



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



ANNUAL REPORT OF 2012-2013



NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA
Barjala, Agartala, Tripura, India - 799055
Website: www.nitagartala.in

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

**ANNUAL REPORT AND ANNUAL ACCOUNTS
2012-2013**

(AUTHENTICATED)

MINISTER OF STATE IN THE
MINISTRY OF HUMAN RESOURCE DEVELOPMENT

NEW DELHI
DATED:



NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA



President of India

Shri Pranab Mukherjee

Visitor of National Institute of Technology, Agartala



The Prime Minister of India

Dr. Manmohan Singh



Dr. M. Mangapati Pallam Raju

Hon'ble Minister of Human Resource Development
Government of India



Dr. Shashi Tharoor

Hon'ble Minister of State for Human Resource Development



Shri Jitin Prasada

Hon'ble Minister of State for Human Resource Development



Shri Manik Sarkar

Hon'ble Chief Minister

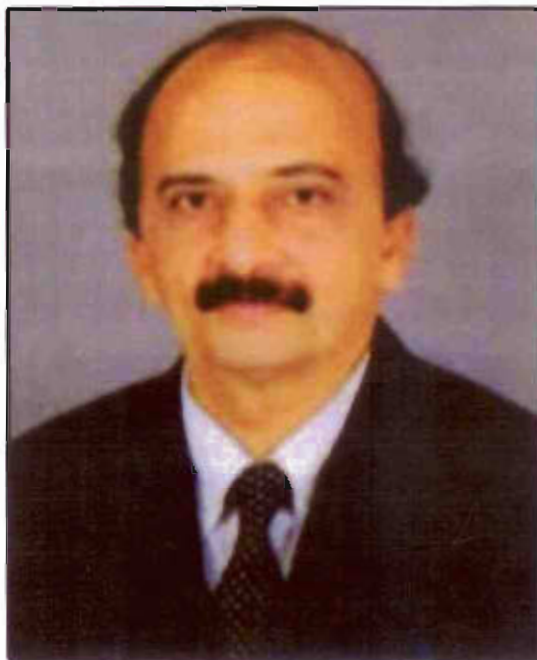
Government of Tripura



Prof. (Dr.) P. N. Singh

Chairman, Board of Governors

National Institute of Technology, Agartala



Dr. Gopal Mugeraya

Director

National Institute of Technology, Agartala

ANNUAL REPORT

2012 – 2013



NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

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1.0 INTRODUCTION

National Institute of Technology, Agartala a Centrally Funded Institution is one of the thirty 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, Civil & Transportation 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. 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. NITA has topped the Campus Placements in Tripura. The Institute feels proud to have more than 90% of the students placed in various well-acclaimed national companies and organisations. 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, fastening 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, Administrative Blocks, Workshops.
- 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 mativating 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, M. Tech., M. Sc. (courses in Physics, Chemistry and Mathematics) and Ph.D. courses in Engineering, Technology, Science and Humanities.

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) School of Management.
- (2) Administrative Building I and II.
- (3) Residential quarters H4A & B, H5, H2A and B and H3A & H3B.
- (4) Completion of Boundary wall.
- (5) Main Gate and Auxiliary Gate II and III.
- (6) International Guest House.
- (7) Directors' Bangalow.
- (8) Road construction.
- (9) Kendriya Vidyalaya.
- (10) G + 6 Academic Block.
- (11) Donner Building.
- (12) Computer Science Building.
- (13) Laboratory cum Canteen Building.

2.0 AN OVERVIEW

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

2.1 Historical Background

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

The Institute (i.e. erstwhile Tripura Engineering College) was established in 1965 with the three traditional branches of Civil, Electrical and Mechanical Engineering. It was initially affiliated to Calcutta University and had the same curriculum structure and examination system at par with Bengal Engineering College (presently Bengal Engineering and Science University, Shibpur). After the establishment of Tripura University, the Institute was then affiliated to 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° C in the winter season to a maximum of 35° 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 in 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 28th March 2008. The SBI has opened an ATM counter in the Institute campus. Teachers, staff, students and local inhabitants are getting benefit out of it. With the introduction of nationalized Banking facility in the campus, a long pending demand of the students and staff of the Institute has been fulfilled. Recently two ATM counters one by CANARA Bank and the other by Punjab National Bank has also been operating in the campus.

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 "Tripura Engineering College" having PIN: 799055.

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.

The number of students recruited by various organizations, based on campus interviews during 2012-13 are presented below:

Branch	Name of the company/ industry	Bachelors Degree level	Masters Degree level	Ph. D.	Total
EE	ABB	02	00	00	02
CSE, ECE	Samsung Research India	08	00	00	08
EE, CSE, ECE, EIE	Aricent Technologies	14	00	00	14
All Branch	Capgemini	22	02	00	24
ME	Maruti Suzuki	04	00	00	04
CSE	Samsung Engineering Lab	01	00	00	01
CSE, ECE	Rancore	05	00	00	05
ME	Mahindra & Mahindra Ltd.	02	00	00	02
ME	L&T	02	00	00	02
CE, ME, EE	Sankalp Semiconductor	02	00	00	02
CE	ITD Cementation	02	00	00	02
CSE	Polaris	06	00	00	06
CSE, MCA	Intecons Software Lab	00	01	00	01
CSE	Drishti Soft	01	00	00	01
EE, EIE	MECON	01	00	00	04
ME, EE, EIE	IOCL	10	00	00	10

EE	Power Grid	00	03	00	03
ME, PE, EIE	Hindustan Motors	04	00	00	04
EE,ME	Denso India Pvt. Ltd.	09	00	00	09
ME,CHE, EE	Vedanta Resources	13	00	00	13
CHE	Sharp Corp	02	00	00	02
CSE	SISO	02	00	00	02
EE, ME, CHE,	KRIBHCO	03	00	00	03
CE	ABCI Infra	05	00	00	05
M. Tech All Br.	Royal Group of Institutions	00	07	02	09
CSE, MCA, ECE	Techno Soft	03	00	00	03
CE, ME	Jindal Steel & Power Ltd.	05	00	00	05
B.TECH All	Indian Army (3 rd Students for SSB interviews.)	17	00	00	17

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, 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.) P. K. Bose, 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 Tridib Chakraborty, Principal, Women's Polytechnic, Hapania, Tripura.
6	Prof. Sekhar Datta, Professor, Tripura Institute of Technology, Narsingarh, Tripura.
7	Prof. Nitindra Nath Som, Former Professor of Civil Engineering & Dean, Faculty of Engineering & Technology, Jadavpur University, Kolkata, West Bengal.
8	Dr. Bindu Dey, Advisor of Biotechnology, Department of Biotechnology, New Delhi.
9	Shri P. N. Das, Associate Professor, Department of Electrical Engineering, NIT, Agartala.
10	Mr. Sumanta Chakrabarti, Registrar is the Secretary of BOG.

Members of the Finance Committee

<i>Sl. No.</i>	<i>Name and Designation of the Members</i>
1	Prof. P. N. Singh, Chairman of the BOG, NIT Agartala, Former Director, NIT Karnataka, Surathkal (Karnataka).
2	Prof. (Dr.) P. K. Bose, 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	Shri P. N. Das, Associate Professor, Department of Electrical Engineering, NIT, Agartala.
6	Mr. Sumanta Chakrabarti, Registrar is the Member Secretary of FC.

Members of the Building and Works Committee

<i>Sl. No.</i>	<i>Name and Designation of the Members</i>
1	Prof. (Dr.) P. K. Bose, Director, NIT Agartala (Tripura) – Chairman of the BWC.
2	The Director or Dy. Secretary, Department of Higher Education, Ministry of Human Resource Development, Govt. of India.
3	Dr. A. K. Chakraborty, Dean (P&D), NIT Agartala.
4	Shri Ajoy Gupta, Superintending Engineer, CPWD, NIT Agartala.
5	Shri Asit Bhaumik, Addl. Chief Engineer, PWD, Govt. of Tripura.
6	Shri Kajal Banik, Executive Engineer, Electrical Inspectorate, Govt. of Tripura.
7	Mr. Sumanta Chakrabarti, Registrar is the Member Secretary of BWC.

Members of the Senate meeting

<i>Sl. No.</i>	<i>Name and Designation of the Members</i>
1	Prof. (Dr.) P. K. Bose, 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	5 Nos.
C	Building & Works Committee Meeting	8 Nos.
D	Senate	1 No.

3.3 Staff Position

3.3.1 Names of Director, Registrar, Deans and HODs

- 1) Director : Prof. (Dr.) P. K. Bose
 2) Registrar : Mr. Sumanta Chakraborti

Deans:

- 1) Dean (Academic) : Dr. R. P. Sharma
 2) Dean (FW) : Prof. (Dr.) K.P.Ghatak.
 3) Dean (P&D) : Dr. A.K. Chakraborty
 4) Dean (Admn.) : Dr. D. Bhattacharya
 5) Dean (S. A.) : Dr. R. S. Panua
 6) Dean (R&C) : Dr. A. Saha

Heads of the Departments:-

- 1) Civil Engineering : Dr. Ratul Das.
 2) Electrical Engineering : Dr. Priyanath Das.
 3) Mechanical Engineering : Dr. Prasun Chakraborti
 4) Computer Science & Engineering : Dr. Paritosh Bhattacharjee.
 5) Electronics & Communication Engineering : Dr. Shambhu Nath Pradhan
 6) Production Engineering : Dr. G. Ravi Kiran Sastry
 7) Civil & Transportation Engineering : Dr. Umesh Mishra
 8) Physics : Dr. J. N. Roy
 9) Chemistry : Dr. Saroj Kumar Das
 10) Mathematics : Dr. U.K. Bera
 11) Humanities & Social Science : Dr. Debasih Neogi.
 12) Chemical Engineering : Smt. Soma Nag (Nondi)
 13) Electronics & Instrumentation Engineering : Dr. Dibyendu Ghoshal

Head of Central Services, Facilities and Section :-

1) Central Library	:	Mr. Kanu Ranjan Roy
2) Medical Officer	:	(i) Dr. Tapan Kr. Datta. (ii) Dr. Dhurjati Debbarma. (iii) Dr. Parimal Chakraborty.
3) Chief Warden	:	Dr. R. K. Yadav
4) Workshop Superintendent	:	Sh. Ajoy Biswas
6) Training & Placement Officer	:	Dr. Kausik Pal.

Engineering Unit:-

1) Estate Engineer (Civil)	:	Mr. Sunil Ch. Das
2) Estate Engineer (Electrical)	:	Mr. Subhendu Chowdhury

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

Sl. No	Name of Staff	Present Designation	Department	Date of joining in NITA
1	Prof. P.K.Bose.	Director	NIT Agartala	19-08-2008
2	Dr.S.C.Saha	Professor	Mech. Engg. Deptt.	01-04-2006
3	Prof.Dr.Umesh Mishra	Professor	Civil Engg. Deptt.	03-10-2008
4	Prof.Dr. Ajit Kumar Ray	Professor.	Humn. & S.S	02-07-2010
5	Prof.Dr.K.P Ghatak.	Professor	E.C.E Deptt.	01.03.2012
6	Dr.Richi Prasad Sharma	Professor	Civil Engg. Deptt.	01-04-2006
7	Dr.Swapan Bhowmik	Assoc. Prof.	Mech. Engg. Deptt.	01-04-2006
8	Dr.Prasun Chakrabarty	Assoc. Prof.	Mech. Engg. Deptt.	01-04-2006
9	Dr. Rup Narayan Roy	Assoc. Prof.	Civil Engg. Deptt.	01-04-2006
10	Dr.Manish Pal	Assoc. Prof.	Civil Engg. Deptt.	01-04-2006
11	Dr.Ajoy Kumar Das	Assoc. Prof.	Mech. Engg. Deptt.	01-04-2006
12	Dr.Debasis Bhattacharya	Assoc. Prof.	Mathematics Deptt.	01-04-2006
13	Dr. Priyanath Das	Assoc. Prof.	Elect. Engg. Deptt.	01-04-2006
14	Dr.Aparna Nath	Assoc. Prof.	Physics Deptt.	01-04-2006
15	Dr. Ratul Das	Assoc. Prof.	Civil Engg. Deptt.	01-04-2006
16	Dr.Saroj kumar Das	Assoc. Prof.	Chemistry Deptt.	01-04-2006
17	Dr.(Mrs) Rama Deb Barma	Assoc. Prof.	Civil Engg. Deptt.	01-04-2006
18	Dr.Sujit Kumar Pal	Assoc. Prof.	Civil Engg. Deptt.	01-04-2006
19	Sri Diptendu Bhattacharya	Assoc. Prof.	C.S.E Deptt.	01-04-2006
20	Dr. Ardhendu Saha	Assoc. Prof.	Elect. Engg. Deptt.	01-04-2006
21	Dr. Rajsekhar Panua	Assoc. Prof.	Mech. Engg. Deptt.	24-05-2010

22	Dr. Ram Naresh Rai	Assoc. Prof.	Prod. Engg. Deptt.	25-06-2010
23	Dr. Ajoy Kr.Chakraborty	Assoc. Prof.	Elect. Engg. Deptt.	15-07-2010
24	Dr. Uttam Kr.Bera	Assoc. Prof.	Mech. Engg. Deptt.	01-09-2010
25	Dr. Debasih Neogi	Assoc. Prof.	Hmn. & S.S. Deptt.	22-08-2008
26	Dr. J.N.Roy	Assoc. Prof.	Physics Deptt.	12.4.2010
27	Dr. Dibyendu Ghoshal	Assoc. Prof.	E.C.E.	29.4.2010
28	Dr.Paritosh Bhattacharjee.	Assoc. Prof.	Mathematics Deptt.	27.3.2012
29	Dr.Tarun Kr.Mishra.	Assoc. Prof.	Chemistry Deptt.	9.4.2012
30	Dr.G.Ravi Kiran Sastry.	Assoc. Prof.	Mech.Engg.	24.4.2012
31	Sri Asis Sarkar	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
32	Smt Lipika Halder	Asstt. Prof.	Civil Engg. Deptt.	01-04-2006
33	Sri John Deb Barma	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
34	Smt Anindita Jamatia	Asstt. Prof.	Elect. Engg. Deptt.	01-04-2006
35	Sri Mrinal Kanti Debbarma	Asstt. Prof.	C.S.E. Deptt.	01-04-2006
36	Sri Swapan Deb Barma	Asstt. Prof.	C.S.E Deptt.	01-04-2006
37	Sri Pritam Das	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
38	Sri Nikhil Deb Barma	Asstt. Prof.	C.S.E Deptt.	01-04-2006
39	Sri Kunal Chakma	Asstt. Prof.	C.S.E Deptt.	01-04-2006
40	Sri Abanishwar Chakraborti	Asstt. Prof.	Elect. Engg. Deptt.	01-04-2006
41	Dr.(Mrs.) Sima Ghosh	Asstt. Prof.	Civil Engg. Deptt.	01-04-2006
42	Smt Sumita Deb	Asstt. Prof.	Elect. Engg. Deptt.	01-04-2006
43	Sri Abhik Majumder	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
44	Smt Smita Das	Asstt. Prof.	C.S.E. Deptt.	01-04-2006
45	Sri Prasenjit Datta	Asstt. Prof.	Prod. Engg. Deptt.	01-04-2006
46	Sri Madhujit Deb	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
47	Sri Rajib Saha	Asstt. Prof.	Civil Engg. Deptt.	01-04-2006
48	Sri Dipankar Sarkar	Asstt. Prof.	Trans. Engg. Deptt.	01-04-2006
49	Sri Gopinandan Dey	Asstt. Prof.	Civil Engg. Deptt.	01-04-2006
50	Sri Dwijen Rudra Pal	Asstt. Prof.	CSE. Deptt.	01-04-2006
51	Sri Barnik Saha Roy	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
52	Sri Suman Deb	Asstt. Prof.	C.S.E. Deptt.	01-04-2006
53	Dr. Apu Kumar Saha	Asstt. Prof.	Mathematics Deptt.	01-04-2006
54	Sri Jayanta Pal	Asstt. Prof.	Civil Engg. Deptt.	01-04-2006
55	Sri Manik Bhowmik	Asstt. Prof.	E.C.E Deptt.	01-04-2006
56	Sri Pankaj Kumar Das	Asstt. Prof.	Mech. Engg. Deptt.	01-04-2006
57	Sri Debdulal Tripura	Asstt. Prof.	Trans. Engg. Deptt.	01-04-2006
58	Sri Nilotpal Deb Barma	Asstt. Prof.	Civil Engg. Deptt.	01-04-2006
59	Sri Anupam Jamatia	Asstt. Prof.	CSE. Deptt.	01-04-2006
60	Sri Prabir Ranjan Kasari	Asstt. Prof.	Elect. Engg. Deptt.	01-04-2006
61	Smt Minakshi Deb	Asstt. Prof.	Elect. Engg. Deptt.	01-04-2006

