Communication Engineering.

**Name of student/ scholar attended Conference/ Seminar and Symposia abroad/ India:**

Sl. No	Name of the Student/ Scholar	Programme	Name of the Conference/ Seminar/ Symposia	Date & Venue
1.	Priyanka Choudhury	PhD	ARTCOM 2013	20-21 September 2013, Bangalore
2.	Abhishek Nag	PhD	International Conference on VLSI and Signal Processing (ICVSP) 2014	January 10 - 12, 2014, at Dept. of (E & ECE) IIT Kharagpur.
3.	Biman Debbarma	PhD	International Conference Advances in Computing, Electronics and Communication ACEC – 2013	Zurich, Switzerland Dated 12 – 13 October, 2013.

**11.3 Lab Facilities:**

Sl.No	Name of the Laboratories	Max Batch Size	No. of Experiments	
			Prescribed	Conducted
1.	Basic Electronics Laboratory	40 students	10	10
2.	Analog Electronics Laboratory	20 students	10	10
3.	Digital Electronics Laboratory	20 students	10	10
4.	Microprocessor Laboratory	20 students	10	10
5.	Communication Laboratory	20 students	10	10
6.	DSP & VLSI Laboratory	30 students	10	10
7.	Computer Laboratory	30 students	10	10
8.	Microwave Laboratory	20 students	10	10
9.	RF Comm. Laboratory	30 students	10	10
10.	Device Fabrication Laboratory	15 students	10	10
11.	Network Analysis & Synthesis Laboratory	20 students	10	10
12.	Control System Laboratory	20 students	10	10
13.	Measurement & Instrumentation Laboratory	20 students	10	10

**11.4 Activities of Faculty:**

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

Sl. No.	Co-ordinators	Title	Period
<b>Short Term Courses</b>			
1.	Mrs. Tamasi Moyra	2 weeks ISTE main Workshop on Analog	04-06-2013 to



	(Panua)	Electronics	14-06-2013
2.	Dr. Aniruddha Mondal	1 day National Workshop on “Recent Trends on Semiconductor Devices”	01.03.2014
3.	Dr. Sambhu Nath Pradhan	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014

**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
<b>Workshop:</b>			
1	Mrs. Tamasi Moyra (Panua)	2 weeks ISTE main workshop on Analog Electronics	04-06-2013 to 14-06-2013
2	Miss Madhuparna Chakraborty	2 weeks ISTE main workshop on Analog Electronics	04-06-2013 to 14-06-2013
		North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
3	Mr. Somnath Roy Choudhury	2 weeks ISTE main workshop on Analog Electronics	04-06-2013 to 14-06-2013
		North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
4	Dr. Sambhu Nath Pradhan	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
5	Mr. Biman Debbarma	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
6	Mr. Manik Bhowmik	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
7	Mr. Atanu Choudhury	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
8	Mr. Anirban Bhattacharjee	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 To 26 <sup>TH</sup> Feb 2014
11	Dr. Dibyendu Ghoshal	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 to 26 <sup>TH</sup> Feb 2014
12	Mr. Mitra Barun	North-East ISI-NIT Agartala Spring	24 <sup>TH</sup> Feb 2014 to

	Sarkar	School on Algorithms for Mobile and Pervasive Computing	26 <sup>TH</sup> Feb 2014
13	Mr.Kamalesh Debnath	North-East ISI-NIT Agartala Spring School on Algorithms for Mobile and Pervasive Computing	24 <sup>TH</sup> Feb 2014 to 26 <sup>TH</sup> Feb 2014
<b>Conference:</b>			
1.	Dr.Sambhu Nath Pradhan	1. International conference on VLSI and Signalprocessing (ICVSP) 2014 2. 17 <sup>TH</sup> International Symposium on VLSI Design and Test (VDAT 2013)	1. January 10 - 12, 2014, at DEPT. OF (E & ECE) IIT Kharagpur. 2. MNIT Jaipur, July. 27-30, 2013.
2.	Dr. Aniruddha Mondal	International Conference on Advanced Nanomaterials and Nanotechnology (ICANN) -2013.	1-3rd December, 2013
3.	Sri Atanu Chowdhury	International Conference on Mechanics, Simulation and Control [ICMSC -2013], Kanyakumari, Tamilnadu, INDIA.	22nd & 23rd June, 2013
<b>Training:</b>			
1.	Sri Atanu Chowdhury	Labview Core-I and Core -II Training Customized Data Acquisition, Real Time and FPGA Training of Labview.	May 27-31, 2013 July 08-12, 2013
<b>Short Term Course:</b>			
2.	Sri Atanu Chowdhury	North-East ISI-NIT Agartala spring school on algorithms for mobile and pervasive computing	February 24-26, 2014

#### *Fellowships of Academics and Professional Societies:*

Sl. No.	Name of Faculty	Level	Year
ISTE/ CSI and others			
IETE	Prof. Kamakhya Prasad Ghatak (Citations 1944, h-index-19 and i10 index-75)	Fellow	1994
IEI			1996
New York Academy Of Sciences			2000
ISTE	Atanu Chowdhury	Life Member	2010-2011
ISI		Life Member	2010-2011
IEI		Associate Member	2009-2010
ISTE	Manik Bhowmik	Life Member	2010-2011
AMIE	Tamasi Moyra	Life Member	2000-2013
GIST	Sambhu Nath Pradhan	Fellow	2012



## 11.5 Design and Development Activities:

*Brief and specific details of Process/ Instruments/ Equipment/ Software Designed and developed:*

Sl. No.	Laboratory	Major Equipments
1.	Microwave Laboratory	<p>A. Microwave test bench with reflex klystron AT X-BAND(8.2-12.4GHZ);</p> <p>B. USB power sensor / meter</p> <p>C. Microwave test bench for measurement of radiation pattern &amp; gain of antenna at x-band</p> <p>D. Microwave power meter with sensor &amp; waveguide to co-axial adapter at x-band (8.2-12.4ghz)</p> <p>E. Microwave test bench with gunn oscillator at x-band (8.2-12.4ghz)</p>
2.	VLSI and Embedded System Laboratory	<p>A. ISE foundation</p> <p>XILINX system edition 11.1I</p> <p>Logic Editionnm EDK</p> <p>system generator + ACCEL DSP</p> <p>B. CPLD-Design-KIT</p> <p>C. Coolrunner-II CPLD Starter KIT</p> <p>D. Coolrunner-II starter kit peripheral module bundle</p> <p>E. Basys Spartan 3E XC3S100E student board, USB cable</p> <p>F. Nexys 2 spartan 3E XC3S500E student board, USB Cable</p> <p>G. XUP spartan 3E starter KIT with USB programming cable</p> <p>H. XUP V5 board(open sparc) with USB platform cable</p> <p>I. XILINX xtreme DSP starter KIT-spartan 3A 1800A edition</p> <p>J. VIRTEX II pro development system</p> <p>K. VIRTEX-5 ML501 evaluation &amp; development platform</p> <p>L. University trainer KIT</p> <p>M. VIRTEX-4 ML 403 embedded platform</p> <p>N. Platform cable USB</p> <p>O. Electronic Design Automation (EDA) EDA Software 29 CDS ECCN 3D991</p> <p>HTS 8523.40.4045</p> <p><b>Cadence CAD Tool</b></p> <p>I. Analog &amp; Mixed signal design - front end tools</p> <p>II. Interface</p> <p>III. Back end tools</p> <p>IV. Digital Design-FE simulation and verification</p> <p>V. Synthesis &amp; DFT tools</p> <p>VI. Low power design tools</p> <p>VII. STA/SI/PHYSICAL implementation tools</p>

		<p>VIII. IR drop &amp; EM analysis tools</p> <p>IX. Common tools to digital and AMS designs tools</p> <p>X. Advanced PCB solutions</p> <p><b>Synopsys CAD Tool</b></p> <p>I. Front End University Bundle</p> <p>II. Back End University Bundle</p> <p>III. TCAD Bundle</p>
3.	<b>DSP Lab</b>	<p>A. XtremE DSP development KIT-VIRTEX-5 SXT edition with USB platform cable.</p> <p>B. Xtreme DSP video starter kit- spartan-3A DSP edition with USB platform cable</p> <p>C. Xtreme DSP development KIT-VIRTEX-4 edition with USB platform cable.</p> <p>D. Xtreme DSP development platform-spartan-3A DSP 3400A edition with USB cable.</p> <p>E. Virtex-4 ML 402 SX xtremE DSP evaluation platform.</p> <p>F. Platform cable USB</p>
4.	<b>RF Communication Lab</b>	<p>A. NI PXI-8106 Core 2 DUO 2.16GHZ, Controller with Windows VISTA</p> <p>B. 1 GB DDR2 RAM for NI 8106, NI 105 and NI 8104 controllers</p> <p>C. NI PXI-4072 6 &amp; 1/2 digit FEX DMM &amp; LCR meter (1.8 MS/S digitizer, 100NV-300V, 10NA-1A, 2YR CAL)</p> <p>D. PI DMM test probes for USE with the digital millimeter products. The probes are IEC1010 and UL certified.</p> <p>E. NI PXI-4110 triple output DC power supply with APS-4100 AUX power</p> <p>F. 3.3 GHZ RF signal generators and CW Source</p> <p>G. NI PXI-5152 2 GS/S(1CH)/1 GS/S(2CH) digitizer W/128MB memory</p> <p>H. SMA 100, SMA male to SMA male flexible cable, 38.1CM</p> <p>I. SMB 112, double shielded SMB and SMA to BNC, male COAX cable 50OHM 1M</p> <p>J. Cables SMA to SMB and SMATO BNC, PXI-5600 TO PXI-5122 &amp; PXI-5142</p> <p>K. NI PXI-1042 8 slot 3U chasis with universal AC power supply</p> <p>L. Power cord, 250V, 10A, India.</p> <p>M. SE start up assistance at your site for 2 days.</p> <p>N. Cable ASSY, Type SH100-10-FLEX, 2M</p> <p>O. SCB-10 shielded connector block I/O N. Signal termination accessory for 100 PIN MIO BDS order SH100 shielded cable separately.</p> <p>P. NI-PXI-6509 industrial 96-channel 5V/TTL/CMOS digital I/O module and NI-DAQ</p>



		<p><b>Q.</b> NI PXI-5660 RF signal analyzer &amp; NI PXI 5670 2.7 GHZ RF vector signal generator with accessories as per specification mentioned below-</p> <ul style="list-style-type: none"> <li>• NI PXI-5660 RF signal analyser, 2.7 GHZ signal analyzer with 20 MHZ REAL time bandwidth, 80 DB dynamic range, less than -135 DBM noise floor, less than -90 DBC/HZ phase noise</li> <li>• SMA 100, SMA male to SMA male flexible cable, 12.7 CM</li> <li>• NI PXI-5670 2.7 GHZ RF vector signal generator with 8MB memory.</li> <li>• SMA 100, SMA male to SMA male flexible cable 38.1 CM</li> <li>• Power chord, 250 Volt, 10A India.</li> <li>• PXI-5670 RF replacement cable kit.</li> <li>• PXI -5670/5671 NAD PXI E RF replacement cable kit.</li> <li>• NI modulation toolkit for labview.</li> <li>• NI measurements toolkit.</li> </ul>
5.	<b>Computer Laboratory</b>	Desktop Computer HP compaq 8000 Elite PC Series [50 NOS.]
6.	<b>Basic Electronics Lab</b>	Universal 24 PIN PLDS, 1.5 AMP voltage regulator, QUAD OP AMP, DUAL frequency compensated OP AMP, general purpose PLL, Dual RS 232 Driver, 3:8 Analogmux/Demux, Timer, RELAYS- RW-SH-106D, Power Supply, Function Generator, MSO, DSO, etc.
7.	<b>Analog Electronics Lab</b>	Universal 24 PIN PLDS, 1.5 AMP voltage regulator, QUAD OP AMP, Dual frequency compensated OP AMP, General Purpose PLL, Dual RS 232 Driver, 3:8 Analog MUX/DEMUX, Timer, RELAYS- RW-SH-106D, power supply, function generator, MSO, DSO, etc.
8.	<b>Digital Electronics Lab</b>	Adder, Subtractor, Counter, Register, Multiplexer, ETC KITS, ICS
9.	<b>Analog &amp; Digital Communication Lab</b>	<p><b>A.</b> Agilent MXA signal N9020A-503 Analyzer with</p> <ol style="list-style-type: none"> <li>1) Agilent N9068A-2FP.</li> <li>2) Agilent 89601BSPC-HE1.</li> </ol> <p><b>B.</b> Arbitrary/Function Generator, 240MHZ, 2 channels.</p> <p><b>C.</b> Logic analyzer, 136 Channels, 2GHZ, timing with 125PS magnivu acquisition, 235MHZ state, 2M memory depth, certificate of traceable calibration standard, India power cord, general purpose probe and accessories, 17 channel, for TLA5000 series logic analyzers and TLA7LX/7MX, TLA7NX/7PX/7QX logic analyzer.</p>
10.	<b>Microprocessor Lab</b>	Advance 8086 microprocessor trainer (AMP-86) advanced 8051 microcontroller trainer KIT (AMC-51) basic 8085 microprocessor

		trainer KIT(MP-85).
11.	<b>Microelectronics &amp; Nanoelectronics Lab</b>	<p>“E-beam evaporator”: Model No: 1576 100mm diameter substrates “E-beam power supply(EB3)” SL NO:3PSU-060-10 “Cleanair” vertical laminar airflow bench model NO:CAV 1200 Working size: W4 X D2 X H2 feet MOC:IN IS 316 SS construction “Clean air” Sterile garment storage cabinet model NO:CGL 424 Working size: W4 X D2 X H4 feet MOC: IN IS 304 SS Construction. Programmable Spin Coater Digital Ultrasonic Cleaner HE-CRYOSTAT with temperature controller LDA MOUNT SI-CCD Optical Chopper System White Light Source Monocromator SR 510, single phase lock IN GSL700X-S60 1700C compact vacuum and tube furnace with complete accessories</p>

#### 11.6 Research and Consultancy:

##### *Sponsored Research Projects:*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1.	MODROBS modernization of computer laboratory, F.NO.8024/RIFD/MOD(NER)-58/2010-11, DT- 03-03-2011	2010-11	AICTE	15 lakhs	Dr. Aniruddha Mondal & Manik Bhowmik
2.	MODROBS modernization of control system laboratory, F.NO.8024/RIFD/MOD(NER)-46/2011-11, DT- 03-03-2011	2010-11	AICTE	7 Lakhs	Atanu Chowdhury
3.	MODROBS modernization of photonics laboratory, F.NO.8024/RIFD/MOD(NER)-54/2010-11, DT- 03-03-2011	2010-11	AICTE	15 Lakhs	Kamalesh Debnath & Atanu Chowdhury
4.	MODROBS modernization of vlsi & microelectronics laboratory, F.NO.8024/RIFD/MOD(NER)-	2010-11	AICTE	12.48 Lakhs	Somnath Roy Chowdhury & Manik Bhowmik



	49/2010-11, DT- 03-03-2011				
5.	MODROBS modernization of optical communication laboratory, F.NO.8024/RIFD/MOD(NER)-50/2010-11, DT- 03-03-2011	2010-11	AICTE	13 Lakhs	Kamalesh Debnath & Manik Bhowmik
6.	MODROBS modernization of Digital Signal Processing (DSP) laboratory F.NO.8024/RIFD/MOD(NER)-57/2010-11, DT- 03-03-2011	2010-11	AICTE	15 Lakhs	Dr. Aniruddha Mondal & Manik Bhowmik
7.	MODROBS modernization of electronics measurement & instrumentation laboratory, F.NO.8024/RIFD/MOD(NER)-52/2010-11, DT- 03-03-2011	2010-11	AICTE	13.55 Lakhs	Atanu Chowdhury & Manik Bhowmik
8.	MODROBS modernization of process control laboratory, F.NO.8024/RIFD/MOD(NER)-59/2010-11, DT- 03-03-2011	2010-11	AICTE	15 Lakhs	Sharmistha Sharma & Atanu Chowdhury
9.	MODROBS modernization of advance spectroscopy laboratory using super continuum source, F.NO.8024/RIFD/MOD(NER)-56/2010-11, DT- 03-03-2011	2010-11	AICTE	15 Lakhs	Somnath Roy Chowdhury & Dr. Ardhendu Saha
10.	MODROBS F.NO.8024/RIFD/MOD(NER)-35/2011-12 Modernisation of audio video laboratory	2011-12	AICTE	10.00 Lakhs	Dr. Sambhunath Pradhan
11.	MODROBS modernization of advance spectroscopy laboratory advanced optical fiber communication lab	2011-12	AICTE	12.00 Lakhs	Kamalesh Debnath
12.	RPS F.No.8023/BOR/RID/ RPS(NER)-56/2010-11 Dated-31.03.2011 High efficiency IN203/SINANO-wire based heterojunction solar cell	2010-11	AICTE	15.3 Lakhs	Anniruddha Mondal
13.	RPS F.NO.8023/RID/RPS-24/(NER)/2011-12	2011-12	AICTE	16.00 Lakhs	Dr. Sambhunath Pradhan

	Low power VLSI circuit design				
14.	RPS design of slot/patch antenna at ka band (AROUND 36.5 GHZ)	2011-12	AICTE	15.00 Lakhs	Dr. Dibyendu Ghoshal
15	Design and development of laser doppler velocimeter using besel beam	2009-10	AICTE	20.00 Lakhs	Atanu Chowdhury
16	Design and development of non-linear mirror mode-locked laser emitting around 1.3 $\mu\text{m}$	2009-10	AICTE	20.00 Lakhs	Manik Bhowmik
17	Thermal aware logic synthesis	2013-16	SERB, DST, Govt. of India	23.10 Lakhs	Sambhunath Pradhan

**Research Publications:**

Total No. of papers published in Refereed National Journals :0

Total No. of papers published in Refereed International Journals :33

Total No. of papers presented in National Conference :1

Total No. of papers presented in International Conferences :20

**-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. Aniruddha Mondal			
A. Mondal, B. Shougaijam, T. Goswami, J.C. Dhar, N.K. Singh, S. Choudhury, K.K. Chattopadhyay	Applied Physics A	25th July, 2014	DOI 10.1007/s00339-013-7835-8
B. Choudhuri, A. Mondal, J. C. Dhar, N. K. Singh, T. Goswami, and K. K. Chattopadhyay	Applied Physics Letters	13 June, 2013	102, 233108



A Ganguly, A Mondal, J C Dhar, P Chinnamuthu, N K Singh, S Choudhury and K K Chattopadhyay	Physica E	3rd August 2013	54, 326-330
J C Dhar, A Mondal, N K Singh and K K Chattopadhyay	Journal of Applied Physics	2nd May 2013	113, 174304
Jay Chandra Dhar, Aniruddha Mondal, Naorem Khelchand Singh, P Chinnamuthu	IEEE Transactions on Nanotechnology	August 2014	12, issue6, pp. 948-950
J C Dhar, A Mondal, N K Singh, S. Chakrabartty, K K Chattopadhyay, and A Bhattacharyya	Journal of Applied Physics	30th December	114, 244310
J C Dhar, A Mondal, S Bhattacharyya, N K Singh, C Ngangbam and K K Chattopadhyay	Journal of Nanoscience and Nanotechnology	January 2014	14, 1-5
N. K. Singh, A. Mondal, J. C. Dhar, Shubhro, K .K. Chattopadhyay, and A. Bhattacharyya	J. Phys. D: Appl. Phys.	January 2014	47 pp. 105106
Naorem Khelchand Singh, Bijit Choudhuri, Aniruddha Mondal, Jay Chandra Dhar, Tamal Goswami, Saptadip Saha, Chitralekha	Electronic Material Letters	February 2014	DOI: 10.1007/s13391-014-3325-1

Ngangbam			
TiO <sub>2</sub> embedded Si nanowire (NW) network based Schottky detector for enlarged light detection	Journal of Nanoscience and Nanotechnology	July, 2014	14 Number 7, 5390-5394
A Ganguly, A Mondal, B Choudhuri, T Goswami and K. K. Chattopadhyay	Advanced Science Engineering and Medicines	March 2014	Volume – 6, page 1-5
Shubhro Chakrabartty, Aniruddha Mondal, MitraBarun Sarkar, Bijit Choudhuri, Apu Kumar Saha and Anirban Bhattacharyya	IEEE Photonics Technology Letters	March 2014	Volume:26 , Issue: 11 1065 - 1068
Dr.Dibyendu Ghoshal			
P. Acharya and Dibyendu Ghoshal	“Image segmentation technique for cloud computing Environment using morphological Approach” Int. J. Scientific and Engineering Research , (USA)	Aug 2013	Vol.4, pp.1839-1843
B.Saha, Dibyendu Ghoshal and P.De	“A novel approach for the recognition of the faces of Eunuchs Int. J. Adv. Research in Electrical, Electronics and Instrumentation Engineering	July 2013	Vol 2, No. 7, pp. 3009-3017
V.S. Bhadouria, Dibyendu Ghoshal	“A new approach for high density	June 2013	DOI: 10.1007/ s11760-013-0487-5



and A.H. Siddiqi	saturated impulse noise removal using division based coupled window median filter Signal; Signal Image and Video Processing, Springer		
Prof.K.P.Ghatak			
S. Bhattacharya, D. De, S. Ghosh, K.P. Ghatak	Fowler-Nordheim Field Emission from Carbon Nanotubes Under Intense Electric Field	2013	Journal of Computational and Theoretical Nanoscience vol10 , page 664
S Bhattacharya, N .Paitya, K.P .Ghatak	Simple theoretical analysis of the effective electron mass in semiconductor Nano wires	2013	Journal of Computational and Theoretical Nanoscience vol10 ,page1999,(2013)
N Paitya, KP Ghatak	Quantization and Carrier Mass, Reviews in Theoretical Science		vol1,page165
S.M Adhikari, K.P Ghatak	On the Diffusivity Mobility Ratio in IIIV, Ternary and Quaternary Materials in the Presence of Intense Electric Field, Quantum Matter	2013	vol2,page296
SM Adhikari, KP Ghatak	Influence of Intense Electric Field on the Carrier Contribution to the Elastic Constants in IIIV and Optoelectronic Materials: Simplified Theory, Relative Comparison and the Suggestion for	2013	vol3,page48

	Experimental Determination, Journal of Nanoengineering and Nanomanufacturing		
SM Adhikari, A Sakar, KP Ghatak	Simple Theoretical Analysis of the Field Emission from Quantum Wire Effective Mass Superlattices of Heavily Doped Materials, Quantum Matter	2013	vol2,page455
Dr.S.N.Pradhan			
P. Choudhury and Sambhu Nath Pradhan	Journal of modern Science and Technology	March 2014.	vol.2 no.1, pp.120-127.
P. choudhury, A. Nag, D. Nath and Sambhu Nath Pradhan	International journal of electronics letters.	3rd march 2014	doi:10.1080/21681724.2014.894136
A. Chakraborty and Sambhu Nath Pradhan	International journal of electronics letters	28th nov 2013	doi: 10.1080/21681724.2013.860575
A. Chakraborty and Sambhu Nath Pradhan	International journal of computer aided engineering and technology	2013.	vol. 5, no. 4, pp. 375-386,
A. Chakraborty and Sambhu Nath Pradhan	Journal of vlsi design tools and technology	2013	vol. 3, no. 1, 2013. issn: 2249 – 474x.
Mrs.Tamasi Moyra			
Tamasi Moyra, Santanu Das, and Susanta Kumar Parui	“Design and validation Of Lowpass Filter Using Microstrip Stub And Defected Ground Structure”, Microwave and Optical Technology Letters	2013	Vol-55, No-3, PP-571-573



Tamasi Moyra	“Modeling of bandpass filter using defected ground structure and defected microstrip structure”, Journal of Computational Electronics	2013	Vol-12, No-1, PP-287-296
Tamasi Moyra, Susanta Kumar Parui and Santanu Das	“Design of coplanar-waveguide-based elliptic filter using T-shaped defected ground structure”, Waves in Random and Complex Media	2013	Vol-23, No-2, PP-143-151
Tamasi Moyra, Susanta Kumar Parui and Santanu Das	“CB-CPW based Wide Band Bandpass Filter using Open-Stub Resonator”, Journal of The Institution of Engineers (India)	2013	Series B Vol-94, No-1, PP-13-19
Mr. Atanu Choudhury			
Atanu Chowdhury and Debika Debnath	Applied Mechanics and Materials journal	August 2013	Vol. 367 (2013) pp 188-193
Atanu Chowdhury and Swapan Das	International Journal of Advances in Electronic and Electrical Engineering	September 2013	Vol. 3 No.8 pp 959-964
Sayantika Das, Tanmoy Majumder and Atanu Chowdhury	International Journal of Computing and Technology	February 2014	Issue 1, Vol. 1 pp 90-94

**In Proceedings of International Conference:**

Name of Conference	Place of the Conference	Name of the Participants	Date/Duration
<b>Dr.Dibyendu Ghoshal</b>			
"Iris pattern matchup recognition for elenuch in India by the method of cumulative sum based Analysis", Proc. IEEE International Conference on Navigational system and signal Processing application	Nagarjun Sagar University, Andhra Pradesh, India.	P. De, Dibyendu Ghoshal and P.Malla	Dec 2013
"Study of watershed approach for morphological based gradient image acquisition" Proc. IEEE International Conference on Navigational systems and Signal Processing Applications,	Nagarjun Sagar University, Andhra Pradesh, India	Dibyendu Ghoshal and P.Acharjya	Dec 2013 pp 144-148
"Morphological Image segmentation using marker controlled watershed Transformation"	Nagarjun Sagar University, Andhra Pradesh, India	Dibyendu Ghoshal and P.Acharjya	Dec 2013 pp 137-143
"An approach to morphological Image segmentation for noisy digital Images"	Nagarjun Sagar University, Andhra Pradesh, India	Dibyendu Ghoshal, P.Acharjya and U. Chatarjee	Dec 2013 pp 291-295
"Edge detection of document image using shifting and subtraction method with improved performance" Proc. IEEE International Conference IEMCON 2013,	Calcutta ,India.	B. Pal, Dibyendu Ghoshal, S.Pandey and V.S. Bhadouria	22-23 Aug, 2014
"A novel algorithm for edge thinning in binary digital images" Proc. IEEE International Conference IEMCON 2013,	Calcutta, India.	Dibyendu Ghoshal and B.Pal	22-23 Aug, 2014
"Decision based salt & pepper noise reduction using adoptive weighted based approach" IEEE xplore . 2nd International Conference on Image Information and Processing	Shimla, India	VS Bhadouria, Dibyendu Ghoshal	9-11 Dec 2013
"Domain Specific Augmentations for High Level	Zurich, Switzerland	M. Schmid, A. Tanase, VS	To be published



synthesis" Proc. 25th IEEE International Conference on Application specific systems, Architecture and Processors,	(Accepted)	Bhadouria, F. Hannig, J. Teich and Dibyendu Ghoshal	
Dr.S.N.Pradhan			
International Conference on Vlsi and signal processing (icvsp)	IIT kharagpur, kolkata	A. nag and Sambhu Nath Pradhan	January 10 - 12, 2014
International Conference on vlsi and signal processing (icvsp) 2014 january 10 - 12, 2014, at dept. of (e & ece) iit kharagpur.	IIT kharagpur, kolkata	Sambhu Nath Pradhan	January 10 - 12, 2014
17th international symposium on vlsi design and test (vdat 2013)	Mnit jaipur	P. Choudhury and Sambhu Nath Pradhan	July. 27-30, 2013.
International conference advances in computing, electronics and communication acec – 2013.	Zurich, Switzerland	B. Debbarma and Sambhu Nath Pradhan	12– 13 October, 2013
Fifth International conference on advances in recent technologies in communication and computing; Artecom 2013.	Bangalore, India	P. Choudhury and Sambhu Nath Pradhan	Sep 20-21, 2013
International conference on advances in computing, electronics and communication Acec – 2013.	Zurich, Switzerland	P. Choudhury and Sambhu Nath Pradhan	12– 13 October, 2013.
17 <sup>th</sup> International symposium on vlsi design and test (vdat 2013).	Mnit Jaipur	D. Nath, p. Choudhury, Sambhu Nath Pradhan	July. 27-30, 2013.
Mrs.Tamasi Moyra			
International Conference on Convergence of Technology – 2014, "Design of An Ultra Wideband Bandpass Filter By Using Microstrip Spur-line and Ring Shaped DGS With Improved Out of Band Response"	Pune	Dibakar Yadav, Tamasi Moyra and Kaushik Debbarma	978-1-4799-3759-2/14/\$31.00©2014 IEEE
International Conference on Convergence of Technology –	Pune	Kaushik Debbarma,	978-1-4799-3759-

2014, "Novel 4X4 Butler Matrix with T- Shaped ADMS Phase Shifter"		Tamasi Moyra, Dibakar Yadav	2/14/\$31.00©2014 IEEE
<b>Mr. Atanu Choudhury</b>			
International Conference on Advanced Computing & Communication Technologies [ICACCT- 2013]	Panipat, Haryana, India	Atanu Chowdhury Authors: Dwijjoy sarkar and Atanu Chowdhury	16th November, 2013
International Conference on Recent Advances in Mechanical Engineering and Interdisciplinary Developments [ICRAMID - 2014]	Nagercoil, Tamilnadu, India	Swapan Das Authors: Atanu Chowdhury and Swapan Das	07th & 08th March, 2014
<b>Mr. Kamalesh Debnath</b>			
International conference on Functional Materials (ICFM) 2014	Kharagpur, Material Science	Tanmoy Majumder, Kamalesh Debnath, JN Roy, Subhro Prakash Mondal	2014

**Books Published:**

Name of the Authors published	Title of the Books	Date of publication of the book	Issue/volume No./Page No.
K. P. Ghatak , S. Bhattacharya	Debye Screening Length: Effects of Nano-structured Materials	2013	Springer Tracts in Modern Physics, Vol 255

**11.7 Industrial consultancy and sponsored Research:**

There are several sponsored research projects which are currently running in the department. In 2013 one research sponsored project has been sensation entitled Thermal Aware Logic Synthesis, by Science and Engineering research board, DST, Govt. of India.