	Barma			
62	Sri Tribid Deb Barma	Asstt. Prof.	CSE. Deptt.	01-04-2006
63	Sri Biman Deb Barma	Asstt. Prof.	E.C.E. Deptt.	01-04-2006
64	Sri Bikram Das	Asstt. Prof.	Elect. Engg. Deptt.	01-04-2006
65	Sri Atanu Chowdhury	Asstt. Prof.	ECE Deptt.	22.09.2008
66	Sri Kishan Choudhuri	Asstt. Prof.	Prod. Engg. Deptt.	18.09.2008
67	Sri Partha Pratim Sarkar.	Asstt. Prof.	Trans. Engg. Deptt.	08.09.2008
68	Dr Baby Bhattacharya	Asstt. Prof.	Mathematics Deptt.	06.02.2009
69	Sri Swarup Paul	Asstt. Prof.	Prod. Engg. Deptt.	20.02.2009
70	Dr.Subhadeep Bhattacharjee	Asstt. Prof.	Elect. Engg. Deptt.	13.04.2010
71	Dr.Mrs. Mitali Saha	Asstt. Prof.	Chemistry Deptt.	12.04.2010
72	Sri.Rahul Banerjee	Asstt. Prof.	Mech. Engg. Deptt.	12.04.2010
73	Mrs. Tara Sen	Asstt. Prof.	Mech. Engg. Deptt.	12.04.2010
74	Dr.Aniruddha Mandal	Asstt. Prof.	E.C.E. Deptt.	12.04.2010
75	Dr..Rabindra Nath Barman	Asstt. Prof.	Prod. Engg. Deptt.	12.04.2010
76	Sri.Kamalesh Debnath	Asstt. Prof.	E.C.E Engg. Deptt.	12.04.2010
77	Sri.Pritam Saha	Asstt. Prof.	Civil Engg. Deptt.	12.04.2010
78	Dr.Gyanabati Khurajam	Asstt.Prof.	Humn. & SS. Deptt.	07.05.2010
79	Sri.Arindam Majumder	Asstt. Prof.	Mech. Engg. Deptt.	20.04.2010
80	Ms Seena P	Asstt. Prof.	Prod. Engg. Deptt.	13-05-2010
81	Dr. Sambhu Nath Pradhan	Asstt. Prof.	E.C.E Deptt.	28-05-2010
82	Mrs. Soma Nag	Asstt. Prof.	Chemical Deptt.	14-06-2010
83	Dr. Keisham Surjit Singh	Asstt. Prof.	Chemistry Deptt.	26-07-2010
84	Shri Nirmalaya Kar	Asstt. Prof.	CSE Deptt.	29-07-2010
85	Shri Prasenjit Debnath	Asstt. Prof.	Elect. Engg. Deptt.	30-07-2010
86	Shri Jayanta Kr. Rakshit	Asstt. Prof.	E.I.C Deptt.	23-08-2010
87	Dr.Rajesh Kr. Yadav	Asstt. Prof.	Physics Deptt.	06-09-2010
88	Dr.Tarun Kanti Bandyopadhyay.	Asstt.Prof.	Chemical Engg.	4.5.2012
89	Dr.Srimanta Ray.	Asstt.Prof.	Chemical Engg.	4.5.2012
90	Dr.Kalyan Gayen.	Asstt.Prof.	Chemical Engg.	4.5.2012
91	Dr.Surajit Das.	Asstt.Prof.	Civil Engg.	16.5.2012
92	Sri Anirban Bhattacharya.	Asstt.Prof.	E.C.E.	21.5.2012
93	Sri Somnath Roy Choudhury.	Asstt.Prof.	E.C.E.	21.5.2012
94	Sri Ankuran Saha.	Asstt.Prof.	Mech. Engg.	21.5.2012
95	Dr.Vidyut Dey.	Asstt.Prof.	Production Engg.	1.6.2012
96	Dr.Sanjay Paul.	Asstt.Prof.	Civil Engg.	24.5.2012
97	Dr.Subrata Kr.Ghosh.	Asstt.Prof.	Mech. Engg.	7.6.2012
98	Mr. Uttam Kr.Mandal.	Asstt.Prof.	Production Engg.	28.5.2012

99	Mr.Mitra Barun Sarkar.	Asstt.Prof.	E.C.E.	15.6.2012
100	Mr.Animesh Debnath.	Asstt.Prof.	Civil Engg.	21.6.2012
101	Mr.Sushant Kr.Biswal	Asstt.Prof.	Civil Engg.	21.6.2012
102	Mrs.Tamasi Moyra.	Asstt.Prof.	E.C.E.	13.6.2012
103	Miss Mudhaparna Chakraborty.	Asstt.Prof.	E.C.E.	22.6.2012
104	Mr. R.K.Bhogendra Meiti	Asstt.Prof.	Mech.Engg.	29.6.2012
105	Dr.Dwipayan Sen.	Asstt.Prof.	Chemical Engg.	16.7.2012
106	Dr.Ajoy Biswas.	Asstt.Prof.	Mech.Engg.	23.7.2012
107	Miss Joyashree Das.	Asstt.Prof.	Elect.Engg.	11.10.2012
108	Mr. Ashim Saha.	Asstt.Prof.	C.S.E.	12.10.2012
109	Dr.Suv ra Prakash Mondal.	Asstt.Prof.	Physics Deptt.	1.11.2012
110	Dr. Anirban Dutta.	Asstt.Prof.	M.B.A.	6.11.2012
111	Dr.Mrinmoy Majumder	Asstt.Prof.	Hydro Informatics Engg.	17.11.2012
112	Dr.Aniruddha Bhattacharya.	Asstt.Prof.	Elect. Engg.	12.12.2012
113	Dr.Ajay Kumar Manna.	Asstt.Prof.	Chemical Engg.	17.12.2012
114	Dr.Biswajit Saha.	Asstt.Prof.	Physics Deptt.	30.11.2012
115	Mr.Biman Kr.Saha Roy.	Asstt.Prof.	Elect. Engg.	28.2.2013.

Director = 01, No. Professor = 05 Nos. Associate Prof. = 24 Nos., Asstt. Prof. = 85 Nos.

TOTAL = 115Nos.

3.3.2.2 Contractual faculty members.

SL. No.	NAME	Designation	Department	
1	Ms. Moumita Majumder	Asstt. Prof.	Computer Science & Engg.	18-08-2010
2	Ms. Lalita Kumari	Asstt. Prof.	Computer Science & Engg.	18-08-2010
4	Ms. Sharmistha Majumder	Asstt. Prof.	Computer Science & Engg.	24-08-2011
5	Mr. Subhajit Deb	Asstt. Prof.	Civil Engg.	06-08-2010
6	Ms. Tamasa Chakma	Asstt. Prof.	Civil Engg.	03-08-2011
7.	Ms.Nabanita Bhowmik	Asstt.Prof.	Civil Engg.	06-12-2012
8.	Mr.Abhijit Debnath	Asstt.Prof.	Civil Engg.	06-12-2012
9.	Ms. Subhra Das	Asstt.Prof.	Civil Engg.	12-12-2012
10.	Ms. Sangita Debnath	Asstt.Prof.	Civil Engg.	12-12-2012
11.	Ms. Moutoshi Saha	Asstt.Prof.	Civil Engg.	12-12-2012
12.	Mr. Bibhab Kr. Lodh	Asstt. Prof.	Chemical Engg.	05-08-2011
13.	Mr.Abhijit Mandal	Asstt. Prof.	Chemical Engg.	21-01-2013
14.	Dr. Sweta	Asstt. Prof.	Chemical Engg.	09-01-2013

15.	Sri Abhijit Baidya	Teaching Asstt.	Mathematics	23-08-2010
16.	Dr. Susmita Roy	Asstt. Prof.	Mathematics	01-08-2011
17.	Mr. Jayanta Debnath	Teaching Asstt.	Mathematics	01-08-2011
18.	Ms. Pinki Majumder	Teaching Asstt.	Mathematics	01-08-2011
19.	Dr. M.C.Paul	Asstt.Prof.	Mathematics	02-07-2012
20.	Ms. Jayashree Chakraborty	Teaching Asstt.	Mathematics	05-09-2012
21.	Dr. Manash Kr.Paul	Asstt. Prof.	Physics	16-07-2010
22.	Ms. Sohini Goswami	Teach. Asstt.	Physics	18-08-2009
23.	Mr. Subharaj Paul	Teach. Asstt.	Physics	01-08-2012
24.	Dr.Sanjay Kr.Mandal	Asstt.Prof.	Physics	05-11-2012
25.	Sri Dipak Sen	Asstt. Prof.	Mechanical Engg.	02-08-2010
26.	Sri Dibyendu Das	Asstt. Prof.	Mechanical Engg.	12-08-2009
27.	Mr. Shahanwaz Khan	Asstt. Prof.	Mechanical Engg.	03-08-2011
28.	Sri. Durbadal Debroy	Asstt. Prof.	Mechanical Engg.	03-08-2011
29.	Sri Aparesch Datta	Asstt. Prof.	Mechanical Engg.	03-08-2011
30.	Sri. Abhishek Paul	Asstt. Prof.	Mechanical Engg.	03-08-2011
31.	Ms. Sharmistha Sharma	Asstt. Prof.	Electrical Engg.	12-08-2009
32.	Ms. Saheli Roy	Asstt. Prof.	Electrical Engg.	12-08-2009
33.	Mr. Bhaskar Bhattacharjee	Teach. Asstt.	Electrical Engg.	18-03-2009
34.	Mr. Diptanu Das	Asstt. Prof.	Electrical Engg.	08-08-2011
35.	Mrs.Nivedita Laskar	Asstt. Prof.	Electrical Engg.	15-11-2011
36.	Dr. Bidyut Kr.Bhattacharjee	Professor	Electrical Engg.	17-01-2013
37.	Mr. Bishop Debbarma	Asstt. Prof.	Production Engg.	24-08-2010
38.	Mr. Sujay Chakraborty	Asstt. Prof.	Production Engg.	01-08-2011
39.	Mr. Shiladitya Chakraborty	Teach. Asstt.	Electronics & Comm. Engg.	25-07-2008
40.	Ms. Soma Das,	Teach. Asstt.	Chemistry	17-08-2009
41.	Mr. Narayan Debnath	Teach. Asstt.	Chemistry	01-08-2011
42.	Dr. Subrata Das	Asstt. Prof.	Chemistry	08-08-2011
43.	Dr.Biswanath Dinda	Professor	Chemistry	16-11-2012
44.	Mr. Bidhyasagar Debnath	Teach. Asstt.	Humanities & So. Sc.	04-08-2008
45.	Mr. Chhutan Dey	Teach. Asstt.	Humanities & So. Sc.	17-06-2011
46.	Ms. Priyanka Goswami Roy	Asstt. Prof.	E. I. E.	06-02-2012
47.	Mr. Prasenjit Ghorai	Asstt. Prof.	E. I. E.	08-08-2011
48.	Dr.Tapas Kr.Basak	Professor	E. I. E.	11-12-2012
49.	Mr.Apangshu Das	Asstt. Prof.	E. I. E.	10-08-2012
50.	Ms. Priyanka Dey	Asstt. Prof.	E. I. E.	13-08-2012
51.	Ms. Tillotama	Asstt. Prof.	Hydro-Informatics	30-08-2011

	Chakraborty			
52.	Dr.Dijendra Nath Roy	Asstt. Prof.	Bio-Engg.	20-01-2013
53.	Dr. Biswanath Bhunia	Asst.Prof.	Bio-Engg.	04-03-2013
54.	Prof.Harwant Singh Chhabra	Professor	MBA	13-12-2012

3.3.3 List of employees - other than faculty members

3.3.3.1 Regular non-teaching staff of the institute

Sl No	Name of Employees	Present Designation	Department	Date of joining in NITA
1	Sri Sumanta Chakrabarti	Deputy Registrar (admn)	Administration.	12-08-2011
2	Sri Tanmoy Ghoshal	Assistant Registrar(Academic)	Academic Section.	07-09-2012
3	Sri Suman Karmakar	Head Instructor	E.E Deptt.	01-04-2006
4	Sri Subhankar Chakma	Head Instructor	C.E Deptt.	01-04-2006
5	Sri Jyoti Lal Debbarna	P.A - 1	Director office	01-04-2006
6	Sri Jadu Lal Debnath	U.D. Clerk	Estt. Section	01-04-2006
7	Sri. Akhil Debbarna	Accountant	Accounts Section	01-04-2006
8	Sri Sanjoy Deb Rupini	U.D Clerk	Estt. Section	01-04-2006
9	Sri Tarun Debbarna	U.D. Clerk	T & P Sect.	01-04-2006
10	Smt. Bakul Debbarna	U.D. Clerk	Estt. Section	01-04-2006
11	Sri Jitendra Debnath	LD Clerk	Store Section.	01-04-2006
12	Sri Narayan Ch. Banik	LD Clerk	Accounts Section	01-04-2006
13	Sri Sajal Kr. Dey	LD Clerk	Accounts Section	01-04-2006
14	Sri Pradip Kr. Majumder	LD Clerk	Exam. Section	01-04-2006
15	Sri Sukhen Saha	LD Clerk	Accounts Section	01-04-2006
16	Sri Dharendra Debnath	Sorter	Library Section	01-04-2006
17	Sri Tapan Deb Nath	Dupl. Opt.	Received & Dispatch Section	01-04-2006
18	Sri Dilip Kr. Ghosh	Driver Gr.II	Vehicle Deptt.	01-04-2006
19	Sri Pabitra Acharjee	Driver (Gr.III)	Vehicle Deptt.	01-04-2006
20	Sri Jagadish Ch. Bhoumik	Sr. Cinema Opt.	E.C.E Deptt.	01-04-2006
21	Sri Sukhendu Debbarna	Technician	Electrical Deptt.	01-04-2006
22	Sri Nirmal Saha	Sr. Cook (Gr.C)	Civil Deptt.	01-04-2006
23	Smt Urmila Debbarna	Group-D(now Group-C)	Esth. Section	01-04-2006
24	Sri Bijan Debnath	Group-D(now Group-C)	Workshop(C.E)	01-04-2006
25	Sri Suban Ch. Deb	Group-D(now Group-C)	Workshop(P.E)	01-04-2006
26	Sri Raj Kishore Ghosh	Group-D(now Group-C)	Electrical Dept.	01-04-2006
27	Sh. Dhanu Ranjan Saha.	Group-D(now Group-C)	Medical Unit	01-04-2006
28	Smt.Mona Rani Das Bahadur.	Group-D(now Group-C)	T & P	01-04-2006
29	Sh. Niranjan Ghosh.	Group-D(now Group-C)	Vehicle	01-04-2006
30	Smt. Sonalaxmi Deb Barna.	Group-D(now Group-C)	Registrar off.	01-04-2006
31	Sh. Ajit Saha.	Group-D(now Group-C)	Store	01-04-2006

32	Smt.Brihalata Deb Barma	Group-D(now Group-C)	C.E.	01-04-2006
33	Sh. Ratan Modi	Group-D (now Group-C)	CSE	01-04-2006
34	Sh. Ratan Debnath	Group-D (now Group-C)	Director off.	01-04-2006
35	Sh. Dilip Deb Barma	Group-D (now Group-C)	E.E.	01-04-2006
36	Sh. Bhusan Sarkar.	Group-D (now Group-C)	M.E.	01-04-2006
37	Sh. Manik Chakraborty.	Group-D (now Group-C)	Workshop(C.E.)	01-04-2006
38	Sh. Manindra Sarkar.	Group-D (now Group-C)	Library	01-04-2006
39	Sh. Bishu Kumar Deb Barma.	Group-D (now Group-C)	Workshop(M.E.)	01-04-2006
40	Sh. Ajit Deb Barma.	Group-D (now Group-C)	Received section	01-04-2006
41	Sh. Nepal Chandra Debnath.	Group-D (now Group-C)	Exam. Section	01-04-2006
42	Sh. Jahar Debnath.	Group-D (now Group-C)	Attached to Dean P&D	01-04-2006
43	Smt. Uma Saha.	Group-D (now Group-C)	Exam. Section	01-04-2006
44	Smt.Premabala Debnath.	Group-D (now Group-C)	Attached to HOD EIE.	01-04-2006

3.3.3.2 List of contractual non-teaching staff of the institute

SL No.	Name of the Faculty	Designation	Department	Date of joining in NITA
1	Sri Sajal Kr. Ganguly (Retired)	P.S	Directors' Office	02-06-2008
2	Sri Sourav Mahajan	Jr. Assistant	Directors Office	12-12-2008
3	Smt. Shampa Pal (Bhowmik)	Jr. Assistant	Directors Office	02-02-2010
4	Sri Nabendra Nath Mukherjee	Admn. Officer	Registrar's Office	12-03-2010
5	Sri Tanumoy Paul	Jr. Assistant	Registrar's Office	19-06-2006
6	Sri Sanjib Debbarma	Helper	Registrar's Office	15-07-2009
7	Ms. Sumitra Roy	Jr. Assistant	Registrar's Office	12-12-2008
8	Ms. Kaninika Banik	Receptionist	Registrar's Office	11-11-2011
9	Sri V.C. Mathai	Tech. Asstt.	MHRD, New Delhi	12-11-2009
10	Sri Asit Baran Bhatt. (Retired)	Accounts Officer	Accounts Section	01-06-2009
11	Sri Rajesh Kr. Majumder	Accountant	Accounts Section	21-11-2007
12	Dhruba Lal Banik (Retired)	Accountant	Accounts Section	05-08-2001
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	Mr.Mritunjoy Das	Accounts Asstt.	Accounts Section	17-01-2013
16	Sri Kartik Ch. Debnath (Retired)	Gr.-D	Accounts Section	01-05-2007
17	Sri Tapan Kr. Rakshit	Finance Officer	Accounts Section	06-01-2012
18	Sri Subrata Chakraborty	Audit officer	Audit Section	05-12-2011
19	Sri Satya Ranjan	Section Officer	Estt. Section	17-02-2012

	Chakraborty			
20	Sri Beni Madhab Bhowmik	U.D.C.	Estt. Section	03-10-2006
21	Sri Milan Chandra Sarkar	Asstt. Reg.	Academic Sec.	03-08-2009
22	Sri Kabir Deb	Jr. Assistant	Academic Sec.	04-06-2007
23	Ms. Krishna Rani Deb	Jr. Assistant	Academic Sec.	21-06-2011
24	Sri Sukdeb Chakraborty	Superintendent.	Exam Section	01-06-2007
25	Ms. Payel Sarkar	Sr. Assistant	Exam Section	05-07-2011
26	Mr. Himangshu Paul	Section Officer(Pur)	Purchase Sec.	26-09-2011
27	Sri Bidyut Kr. Ghosh	Jr. Assistant	Purchase Sec.	12-12-2008
28	Smt. Joydipa Bhattacharya	Jr. Assistant	Purchase Sec.	01-03-2012
29	Sri Kanu Ranjan Roy (Retired)	Sr. Librarian.	Library	01-09-2009
30	Sri Shymal Kanti Deb (Retired)	Lib.	Library	01-06-2007
31	Sri Subhash Sarkar	Lib. Asstt.	Library	27-01-2012
32	Sri Anirban Sharma Roy	Lib. Asstt.	Library	30-01-2012
33	Sri Nabin Chandra Kundu	Lib. Asstt.	Library	01-04-2010
34	Sri Dipankar Das	Jr. Assistant	Library	18-12-2008
35	Sri Govinda Chandra Shil (Retired)	Jr. Assistant	Library	13-04-2010
36	Smt. Sanju Debnath	Draftsman	Dean(P & D)	12-12-2008
37	Sri Sukanta Goswami	Jr. Assistant	Dean (FW)	19-12-2008
38	Sri Partha Biswas	Estate Manager	Estate Section	12-12-2008
39	Sri Biman Das	Jr. Engineer	Estate Section	14-06-2011
40	Mr. Moumita Dhar	Jr. Engineer	Estate Section	15-09-2011
41	Ms. Saswati Saha	Jr. Engineer	Estate Section	15-09-2011
42	Mr. Rajesh Kr. Modak	Jr. Engineer	Estate Section	16-09-2011
43	Smt. Tapasi Debnath	Jr. Engineer	Estate Section	24-04-2011
44	Sri Nakul Ch. Debnath (Retired)	Plumber	Estate Section	01-05-2008
45	Sri Papai Kanti Ghosh	Clerk-Cum-Typist	Estate Section	15-11-2010
46	Sri Sudhangshu Kr. Bhowmik (Rtd.)	Plumber	Estate Section	04-11-2009
47	Sri Samir Adhikari	Work Asstt.	Estate Section	08-05-2009
48	Sri Sankar Debbarma	Work Asstt.	Estate Section	11-07-2009
49	Mr. Sanjib Chakraborty	Opt (Auditorium)	Estate Section	27-06-2011
50	Mr. Basab Kr. Bhattacharjee	Jr. Engineer(Civil)	Estate Section	03-09-12
51	Sri Rakesh Tripura	Mason	Estate Section	10-12-2012
52	Sri Pradip Sutradhar	Carpenter	Estate Section	10-12-2012
53	Sri Biswajit Das	Helper	Estate Section	10-12-2012
54	Sri Sanjib Sarkar	Helper	Estate Section	10-12-2012

55	Sri Milan Karmakar	Helper	Estate Section	10-12-2012
56	Mr. Suman Das	Junior Engineer	Estate Section	04-03-2013
57	Mr. Bidyut Kanti Das	Junior Engineer	Estate Section	01-03-2013
58	Mr. Bimal Krishna Debnath	Jr. Engineer (Elect.)	Estate Section	02-09-2010
59	Mr. Harekrishna Debnath	Operator	Estate Section	09-11-2010
60	Sri Srikumar Nath (Retired)	Operator	Estate Section	11-11-2010
61	Sri Debashis Debnath	Operator	Estate Section	09-11-2010
62	Mr. Azad Ali Khan	Operator	Estate Section	09-11-2010
63	Sri Ranjit Sharma	Helper	Estate Section	09-11-2010
64	Sri Rajib Chakraborty	Helper	Estate Section	09-11-2010
65	Sri Chanki Paul	Helper	Estate Section	09-11-2010
66	Mr. Amar Ch. Das	Electrician	Estate Section	01-12-2011
67	Mr. Pradip Das	Electrician	Estate Section	01-12-2011
68	Mr. Arabinda Das	Electrician	Estate Section	01-12-2011
69	Mr. Sujit Debnath	Lineman	Estate Section	01-12-2011
70	Mr. Amar Krishna Saha	Helper	Estate Section	01-12-2011
71	Mr. Subir Namasudra	Helper	Estate Section	01-12-2011
72	Sri Biswajit Das	Supervisor	Estate Section	07-08-2012
73	Sri Pabitra Shil	Electrician	Estate Section	08-08-2012
74	Sri Krishan Debnath	Lineman	Estate Section	02-08-2012
75	Sri Krishna Ch. Saha	Lineman	Estate Section	03-08-2012
76	Sri Uttam Kr. Debnath	Lineman	Estate Section	07-08-2012
77	Sri Parimal Debnath	Helper	Estate Section	03-08-2012
78	Sri Biswajit Debbarma	Helper	Estate Section	03-08-2012
79	Mr. Litan Sarkar	Jr. Assistant	TPO Section	16-07-2010
80	Sri Anupam Pal	Sports Officer	Dean (SW)	16-08-2007
81	Sri Sukanta Ghoswami	Phy. Edu. Off.	Dean (SW)	16-08-2007
82	Sri Sabyasachi Chaudhuri	Sports Officer	Dean (SW)	06-12-2012
83	Sri Debashish Biswas	Foreman	Mech./Workshop	04-08-2008
90	Sri Manojit Das	Foreman/Instructor	Mech./Workshop	18-09-2008
91	Sri Koushik Debroy	Foreman	Mech./Workshop	01-01-2009
92	Sri Debabrata Sen	Head Ins.	Mech./Workshop	01-01-2008
93	Sri Arup taru Roy	Instructor	Mech./Workshop	19-08-2009
94	Sri Ranju Kr. Singh	Instructor	Mech./Workshop	19-08-2009
95	Sri Biswajit Debnath	Instructor	Mech./Workshop	19-08-2009
96	Sri Govinda Ch. Das (Retired)	Tech. Supporting Staff	Mech./Workshop	30-08-2006
97	Sri Jiban Chandra	Sr. Engine Operator	Mech./Workshop	19-03-2012
98	Sri Basudeb Banik	Tech.	Mech./Workshop	22-12-2008
99	Sri Sujit Kumar Bhowmik	Skilled Asstt.	Mech./Workshop	18-09-2008
100	Sri Subhendu Debbarma	Jr. Tech.	Mech./Workshop	19-08-2008

101	Sri Chinmoy Dey	Jr. Tech.	Mech./Workshop	19-08-2009
102	Sri Subhash Das	Skilled Asstt.	Mech./Workshop	02-07-2009
103	Sri Nikhil Ch. Karmakar (Retired)	Gr.-D	Mech./Workshop	01-06-2007
104	Sri Bishnupada Das	Driver	Mech./Workshop	19-11-2008
105	Sri Babul Ch. Deb	Driver	Mech./Workshop	16-07-2009
106	Sri Gopal Ch. Das	Driver	Mech./Workshop	16-07-2009
107	Sri Sajal Saha	Driver	Mech./Workshop	01-02-2011
108	Sri Sachindra Ch. Das (Retired)	Gr. D	Mech./Workshop	01-02-2009
109	Sri Sukanta Pal	Lab. Ins.	Mech./Workshop	20-08-2009
110	Mr Abhijit Giri	Technical Asstt	Mech./Workshop	13-08-2010
111	Mr Suman Nandi	Lab. Asstt.	Mech./Workshop	10-08-2010
112	Ms Manisha Deb	Lab. Asstt.	Mech./Workshop	13-08-2010
113	Mr Kishore Das	Lab. Asstt.	Mech./Workshop	25-08-2010
114	Mr Pinku Saha	Lab. Asstt.	Mech./Workshop	26-08-2010
115	Sri Pramod Pal	Instructor	Production Engg.	04-09-2009
116	Sri Biswanath Karmakar	Jr. Tech	Production Engg.	04-09-2009
117	Smt. Sima Das	Sr. Ins.	Elect. Engg.	19-08-2009
118	Smt. Tapa Saha	Tech. Supp Staff	Elect. Engg.	25-07-2008
119	Sri Kabir Bhowmik	Sr. Ins.	Elect. Engg.	19-08-2009
120	Sri Ajit Deb	Lab. Tech	Elect. Engg.	19-08-2009
121	Mr. Debanjan Nag	Tech. Asstt.	Elect. Engg.	16-12-2011
122	Mr. Debabrata Bhattacharya	Technical Asstt	Elect. Engg.	09-08-2010
123	Mr. Jayanta Chowdhury	Technical Asstt	Elect. Engg.	10-07-2012
124	Mr. Pranab Majumder	Technical Asstt	Elect. Engg.	16-07-2012
125	Mr. Ushajai Mog	Technical Asstt	Elect. Engg.	10-07-2012
126	Sri Kamal Kn. Pal	System Admin.	CSE Deptt.	15-12-2008
127	Mr. Pattha Sarathi Bhattacharjee	Network Admin.	CSE Deptt.	15-09-2011
128	Mr. Suman Saha	Lab / Tech Assistant	CSE Deptt.	09-08-2010
129	Mr. Viki Datta	Lab / Tech Assistant	CSE Deptt.	14-09-2011
130	Sri Malay Paul	Lab / Tech Assistant	CSE Deptt.	13-03-2012
131	Sri Jayanta Paul	Lab / Tech Assistant	CSE Deptt.	13-03-2012
132	Sri Rabindra Ch. Das (Retired)	Gr. D	CSE Deptt.	20-04-2009
133	Sri Gautam Kr. Rakshit	MIS(Administrator)	CSE Deptt.	06-12-2012
134	Mr. Dhruba Narayan Das	Technical Asstt	Chemical Engg.	09-08-2010
135	Mr. Dipankar Goswami	Technical Asstt	Chemical Engg.	09/08/2010
136	Ms. Sangita Patari	Lab. Asstt.	Physics	06/09/2011
137	Sri Pijush kn. Datta	Lab. Asstt	Physics	22/09/2011

138	Sri Dulal Chakraborty	Retd. Group – D	Chemistry	01/01/2011
139	Sri Satyajit Ghosh	Lab, Asstt.	ECE	07-09-2012
140	Ms. Poulami Ghosh	Tech. Asstt.	ECE	09/12/2011
141	Mr. Dipesh Debnath	Technician	ECE	02/01/2012
142	Mr. Abhijit Chakraborty	Technical Asstt	ECE	10/08/2010
143	Mr. Prasanta Sutradhar	JRF	ECE	11-01-2013
144	Sri Anjan Das	Technical Asstt.	ECE	06-02-2012
145	Ms. Sulakshana Banik	Lab. Technician(EIE)	EIE	13-08-2012
146	Ms. Sunam Jannat	Lab. Technician(EIE)	EIE	14-08-2012
147	Dr. Tapan Kr. Datta (Retired)	Medical Off.	Medical Unit	22/01/2009
148	Dr. Parimal Chakraborty	Medical Off.	Medical Unit	01/02/2012
149	Sri Rajesh Karmakar	Pharmacist	Medical Unit	17/04/2008
150	Ms. Supriya Das	Pharmacist	Medical Unit	27-9-2012
151	Sri Dipen Majumder	Technician	Medical Unit	22/12/2008
152	Sri Dipak Kr. Pal	Security Officer	Medical Unit	19/08/2011
153	Sri Sanjit Debbarma	Helper	Guest House	15/07/2009
154	Sri Suman Rudra Pal	Off. Asstt.	Transit House	19/08/2008
155	Smt. Sulekha Sarkar	Cook	Transit House	06-05-2011
156	Sri Bappi Das	Helper/Cook	Transit House	01-02-2011
	Sri Ritabrata Roy	Technical Asstt.	Hydro-informatics	02-08-2012
157	Mr. Dweep Jyoti Thakuria,	Technical Assistant (P/E)	Production Engg.	24-09-2012
158	Mr. Hrishikesh Deka	Technical Assistant (P/E)	Production Engg.	24-09-2012
159	Sri Prasenjit Dutta	Technical Assistant (Civil)	Civil Engg.	6-12-2012
160	Ms. Papia Banik	Technical Assistant (Civil)	Civil Engg.	6-12-2012
161	Sri Sankar Paul	Technical Assistant (Civil)	Civil Engg.	13-12-2012

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. Prof. U. Mishra is 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 23rd 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 20th NIT in India and 2nd 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 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 1st 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 2012-2013:

Table 1 – Fresh Admission

Sl. No.	Department	B. Tech.	M. Tech.	MCA	M. Sc.	MBA	Ph. D.	Total
1.	CE	173	33	00	00	00	04	210
2.	ME	90	19	00	00	00	15	124
3.	EE	89	24	00	00	00	07	120
4.	CSE	85	11	11	00	00	00	112
5.	ECE	87	20	00	00	00	17	124
6.	EIE	48	00	00	00	00	00	48
7.	PE	73	10	00	00	00	00	83
8.	CH	46	00	00	00	00	00	46
9.	BIO	25	00	00	00	00	00	25
10.	HYDRO	00	11	00	00	00	05	16
11.	HU	00	00	00	00	00	05	5
12.	MATHS	00	00	00	04	00	07	11
13.	CHE	00	00	00	07	00	06	13
14.	PHY	00	00	00	06	00	00	6
15.	Management	00	00	00	00	17	00	17
	TOTAL	716	128	11	17	17	66	955

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

Scheduled Castes	163	Q.I.P.	M. Tech.	00
Scheduled Tribes	122		Ph. D.	04
Physically Handicapped	12	Sponsored	M. Tech.	08
		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 1st Semester

		CE	ME	EE	CSE	ECE	EIE	CHE	PE	BIO	TOTAL	MCA
From the State of Tripura:												
OP	Boys	30	19	12	19	13	12	09	20	05	139	00
	Girls	12	00	09	04	08	04	07	02	03	49	00
	Total	42	19	21	23	21	16	16	22	08	188	00
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
	Total	00	00	00	00	00	00	00	00	00	00	00
SC	Boys	12	07	06	07	05	04	04	05	03	53	00
	Girls	05	00	01	01	03	01	01	02	00	14	00
	Total	17	07	07	08	08	05	05	07	03	67	00
ST	Boys	20	13	09	03	08	01	01	01	00	56	00
	Girls	07	01	05	04	05	00	00	01	00	23	00
	Total	27	14	14	07	13	01	01	02	00	79	00
Total		86	40	42	38	42	22	22	31	11	334	
From the various part of the country except the State of Tripura												
OP	Boys	39	22	21	19	23	10	10	12	04	160	03
	Girls	03	0	00	02	01	02	01	00	00	9	00
	Total	42	22	21	21	24	12	11	12	04	169	03
OB C	Boys	28	13	12	11	11	07	08	20	06	116	05
	Girls	00	00	01	02	00	00	01	01	00	5	01
	Total	28	13	13	13	11	07	09	21	06	121	06
PH	Boys	04	00	02	01	02	02	01	00	00	12	00
	Girls	00	00	00	00	00	00	00	00	00	0	00
	Total	04	00	02	01	02	02	01	00	00	12	00
SC	Boys	12	07	07	06	05	04	02	06	02	51	02
	Girls	00	00	00	01	00	00	01	00	00	2	00
	Total	12	07	07	07	05	04	03	06	02	53	02
ST	Boys	06	04	03	04	03	01	00	03	02	26	00
	Girls	00	00	00	00	01	00	00	00	00	1	00
	Total	06	04	03	04	04	01	00	03	02	27	00
Total		92	46	46	46	45	26	24	42	14	382	11
Total intake capacity in each Branch		178	86	88	84	87	48	46	73	25	716	11

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

		CE	ME	EE	CSE	ECE	HY	PE	Total
From the State of Tripura:									
OP	Boys	06	07	03	01	05	06	03	31
	Girls	08	02	03	01	01	01	01	17
	Total	14	09	06	02	06	07	04	48
OBC	Boys	05	03	02	00	05	01	00	16
	Girls	01	00	00	01	00	00	01	03
	Total	06	03	02	01	05	01	01	19
PH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00
	Total	00	00	00	00	00	00	00	00
SC	Boys	04	00	01	02	01	02	01	11
	Girls	02	00	01	00	01	00	00	04
	Total	06	00	02	02	02	02	01	15
ST	Boys	00	01	00	00	01	00	00	02
	Girls	02	00	00	01	00	00	00	03
	Total	02	01	00	01	01	00	00	05
Total		28	13	10	06	14	10	06	87
From the various part of the country except the State of Tripura									
OP	Boys	02	03	04	02	04	01	03	19
	Girls	00	00	03	00	00	00	00	03
	Total	02	03	07	02	04	01	03	22
OBC	Boys	01	01	03	02	01	00	01	09
	Girls	02	00	00	00	00	00	00	02
	Total	03	01	03	02	01	00	01	11
PH	Boys	00	00	00	00	00	00	00	00
	Girls	00	00	00	00	00	00	00	00
	Total	00	00	00	00	00	00	00	00
SC	Boys	00	01	01	00	00	00	00	02
	Girls	00	00	01	00	01	00	00	02
	Total	00	01	02	00	01	00	00	04
ST	Boys	00	01	02	00	00	00	00	03
	Girls	00	00	00	01	00	00	00	01
	Total	00	01	02	01	00	00	00	04
Total		05	06	14	05	06	01	04	41
Total intake capacity in each Branch		33	19	24	11	20	11	10	128

Table 4 – Admitted students in M. Sc. 1st Semester

		Math.	Phy.	Chem.
From the State of Tripura:				
OP	Boys	02	04	04
	Girls	00	01	01
	Total	02	05	05
OBC	Boys	02	01	01
	Girls	00	00	01
	Total	02	01	02
OPPH	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
SC	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
ST	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
From the various part of the country except the State of Tripura				
OP	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
OPPH	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
SC	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
ST	Boys	00	00	00
	Girls	00	00	00
	Total	00	00	00
Total intake capacity in each Branch		10	10	14

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

Sl. No.	Name of the state	CE	ME	EE	CSE	ECE	EIE	CH E	PE	BIO	MCA	Total
1.	AP	05	02	02	07	07	01	02	12	03	00	41
2.	AS	00	01	00	02	01	00	00	00	00	01	05
3.	BH	52	15	19	16	17	09	07	20	01	02	158
4.	DL	01	01	01	02	03	03	00	01	00	01	13
5.	HR	00	00	00	00	02	00	01	00	00	00	03
6.	JR	00	03	02	00	01	03	01	02	00	00	12