## 12.0 ELECTRONICS & INSTRUMENTATION ENGINEERING DEPARTMENT

### 12.1 Introduction:

The Institute was established in the year of 1965 and was initially affiliated to University of Calcutta and thereafter re-affiliated to Tripura University in 1987. The Institute is approved by AICTE, New Delhi. During the inception in 1965, this institute started with Bachelor of Engineering Courses in Civil, Mechanical and Electrical Engineering. The Institute has been converted from state Engineering College to National Institute of Technology Agartala in the year 2006. Presently B. Tech course in Electronics & Instrumentation Engineering Department has been started from July 2009. The first batch of B.Tech students had passed out in May 2013. At present the current 4<sup>th</sup> year will start from July 2014. Best endeavor is being put for the recruitment of qualified and competent faculty members from all over the country to meet the requirements and status of the esteemed Institute.

**12.2 Academic Programme:** B.Tech, M.Tech, Ph.D

### 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.

Sl. No.	Semester	Name of the laboratories	Maximum Batch Size	Weekly hours required as per curricula	No. of Experiments	
					Prescribed	Conducted
1.	3 <sup>rd</sup> semester	Network Analysis and Synthesis lab	25	03	10	10
		Electrical Measurement and Measuring Instruments lab	25	03	10	10
		Analog Electronic Circuits lab	25	03	10	10
		Programming in C lab	25	03	10	10
2.	5 <sup>th</sup> semester	Industrial Instrumentation lab	18	03	10	10
		Electronic Instrumentation and Measurement lab	18	03	10	10

		Linear Control Systems lab	18	03	10	10
3.	7 <sup>th</sup> semester	Process Control-II	15	03	10	10
		Digital Signal Processing Lab	15	03	10	10
		Digital Image Processing(Elective-I) Lab	15	03	10	10

**12.4 Activities of Faculty:**

*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
Training:			
1.	Jayanta Kumar Rakshit	Field Instruments, PLC and DCS	17/05/2013 to 26/05/2013

**12.5 Research and Consultancy:**

*Sponsored Research Projects:*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	Development of staff/patch antenna at Ka-band (around 35 GHz)	2 years	All India Council for Technical Education (AICTE)	15 (fifteen) Lac	Dr. Dibyendu Ghoshal and Mr. Anirban Bhattacharjee

**Research Publications:**

Total No. of papers published in Refereed International Journals : 09  
Total No. of papers presented in International Conferences : 09

**In Refereed International Journals**

Sl. No.	Name of the Authors	Title of the Journals	Date of publication	Pages/Vol. No.
1.	P. Acharya and Dibyendu Ghoshal	"Image segmentation technique for cloud computing Environment using morphological Approach" Int. J. Scientific and Engineering Research , (USA)	Aug 2013	Vol.4, pp.1839-1843



2.	B.Saha, <b>Dibyendu Ghoshal</b> and P.De	"A novel approach for the recognition of the faces of Eunuchs Int. J. Adv. Research in Electrical, Electronics and Instrumentation Engineering	July 2013	Vol 2, No. 7, pp. 3009-3017
3.	V.S. Bhadouria, <b>Dibyendu Ghoshal</b> and A.H. Siddiqi	"A new approach for high density saturated impulse noise removal using division based coupled window median filter Signal; Signal Image and Video Processing, Springer	June 2013	DOI: 10.1007/s11760-013-0487-5 Page=14
4.	<b>J.K. Rakshit</b> , J.N. Roy, T. Chattopadhyay	Optics Communications	15 Aug 2013	Vol 303, pp 30-37
5.	<b>J.K. Rakshit</b> , T. Chattopadhyay, J.N. Roy	Optik- Int. J. Light Electron Opt.	Dec. 2013	Vol 124(23) pp 6048-6057
6.	J.N. Roy, <b>J.K. Rakshit</b>	Optics Communications	01.02.2014	Vol 312 Pp 73-79
7.	J.K. Rakshit, J.N. Roy, T. Chattopadhyay	J. Comput Electron	March 2014	Vol 13(1), pp 278-286
8.	<b>J.K. Rakshit</b> and J.N. Roy	Optica Applicata	March 2014	Vol 44(1)
9.	Nabamita Goswami, <b>Priyanka Dey</b> , Ardhendu Saha	Optik- Elsevier	11 <sup>th</sup> March, 2014	

*In Proceedings of International Conference:*

Sl No.	Name of the Conference	Place of the Conference	Name of the participants	Date/ Duration
1.	"Iris pattern matchup recognition for elenuch in India by the method of cumulative sum based Analysis", Proc. IEEE International-Conference on Navigational system and signal Processing application	Nagarjun Sagar University, Andhra Pradesh, India.	<b>P. De, Dibyendu Ghoshal</b> and P.Malla	Dec 2013

2.	"Study of watershed approach for morphological based gradient image acquisition" Proc. IEEE International Conference on Navigational systems and Signal Processing Applications,	Nagarjun Sagar University, Andhra Pradesh, India	Dibyendu Ghoshal and P.Acharjya	Dec 2013 pp 144-148
3.	"Morphological Image segmentation using marker controlled watershed Transformation"	Nagarjun Sagar University, Andhra Pradesh, India	Dibyendu Ghoshal and P.Acharjya	Dec 2013 pp 137-143
4.	"An approach to morphological Image segmentation for noisy digital Images"	Nagarjun Sagar University, Andhra Pradesh, India	Dibyendu Ghoshal, P.Acharjya and U. Chatarjee	Dec 2013 pp 291-295
5.	"Edge detection of document image using shifting and subtraction method with improved performance" Proc. IEEE International Conference IEMCON 2013,	Calcutta, India.	B. Pal, Dibyendu Ghoshal, S.Pandey and V.S. Bhadouria	22-23 Aug, 2014
6.	"A novel algorithm for edge thinning in binary digital images" Proc. IEEE International Conference IEMCON 2013,	Calcutta, India.	Dibyendu Ghoshal and B.Pal	22-23 Aug, 2014
7.	"Decision based salt & pepper noise reduction using adoptive weighted based approach" IEEE xplore . 2 <sup>nd</sup> International Conference on Image Information and Processing	Shimla, India	VS Bhadouria, Dibyendu Ghoshal	9-11 Dec 2013
7.	"Domain Specific Augmentations for High Level synthesis" Proc. 25 <sup>th</sup> IEEE International Conference on Application specific systems , Architecture and Processors,	Zurich, Switzerland (Accepted)	M. Schmid, A. Tanase, VS Bhadouria, F. Hannig, J. Teich and Dibyendu Ghoshal	To be published
8.	Proc. SPIE 8604, doi: 10.1117/12.2000445,	California,	Ardhendu Saha, Nabamita Goswami, Priyanka Dey	12 <sup>th</sup> March, 2013



9.	Optoelectronics, Photonics and Applied Physics, doi: 10.5176/2301-3516_OPAP13.49	Singapore	Nabamita Goswami, <b>Priyanka Dey,</b> Ardhendu Saha and Gargi Chakraborty	Feb 2013
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***Distinguished Visitors to the Departments:***

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	<b>Mr. Shubhasish Kar</b> , Scientist 'D', Electronic Test and Development Centre, Ministry of Communication, Department of Information Technology, Govt of India	30 <sup>th</sup> April, 2014	To conduct Grand Viva of 8 <sup>th</sup> Semester B.Tech
2.	<b>Prof. (Dr.) M. Umapathy</b> , NIT, Tiruchy Department of Instrumentation and Control Engineering	26-27 <sup>th</sup> April, 2014	For question papers moderation of EIE Department
3.	<b>Dr. Kallol Bhattacharya</b> , Associate Professor, Department of Applied optics and Photonics, Calcutta University	26-27 <sup>th</sup> April, 2014	For question papers moderation of EIE Department

### 13.0 HUMANITIES & SOCIAL SCIENCES DEPARTMENT

#### 13.1 Introduction:

The Department of Humanities & Social Sciences offers undergraduate courses in Economics, Costing, Management and English to the B. Tech. students. Besides that the Department is also running Ph.D. programmes.

#### 13.2 Lab Facilities:

The Department of Humanities & 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.

Sl. No.	Name of the Laboratories	Maximum Batch Size	No. of Experiments	
			Prescribed	Conducted
	Language Lab	40	Practice in Basic Language, Body Language, Listening Practice, GD, Debate, Communication Skills	Practice in Basic Language, Body Language, Listening Practice, GD, Debate, Communication Skills

#### 13.3 Activities of Faculty:

*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. Debasis Neogi	Management Development Programme	3 – 5 March, 2014
2.	Dr. Gyanabati Khuraijam	Recent Trends and Advances in Chemical Engineering: Concepts and Applications	14.06.2013
3.	Dr. Gyanabati Khuraijam	Reliability Engineering & Management	28.11.2013 to 29.11.2013
Conference:			
1.	Dr. Debasis Neogi	National Conference on Contemporary	19 <sup>th</sup> -21 <sup>st</sup> April,



		Issues of Cooperative Societies in India with Special Reference to its North Eastern Region	2013
2.	Dr. Gyanabati Khuraijam	International Conference on Literature to Cinema: Appropriation, Adaptation, Adulteration	01.06.2013 to 03.06. 2013
3.	Dr. Gyanabati Khuraijam	National Seminar on The Native Hill Communities in Manipur from Ethno-Historical and Cultural Perspectives	18.10.2013 to 19.10.2013

### 13.4 Research and Consultancy:

#### Research Publications:

Total No. of papers published in Refereed National Journals	: 01
Total No. of papers published in Refereed International Journals	: 13
Total No. of papers presented in National Conference	: 02
Total No. of papers presented in International Conferences	: 01

#### In Refereed National Journals:

Name of the Authors published in National Journals	Title of the Paper	Title of the Journals	Date of publication of the paper	Issue/ Volume No./ Page No.
Dutta, Papiya, Debasis Neogi	Working Children of Tripura: An Investigation of their Educational Attainment and Health Conditions	<i>Political Economy Journal of India</i>	January – June, 2013	Vol. 22, Issues 1 & 2, pp. 95-99.

#### 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.
Chowdhury Amit Bikram, Debasis Neogi	<i>An Economic Overview of BIMSTEC countries: (1997-2011) in Journal of Asian Business Strategy</i>	August 2013	Vol.3 (8) 2013; pp. 210-223
Chowdhury Amit Bikram, Debasis Neogi	<i>Indo-Bangladesh Trade: Opportunities for North East India in International</i>	May 2013	Vol. 2, Issue 2, pp. 21 –30

	Journal of Business and General Management		
Debnath Nandita, Debasis Neogi	<i>A Study on the Impact of MGNREGA on Generation and Distribution of Sustainable Assets among Tribal and Non-Tribal Population in Tripura state of North East India in International Journal of Advanced Research</i>	December 2013	Vol. 1, Issue: 8; pp. 711-721
Dey Anamika, Debasis Neogi	<i>Work participation of Women in the Self Help Groups: How Does it Impact on Health and Educational Attainment of the Society?</i> in Indian Journal of Applied Research	November 2013	Vol. 3, Issue: 11.; pp. 55-60
Neogi Debasis, Anamika Dey	<i>Work Participation of Women in Self Help Groups and Resultant Impact on Vulnerability: A Case Study from North East India in Paripex – Indian Journal of Research</i>	October 2013	Vol. 2, Issue : 10, pp. 42-45
Gyanabati Khuraijam and Suman Acharjee	Nation in Question in Amitav Ghosh's <i>The Glass Palace</i>	June 2013	Vol. 4 Issue III, pp. 1-6.
Yumnam Oken Singh and Gyanabati Khuraijam	Armed Forces (Special Powers) Acts 1958: A Source of National Disintegration	July 2013	Vol. II Issue IV .pp. 1- 8.
Suman Acharjee and Gyanabati Khuraijam	Heterogeneity Breaks Through Homogeneity of Nation: <i>Sea of Poppies</i> and <i>River of Smoke</i>	July- August 2013	Vol. 1. Issue II. Pp. 17-24.
Gyanabati Khuraijam and Yumnam Oken Singh	Amitav Ghosh's <i>The Hungry Tide</i> : The Ebb and Flow of History	October 2013	Vol. 4 Issue V. pp. 1- 10
Yumnam Oken Singh and Gyanabati Khuraijam	The Advent of Vaishnavism: A Turning Point in Manipuri Culture	December 2013	Vol. 1. Issue IX. Pp. 2736-2748
Asha Khuraijam, Huiningsumbam Nonida Devi and Gyanabati Khuraijam	Mani Shanker's <i>Tango Charlie</i> : A Source of Unveiling the North-East Issues	November – December 2013	Vol.II, Issue VI. pp. 22-28.
Huiningsumbam Nonida, Devi Asha Khuraijam	Alienation and Suppression as Part of Women's Existence: A	December 2013	Vol. I. No.3. pp. 33-41.



and Gyanabati Khuraijam	Study of ShashiDeshpande's <i>That Long Silence</i> and Bill Codon's <i>Dreamgirls</i>		
Asha Khuraijam and Gyanabati Khuraijam, ,	Escaping Patriarchy – For Victory or For Failure? : A Comparative Study of the Protagonists of Kate Chopin's <i>The Awakening</i> and Anita Desai's <i>Where Shall We Go This Summer?</i>	March 2014	Vol. 1. Issue XII. pp. 5600-5618.

***In Proceedings of National Conference:***

Name of the Conference	Place of the Conference	Name of the participants	Date/ Duration
National Conference on Contemporary Issues of Cooperative Societies in India with Special Reference to its North Eastern Region	Department of Commerce, Tripura University	Anamika Dey, Debasis Neogi	19 <sup>th</sup> -21 <sup>st</sup> April, 2013

## 14.0 MECHANICAL ENGINEERING DEPARTMENT

### 14.1 Introduction:

The Mechanical Engineering Department of the Institute since 1970 has produced so many technocrats who are serving the country. The department has been involved with many research works and projects. Needless to say it is presently associated to different research and development activities resulted a couple of patents filed. Some of the faculty members are coordinating different technical bodies of the state, Tripura and the region. Numerous projects at state as well as national level are secured from different funding agencies and organize the short term courses in different fields of engineering and technology. The Department has organized conferences at national level too. The Department of Mechanical Engineering intakes 90 (Ninety) students per year in the first semester of the four year Degree course, besides considerable numbers of PhD students the department is hoisting three programs at PG level.

The Department has 24 (twenty four) nos. of faculty members. Among them 1 (one) Professor, 5 (five) numbers of Associate Professors, and rest are Assistant Professor. All the faculties are involved with different consultancy, research and developmental works along administrative activities of the Institute.

### 14.2 Lab Facilities:

#### Laboratories (Existing):

Sl. No.	Name of the Laboratories	Available Floor Area (sq.m)	Max. Batch Size	Weekly Hours Required as per Curricula	No. of Experiments	
					Prescribed	Conducted
1	Refrigeration & Air Conditioning Lab.	30	20	3	4	4
2	Thermal Power lab.	30	20	3	6	6
3	CNC M/C Lab	40	20	3	2	1
4	Mechanical Measurement Laboratory	40	20	3	6	6
5	Vibration Lab	40	20	3	6	6
6	Heat Transfer Lab	50	20	7	7	7
7	IC Engine Lab	200	20	3	8	8
8	Fluid Mechanics Laboratory	50	20	3	6	6
9	Fluid Machinery Lab	100	20	3	4	4
10	Computational Lab - 1	40	20	3	3	3



11	Computational Lab - 2	100	40	3	10	10
12	Tribology Lab	30	20	3	2	2
13	CAD CAM Lab	40	20	3	7	7
14	FMS Lab	40	20	--	--	--
15	SOM Lab	40	20	3	8	8
16	Wind Tunnel Lab	40	20	3	6	6

### I.C Engine Lab with Newly Installed Engines



4 Cylinder Gasoline Engine



Plasma Fuel Reformer



IDI Engine

**Major Up gradation in Welding Shop**



Arc Welding Machine



Induction Welding Machine



Friction Stir Welding Machine

**Major Up gradation in Machine Shop**



New Lathes in Machine Shop



## 14.3 Activities of Faculty:

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

Title	Offered by	Level	Duration	Coordinator
<b>Workshop</b>				
Reliability Engineering & Management	NIT Agartala (Funded by TEQIP –II)	Faculty, Research Scholar & Technical Staff	2 Days (28 – 29 November 2013)	Late. Asis Sarkar (Assistant Professor, M.E Department)
Green Energy & Economy	NIT Agartala (Funded by TEQIP –II)	Faculty, Research Scholar & Technical Staff	2 Days (06 – 07 February 2014)	Mr. Madhujit Deb (Assistant Professor, M.E Department) & Dr. Debasish Neogi (Associate Professor, Humanities)

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

<b>Seminar :</b>			
Sl. No	Name of the Faculty	Paper Presented	Name of the conference.
1	Dr. Dipak Sen	Numerical study of laminar natural convection in a partially heated arch cavity	National Seminar on Energy Science and Engineering, NSESE-2013, TIT Tripura
2	Mr. Shahanwaz Khan, Dr. R.S. Panua	Computational Analysis of Erosion effect due to cavitation in Injector Nozzle of CI Engine.	National Seminar on Energy Science and Engineering, NSESE-2013, TIT Tripura
3.	Dr. Swapan Bhaumik	28 <sup>th</sup> Indian Engineering Congress	IEI, TamilNadu State Centre Dec 20-22,2013
4.	Dr. Swapan Bhaumik	Enhancement and Characterization of Nucleate Pool Boiling Heat Transfer on Titanium Oxide Nano-coated Surface”	IIT Kharagpur, Dec 28-31,2013
<b>Short term Course/ Workshop:</b>			
Sl. No	Participants	Funded By / Organized by / Time	Name of the Training
1	Faculty,	TEQIP – II, NIT Agartala	Advances in Tribology

	Research Scholar & Technical Staf	November 2013	
2	Faculty, Research Scholar & Technical Staff	TEQIP – II, NIT Agartala November 2013	Reliability Engineering & Management
3	Faculty, Research Scholar	TEQIP – II, NIT Agartala, , January 2014	Multi Criteria Decision Making
4	Faculty, Research Scholar	TEQIP – II, NIT Agartala, January 2014	Advances in Materials & Machining
5	Faculty, Research Scholar	TEQIP – II, NIT Agartala, January 2014	Advances in Welding Process
6	Faculty, Research Scholar & Technical Staff	TEQIP – II, NIT Agartala, February 2014	Green Energy & Economy
7.	Dr. Swapan Bhaumik	Coorg, Karnataka, March 20-22,2014	Attending the IET Council Meeting

**Training:**

Sl. No	Name of the Participants	Organized by / Place of Training / Time	Name of the Training
1	Mr. Abhik Majumder, Mr. Pankaj Kumar Das, Mr. Durbadal Deb Roy, Mr. Abhishek Paul, Mr. Aparesh Dutta etc...	Comprehensive Consultancy PVT Ltd. NIT Agartala, July 2013	Training on Solid Works
2	Dr. Prasun Chakraborti Dr. Swapan Bhaumik	IIM, Indore, November 2013	Management Capacity Enhancement Programme
3	Dr. Swapan Bhaumik	EQUATE, New Delhi March 10-13,2014	Pedagogy-Enhancing Teacher Effectiveness for Faculty of CFTs i/c NITs
4.	Dr. Swapan Bhaumik	Engineering Staff College of India, Hyderabad, February 8,2014	One day Interactive Session for Newly Elected



			Chairmen & Honorary Secretaries of IEI States & Local Centre.
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**Ongoing Research Projects:**

Project Title	Amount Received	Funding Agency	Status	Co-ordinator
Parametric Optimization And Heat Transfer Study During Submersed Arc Welding	Rs.10lakh s	AICTE, New Delhi	ongoing	Dr. Ajay Biswas And Dr. Swapan Bhaumik
MODROBS Project titled "Modernization of Fitting Shop, Carpentry Shop, Machine Shop.	Rs.12 lakhs	AICTE, New Delhi	ongoing	Dr. Ajay Biswas
Feasibility Study of Nano Particle Based Two Phase Air Water Heat Exchanger	Rs 12.8 Lakhs	AICTE	Ongoing	Shri. Abhik Majumder
Study of Heat Transfer Microstructure in Friction stir welding	8 Lakh	AICTE	Ongoing	Dr. S.C. Saha Dr. John DebBarma
Integrated Modeling and Experimental verification of Friction stir welding of 6 xxx series of aluminum alloy with dissimilar metals: Process, Microstructure & properties.	17.65 Lakhs	AICTE	Ongoing	Dr. S.C. Saha Mr. Barnik Saha Roy
Tribological study of Bio Materials for Human Joints	18 Lakhs	RPS , AICTE	Ongoing	Dr. Prasun Chakraborti
Study of Tribological Properties of Cylinder liner ring combination with alternative fuel & Diesel.	18 Lakhs	RPS , AICTE	Ongoing	Dr. Prasun Chakraborti & Mr. Pankaj Kumar Das
Modernization of Heat Transfer Laboratory.	12 Lakhs	AICTE	Ongoing	Dr. Swapan Bhaumik
Experimental & Computational Study of Fluid Flow through Baffles	13 Lakhs	AICTE	Ongoing	Dr. R.S. Panua
Studies on the Track between	9 Lakhs	RPS,	Ongoing	Dr. Prasun

the sleeper and the swash plate in an Axial Piston Pump		AICTE		Chakraborti & Mr. Kishan Chaudhury
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	19.7 Lakhs	AICTE	Ongoing	Mr. Rahul Banerjee
An experimental study to explore the potential of Bio Diesel Ethanol blend as an alternative fuel in Diesel Engine with Hydrogen Enrichment.	20 Lakhs	AICTE	Ongoing	Mr. Rahul Banerjee

**Consultancy Work:**

Sl. No	Nature of Work	Sponsoring Agency/ Industry	Status
1	Vibration Analysis of 1430 KVA Power Pack, ONGC Agartala	ONGC	Ongoing
2	Vetting for Design and drawing of 132 KV double circuit tower of MS lattice structure (+ 9 m extension) including civil foundation.	TSECL	Ongoing

- ❖ Strength of Material Lab of Mechanical Engineering Department of NIT Agartala is earning the revenue for the Institute by carrying out different kind of test as per the needs of different Industries like, NCC, PWD, EDCL, Shyam Steel etc.

**Total Amount of Work for the Year 2013 – 14:**

**Rs. 276811.00**

(Two Lakh Seventy Six Thousand Eight Hundred Eleven Rupees)

**Publications:****RESEARCH PUBLICATIONS:**

Total No. of papers published in Referred International Journals	:	22
Total No. of papers presented in National Conference	:	4
Total No. of papers presented in International Conferences	:	10
Total No. of books published	:	1

**INTERNATIONAL CONFERENCE**

1. "Impact of Bio Diesel Fuel Oil dilution on cylinder liner ring combination." *International Conference of Advances in Tribology*. MoutushiSingha Roy, Pankaj Kumar Das, Bishop DebBarma, Prasun Chakraborti.



2. "Tribological study of Cylinder Liner Ring Combination using Degraded Oil." *International Conference of Advances in Tribology*. Abhinaba Roy, Pankaj Kumar Das, Prasun Chakraborti.
3. "Investigation on Tribological effect of waste cooking oil blended with engine oil." *International Conference of Advances in Tribology*. Moushumi Debnath, Pankaj Kumar Das, Prasun Chakraborti.
4. "Numerical Analysis Of Characteristic Of Flow And Heat Transfer Due To Natural Convection In A Enclosure (Square) Using Nano-Fluid", 978-1-4799-2206-2/14/IEEE 2014 *International Conference on Advance in Energy Conversion Technologies (ICAECT)*, Prasenjit Dey, Dr. Ajoy Kumar Das
5. "Enhancement and Characterization of Nucleate Pool Boiling Heat Transfer on Titanium Oxide Nano-coated Surface", 22<sup>nd</sup> National and 11<sup>th</sup> *ISHMT-ASME Heat and Mass Transfer Conference*, December 28-31, 2013, IIT Kharagpur. DOI/ *HMTCI300265*, Das, S; Durbba, S.K; Bhowmik, A; and Bhaumik, S.
6. "Enhancement of Nucleate Pool Boiling Heat Transfer on Silicon Oxide TF Surface", *10th International Conference On Mechanical Engineering* December 20-22, 2013, Dhaka, Bangladesh, Das, S; Durbba, S.K; and Bhaumik, S.
7. "Thermodynamic analysis and cogeneration of a cement plant in India-A case study", *IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS'13)*, D Sen, D Das, R Panua, P Sen.
8. "A Numerical Simulation Of Fluid Field Through Baffles In A Square Channel", *10th International Conference on Mechanical Engineering, ICME 2013*, D Sen, R Panua, A Das, P Sen.
9. "An experimental investigation of performance and emission characteristics of a CI Engine fueled by different blends of Diesel-ethanol-biodiesel", *International Conference on Energy Efficient Technologies for Sustainability (ICEETS) 2013*, P.K. Bose, A, Paul and R.S. Panua
10. "An Approach to Optimize the Parameters of Particle Swarm Optimization by Taguchi Based Grey Relational Analysis", *3rd International Conference on Materials Processing and Characterisation (ICMPC 2014) (Accepted)*, Argha Das, Arindam Majumder, and Pankaj Kumar Das.

#### NATIONAL CONFERENCE

1. "Friction Stir Welding For Aluminum Steels: A State Of Art Review", Kelli Durga

Prasad AND S.C. SAHA, National Conference On Advances In Welding Technology  
NERIST 10th may 2013

2. "Effects Of Process Parameter On Microstructure And Mechanical Properties In Friction Stir Welding: A Review", Kelli Durga Prasad, Tanmoy Medhi, S. Debbarma And S.C. Saha, Recent Advancements In Mechanical Engineering NERIST 8th November 2013
3. "Development In Welding Technology - Indian Contest", S. DebBarma and S.C. Saha , National Conference On Advances In Welding Technology NERIST, 10th may 2013
4. "An Intelligent approach to optimize multi objective manufacturing processes using DEA based BAT algorithm", National Conference on Recent Advancements in Mechanical Engineering (NCRAME 2013), 8th-9th Nov. 2013, Parwar. S. K, Majumder. A, Barma. J. D

#### **INTERNATIONAL JOURNAL**

1. "Optimization Of The Effect Of Welding Heat Input On The Microstructure And Mechanical Properties Of Submerged Arc Welded Joint By Fuzzy- Based Multi Objective Threshold Acceptance Algorithm."  
Institution Of Mechanical Engineers Part-B,  
Journal Of Engineering Manufacture.  
16th september, 2013  
Joydeep Roy, Arindam Majumder, S.C. Saha, Ram N Roy
2. "An Approach For Solving Multicharacteristics Optimization Of Submerged Arc Welding Process Parameters By Using Grey Based Genetic Algorithm",  
JSIR  
29th June 2013  
Joydeep Roy, Arindam Majumder, J. D. Barma, R. N. Rai And S. C. Saha,
3. "Laminar Natural Convection Study In A Quadrantal Cavity Using Heater On Adjacent Wall "  
Frontiers In Heat And Mass Transfer (FHMT), DOI: 10.5098/hmt.v4.1.3005, ISSN: 2151-8629, Dipak Sen, R.S. Panua
4. "Performance Study Of Jatropha Methyl Ester And Jatropha Oil Blends With Diesel In A Direct Injection Compression Ignition Engine"  
ISST Journal of Mechanical Engineering, Vol. 4 No. 2, p.p. 71-75  
B. De and R.S. Panua.
5. "CFD Modelling And Validation Of Combustion In Direct Injection Compression Ignition Engine Fuelled With Jatropha Oil Blends With Diesel".



- Frontiers In Heat And Mass Transfer (FHMT). DOI: 10.5098/hmt.5.7, ISSN: 2151-8629, B. De and R.S. Panua.
6. "Laminar natural convection study in a quadrant cavity using heater on adjacent walls, Frontiers in Heat and Mass Transfer"  
Vol. 4, No. 1, 2013 DOI: 10.5098/hmt.v4.1.3005, D Sen, R Panua, A Das, P Sen
  7. "Enhancement of Pool Boiling Heat Transfer on Silicon Oxide Surface", Journal of Procedia Engineering of Elsevier – Accepted in Press,  
Das, S; Durbba, Santosh Kumar; Bhaumik, S,
  8. "Enhancement of Nucleate Pool Boiling Heat Transfer on Titanium Oxide Thin Film Surface",  
Arab J SciEng( Springer, SCIE, JCR- 0.385 )– Accepted in press.  
Das, S; and Bhaumik, S.
  9. "Multi objective optimization of performance parameters of a single cylinder diesel engine with hydrogen as a dual fuel using pareto-based genetic algorithm,"  
International Journal of Hydrogen Energy, Volume 39, Issue 15, 15 May 2014, Pages 8063-8077, ISSN 0360-3199, <http://dx.doi.org/10.1016/j.ijhydene.2014.03.045>.  
Madhujit Deb, Rahul Banerjee, Arindam Majumder, G.R.K. Sastry.
  10. "Multi objective optimization of performance parameters of a single cylinder diesel engine running with hydrogen using a Taguchi-fuzzy based approach,"  
Energy, Volume 63, 15 December 2013, Pages 375-386, ISSN 0360-5442,  
<http://dx.doi.org/10.1016/j.energy.2013.10.045>.  
Probir Kumar Bose, Madhujit Deb, Rahul Banerjee, Arindam Majumder,
  11. "Performance And Exhaust Emissions Prediction Of A CRDI Assisted Single Cylinder Diesel Engine Coupled With EGR Using Artificial Neural Network",  
Applied Energy, Volume 119, 15 April 2014, Pages 330-340, ISSN 0306-2619,  
<http://dx.doi.org/10.1016/j.apenergy.2014.01.044>. Sumit Roy, Rahul Banerjee, Probir Kumar Bose.
  12. "Effect Of Compressed Natural Gas Dual Fuel Operation With Diesel And PongamiaPinnata Methyl Ester (PPME) As Pilot Fuels On Performance And Emission Characteristics Of A CI (Compression Ignition) Engine",  
Energy, Volume 68, 15 April 2014, Pages 495-509, ISSN 0360-5442,  
<http://dx.doi.org/10.1016/j.energy.2014.03.026>.  
Abhishek Paul, Raj Sekhar Panua, Durbadal Debroy, Probir Kumar Bose,
  13. "An experimental investigation of performance-emission trade off of a CI engine fueled by diesel-compressed natural gas (CNG) combination and diesel-ethanol blends with CNG enrichment",  
Journal Name:- Energy(Elsevier)Volume:- 55, Pages:- 787-802, ISSN:- 0360-5442 , 15 June 2013,First Author:-Abhishek Paul.Co Authors:- Probir Kumar Bose, Raj Sekhar Panua, Rahul Banerjee,(<http://dx.doi.org/10.1016/j.energy.2013.04.002>.)
  14. "An experimental investigation of the performance and emissions characteristics of a direct injection compression ignition engine running with LPG"  
*Int. J. Energy Technology and Policy( Inder Science), Vol. 9, No. 2,PP: 128-143 2013*  
B. De and R.S. Panua
  15. "Optimization of Process Parameters of Submerged Arc Welding by using Grey-Fuzzy based Taguchi Method for AISI 1518 grade steel."

- Proceedings of IMechE, Part B: Journal of Engineering Manufacture. (Accepted)  
Sarkar. A. Majumder. A ,Pawar. M, Saha. S. C,Rai. R. N
16. "A Correlation for Prediction of Pool Boiling Heat Transfer of Nanofluid", Arabian Journal for Science and Engineering(Springer) – Accepted in press.  
Das, S and Bhaumik, S.
  17. "Parameters of Affecting the Temperature Distribution in a Disc-Type Transformer Winding with  $Al_2O_3$  Nanofluid - CFD Analysis", *Research Journal of Recent Sciences - Accepted inpress*; Das, S, Ali ,M.; and Bhaumik, S.
  18. Thermodynamic analysis and cogeneration of a cement plant in India-A case study  
978-1-4673-6150-7/13/\$31.00 ©2013 IEEE, Dipak Sen, Rajsekhar Panua, Pulak Sen, Dharpohari Das.
  19. Numerical Analysis of Laminar Natural Convection in a Quadrantal Cavity with a Solid Adiabatic Fin Attached to the Hot Vertical Wall  
Journal of Applied Fluid Mechanics, Vol. 6, No. 4, pp. 501-510, 2013  
ISSN 1735-3572, EISSN 1735-3645  
P. K. Bose, D. Sen, R. Panua and A. K. Das
  20. Socio-Economic upliftment of rural Tripura with geothermal energy resources: A case study with MCDA software application  
JSMRE, Volume 2, No 3 – 4; ISSN: 2153 – 6821  
Nova Science Publishers  
Prasun Chakraborti, AshisAcharjee
  21. Effects of environmental assesment on district heating production system – A case study  
IJMSER, Volume 4 No. 2; December 2013. pp 77-86  
International Science Press  
Prasun Chakraborti, AshisAcharjee
  22. Diffusion of technological development and its transfer on district heating in a social environment: A multi agent based model  
IJEEES, Volume. 5 No. 1. January – June 2013, pp. 1 -8  
Research Science Press(India)  
Prasun Chakraborti, AshisAcharjee

#### **BOOKS PUBLISHED:**

1. Thermal Analysis and Cogeneration of a Cement Plant,  
ISBN-13: 978-3-659-44311-4, September 1,2013  
Dr. Dipak Sen, Dharpohari Das, Dr. Rajsekhar Panua

#### **HONOURS & AWARDS:**

1. Dr. Swapan Bhaumik, Associate Professor of this Department has selected as Chairman, Tripura State Centre of The Institution of Engineers(India) and assumed the charge during Annual General Meeting in the August,2013.  
As a Chairman, Tripura State Centre, The Institution of Engineers (India), Dr. Bhaumik organized the following different Technical Programmes:



<p>1.</p>	<p>Observance of “46<sup>th</sup> Engineers’ Day -2013 13<sup>th</sup>, 14<sup>th</sup> &amp; 15<sup>th</sup> September, 2013”.</p> <p><b>Debate &amp; Extempore Speech Competition:</b> Tripura Institute of Technology, Narsingarh <b>Chief Guest:</b> Sri Kishore Ambuly, IAS, Secretary, Education (Higher) Department, Govt. of Tripura</p> <p><b><u>Plantation:</u></b></p> <p><b>B. Ed College, Near Heritage Park, Gurkhabasti</b></p> <p><b>Chief Guest:</b> Sri Jitendra Choudhury, Hon’ble Minister for Forest, R.D. etc. Department, Govt. of Tripura.</p> <p><b><u>Mass Rally:</u></b></p> <p><b>Assembled at City Centre, Agartala</b></p> <p><b>Chief Guest:</b> Sri Ratan Bhowmik, Hon’ble Minister for PWD (DWS), Tourism etc. Department, Govt. of Tripura</p> <p><b><u>Blood Donation:</u></b></p> <p><b>Institution Building, P.N. Complex, Gurkhabasti.</b></p> <p><b>Chief Guest:</b> Sri Pabitra Kar, Hon’ble Deputy Speaker, Tripura Legislative Assembly</p>	<p>Observance of 46<sup>th</sup> Engineer’ Day-2012, <i>Annual Report 2013-14</i> different programmes have been organized in a befitting manner, such as Plantation, Blood Donation Camp, Debate &amp; Extempore Speech Competition, Mass Rally &amp; Seminar on “Frugal Engineering- <i>Achieving More with Fewer Resources</i>”.</p> <p><b>During Seminar,</b> Sri Badal Choudhury, Hon’ble Minister for PWD (R &amp; B/ WR), Finance etc. Department, Govt. of Tripura was present as Chief Guest. Er. V.P. Mahawar, GGM-Asset Manager, O.N.G.C. Ltd., Tripura Asset delivered the Keynote Speech. Er. Debkumar Chakraborty, General Manager, B.S.N.L., Tripura SSA, Agartala delivered the Expert Speech.</p> <p><b>Er. Mihir Kanti Chakraborty, Former General Manager (Tech-I), T.S.E.C.L., Agartala</b> was felicitated as <b>Engineer of the Year 2013.</b></p> <p><b>Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre</b> presided over the programme (s).</p>
<p>2.</p>	<p>Observance of “World Habitat Day – 2013”.</p> <p><b>7<sup>th</sup> October, 2013 (Monday).</b></p> <p><b>Seminar – Theme: “Urban Mobility”.</b></p> <p><b>Venue: Press Club, Agartala.</b></p>	<p>1. Dr. Prafulla Jit Sinha, Hon’ble Chairperson, Agartala Municipal Council was present as Chief Guest.</p> <p>2. Sri Ashutosh Jindal, IAS, Secretary, Urban Development Department, Govt. of Tripura has grace the programme as Guest of Honour.</p> <p>3. Er. R. K. Majumder, IAS, Director, Urban Development Department, Govt. of Tripura has delivered the lecture as Expert Speaker.</p> <p>4. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>

3.	<p>Observance of “World Standards Day – 2013”.</p> <p>17<sup>th</sup> October, 2013.</p> <p>Seminar – Theme: “International Standards Ensure Positive Change”.</p> <p>Venue: Institution Building, P.N. Complex, Gurkhabasti.</p>	<p>1. Er. Hemraj, Sr. General Manager, NBCC Ltd., Agartala was present as Chief Guest.</p> <p>2. Dr. Bidyut Bhattacharjee, Professor, Electrical Engineering Department, NIT Agartala has delivered the lecture as Expert Speaker.</p> <p>3. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
4.	<p>Lecture Programme on “Need of Managerial Training for Technical Personnel”.</p> <p>29<sup>th</sup> October, 2013</p> <p>Venue: IEI Building, P.N. Complex, Agartala</p>	<p>1. Er. Sunil Bhowmik, FIE, Engineer-in-Chief, PWD, Govt. of Tripura was present as Chief Guest.</p> <p>2. Dr. Dinesh K Srivastava, Professor, National Institute of Industrial Engineering (NITIE) Powai, Mumbai has delivered the lecture as Expert Speaker.</p> <p>3. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
5.	<p>Lecture Programme on “Surface Science and Technology for Various Defence Applications.</p> <p>7<sup>th</sup> November, 2013</p> <p>Venue: IEI Building, P.N. Complex, Agartala.</p>	<p>1. Dr. B. Venkataraman, Head, Surface Engineering Group, Defence Metallurgical Research Laboratory, Hyderabad and Member, National Advisory Board, Centre for Corrosion &amp; Surface Engineering, NIT Trichy has delivered the lecture as Expert Speaker.</p> <p>2. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
6.	<p>Lecture Programme on “Advances in Computer Science and Engineering”.</p> <p>10<sup>th</sup> November, 2013</p> <p>Venue: IEI Building, P.N. Complex, Agartala.</p>	<p>1. Prof. Siddhartha Ghosh, Associate Professor (Computer Science Deptt.) and HR Manager (Training and Placements), G. Narayanamma Institute of Technology and Science for Woman, Hyderabad has delivered the lecture as Expert Speaker.</p> <p>2. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>



7.	<p>Lecture Programme on “Safety and Quality in Construction”</p> <p>13<sup>th</sup> November, 2013</p> <p>Venue: IEI Building, P.N. Complex, Agartala.</p>	<p>1. Er. K.B. Rajoria, FIE, Chairman, Board of Governors, Safety &amp; Quality Forum, The Institution of Engineers (India) was present as Chief Guest.</p> <p>2. Er. P. Sarkar Banerjee, FIE, Chief Inspector of Factories &amp; Boilers, Govt. of Tripura was present as Guest of Honour.</p> <p>3. Er. S.K. Bose, Safety Manager, Nagarjuna Construction Company Ltd., Kolkata has delivered the lecture as Expert Speaker.</p> <p>4. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
8.	<p>Observance of “Energy Conservation Day – 2013”.</p> <p>14<sup>th</sup> December, 2013.</p> <p>Venue: Institution Building, P.N. Complex, Agartala.</p>	<p>1. Prof. (Dr.) Sekhar Datta, FIE, Principal, Tripura Institute of Technology, Narsingarh was present as Chief Guest.</p> <p>2. Er. Babul Chakraborti, MIE, Joint Director, Tripura Renewable Energy Development Agency, Agartala has delivered the lecture as Expert Speaker.</p> <p>3. Dr. Subhadeep Bhattacharjee, MIE, Assistant Professor, Electrical Engineering Department and Professor-In-Charge, School of Energy Science, NIT Agartala has delivered the lecture as Expert Speaker.</p> <p>4. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
9.	<p>Lecture Programme on “Natural Treatment Technique for Sustainable Drinking Water Supply”.</p> <p>6<sup>th</sup> January, 2014</p> <p>Venue: Institution Building, P.N. Complex, Agartala.</p>	<p>1. Dr. N. C. Ghosh, Scientist-F &amp; Head, Ground Water Hydrology Division, National Institute of Hydrology, Roorkee has delivered the lecture as Expert Speaker.</p> <p>2. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
10.	<p>Panel Discussion on “Tripura: A Prospective Technical Education Hub of</p>	<p>1. The following Eminent Educationists has participated in the discussion:</p>

	<p><b>North-East India.”</b></p> <p><b>25<sup>th</sup> January, 2014</b></p> <p><b>Venue: Sukanta Academy Auditorium, Agartala.</b></p>	<p>Prof. Anjan Kumar Ghosh, Vice-Chancellor, Tripura University</p> <p>Mr. Kishor Ambuly, Secretary, Higher Education &amp; Transport, Govt. of Tripura</p> <p>Prof. Gopal Mugeraya, Director, NIT Agartala</p> <p>Prof. K.L. Chopra, Former Director, IIT, Kharagpur</p> <p>Prof. R.S.Sirohi, Former Director, IIT Delhi</p> <p>Moderator: Prof. Sivaji Chakravorty, Professor, Jadavpur University.</p> <p>2. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
11.	<p><b>Round Table Discussion with Dr. Anju Gaur, Senior Water Resources Specialist, The World Bank.</b></p> <p><b>9<sup>th</sup> February, 2014</b></p> <p><b>Venue: Institution Building, P.N. Complex, Agartala.</b></p>	<p><b>The Following Engineers were present :</b></p> <ol style="list-style-type: none"> <li>1. Er. Tapan Lodh, FIE, Chief Engineer(WR)</li> <li>2. Er. Sanchayita Das, FIE, SE</li> <li>3. Er. Ajit Chandra Lodh, MIE, SE</li> <li>4. Er. Susanta data, MIE,EE</li> <li>5. Dr. Ratul Das, HOD,CED, NIT Agartala</li> </ol> <p>And Others</p>
12.	<p><b>Round Table Discussion on National Safety Day- 2014.</b></p> <p><b>8<sup>th</sup> March, 2014.</b></p> <p><b>Venue: Institution Building, P.N. Complex, Agartala.</b></p>	<p><b>The Following Engineers were present :</b></p> <ol style="list-style-type: none"> <li>1. Er. S. K. Pandey, FIE, Chief Engineer, BRO</li> <li>2. Er. Paramananda Sarkar, FIE, CIFB</li> <li>3. Er. Kajal Banik, FIE EI, PWD</li> <li>4. Er. Awadesh Kumar, SE, CPWD</li> <li>5. Er. Rajesh Kumar, EE, CPWD</li> </ol> <p>And Others</p>
13.	<p><b>Observance of “World Water Day- 2014”</b></p> <p><b>22<sup>nd</sup> March, 2014</b></p> <p><b>Venue: Institution Building, P.N. Complex, Agartala.</b></p> <p><b>Theme: Water and Energy.</b></p>	<ol style="list-style-type: none"> <li>1. Er. N.K. Dutta, FIE, Former Engineer- in- Chief &amp; Secretary, Public Works Department, Govt. of Tripura has delivered the speech as the Chief Guest.</li> <li>2. Er. B.K. Debbarma, FIE, Chief Engineer, Public Works Department (DWS), Govt. of Tripura has delivered the speech as the Guest of Honour.</li> <li>3. Er. K.L. Das, FIE, GM (Tech- II), Tripura State Electricity Corporation Ltd. has delivered the speech as the Guest of</li> </ol>



		<p>Honour.</p> <p>4. Dr. Debasish Deb, Agriculture Department, Govt. of Tripura has delivered the speech as Expert Speaker.</p> <p>5. Er. Tapan Lodh, FIE, Chief Engineer, Public Works Department (WR), Govt. of Tripura has delivered the speech as Keynote Speaker.</p> <p>6. Er. B. Nandy Majumder, FIE, Immediate Past Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
14.	<p>Lecture Programme on "Preventive Maintenance of Water Pump".</p> <p>28<sup>th</sup> March, 2014</p> <p>Venue: Institution Building, P.N. Complex, Agartala.</p>	<p>1. Er. Amalesh Bhattacharya, MIE, Consultant, SGA Ltd., Agartala has delivered the lecture as Expert Speaker.</p> <p>2. Dr. Swapan Bhaumik, FIE, Chairman, The Institution of Engineers (India), Tripura State Centre presided over the programme.</p>
15.	<p>One Day Seminar on "Modern Methodology for Website Development &amp; Its Application on E-Commerce"</p> <p>30<sup>th</sup> March, 2014</p> <p>Venue: Institution Building, P.N. Complex, Agartala.</p>	<p>1. Prof. Sekhar Datta, FIE, Principal, Tripura Institute of Technology, Narsingarh has delivered the speech as the Chief Guest.</p> <p>2. Er. C.K. Dhar, MIE, Senior Technical Director &amp; State Informatics Officer, National Informatics Centre (NIC), Govt. of India has delivered the speech as the Guest of Honour. And he has delivered the Expert Speech on Software Engineering.</p> <p>3. Er. Abhijit Debnath, Scientist – B &amp; Assistant Director, National Institute of Electronics &amp; Information Technology (NIELIT), Agartala has delivered the Expert Speech on Website Security.</p> <p>4. Er. Sabyasachi Debnath presented a power point presentation on Development of Website and its application in the E-commerce website.</p> <p>5. Mr. Shirsha Ghosh, Final year student, Electronics &amp; Telecommunication Engineering Department, Tripura Institute of Technology demonstrated the participants regarding the development procedure of Website.</p> <p>6. Er. B.K. Upadhyaya, MIE, Head,</p>

		Electronics & Telecommunication Engineering Department, Tripura Institute of Technology and Convener, Electronics & Telecommunication Engineering Division, IE (I), TSC presided over the programme.
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## 15.0 MATHEMATICS DEPARTMENT

### 15.1 Introduction:

The Mathematics Department is old as (NIT, Agartala in 2006, formerly and Tripura Engineering College) itself a venerable forty eight years of age, established in 1965. It has always believed in striving for excellence in research and teaching and has succeeded in this endeavor to a large extent. Growing steadily, today the department not only teaches Mathematics to under graduate students of different Engineering Branches but recently the department has also started two years M.Sc. degree course (Mathematics) in which admission is made through merit basis with an initial intake capacity of 10 students. Also department has started 5-years Integrated M.Sc. program in Mathematics in 2013. A syllabus revision workshop has been organized by the Department, for up gradation of UG-syllabus and course structure / syllabus for M.Sc. programme to make a significant contribution to research and development in Mathematics.

The Department has qualified faculty members consisting of three Associate Professors, two Assistant Professors, two contractual Assistant Professors and four Teaching Assistants. In their pursuit of research the faculty members have covered a vast area such as Operation research, Fuzzy topology, Fuzzy dynamic programming, Fuzzy decision making, Rough Set, Mathematical and computational biology, Bio-informatics.

The entire teaching faculty is actively engaged in research in their respective fields, and innumerable research papers are being published in various journals of repute. More than 20 research scholars have been pursuing their research work in their respective fields.

### 15.2 Academic Programme:

- BS-MS dual programme in Maths and computing
- M.Sc in Mathematics
- Ph.D Programme : Ph.D can be pursued in this department.

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 this courses on Numerical Methods and Analysis(4<sup>th</sup> Semester EE,EI,CHE & PE, 5th Semester ECE ,Operation Research & Mathematical foundation (MCA-2<sup>nd</sup> and 4th), courses on Higher Engineering Mathematics in M.Tech curriculum(CE, ME and ECE), M.B.A. BS-MS, M.Sc. courses in Mathematics with specialization in OR and Topology and Ph.D. program are also run under the Department.

### 15.3 Lab Facilities: One Computer Laboratory

Name of the Laboratory	Available Floor area (Sq.m)	Maximum Batch Size	No. Of Experiments
Computer Laboratory	69.485	10	a) 20 C-prog on numerical analysis b) 15 MATLAB prog on numerical

			analysis e) 19 C-prog on Adv numerical analysis
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#### 15.4 Activities of Faculty:

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

Sl. No	Name of the Faculty	Title	Period
1.	Dr. Baby Bhattacharya	Recent Trends and Advances in Chemical in Engineering: Concepts and Applications.	One Day National Workshop on 14 <sup>th</sup> June, 2013 organized by Department of Chemical Engineering, NIT, Agartala.

#### Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1.	Dr. Uttam Kumar Bera	China	12-29 October, 2013.	Visiting Professor at Tsinghua University and World Congress on Science and Technology at Sanya, China.
2.	Dr. Baby Bhattacharya	Dhaka, Bangladesh	20-22 <sup>nd</sup> March 2014	18 <sup>th</sup> international mathematics Conference

#### 15.5 Research and Consultancy:

##### Research Publications:

Total no. of papers in Refereed National Journals : 02

Total no. of papers in Refereed International Journals : 20

Total no. of papers in Refereed International Conference : 09

##### In Refereed National Journals:

1. Susmita Roy and S. Bhattacharya, Application of fuzzy-rough oscillatory region on data collected for HIV/AIDS, Journal of the Kerala Mathematical Association, Vol.10, No.1, June 2013, p.19-26. (ISSN: 0973-2721).
2. D. Bhattacharya and Lipika Dey, A Note on strongly normal lower semi continuous function, Journal of Tripura Mathematical Society, Vol.15, p.134-143, 2014.

##### In Refereed International Journals:

1. A. Baidya, U.K. Bera and M. Maiti, "Multi-item Interval Valued Solid Transportation Problem with Safety Measure under Fuzzy-Stochastic Environment", Journal of



- Transportation Security, Springer, Vol.6, pp.151-174, DOI:10.1007/s12198-013-0109-z, 4<sup>th</sup> April, 2013.
2. A. Baidya, U. K. Bera and M. Maiti, "Solution of multi-item interval valued solid transportation problem with safety measure using different methods", OPSEARCH, SCOPUS, vol. 51(1), pp. 1-22, 2013.
3. A. Baidya, U. K. Bera and M. Maiti, "A solid transportation problem with safety factor under different uncertainty environments", Journal of Uncertainty Analysis and Applications, vol. 1:18, 2013.
4. A. Baidya, U. K. Bera, "An interval valued solid transportation problem with budget constraint in different interval approaches", Journal of Transportation Security, vol. 7, pp. 147-155, 2014.
5. P. Majumder and U. K. Bera, "A deterministic inventory model for deteriorating items with time dependent demand and allowable shortage under trade credit", Int. Journal of current Science & Technology, Vol.1, No.1, 2013.
6. U. K. Bera & P. Mazumder, "A Deterministic Inventory Model with Weibull Deterioration Rate under Trade Credit Period in Demand Declining Market and Allowable Shortage Using Fuzzy Logic" Scientific Bulletin Series-C, Romania, 2014(Accepted).
7. Susmita Roy and S. Bhattacharya, "On fuzzy  $m_x^*$ -oscillatory region and its application in image processing", Annals of Fuzzy Mathematics and Informatics, ISSN: 2093-9310, Vol. 7, No. 2(February 2014), pp. 319-326.
8. P. Majumder and U. K. Bera, "An EPQ model for a deteriorating item with inflation reduced selling price and demand with immediate part payment", Hacettepe Journal of Mathematics and Statistics, 2013 (Accepted).
9. A. Baidya, U. K. Bera and M. Maiti, "A Restricted Multi-objective Solid Transportation Problem with Budget Constraint involving Stochastic Variable and Interval Type-2 Fuzzy Number", New Mathematics and Natural Computation, 2014(Accepted)
10. A. Baidya, U. K. Bera, "An Interval Solid Transportation Problem with Vehicle Cost, Fixed Charge and Budget", International Journal of Mathematics and Scientific Computing, 2014(Accepted)
11. B. Bhattacharya, A. Paul and S. Debnath, "Some Properties of  $(1, 2)^*$ -Locally Closed Sets", Int. J. of Analysis, Volume 2014, 5 Pages (2014).
12. B. Bhattacharya and A. Paul, A New Approach of  $\gamma$ -Open Sets in Bitopological Spaces, Gen. Math. Notes, Vol. 20, No. 2, February 2014, pp. 95-110.
13. B. Bhattacharya and J. Chakraborty, On L-fuzzy  $\sigma$ -Generalized closed sets and their properties, International journal of Computer Applications (0975-8887) vol-70-No.4, May 2013, 49-52.
14. B. Bhattacharya and J. Chakraborty, On  $\sigma$ -induced L-fuzzy topological spaces, Int. J. Pure App. Sci. Technol, 16 (1), (2013), pp. XX-XX.
15. B. Bhattacharya and S. Biswas,  $\gamma$ -induced Fuzzy Supra topological Spaces and Fuzzy Supra  $\gamma_s$ -closed spaces, International Journal of Computer Applications (0975-8887) vol-70-No.2, May 2013, 26-29.



16. S.Debnath and J.Debnath, Some generalized statistical convergent sequence spaces, Mathematical Science Letters, Vol.2(2), April, 2013, p.151-154
17. S.Debnath and J.Debnath, Some ideal convergent sequence spaces of fuzzy real numbers, Palestine journal of Mathematics, Vol.3(1), p.27-32, 2014.
18. S.Debnath and J.Debnath, On I-statistically convergent sequence space define by sequences of orlicz fuctions using matrix transformation, Proyecciones Journal of Mathematics, Vol.33, No.3, p.277-285, September, 2014.

**In Proceedings of International Conference:**

1. P. Bhattacharya, S.Das, U.K.bera "Visualization of streamlines with their velocity profiles" in International Conference Energy System Modeling and Optimization Conference (ESMOC 2013) from December 9-11, 2013, NIT Durgapur, India (Accepted)
2. Paritosh Bhattacharya, Susmita Paul, K.S.Choudhury, "Maximum sustainable yield policy in prey –predator system-A study". IJCA Proceedings on CCSN 2013(1): 46-49, December 2013 . Published by Foundation of Computer science, New York, USA, BibTeX.
3. 2. Paritosh Bhattacharya, Susmita Paul, K.S.Choudhury, "Analysis on Food web structure interaction, strength and stability on different mathematical models of prey and predator ", in lecture notes in Electrical Engineering- Springer publication, Vol. 298, pp. 207-217(2014)
4. 3. Paritosh Bhattacharya, Susmita Paul, K.S.Choudhury, " Different growth models in population dynamics and its exponential regression" in International conference on Emerging Research in Computing, Information, Communication and Application (ERCICA 2013) from 2-3 August 2013 at Nitte Meenakshis Institute of Technology, Bangalore.(Elsevier Conference)
5. 4. Paritosh Bhattacharya, Susmita Paul, K.S.Choudhury. "Ecological Network, structure interaction, strength and stability on different prey and predator models" in 3<sup>rd</sup> International Symposium on Complex Dynamical Systems and Applications(CDSA 2014) from 10-12 March 2014 at Indian Statistical Institute, Kolkata.
6. A. Baidya, U. K. Bera and A.Das A Safety Based Multi-Objective Solid Transportation Model with Weibull Distribution, ICKCE, an IEEE Conference, 2014(Accepted)
7. B.Bhattacharya and J. Chakraborty, "Some Generalized Continuous functions in Generalized Fuzzy Topological Spaces", 18<sup>th</sup> international mathematics Conference 20-22<sup>nd</sup> March 2014, Dhaka Bangladesh.
8. B.Bhattacharya and J. Chakraborty, "Generalized Regular Fuzzy Locally Closed Sets and Some Generalizations of Fuzzy LC -Continuous Functions", International Conference on Mathematics and Engineering Sciences, March 20 - 22, 2014, Chitkara University Himachal Pradesh.
9. B.Bhattacharya and A. Paul , "On  $\gamma$  -Generalized Closed Set in Bitopological Spaces", 18<sup>th</sup> international mathematics Conference 20-22<sup>nd</sup> March 2014, Dhaka Bangladesh.