7.	KL	00	00	00	00	00	01	00	01	01	00	03
8.	MH	02	00	01	01	01	00	00	00	00	00	05
9.	MNP	00	00	00	00	00	00	00	00	00	00	00
10.	MP	01	01	03	02	01	01	00	00	02	00	11
11.	OR	00	01	00	00	00	00	01	01	00	00	03
12.	RJ	12	06	08	07	06	04	04	00	01	00	48
13.	TN	00	00	00	00	00	02	00	00	00	01	03
14.	TR	87	43	42	37	45	21	22	33	10	00	340
15.	UP	14	12	08	08	07	01	09	09	04	03	75
16.	WB	01	00	00	00	00	00	01	00	01	03	06
17.	CG	00	00	01	00	00	00	00	00	00	00	01
Total		175	85	87	82	91	46	48	79	23	11	727

4.5 Students/ Scholars Enrolment:

The total number of students on roll in various programmes of the Institute in the academic year 2011-2012 are given below:

TABLE 6 – Students on roll

Sl. No.	Department	B. Tech	MCA	M. Tech.	M. Sc.	Ph. D	Post Doc.	Total
1.	Civil Engg	513	00	62	00	15	00	590
2.	Mech. Engg.	285	00	37	00	27	00	349
3.	Electrical Engg.	226	00	44	00	25	00	295
4.	Computer Sc. & Engg.	236	37	23	00	06	00	302
5.	Electronics & Communication Engg.	284	00	30	00	34	00	348
6.	Production Engg.	115	00	10	00	01	00	126
7.	Civil& Transportation Engg.	15	00	00	00	00	00	15
8.	Electronics & Instrumentation	100	00	00	00	00	00	100
9.	Chemical Engineering	71	00	00	00	00	00	71
10.	Bio Engineering	00	00	00	00	00	00	0
11.	Hydro Informatics	00	00	16	00	09	00	25
12.	Mathematics	00	00	00	12	18	00	30
13.	Humanities	00	00	00	00	14	00	14
14.	Chemistry	00	00	00	13	09	02	24
15.	Physics	00	00	00	12	05	00	17
Grand Total		1,845	37	222	37	163	02	2,306

The above total includes the following:

DASA (Indian origin)	Nil	QIP	M. Tech.	00
Scheduled Castes	444		Ph. D.	00
Scheduled Tribes	325	Sponsored	M. Tech.	02
Physically Handicapped	36	Project	Ph. D.	Nil
Women students		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 31-03-2013

Sl. No.	Programme	SC	ST	OBC	OPPH
1.	B. Tech.	389	297	425	36
2.	M. Tech.	38	18	55	00
3.	MCA	03	02	12	00
4.	M.Sc	02	00	11	00
6.	Ph. D.	09	05	12	00
7.	MBA	03	03	02	00
Total		444	325	517	36

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	2012	2011	2010	2009	Others
1	Civil	513	493	380	257	00
2	Mechanical	285	289	262	232	00
3	Electrical	226	284	245	224	00
4	Computer Science	236	236	231	209	00
5	Electronics & Comm.	284	284	260	213	00
6	Civil & Transportation	00	14	53	95	00
7	Production	115	115	113	111	00
8	Electronics & Instrumentation	100	100	56	21	00
9	Chemical	71	71	37	16	00
10	Electrical & Electronics	00	00	00	00	00
11	MCA	12	19	07	05	00
Grand Total		1841	1905	1644	1383	00

TABLE 8 – M. Tech Students on roll

Sl. No.	Department	Specialization	2012	2011
01.	Civil Engineering	Geotechnical	09	09
		Structural	10	10
		Transportation	10	10
		Environmental	04	00
02.	Mechanical Engineering	Manufacturing Technology	09	10
		Thermal Science	10	08
03.	Electrical Engineering	Power Electronics & Drives	08	04
		Power System Engineering	08	10
		Instrumentation Engineering	08	06
04.	Computer Science & Engineering	Computer Science & Engineering	11	12
05.	Electronics & Communication Engineering	Communication Engg.	10	00
		Micro Electronics & VLSI	10	10
06.	Production Engineering	Computer Integrated Manufacturing	10	00
07.	Hydro Informatics	Hydro Informatics	11	05
Total			128	94

TABLE 9 – M. Sc. Students on roll

Sl. No.	Department	Specialization	2012	2011
01.	Physics Department	Condensed Matter Physic, Optics, Plasma	05	06
02.	Mathematics Department	Applied Mathematics or Topology, Bio Mathematics	04	08
03.	Chemistry	Organic	07	06
04.	MBA	Marketing Mangment, Financial Management, Human Resource Management	17	00

4.6 Examination & Evaluation:

Evaluation of the performance of the students is regarded as one of 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 examinations are conducted. This apart, class tests are also taken. For all subjects viva-voce test is also conducted. Marks are awarded to the students in each subject and on the basis of that the Semester Performance Index (SPI) is calculated. Taking the result of both Mid-Term and End-Term Examination Cumulative Performance Index (CPI/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 behaviour of the students.

4.7 Course Offered:

TABLE 10 – No. of Courses offered

Sl. No.	Department	UG	PG	
1	Civil Engg	B.Tech (1)	M.Tech(3)	P.h.D(1)
2	Mech. Engg.	B.Tech(1)	M.Tech(2)	P.h.D(1)
3	Electrical Engg.	B.Tech(1)	M.Tech(3)	P.h.D(1)
4	Computer Sc. & Engg.	B.Tech(1)	M.Tech(1)	P.h.D(1)
5	Electronics & Communication Engg.	B.Tech(1)	M.Tech(1)	P.h.D(1)
6	Production Engg.	B.Tech(1)	M.Tech(0)	P.h.D(1)
7	Electronics & Instrumentation	B.Tech(1)	-	P.h.D(1)
8	Chemical Engineering	B.Tech(1)	-	-
9	Bio Engineering	B.Tech(1)	-	-
10	School of Hydro Informatics	-	M.Tech(1)	P.h.D (1)
11	Mathematics	-	M.Sc(1)	P.h.D (1)
12	Humanities	-	-	P.h.D (1)
13	Chemistry	-	M.Sc (1)	P.h.D (1)
14	Physics	-	M.Sc (1)	P.h.D (1)
15	School of Management	-	MBA (3)	-

4.8 Convocation:

The National Institute of Technology Agartala celebrated its 4th convocation on 10th February, 2012. Sri Kapil Sibal, Hon'ble Minister, Human Resource Development & Communication and Information Technology, Government of India was the Chief Guest in the Convocation Ceremony. In the 4th Convocation Smt. Sima Ghosh of Civil Engineering Department was awarded Ph.D degree in Engineering. The M.Tech and B.Tech candidates passing out of the Institute in the year 2011 were also awarded degree. In this Convocation Sri Kapil Sibal the Chief Guest of the Convocation presented Honoris Causa D. (Science) to Prof. U. R. Rao.

4.8.1 Introduction:

TABLE 11 – Degree awarded

Sl. No.	Department	B. Tech	M. Tech.	Ph. D.
1	Civil Engg.	43	03	01
2	Mech. Engg.	58	08	00

3	Electrical Engg.	54	07	00
4	Computer Sc. & Engg.	64	00	00
5	Electronics & Comm. Engg.	63	00	00
6	Production Engg.	49	00	00
7	Civil & Transportation Engg.	35	00	00
	TOTAL	366	18	01

With this convocation, the total number of degrees awarded so far by the Institute is 115 the details of which are given below:

Sl. No.	Programme	No.
01.	Ph. D.	01
02.	M. Tech.	14
03.	B. Tech.	100

4.8.2 Award of Prizes to the students:

Gold medals were awarded to Institute Topper of B.Tech and M.Tech. Awarded Gold-Plated Medals to the Branch Topper of each branch of B.Tech and M.Tech .

4.8.3 Convocation Prizes:

The following are the details of Prizes awarded to the students at the 4th Convocation:

Name of the Prize	Name of students/ persons
Gold-plated medals for Branch toppers of B.Tech and M.Tech	For B.Tech- 1.CE: Sri Surajit Das 2.ME: Sri Asutosh Tripathi 3.EE: Smt Sayani Sikdar 4.CS: Sri Arun Dwan 5.EC: Sri Sonu Yadav 6.C&T: Sri Hriesikesh Vivek Sen 7.PE Sri Prasenjit Chanda M.Tech- 1.CE: Sri Debdulal Tripura 2.ME: Sri Barnik Saha Roy 3.EE: Smt Debika Debnath
Gold Medal for Institute topper of B.Tech and M.Tech	B.Tech: 1.ECE: Sri Sonu Yadav M.Tech: 1.ME: Sri Barnik Saha Roy

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 a sanctioned intake capacity of 30 (thirty) students at undergraduate level. The department has a plan to set up the excellent facilities in terms of class rooms, UG laboratories and research laboratories. Within a 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:

For setting up of Bio-Chemistry lab procurement of instruments has been started.

5.4 Faculty and their activities:

Name	Designation	Qualification	Major Area of Specialization
Mrs. Soma Nag	Assistant Professor & Head	B.E(Jadavpur University), M.Tech(IIT,KGP), Chartered Engineer, Ph.D (pursuing)	Plant Design and Fabrication, Environmental Engineering & Waste Treatment
Dr. Dijendra Nath Roy (Joined in January 2013)	Assistant Professor	B.Tech(WBUT), Ph.D (J.U) Post Doc (NUS, Singapore)	Animal and human Physiology, Animal Biotechnology, Immunology, Drug Development
Dr. Biswanath Bhunia (Joined in March 2013)	Assistant Professor	B.Pharm(JU), M.Tech (JU), Ph.D (NIT DGP)	Bioprocess Engineering, Fermentation Technology, Down Stream Processing, Enzyme-Microbial Technology

6.0 CIVIL ENGINEERING DEPARTMENT

6.1 Introduction:

The Department of Civil Engineering was started from the inception of the institute in 1965. Initially the institute was affiliated to the 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. regular faculty members and 7 (seven) nos. visiting faculty members. Almost all the faculty members are involved with different consultancy, research and development 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 programme and the main areas of research include Geotechnical Engineering, Structural Engineering, Water Resources Engineering, Environmental Engineering and Transportation Engineering. The department also handles consultancy works and projects with the state & central government organizations.



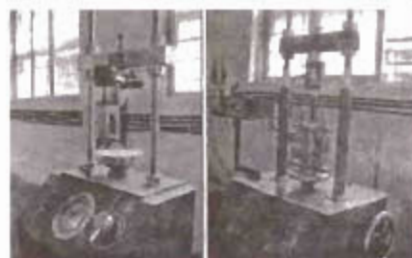
Structural Engineering Laboratory



Geotechnical Engineering Laboratory



Environmental Engineering Laboratory



Solid Mechanics Laboratory



Water Resources Engineering Laboratory

6.2 Academic Programme:

B. Tech (Civil Engineering), M. Tech. (Structural Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering and Water Resources Engineering) and Ph. D.

6.3 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 Engineering	207.68	20	17	21	17	21
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

6.4 Faculties and other Activities:

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

Sl. No.	Name of the Faculty	Title	Period
Workshop:			
1	Mr. Animesh Debnath	Contemporary and future perspective of physics applicable to science and technology: Challenges and opportunities	4th February 2013
Conference:			
1	Mrs. Tara Sen	International Conference On Advances In Architecture And Civil Engineering	June 21 st to 23 rd 2012
2	Mrs. Tara Sen	International Conference on Material Science, ICMS	21 st to 23 rd February, 2013

Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1	Dr. Manish Pal	Singapore	18-19 March, 2013	Paper Presentation
2	Dr. Sima Ghosh	Singapore	18-19 March, 2013	Paper Presentation
3	Mr. Dipankar Sarkar	Singapore	18-19 March, 2013	Paper Presentation

Honours and Awards obtained:

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award For	Date
1	Sushant K. Biswal	Ph. D.	IIT Kanpur	Ph. D. from IIT Kanpur	26/11/2012

6.5 Design and Development Activities:

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

6.6 Research and Consultancy:

The department is engaged in performing various testing 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.

Sponsored Research Projects:

Sl. No.	Title	Period	Funding agency	Amount (in lakhs)	Co-ordinators
1	Seismic Vulnerability Study of Existing Structures on Agartala City	2009 - 2012	AICTE	11.00	Dr. R.P Sharma & Mrs. L. Halder
2	Study of Retaining wall under Seismic Loading Condition	2009 - 2012	AICTE	13.50	Dr. R.P Sharma & Dr. Sima Ghosh
3	Strength, Durability and Ductility study of Concrete using locally available material	2009 - 2012	AICTE	10.00	Mr. G.N. Dey & Mr. J. Pal

4	Planned development of protocols for utilization of the tide land for brick manufacturer after analysis of geo-consequences of mining along with NEIST-Jorhat and Tripura State Council for Science and Technology.	Start Date: 16.07.2010 Completion Date: 15.01.2013	S & T, India	18.67	Dr. R.P. Sharma, Mr. P. P. Sarkar & Mr. D. Sarkar
5	Modernization of transportation Engineering Laboratory	2011 - 2012	AICTE	14.90	Mr. Partha Pratim Sarkar
6	Modernization of Surveying Laboratory under Transportation Engineering Department	2009 - 2012	AICTE	12.00	Dr. U. Mishra & Mr. D. Sarkar
7	Modernization of Pavement Engineering Lab	2012-2013	AICTE	14.00	Dipankar Sarkar
8	Behavioural Study Of RCC Beams Retrofitted By Different Techniques Using Artificial And Natural FRP	2011 - 2012 Ref. No. 8023/RID/RPS-14/(POLICY-III)(NER)/2011-12 Dated March 23 rd 2012	AICTE	6.80	Mrs. Tara Sen
9	Removal of Arsenic by using Nano Filtration from Contaminated Ground Water	01-04-2012 to 31-03-2014	AICTE	6.85	Dr. U. Mishra

Industrial Consultancy:

Sl. No.	Name of the Faculty	Title	Industry	Amount
1	Mr. Rajib Saha	Mix Design	CPWD, PWD, NBCC, URBAN DEVELOPMENT	

			DEPT., Tripura etc.	
2	Mr. Rajib Saha	Third party visit for technical checking of on-going large scale construction projects.	Tripura University, Agartala	

Research Publications:

Total No. of papers published in Refereed International Journals : 05

Total No. of papers presented in International Conferences : 08

In Refereed International Journals:

1. Biswal, S. K., "Time-averaged shear stress and velocity distribution in an open channel junction" *ISH journal of Hydraulic Engineering*, (Accepted for Publication).
2. Dey, S., and Das, R., "Gravel-bed hydrodynamics: a double-averaging approach." *Journal of Hydraulic Engineering, ASCE*, August 1, 2012, 138(8), 707-725.
3. Dey, S., Das, R., Gaudio, R., and Bose, S. K., "Turbulence in mobile-bed stream." *Acta Geophysica, Springer*, December 2012, 60(6), 1547-1588.
4. Debnath, Animesh, and Saswati Chakraborty, S., "Experimental design to optimise colour removal of diazo dye Congo Red using Zero-Valent Iron" *International Journal of Environment and Waste Management*, 2013, 11, 3, 267-288.
5. Saha, R., Dutta, S.C., Halder, S., "Seismic response of soil-pile foundation-structure system" *Journal of civil engineering and management* (accepted in August 2012).

In Proceedings of International Conference:

1. ACE, Singapore, Sarkar, D., Pal, M., 18-19 March, 2013, pp: 450-454.
2. ACE, Singapore, Sarkar, D., Pal, M., 18-19 March, 2013, pp: 455-457.
3. International Conference On Advances In Architecture And Civil Engineering, M.S. Ramaiah Institute Of Technology, MSR Nagar, MSRIT Post, Bangalore, India, Tara Sen, Shubhalakshmi B.S, and Dr.H.N.Jagannatha Reddy, June 21st to 23rd 2012.
4. International Conference On Advances In Architecture And Civil Engineering, M.S. Ramaiah Institute Of Technology, MSR Nagar, MSRIT Post, Bangalore, India, Tara Sen, Shubhalakshmi B. S., and Dr. H. N. Jagannatha Reddy, June 21st to 23rd 2012.
5. International Conference On Advances In Architecture And Civil Engineering, M.S. Ramaiah Institute Of Technology, MSR Nagar, MSRIT Post, Bangalore, India, Shubhalakshmi B. S., Tara Sen and Dr. H. N. Jagannatha Reddy, June 21st to 23rd , 2012.
6. International Conference on Material Science, ICMS, Tripura University (A Central University), Agartala, India, Tara Sen, H. N. Jagannatha Reddy, 21st to 23rd February, 2013.
7. International Conference on Material Science, ICMS Tara Sen, Tripura University (A Central University), Agartala, India, H. N. Jagannatha Reddy, 21st to 23rd February, 2013.

8. International Conference on Material Science , ICMS, Tripura University (A Central University), Agartala, India, Tara Sen, H. N. Jagannatha Reddy, 21st to 23rd February 2013.

6.7 Institute –Industry Collaboration:

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

6.8 Industrial Consultancy and Sponsored Research:

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

6.9 Other Activities:

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

7.0 CHEMICAL ENGINEERING DEPARTMENT

7.1 Introduction:

The department is committed to setting up excellence in teaching, research and service to the Nation. This department was set up in the academic year of 2009-10 with a sanctioned intake capacity of 60(sixty) students at the undergraduate level. The department has excellent facilities in terms of class rooms, UG laboratories and research laboratory. Within four years, the department has set up all major undergraduate laboratories, viz., Fluid Mechanics, Mechanical Operation, Heat Transfer, Mass Transfer, Fuel and Combustion, Reaction and Environmental Engineering. The department has started PhD programme and M.Tech programme is scheduled to start from July 2013 session. Research laboratories being set up according to the research interest of faculty members aiming to cutting edge and interdisciplinary research activities. Currently, this department is looking for research activities in the field of Environmental Engineering and waste water treatment, Adsorption, Computational fluid dynamics, Bio-fuels, Systems Biology, Polymer and Rubber Technology and Catalytic reactor.