**15.6 Other Activities:**

Details of M.Sc student Project guided:

Sl. No	Name of Student	Year	Title of the M.Sc Project	Name of the guide
1.	Jayanta Acharjee	2014	Hesitant fuzzy sets, its properties and applications	Dr. D. Bhattacharya
2.	Bimal Sinha	2014	A study of interval type-II fuzzy sets and its application in Transportation problem	Dr. U.K.Bera
3.	Tusar Debnath	2014	Heat Transfer through conduction	Dr. P. Bhattacharya

Details of Ph D Students guiding:

Sl. No	Name of Student	Department /Year of registration	Status	Name of the guide
2.	Mr. Debasish Pal	Mathematics	Theses submitted	Dr. Debashish Bhattacharya
3.	Mrs. Sayanta Chakraborty	Mathematics	Ph.D pursuing	Dr. Debashish Bhattacharya
4.	Mr. Abhijit Baidya	Mathematics	Ph.D pursuing	Dr. Uttam Kumar Bera
5.	Mrs. Pinki Majumder	Mathematics	Ph.D pursuing	Dr. Uttam Kumar Bera
6.	Mr. Jayanta Debnath	Mathematics	Ph.D pursuing	Dr. Debashish Bhattacharya & Dr. Shyamal Debnath
7.	Ms. Sunny Biswas	Mathematics	Ph.D pursuing	Dr. Baby Bhattacharya
8.	Ms. Jayasree Chakraborty	Mathematics	Ph.D pursuing	Dr. Baby Bhattacharya
9.	Mr. Arnab Paul	Mathematics	Ph.D pursuing	Dr. Baby Bhattacharya
10.	Mr. Priyanka Majumder	Mathematics	Ph.D pursuing	Dr. Apu Kumar Saha
11.	Mr. Amrit Das	Mathematics	Ph.D pursuing	Dr. Uttam Kumar Bera
12.	Ms. Poulami Dey	Mathematics	Ph.D pursuing	Dr. Uttam Kumar Bera
13.	Ms Susmita Paul (Co Supervisor- Prof. Kripasindhu Choudhury, JU)	Dept of Mathematics	Working on Biomathematics (Course work going on)(2012)	Dr. Paritosh Bhattacharya

14.	Ms Sangita Das	Dept of Mathematics	Working on Heat Transfer(Coursework going on)(2013)	Dr. Paritosh Bhattacharya
15.	Ms. Sudipa Chowdhury	Mathematics	Course work going	Dr. Apu Kumar Saha
16.	Mr. Asish Roy	Mathematics	Course work going	Dr. Apu Kumar Saha
17.	Mr. Suman Debnath	Mathematics	Course work going	Dr. Apu Kumar Saha
18.	Mr. Suman Deb	Dept of Computer Science & Engineering	Course work going on(2013)	Dr. Paritosh Bhattacharya
19.	Mr. Abhishek Paul	Dept of Computer Science & Engineering	Course work going on (2013)	Dr. Paritosh Bhattacharya
20.	Mr. Ankur Biswas	Dept of Computer Science & Engineering	Course work going on (2013)	Dr. Paritosh Bhattacharya
21.	Mr: Abhijit Debnath	Dept of Computer Science & Engineering	Course work going on (2013)	Dr. Paritosh Bhattacharya
22.	Mr. Suman Deb	Dept of Computer Science & Engineering	Course work going on (2013)	Dr. Paritosh Bhattacharya
23.	Mr. Abhishek Paul	Dept of Computer Science & Engineering	Course work going on (2013)	Dr. Paritosh Bhattacharya
24.	Mr. Rupak Dutta	Dept. of Mathematics	Course work going on	Dr. Baby Bhattacharya
25.	Mr. Sudip Debnath	Dept. of Mathematics	Course work going on	Dr. Apu Kumar Saha
26.	Mr. Sukanta Nama	Dept. of Mathematics	Course work going on	Dr. Apu Kumar Saha



## 16.0 PHYSICS DEPARTMENT

### 16.1 Introduction:

The Physics Department is as old as NIT Agartala (NITA in 2006, formerly Tripura Engineering College) itself, 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 1<sup>st</sup> and 2<sup>nd</sup> semesters of engineering undergraduates (**B.Tech**) and Material Science to the 4<sup>th</sup> semester engineering undergraduates of Electrical branch.
- The department also offers 10 semester dual degree in **B.Tech-M.Tech** in Engineering Physics and BS-MS dual degree programme in Physics. The dual degree program affords undergraduate students enhances the opportunity to broaden their studies and improve their career prospects.
- The department runs 4 semester master 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 and Atmospheric Science*.

The department has a vibrant research program (Ph.D.) in various frontline areas of research, in addition to the present undergraduate and post-graduate programmes. Presently work is going on cutting edge topics within the following major thrust areas of

- Applied Optics & Photonics
- Theoretical and experimental Condensed Matter Physics
- Experimental Plasma Physics
- Liquid Crystals
- Spintronics and devices
- Experimental Nano-science
- Atmospheric Science

**16.3 Lab Facilities:**

Sl. No.	Name of the Laboratories	Available Floor Area (sq.m)	Maximum Batch Size	No. of Experiments		Remarks
				Prescribed	Conducted	
1.	UG laboratories (2)	300 sq. meter	35-40 students per batch	8	7	
2.	PG Laboratories (4)	500 sq. meter	3 - 4 students per batch	6X4 = 24	6X4 = 24	

**16.4 Activities of Faculty:**

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

Sl. No.	Co-ordinator	Title	Period
<b>Workshop:</b>			
One day National Workshop	Dr. J.N. Roy	Contemporary and Future Perspectives of Bio –Engineering in Medical Science and Technology	9 <sup>th</sup> July 2013

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
<b>Workshop:</b>			
1. UGC-DAE CSR Indore, India, 2013.	Dr. P. Dey	Workshop on recent Developments in Magnetic Materials and Thin Films (RDMMTF),	25-27 <sup>th</sup> June, 2013
<b>Symposia:</b>			
1.	Dr. J.N.Roy	Winter Symposium on Photonics and Optoelectronics (W-SOPO 2013) held at Sanya, China	1 – 3 <sup>rd</sup> December 2013 (As invited Speaker)
2.	Dr. Manash Kumar Paul	National Symposium on High Power RF & Microwave (HPRFM - 2013)	04 – 06 <sup>th</sup> September, 2013
3.	Dr. Rakesh Roy	National Space Science Symposium 2014 (NSSS 2014) held at Dibrugarh University, Assam	29 January-01 February 2014



<b>Conference:</b>			
1. 58 <sup>th</sup> International Conference on Magnetism and Magnetic Materials ("MMM 2013") held at Denver, Colorado, USA	Dr. P. Dey	Temperature driven transition from Giant to Tunneling magneto-resistance in Fe <sub>3</sub> O <sub>4</sub> /Alq <sub>3</sub> /Co Spin Valve: Role of Verwey transition of Fe <sub>3</sub> O <sub>4</sub>	6 - 8 <sup>th</sup> November, 2013.
<b>Short term course:</b>			
1.	Dr. J.N.Roy	AICTE sponsored Faculty Development Programme organized by B P Poddar Institute of Management and Technology	8 <sup>th</sup> Nov 2013 (As invited Speaker)

**Visits Abroad by faculty:**

Sl. No.	Name of the Faculty	Country visited	Date	Purpose of Visit
1	Dr. J. N. Roy	China	1 <sup>st</sup> – 3 <sup>rd</sup> December 2013	As Invited Speaker & Chairing of inaugural session
2	Dr. P. Dey	USA	5-9 <sup>th</sup> November, 2013	Oral presentation at "58 <sup>th</sup> International Conference on Magnetism and Magnetic Materials ("MMM 2013")"

**16.5 Research and Consultancy:****Research Collaboration:**

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

**Sponsored Research Projects:**

Sl. No.	Title	Period	Funding Agency	Amount (in lacks)	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	3 years	DST	19.2	Dr. B.Saha

**Research Publications:**

Total No. of papers published in Refereed International Journals	: 15
Total No. of papers published in National Conference proceedings	: 02
Total No. of papers published in International Conference proceedings	: 03
Total No. of peer reviewed Monographs/Books	: 02

**In Referred 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.
J.N.Roy and J.K.Rakshit,	"Design of micro-ring resonator-based all-optical logic shifter" <i>Optics Communication</i>	2013/9/19	312, 73-79
J.K.Rakshit and J.N.Roy,	"micro-ring resonator-based all-optical reconfigurable logic operations" <i>Optics Communication.</i>	15 /6/2014	321, 38-46
J.K.Rakshit, T.Chattopadhyay and J.N.Roy,	"A theoretical study of all optical clocked D flip flop using single micro-ring resonator" <i>Journal of Computational Electronics,</i>	7/9/ 2013	13(1), 278-286
J.K.Rakshit, T.Chattopadhyay and J.N.Roy.	"Design of ring resonator based all optical switch for logic and arithmetic operations - a theoretical study", <i>Optik</i>	21/7/2013	124 (23), 6048-6057
P.Bhowmik, J.N.Roy and T.Chattopadhyay,	"Ternary Galois Field Arithmetic Operations With Optical Nonlinear Material (OPNLM) Switch", <i>Optik.</i>	18/7/2013	Vol 124 (22), pages5561-5566
E Dimitriadou, KE Zoiros, T Chattopadhyay and	"Design of ultrafast all-optical 4-bit parity generator and checker using quantum-dot semiconductor	23/05/ 2013	Vol 12(3), pages481-489



JN Roy	optical amplifier-based Mach-Zehnder interferometer. <i>Journal of Computational Electronics</i> .		
J K Rakshit , J.N.Roy and T Chattopadhyay	"Design of micro ring resonator based all optical parity generator and checker circuit" <i>Optics Communication</i> .	2013/4/16	Vol 303, pages 30-37
S. K. Mandal, P. Dey and T. K. Nath	"Structural, electrical and dielectric properties of La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> -ErMnO <sub>3</sub> multiferroic composites" <i>Materials Science and Engineering B</i>	2013/12/4	Vol 181, pages 70
P. Dey, R. Rawat, S. R. Potdar, R. J. Choudhary, A. Banerjee,	"Temperature driven transition from Giant to Tunneling magnetoresistance in Fe <sub>3</sub> O <sub>4</sub> /Alq <sub>3</sub> /Co Spin Valve: Role of Verwey transition of Fe <sub>3</sub> O <sub>4</sub> ", <i>Journal of Applied Physics</i>	2014/01/29	Vol 115, pages 17C110
A. Hallal, T. Berdot, P. Dey, L. Tati Bismaths, L. Joly, A. Bourzami, H. Bulou, F. Scheurer, F. Djeghloul, E. Urbain, D. Spor, J. Henk, M. Alouani, W. Weber,	"Electron-Spin Motion as a New Tool to Investigate Ferromagnetic Film Systems: A Few Examples" <i>Sensor Letters</i> ,	2013/09	Vol 11, pages 1632
Manash Kumar Paul, et.al	"Antenna coupling study for ICWC plasma characterization in TEXTOR", <i>Pramana - Journal of Physics (Springer Pub.)</i>	2013	Vol 80(1), pages 121-131
B. Saha, N. S. Das, K. K. Chattopadhyay	"Combined effect of oxygen deficient point defects and Ni doping in RF magnetron sputtered ZnO Thin film", <i>Thin solid films</i>	2014/03	Vol 562, pages 37-42
N. Gogurla, S. P. Mondal, A. K. Sinha, A. K. Katiyar, W. Banerjee, S. C Kundu and S. K Ray	"Transparent and flexible resistive switching memory devices with very high ON/OFF ratio using gold nanoparticles embedded in silk protein matrix", <i>Nanotechnology</i>	2013/08/02	Vol 24, pages 345202
Choudhury A., Guha A., De B. K. and Roy R.,	"A statistical study on precursory effect of earthquakes observed through atmospheric vertical electric field from North-East India", <i>Annals of Geophysics</i>	2013/05/20	Vol 56( 3), pages R0331

Guha A., Banik T., De B. K., Roy R. and Choudhury A.,	Characteristics of severe thunderstorms studied with the help of VLF atmospherics over North-East India", <b>Journal of Earth System Science</b>	2013/08/04	Vol 122, pages 1013-1021
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## In Proceedings of National Conference:

Name of the Conference	Place of the conference	Name of the Participants	Date/ Duration
28 <sup>th</sup> National Symposium on Plasma Science & Technology (PLASMA 2013)	KIIT University, Bhubaneswar, Odissa, India	Manash Kumar Paul, P.K.Sharma, A. Thakur and S. V. Kulkarni	03 - 06 December, 2013
National Symposium on High Power RF & Microwave (HPRFM - 2013)	Institute for Plasma Research, Gandhinagar, Gujarat, India	Manash Kumar Paul, Et.al	04 - 06 September, 2013

## In Proceedings of International Conference:

Name of the Conference	Place of the conference	Name of the Participants	Date/ Duration
International Conference on Material Science (ICMS-2013)	Tripura University (Central University).	P.Bhowmik, J. N.Roy, T. Chattopadhyay	21-23 February 2013
Winter Symposium on Photonics and Optoelectronics (W-SOPO 2013)	Sanya, China	J.N.Roy	1 <sup>st</sup> - 3 <sup>rd</sup> December 2013
Advance Trends in Engineering and Technology" (ICATE T-2014),	Arya College of Engineering & Information Technology, (Old Campus), SP-42, Kukas Industrial Area (RIICO), Delhi Road, Kukas, Jaipur (Rajasthan), India.	Swati Singh, P. Dey, J. N. Roy and S. K. Mandal,	18-19 April 2014

## Books Published:

Name of the Authors published	Title of the Books	Date of publication of the Book	Issue/ Volume No./ Page No.
S. K. Mandal, P. Dey and T. K. Nath,	Physics of Oxide Materials for Spintronics	2013/04/29	Scholars' Press, Germany, 2013. ISBN No. 978-3-639-51305-9



S. P. Mondal et al.	Volatile Biomarkers, Chapter: 18 Smart Sensor Systems for Human Health Breath Monitoring Applications"	2013/ 05	Elsevier, ISBN: 978-0-444-62613-4
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**Distinguished Visitors to the Departments:**

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1	Prof. Arghya Taraphder. Head, Department of Physics, IIT KGP	21 <sup>st</sup> to 23 <sup>rd</sup> May 2013	Design of curriculum and syllabus for BS-MS in Physics and B.Tech-M.Tech in Engineering Physics Programme.
2	Prof. K.Goswami. Former professor and Head Department of Physics, Jadavpur University		
3	Padma Shree Prof. Sankar K. Pal Distinguished Scientist and former Director Indian Statistical Institute, Kolkata	9 <sup>th</sup> July 2013	To deliver lecture at workshop organized by Department of Physics

## 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 department is offering Bachelor of Technology in Production Engineering and M. Tech in Computer Integrated Manufacturing and as well as Doctoral Program.

The Department has nine numbers of permanent faculty and three 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

### 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

Laboratory details:

Sl. No.	Name of the Laboratories	Available Floor Area (sq.m)	Maximum Batch Size	Weekly hours required as per curricula	No. of Experiments	
					Prescribed	Conducted
1	Metallographic	20	6	6	10	7
2	Non Traditional Machining	56	20	9	10	10
3	CNC automation & Robotics	56	20	9	10	7
4	Ergonomics & Condition Monitoring	40	15	6	6	5
5	CAD/CAM	56	30	12	10	10
6	Metal Forming and Metal Casting	56	20	6	8	7



#### UPCOMING LABs

1. Mechatronics lab
2. Quality assurance lab
3. Metrology lab
4. Theory of Machines Lab.

#### 17.4 Activities of Faculty:

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

Workshop attended : 01 (2012-13).

#### 17.5 Research & Consultancy:

##### No. of Research Publications:

National Journal	:	01
International Journal	:	08
No. of book published	:	01

##### *Ongoing projects: 5 (five)*

1. condition monitoring of agricultural diesel engines run by vegetable oils through tribo analysis of used lubricants (PI: Swarup Pal )

**Sponsoring Organisation: AICTE, 1575000.**

2. Development of GIS based Real Time Monitoring Software for Maximizing Efficiency of Water Treatment Plants; **Sponsoring Organization. DST; 3 years; Rs.25,00,000 ; .**

**PI: Dr. Rabindra Nath barman**

3. Maximization of Water Efficiency by Minimizing Water Footprint of NIT, Agartala with the help of Neuro-Genetic Algorithms.; **Sponsoring Organization: AICTE;2 years; Rs.20,00,000. PI: Dr. Rabindra Nath barman.**

4. Machinability studies on Al-Cu-TiC metal matrix composites. **Sponsoring Organization: AICTE; 2 years; Rs16,00,000. PI: Dr. Ram Naresh Rai.**

5. **Project Title:** Novel Bio refineries: Design and Process Development for production of High value products & Bio fuels from micro algal consortium (DBT) **Co.P: Dr. G.R.K. Sastry**

**Amount : 61 Lakhs**

6. **Title:** Study Of The tribology of sleeper pad bearing in an axial piston pump: A simulation & experimental approach.(PI: Kishan Chowdhuri)

**Sponsoring Organisation: AICTE, New Delhi**

**Paper details for the year 2012 - 2013**

1. Chakraborty S., Choudhuri K., Dutta P., Debbarma B., Performance prediction of Centrifugal Pumps with Variations of Blade Number, *Journal of Scientific and Industrial Research*, Volume 72, (2013), pp. 373-378.
2. Chakraborty S., Biswas N., Choudhuri K., Dutta P., CFD Analysis of Centrifugal Pumps with Variations of Blade Number at 3300 RPM, *International Journal of Applied Engineering Research*, ISSN 0973-4562, Volume 8, Number 3 (2013), pp. 203-213.
3. Biswas N., Chakraborty S., Das D., Roy U., CFD Analysis of Multilobe Bearings at 70000 RPM, *International Journal of Dynamics of Fluids*, ISSN 0973-1784, Volume 9, Number 1 (2013), pp. 17-28.
4. Choudhuri K., Chakraborty S., Chakraborti P., Dutta P., Stress analysis and Design Optimization of Piston Slipper assembly in an Axial Piston Pump, *Journal of Scientific and Industrial Research* (Accepted)
5. Roy, Joydeep, Arindam Majumder, Subhash C. Saha, and Ram N. Rai. "Optimization of the effect of welding heat input on the microstructure and mechanical properties of submerged arc welded joints by fuzzy-based multi objective threshold acceptance algorithm." *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture* (2013).
6. Ram Naresh Rai, A.K. Prasada Rao, G.L. Dutta and M. Chakraborty, Forming Behaviour of Al-TiC In-situ Composites; *Materials Science Forum* Vol. 765 (2013) pp. 418-422.
7. Mandal, U.K., Sarkar, B., (2012), An exploratory analysis of intelligent manufacturing system (IMS) under fuzzy utopian environment, *IOSR Journal of Engineering*, ISSN: 2250-3021, Volume-2, Issue-8, PP-129-140.
8. Mandal, U.K., Sarkar, B., (2012), Selection of best Intelligent Manufacturing system (IMS) Under Fuzzy Moora Conflicting MCDM environment, *International Journal Emerging Technology and Advanced Engineering*, ISSN: 2250-2459, Volume-2, Issue-9, PP-301-310.

**National Journal:**

- 1) Pandey K.M., Chakraborty S., Singh A.P., Numerical Studies on Effects of Blade Number Variations on Performance of Centrifugal Pumps at 2500 RPM, *Journal of Environmental Research and Development (JERAD)*, Vol. 6 No. 3A, pp- 863-868, (2012)

**International book**

1. Application of nature based algorithm in natural resource management, Springer Netherlands; Mrinmoy Majumder, Rabindra Nath Barman(2013)

**Workshop attended:**

One day national workshop on contemporary and future perspectives of physics applicable to science and technology: challenges and opportunities, 4<sup>th</sup> February 2013, NIT Agartala Dr. Rabindra Nath Barman.



## **18.0 SCHOOL OF HYDRO-INFORMATICS ENGINEERING**

### **18.1 Introduction:**

This school was developed to supply the need of the industry and provide a platform for education of water and energy research so that both these resources can be conserved and used optimally. Water and Energy need to be conserved and managed efficiently in view of the coming days of water and energy scarcity due to climate change and overgrowth in population. The main objective of the School is: To provide a platform of research and education in the field of computational hydrology, hydraulics and hydropower.

### **VISION:**

The School has the following visions:

- To become a solution provider to the problems of hydrology, hydraulics and hydropower
- To provide an arena of research and development for people interested to pursue their education in the field of computational hydrology, hydropower and hydraulics.
- To provide researchers, scientists and professionals from the field of water and environment the data, information and consultancy often required by them to solve the live problems.

### **MISSION:**

The School has the following missions:

- To provide the necessary tools and techniques required to solve problems of computational hydrology, hydropower and hydraulics to the students and practitioners interested to pursue their education in related fields.
- To prepare an authentic database of information related to the field of water resources and technology like continuous discharge data, digitized maps of watersheds etc.
- To provide research and consultancy for solving problems encountered by the hydrology, hydraulics and hydropower industries.



**18.2 Academic Programme:**

The School offers PhD and MTech courses. The enrolled students can pursue their career in Multi-Disciplinary Industries (Renewable Energy (Hydro), Food Processing, Agriculture, Agro-Mechanization, Electrical & Electronics Measuring Instrument etc) and as a Faculty or Researcher in both National and International Universities.

**18.3 Lab Facilities:**

Sl. No.	Name of the Laboratories	Maximum Batch Size	No. of Experiments		Remarks
			Prescribed	Conducted	
1	Application Software Laboratory	20	6	6	Proper setup pending due to non availability of space
2	Hydraulics & Hydrology Laboratory	10	4	0	Proper setup pending due to non availability of space
3	Water Quality Laboratory	10	16	11	Proper setup pending due to non availability of space

**18.4 Activities of Faculty:**

*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. Mrinmoy Majumder	Advances in Optimization	06 days

**18.5 Research and Consultancy:**

*Sponsored Research Projects:*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Coordinators
01	Development of GIS based Real Time Monitoring Software for Maximizing Efficiency of Water Treatment Plants	3 years	DST, GoI	25,00,000	PI: Prof P. K. Bose Co-PI: Dr. Mrinmoy Majumder & Dr. Rabindra Nath Barman



*Books Published:*

1. Ranking of Watersheds with respect to Climatic Impact by Neural Network and Analytical Hierarchy Process

Authors: Mr. Uttam Roy and **Dr. Mrinmoy Majumder**

Publisher: Springer, Approved for Publication

2. Impact of Climate Change on Small Scale Hydro-turbine Selections

Authors: Mr. Uttam Roy and **Dr. Mrinmoy Majumder**

Publisher: Springer, Approved for Publication

3. Impact of Climate Change and Urbanization on Virtual Water, Water Footprint, Green Water and Water Sequestration

Authors: **Dr. Mrinmoy Majumder** and Dr. Apu Kumar Saha

Publisher: Springer, Approved for Publication

4. Development of Feasibility Model of Solar Energy Plants by ANN and MCDM Techniques

Authors: Dr. Apu Kumar Saha and **Dr. Mrinmoy Majumder**

Publisher: Springer, Approved for Publication

5. Minimization of Climatic Vulnerabilities on a Mini-hydro Power Plant: A Fuzzy AHP, Fuzzy ANP Techniques and Neuro Genetic Model Approach

Authors: **Dr. Mrinmoy Majumder** and Dr. Apu Kumar Saha

Publisher: Springer, Approved for Publication

6. Maximization of Hydropower Potential by Neuro-genetic Modeling and MCDM Techniques

Publisher: Springer, Approved for Publication

7. Estimation of Climate Change Impact on Mini Hydro-Power Plant with the help of MCDM and Cognitive Indices

Authors: **Dr. Mrinmoy Majumder**, Publisher: Springer, Approved for Publication

8. Impact of Urbanization on Water Shortage in Face of Climatic Aberrations

Authors: **Dr. Mrinmoy Majumder**,

Publisher : Springer, Approved for Publication

## 19.0 SCHOOL OF MANAGEMENT

### 19.1 Introduction:

The School of Management has started its operation by offering PG course 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. The Department facilitates students to undergo paid internships in various reputed government and private organizations viz. NEDFI, SBI, NABARD, ONGC, HDFC, ITC, Senrysa Technologies Pvt. Ltd. etc.

Masters of Business Administration (Full Time) programme 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 04 (four) nos. of dedicated faculty members along with 03 (Three) nos. of guest faculties from highly corporate professionals in order to bring professionalism among the students by blending academic knowledge with corporate skills. All dedicated faculty members are deeply involved in academic, research and administrative responsibilities of the Institute.

### 19.2 Academic programme :

Currently, School of Management is offering two year (four semesters) full time MBA programme. This Program aimed at providing in-depth understanding to students in technical, human and conceptual skills necessary for a successful manager with specialization in different functional areas like Financial Management, Marketing Management, Human Resource and System Management. The teaching strategy for this program oriented towards the application of knowledge with live cases and teaching aids. There is a six weeks summer internship programme for students, after completion of first year course to develop business acumen.

### 19.3 Activities of Faculty:

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

Sl. No.	Co-ordinators	Title	Period
Seminar :			
1	Dr. Anirban Dutta Dr. Sonit Dutta (SIP- coordinator)	Current Scenario of Indian Economy and Business (3 <sup>rd</sup> January 2014)	One-day





Fig: 1 Seminar and Class Lecture series

**Short-term Courses/Workshops/Seminar/Symposia/Conference/Training attended by the Faculty in Academic Institutions and Public Sector Undertakings:**

Sl. No.	Name of Faculty	Title	Period
<b>Workshop :</b>			
1.	Dr. Sonit Dutta	'Analysis for Business Research' December 12-14, 2013, jointly organized by Indian Statistical Institute (ISI), Kolkata and Assam University, Silchar	Three-day
2.	Ms. Mili Kar	'Analysis for Business Research' December 12-14, 2013, jointly organized by Indian Statistical Institute (ISI), Kolkata and Assam University, Silchar	Three-day
3	Dr. Sonit Dutta	'Recent Trends and Advances in Chemical Engineering: Concepts and Applications' June 14, 2013, Department of Chemical Engineering, National Institute of Technology, Agartala	One-day
4	Dr. Rajib Mallik	'Recent Trends and Advances in Chemical Engineering: Concepts and Applications' June 14, 2013, Department of Chemical Engineering, National Institute of Technology, Agartala	One-day
<b>Conference :</b>			
1	Ms. Mili Kar	'Contemporary Issues of Co-operative Societies in India with Special Reference to its North Eastern Region', April 19 <sup>th</sup> -21 <sup>st</sup> , 2013, organized by Tripura University	Three-day
2	Dr. Rajib Mallik	'Contemporary Issues of Co-operative Societies in India with Special Reference	Three-day

		to its North Eastern Region', April 19 <sup>th</sup> -21 <sup>st</sup> , 2013, organized by Tripura University	
<b>Seminar:</b>			
1	Dr. Rajib Mallik	'Issues and Trends of Governance in Multicultural Societies', November 16 <sup>th</sup> – 17 <sup>th</sup> , 2013, organized by Tripura University	Two-day

**Honours and Awards obtained by Faculty:**

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award for	Date
1	Sonit Dutta	Ph.D Degree	Assam University, Silchar	Obtaining Ph.D Degree from AUS	20/05/2013
2	Dr. Rajib Mallik	International Gold Star Award	Indian Solidarity Council, Dubai	In recognition of Sterling Merit Excellent Performance and Outstanding Contribution for the Progress of the Nation and Worldwide	18/11/2013
3	Dr. Rajib Mallik	Best Educationist Award	International Institute of Education & Management, New Delhi	For outstanding achievements in the field of education	24/07/2013
4	Dr. Rajib Mallik	Distinguished Researcher Award	Ruminations, Merrut	For remarkable contribution in the field of research	10/07/2013
5	Dr. Rajib Mallik	Rajiv Gandhi Education Excellence Award	Indian Solidarity Council, New Delhi	For outstanding achievements in the field of education	06/09/2013
6	Dr. Rajib Mallik	Vidya Rattan Gold Medal Award	International Institute of Education & Management, New Delhi	For outstanding achievements in the field of education	06/09/2013



#### 19.4 Design and Development Activities :

At present the development activities are not initiated, but the department is putting effort to initiate personality and soft-skill development programme in the near future.

#### 19.5 Research and Consultancy :

At present sponsored projects and consultancy are not performed, but the Department is very keen to take up these kind of activities in coming years.

#### Research Publications:

Total no. of papers published in Referred National Journals	:	01
Total no. of papers published in Referred International Journals	:	04
Total no. of papers presented in National Conference	:	03
Total no. of Books published	:	02

#### In Referred National Journals:

1. Mallik, R. "Volume of Transaction in Regulated Markets of Tripura", J I G Y A S A, ISSN 0974 – 7648, An Interdisciplinary Refereed Research Journal, VOL.-VI, No-1, May 2013, pp-110-117.

#### In Referred International Journals:

1. Chakraborty, K., Dutta, A., Sengupta, P.P., 2013 "Efficiency and Productivity of Indian Life Insurance Industry", *Asia Pacific Journal of Risk and Insurance*. Vol:7(1), Pg -, ISSN (Online) 2153-3792. [It is in 1st position of top 20 most downloadable article] <http://www.degruyter.com/view/j/apjri.2013.7.issue-1/2153-3792.1164/2153-3792.1164.xml?format=INT>
2. Dutta, A., 2013 "Impact of Privatization on Productivity – A Non Parametric Analysis of Indian Insurance Sector" *Global Business Review*, Sage Publication. Vol: 14 (2), Pg-297-314. <http://gbr.sagepub.com/content/14/2/297.abstrac>
3. Mallik, R. "Working of Regulated Markets In Tripura", *SHODH PRERAK*, ISSN 2231 – 413X, A Multidisciplinary Quarterly International Refereed Research Journal, Vol. 3, Issue 2, April 2013, pp-139-147.
4. Mallik, R. "Market Amenities and Facilities in Regulated Markets of Tripura" *The journal of International Research Reviews* , ISSN2319-3204, An International research refereed Journal, Vol. 1, Issue- 1, April 2013, pp-98-105.