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 moulded 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.

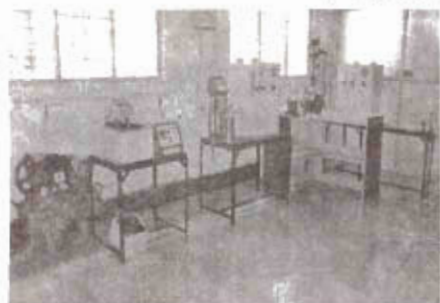


Heat Transfer Lab

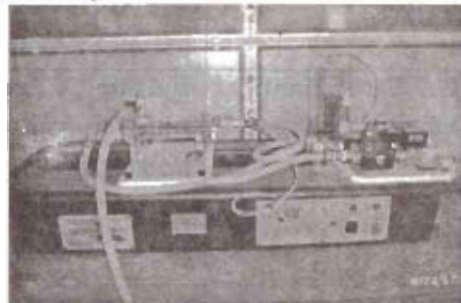


Fluid Mechanics Lab

5th Semester students are performing



Reaction Engineering Lab



Shell and Tube Heat Exchanger

7.2 Academic Programme:

The department offers courses in Under Graduate programme leading to B. Tech degree under Chemical Engineering (4 years) and doctoral programme. M.Tech programme in Chemical Engineering is scheduled to start from July 2013.

7.3 Lab Facilities:

Sl. No.	Name of the Laboratories	Available Floor Area(m ²)	Maximum Batch Size	No. of Experiments	
				Prescribed	Conducted
1	Fluid Mechanics Laboratory	35.5	30	10	10
2	Mechanical Operation Laboratory	35.5	30	10	10
3	Heat Transfer Laboratory	35.5	30	10	10
4	Mass Transfer Laboratory	35.5	30	10	08
5	Fuel & Combustion Laboratory	35.5	30	10	10
6	Reaction Engg Laboratory	35.5	30	10	10
7	Process Design Laboratory	50.0	60	10	10

7.4 Faculties and their Activities:

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

Sl. No.	Name of Faculty	Title	Period
Workshop:			
1	Soma Nag	Industry - Academia Workshop on "Simulation & Modelling in the Process Industry" conducted by Petroleum Federation of India, Lovraj Kumar Trust (LKMT) in association with Indian Oil Corporation Ltd. Refinery, West Bengal. One day workshop on "Intellectual Property Rights" conducted by NIT Agartala. The workshop was organized by NIT Agartala & TIFAC(DST) New Delhi in collaboration with MHRD IPR chair at Tezpur University.	During 25 th 28 th July, 2012 at IMA, Haldia 10 th August-2012
2	Dr. Tarun Kanti Bandhyopadhyay	Industry - Academia Workshop on "Simulation & Modelling in the Process Industry" conducted by Petroleum Federation of India, Lovraj Kumar Trust (LKMT) in association with Indian Oil Corporation Ltd. Refinery, West Bengal. One day workshop on "Intellectual Property	During 25 th 28 th July, 2012 at IMA, Haldia 10 th August-

		Rights ” conducted by NIT Agartala. The workshop was organized by NIT Agartala & TIFAC(DST) New Delhi in collaboration with MHRD IPR chair at Tezpur University.	2012
		“Hydrocarbon Industry Growth: Prospects & Challenges in North East” conducted by Indian OIL-Guwahati Refinery & Petrotech at Guwahati Assam.	21 st to 22 nd January-2013
3	Dr. Srimanta Ray	Rubber and Latex Processing – RRII, Kottayam, Kerala Given a presentation on “ Role of NIT Agartala in development of North-East” in North-East career & skills expo-2012, Tripura.	11 th July-13 th July, 2012 20-22 nd December-2012 at Children's Park, Agartala.
4	Mr Bibhab Lodh	Given a presentation on “ Role of NIT Agartala in development of North-East” in North-East career & skills expo-2012, Tripura. One day workshop on “ Intellectual Property Rights ” conducted by NIT Agartala. The workshop was organized by NIT Agartala & TIFAC(DST) New Delhi in collaboration with MHRD IPR chair at Tezpur University. “Hydrocarbon Industry Growth: Prospects & Challenges in North East” conducted by Indian OIL- Guwahati Refinery & Petrotech at Guwahati Assam	20-22 nd Dec-2012 at Children's Park, Agartala. 10 th August-2012 21 st to 22 nd January- 2013
5	Dr Ajay Kumar Manna	Recent Trends in Oil and Gas Production Technology- organized by ONGC at Sivsagar, Assam.	4-8 th February 2013
Short term Course:			
1.	Mr Bibhab Lodh	Two weeks ISTE WORKSHOP on “ Introduction To Research Methodologies ” conducted by IIT Bombay. The workshop was held under the	25 th June-4 th July-2012.

	National Mission on Education through ICT (MHRD)	
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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	2012
5	Mr Bibhab Kumar Lodh	Member	2012

7.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	MODROBS on Fuel Lab	2010-13	AICTE	8.35	HOD
2	RPS on Development an alternative route for stabilizing and process of natural rubber latex	2011-14	AICTE	16.00	S.Nag and Srmanta Ray
3	Developing an off-grid hybrid power system	2012- 2014	AICTE	17.00	Dr. S. Ray (Co-PI)

Research Publications:

Total No. of papers published in Refereed International Journals : 6

Total No. of papers presented in Conference/Seminar : 5

In Refereed Journals:

<i>Title of the Journals</i>	<i>Name of the Authors published in National Journals</i>	<i>Date of publication of the paper) (Issue/ Volum No./ Page No</i>
Non-Newtonian and Gas-non-Newtonian Liquid Flow through Elbows – CFD Analysis”,	T. K. Bandyopadhyay and S. K. Das,	<i>Journal of Applied Fluid Mechanics</i> , Vol. 6, No. 1, pp. 131-141, 2013.

Development of a cost-optimized hybrid power system	Ray, S., Chakraborty, A.K., Debnath, D.	1. Int. J. Chem. Tech. Res. (2013), 5, 2, 771-779.
Optimization and Modeling Hybrid Power Plant.	Debnath, D., Chakraborty, A.K., Ray, S. (2012).	2. Int. J. Eng. Res. Technol. (2012), 1, 3, 1-10.
Water Environment Research	Pal arimal., Manna Ajay Kumar, Linnane Lassi, "Arsenic Removal by Solar-Driven Membrane Distillation: Modeling and Experimental Investigation with a New Flash Vaporization Module"	(Research paper), Volume 85, Number 1, January 2013, pp. 63-76(14)
Journal of Applied Polymer Science	Sweta, Shishir Sinha, Prakash Biswas, M.R. Maurya, Shri Chand	127(5), 3424-3434, 2013
Journal of Applied Polymer Science	Sweta, Shishir Sinha, Shri Chand	Accepted (2013) DOI: 10.1002/APP.39374

In Proceedings of Conference/Seminar:

1. Bandyopadhyay, T.K., "Convergent-divergent extraction column for extraction of aromatics from light petroleum fraction- experiment and CFD analysis" National Seminar on Green Chemistry & Nanoscience: Theory and Applications 20-21 July 2012 at MBB College, Agartala, Tripura
2. Ajay K. Manna and Parimal Pal, "Polarizations in a flash vaporization solar-driven membrane distillation" CHEMCON 2012, NIT, Jalandhar", 27-30-th December, 2012 .
3. Ajay Kumar Manna, "Estimation of performance factors during arsenic removal from groundwater by solar-driven membrane distillation" CHEMCON 2012, NIT, Jalandhar", 27-30-th December, 2012.

In Proceedings of International Conference:

Name of the Conference	Name of the Paper	Type of Papers
International Conference on Applications of Fluid Engineering (CAFÉ 2012) September 20-22, 2012 at G.L. Bajaj , Institute of Technology & Management, Plot No. 2, Knowledge Park III, Greater Noida (U.P.).	Newtonian liquid flow through vertical helical coil with the help of CFD technique" by Bandyopadhyay, T.K	Research Paper
Int. Conf. on Global Scenario Env. Energy (ICGSEE), Bhopal, Mar 14 - 16, 2013.	Ray, S., Chakraborty, A.K., Debnath, D*. (2013). Cost-optimized hybrid power system for a model site.	Research Paper

Book Chapters

Tarun Kanti Bandyopadhyay “CFD analysis for Non-Newtonian and Gas-non-Newtonian” LAP LAMBERT Academic Publishing, ISBN-13: 978-3-659-30867-3, ISBN-13: 3659308676 (2013-01-18).

7.6 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 promoting of the rubber sector in Tripura, especially for the creation of technical manpower & local enterprise promotion for value addition of rubber within the in association with Rubber Board. TIFAC, New Delhi (DST) has been sponsoring these activities.

Research: The department of Chemical Engineering is aiming vibrant research activity for technical development, especially in north eastern 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:

The department was started since 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, 2 years M.Sc program in chemistry and PhD program. Department has developed infrastructure for carrying out the research work in various fields such as natural product chemistry, organic synthesis, organometallic chemistry, coordination chemistry, bioinorganic synthesis and nanotechnology. Chemistry Department has arranged a seminar on Targeting Protolytic Enzymes of PCSK family for intervention of diseases, where distinguished scientist Professor Ajay Kr. Basak, from Ottawa University Research Hospital, Canada, has delivered a lecture.

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	No. of experiments	
				Prescribed	Conducted
1.	Lab-1(UG)	14.8m x 6.5m = 86.2 sq. m	35	12	08
2.	Lab-2 (PG and Research)	14.8m x 6.5m = 86.2 sq. m	NA	NA	NA



B. Tech. Lab



M. Sc. & Research Lab

8.4 Faculties and their Activities:

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

Sl No.	Invitee Lecturer	Date	Seminar	Organized By
1.	Prof. Ajay Kr. Basak, Ottawa University Research Hospital, Canada	19 th Feb 2013	Seminar on Targeting Protolytic Enzymes of PCSK family for intervansion of diseases.	Chemistry Department

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. Mitali Saha	Brainstorming workshop on developing R&D proposals for North Eastern States of India, Pragna Bhawan, Agartala, Tripura	18-19 October 2012
Conference:			
1.	Dr. Mitali Saha	Preparation of continuous carbon nanotube-polycarbonate composite fibers through melt spinning, National Symposium on Recent Trends Chemical Sciences (NSRTCS-2013), Manipur	22-23 March, 2013
2.	Ms. Soma Das	Synthesis and characterization of carbon nanotubes from coconut oil and its use as glucose biosensor, Green Chemistry and Nanoscience: Theory and Application, M.B.B College Agartala.	July, 20 - 21, 2012
3.	Narayan Debnath,	Conducting Polymer Nano composite: for Chemical Sensor Based application: A review	July, 20 - 21, 2012

4.	Narayan Debnath,	Green Chemistry: An Inherently Environmentally Benign Chemistry	July, 20 – 21, 2012
5.	Dr. Subrata Das	100 th Indian Science Congress, Proceeding paper	3-7 Jan 2013, University of Calcutta
International:			
1.	Dr. Mitali Saha	Electrochemical Studies for the detection of Bio molecules	14-16 February, 2013
2.	Ms. Soma Das	Electrochemical Studies for the detection of Bio molecules	14-16 February, 2013
3.	Mr. Narayan Debnath	Electrochemical Studies for the detection of Bio molecules	14-16 February, 2013
Training:			
1.	Dr. Subrata Das	IASc-INSa-NASI Summer Research	15. 05.2012 to 12.07.2012

Honours and Awards obtained by Faculty:

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award for	Date
1	Dr. Subrata Das	BHARAT JYOTI AWARD	Dr. Bhishma Narain Singh, Former Governor of Tamilnadu & Assam	Meritorious Services, Outstanding Performance and Remarkable Role in Science	9 th February, 2013, New Delhi

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 Time	1995
2.	Dr. K. S. Singh	Indian Science Congress Association	Life Member	2007
4.	Dr. Mitali Saha	Indian Carbon Society	Life member	2011
5.	Mr. Narayan Debnath	Tripura Chemical Society	Executive Committee Member (Life member)	2012

8.5 Research and Consultancy :

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lacs)	Co-ordinators
1.	Synthesis, Characterization—amino acid and benzoic acid related systems	2010-2013	DST	19.06	Dr. K. S Singh

2.	Modernisation of Laboratories Under Chemistry Department	2010-2011	AICTE (MODROB S)	7.55	Dr. Saroj Kr. Das
3.	Development of carbon nanomaterials from starch materials	2011-2014	AICTE(RP S)	18.20	Dr. Mitali Saha
4.	Development of Nano structured material composition for next generation solar cells	2012-2015	CPRI	25.00	Dr. Mitali Saha
5.	Preparation of nanomaterials for Cholesterol biosensor	2012-2014	AICTE(RP S)	19.40	Dr. Mitali Saha
6.	Nucleophilic addition reaction of uracil ring for the synthesis of bio-active compounds.	2012-2014	AICTE(RP S)	16.00	Dr. Subrata Das
7.	Design of efficient method for the synthesis of RNA nucleobases.	2013	DBT	47.37	Dr. Subrata Das
8.	Nitroso-Diels-Alder (NDA) reaction for the synthesis of some Heterocyclic compounds.	2013	DST	26	Dr. Subrata Das

Research Publications:

Total No. of papers published in Refereed International Journals	: 06
Total No. of papers presented in National Conference	: 07
Total No. of papers presented in International Conferences	: 03

In Refereed International Journals:

1. Subrata Das*, A. J. Thakur, T. Medhi, B. Das, *RSC Advances*, 2013, 3, 9407.
2. B. K. Saikia, Subrata Das, B. Sridhar, A. J. Thakur, *J. Chem. Crystallogr* 2012, 42, 711-720.
3. Soma Das, Mitali Saha *, *Adv.Sci. Eng.Med.*, 2013, 5, 645-648.
4. Soma Das, Mitali Saha *, *Current Trnds. Tech. Sc.*, 2013, 4, 174-177.
5. Soma Das, Mitali Saha *, *Int. Jr. phamr. Bio Sci.*, 2013, 4, 967 - 975.
6. Soma Das, Mitali Saha *, *Current Trnds Tech. Sc.*, 2013, 4, 148 -153

In Proceedings of National Conference:

1. Green Chemistry and Nanoscience: Theory and Application, M.B.B College Agartala, Soma Das, Mitali Saha, 20-21 July 2012.

- Green Chemistry and Nanoscience: Theory and Application , M.B.B College Agartala, Narayan Debnath , 20-21 July 2012.
- Green Chemistry and Nanoscience: Theory and Application , M.B.B College Agartala, Narayan Debnath , Deepak Rudrapal , 20-21 July 2012.
- National Symposium on Recent Trends Chemical Sciences (NSRTCS-2013), Department of Chemistry, Manipur University, Canchipur-795003, Mitali Saha, 22-23 March, 2013.
- National Symposium on Recent Trends Chemical Sciences (NSRTCS-2013), Sanasam Sachika Devi, Keisham Surjit Singh and W. Radhapriyari, Department of Chemistry, Manipur University, Canchipur-795003, 22-23 March, 2013
- National Symposium on Recent Trends Chemical Sciences (NSRTCS-2013), Manojit Roy, Keisham Surjit Singh, W. Radhapriyari Devi and Ch. Brajakishwor Singh, Department of Chemistry, Manipur University, Canchipur-795003, 22-23 March, 2013.
- 100th Indian Science Congress, University of Calcutta, Rupak Banik, Sumana Dev, Tarun Kumar Misra, Ashim J. Thakur, Subrata Das , Calcutta University , 3rd Jan-7th Jan 2013.

In Proceedings of International Conference: 03 Nos

- International Conference on Material Science 2013 , Tripura University , Soma Das , Narayan Debnath , Mitali Saha , 14 –16 February 2013.
- International Conference on Material Science 2013 , Tripura University , Monica Debbarma , Mitali Saha , 14 – 16 February 2013.
- International Conference on Material Science 2013 , Tripura University , Satyanand , Mitali Saha , 14 – 16 February 2013

Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Prof. Ambikesh Mahapatra, Jadavpur University	1 st Oct-3 rd Oct 2012	Guest Lecturer
2.	Dr. Sumanta Kr. Sahu, Indian School of Mine , Dhanbad	29 th Oct -3 rd Nov 2012	Guest Lecturer
3.	Prof. Ajay Kr. Basak, Ottawa University Research Hospital , Canada	19 th Feb 2013	Seminar on Targeting Protolytic Enzymes of PCSK family for intervansion of diseases.

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 interdisciplinary areas, innovation, problem solving abilities, intellectual, honest and professional ethics and capacity for team work in the national and international environment. The first undergraduate batch was rolled out in the year 2003. Since its inception in 1999, the department has always been recognized for excellence.



Department of Computer Science and Engineering

9.2 Academic Programme:

This Institute offers courses of study and facilities for research leading to B.Tech, M.Tech, MCA and Ph.D under Computer Science & Engineering.