#### Books Published:

1. Dutta, A., Sengupta, P.P., 2014 " Analysis of Revenue Efficiency: Empirical Study of Indian Non-Life Insurance Companies"; A.N.Ghosh, A.K. Karmakar (eds.), *Analytical Issues in Trade, Development and Finance, India Studies in Business and Economics*, Chapter 26, Pg: 449-456, Springer India. [http://link.springer.com/chapter/10.1007%2F978-81-322-1650-6\\_26](http://link.springer.com/chapter/10.1007%2F978-81-322-1650-6_26)
2. Rajib Mallik "Globalization and India's 'Look East Policy': An overview", Globalization and India, Kankata Raja Ram and Chalamalla Venkateshwarlu(eds), HISS Publications, Hyderabad Institute of social sciences, May 2013 ,pp-155-164

**Distinguished Visitors to the Departments**

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1	Prof. Tridip Chakraborty, EX- Faculty, IIM -Kolkata	19/07/2013	For delivering Guest Lecture
2	R.K. Banerjee Ex. Dy. Secretary, Government of India	08/08/2013	For delivering Guest Lecture
3	Prof. S.K. Dey Associate Professor, VGSOM IIT-Kharagpur	18/11/2013 & 19/11/2013	For SIP evaluation and delivering lecture
4	Mr. Tamal De Vice President, Deutsche Bank Group, Mumbai	18/12/2013	For delivering one day lecture
5	Prof. Kalyan Chakraborty Professor of Economics, Emporia State University, USA	03/01/2014	For delivering lecture in one day Seminar
6	Prof. Anirndam Banik International Management Institute, New Delhi	03/01/2014	For delivering lecture in one day Seminar

**19.6 Institute –Industry Collaboration :**

One day industrial visit was made on 06/09/2013 at Nest N Crest, Agartala to get insight into the production aspect of toned milk and other similar line of products.



**Fig: 2 Industrial visits at Nest N Crest**

**19.7 Other Activities:**

The faculties of the Department actively participate in the co-curricular activities in the Institute like Student's Admission, Placement etc.



## 20.0 CENTRAL LIBRARY

### 20.1 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 intend to open non-book section and 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.

### 20.2 Library Information Services Statistics:

Item	2012-2013	2013-2014	Remarks
<b>A. Collections:</b>			
Books	78879 (As per Accession register)	84317 (As per Accession register)	Physical book of 2012-13 is 62965 and 2013-14 is 68403. 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	07	3 No's added in 2013-14
Pamphlets and Reports	Nil	01	1 no's of report added in 2013-14
Book Bank (General)	5160	Nil	0 No's added in 2013-14
Book Bank (Weaker Section)	Nil	Nil	0 No's added in 2013-14
Current Periodicals by Subscription	8	8	
Current Periodicals by Exchange/ Gift	246	238	
Back volumes of Periodicals	3	Nil	
Faculty Publications	2	NA	
C.D	612	Nil	0 No's added in 2013-14
<b>Total</b>	<b>79751</b>	<b>84571</b>	
<b>B. Membership:</b>			
Staff	09	19	10 Nos added in 2013-

			14
Faculty	16	22	6 Nos added in 2013-14
Students	1047	1059	1059 Nos added in 2013-14
<b>Total</b>	1072	1100	1100 Nos added in 2013-14
<b>C. Services : Circulation</b>			
Number of Readers visited	32316	57715	
Number of Books/ Journals issued	19772	20353	
Number of Books issued through Book Bank (General)	15796	NA	
Number of Books issued Book Bank (Weaker Section)	3976	NA	
Xerox charges collection	1518	Rs.2631	Rs.2631 for the period from 01/04/13 to 31/03/13
<b>D. Reservation of Books</b>			
Registered	1547	585	
<b>E. Loans</b>			
Department Loan (Under issue)	64	15	
<b>F. Literature Search</b>			
CD-ROM search by users	1	2	
<b>G. Reprint Service</b>			
Reprints received from other Institutions	1	56	
<b>H. Reprography Service</b>			
Number of Xerox copies supplied	2024	3758	
<b>I. Expenditure on</b>			
Books Printed	8335070	4270847	
Printed Journals	13635	13903	
E-books	25860259	Proposed	Subscription proposal has been placed and it is under process.
E-journals	27515880	Proposed	
<b>J. New Journals Added</b>	4 new subscriptions (e-journals)	Nil (printed journal)	2 New e-jor Page 2 of 3 been proposed for subscription. i. RSC Gold



			& ii. J- Gate(INFORMATICS)
K. Any other material, if any:	1 (ithenticate)	Nil	

### 20.3 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.

### 20.4 New Facilities/ Equipments added:

During the financial year 2012-2013 NIT library has gone through tremendous developments, e.g. digital library, one for students and the other one for research scholars and faculties with 55 seating capacity has been started in Aug'12. And during this period NIT Agartala has subscribed 62036 e-books and 14084 e-journals. Students, faculties and research scholars can access e-books & e-journals covering all the fields of science & technology.

RFID (Radio Frequency Identification) technology has been introduced in NITA library in July '12. This technology includes self check-in and self check-out system which is going to be started very soon. At present 25000 books are tagged under RFID technology and there is a plan to cover all the remaining books and new collections under RFID system, so that library can be fully computerized.

2013-14 : Introduction of 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.

### 20.5 Future Plan:

- i. Fully computerization of NITA library.
- ii. Starting documentation work and services on different subjects specially in science and engineering.
- iii. Providing Inter Library Loan facility.
- iv. Opening of Non book section.
- v. Starting a binding section in the library.
- vi. 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.

### 20.6 Other activities:

Seminar cum workshop in joint collaboration of NITA and ISI, Kolkata on Building Network Databases in North Eastern Region of India - 2012-13.

## 21.0 STUDENT AMENITIES AND ACTIVITY

### 21.1 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

### 21.2 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.

### 21.3 NCC:

NIT Agartala has applied for the NCC unit of 100 cadets, which is under process and will start in the coming session.

### 21.4 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 26<sup>th</sup> January and of 15<sup>th</sup> August; tree plantations of 15<sup>th</sup> August; a rally on 20<sup>th</sup> August on Rajeev Gandhi Akshay Urja Diwas and a blood donation camp, all were organized in the campus with great enthusiasm and zeal by the said unit.

### 21.5 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 for the students, by the students.



### **21.6 Games & Sports:**

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

#### **2013-14:**

The Volleyball team of NIT Agartala participated in the Inter NIT Volleyball tournament (Men's) organized by the NIT Warngal from 1<sup>st</sup> to 3<sup>rd</sup> January 2014.

In January, 2014, Annual Sports Week was organized. The Annual Athletic meet held between 23<sup>rd</sup> to 26<sup>th</sup> March, 2014. Students, both boys and girls, took part in athletics meet. In this Events faculties, staff and their family also Participate.

A 52 member contingent from NIT Agartala took part in the Inter NIT meet at NIT Trichy from 9<sup>th</sup> February to 12<sup>th</sup> February, 2014. Competitions were held in basketball (men's & women's), Badminton chess (men's & women's), cricket, and table tennis.

Every year Inter Departmental Sports Competition will be organized. All the events will be held throughout this academic calendar.

### **21.7 Cultural Activities (Moksha):**

Every year the students of NIT, Agartala organize Annual Cultural Fest of the Institute called Moksha which witnesses spontaneous participation of students. Mega events like music, dance, instrument playing, drama competition and inter-college dance, band competition were held during the festival.

In the year 2013 Moksha was organized from 8<sup>th</sup> November to 11<sup>th</sup> November, 2013. Anjika Marshal Art Dance Group, Kolkata and Parikrama Band, New Delhi, entertained the campusites with their scintillating performance.

### **21.8 Technical Fest (AAYAM):**

Every year the students of NIT, Agartala organize Annual Techno-Management Fest AAYAM. The students are very excited with AAYAM this year, which will take place from 28<sup>th</sup> to 30<sup>th</sup> March 2014. This fest also witness the presence of celebrity SONA MAHAPATRA and the fest witness the crowd of nearly 3000 people.

### **21.9 Other Activities:**

The students of NIT-A participate 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 Art, Drama Club, Soft Skill development, Programming, Meditation, Science and Trekking Clubs.

## 22.0 TRAINING & PLACEMENT AND OTHER FACILITIES

### 22.1 Training and Placement:

The institute Training and Placement Cell is instrumental in arranging on campus placement drives for UG & PG students. Besides this, the cell arranges for internships, industrial training and invited talks from industry experts for the students of the institute. Students are motivated to participate in seminars, workshops and technical competitions organized various professional bodies. The Institute has a good placement record with many reputed organizations from the public and private sectors visiting the institute every year to recruit the students.

Details of the number of students placed during the period under report are given below as against those registered during 2013-2014.

#### Campus Recruitment

Branch	Name of the company/ industry	Bachelors Degree level	Masters Degree level	Ph. D.	Total
CSE, ECE	Samsung (R&D) Delhi	07	-	-	07
ME	Maruti Suzuki	02	-	-	02
ME, CSE, ECE, EIE	Mu- Sigma	08	-	-	08
EE, EIE	Finisar (Malaysia)	03	-	-	03
All Branches	Capgemini	27	02	-	29
ME, EE, ECE, CSE	Virtusa	15	-	-	15
CE, EE	ABCI	07	-	-	07
CSE	Polaris	02	-	-	02
All Branches	Infosys	72	05	-	77
CSE	Samsung (SRI, Bengaluru)	02	-	-	02
CE, ME, EE, EIE	L&T	27	01	-	28
CSE, ECE, EE, EIE	Verizon	00	-	-	00
EE	ABB	01	-	-	01
ME, EE	Concept Education	03	-	-	03
CSE	Oracle Server	02	-	-	02
CSE	Oracle Sun System	01	-	-	01
ME	Subros	04	-	-	04
ECE, EIE, CSE	Aricent	07	-	-	07
ECE, EIE, CHE, CSE	IBM	03	-	-	03
CSE, ECE	Magneti Marelli	01	-	-	01
CSE	Samsung (SRI, Noida)	02	-	-	02
EE, ME, CE, ECE	Resonance	04	-	-	04



ME	Afcons Infrastructure Ltd.	04	-	-	04
CSE	Drishti Soft	RW	-	-	RW
ECE, CSE	Reliance Jio	RW	-	-	RW
ME	JCB	RW	-	-	RW
ME	Samsung Heavy Industry	01	-	-	01
MBA	Anchor Electricals	-	02	-	02
MBA	Nestle	-	01	-	01
ME	Racks & Rollers	RW	-	-	RW
ME	Chadha Industry	RW	-	-	RW
CE, EE, CHE, ME	KRIBHCO	RW	-	-	RW
B.TECH All	Indian Army (3 <sup>rd</sup> Students for SSB interviews.)	RW	-	-	RW

\* RW= Result Waiting

## 22.2 Financial Assistance to Students:

Different types of Stipend/ Scholarship were available for the students of this institute based on the guidelines of State Government/ Central Government subject to the fulfillment of academic and other criteria. Upon conversion of Tripura Engineering College into NIT Agartala, modalities for the stipend/ scholarship have to be finalized for the students.

### DIFFERENT CATEGORY OF STIPEND / SCOLERSHIP/ FINANCIAL ASSISTANTSHIP TO THE STUDENTS

Sl. No	Category of Stipend / Scholarship		Rate of stipend P.M.(Rs.)	Income/ other bar	No. of Students	Duration of the Stipend / Scholarship
1	S C Stipend	Hosteller	1200	2.5 lack	175	10 month
		Days' Scholar	550			
2	S T Stipend	Hosteller	820	2.5 lack	128	10 month
		Days' Scholar	530			
3	OBC Stipend	Hosteller	750	1.0 lack	69	10 month
		Days' Scholar	350			
4	N E C Stipend	---	1200	---	35	10 month
5	Post Madhyqmik Stip.	---	450	---	125	10 month

### 23.0 CAMPUS AMENITIES AND INFRASTRUCTURE DEVELOPMENT INITIATIVES

#### 23.1 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.

#### 23.2 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 G+6 Academic Building	Amount includes at Sl.No.4 in the works progress list below.
5.	Construction of Staff Housing, Guest House, Director's, Residence.	6046.49 (Including deviation)
6.	Construction of Central School.	2395.00
7.	Extension of Mechanical Work Shop.	92.53

#### 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 Administration Block I & II and Seminar Hall.	3913.02
2.	Construction of School of Management Block.	3637.28
3.	Construction of Computer Center and Central Library.	6689.00
4.	Construction of Laboratories cum Canteen Building, Workshop and Academic Building.	5178.16
	Construction of G+6 Academic Building.	



5.	Construction of New Housing (H4B two blocks consisting of 48 flats).	2698.54
6.	Construction of duplex housing (10 nos.).	1055.50
7.	Additional Floor of Central School.	995.85
8.	Construction of 1500 Capacity Boys Hostel.	15243.00

**23.3 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. The Director's Bungalow is also completed and is occupied. New H4B2 and H4B3 type housing with 24 flats each are in progress.

**23.4 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.

**23.5 Hostel :**

Boys Hostel : Arryabhata: 1024 Capacity, Howrah: 128 Capacity, Dhalai: 92 Capacity, Goumati: 128 Capacity, Girls Hostel: Gargi: 463 Capacity.

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

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

## 24.0 CENTRE FOR INDUSTRIAL CONSULTANCY AND SPONSORED RESEARCH

### 24.1 Introduction:

Our campus is witnessing an exponential growth in R&D activities. Apart from a large number of consultancy works being undertaken by our engineering departments, academic research is gaining its momentum day by day. Nearly 150 research scholars are undergoing their Ph.D in various fields in all the departments. Papers have been published by our faculty members and research scholars in different refereed journals of international and national repute. Research papers have been presented in various conferences, seminars and symposia held at national and international levels. Seminars, conferences and symposia at national level were organized by various departments of our institute. Apart from academic activities our faculty members are also engaged in various consultancy works.

Our institute has signed MOUs with industries and institutions in and abroad to promote collaborative research and consultancies. Our faculty members have obtained major projects funded by DST, CSIR, DBT and AICTE etc.

### 24.2 Sponsored Research:

Sl. No.	Sponsoring Agency	Project Title	Name of the Chief Project Investigator/ Project Investigator	Sanctioned Value (In lakhs)
1	DST, Govt. of India	Synthesis of $\text{In}_2\text{O}_3$ Nano-Wire assembly and UV detector	PI: Dr. Aniruddha Mondal	Rs. 53,96,000
2	AICTE	High Efficiency $\text{In}_2\text{O}_3$ / Si Nano-wire based hetero junction solar cell	PI: Dr. Aniruddha Mondal	Rs. 15,30,000
3	AICTE	Modernization of Computer Laboratory	Dr. Aniruddha Mondal & Manik Bhowmik	Rs. 15,00,000
4	AICTE	Modernization of Digital Signal Processing (DSP) laboratory	Dr. Aniruddha Mondal & Manik Bhowmik	Rs. 15,00,000
5	DST, Govt. of India	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	Dr. Biswajit Saha	Rs. 19,20,000
6	SERB, DST, Govt. of India	Thermal Aware Logic Synthesis	Dr. S. N. Pradhan	Rs. 23,10,000



### 24.3 Consultancy Programmes:

The Institute is actively engaged in performing various consultancies and testing works. Department of Civil Engineering and Mechanical Engineering has been performing various testing related works.

Sl. No.	Amount of Work (Rs)	Nature of Work	Sponsoring Agency/ Industry
1	16856	Consultancy (Mix Design: M-25)	PWD, Agartala
2	16854	Consultancy (Mix Design: M-30)	Bridge & Roof Co.
3	55506	Consultancy (Mix Design: M-25) & Testing (Miscellaneous Materials)	PWD, Khayerpur
4	33708	Consultancy (Mix Design: M-25)	NBCL
5	16854	Consultancy (Mix Design: M-30)	IL&FS
6	50562	Consultancy (Mix Design: M-30,35)	NBCL
7	16854	Consultancy (Mix Design: M-25)	THCB
8	33708	Consultancy (Mix Design: M-30)	PWD, Dharmanagar
9	16854	Consultancy (Mix Design: M-35)	PWD, Khayerpur
10	50562	Consultancy (Mix Design: M-25,30,35)	HSCL
11	16854	Consultancy (Mix Design: M-30)	Bridge & Roof Co.
12	16854	Consultancy (Mix Design: M-25,30,35)	N.F. Railway
13	16854	Consultancy (Mix Design: M-25)	NBCL
14	50562	Consultancy (Tower Fdn Design)	BSNL
15	56180	Consultancy (Proof Checking)	S.K. Das Con Co
16	50562	Consultancy (Mix Design: M-30)	PWD, Dharmanagar
17	16875	Consultancy (Mix Design: M-30)	PWD, Udaipur
18	16854	Consultancy (Mix Design: M-25)	R & B, Agartala
19	60000	Vibration Analysis of 1430 KVA Power Pack, ONGC Agartala	ONGC
20	100000	Vetting for Design and drawing of 132 KV double circuit tower of MS lattice structure (+9 m extension) including civil foundation	TSECL

### 24.4 Industrial Associateship Scheme:

An Industrial Advisory Committee (IAC) is constituted with leading experts from the Industry associations, to provide professional and technical input into curriculum and activities of the students.

Experienced person from Industry make frequent visits to the institute as examiner, resource persons for seminars/ workshops, for syllabus review meeting etc.

**24.5 MoUs Agreements Signed :**

An MoU has been signed between NIT Agartala and Tripura Bamboo Mission Society (TBM SOCIETY), under the Department of Industries and Commerce, Government of Tripura for developing prototypes of machines for the bamboo sector in general and of bamboo stick making in particular and other related activities to be undertaken to launch/ commercialize the prototypes.

**24.6 Patents:**

Sl No	Title of the invention	Inventors	Department
1	Obtaining selectivity in gas sensors via a sensor array system composed of p and n type material	P. Dutta, S. Mondal, S. Ssenyange (Patent has been filed by Ohio State University, USA)	Physics
2	Switching Noise minimization in a silicon chip through proper current profile	S. Debnath, B. K. Bhattacharyya	Electrical Engineering
3	Replacement of battery for low power hand held device	A. S. Sengupta, B. K. Bhattacharyya	Electrical Engineering
4	PDSO (Pocket Digital Storage Oscilloscope)	S. Verma, D. Barnwal, S. Surya	Electrical Engineering
5	Power supply noise reduction using clock gating with variable frequency as global clock	B. K. Bhattacharyya, D. Deb, S. Bhowmik, S. N. Pradhan	Electrical Engineering



## 25.0 CENTRAL WORKSHOP FACILITIES

### Mission

To take into our fold young talents and mould them into well qualified technicians, technologists and engineers by fostering innovation, leadership, professional ethics and entrepreneurial spirit through high standards of Practical Training

### Vision

To achieve excellence through quality training and strive in Nation Building with a special focus to serve the industries as a potential knowledge hub for dissemination of technological and scientific advancements.

### Introduction:

The Workshop under department of Mechanical Engineering has been involved with so many research works and produced some excellent outcome. The Workshop is presently associated with different research and development activities in addition to normal classes under UG and PG courses. Some of the staffs in association with Faculty members are coordinating different technical bodies of the state, Tripura and the region.

### Existing Shops/Facilities under Workshop

#### 1. MACHINE SHOP

List of machines available

1. Horizontal type lathe machine(all gear including Low speed, Medium Speed and high speed)
2. Horizontal type lathe machine ( cone pulley head stock )
3. Horizontal milling machine and universal milling machine
4. Tool and cutter grinder.
5. Band saw.
6. Hydraulic power saw.
7. Radial drilling machine.
8. Pillar drilling machine.
9. Pedestal grinder.
10. Planer (heavy duty)
11. Shaper( light duty and heavy duty)
12. Cut off saw.
13. Capstan lathe.

### Nature of Work performed in machine shop.

1. Conducting practical classes of all branches of second semester and also conducting senior semester's practical classes of two branches Mechanical Engineering and Production Engineering up to end semester.
2. All kind of lathe works including thread cutting and crank shaft turning.

3. All kind of milling operation including gear cutting and pocket milling. Except rack milling and spline cutting.
4. Surface grinding. Cylindrical grinding. All kind of cutting tool grinding single point and multi point cutting tools. Except helical tooth grinding.
5. All kinds of research works related to Phd , M. tech and B.tech project works etc. we are conducting in this floor.
6. Assistance to students in all kind of competition work.

## **2. WELDING SHOP**

List of Machines/ Machine tools.

01. Arc Welding Set:
  - a) Oil cooled Arc welding set.
  - b) Air cooled Arc. Welding set.
  - c) IGBT based Arc welding Set
02. Spot welding Machine.
03. Multi Spot Welding Machine
04. Submerged Arc Welding machine.
05. Plasma cutting & Gouging Machine
06. Plasma Arc Welding machine.
07. Gas welding set.
08. TIG Welding Set.
09. MIG Welding set.
10. Induction heating System with Water Chiller unit.

### **Nature of Work performed in Welding shop.**

1. Conducting practical classes of all branches of second semesters and also conducting senior semester's practical classes of two branches Mechanical Engineering and Production Engineering up to end semester
2. All kinds of research works related to Phd , M. tech and B.tech project works etc. we are being conducted in the shop floor
3. Provision of different types of fabrication/Over head welding etc. works as per requirement.

## **3. SMITHY & FORGING SHOP**

The smithy & forging shop is equipped with sufficient numbers of following hand tools, Machine tools etc. which are given below.

1. Electric Hearth-02 Nos.
2. Hand Blower-01 No.
3. Swage Block-01 No.
4. Anvil-10 Nos.



**Nature of Work performs in smithy & forging shop**

1. For conducting practical classes of all branches up to second semesters and conducting senior semester's practical classes of two branches Mechanical Engineering and Production Engineering up to 6<sup>th</sup> semester.
2. All kinds of research works related to Phd , M. tech and B.tech project works etc. we are conducting in this floor.
3. Also engaged for making different types of works as an when required by the Institute.

**4. CARPENTRY/PATTERN SHOP:**

The Carpentry/Pattern shop is equipped with sufficient numbers of following hand tools, Machine tools etc. are given below.

- |                           |         |
|---------------------------|---------|
| 1. Wood working Lathe     | 02 nos. |
| 2. Band Saw Machine.      | 01 nos. |
| 3. Circular Saw Machine.  | 02nos.  |
| 4. Planner Machine.(wood) | 01no.   |
| 5. Grinding Machine.      | 01no.   |
| 6. Drilling Machine.      | 01 no.  |

**Nature of Work performed in Carpentry/Pattern shop**

1. Conducting Practical classes of B.Tech (1<sup>st</sup> semester & 2<sup>nd</sup> semester all branches) , 3<sup>rd</sup> semester & 4<sup>th</sup> semester of mechanical / Production Engg.
2. All kinds of research works related to Phd , M. tech and B.tech project works etc. are being conducted in this floor.
3. Facilities available to do innovative works by the students to complete different scientific /Engg. Exhibitions cum competitions.

**5. SHEET METAL SHOP:**

The Sheet Metal shop is equipped with sufficient numbers of following hand tools, Machine tools etc. are given below.

1. Sheet shearing Machine .
2. Sheet bending Machine.
3. Hydraulic Pipe Bending Machine.
4. Vacuum pump.

**Nature of Work performed in Sheet Metal shop :**

1. Conducting practical classes of all branches of second semesters and also conducting senior semester's practical classes of two branches Mechanical Engineering and Production Engineering up to end semester

4. All kinds of research works related to Phd , M. tech and B.tech project works etc. are being conducted in this floor.
2. Provision of fabrication work as and when required.

#### **6. FITTING SHOP:**

##### **Tools available in Fitting Shop**

- 1. Marking Tools**
  - a. Steel Rule
  - b. Scriber
  - c. Divider
  - d. Center punch
  - e. Try square
  - f. Vernier caliper
  - g. Surface plate
  - h. Calipers
- 2. Measuring Tools**
  - a. Fillet and radius gauge
  - b. Screw pitch gauge
  - c. Surface plate
  - d. Try square
  - e. Dial gauge
  - f. Plate gauge
- 3. Holding Tools**
  - a. Table Vice
- 4. Striking Tools**
  - a. Ball peen hammer
- 5. Cutting Tools**
  - a. File
  - b. Scrapers
  - c. Chisel
  - d. Drills
  - e. Tap and wrench
  - f. Die and die stock
  - g. Hack saw
- 6. Tightening Tools**
  - a. Sliding wrench
  - b. Ring Spanner
  - c. Allen key
- 7. Machine Tools**
  - a. Drilling m/c
  - b. Power hack saw
  - c. Grinding m/c
  - d. Lathe m/c



### Facilities in Fitting Shop

1. Practical Classes of B. Tech 1<sup>st</sup> year. (1<sup>st</sup> Semester and 2<sup>nd</sup> Semester)
2. Project works of M Tech and Ph D.
3. Facilities available to do innovative works by the students to complete different scientific / Engg. exhibition cum competitions.

### ACHIEVEMENTS OF WORKSHOP STAFF

#### Patents Filed:

1. Patent Application no. 1370/KOL/2012 dated 30.11.2012 entitled “A POLISHING SYSTEM FOR POLISHING OF SURFACE OF SUBJECTS SUCH AS THE INCENSE STICKS” in the name of 1. NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA, by Shuvendu DebBarma, John DebBarma, Arindam Majumder

#### Short Term Courses Attended:

Name of the Staff	Title of the course	Offered By	Duration	Coordinator
Mr. Debasish Biswas	<b>“Advanced Material &amp; Machining” Under TEQIP-II</b>	Department of Production Engineering	January 09-10, 2014	Dr. R.N Barman & Mr. Swarup Paul
Mr. Kaushik Deb Roy				
Sri Monojit Das				
Sri Ranju Kumar Singh,				
Sri Arup Taru Roy				
Sri Subhendu DebBarma				
Sri Subhash Das				
Sri Sujit Kr. Bhowmik				
Sri Pinku Saha				

## 26.0 FINANCE &amp; ACCOUNTS

## 26.1 Analysis of Plan and Non-Plan Fund:

		(Rs. in lakhs)	
<u>Head</u>		<u>2013-14</u>	<u>2012-13</u>
1. Non- Plan			
Income			
Grant from MHRD	:	1900.00	2200.00
Total	:	1900.00	2200.00
Expenditure			
Recurring	:	3777.56	3820.91
Total	:	3777.56	3820.91
2. Plan			
Grant from MHRD	:	9925.00	14450.00
Corpus Fund Transfers			
Total	:	9925.00	14450.00
Expenditure			
Non-Recurring	:	8552.22	14539.26
Total			

## 26.1.1 Plan Fund:

<u>Plan</u>	<u>(Rs. in Lakhs)</u>
Opening Balance	: (-) 980.83
Grant Sanctioned During 2013-2014	: 9925.00
Funds from other sources	: 139.32
Total Available	: 9083.49
Capital Expenses during 2013-2014	
Building & Construction	: 7861.26
Furniture & Fixtures	: 25.94
Equipments	: 642.04
Other Exp.	: 22.98
Total Utilized	: 8552.22
Unutilized Balance	: 531.27



**26.1.2 Non-Plan Fund:**

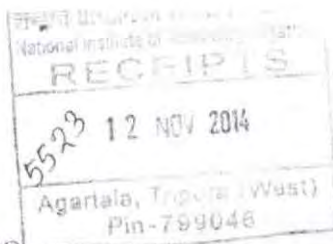
<u>Non – Plan</u>	(Rs in Lakhs)
Opening Balance	: 1156.01
Grant Sanctioned during 2013-2014	: 1900.00
Funds from other sources	: 1463.42
Total Available	: 4519.43
Expenditure during 2013 – 2014	
Pay & Allowances	: 1920.20
Recruitment Benefits	: 100.00
Library Services	: 2.50
Health Services	: 10.47
Student Scholarship	: 199.06
Administrative Expenses	: 767.22
Student Support Activities	: 39.69
House Keeping & Estate Maintenance	: 439.30
Water / Electricity	: 299.12
Total Utilized	: 3777.56

**26.2 Establishment Expenditure:**

<u>Sl.No</u>	<u>Head</u>	<u>Amount (In Lakhs)</u>
1	Pay & Allowance	1920.20
2	Retirement Benefits	100.00

**Audit Report  
&  
Annual Accounts 2013 -2014**





No. ECPA/SAR-NIT/2013-14/287

INDIAN AUDIT AND ACCOUNTS DEPARTMENT  
OFFICE OF THE ACCOUNTANT GENERAL (AUDIT)

TRIPURA, AGARTALA

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Date: November 11, 2014

To  
The Director  
National Institute of Technology  
Jirania, Agartala  
Tripura (West)  
PIN-799055.