The department currently offers the following programmes:-

Under Graduate Programme:

- 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	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	20	17



Department of Computer Science and Engineering Lab

9.4 Faculty and their Activities:

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

Short Term Courses:

Sl. No.	Co-ordinators	Title	Period
1	Ashim Saha (Remote Center Coordinator)	Linux Ubuntu workshop conducted by IIT, Bombay under Spoken Tutorial Project.	22/03/2013
		PHP & MySQL workshop conducted by IIT, Bombay under Spoken Tutorial Project.	11/01/2013

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

Workshop:

Sl. No.	Name of Faculty	Title	Period
1	Dr. Paritosh Bhattacharya	Participated one day National workshop on "Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities" at NIT Agartala.	04/02/2013

		Participated Two day ISTE Workshop on "Aakash for Education" conducted by IIT Bombay	10/11/2012 to 11/11/2012
		Participated Annual Review Respond Projects programme, Sponsored by ISRO Space Application Centre Ahmedabad at ISRO, SAC, Ahmedabad	01/11/ 2012 to 02/11/ 2012
		Participated Brain Storming workshop funded by DST Government of India at Pragna Bhawan Agartala	18/10/2012 to 19/10/2012
		Participated One Day Workshop on "Intellectual Property Rights" Sponsored by National Institute of Technology, Agartala & TIFAC (DST) Govt. of India, New Delhi in collaboration with MHRD IPR Chair at Tezpur University at NIT Agartala	10/08/2012
2	Mr. Mrinal Kanti Debbarma	2 Days ISTE Workshop on Aakash for Education IIT Bombay & NIT Agartala, MHRD, under the Govt. of Ind	10/11/2012 to 11/11/2012
		2-week ISTE Workshop on Research Methodology" IIT Bombay & NIT Agartala, MHRD, under the Govt. of India	24/06/2012 to 04/07/2012
3	Mr. Swapan Debbarma	2-week ISTE Workshop on Research Methodology" IIT Bombay & NIT Agartala, MHRD, under the Govt. of India	24/06/2012 to 04/07/2012
4	Mr. Nikhil Debbarma	2-week ISTE Workshop on Research Methodology" IIT Bombay & NIT Agartala, MHRD, under the Govt. of India	24/06/2012 to 04/07/2012
5	Mr. Nirmalya Kar	Participated One Day Workshop on "Intellectual Property Rights" Sponsored by National Institute of Technology, Agartala & TIFAC (DST) Govt. of India, New Delhi in collaboration with MHRD IPR Chair at Tezpur University at NIT Agartala	10/08/2012

		Participated in a Two-Week ISTE workshop on "Introduction to Research Methodologies" conducted by IIT Bombay under NMEICT (MHRD).	24/06/2012 to 04/07/2012
4	Mr. Anupam Jamatia	Attended 2-Day ISTE workshop on Aakash for Education conducted by IIT Bombay.	10/11/2012 to 11/11/2012
		Essential Abstractions in GCC '12 A Workshop on GCC Internals by GCC Resource Center, IIT Bombay	30/06/2012 to 03/07/2012.
5	Mr. Kunal Chakma	Two days ISTE workshop on Aakash for Education conducted by IIT Bombay under the National Mission on Education through ICT(MHRD)	10/11/2012 to 11/11/2012
		Two-Weeks ISTE Workshop on "Introduction to Research Methodologies" conducted by IIT Bombay under the National Mission on Education through ICT(MHRD)	25/06/2012 to 04/07/2012
6	Mr. Dwijen Rudrapal	2. Two days ISTE workshop on Aakash for Education conducted by IIT Bombay under the National Mission on Education through ICT(MHRD)	10/11/2012 to 11/11/2012
7	Mr. Tribid Debbarma	Two days ISTE workshop on Aakash for Education conducted by IIT Bombay under the National Mission on Education through ICT(MHRD)	10/11/2012 to 11/11/2012
		Participated in a Two-Week ISTE workshop on "Introduction to Research Methodologies" conducted by IIT Bombay under NMEICT (MHRD).	25/06/2012 to 04/07/2012
8	Mr. Suman Deb	Participated One Day Workshop on "Intellectual Property Rights" Sponsored by National Institute of Technology, Agartala & TIFAC (DST) Govt. of India, New Delhi in collaboration with MHRD IPR Chair at Tezpur University at NIT Agartala	10/08/2012

9	Mr. Ashim Saha	Participated in a Two-day Workshop on "MATLAB and Its Application in Digital Image and Signal Processing" Conducted by IIT, Allahabad.	07/03/2013 to 13/03/2013
		ISTE workshop on "Aakash Education" Conducted by Indian Institute of Technology Bombay	10/11/2012 to 11/11/2012
		ISTE workshop on "Introduction to Research Methodologies" Conducted by Indian Institute of Technology Bombay	25/06/2012 to 04/07/2012
		Participated in 5 th National Workshop on "Recent Trends in Object-Oriented Software Testing (R-Toost - 2012)" organized by CSE Dept, NIT Rourkella.	09/06/2012 to 11/06/2012
		Participated in Awareness Workshop on Developing Location Specific R & D and Demonstration projects in Tripura." organized by Tripura State Council for Science & Technology with support from Department of Science & Technology, Govt. of India.	04/04/2012 to 05/04/2012
10	Smt. Sharmistha Majumder	ISTE workshop on "Introduction to Research Methodologies"	25/06/2012 to 04/07/2012

Conference:

Sl. No.	Name of Faculty	Title	Period
1	Dr. Paritosh Bhattacharya	S. Mukhopadhyay, Paritosh Bhattacharya, "Optimized DHT-RBF model as replacement of ARMA-RBF model for wind power forecasting" in IEEE International Conference in Emerging Trends in computing, communication and Nanotechnology (ICE-CCN) at Tirunelveli, India	25/03/2013 to 26/03/2013

		S. Mukhopadhyay, Paritosh Bhattacharya, "Minimum Vertex Colored Wavelet Packets to prove the Kraft's Inequality", 100 th Indian Science Congress Calcutta University, Kolkata, India	03/01/2013 to 07/01/2013
		S. Mukhopadhyay, Paritosh Bhattacharya, R. Bhattacharjee, P.K.Bose "Discrete Hilbert Transform as Minimum Phase Type Filter for the Forecasting and the characterization of Wind Speed", IEEE International Conference on Communications, Devices and Intelligent Systems (CODIS) at Jadavpur University Kolkata	28/12/2012 to 29/12/2012
		A.Mitra, S.Mukhopadhyay "Wind Power Forecasting Based on Discrete Hilbert Transform and Neural Network Model" International Conference on Advances in Mechanical Engineering and its interdisciplinary areas, CEM Kolaghat	27/12/2012 to 28/12/2012
		S. Mukhopadhyay, P. Bhattacharya, P. Das, "Sustainable Development Using Wind Power in Rural Area", National Conference on Sustainable Development through Innovative Research in Science and Technology sponsored by DST PURSE PROGRAMME at Jadavpur University, Kolkata	28/09/2012 to 29/09/2012
		S. Mukhopadhyay, P. Bhattacharya, P. Das, "Possibility Determined by Weibull Parameters for Wind Farm installation in Midnapore Zone", IETE Annual Seminar, Kolkata	08/09/2012 to 09/09/2012
2	Mr. Mrinal Kanti Debbarma	National Conference on Research and Higher Education Information Technology (RHEIT-2013) Assam University	04/02/2013 to 05/02/2013
		IEEE International Conference on Communication Information and Computing Technology (ICCICT-2012), Mumbai, India	18/10/2012 to 20/10/2012

3	Mr. Kunal Chakma	International Conference on Software and Computing Technology (ICSCT 2012) Kuala Lumpur, Malaysia	21/12/2012 to 22/12/2012
4	Mr. Nikhil Debbarma	International Conference on Software and Computing Technology (ICSCT 2012) Kuala Lumpur, Malaysia	21/12/2012 to 22/12/2012
5	Mr. Anupam Jamatia	International Conference on Software and Computing Technology (ICSCT 2012), Kuala Lumpur, Malaysia	21/12/2012 to 22/12/2012
6	Smt. Smita Das	Springer International Conference on Computing, Communication and Information Technology, 2012 (ICCCIT-2012), Chennai, India	28/06/2012 to 30/06/2012
		IEEE international conference on electronics computer technology (icect 2012), kanyakumari, india	06/04/2012 to 08/04/2012
7	Mr. Dwijen Rudrapal	International Conference on Emerging Trends in Electrical, Communication and Information Technologies" ICECIT-2012 Anantapur, Andhra Pradesh	21/12/2012 to 23/12/2012
		The 4th International Conference on Signal and Image Processing" ICSIP-2012, Coimbatore, Tamilnadu,	13/12/2012 to 15/12/2012
		Springer International Conference on Computing, Communication and Information Technology, 2012 (ICCCIT-2012)	27/06/2012 to 29/06/2012
		4th IEEE International Conference on Electronics Computer Technology - ICECT 2012	06/04/2012 to 08/04/2012
8	Mr. Nirmalya Kar	International Conference on Communication and Broadband Networking (ICCBN 2012) , Phuket, Thailand	27/05/2012 to 28/05/2012
		Advances in Information Technology and Mobile Communication (AIM 2012) Bangalore, India	27/04/2012 to 28/04/2012

9	Mr. Suman Deb	ACSIT-2012, International Conference of Advanced Computer Science & Information Technology, July-2012, Chennai, India.	07/2012
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Short Term Course attended:

Sl. No.	Name of Faculty	Title	Period
1	Mrs. Smita Das	One Week AICTE sponsored Staff Development Program on "Understanding Embedded Systems"	04/06/2012 to 15/06/2012
2	Mr. Ashim Saha	DST Sponsored SERC School on "Advanced Software Engineering Techniques & Their Applications"	04/06/2012 to 08/06/2012

Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1	Mr. Nikhil Debbarma	Malaysia	21/12/2012 to 22/12/2012	International Conference on Software and Computing Technology (ICSCT 2012)
2	Mr. Kunal Chakma	Malaysia	21/12/2012 to 22/12/2012	International Conference on Software and Computing Technology (ICSCT 2012)
3	Mr. Anupam Jamatia	Malaysia	21/12/2012 to 22/12/2012	International Conference on Software and Computing Technology (ICSCT 2012)
4	Mr. Nirmalya Kar	Phuket, Thailand,	27/05/2012 to 28/05/2012	International Conference on Communication and Broadband Networking (ICCBN 2012)

In Refereed International Journals:

By Mr. Mrinal Kanti Debbarma

1. M. K. Debbarma, D. Chakraborty, and Sudipta Roy, S. K. Sen, "QoS Provisioning in WMNs: Challenges and a Comparative Study of Efficient Methodologies" International Journal of Computer Application (IJCA) ISSN : 0975 -- 8887, Vol. 65-No-3, PP-24-27, March 2013 <http://research.ijcaonline.org/volume65/number3/pxc3885833.pdf>

2. Mrinal Kanti Debbarma, Swapan Debbarma, Nikhil Debbarma, Kunal Chakma, AnupamJamatia. "A Review and Analysis of Software Complexity Metrics in Structural Testing" International Journal of Computer and Communication Engineering (IJCCE).Vol.2 No2. March 2013 pp.129-133
3. Jhunu Debbarma, M. K. Debbarma, Sudipta Roy, R.K Pal, "Literature Survey on Cross-Layer Design Architecture for Bandwidth Management in Mobile Ad-hoc Networks," in International Journal of Computer Application (IJCA) ISSN : 0973 – 80871-87-9, vol-60, No. 7,pp-1-8, Dec, 2012. DOI: 10.5120/9701-3739 <http://research.ijcaonline.org/volume60/number7/pxc3883739.pdf>
4. M. K. Debbarma, S. K. Sen, Sudipta Roy "A Review of DVR-based Routing Protocols for Mobile Ad hoc Networks, International Journal of Computer Application (IJCA) ISSN : 0975 – 8887, Vol. 58-No-3, PP-1-8, Nov 2012, DOI: 10.5120/9259-3433 <http://research.ijcaonline.org/volume58/number3/pxc3883433.pdf>
5. M. K. Debbarma, S. K. Sen, Sudipta Roy "DVR-Based MANET routing protocols Taxonomy," International Journal of Computer Science & Engineering Survey (IJCSES) ISSN: 0976 – 2760 [Online]; 0976 - 3252 [Print],Vol. 3, No. 5,PP- 51-69, October 2012,DOI10.5121/ijcses.2012.3504.<http://airccse.org/journal/ijcses/papers/3512ijcses04.pdf>
6. N.Kar, M. K. Debbarma, Ashim Saha, D. Rudrapal Article: "Study of implementing automated attendance system using face recognition technique" International journal of computer and communication engineering ISSN 2010-3743. Pages 100-103 volume 01 No-02 July 2012 published by IACSIT.
7. Nirmalya Kar, Mrinal Kanti Debbarma, Ashim Saha And Dwijen Rudrapal "A Study Of Implementing Automated Attendance System Using Face Recognition Technique, International Conference on Communication and Broadband Networking (ICCBN 2012) , Phuket, Thailand, 27-28 May 2012, Published in International Journal of Computer and Communication Engineering (IJCCE) (ISSN 2010-3743). Pages 100-103 volume 01, No-02 July 2012, DOI: 10.7763/IJCCE.2012.V1.28; published by IACSIT. IPCSIT.
8. Suman Deb, Diptendu Bhattacharya, Mrinal Kanti Debbarma, "Interpretation of significant eye blinks with the use of intelligent agent for effective human computer interaction" International Journal of Computer Science and Network (IJCSN) Volume 1, Issue 3, June 2012 www.ijcsn.org ISSN 2277-5420.

By Mr. Swapan Debbarma

1. Mrinal Kanti Debbarma, Swapan Debbarma, Nikhil Debbarma, Kunal Chakma, Anupam Jamatia. "A Review and Analysis of Software Complexity Metrics in Structural Testing" International Journal of Computer and Communication Engineering (IJCCE).Vol.2 No2. March 2013 pp.129-133
2. K.Chakma,S.Debbarma,N.Kar,N.Debbarma and T.Debbarma,"A Hierarchical Scheduling Approach for Symmetric Multiprocessing Based Real Time Systems on VxWorks" in Lecture Notes on Software Engineering, LNSE 2013 Vol.1(1): 61-65 ISSN:2301-3559,pp.61-65DOI: 10.7763/LNSE.2013.V1.14, February 2013

3. KP Ghatak, PK Bose, S Bhattacharya, A Bhattacharjee, D De, S Ghosh, S. Debbarma and N.Patiya "Simple Theoretical Analysis of the Fowler-Nordehim Field Emission from Quantum Confined Optoelectronic Materials" American Scientific Publishers, Vol 2, No.2, pg: 83-101 January 2013
4. S. Debbarma, A. Bhattacharjee, S. Bhattacharyya, A. Mondal, and K. P. Ghatak "Influence of Quantizing Magnetic Field on the Effective Electron Mass in Nonlinear Optical Optoelectronic and Related Materials: Simplified Theory and Relative Assessment", American Scientific Publishers vol 1, No 1, July 2012, Pg 84-109, S. Debbarma
5. P Bhardwaj, S Debbarma, S Deb, N Debbarma, J Pal "Liveness Detection Using Eye Blink A Case Study" 04/07/2012
6. Government and Binding Theory for Hindi Language, International Journal of Computer Applications (0975 – 8887), Volume 43– No.22, Pages: 42 - 45, April 2012.

By Mr. Nikhil Debbarma

1. Mrinal Kanti Debbarma, Swapan Debbarma, Nikhil Debbarma, Kunal Chakma, AnupamJamatia. "A Review and Analysis of Software Complexity Metrics in Structural Testing". International Journal of Computer and Communication Engineering (IJCCE).Vol.2 No2. March 2013 pp.129-133.
2. K.Chakma,S.Debbarma,N.Kar,N.Debbarma and T.Debbarma,"A Hierarchical Scheduling Approach for Symmetric Multiprocessing Based Real Time Systems on VxWorks" in Lecture Notes on Software Engineering, LNSE 2013 Vol.1(1): 61-65 ISSN:2301-3559,pp.61-65DOI: 10.7763/LNSE.2013.V1.14, February 2013
3. P Bhardwaj, S Debbarma, S Deb, N Debbarma, J Pal "Liveness Detection Using Eye Blink A Case Study" 04/07/2012.

By Mr. Kunal Chakma

1. Mrinal Kanti Debbarma, Swapan Debbarma, Nikhil Debbarma, Kunal Chakma, Anupam Jamatia. "A Review and Analysis of Software Complexity Metrics in Structural Testing" International Journal of Computer and Communication Engineering (IJCCE).Vol.2 No2. March 2013 pp.129-133
2. K.Chakma,S.Debbarma,N.Kar,N.Debbarma and T.Debbarma,"A Hierarchical Scheduling Approach for Symmetric Multiprocessing Based Real Time Systems on VxWorks" in Lecture Notes on Software Engineering, LNSE 2013 Vol.1(1): 61-65 ISSN:2301-3559,pp.61-65DOI: 10.7763/LNSE.2013.V1.14, February 2013

By Smt. Smita Das

1. Ruman Sarkar, Smita Das, "Analysis of different Braille devices for implementing a cost-effective and portable Braille system for the visually impaired people", International Journal of Computer Applications (0975 - 8887), December 2012.

2. Government and Binding Theory for Hindi Language, International Journal of Computer Applications (0975 – 8887), Volume 43– No.22, Pages: 42 - 45, April 2012.

By Mr. Dwijen Rudrapal

1. N.Kar, M. K. Debbarma, Ashim Saha, D. Rudrapal Article: "Study of implementing automated attendance system using face recognition technique" International journal of computer and communication engineering ISSN 2010-8743. Pages 100-103 volume 01 No-02 July 2012 published by IACSIT
2. Anish Kumar Saha, Partha Pratim Deb, Moutushi Kar and D Rudrapal. Article: "An Optimization Technique of Web Caching using Fuzzy Inference System". International Journal of Computer Applications (IJCA) 43(17):20-23, April 2012. Published by Foundation of Computer Science, New York, USA

By Mr. Suman Deb

1. P.Bhardwaj, Swapan Debbarma, Suman Deb, Nikhil Debbarma, Jayanta Pal "Liveness Detection Using Eye Blink A case Study" International Journal of Application or Innovation in Engineering & Management (IJAIEEM) Volume 1, Issue 3, November 2012 Page 21 ISSN 2319 – 4847.
2. Suman Deb, Saptarshi Chakraborty, Taniya Bhattacharjee, "A study on eigen faces for removing image blurredness through image fusion" The International Journal of Multimedia & Its Applications (IJMA), June 2012, Volume 4, Number 3, ISSN:0975-5578 (Online); 0975-5934 (Print).
3. Suman Deb, Diptendu Bhattacharya, Mrinal Kanti Debbarma, "Interpretation of significant eye blinks with the use of intelligent agent for effective human computer interaction" International Journal of Computer Science and Network (IJCSN) Volume 1, Issue 3, June 2012 www.ijcsn.org ISSN 2277-5420.