Subject:- *Separate Audit Report on the accounts of the National Institute of Technology, Agartala for the year 2013-14.*

Sir,

I am sending herewith the Separate Audit Report on the accounts of the National Institute of Technology, Agartala for the year 2013-14 which is duly approved by the Accountant General (Audit).

Encl:- As stated above.

Yours faithfully,

Sr. Audit Officer/ ECPA (HQ)

AR (F)  
12/11/14

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**Separate Audit Report of the Comptroller and Auditor General of India on the Accounts of National Institute of Technology (NIT), Agartala for the year ended 31 March 2014**

We have audited the attached Balance Sheet of National Institute of Technology (NIT), Agartala as at 31 March 2014, 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 NIT's management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This Separate Audit Report contains the comments of the Comptroller and Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transaction 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/CAG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, 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 explanation, 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 and Receipts and Payments Account dealt with by this report have been drawn up in the format approved by the Government of India.



iii. In our opinion, proper books of accounts and other relevant records have been maintained by the NIT, Agartala, in so far as it appears from our examination of such books.

iv. We further report that:

**A. Balance Sheet**

**A.1.1 Current Liabilities and provision (Schedule-6)**

**Sundry Creditors (Plan fund) - ₹ 7.67 crore**

(I) The above Sundry Creditors of ₹ 7.67 crore pertains to the procurement of machinery and equipment, computer accessories, books and journal etc. for which neither the goods have been received nor billing was made by the concerned parties. This had also included 'Sundry Creditors' of ₹ 4.66 crore accounted for in earlier years not supported by bills/vouchers etc. and no procurement was made till date.

Thus, providing for 'Sundry Creditors' without any supply/billing made by the agencies resulted in overstatement of "Sundry Creditors" under the head "Current Liabilities and Provisions" and also overstatement of "Stock in transit" under the head "Current Assets, Loan Advances etc." by ₹ 7.53 crore at the end of 2013-14.

(II) The above does not include bills valued ₹ 44.97 lakh received from four suppliers during 2013-14 against supply of printed books. This resulted in understatement of sundry creditors under the head 'Current Liabilities and Provisions' by ₹ 44.97 lakh, Books" by ₹ 2.42 lakh and 'Books in transit' by ₹ 42.55 lakh.

**A. 2.1 Loans & Advances (Plan fund) (Schedule-3 (ii))- ₹ 160.28 crore**

**Current Assets, Loans, Advances etc. (Schedule-10)- ₹ 73.98 crore**

The above includes expenditure of ₹ 163.58 crore incurred by the implementing agencies on the construction of different projects assigned by the institute and the bills against that had also been accepted by NIT.

Therefore, inclusion of ₹ 163.58 crore as advances under "Loans and Advances" was incorrect resulting into overstatement of "Loans and Advances" and understatement of "Work in Progress" to that extent.

**A. 2.2 Current Assets Loan and Advances (Schedule 10)****Closing bank balance ( Plan Fund) - ₹ 21.95 lakh**

Three cheques valued ₹ 16.65 lakh issued during the period from 31 March 2010 to 2 August 2012 were not presented in the Bank by the recipient for encashment and reflected in the Bank Reconciliation Statement, prepared as on March 2014, as 'cheque issued but not presented into Bank for payment'. However, these cheques being time barred were required to be reversed.

Thus, due to non- reversal of these three lapsed cheques, Bank balance and Sundry Creditors was understated by ₹ 16.65 lakh.

**A.2.3 Current Assets, Loan and Advances (Schedule 10)****Earnest Money and Security Deposit- ₹ 3.20 crore**

The above includes an amount of ₹ 0.30 crore being interest earned on Fixed Deposit and Savings bank accounts maintained for Earnest Money and Security Deposit received from various agencies. This resulted in overstatement of Current Assets, Loan and Advances and understatement of 'income' and capital fund to that extent.

**A.3.1 Fixed Assets (Schedule 7)****(I) Capital work in Progress (Plan Fund) - ₹ 335.61 crore**

Nine works valued at ₹ 11.27 crore were completed in 2013-14 or in earlier years but all these works still appeared under "Capital work in Progress". This resulted in overstatement of "Work in Progress" by ₹ 11.27 crore and understatement of Fixed Assets by ₹ 9.39 crore, depreciation by ₹ 1.87 crore, overstatement of Capital fund by ₹ 1.87 crore.

**(II) Machinery and Equipment( Plan Fund) - ₹ 45.33 crore**

(a) The above includes expenditure of ₹ 1.54 crore incurred for the work "supply, installation, testing and commissioning of 15 lifts in staff housing, Academic Block and Director's Bungalow" as on 31 March 2014. Construction works of these buildings as well as installation of lifts were in progress till date of audit (September 2014).

This resulted in overstatement of "Machinery and Equipment" by ₹ 1.54 crore and understatement of "Capital Work in Progress" to that extent. This also resulted in overstatement of depreciation and understatement of Capital Fund by ₹ 13.12 lakh.



- (b) The above does not include Machinery and Equipment's amounting to ₹ 2.32 crore procured during the year. The different lab equipments and other items received, entered in the stock register and put to use, however, no accounting entries have been passed so far. This resulted in understatement of Fixed assets and overstatement of Stock in transit by ₹ 2.32 crore.

On being pointed out in audit, the Institute stated that the amount has been included in "Stock in transit" and the amount will be automatically adjusted with the release of payments during 2014-15 as fixed assets.

**(III) Library Books (Additions during the year) (Non plan Fund) - ₹ 0.77 crore**

The above does not include books received on 15-05-2013 resulting in understatement of library books under 'Fixed Assets' by ₹ 2.42 lakh and understatement of Depreciation and overstatement of Capital fund by ₹ 0.17 lakh

**B. Income and Expenditure Account**

**B. 1. Accrued Interest on Fixed Deposits**

Scrutiny of the Income and Expenditure accounts revealed that accrued interest on fixed deposits amounting to ₹ 0.35 crore was not taken as income in the Income and Expenditure accounts. This resulted in understatement of Income by Rs. 35.01 lakh with corresponding understatement of Deficit 'Capital Fund'.

**C. Grant-in-aid**

During the year the Institute had received ₹ 118.25 crore (₹ 99.25 crore under Plan and ₹ 19.00 crore under Non-plan) from the Ministry of Human Resource Development. Last years unutilised balance was ₹ 1.75 crore {Plan: (-) ₹ 9.81 crore; Non-plan: ₹ 11.56 crore}. Further, internal income of the Institute was ₹ 16.03 crore. Against the total availability of ₹ 136.03 crore, the Institute could utilise only ₹ 123.30 crore leaving unspent balance of ₹ 12.73 crore ( Plan: ₹ 5.31 crore and Non Plan: ₹ 7.42 crore) as on 31 March 2014.

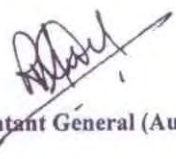
v. Subject to our observations in the preceding paragraphs, we report that the Balance Sheet, Income and Expenditure Account and Receipts and Payments Account dealt with by this report are in agreement with the books of Accounts.

vi. In our opinion and to the best of our information and according to the explanations given to us, 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 2014.
- b. In so far as it relates to Income and Expenditure Account of the deficit for the year ended on that date.

Place: *Agartala*  
Date: *10-11-2014*

  
Accountant General (Audit)



**Annexure to the Draft Separate Audit Report on the accounts of the National Institute  
of Technology, Agartala for the year 2013-14**

**1. Adequacy of internal control system:**

- (i) None of the entries made in the cash book was authenticated by the DDO as a token of check.
- (ii) There are several Bank Accounts maintained by the NITA without maintaining complete list of Bank Accounts.
- (iii) Budget Control Register was not maintained.
- (iv) Separate record/register was not maintained to keep track of the receipt of bills from the suppliers and payment made there against.
- (v) Ledgers and Journals were not authenticated by the DDO.
- (vi) Fixed Deposit Register was not maintained properly and none of the entries was authenticated by any responsible officer.
- (vii) The liability of ₹ 4.66 crore created in the earlier years for which material/goods have not yet been received even after lapse of more than a year reflects a poor internal control of the organisation. The NIT needs to conduct a review of all such liabilities created in the accounts and correct the accounts as it distorts the true and fair view of statement of affairs of NIT. Further, the Institute already had furnished utilization certificates in earlier years in support of utilisation of Plan Grant which did not depict true picture of unspent balance and also it resulted into misreporting to the Government of India.
- (viii) Lab equipments and other items valued ₹ 2.32 crore received during 2013-14 were entered in the stock register but no accounting entries have been passed so far which indicates lack of financial and accounting control.

**2. Adequacy of internal audit system:**

Separate Internal Audit Wing has not been constituted till date although internal audit of the Institute was stated to be conducted by an Audit Officer but no audit report was made available to audit.

**3. System of physical verification of fixed assets**

Physical verification of Fixed Assets was not done during 2013-14.

**4. System of physical verification of inventory**

Physical verification of Books, Journals, stationeries and consumables were not done during 2013-14.

**5. Payment of statutory dues**

Records relating to recovery and payment of statutory dues were not maintained by the Institute to ensure that no statutory dues were outstanding for more than six months at the close of the financial year.

**KOUSHIK DEBNATH & ASSOCIATES**  
Chartered Accountants

Old Municipality Road,  
Lenin Sarani, Agartala  
Ph: 0381-2381007

To  
The Registrar,  
National Institute of Technology (NIT)  
Jirania, Agartala.

**Subject: - Internal Audit Report for the year ended 31.03.2014**

We have conducted the Internal audit of your organization for the period for the year ended 31.03.2014 and we report the following observations.

**Observations:-**

1. The concern maintained separate set of cashbook for its Plan & Non-Plan funds. On verification of the Cashbook on 18.06.2014 it has been observed that the same has been updated till 31.05.2014. The cashbook should be updated on daily basis. An amount of Rs.27.80 lacs (Non-Plan) & Rs.0.67 lacs (Plan) was held in cash by the organization on 31.03.2014, no physical cash verification was done on that date. No Insurance for cash in safe & transit is available.

It has been observed that payment against expenditures incurred is made in cash for amount exceeding Rs.20000/- instead of account payee cheque:

Date	Amt (Rs.)	Voucher No.	Remarks
31.07.2013	22595.00	267	Payment to Travel Agency
26.08.2013	86754.00	350	Purchase of Gold from P.C Chandra Jewellers
09.10.2013	184786.00	502	Recruitment expenses.

Wrong classification of expenditures are observed, capital expenditure are booked to revenue.

Cost of lab equipments Rs.218714/- from M/s Indian High Vacuum are booked under Repairs & maintenance instead of capitalizing the same.

Expenditure incurred on building (ceiling) on 03.05.2013 for an amount of Rs.2476324/- has been booked under R&M instead of capitalising the same.

2. The concern prepared bank reconciliation statements regularly. However the following cheques remained uncleared as on 31.03.2014 & requires reversal:

Cheq No & dt	Amt(Rs.)
031021 dt 02.08.2012	Rs.398302/-
947161 dt 31.03.2010	Rs.1265505/-
657318 dt 31.03.2011	Rs.1249/-





**KOUSHIK DEBNATH & ASSOCIATES**  
**Chartered Accountants**

Old Municipality Road,  
 Lenin Sarani, Agartala  
 Ph: 0381-2381007

3. Fixed Assets: The organization maintained Fixed Asset register. However physical verification of the assets had not been conducted during the year. Fixed Assets are capitalized on the basis of running bills.

4. Details of Funds received by NIT, Agartala during the financial year 2013-14

Plan Fund:

Sl No	Sanction Memo	Date of Sanction	Amt (in lakhs)
1	F.34-2/2013-TS.III	15.07.2013	3625.00
2	F.34-2/2013-TS.III	26.09.2013	500.00
3	F.34-2/2013-TS.III	29.01.2014	3500.00
4	F.34-2/2013-TS.III	26.03.2014	800.00
	<b>Total</b>		<b>9925.00</b>

Non-Plan Fund:

Sl No	Sanction Memo	Date of Sanction	Amt (in lakhs)
1	F.NO.34-4/2013-TS.III	26.07.2013	900.00
2	F.NO.34-4/2013-TS.III	01.11.2013	1000.00
	<b>Total</b>		<b>1900.00</b>

5. It has been observed that certain advances are lying unadjusted since the opening of the financial year (01.04.2013). Following are details of the same.

Name of the Party	Amt (Rs.)
RD ( Const of Boundary Walls)	27,111,843.00
BSNL	172,764.00
RD ( Repairing of Admin)	1,066,603.00
RD ( Renovation of workshop)	7,088,660.00
RD ( Hostel Building)	2,306,504.00
RD ( Const of Classroom)	4,393,280.00
RD ( Auditorium)	1,940,052.00
RD ( Const of Boundary Wall & Septic)	1,344,600.00
RD ( Const of Boundary Walls & type II)	995,600.00
RD ( Multipurpose Building)	1,018,605.00
RD ( Security Barrack)	778,822.00



**KOUSHIK DEBNATH & ASSOCIATES**  
Chartered Accountants

Old Municipality Road,  
Lenin Sarani, Agartala  
Ph: 0381-2381007

Temporary Advances lying unadjusted since opening of the financial year (01.04.2013) are as follows:

Name of the Employee:	Amt (Rs.)
Sukanta Goswami-1	41,548.00
Paritosh Bhattacharjee	1,900.00
Jhon Debbarma	37,010.00
Arindam majumder	47,200.00
Rahul banerjee	35,000.00
Bikram das	11,440.00
Swarup paul	40,000.00
K Surjit Singh	9,000.00
RK Bhogendra Meitei	87,420.00
Kalyan Gayen	50,000.00
M.B.Sarkar	50,000.00
Surajit das	79,495.00
Baby Bhattacharjee	50,000.00
Pankaj kumar das	9,300.00
Total	549,313.00

Efforts should be taken to adjust/recover the same immediately.

6. It has been observed that in case of payment made to contractors regarding security & manpower services, sweeping & gardening services no documentary evidence like challan regarding deposit of Statutory dues like Service tax, EPF, ESI are provided by the agencies. This should be taken care of.
7. With regard to deduction & deposit of TDS no major irregularities were observed. The concern had filed electronic- TDS returns for all the Quarters of 2013-14 within the due date except Q2 was delayed by 4 days.

Place: Agartala  
Date: 25.06.2014





FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
BALANCE SHEET AS AT 31.03.2014			
CORPUS / CAPITAL FUND AND LIABILITIES	Schedule	Current year 2013-2014	Amount Rs Previous year 2012-2013
CORPUS / CAPITAL FUND	1	4427264376	3775438441
RESERVES AND SURPLUS	2	0	0
DESIGNATED / EARMARKED FUNDS	3	1639823944	1494122059
RESTRICTED FUNDS	4	0	0
LOANS AND BORROWINGS	5	0	0
CURRENT LIABILITIES & PROVISION	6	415849434	715079772
GOVT FUND-DONOR PROJECT		112637000	112637000
OTHERS INCOME- PLAN FUND		115880	115880
GRANT FROM NMEICT		499000	500000
<b>TOTAL</b>		<b>6596189634</b>	<b>6097893152</b>
<b>ASSETS</b>			
FIXED ASSETS	7	4253581418	3521879378
INVESTMENTS - FROM EARMARKED / ENDOWMENT FUNDS	8	0	0
INVESTMENTS OTHERS	9	0	0
CURRENT ASSETS, LOANS, ADVANCES ETC	10	739784220	1192543813
LOANS & ADVANCES-PLAN FUND	3(ii)	1602823996	1383469961
<b>TOTAL</b>		<b>6596189634</b>	<b>6097893152</b>
SIGNIFICANT ACCOUNTING POLICIES	22		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	23		
Asstt. Registrar(Finance) Asstt. Registrar (Finance), National Institute of Technology Agartala.	Registrar, National Institute of Technology Agartala.	Director, National Institute of Technology Agartala	
For KOUSHIK DEBNATH & ASSOCIATES (Chartered Accountants)			
(Koushik Debnath) Proprietor			

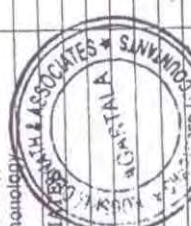
FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANIZATIONS)				
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014				
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013	
<b>INCOME</b>				
Academic Receipts	11	117177736	129089919	
Grants & Donations				
Non Plan Fund	12	190000000	220000000	
Plan Fund- Revenue Purpose	3	2297229	237196	
Income from Investments	13	0	0	
Interest Earned	14	30284531	28401885	
<b>TOTAL (A)</b>		<b>339759496</b>	<b>377729000</b>	
<b>EXPENDITURE</b>				
Staff Payment & Benefits	15	197139249	166201906	
Academic Expenses	16	26398577	14549328	
Administrative & General Expenses	17	86265647	56276292	
Transportation Expenses	18	1610302	1428473	
Repairs & Maintenance	19	9050459	7369139	
Finance Cost	20	141252	175904	
Other Expenses	21	0	0	
Expenses of Plan Fund	3(iii)	2297229	237196	
Depreciation	7	185737732	115242862	
Grant to KV, NIT Agartala		5134000	7639005	
Contribution to				
Retirement Benefit Fund		10000000	7500000	
Inst. Dev. Fund		8660000	6690000	
<b>TOTAL (B)</b>		<b>532434447</b>	<b>383310105</b>	
Balance being Excess of Income over Expenditure (A - B)		<b>(192674951)</b>	<b>(581105)</b>	
Balance being Excess of Income over Expenditure (A - B)				
transferred to Capital Fund				
Significant Accounting policies	22			
Contingent liabilities and notes on Accounts	23			
Asstt. Registrar(Finance)	Registrar		Director	
Asstt. Registrar (Finance)	Registrar		Director	
National Institute of Technology	National Institute of Technology		National Institute of Technology	
Agartala	Agartala		Agartala	
For				
KOUSHIK DEBNATH & ASSOCIATES				
(Chartered Accountants)				
(Koushik Debnath)				
Proprietor				



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)					
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA					
RECEIPTS AND PAYMENTS FOR THE PERIOD/ YEAR ENDED ON 31.03.2014					
RECEIPTS	(Amount - Rs.) Current Year 2013-2014	(Amount - Rs.) Previous Year 2012-2013	PAYMENTS	(Amount - Rs.) Current Year 2013-2014	(Amount - Rs.) Previous Year 2012-2013
I) Opening Balance:			Non-Plan Expenditure:		
In Current Account(Non-Plan)			a) EXPENSES:		
Bank (SBI, NIT Agt Br)	204201737	192128615	a) Staff Payment & Benefit	193202661	157791026
Bank (Canara Bank Agt Br)	448955	448955	b) Administrative & Gen. Expenses	85681424	81751502
Cash	510706	3492306	c) Academic Expenses	27133657	0
			d) Transportation Expenses	1587093	0
Opening Balance: (Plan)			e) Repair & Maintenance	9146729	0
Bank- SBI, NTA Br.	12868849	91290140	f) Finance Cost	141252	316892816
Bank (Canara Bank Agt Br)	19541	18780			
Cash	67780	57780	II) Expenditure on Fixed Assets & Capital Working progress :-		
			Fixed Assets:		
III) GRANTS RECEIPTS:			Plan	843005969	719060678
From MHRD (Govt. Of India)			Non-Plan	72938886	88540798
a) Non Plan	190000000		III) Other Payments		
			a) Stipend		
IV) Interest Received			NEC-Stipend	23200	818800
a) Plan Fund	13794592	9491687	Otherstate-Stipend	9705526	7636894
b) Non-Plan Fund	6541405	7344957	Post Matric Scholarship-SC & OBC	0	6876970
			Post Matric Scholarship-ST	4600	4259870
V) Any other received			Post Madhyamik Stipend	0	990750
a) Academic Collection	116768344	127759161	Post Matric Scholarship-OBC	246425	20814059
b) Miscellaneous Receipts	213985	31875			
c) Library Caution Money	5420000	4125000	IV) Advances		
d) CCB & CCMT Fees	3057195	2094543	a) Plan	240000000	567606000
e) Security Deposit	0		b) Non-Plan	2000000	5101053
f) Sale of Tender Form	359980	194000			
g) Recruitment Fees(Interview)	0	125819504	Payment to S. Creditors		
			Inst Dev Fund		
Other Fund			Exp. for CCB & CCMT	8660000	6690000
(corresponding to schedule 12A)			Retirement Benefit Fund	1359433	1740973
			Library Caution Money	10000000	7500000
Intt on Mobilization Advance	6495469	9960866	Grant to KV, NIT Agartala	2159000	522000
Temporary Advance Received	3231304		Fund for SC Welfare Deptt(Book)	5134000	7639005
LTC Advance Received	340020		Exp. For Virtual Class Room	0	17183
			Exp. For NMEICT	1000	825123
			LTC Advance to Faculty & Staff	2261900	2626273
			Loan to NIMCET	800000	0
			Temporary Advance to Employees	126780	0
Asstt. Registrar (Finance)			Other Payments:		
National Institute of Technology			Plan Expenditures	2297229	237196
Agartala.			(corresponding to schedule 3)		

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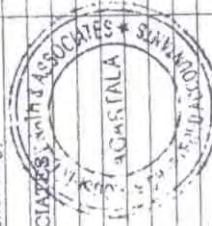



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Bank Balance (S.B. A/c)		346721	341522
2. Income from Sales / Services		499497	76742
3. Fees / Subscriptions		23530	13573
4. Interest Earned		869748	431837
<b>TOTAL</b>			
		128964	84994
		20	122
	10	740764	346721
<b>TOTAL</b>		869748	431837
<b>NEW PENSION SCHEME-TIER-I FUND</b>			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:		3876	7536
S.B. A/c		30690998	20280151
Fixed Deposit		0	0
2. Income from Sales / Services		0	0
3. Fees / Subscriptions		11230534	8720890
Employee/Employer's Contribution		0	0
Employee/Employer's Contribution-FD		20135	15050
4. Interest Earned-S.B. Accounts		2476967	1671347
5. Interest Earned-F.D. Accounts		44422510	30694974
<b>TOTAL</b>			
		65740	0
		0	100
	10	44353965	30690998
	10	2805	3876
<b>TOTAL</b>		44422510	30694974
<b>EXPENDITURE</b>			
Bank Charges		0	0
Fixed Deposit		44353965	30690998
Bank Balance (S.B. A/c)		2805	3876
<b>TOTAL</b>		44422510	30694974
<b>Asstt. Registrar (Finance),</b> <b>National Institute of Technology,</b> <b>Agartala</b> <b>For</b> <b>KOUSHIK DEBNATH &amp; ASSOCIATES</b> <b>(Chartered Accountants)</b>			
 <b>(Koushik Debnath)</b> <b>Director</b>		<b>Registrar,</b> <b>National Institute of Technology</b> <b>Agartala, Tripura (W-789055)</b>	<b>Director,</b> <b>National Institute of Technology</b> <b>Agartala</b>

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
Particulars	Schedule	RETIREMENT BENEFIT FUND	
		Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		8131669	344615
Fixed Deposit		32324170	31276506
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		218084	14414803
4. Fees / Subscriptions-FD		0	0
5. Interest Earned-S.B.Accounts		261271	273105
6. Interest Earned-F.D.Accounts		2134940	1047664
<b>TOTAL</b>		<b>43070134</b>	<b>47356693</b>
<b>EXPENDITURE( Pension/ Gratuity)</b>			
Bank Charges		1834847	6900742
Fixed Deposit	10	0	112
Bank Balance (S.B. A/c)	10	34459110	32324170
		6776177	8131669
<b>TOTAL</b>		<b>43070134</b>	<b>47356693</b>
<b>INSTITUTE DEVELOPMENT FUND</b>			
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		15085845	301571
Fixed Deposit		18330400	19968437
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		282766	14277045
4. Interest Earned-S.B.Accounts		1913175	269278
5. Interest Earned-F.D.Accounts		550640	1566573
<b>TOTAL</b>		<b>36162826</b>	<b>36382904</b>
<b>EXPENDITURE</b>			
Fixed Deposit		0	2966659
Bank Balance (S.B. A/c)	10	20243575	18330400
	10	15919251	15085845
<b>TOTAL</b>		<b>36162826</b>	<b>36382904</b>
Asstt. Registrar (Finance), National Institute of Technology Agartala.			
For			
Koushik DEENATH & ASSOCIATES (Chartered Accountants)			
(Koushik Debnath)			



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		35950	26176
2. Income from Sales / Services-			
3. Fees / Subscriptions		0	0
4. Interest Earned-S.B.Accounts		16160	8577
<b>TOTAL</b>		1452	1197
		53562	35950
Bank Balance (S.B. A/c)	10	53562	35950
<b>TOTAL</b>		53562	35950
<b>PROJECT FUND</b>			
<b>INCOME</b>			
1. Opening Bank Balance (S.B. A/c)		Current year 2013-2014	Previous year 2012-2013
2. Income from Sales / Services-		3422323	247020
3. Fees / Subscriptions		0	0
4. Interest Accrued-S.B.Accounts		1931274	5518007
<b>TOTAL (A)</b>		5393132	5835020
<b>EXPENDITURE:</b>			
Service Tax		105142	140234
Refund to Parties		0	0
Exp. & Distribution to Faculties & Staffs		1441300	2269201
Bank Charges		1579	3262
Fixed Deposit	10	0	0
Closing Bank Balance (S.B. A/c)	10	3945111	3422323
<b>TOTAL (B)</b>		5493132	5835020
<p>For  <b>Asstt. Registrar (Finance),</b>  National Institute of Technology  Agartala.</p> <p><b>Koushik DEBNATH &amp; ASSOCIATES</b>  (Chartered Accountants)</p> <p>(Koushik Debnath)  Proprietor</p>			

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
DEPARTMENTAL PROMOTIONAL FUND/CIVIL		Current year 2013-2014	Previous year 2012-2013
Particulars	Schedule		
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		1408791	847980
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		225130	519449
4. Interest Earned-S.B.Accounts		56647	41362
<b>TOTAL</b>		<b>1690568</b>	<b>1408791</b>
Bank Balance (S.B. A/c)	10	1690568	1408791
<b>TOTAL</b>		<b>1690568</b>	<b>1408791</b>
<b>NSS UNIT</b>			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		8227	10238
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		33827	55855
4. Interest Earned-S.B.Accounts		1079	1240
<b>TOTAL</b>		<b>43133</b>	<b>67333</b>
<b>EXPENDITURE</b>			
Bank Charges		31961	59050
Bank Balance (S.B. A/c)	10	0	56
<b>TOTAL</b>		<b>43133</b>	<b>67333</b>
<b>Asstt. Registrar (Finance),</b> <b>National Institute of Technology</b> <b>Agartala.</b> <b>For</b> <b>KOUSHIK DEBNATH &amp; ASSOCIATES,</b> <b>(Chartered Accountants)</b>  <b>Proprietor</b> <b>(Koushik Debnath)</b>			
<b>Registrar,</b> <b>National Institute of Technology</b> <b>Agartala, Tripura (W)-799035</b>  <b>Director.</b> <b>National Institute of Technology</b> <b>Agartala</b>			



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
EMD & SECURITY DEPOSIT			
INCOME	Particulars	Schedule	Current year 2013-2014
1. Opening Balance:			Previous year 2012-2013
S.B. A/c			
Fixed Deposit			12634629
2. Income from Sales / Services-			4120331
S.B. A/c			15000000
Fixed Deposit			0
3. Fees / Subscriptions			25949474
4. Interest Earned-S.B.Accounts			600215
5. Interest Earned-F.D.Accounts			595070
<b>TOTAL</b>			<b>54779388</b>
			<b>37171286</b>
EMD & Security Released			22804098
Bank Charges			13430
Fixed Deposit	10		15595070
Bank Balance (S.B. A/c)	10		16366790
<b>TOTAL</b>			<b>54779388</b>
			<b>37171286</b>
INFRASTRUCTURAL DEVELOPMENT FUND			
INCOME	Particulars	Schedule	Current year 2013-2014
1. Opening Balance:			Previous year 2012-2013
S.B. A/c			
Fixed Deposit			632870
2. Income from Sales / Services-			5000000
S.B. A/c			0
Fixed Deposit			0
3. Fees / Subscriptions			0
4. Interest Earned-S.B. Accounts			50639
<b>TOTAL</b>			<b>5683509</b>
			<b>5632870</b>
Accrued Interest-F.D.			0
Fixed Deposit	10		5000000
Bank Balance (S.B. A/c)	10		683509
<b>TOTAL</b>			<b>5683509</b>
			<b>5632870</b>



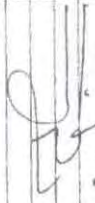
For

**Koushik DEBNATH & ASSOCIATES**  
(Chartered Accountants)

Asstt. Registrar (Finance),  
National Institute of Technology  
Agartala.