By Mr. Anupam Jamatia

1. Mrinal Kanti Debbarma, Swapan Debbarma, Nikhil Debbarma, Kunal Chakma, Anupam Jamatia. "A Review and Analysis of Software Complexity Metrics in Structural Testing" International Journal of Computer and Communication Engineering (IJCCE). Vol.2, No 2. March 2013 pp.129-133.
2. Suman Deb, Saptarshi Chakraborty and Anupam Jamatia "Liveness Detection Using Thermal Image - A Case Study" International Journal of Emerging Technology and Advanced Engineering (IJETAEE). Volume 2, Issue 12, ISSN 2250-2459, December 2012.

By Mr. Tribid Debbarma

1. K.Chakma, S. Debbarma, N.Kar, N. Debbarma and T. Debbarma, "A Hierarchical Scheduling Approach for Symmetric Multiprocessing Based Real Time Systems on VxWorks" in Lecture Notes on Software Engineering, LNSE. 2013 Vol.1(1): 61-65 ISSN:2301-8559, pp. 61-65 DOI: 10.7763/LNSE.2013.V1.14, February 2013

By Mr. Nirmalya Kar

1. Nirmalya Kar, Mrinal Kanti Debbarma, Ashim Saha And Dwijen Rudrapal "A Study Of Implementing Automated Attendance System Using Face Recognition Technique, International Conference on Communication and Broadband Networking (ICCBN 2012) , Phuket, Thailand, 27-28 May 2012, Published in International Journal of Computer and Communication Engineering (IJCCE) (ISSN 2010-3743). Pages 100-103 volume 01, No-02 July 2012, DOI: 10.7763/IJCCE.2012.V1.28; published by IACSIT. IPCSIT.

By Smt. Lalita Kumari

1. Lalita Kumari, Radhey Shyam, Swapan Debbarma, Nirmalya Kar and Smita Das. Article: Government and Binding Theory for Hindi Language. International Journal of Computer Applications 43(22):42-45, April 2012. Published by Foundation of Computer Science, New York, USA, ISSN 0975 – 8887, DOI:- 10.5120/6406-8892

In Proceedings of National Conference:

By Dr. Paritosh Bhattacharya

1. S. Mukhopadhyay, P. Bhattacharya, P. Das, "Possibility Determined by Weibull Parameters for Wind Farm installation in Midnapore Zone", IETE Annual Seminar-2012, Kolkata, Proceeding.

By Mr. Mrinal Kanti Debbarma

1. M. K. Debbarma, Jhunu Debbarma, Santanu Kumar Sen, Sudipta Roy "DVR- based Hybrid Routing Protocols in mobile Ad hoc Networks: Applications and Challenges" National Conference on Research and Higher Education Information Technology (RHEIT-2013), Assam University, 4-5, Feb, 2013.
2. Jhunu Debbarma, M. K. Debbarma, S. K. Sen, Sudipta Roy, R. K. Pal, "Mobile Adhoc Network: Challenges and in the Research Activities" National Conference on Research and Higher Education Information Technology (RHEIT-2013), Assam University, 4-5, Feb, 2013
3. M. K. Debbarma, Jhunu Debbarma, Santanu Kumar Sen, Sudipta Roy " A Study on Position based Routing Protocols in Mobile Ad hoc Networks" workshop on J2EE, AJAX and struts(WJAS)- 2013, 4 jan, 2013

By Mr. Nirmalya Kar

1. Ashim Saha, Mrinal Kanti Debbarma, Nirmalya Kar, "A Proposed Technique of Online Face Authentication to Enrich the Security of Personal Web Account", NationalConference on Pervasive Computing & Communications (NCPCC-2012), Kolkata, 2-3 March 2012.

2. Mrinal Kanti Debbarma, Nirmalya Kar, Ashim Saha, "Two-Way Energy Efficient Communications in Wireless Sensor Networks: A Survey", Accepted for National Conference on Pervasive Computing & Communications (NCPCC-2012), Kolkata, 2-3 March 2012.

By Mr. Ashim Saha

1. Nirmalya Kar, Sharmistha Roy, Ashim Saha "A Biometric Based Design Pattern for Implementation of a Security Conscious E-Voting System using Cryptographic Protocols" ACEEE International Journal of Network Security. Vol-2, No. 2, Sep 2012, ISSN: 2152-5064, ISSN: 2152-5064, published by ACEEE, USA.
2. N.Kar, M. K. Debbarma, Ashim Saha, D. Rudrapal Article: "Study of implementing automated attendance system using face recognition technique", presented in International Conference on Communication and Broadband Networking (ICCBN 2012), Bangkok, Thailand, 27-28 May, 2012, Published in International journal of Computer and Communication Engineering (ISSN 2010-8743). Pages 100-103 volume 01 No-02 July 2012, published by IACSIT.

In Proceedings of International Conference:

By Dr. Paritosh Bhattacharya

1. S. Mukhopadhyay, Paritosh Bhattacharya, "Optimized DHT-RBF model as replacement of ARMA-RBF model for wind power forecasting" in IEEE International Conference in Emerging Trends in computing, communication and Nanotechnology (ICE-CCN) from 25-26 March 2013 at Tirunelveli, India
2. S. Mukhopadhyay, Paritosh Bhattacharya, "Minimum Vertex Colored Wavelet Packets to prove the Kraft's Inequality", 100th Indian Science Congress, 3-7 January 2013, Calcutta University, Kolkata, India
3. S. Mukhopadhyay, Paritosh Bhattacharya, R. Bhattacharjee, P.K.Bose "Discrete Hilbert Transform as Minimum Phase Type Filter for the Forecasting and the characterization of Wind Speed", IEEE International Conference on Communications, Devices and Intelligent Systems (CODIS), December 28 & 29, 2012 at Jadavpur University, Kolkata.
4. A.Mitra, S.Mukhopadhyay "Wind Power Forecasting Based on Discrete Hilbert Transform and Neural Network Model" International Conference on Advances in Mechanical Engineering and its interdisciplinary areas, CEM Kolaghat, December 27 & 28, 2012
5. S. Mukhopadhyay, P. Bhattacharya, P. Das, "Sustainable Development Using Wind Power in Rural Area", National Conference on Sustainable Development through Innovative Research in Science and Technology sponsored by DST PURSE PROGRAMME, 28-29th September, 2012 at Jadavpur University, Kolkata
6. S. Mukhopadhyay, P. Bhattacharya, P. Das, "Possibility Determined by Weibull Parameters for Wind Farm installation in Midnapore Zone", IETE Annual Seminar, 8-9 September, 2012, Kolkata.

By Mr. Mrinal Kanti Debbarma

1. Dibakar Chakraborty, M. K. Debbarma, "MAvB: A Maximum Available Bandwidth based routing metric for multi radio multichannel Wireless Mesh Networks ensuring QoS provisions for real time communications" IEEE International Conference on Electrical, Computing and Communication Technologies (CONECCT), 17-19, Jan, 2013, World Trade Center, Bangalore, Page-1-6
2. Anupam Jamatia, Tribid Debbarma, M. K. Debbarma, Swapan Debbarma, "Scenario Based Pause Time Analysis of AODV, DSDV and DSR over CBR connections in MANET" Proc. of the International Conference on Software and Computing Technology (ICSCT 2012), December 21-22, 2012, Kuala Lumpur, Malaysia. ISSN 2301-3559.
3. Alak Roy, Manasi Hazarika, M. K. Debbarma "Energy Efficient Cluster Based Routing in MANET" IEEE International Conference on Communication Information and Computing Technology (ICCICT-2012) 2012, October 18-20, 2012, PP-1-5, Mumbai India, DOI: 10.1109/ICCICT.2012.6398228
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5. Alak Roy, Manasi Hazarika, M. K. Debbarma "Power and Signal Efficient Cluster Based Routing in Mobile Ad-hoc Network" 3rd IEEE International Conference on Computing Communication and Networking Technologies (ICCCNT 2012), 2012, 26, 27 and 28 July, Coimbatore, India.
6. Smita Das, Dwijen Rudra pal, S. Debbarma, N. Kar and M. K. Debbarma "Implementation of Gesture in scheming Mouse Events for camera and projector based Virtual Touch Screen", 4th International Conference on Electronics Computer Technology (ICECT2012), April 6-8, 2012, ISBN: 978-1-4673-1850-1/12, Page No. 468-472, Kanyakumari, India.

By Mr. Swapan Debbarma

1. "Scenario Based Pause Time Analysis of AODV, DSDV and DSR over CBR Connections in MANET". International Conference on Software and Computing Technology (ICSCT) 2012 in Kuala Lumpur, Malaysia, December 21-22, 2012
2. D Rudrapaul, S Das, N Debbarma, S. Debbarma et al "Internal Attacker Detection by Analyzing User Keystroke Credential", International Conference on Software and Computing Technology (ICSCT 2012), Kuala Lumpur, Malaysia, December 21-22, 2012.
3. MKD, S Das, D Rudrapaul, S. Debbarma "Implementation of Gesture in scheming Mouse Events for camera and projector based Virtual Touch Screen", International conference on electronics computer technology (icect 2012), [IEEE Conference Proceedings ISBN: 978-1-4673-1849-5], Kanyakumari, India, APRIL 6 - 8, 2012.

By Mr. Nikhil Debbarma

1. D Rudrapaul, S Das, N Debbarma, S. Debbarma et al "Internal Attacker Detection by Analyzing User Keystroke Credential", International Conference on Software and

Computing Technology (ICSCT 2012), Kuala Lumpur, Malaysia, December 21-22, 2012.

2. Dwijen Rudrapal, Smita Das, Ashim Saha, Lalita Kumari and Nikhil Debbarma "A Study and Analysis Of Keystroke Dynamics And Its Enhancement For Proficient User Authentication", International Conference on Electronics Computer Technology, April 6 – 8, 2012, Kanyakumari, India.

By Mr. Kunal Chakma

1. 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). ACM, New York, NY, USA, 13-18.
DOI=10.1145/2491148.2491152 <http://doi.acm.org/10.1145/2491148.2491152>
2. Nirmalya Kar, Sharmistha Roy, Ashim Saha, Kunal Chakma, Anupam Jamatia "A Bio-metric Based Design Pattern for Implementation of a Security Conscious E-Voting System using Cryptographic Protocols" in: Second International Conference on Advances in Information Technology and Mobile Communication AIM 2012, 27-28 April 2012, India, Bangalore.

By Mr. Tribid Debbarma

1. "Scenario Based Pause Time Analysis of AODV, DSDV and DSR over CBR Connections in MANET". International Conference on Software and Computing Technology (ICSCT) 2012 in Kuala Lumpur, Malaysia, December 21-22, 2012

By Smt. Smita Das

1. R. Sarkar, Smita Das, S. Roy, "SPARSHA: A low cost refreshable Braille for deaf-blind people for communication with deaf-blind and non-disabled people", International Conference on distributed computing and internet technology, Bhubaneswar, India, February, 05 – 08, 2013.
2. Smita Das et al. "Security Enhancement of Steganography and Preserving Low Visual Distortion of Image by Modifying Data Embedding Techniques" International Conference on emerging trends in electrical, communication and information technologies (ICECIT 2012), Anantapur, India, December 21-23, 2012.
3. N. Kar, S. Roy, A. Saha, Smita Das, "An Alternative Approach towards Implementation of Secure e-Voting System Using Public-Key Cryptography", International Conference on emerging trends in electrical, communication and information technologies (ICECIT 2012), Anantapur, India, December 21-23, 2012.
4. Dwijen Rudrapal, Smita Das, Nikhil Debbarma, "Internal Attacker Detection by Analyzing User Keystroke Credential", International Conference on Software and Computing Technology (ICSCT 2012), Kuala Lumpur, Malaysia, December 21-22, 2012.
5. Dwijen Rudrapal, Smita Das, "Analysis and Evaluation of Keystroke Duration of User's Typing as a Distinctive Measure of Recognition", Springer International Conference on Signal and Image Processing (ICSIP 2012), Coimbatore, India, December 13-15, 2012.

6. Smita Das et al. "Analysis of colour moment as a low level feature in improvement of Content Based Image Retrieval" Springer International Conference on Signal and Image Processing (ICSIP 2012), Coimbatore, India, December 13-15, 2012.
7. Smita Das et al. "An Efficient Method For Content Based Image Retrieval Using Color Moment And Texture Descriptor", Springer International Conference on Computing, Communication and Information Technology, 2012 (ICCCIT-2012), Chennai, India, June 28-30, 2012.
8. D. Rudrapal, Smita Das, A. Saha, "Analysis of User Keystroke Dynamics and its Application for Preventing Automated Form Filling programmes", Springer International Conference on Computing, Communication and Information Technology, 2012 (ICCCIT-2012), Chennai, India, June 28-30, 2012.
9. Smita Das et al. "Implementation of Gesture in scheming Mouse Events for camera and projector based Virtual Touch Screen", International conference on electronics computer technology (icect 2012), [IEEE Conference Proceedings ISBN: 978-1-4673-1849-5], Kanyakumari, India, APRIL 6 - 8, 2012.
10. D. Rudrapal, Smita Das, A. Saha, L. Kumari, N. Debbarma, "A Study And Analysis Of Keystroke Dynamics And Its Enhancement For Proficient User Authentication", International Conference on Electronics Computer Technology (ICECT 2012), [IEEE Conference Proceedings ISBN: 978-1-4673-1849-5], Kanyakumari, India, APRIL 6 - 8, 2012.

By Mr. Dwijen Rudrapal

1. R. Sarkar, Smita Das, S. Roy, D. Rudrapaul "SPARSHA: A low cost refreshable Braille for deaf-blind people for communication with deaf-blind and non-disabled people", International Conference on distributed computing and internet technology, Bhubaneswar, India, February, 05 - 08, 2013.
2. Smita Das et al. "Security Enhancement of Steganography and Preserving Low Visual Distortion of Image by Modifying Data Embedding Techniques" International Conference on emerging trends in electrical, communication and information technologies (ICECIT 2012), Anantapur, India, December 21-23, 2012.
3. Dwijen Rudrapal, Smita Das, Nikhil Debbarma, "Internal Attacker Detection by Analyzing User Keystroke Credential", International Conference on Software and Computing Technology (ICSCT 2012), Kuala Lumpur, Malaysia, December 21-22, 2012.
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5. Smita Das et al. "Analysis of colour moment as a low level feature in improvement of Content Based Image Retrieval" Springer International Conference on Signal and Image Processing (ICSIP 2012), Coimbatore, India, December 13-15, 2012.
6. Smita Das et al. "An Efficient Method For Content Based Image Retrieval Using Color Moment And Texture Descriptor", Springer International Conference on Computing, Communication and Information Technology, 2012 (ICCCIT-2012), Chennai, India, June 28-30, 2012.
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By Mr. Suman Deb

1. Suman Deb, S. Thirupathi Reddy, Ujjwal Baidya, Amit Kumar Sarkar, Pratik Renu, "A novel approach of assisting the visually impaired to navigate path and avoiding obstacle-collisions-an assistive technology tool to use low cost head mount camera as third eye" 3rd IEEE International Advance Computing Conference (IACC-2013) February 22-23, 2013 Ghaziabad (UP)-201009, India. Published in IEEE Explore Digital Library. Catalog Number:CFP1339F-CDR ISBN: 978-1-4673-4528-6.
2. Suman Deb, Sujay Deb "Designing an intelligent blink analyzer tool for effective human computer interaction through eye" at Intelligent Human Computer Interaction 2012 (IHCI 2012) held at Indian Institute of Technology Kharagpur, India during 27 – 29 December, 2012. Published by IEEEExplore IEEE Conference Registration Number – 20982 IEEE Catalog Number –CFP1288T –CDR ISBN- 978-1-4673-4368-8.
3. Suman Deb, Ria Bhattacharjee, Bibekjyoti Derooy "Low Cost Versatile Autonomous Vehicle with Intelligent Control System" International Symposium on Robotics and Intelligent Sensors 2012 (IRIS 2012). Sarawak, Malaysia. Procedia Engineering Volume 41, 2012, Pages 965–970, Science Direct, Elsevier.
4. Suman Deb, Saptarshi Chakraborty, Taniya Bhattacharjee, "Application of image fusion for enhancing the quality of an image" International Conference of Advanced Computer Science & Information Technology (ACSIT-2012) July, 2012, Chennai, India.
5. Suman Deb, Sourav Biswas, Chinmoy Debnath, Suddhasatta Dhar, and Priyanka Deb, "Face Recognition System in Cell Phones based on Text Message Service" N. Meghanathan et al. (Eds.): CCSIT 2012, Part III, LNCS 86, pp. 134–141. Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (2012) Lecture Notes in Computer Science (LNCS) SPRINGER.

By Mr. Anupam Jamatia

1. 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). ACM, New York, NY, USA, 13-18. DOI=10.1145/2491148.2491152
<http://doi.acm.org/10.1145/2491148.2491152>
2. Anupam Jamatia, Tribid Debbarma, Mrinal Kanti Debbarma, Swapan Debbarma Scenario Based Pause Time Analysis of AODV, DSDV and DSR over CBR connections in MANET In: International Conference on Software and Computing Technology (ICSCT 2012) 21-22, December 2012, Kuala Lumpur, Malaysia.