*[Signature]*  
Registrar,  
National Institute of Technology  
Agartala, Tripura (W)-799055

(Koushik Debnath)  
Proprietor

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
SPONSORED PROJECT FUND			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		41941088	546607
Fixed Deposit		64739837	68130841
2. Income from Sales / Services-		0	0
S.B. A/c		19007610	52425675
3. Fees / Subscriptions		0	0
4. Other Income		1374529	369692
4. Interest Earned-S.B. Accounts		6737004	5608645
5. Interest Earned- F.D. A/c		133800068	127081460
<b>TOTAL</b>			
		133800068	127081460
<b>EXPENDITURE</b>			
Bank Charges		33734137	20395460
Fund Tr. To Inf. Dev. Fund		140929	5075
Accrued Interest-F.D. A/c		0	0
Fixed Deposit	10	71476841	64739837
Bank Balance (S.B. A/c)	10	28448161	41941088
<b>TOTAL</b>			
		133800068	127081460
For			
KOUSHIK DEBNATH & ASSOCIATES			
(Chartered Accountants)			
			
(Koushik Debnath)			
Proprietor			
			
Asstt. Registrar (Finance),			
National Institute of Technology			
Agartala.			
			
Director			
National Institute of Technology			
Agartala.			

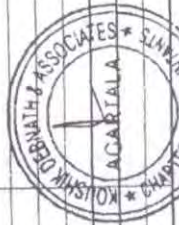

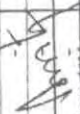
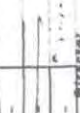


Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
Particulars	Schedule	STAFF BENEFIT TRUST (GPF)	
		Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		528821	382899
2. Income from Sales / Services-			
3. Fees / Subscriptions		0	0
4. Interest Earned-S.B.Accounts		5689000	5579939
<b>TOTAL</b>		11970	28348
<b>EXPENDITURE</b>			
Remittance		6229791	5991186
Bank Charges		0	0
Bank Balance (S.B. A/c)	10	6137400	5462239
<b>TOTAL</b>		92391	126
		528821	528821
		6229791	5991186
<b>DIRECTOR'S RELIEF FUND</b>			
		Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		307359	366
2. Income from Sales / Services-			
3. Fees / Subscriptions		0	0
4. Interest Earned-S.B.Accounts		12418	300000
<b>TOTAL</b>		319777	7318
<b>EXPENDITURE</b>			
Bank Charges		0	0
Bank Balance (S.B. A/c)	10	319777	307684
<b>TOTAL</b>		319777	307684
<b>Asstt. Registrar (Finance),</b>			
National Institute of Technology			
Agartala.			
For			
KOUSHIK DEBNATH & ASSOCIATES			
(Chartered Accountants)			
(Koushik Debnath)			
Proprietor			
		Registrar.	Director.
		National Institute of Technology	National Institute of Technology
		Agartala, Tripura (W)-789055	Agartala

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		30228	20349
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		0	9000
4. Interest Earned-S.B.Accounts		1222	879
<b>TOTAL</b>		<b>31450</b>	<b>30228</b>
Bank Charges		0	0
Bank Balance (S.B. A/c)	10	31450	30228
<b>TOTAL</b>		<b>31450</b>	<b>30228</b>
<b>GUEST HOUSE FUND</b>			
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		618727	368990
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		198100	231850
4. Interest Earned-S.B.Accounts		26372	17887
<b>TOTAL</b>		<b>843199</b>	<b>618727</b>
<b>EXPENDITURE</b>			
Bank Charges		0	0
Bank Balance (S.B. A/c)	10	843199	618727
<b>TOTAL</b>		<b>843199</b>	<b>618727</b>
<p>Asslt. Registrar (Finance), National Institute of Technology Agartala.</p> <p>For KOUSHIK DEBNATH &amp; ASSOCIATES (Chartered Accountants)</p> <p>(Koushik Debnath) Proprietor</p>			
<p>Registrar, National Institute of Technology Agartala, Tripura (W)-798055</p> <p>Director, National Institute of Technology Agartala</p>			



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2014			
Particulars	Schedule	Current year 2013-2014	Previous year 2012-2013
<b>INCOME</b>			<b>AAYAM</b>
1. Opening Balance:			
S.B. A/c		1068392	518531
2. Income from Sales / Services-			
3. Fees / Subscriptions		0	0
4. Interest Earned-S.B.Accounts		1310000	1587000
<b>TOTAL</b>		<b>2393854</b>	<b>2111899</b>
<b>EXPENDITURE</b>			
Bank Charges		0	1043171
Bank Balance (S.B. A/c)	10	1692584	336
<b>TOTAL</b>		<b>2393854</b>	<b>2111899</b>
<b>MOKSHA</b>			
<b>INCOME</b>			
1. Opening Balance:			
S.B. A/c		264152	124012
2. Income from Sales / Services-			
3. Fees / Subscriptions		0	0
4. Interest Earned-S.B.Accounts		1300000	1295000
<b>TOTAL</b>		<b>1578707</b>	<b>1427019</b>
<b>EXPENDITURE</b>			
Bank Charges		1239423	1162867
Bank Balance (S.B. A/c)	10	252	0
<b>TOTAL</b>		<b>1578707</b>	<b>1427019</b>
<p>Asstt. Registrar (Finance), National Institute of Technology For Agartala.</p> <p>KOUSHIK DEBNATH &amp; ASSOCIATES (Chartered Accountants)</p> <p>(Koushik Debnath) Proprietor</p>			
<p>Registrar, National Institute of Technology Agartala, Tripura (W)-799055</p> <p>Director, National Institute of Technology Agartala</p>			

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014			
	Current Year 2013-2014	Previous Year 2012-2013	(Amount - Rs.)
<b>SCHEDULE 1- CORPUS / CAPITAL FUND :</b>			
Balance as at the beginning of the year	3775438441	3061958868	
Add Contributions towards Earmarked/Endowment Fund	844500886	719060678	
Add (Deduct) balance of Net Income/ Expenditure ) transferred from the Income and Expenditure Account.	(192674951)	(5581105)	
<b>BALANCE AS AT THE YEAR - END</b>	<b>4427264376</b>	<b>3775438441</b>	
<b>FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)</b>			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014			
	Current Year 2013-2014	Previous Year 2012-2013	
<b>SCHEDULE 2- RESERVE AND SURPLUS:</b>			
1) Capital Reserve	-	-	
As per last Account	-	-	
Addition during the year	-	-	
Less: Deduction during the year	-	-	
2) Revaluation Reserve	-	-	
As per last Account	-	-	
Addition during the year	-	-	
Less: Deduction during the year	-	-	
3) Special Reserves:	-	-	
As per last Account	-	-	
Addition during the year	-	-	
Less: Deduction during the year	-	-	
4) General Reserve	-	-	
As per last Account	-	-	
Addition during the year	-	-	
Less: Deduction during the year	-	-	
<b>TOTAL</b>			
			
			
Asstt. Registrar (Finance), National Institute of Technology Agartala.			
			
Registrar, National Institute of Technology Agartala, Tripura (W)-798055			
			
Director, National Institute of Technology Agartala			



**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014**

SCHEDULE 3- DESIGNATED / EARMARKED FUNDS	FUND- WISE BRAKE UP		TOTALS
	Current Year 2013-2014	Previous Year 2012-2013	
a) Opening Balance of the Funds	(96480555)	0	(96480555)
b) Additions to the Funds:			
i) Donations / Grants From AICTE			
Fund for Capital Assets(tr to Balance Sheet)	990202771	5073480221	6063682992
Less: Tr. To Corpus/Capital Fund	844500886	3579358162	4423859048
Net Fund for Capital Assets(tr to Balance Sheet)	145701885	1494122059	1639823944
Fund for Revenue Purpose(tr to Income & Expenditure A/C)	2297229	237196	2534425
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.14)	13794592	42664369	56458961
iv) Others Income			115880
v) Advance Received back from Parties	309595181	245190069	554785250
vi) Fund for Virtual Class Room	0	3945933	3945933
vii) Grant from NMEICT	0	500000	500000
<b>TOTAL (a+b)</b>	<b>374908332</b>	<b>1899412506</b>	<b>2274320838</b>
c) Utilisation / Expenditure towards objectives of funds			
i) Capital Expenditure			
-Fixed Assets			
Vehicle		1686081	1686081
Electric Instalations		28455583	28455583
Hostel Building, quarters etc		24896321	24896321
Const. of Ladies Toilets		115284	115284
Furniture & Fittings	13206142	78502709	91708851
Equipment & Machinery-Grass Cutter		40000	40000
Computer & Accessories	5980272	68606182	74586454
Plant & Machinery		385000	385000
Generator		51000	51000
Machinery & Equipments-Air Conditioner	419700	4541978	4961678
Equipment & Machinery	270967054	330478070	601445124
EPBX Machine		409937	409937
Books & Journals		3032073	3032073
Const of Workshop Wall		16491819	16491819
Const of Boundary Wall	4236181	31733122	35969303
Type II & III Quartersstt. Registrar (Finance),	1848388	22934592	24222980
Boundary Wall, National Institute of Technology		995600	995600
Admin Building & Class Rooft		18621297	18621297
Auditorium Buildings		21211849	21211849
Academic, Library Building	9173345	126925380	136098725



Director  
 National Institute of Technology  
 Agartala

Networking(Equipments)	20339631	189118430	209458061
Const of Internal Road	15828186	1245582044	1261410230
Const of Boys & Girls Hostels	1012179	8894505	9906684
Const of Main Gate & Sub Gate		785976	785976
Const of Basket Ball Court	1674237	3336651	5010888
Const of Watch Tower & Security Barrack		11943969	11943969
Const of Market Complex	44827870	314602921	359430791
Const of School of Management	857041	9590437	10447478
Const of Sewerage Treatment Plant (STP)	157892895	144173519	302066414
Const of Sports Complex		54917000	54917000
Const of Central School	16435980	506215054	522651034
Const of Housing & Guest House	111603867	251636129	363239996
Const of Admn Block & Seminar Hall		2419601	2419601
Const of Central Library	5198123	0	5198123
Const of Central Stores	4910560	0	4910560
Const of H4B Building	157431831	0	157431831
Const of 1500 Bedded Boys Hostel	1217404	0	1217404
Const of Duplex Building	844500886	3579358162	4423859048
<b>TOTAL</b>	844500886	3579358162	4423859048
Less: Tr. to Fixed Assets (Schedule 8)	0	0	0
<b>TOTAL (3i)</b>	0	0	0
<b>Others</b>			
Advance to Parties(Schedule 3A)	240000000	3876569456	4116569456
Less: Adjustment Tr to Fixed Assets	20645965	2493099495	2513745460
	219354035	1383469961	1602823996
	0	5100	5100
	0	15000	15000
Security Deposit to TSECL			
Temporary Adv to Monajit Das			
Stock in Transit:			
Machinery & Equipments	0	258341636	258341636
Networking in Transit	0	7924964	7924964
Computer & Accessories	0	543742	543742
Furniture & Fittings in Transit	0	12064387	12064387
Exp. For Virtual Class Room	0	2750409	2750409
Exp. For NMEICT	1000	0	1000
Assit. Registrar (Finance), National Institute of Technology Agartala, Tripura (W)-799055			
<b>TOTAL (3ii)</b>	219355035	1665115199	1884470234
<b>III) Revenue Expenditure</b>			
-Other Administrative Expenses.			
Bank Charges	2297229	87196	2384425
NIT Transit House-Delhi	0	150000	150000
<b>TOTAL(3iii)</b>	2297229	237196	2534425
<b>GRNAD TOTAL (3i+3ii+3iii)</b>	221652264	1665352395	1887004659
<b>Un-Spent Grant(Plan Fund)</b>	153256068	(96480555)	

Director  
National Institute of Technology  
Agartala

NOTE: Rs. 22,97,229/- spent for revenue purpose which has been capitalised. The said amount of Fund has been transferred to Income and Expenditure Account as per Plan Fund Revenue



**FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)**  
**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**SCHEDULES FORMING PART OF SCHEDULE 3 AS AT 31.03.2014**



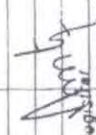
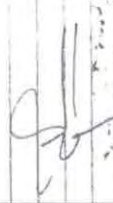
SCHEDULE 3 A- DETAILS OF ADVANCE TO PARTIES	Current Year 2013-2014		Previous Year 2012-2013		Adjustment to Fixed Assets	TOTAL (1+2-3)
	(1)	(2)	(3)	(4)		
Advance to:						
R.D. Deptt(Const of Boundary Wall)	0	27111843	0	0	0	27111843
B.S.N.L.(Call User Group-CUG)	0	172764	0	0	0	172764
R.D. Deptt(Repairing of Administrative Building)	0	1066603	0	0	0	1066603
R.D. Deptt(Hostel Building & Others)	0	2306504	0	0	0	2306504
P.H.E(Iron Removal Plant)	0	1560100	0	0	0	1560100
Tripura Housing Board(Academic Building, Library)	0	7640420	0	0	0	7640420
TSECL-Dedicative Power Supply	0	40800000	0	0	0	40800000
R.D. Deptt(Auditorium)	0	1940052	0	0	0	1940052
R.D. Deptt(Boundary Wall & Septic Tank)	0	1344600	0	0	0	1344600
R.D. Deptt(Boundary Wall & Type IV)	0	995600	0	0	0	995600
R.D. Deptt(Multipurpose Buildings)	0	1018605	0	0	0	1018605
R.D. Deptt(Security Barrak)	0	778822	0	0	0	778822
R.D. Deptt(Const of Class Room)	0	4393280	0	0	0	4393280
BRTF(Internal Road Development)	0	20645965	0	20645965	0	0
DWS Deptt (Water Supply)	0	2695300	0	0	0	2695300
EPIL(Const of Workshop)	0	455000000	0	0	0	455000000
PWD Deptt (Electrification)	0	843020	0	0	0	843020
TSECL-DGM Jirania	0	1400170	0	0	0	1400170
R.D.Deptt(Renovation of Workshop)	0	7088660	0	0	0	7088660
S.D. Hardson Co(Equipments)	0	1265505	0	0	0	1265505
Eastern Engg Corp(Equipments)	0	18000	0	0	0	18000
CPWD(Const of Central School)	22000000	207883000	0	0	0	229883000
CPWD(Const of H4B Building)	11000000	90000000	0	0	0	101000000
CPWD(Const of Duplex Building)	10000000	34800000	0	0	0	44800000
CPWD(Const of Internal Road)	7000000	0	0	0	0	7000000
Bridge & Roof Co.(Const of Central Computer Centre & CSE I)	1900000000	470000000	0	0	0	660000000
Cadence Design System, Ireland	0	701148	0	0	0	701148
<b>TOTAL</b>	<b>240000000</b>	<b>1383469961</b>	<b>20645965</b>	<b>1602823996</b>		



Asstt. Registrar (Finance),  
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Registrar,  
National Institute of Technology  
Agartala, Tripura (W)-798055

Director  
National Institute of Technology  
Agartala

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014			
SCHEDULE 4- RESTRICTED FUNDS:	Current Year 2013-2014	Previous Year 2012-2013	
1) Central Govt.			
2) State Govt. (Specify)			
3) Financial Institutions			
a) Term loans			
b) Interest accrued and due			
4) Banks			
a) Term Loans			
- Interest accrued and due.			
b) Other Loans (Specify)			
Interest accrued and due			
5) Other Institutions and Agencies			
6) Debentures and Bonds			
7) Others (specify)			
<b>TOTAL</b>			
Note: Amount due within one year.			
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">   <b>Asstt. Registrar (Finance),</b>  National Institute of Technology  Agartala. </div> <div style="text-align: center;">  </div> <div style="text-align: center;">   <b>Registrar</b>  National Institute of Technology  Agartala, Tripura (W)-798055 </div> <div style="text-align: center;">   <b>Director</b>  National Institute of Technology  Agartala </div> </div>			




**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014**


	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
<b>SCHEDULE 5- LOANS AND BORROWINGS</b>		
1) Central Govt.		0
2) State Govt. (Specify)		0
3) Financial Institutions		0
4) Banks		0
a) Term Loans		0
b) Other Loans (Temporary overdraft )	0	0
5) Other Institutions and Agencies		0
6) Debentures and Bonds		0
7) Fixed Deposits		0
7) Others (specify)		0
<b>TOTAL</b>	<b>0</b>	<b>0</b>

Note: Amount due within one year.

  
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 Registrar,  
 National Institute of Technology  
 Agartala, Tripura (W)-726055.

  
 Director,  
 National Institute of Technology  
 Agartala

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014			
	(Amount - Rs.)		
	Current Year 2013-2014	Previous Year 2012-2013	
<b>SCHEDULE 6- CURRENT LIABILITIES AND PROVISIONS</b>			
<b>A) CURRENT LIABILITIES</b>			
1) Acceptances	0		
2) Sundry Creditors			
For Plan Fund	76681335	280279954	
For Non-Plan Fund	3864340	84924836	
Outstanding Liabilities:			
a) Travelling & Conveyance	0	1210	
b) Telephone Re-imbursement	0	16404	
c) Printing & Stationery	0	0	
d) Scholarship	0	532840	
e) Allowance & Bonus	0	0	
f) Salaries & Wages	16659668	16495110	
g) Electricity & Power	2265211	0	
h) Telephone Expenses	26833	0	
i) CPDA	22568	28762	
j) Advertisement & Publicity	0	2614787	
k) Medical Re-imbursement	26469	0	
<b>TOTAL (7A)</b>	<b>99546424</b>	<b>384893903</b>	
<b>PROVISION:</b>			
a) Fund Payable to MHRD (Plan)	20000000	0	
b) Testing/Earthquake & Water quality etc	0	0	
c) Mess Fees Payable to Hostel	0	0	
d) CCB, CCMT & Other Fees	2579109	881347	
e) Counselling Fees-Payable to Students	100000	100000	
<b>TOTAL (7B)</b>	<b>22679109</b>	<b>981347</b>	
b) Others-Mess Fees payable to Hostel	0	0	
3) Advances Received	0	0	
4) Interest accrued but not due on:	0	0	
a) Secured Loans/ borrowings.	0	0	
b) Unsecured Loans/ borrowings.	0	0	
<b>TOTAL (7C)</b>	<b>0</b>	<b>0</b>	
<b>5) Statutory Liabilities:</b>			
a) Overdue	0	0	
b) Others	3945111	3422323	
Project Fund	44356770	30694874	
New Pension Scheme-Tier-I Agartala.			





Retirement Benefit Fund	41235287	40455839
Student Welfare Fund	740764	346721
Staff Development Fund	120379	120379
Institute Development Fund	36162826	33416245
EMD & Security Deposit	31961860	27634629
Infrastructural Development Fund	5683509	5632870
Sponsored Project Fund	99925002	106680925
Staff Welfare Fund	53562	35950
Departmental Promotional Fund(Civil)	1690568	1408791
NSS Unit	11172	8227
Staff Benefit Trust	92391	528821
Director's Relief Fund	319777	307359
School of Continuing Education	31450	30228
Guest House Fund	843199	618727
Aayam	701270	1068392
Moksha	339032	264152
TEQIP Fund	0	54361213
NSS Unit Prog.	13182	13182
Renewable Energy Club(TREDA)	24	24
Stipend Payable to Students(Forming Part of Schedule 13A)	458605	477490
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
<b>TOTAL (7D)</b>	<b>270882831</b>	<b>309724452</b>
6) Other current Liabilities		
i) Library Caution Money		
Opening Balance	13735500	10132500
Add: This year	5420000	4125000
	<b>19155500</b>	<b>14257500</b>
Less: Payment this year	2159000	522000
<b>TOTAL (7E)</b>	<b>16996500</b>	<b>13735500</b>
ii) Loan from DHE(Staff Salaries)		
	5629954	5629954
iii) Earnest Money Deposit	114616	114616
<b>TOTAL (7F)</b>	<b>5744570</b>	<b>5744570</b>
<b>TOTAL (I)</b>	<b>415849434</b>	<b>715079772</b>
<b>B. PROVISIONS</b>		
1) For taxation	0	0
2) Gratuity	0	0
3) Superannuation / pension	0	0
	0	0





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4) Accumulated Leave Encashment	0	0
5) Trade Warranties / Claims	0	0
6) Others (Specify)	0	0
<b>TOTAL (ii)</b>	0	0
<b>TOTAL (i+ii)</b>	<b>415849434</b>	<b>715079772</b>

  
**Asstt. Registrar (Financial)**  
 National Institute of Technology  
 Agartala.



  
**Registrar**  
 National Institute of Technology  
 Agartala, Tripura (W)-788055

  
**Director**  
 National Institute of Technology  
 Agartala



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)									
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA									
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014									
SCHEDULE 7 FIXED ASSETS	DESCRIPTION	Rate of Depn	GROSS BLOCK		DEPRECIATION		NET BLOCK		Remarks
			Cost/valuation As at beginning of the year	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 deductions during the year
							As at the Current year-end	Total up to the year-end	As at the Previous year-end
<b>PLAN FUND</b>									
<b>LAND</b>									
	Freehold								
	Leasehold								
	Building	10%	24896321			24896321	9562934	1533339	11096273
	Ladies Toilet	10%	115284			115284	50614	57081	57081
	Furniture & Fittings	10%	78502709	13206142		91708851	16251281	6791228	23042509
	Machinery & Equipments	15%	330478070	270967054		601445124	91342717	56811041	148153758
	Machinery & Equipments(Grass)	15%	40000			40000	21720	2742	24462
	EPBX Machine	15%	409937			409937	183951	33898	217849
	Library Books	100%	3032073			3032073	3032073	0	3032073
	Machinery & Equipments(Air Con)	15%	4541978	419700		4961678	1425782	3140	1953234
	Generator	15%	51000			51000	30069	23702	33209
	Computer & Accessories	60%	68606182	5980272		74586454	43232630	17164904	60397534
	Plant & Machinery(Tractor)	15%	385000			385000	226986	23702	250688
	Vehicle	15%	1686081			1686081	772479	137040	909519
	ELECTRIC INSTALLATIONS	10%	28455583			28455583	7134439	2132114	9266553
	Type II & III Quarters(Buildings)	10%	22934592	1288388		24222980	4886642	1883555	17452783
	Boundary Wall	10%	995600			995600	312162	68344	380506
	Admin Building & Class Room	10%	18621297			18621297	5838556	1278274	7116830
	Academic, Library Building	10%	126925380	9173345		136098725	19663788	10914774	30578562
	Networking(Equipments)	10%	56028049			56028049	4980833	5104722	10085555
	<b>TOTAL (I)</b>		<b>766705136</b>	<b>301034901</b>	<b>0</b>	<b>1067740037</b>	<b>208949656</b>	<b>104416736</b>	<b>0</b>
<b>NON-PLAN FUND</b>									
	FURNITURE & FIXTURES	10%	328363	188656		517019	140318	21987	162305
	COMPUTER/PERIPHERALS	60%	1417635	92190		1509825	1310207	64609	1374816
	ELECTRIC INSTALLATIONS	10%	37228388	8428826		45657214	4817211	3617881	8435092
	EPBX Machine	15%	421438			421438	261040	24060	285100
	Water Purifier	15%	126406			126406	57600	10321	67921
	Fax Machine	15%	9000			9000	5306	554	5860
	INTERNET / V.SET	5%	123291			123291	41725	4078	45803
	Hostel building, quarters etc	10%	19500000			19500000	3648748	1585125	5233873
	Store Goods & Equipments	15%	1027644	179105		1206749	401489	110427	511916
	Machinery & Equipments	15%	7200665	1848749		9049414	1753675	1012435	2762140
	Office Equipments	10%	692432			692432	114802	57763	2562565
	Musical Instruments	10%	125271			125271	40273	8500	48773
	Books & Journals	15%	38749			38749	18063	3103	21166
	Library Books	100%	34000			34000	9220	2478	11698
	Postage	10%	6893914	7652026		14545940	6479742	1810508	8290242
	<b>TOTAL (II)</b>		<b>98708456</b>	<b>49895542</b>	<b>0</b>	<b>148603998</b>	<b>64044704</b>	<b>69000798</b>	<b>133045502</b>
	<b>TOTAL</b>							<b>754373645</b>	<b>557755480</b>



Type IV Quarters (Buildings)	10%	27393886	4553792	32047678	2968942	2517956	5486898	26560780	24424944
Networking (Equipments)	10%	2242620		2242620	357529	188509	546038	1696582	1885091
Auditorium Building	10%	14838699		14838699	2271883	1256682	3528565	11310134	12566816
Boundary Wall	10%	251005		251005	18705	23230	41935	209070	232300
<b>TOTAL (ii)</b>		<b>218601862</b>	<b>72938886</b>	<b>0</b>	<b>88761182</b>	<b>81320996</b>	<b>0</b>	<b>170082178</b>	<b>129840680</b>
<b>TOTAL (i + ii)</b>		<b>985306998</b>	<b>373973787</b>	<b>0</b>	<b>1359280785</b>	<b>185737732</b>	<b>0</b>	<b>483448570</b>	<b>687596160</b>
<b>CAPITAL WORK IN PROGRESS</b>									
<b>PLAN FUND</b>									
Const. of Workshop		16491819		16491819	0	0	0	16491819	16491819
Const. of Boundary Wall		31733122	4236181	35969303	0	0	0	35969303	31733122
Const. of Boys & Girls Hostels		1245582044	15828186	1261410230	0	0	0	1261410230	1245582044
Const. of Main Gate & Sub Gate		8894505	1012179	9906684	0	0	0	9906684	8894505
Const. of Basket Ball Court		785976		785976	0	0	0	785976	785976
Const. of Watch Tower & Security Barrack		3336651	1674237	5010888	0	0	0	5010888	3336651
Const. of Market Complex		11943969		11943969	0	0	0	11943969	11943969
Const. of School of Management		314602921	44827870	359430791	0	0	0	359430791	314602921
Const. of Internal Road		189118430	20339631	209458061	0	0	0	209458061	189118430
Const. of Auditorium Buildings		21211849		21211849	0	0	0	21211849	21211849
Const. of Sewerage Treatment Plant (STP)		9590437	857041	10447478	0	0	0	10447478	9590437
Const. of Sports Complex		144173519	157892895	302066414	0	0	0	302066414	144173519
Const. of Central School		54917000		54917000	0	0	0	54917000	54917000
Const. of Housing & Guest House		506215054	16435980	522651034	0	0	0	522651034	506215054
Const. of Admin Block & Seminar Hall		251636129	111603867	363239996	0	0	0	363239996	251636129
Const. of Central Library		2419601		2419601	0	0	0	2419601	2419601
Const. of Central Stores		0	5198123	5198123	0	0	0	5198123	0
Const. of H4B Building		0	4910560	4910560	0	0	0	4910560	0
Const. of 1500 cap. Boys Hostel		0	157431831	157431831	0	0	0	157431831	0
Const. of Duplex Building		0	1217404	1217404	0	0	0	1217404	0
<b>TOTAL (i)</b>		<b>2812653026</b>	<b>543465985</b>	<b>0</b>	<b>3356119011</b>	<b>0</b>	<b>0</b>	<b>3356119011</b>	<b>2812653026</b>
<b>NON-PLAN FUND</b>									
Const. of Market Complex		20681908	0	20681908	0	0	0	20681908	20681908
Const. of Admin. Building		560651	0	560651	0	0	0	560651	560651
Const. of Workshop		387633	0	387633	0	0	0	387633	387633
<b>TOTAL (ii)</b>		<b>21630192</b>	<b>0</b>	<b>21630192</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21630192</b>	<b>21630192</b>
<b>TOTAL (i + ii)</b>		<b>2834283218</b>	<b>543465985</b>	<b>0</b>	<b>3377749203</b>	<b>0</b>	<b>0</b>	<b>3377749203</b>	<b>2834283218</b>
<b>GRAND TOTAL</b>		<b>3819590216</b>	<b>917439772</b>	<b>0</b>	<b>4737029988</b>	<b>185737732</b>	<b>0</b>	<b>483448570</b>	<b>3521879378</b>

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



Asstt. Registrar (Finance),  
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Agartala.

Registrar,  
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Director,  
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Agartala



**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014**

	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
<b>SCHEDULE 8- INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS:</b>		
1) In Govt securities	-	-
2) Other approved Securities	-	-
3) Shares	-	-
4) Deventures & Bonds	-	-
5) Subsidiaries & Joint Ventures	-	-
6) Others (to be specified)	-	-
<b>TOTAL:</b>	-	-

**FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)**  
**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014**

	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
<b>SCHEDULE 9- INVESTMENTS - OTHERS</b>		
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)		
<b>TOTAL:</b>	0	0

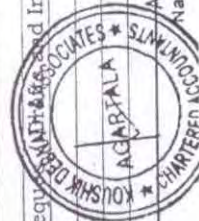


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National Institute of Technology  
Agartala

FORM OF FINANCIAL STATEMENTS (NON - PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2014			
SCHEDULE 10 CURRENT ASSETS, LOAN, ADVANCES ETC.	Current Year 2013-2014	Previous Year 2012-2013	
Current Assets:			
1) Inventories:			
a) Stores and Spares			
Stock in Transit			
NON-PLAN FUND			
Library Books in Transit	0	8924143	
Computer in Transit	0	178947	
Medicine in Transit	0	126059	
Machinery & Equipments	0	619140	
Work-in-Progress	0	4553930	
Books & Journal in Transit	0	67291152	
Furniture & Fittings in Transit	0	0	81693371
PLAN FUND			
Machinery & Equipments	64055272	258341636	
Machinery on Networking	7924964	7924964	
Computer & Accessories in Transit	543742	543742	
Furniture & Fittings in Transit	2752132	12064387	278874729
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	5100		5100
Security Deposit with TSECL			
3) Cash balance in hand (including cheque and imprest)			
Closing Cash Balance- Non Plan	2780814	510706	
Closing Cash Balance- Plan	67780	67780	578486
4) Bank Balances:			
a) With Scheduled Banks			



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Registrar,  
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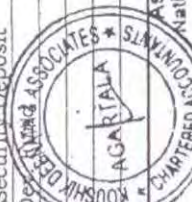


- On Current Account				
Canara Bank- Non Plan A/c No- 876	448955			448955
- On Savings Accounts				
SBI, NITA Br.-Non Plan(A/c-30369892838)	112007631			204201737
SBI, NITA Br.-Plan(A/c-30358199684)	219529291			12888849
Canara Bank, Agt Br.- Plan (A/c-9007)	19541			19541
SBI, NITA Br.-N. P. S. Fund(A/c-30471674447)	2805			3876
SBI, NITA Br.-Project Fund(A/c-30533908751)	3945111			3422323
SBI, NITA Br.-R. B. Fund(A/c-30693303036)	6776177			8131669
SBI, NITA Br.-Student Welfare Fund(A/c-30534089717)	740764			346721
SBI, NITA Br.-Inst. Dev. Fund(A/c-30534091012)	15919251			15085845
SBI, NITA Br.-EMD & Security Deposit(A/c-30936141729)	16366790			12634629
TGB, NITA Br.-Inf. Dev Fund(A/c-8026010030064)	683509			632870
SBI, NITA Br.-SDP Fund(A/c-30773081908)	28448161			41941088
SBI, NITA Br.-Staff Welfare Fund(A/c-30534092027)	53562			35950
SBI, NITA Br.-DPF(Civil)(A/c-30534090278)	1690568			1408791
SBI, NITA Br.-NSS Unit(A/c-30786417404)	11172			8227
SBI, NITA Br.-Staff Benefit Trust(A/c-31509918149)	92391			528821
SBI, NITA Br.-Director's Relief Fund(A/c-31536875510)	319777			307359
SBI, NITA Br.-School of Cont. Edu.(A/c- 30939795485)	31450			30228
SBI, NITA Br.-Guest House Fund(A/c-31664487420)	843199			618727
SBI, NITA Br.-Aayam(A/c-31441172525)	701270			1068392
SBI, NITA Br.-TEQIP Fund(A/c-32067844633)	0			54361213
SBI, NITA Br.-Moksha(A/c-31623482000)	339032		408970407	264152
- On Deposit Account(Including Margine Money)				
Fixed Deposit with SBI Agt Br.-General A/c	3004085			2572324
Fixed Deposit with Canara Bank, Agt. Br.-General A/c	22162525			19140221
Fixed Deposit with SBI Agt Br.-NPS Fund	44353965			30690998
Fixed Deposit with SBI Agt Br.-RBF Fund	34459110			32324170
Fixed Deposit with TGB NITA Br.-Inf. Dev Fund	5000000			5000000
Fixed Deposit with TGB NITA Br.-SDP Fund	71476841			64739837
Fixed Deposit with SBI Agt Br.-Project Fund	0			0
Fixed Deposit with SBI Agt Br.-EMD & Security Deposit	15595070			15000000
Fixed Deposit with TGB NITA Br.-Inst. Dev Fund	20243575		216295171	18330400
b) With Non Sheded banks				
- On Current Account				
- On Deposit Account				

Director  
National Institute of Technology  
Agartala

Registrar  
National Institute of Technology  
Agartala, Tripura (W)-799055

Asstt. Registrar (Finance)  
National Institute of Technology  
Agartala




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

SCHEDULE 10A: DETAILS OF FIXED DEPOSIT ACCOUNTS						
Sl. No.	Date of Deposit	Certificate / Account No	Amount (Rs)	Maturity date	Maturity Value (Rs)	Name of Bank
<b>i) General Accounts</b>						
1	31.03.2014	30268531331	2964056	30.05.2015	3239960	SBI Agt Br.
2	31.03.2014	30772128735	40029	30.05.2015	43755	SBI Agt Br.
3	15.03.2014	234840100086372	7166134	15.03.2016	8570697	Canara Bank, Agt Br
3	26.03.2014	3248401000426/1	8000000	26.03.2016	9568001	Canara Bank, Agt Br
4	26.03.2014	3248401000426/2	6996391	26.03.2016	8367683	Canara Bank, Agt Br
		<b>TOTAL</b>	<b>25166610</b>		<b>29790096</b>	
<b>ii) Retirement Benefit Fund</b>						
1	02.04.2011	430359168928	1531554	02.04.2014	1956711	SBI, NITA Br
2	10.03.2014	503	3293450	10.03.2015	3617652	TGB NITA Br.
3	10.03.2014	504	3293450	10.03.2015	3617652	TGB NITA Br.
4	10.03.2014	505	2634759	10.03.2015	2894120	TGB NITA Br.
5	10.03.2014	506	1976071	10.03.2015	2170592	TGB NITA Br.
6	10.03.2014	507	1317380	10.03.2015	1447061	TGB NITA Br.
7	10.03.2014	508	658691	10.03.2015	723531	TGB NITA Br.
8	06.02.2014	33642380099	2599178	06.02.2015	2841118	SBI, NITA Br.
9	06.02.2014	33642380191	1559507	06.02.2015	1704671	SBI, NITA Br.
10	06.02.2014	33642380351	1559507	06.02.2015	1704671	SBI, NITA Br.
11	06.02.2014	33642380500	1559507	06.02.2015	1704671	SBI, NITA Br.
12	06.02.2014	33642380634	1559507	06.02.2015	1704671	SBI, NITA Br.
13	06.02.2014	33642380736	1559507	06.02.2015	1704671	SBI, NITA Br.
14	06.02.2014	33642380872	1559507	06.02.2015	1704671	SBI, NITA Br.
15	06.02.2014	33642381004	1559507	06.02.2015	1704671	SBI, NITA Br.
16	06.02.2014	33642379708	1559507	06.02.2015	1704671	SBI, NITA Br.
17	06.02.2014	33642379822	1559507	06.02.2015	1704671	SBI, NITA Br.
18	06.02.2014	33642379866	1559507	06.02.2015	1704671	SBI, NITA Br.
19	06.02.2014	33642379968	1559507	06.02.2015	1704671	SBI, NITA Br.
		<b>TOTAL</b>	<b>34459110</b>		<b>38019818</b>	
<b>Asstt. Registrar (Finance) TOTAL</b>						
<b>iii) New Pension Scheme Fund-Tier-I</b>						
1	02.04.2011	30359167844	2034416	02.04.2014	2599167	SBI, NITA Br.
2	16.04.2011	30452528964	310191	16.04.2014	396300	SBI, NITA Br.
3	13.09.2014	30477089620	149194	13.09.2014	162683	SBI, NITA Br.
4	17.09.2013	30494319968	633626	17.09.2014	690914	SBI, NITA Br.
5	23.10.2013	30536974536	665801	23.10.2014	726155	SBI, NITA Br.
6	17.11.2013	30572693760	281850	17.11.2014	308863	SBI, NITA Br.
7	27.01.2014	30659251769	263663	27.01.2015	286673	SBI, NITA Br.

  
 Asstt. Registrar (Finance)  
 National Institute of Technology  
 Agartala

8	27.01.2014	30659223516	263663	27.01.2015	286673	SBI, NITA Br.
9	13.02.2014	30679572359	264019	13.02.2015	286597	SBI, NITA Br.
10	26.03.2014	30723233180	263034	26.03.2015	285927	SBI, NITA Br.
11	18.04.2013	30741450409	240988	18.04.2014	262776	SBI, NITA Br.
12	25.05.2013	30772790529	261819	25.05.2014	285491	SBI, NITA Br.
13	11.06.2013	30790483174	268421	11.06.2014	292690	SBI, NITA Br.
14	22.07.2013	30833062025	270025	22.07.2014	294439	SBI, NITA Br.
15	26.08.2013	30869020196	270371	26.08.2014	294816	SBI, NITA Br.
16	16.09.2013	30894559896	268924	16.09.2014	293238	SBI, NITA Br.
17	26.10.2013	30935263512	269290	26.10.2014	293667	SBI, NITA Br.
18	12.11.2013	30954910750	266620	12.11.2014	290584	SBI, NITA Br.
19	18.12.2013	30995065723	2606718	18.12.2014	2855629	SBI, NITA Br.
20	27.01.2014	31036380751	272351	27.01.2015	296121	SBI, NITA Br.
21	06.02.2014	31048976850	456789	06.02.2015	495931	SBI, NITA Br.
22	26.03.2014	31110608821	286406	26.03.2015	311332	SBI, NITA Br.
23	28.04.2013	31149019728	281514	28.05.2014	306967	SBI, NITA Br.
24	03.06.2013	31195703339	425305	03.06.2014	463758	SBI, NITA Br.
25	15.06.2013	31211169672	287684	15.06.2014	313694	SBI, NITA Br.
26	29.07.2013	31295128285	143901	29.07.2014	156912	SBI, NITA Br.
27	20.08.2013	31345275995	726167	20.08.2014	791822	SBI, NITA Br.
28	22.09.2013	31438847121	429895	22.09.2014	469911	SBI, NITA Br.
29	21.10.2013	31473911005	432873	21.10.2014	470909	SBI, NITA Br.
30	12.11.2013	31498348868	592268	12.11.2014	643971	SBI, NITA Br.
31	09.12.2013	31531900439	849659	09.12.2014	929054	SBI, NITA Br.
32	18.01.2014	31590482761	600183	18.01.2015	651883	SBI, NITA Br.
33	20.02.2014	31638619142	604525	21.02.2015	656104	SBI, NITA Br.
34	24.03.2014	31683863334	601087	24.03.2015	653358	SBI, NITA Br.
35	11.04.2013	31705934269	535940	11.04.2014	593502	SBI, NITA Br.
36	12.05.2013	31744689276	580406	12.05.2014	640882	SBI, NITA Br.
37	22.07.2013	31847516759	1178410	22.07.2014	1287995	SBI, NITA Br.
38	07.09.2013	31926034223	589800	07.09.2014	640774	SBI, NITA Br.
39	21.09.2013	31950668862	569544	21.09.2014	620066	SBI, NITA Br.
40	16.11.2013	32036725156	569544	16.11.2014	619203	SBI, NITA Br.
41	16.11.2013	32036500878	592546	16.11.2014	647702	SBI, NITA Br.
42	16.12.2013	32088124959	595954	16.12.2014	651427	SBI, NITA Br.
43	20.01.2014	32150080442	347206	20.01.2015	379170	SBI, NITA Br.
44	16.02.2014	32194047063	631504	16.02.2015	685463	SBI, NITA Br.
45	22.03.2014	32249818696	607674	22.03.2015	660545	SBI, NITA Br.
46	11.04.2013	32280294988	567603	11.04.2015	670577	SBI, NITA Br.
47	11.05.2013	32327269715	573869	11.05.2015	678158	SBI, NITA Br.
48	29.06.2013	32401165700	617592	29.06.2014	673430	SBI, NITA Br.
49	19.07.2013	32435516795	792485	19.07.2013	864136	SBI, NITA Br.
50	30.08.2013	32509160200	1754227	30.08.2014	822419	SBI, NITA Br.
51	22.09.2013	32560299037	821250	22.09.2015	981255	SBI, NITA Br.
52	12.10.2013	32599643066	808197	12.10.2014	883427	SBI, NITA Br.
53	16.11.2013	32659511373	860409	16.11.2014	940499	SBI, NITA Br.

*[Signature]*  
 Director  
 National Institute of Technology  
 Agartala









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27	10.03.2014	8026142100119	2407165	10.03.2015	2644122	TGB NITA Br.
28	10.03.2014	8026142100128	1203582	10.03.2015	1322061	TGB NITA Br.
		<b>TOTAL</b>	<b>71476841</b>		<b>78512901</b>	
v) Infrastructure Development Fund						
1	07.10.2009	466	1000000	07.10.2014	1504264	TGB NITA Br.
2	07.10.2009	467	1000000	07.10.2014	1504264	TGB NITA Br.
3	07.10.2009	468	500000	07.10.2014	752132	TGB NITA Br.
4	07.10.2009	469	500000	07.10.2014	752132	TGB NITA Br.
5	07.10.2009	470	500000	07.10.2014	752132	TGB NITA Br.
6	07.10.2009	471	500000	07.10.2014	752132	TGB NITA Br.
7	07.10.2009	472	400000	07.10.2014	601706	TGB NITA Br.
8	07.10.2009	473	300000	07.10.2014	451279	TGB NITA Br.
9	07.10.2009	474	200000	07.10.2014	300853	TGB NITA Br.
10	07.10.2009	475	100000	07.10.2014	150246	TGB NITA Br.
		<b>TOTAL</b>	<b>5000000</b>		<b>7521140</b>	
vi) Institute Development Fund						
1	10.03.2014	509	3952141	10.03.2015	4341183	TGB NITA Br.
2	10.03.2014	510	3293450	10.03.2015	3617652	TGB NITA Br.
3	10.03.2014	511	3293450	10.03.2015	3617652	TGB NITA Br.
4	10.03.2014	512	2634759	10.03.2015	2894120	TGB NITA Br.
5	10.03.2014	513	1976071	10.03.2015	2170592	TGB NITA Br.
6	10.03.2014	514	1317380	10.03.2015	1447061	TGB NITA Br.
7	10.03.2014	515	658691	10.03.2015	723531	TGB NITA Br.
8	06.02.2014	33642377597	1558126	06.02.2015	1703162	SBI NITA Br.
9	06.02.2014	33642378738	1559507	06.02.2015	1704671	SBI NITA Br.
		<b>TOTAL</b>	<b>20243575</b>		<b>23219624</b>	
vii) EMD & Security Deposit Fund						
1	06.02.2014	33642378772	1559507	06.02.2015	1704671	SBI NITA Br.
2	06.02.2014	33642378909	1559507	06.02.2015	1704671	SBI NITA Br.
3	06.02.2014	33642378976	1559507	06.02.2015	1704671	SBI NITA Br.
4	06.02.2014	33642379038	1559507	06.02.2015	1704671	SBI NITA Br.
5	06.02.2014	33642379107	1559507	06.02.2015	1704671	SBI NITA Br.
6	06.02.2014	33642379130	1559507	06.02.2015	1704671	SBI NITA Br.
7	06.02.2014	33642379136	1559507	06.02.2015	1704671	SBI NITA Br.
8	06.02.2014	33642379138	1559507	06.02.2015	1704671	SBI NITA Br.
9	06.02.2014	33642379138	1559507	06.02.2015	1704671	SBI NITA Br.
10	06.02.2014	33642379138	1559507	06.02.2015	1704671	SBI NITA Br.
		<b>TOTAL</b>	<b>15595070</b>		<b>17046710</b>	
Asstt. Registrar (Finance), National Institute of Technology Agartala						
		<b>GRAND TOTAL</b>	<b>216295171</b>		<b>242020870</b>	



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 31.03.2014		
	Current Year 2013-2014	(Amount - Rs.) Previous Year 2012-2013
<b>SCHEDULE 11 - ACADEMIC RECEIPTS</b>		
1) Academic Collection	116603771	128864044
2) Annual Fees / Subscription		
3) Seminar / program Fees		
4) Consultancy Fees		
5) Others (Specify)-		
a) Misc Income	213985	31875
b) Recruitment Fees(Interview)	0	0
c) Sale of Tender Form	359980	194000
<b>TOTAL</b>	<b>117177736</b>	<b>129089919</b>
<div style="display: flex; justify-content: space-between;"> <div>   Asstt. Registrar (Finance),  National Institute of Technology  Agartala. </div> <div>  </div> <div>   Registrar,  National Institute of Technology  Agartala. Triptura (W)-799055 </div> <div>   Director  National Institute of Technology  Agartala </div> </div>		

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 31.03.2014			
	Current Year 2013-2014	(Amount - Rs.) Previous Year 2012-2013	
<b>SCHEDULE 12 - GRANTS / SUBSIDIES</b>			
(Irrevocable Grants & Subsidies received)			
1) Central Govt.			
a) From MHRD- Non Plan	1900000000	2200000000	
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	
<b>TOTAL</b>	<b>1900000000</b>	<b>2200000000</b>	
<b>FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)</b>			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2014			
	Current Year 2013-2014	(Amount - Rs.) Previous Year 2012-2013	
<b>SCHEDULE 13 - INCOME FROM INVESTMENTS</b>			
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			
<b>TOTAL</b>	<b>0</b>	<b>0</b>	

Asstt. Registrar (Finance),  
National Institute of Technology  
Agartala, Tripura (W)-789055.

Asstt. Registrar (Finance),  
National Institute of Technology  
Agartala, Tripura (W)-789055.



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 31.03.2014		
	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
<b>SCHEDULE 12A - STIPEND FUND</b>		
<b>RECEIPTS</b>		
Opening Balance	477490	2706518
1) State Govt.fund for Stipend	0	7356970
a) SC & OBC Welfare Deptt	0	0
b) SC Welfare Deptt-SC Stipend	0	4336350
c) SDM-ST Stipend	0	0
d) DHE- NEC Stipend	252000	1179965
e) Post Madhyamik & OBC		
f) ST Welfare Society		
2) Govt. Agencies		
a) NEC-Shillong-National Scholarship	0	751600
b) NEC-Shillong-Stipend		
3) Institution / Welfare bodies	9708866	4960146
4) Stipend-Other State	10438356	21291549
<b>TOTAL (i)</b>		
<b>EXPENDITURE</b>		
NEC-Stipend	23200	818800
Post Madhyamik Stipend	0	990750
Otherstate-Stipend	9705526	7636894
Post Matric Scholarship-SC & OBC	0	6876970
Post Matric Scholarship-ST	4600	4259870
LIG-Stipend	0	0
Post Matric Scholarship-OBC	246425	230775
Refund to SDM(ST Stipend)	0	0
<b>TOTAL (ii)</b>	9979751	20814059
<b>Net Amount (Tr. to Schedule 6)</b>	458605	477490

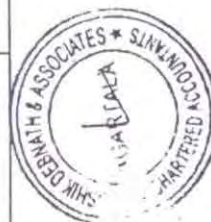
Asstt. Registrar (Finance),  
National Institute of Technology  
Agartala.

Registrar,  
National Institute of Technology  
Agartala, Tripura (W)-799055

Director,  
National Institute of Technology  
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 31.03.2014			
	Current Year 2013-2014	(Amount - Rs.) Previous Year 2012-2013	
<b>SCHEDULE 14 - INTEREST EARNED</b>			
1) On Term Deposits:			
a) With scheduled Banks- Non-Plan Fund		0	
State Bank of India, NIT Agartala Br.	431761	231242	
Canara Bank, Agartala Br	3021304	1644172	
b) With Non scheduled Banks			
c) With Institutions			
d) Others			
2) On Savings Accounts:			
a) With scheduled Banks			
Non-Plan Fund:			
Canara Bank, Agartala Br	0	0	
State Bank of India, NIT Agartala Br.	6541405	7344957	
Plan Fund:			
Canara Bank, Agartala Br	0	761	
State Bank of India, NIT Agartala Br.	13794592	9490926	
b) With Non scheduled Banks	0		
c) Post office savings Accounts			
d) Others			
3) On Loans:			
a) Employees / Staff			
b) Others			
i) Intt on Mobilization Advance(NCCL)	6495469	9689827	
4) Interest on Debtors and Other Receivables		0	
<b>TOTAL</b>	<b>30284531</b>	<b>28401885</b>	



Asstt. Registrar (Finance),  
National Institute of Technology  
Agartala.

Registrar,  
National Institute of Technology  
Agartala, Tripura (W)-790055

Director  
National Institute of Technology  
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 31.03.2014**

<b>SCHEDULE 15 - STAFF PAYMENT &amp; BENEFIT</b>		<b>(Amount - Rs.)</b>	
	<b>Current Year 2013-2014</b>	<b>Previous Year 2012-2013</b>	
a) Salaries and Wages			
i) Regular Faculty & Staffs	128916204	110735920	
ii) Contractual Faculty & Staffs	53310187	45387142	
b) Allowances and Bonus	1449117	939237	
c) Contribution to Provident fund	0	0	
d) Contribution to other funds (Specify)			
e) New Pension Scheme Fund-Tier-I			
f) Staff Welfare Expenses	5615267	5798143	
g) Expenses on Employees Retirement and Terminal benefits	0	0	
h) LTC Facility	0	0	
i) Medical Facility	4091232	742699	
j) Children Education Allowance	158373	75566	
k) Other (Specify)			
1) Telephone Re-imbursement	68913	106827	
2) CPDA	3529956	2416372	
<b>TOTAL</b>	<b>197139249</b>	<b>166201906</b>	

**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 31.03.2014**

<b>SCHEDULE 16 - ACADEMIC EXPENSES</b>		<b>(Amount - Rs.)</b>	
	<b>Current Year 2013-2014</b>	<b>Previous Year 2012-2013</b>	
a) Laboratory Expenses			
b) Honorarium to Visiting Examiner	849206	88831	
c) Expenses on Workshop	445897	348820	
d) Convocation Expenses	5197542	206915	
e) Scholarship-Institute	19905932	13904762	
f) Others (specify)	0	0	
<b>TOTAL</b>	<b>26398577</b>	<b>14549328</b>	



**Asstt. Registrar (Finance),**  
National Institute of Technology  
Agartala.

**Registrar,**  
National Institute of Technology  
Agartala, Tripura (W)-798055

**Director,**  
National Institute of Technology  
Agartala

*[Signature]*

## FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

SCHEDULES FORMING PART OF INCOME &amp; EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2014

SCHEDULE 17 - ADMINISTRATIVE & GENERAL EXPENSES	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
a) Electricity and Power	25231533	14505308
b) Water Charges	0	0
c) Postage	96440	2951
d) Printing & Stationery	4109059	1132066
e) Travelling & Conveyance Expenses	1765528	724816
f) Expenses on Seminar	0	0
g) Hospitality Expenses	264606	175275
h) Advertisement and publicity	2444966	5303795
i) Newspaper & Periodical	10952	12951
j) Telephone & Communication	521792	490825
k) Others (Specify)	0	0
l) Miscellaneous Expenses	141107	139119
m) Medicine Expenses	972614	341377
n) Institution Membership Exp	49000	50000
o) Recruitment expenses	806058	578851
p) Liveries	51099	0
q) Security Services	28966699	15928728
r) Gardening Expenses	3194874	1582780
s) Sweeping & Cleaning	12894078	8764546
t) Lawyer Fees	203115	90780
u) Networking Expenses	362181	2859493
v) Games, Sports & Cultural Activity	3117917	2600006
w) Internal Audit Fees	22472	16854
x) Statutory Audit Fees-A.G.	50000	50000
y) Rent to PWD-Agartala Transit House	19200	17040
z) BOG Meeting Expenses	966857	901231
aa) Cable Charges	3500	7500
<b>TOTAL</b>	<b>86265647</b>	<b>56276292</b>



Asstt. Registrar (Finance),  
National Institute of Technology  
Agartala.

Registrar,  
National Institute of Technology  
Agartala, Tripura (W)-799055

Director,  
National Institute of Technology  
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 31.03.2014**

	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
<b>SCHEDULE 18 - TRANSPORTATION EXPENSES</b>		
a) Registration, Insurance etc. for new Car.	173434	133839
b) Transportation Expenses	1257377	1122720
c) Vehicle Repair & Maintenance	179491	171914
d) Others (Specify)		
<b>TOTAL</b>	<b>1610302</b>	<b>1428473</b>

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**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**

**SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2014**

	(Amount - Rs.)	
	Current Year 2013-2014	Previous Year 2012-2013
<b>SCHEDULE 19 - REPAIRS &amp; MAINTENANCE</b>		
a) Repair & Maintenance	3117071	2213367
b) Repairs & Maints-Electricals	835087	471061
c) Repair & Maintenance - Building	5098301	4684711
d) Others (Specify)	0	0
<b>TOTAL</b>	<b>9050459</b>	<b>7369139</b>

Assit. Registrar (Finance),  
National Institute of Technology  
Agartala.



Registrar,  
National Institute of Technology  
Agartala, Tripura (W)-799066

Director,  
National Institute of Technology,  
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 31.03.2014**

(Amount - Rs.)		
SCHEDULE 20 - FINANCE COSTS	Current Year 2013-2014	Previous Year 2012-2013
a) Interest on Fixed Loans	0	0
b) Interest on Other Loans	0	0
c) Bank Commission	141252	175904
d) Others (Specify)	0	0
<b>TOTAL</b>	<b>141252</b>	<b>175904</b>

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**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2014**

(Amount - Rs.)		
SCHEDULE 21 - OTHER EXPENSES	Current Year 2013-2014	Previous Year 2012-2013
a) Provision for Bad and Doughtful Debts	0	0
b) Irrecoverable Balance Written off	0	0
c) Others (Specify)	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>

*[Signature]*  
 Asstt. Registrar (Finance),  
 National Institute of Technology,  
 Agartala.



*[Signature]*  
 Registrar,  
 National Institute of Technology,  
 Agartala, Tripura (W)-789055

*[Signature]*  
 Director,  
 National Institute of Technology,  
 Agartala



SCHEDULE-22SIGNIFICANT ACCOUNTING POLICIES

1. ACCOUNTING CONVENTION:  
The Financial statement are prepared on the basis of historical cost convention unless otherwise stated and on the accrual method of accounting.
2. INVENTORY VALUATION:  
i) Stores & spares (including machinery Spares) are valued at cost
3. INVESTMENT:  
No Investment except Fixed Deposit was made during the year under audit. Investments are valued at cost.
4. FIXED ASSETS:  
Fixed Assets are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses related to acquisition.
5. DEPRECIATION:  
Depreciation is provided on reducing balance method/diminishing return method as per rate specified in the Income Tax Act'1961. However, depreciation has been charged on pro-rata basis.
6. GOVERNMENT GRANT/SUBSIDIES:  
i) Government Capital grants for setting up projects are treated as capital receipts (the said grants are shown under the head Ear Marked/Endowment Fund)  
ii) Fixed Assets acquired out of specific grants are shown at their full value of acquisition.
7. RETIREMENT BENEFIT:  
Provision towards Retirement Benefits payable has been made as per Budget Provision of 2013-14.
8. NEW PENSION SCHEME:  
Employee's contribution to NPS along with matching contribution of the Institution has been deposited in a separate Bank Account and Fixed Deposit is made under the New Pension Scheme Fund-Tier-I on monthly basis.



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Agartala.

SCHEDULE -23CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS1. CONTINGENT LIABILITIES:

The Institute has no Contingent liabilities.

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:


NIT Agartala being an educational institute is exempted from tax under section 10 (23C) of the Income tax act 1961.

4. FOREIGN CURRENCY TRANSACTION:


Foreign currency transactions are recorded at the exchange rates prevailing on the date of the transaction


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 31.03.2014 and income and expenditure and Receipts and payment account for the year ended on that date.

  
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National Institute of Technology,  
Agartala. Tripura (W)-799055

  
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Agartala



**FORM OF FINANCIAL STATEMENTS (NON- PROFIT ORGANISATIONS)**  
**Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA**  
**CASH FLOW STATEMENT FOR THE PERIOD/ YEAR ENDED 31.03.2014**

Particulars	Current Year 2013-14	Previous Year 2012-13
<b>A. CASH FLOW FROM OPERATING ACTIVITIES</b>		
Susplus/(deficit) for the year	(192,674,951)	(5,581,105)
Adjustments for the Non-operating Incomes/Expenses		115,242,862
Depreciation	185,737,732	-
Write offs	-	115,242,862
Interest expenses on Loans	-	109,661,757
(Increase)/Decrease in Current Assets	295,601,283	(952,714,191)
Increase/(Decrease) in Current Liabilities	(260,407,602)	137,956,512
Net Cash Flow from Operating Activities	<b>28,256,462</b>	<b>(705,095,922)</b>
<b>B. CASH FLOW FROM INVESTING ACTIVITIES</b>		
(Purchase)/Sale of Fixed Assets	(917,439,772)	(807,601,476)
(Purchase)/Sale of Fixed Investments	(3,454,065)	(1,875,414)
Interest received	-	(809,476,890)
Net Cash Flow from Investing Activities	<b>(920,893,837)</b>	<b>(809,476,890)</b>
<b>C. CASH FLOW FROM FINANCING ACTIVITIES</b>		
Additions to General Fund during the year	19,151,048	500,000
Grants/funds in nature of founders/promoters contribution	990,202,771	1444762804
Endowment fund(principal sum)	-	-
Interest paid on Loans	<b>1,009,353,819</b>	<b>1,445,262,804</b>
Net Increase in Cash Equivalents (A+B+C)	116,716,444	(69,310,008)
Csh and cash Equivalents as at the beginning of F.Y.	218,137,568	287,447,576
Cash and Cash Equivalent at the end of the period	<b>334,854,012</b>	<b>218,137,568</b>



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