3. Nirmalya Kar, Sharmistha Roy, Ashim Saha, Kunal Chakma, Anupam Jamatia "A Biometric Based Design Pattern for Implementation of a Security Conscious E-Voting System using Cryptographic Protocols" In: Second International Conference on Advances in Information Technology and Mobile Communication AIM 2012, 27-28 April 2012, India, Bangalore

By Mr. Nirmalya Kar

1. Nirmalya Kar, Sharmistha Roy, Ashim Saha, Kunal Chakma, Anupam jamatia "A Biometric Based Design Pattern for Implementation of a Security Conscious E-Voting System using Cryptographic Protocols", Second International Conference on Advances in Information Technology and Mobile Communication AIM 2012. Yogesh Chabba (Ed.): pp. 79-86, Communications in Computer and Information Science (CCIS) Vol-296 © Springer-Verlag Berlin Heidelberg 2013, ISBN: 978-3-642-20572-9, DOI: 10.1007/978-3-642-35864-7_11.
2. Nirmalya Kar, Atanu Majumder, Ashim Saha, Anupam Jamatia, Kunal Chakma, and Mukul Chandra Pal. 2013. "An improved data security using DNA sequencing". In *Proceedings of the 3rd ACM MobiHoc workshop on Pervasive wireless healthcare* (MobileHealth '13). ACM, New York, NY, USA, 13-18. DOI=10.1145/2491148.2491152 <http://doi.acm.org/10.1145/2491148.2491152>
3. Nirmalya Kar, Sharmistha Roy, Ashim Saha, Lalita Kumari and Smita Das, "An Alternative Approach towards Implementation of Secure e-Voting System Using Public-Key Cryptography", Elsevier International Conference on Emerging Trends in Electrical, Communication and Information Technologies (ICECIT 2012), Anantapur, Andhra Pradesh, India, 21-23 December 2012, ISBN: 978-81-312-3411-2.
4. Smita Das, Dwijen Rudrapal and Nirmalya Kar, "Security Enhancement of Steganography and Preserving Low Visual Distortion of Image by Modifying Data Embedding Techniques", Elsevier International Conference on Emerging Trends in Electrical, Communication and Information Technologies (ICECIT 2012), Anantapur, Andhra Pradesh, India, 21-23 December 2012, ISBN: 978-81-312-3411-2.

By Smt. Lalita Kumari

1. Dwijen Rudrapal, Smita Das, Ashim Saha, Lalita Kumari, N. Debbarma, "A Study And Analysis of Keystroke Dynamics And Its Enhancement For Proficient User Authentication", in the 4th IEEE International Conference on Electronics Computer Technology (ICECT 2012), Kanyakumari, India, April 6-8, 2012, pp. 482 - 486, ISBN: 978-1-4673-1850-1.

By Mr. Ashim Saha

1. Dwijen Rudrapal, Smita Das, Ashim Saha "Analysis of User Keystroke Dynamics and Its Application for Preventing Automated Form Filling Programmes" ICCIT (International Conference on Computing, Communication and Information Technology) 2012, to be held on 27- 29 June 2012 at Jaya Engineering College, Chennai.
2. Nirmalya Kar, Sharmistha Roy, Ashim Saha, Kunal Chakma and Anupam Jamatia, "A Biometric Based Design Pattern for Implementation of a Security Conscious E-Voting System using Cryptographic Protocols" AIM 2012, pp. 79-86, 2012. Communications in

Computer and Information Science (CCIS) Vol-296 © Springer-Verlag Berlin Heidelberg 2012 (ISBN: 978-3-642-20572-9).

5. Dwijen Rudrapal, Smita Das, Ashim Saha, Lalita Lumari, N. Debbarma "A Study And Analysis Of Keystroke Dynamics And Its Enhancement For Proficient User Authentication." 4th International Conference on Electronics Computer Technology (ICECT 2012), April 6-8 2012, in Kanyakumari, India. ISBN: 978-1-4673-1849-5, published in IEEE Xplore.

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

9.6 Research and Consultancy:

Sponsored Research Projects:

Sl No	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	"Automated Facial Expression Recognition for Emotion Detection"	2012-13	Research Promotional Scheme, AICTE	8.75 Lakhs	Mr. Nirmalya Kar & Mr. Ashim Saha
2	"Modernization of Networking Lab"	2012-13	MODROBS Scheme, AICTE	15.00 Lakhs	Mr. Nikhil Debbarma

Research Publications:

Total No. of papers published in Refereed International Journals : 19

Total No. of papers presented in National Conference : 08

Total No. of papers presented in International Conferences : 28

9.7 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 an MoU with Centre for Development of Advanced Computing (C-DAC), a Scientific Society under the Ministry of Communications and IT, Government of India on October 29, 2009 at Agartala. About C-DAC Satellite Centre, NIT Agartala, the MoU envisages strategic collaboration between the two organizations for research and development in areas such as e-Learning, semantic web etc., and high-end non-formal training programmes in Information and Communication Technologies.

9.8 Other Activities:

C-DAC Satellite Centre, NIT Agartala

Towards boosting industry-academia partnership for research and development as well as facilitating high end training programmes in Information and Communication Technologies, the National Institute of Technology, Agartala has signed an MoU with Centre for Development of Advanced Computing (C-DAC), a scientific society under the Ministry of Communications and IT, Government of India on October 29, 2009 at Agartala. About C-DAC Satellite Centre, NIT Agartala the MoU envisages strategic collaboration between the two

organizations for research and development in areas such as e-Learning, semantic web etc., and high-end non-formal training programmes in Information and Communication Technologies. The various programmes which will be conducted include Diploma in Advanced Computing (DAC), Diploma in Wireless & Mobile Computing (WiMC), Diploma in VLSI Design (DVLSI), and Diploma in Advanced Computer Arts (DACA). The certificate diploma programmes will also be conducted for the students. These programmes include the Advanced Diploma in Information Technology (ADIT), Diploma in Information Technology (DIT). These high-end career oriented IT training programmes designed and developed by the Advanced Computing School of C-DAC will assist the students in moulding their skills based on the requirements of the IT industry thereby providing an advantage in placements and in their career path. The syllabi of the programmes are designed based on industry inputs and the IT training programmes have been developed taking the latest technologies in consideration.

On-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).

CDAC Staff Details

SL No.	Name	Designation	Nature of Work
1	Mr. Nirmalya Kar	Co-ordinator	Coordinating the Scientific Society of NIT, Agartala
2	Miss Dipanwita Debnath	Instructor	Teaching and Lab maintenance
3	Mr. Ritam Saha	Instructor	Teaching and lab maintenance

10.0 ELECTRICAL ENGINEERING DEPARTMENT

10.1 Introduction:

The department of Electrical Engineering is one of the enriched and primogenital branches of engineering of the National Institute of Technology (NIT), Agartala (formerly Tripura Engineering College, Govt. of Tripura). This Department has been fulfilling the need of the state Tripura as well as the nation by developing technical manpower in the 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.

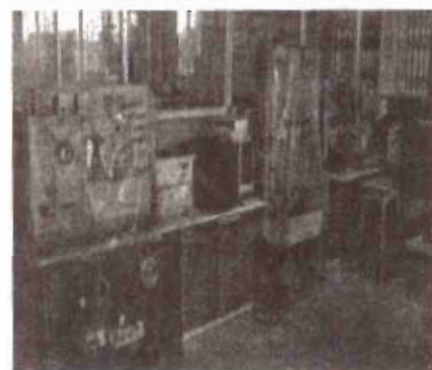
The Electrical Engineering Department was started with an annual intake of 20 seats in 1965 and consecutively increased to 40 in 1981. After conversion of the Tripura Engineering College into National Institute of Technology (NIT) in 2006, not only the intake has been increased to 90 but also this conversion 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.



Optics Laboratory



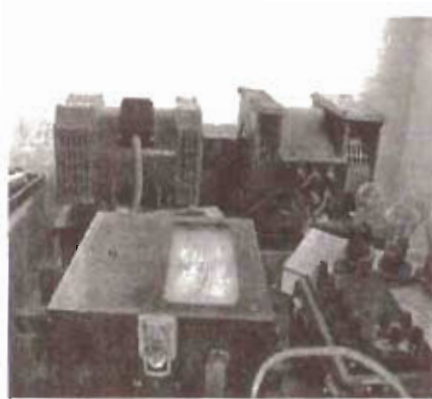
Process Control &
Instrumentation Laboratory



Process Control &
Instrumentation Laboratory



Electrical Machine Laboratory



Electrical Machine Laboratory



High Voltage
Engineering Laboratory

10.2 Academic Programme:

Electrical Engineering Department has progressed noticeably with an annual intake of 90 for 4 year (8 semester) B.Tech program and an annual intake of 30 for 2 years (4 semester) M. Tech. programme. Apart from B.Tech. and M. Tech. Electrical Engineering department started Ph.D programme from 2008 academic session. The first batch of M.Tech in Electrical Engineering has been started in 2008 with specialization in Power Electronics & Drives. Considering the aspiration of the students and keeping in view the present trend of employment opportunity in Power & Industrial sector and also faculty necessity in academic field, two more specializations, namely (a) Power System and (b) Instrumentation have also been introduced in M.Tech curriculum of Electrical Engineering from the academic session 2010-2011. The first batch of students of both the specializations has successfully completed their course. Therefore presently the department is offering M.Tech in the following specialization viz. (a) Power System, (b) Instrumentation and (c) Power Electronics & Drives. Similarly, an excellent response has been obtained for Ph.D programme. Several candidates from academic arena and industry have shown their interest in pursuing their Ph.D work in the Department of Electrical Engineering and enrolled their names in the program. At present 33 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 Programme Goals:

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

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

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

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

10.3 Lab Facilities:

Sl. No.	Name of the Laboratories	Available Floor Area (sq.m)	Max. Batch Size	No. of Experiments	
				Prescribed	Conducted
1.	Basic Electrical Laboratory	300 sq m	Total=90	8	8
2.	Electrical Machines Laboratory	600 sq m Height – 9 m	Total=90 In four groups	6	6
3.	Computer Programming & Simulation Lab	90 sq m	Total=100 In four groups	12	10
4.	Virtual Instrumentation Laboratory	225 sq m	Total=90 In four groups	8	8
5.	High Voltage Engineering Lab	300 sq m Height – 9 m	Total=90 In four groups	7	7
6.	Electrical Measurement Lab	200 sq m	Total=100 In four groups	9	8
7.	Microprocessor & micro Controller Lab	150 sq m	Total=90 In four groups	15	13
8.	Power Electronics & Electrical drives Lab	225 sq m + 100 sq m (additional for PG students.)	Total=90 In four groups	5	5
9.	Control system Lab	150 sq m	Total=90 In four groups	20	15
10.	Power System Lab	100 Sq.m	Total=100 In four groups	8	8

10.4 Faculties and their Activities:

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

Sl. No.	Name of Faculty	Title	Period
Workshop:			
1.	Dr. S. Bhattacharjee	Introduction to Research Methodologies	25.06.2012 – 04.07.2012
2.	Mr. Bikram Das	"Workshop on Aakash for Education." under the National Mission on Education	10-11-12 to 11-11-12

		through ICT (MHRD, Govt. of India) and MNRE organized by IIT, Bombay held at NIT, Agartala.	
		“Analog Electronics” under the National Mission on Education through ICT (MHRD, Govt. of India) and MNRE organized by IIT Kharagpur, held at NIT, Agartala.	4 th -14 th June 2013
3.	Mr. Prabir Ranjan Kasari	“Workshop on Aakash for Education.” under the National Mission on Education through ICT (MHRD, Govt. of India) and MNRE organized by IIT, Bombay held at NIT, Agartala.	10-11-12 to 11-11-12
4.	Mr. Abanishwar Chakraborty	“Workshop on Aakash for Education.” under the National Mission on Education through ICT (MHRD, Govt. of India) and MNRE organized by IIT, Bombay held at NIT, Agartala.	10-11-12 to 11-11-12
		“Analog Electronics” under the National Mission on Education through ICT (MHRD, Govt. of India) and MNRE organized by IIT Kharagpur, held at NIT, Agartala.	4 th -14 th June 2013
5.	Saheli Ray	Introduction to Research Methodology	June 25th, 2012 to July 4th, 2012
6.	Sharmistha Sharma	Introduction to Research Methodology	June 25th, 2012 to July 4th, 2012
7.	Diptanu Das	Introduction to Research Methodology	June 25th, 2012 to July 4th, 2012
Conference:			
1.	Dr. A. K. Chakraborty	9th IET International Conference on Advances in Power System Control, Operation and Management (APSCOM)	18 to 22 Nov, 2012

Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1.	Dr. A. K. Chakraborty	Hong Kong	18 to 22 Nov, 2012	9th IET International Conference on Advances in Power System Control, Operation and Management (APSCOM)

Honours and Awards obtained:

Sl. No.	Name of Faculty	Name of Award	Awarded by	Award for	Date
1.	Dr. P.N. Das	Member BOG	NITA		2012-13

Students Awards:

- Ms. Smita Banik (Ph.D Scholar) has received CSIR award.
- Ms. Anulakha Saha has received POSOCO POWER SYSTEM AWARD from Power system operation Corporation, FITT, IIT Delhi for her M.Tech thesis "Performance Analysis and Comparison of various FACTS controller in Power System " guided by Dr. P.N.Das.
- Mr. Suman Debnath has received POSOCO POWER SYSTEM AWARD from Power system operation Corporation, FITT, IIT Delhi for his M.Tech thesis "Harmonic elimination in multi-level inverter using soft computing technic" guided by Dr. R.N.Ray.

Book:-

"Maximum Power Point Tracking For Solar Panels" Bikram Das, Prabir Ranjan Kasari, Abanishwar Chakrabarti. ISBN-13: 978-3-659-43563-8, ISBN-10: 3659435635; EAN: 9783659435638; LAP- Lambert Academic Publishing (2013-08-02)

Fellowships of Academics and Professional Societies:

Sl. No.	Name of Faculty	Level	Year
ISTE/ CSI and others			
1	Dr. Rup Narayan Ray	IE(I)-Member, ISTE – LM and INDIAN SCIENCE CONGRESS ASSOCIATION Member	1998 1992 1993
2	Dr. Priyanath Das.	ISTE Member, IE(I)	2009
3	Dr. Ardhendu Saha	ISTE Member IACS (Life Member),	2009 1999
4	Dr. Ajoy Chakroborty	MIET(UK), MISTE, FIE(I)	
5	Mrs. Anindita Jamatia.	ISTE Member	2009
6	Mr Abanishwar Chakroborty	ISTE Member	2009
7	Mrs. Sumita Deb.	ISTE, Life Member Institute of Engineers (India), Graduate G-547504-0	2009 2008.
8	Mrs Minakshi Deb Barma.	ISTE Member	2009
9	Mr Prabir Ranjan Kasari	ISTE, LM 62058, IEEE	2009

10	Mr Bikram Das.	ISTE(LM/ 62063), IEEE(India) associate member(AM099384-3) , Solar Energy Society of India (LM/1459/2010)	2010
11	Dr. Subhadeep Bhattacharjee	MISTE, MIETE(I)	

10.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1.	Modernization of Photonics Simulation Laboratory	2012-13	AICTE	1500000	Dr . Ardhendu Saha
2.	Optimizing Power Output through Hybrid Technology	2011-214	DST	19.34	Dr. Subhadeep Bhattacharjee
3.	Developing an Off Grid Hybrid Power System for Remote Communities of North Eastern India	2012-2014	AICTE	17.96	Dr. Ajoy Kumar Chakraborty and Dr. S. Ray

Research Publications:

Total No. of papers published in Refereed National Journals : 01

Total No. of papers published in Refereed International Journals : 41

Total No. of papers presented in National Conference : 04

Total No. of papers presented in International Conferences : 17

In Refereed National Journals:

S. Bhattacharjee, 'An ab initio Study on Solar Geometry and Potential for N-E India', Journal of the Institution of Engineers (India) (Series-B) (ISSN 2250-2106) (Springer), 93 (3), pp. 193-202.

In Refereed International Journals:

Authors	Period	Paper Title	Journal Title	Volume, Page No.
R. N. Ray et al.	May 2012	THD Optimization in 13 level photovoltaic inverter using Genetic Algorithm.	International Journal of Engineering Research and Applications (ISSN: 2248-9622)	vol. 2, Issue 3, pp. 385-389

R. N. Ray et al.	Jan – Jun. 2012	Investigation of the Performance of Hysteresis Motor with High Temperature Super Conducting Element in the Rotor Using COMSOL MULTIPHYSICS.	International Journal of Electrical Engineering & Technology (ISSN: 0976-6553)	vol. 3, Issue 1, pp. 344-352
R. N. Ray et al.	Jun. 2012	Design and Modeling of Hysteresis Motor with High Temperature Superconducting Material in the Rotor using Finite Element Method.	Innovative Systems Design and Engineering (ISSN 2222-2871)	vol. 3, no. 6, pp. 68-76
R. N. Ray et al.	Sept 2012	Comparison of 2D and 3D Modeling of Hysteresis Motor with HTS Element in the Rotor.	International Journal of Engineering Research and Applications (ISSN: 2248-9622)	vol. 2, Issue 5, pp. 1248-1257
R. N. Ray et al.	June 2012	Cuckoo Search: A New Optimization Algorithm for Harmonic Elimination in Multilevel Inverter.	Journal of Bioinformatics and Intelligent Control (ISSN: 2326-7496)	Vol. 1, no. 1, pp. 80-85
R. N. Ray et al.	Dec. 2012	Comparison of Different Soft Techniques applicable to Multilevel Inverter for Harmonic Elimination.	International Journal of Computer Applications (ISSN: 2250-1797)	Vol. 6, Issue 2, pp. 94-104
Sumita Deb, ArdhenduSaha.	12 October 2012	Highly efficient broadband second harmonic generation in a tapered zinc telluride slab using total internal reflection fractional quasi phase matching	Optik - International Journal for Light and Electron Optics (Elsevier Journal),	page no: 1-4 , impact factor :0.510
SmitaBanik, Sumita Deb, ArdhenduSaha,	15 January 2013	Analysis of broadband second harmonic generation in a trapezoidal isotropic semiconductor slab with an elliptical upper surface using total internal reflection quasi phase matching	Optics Communications (Elsevier Journal)	Volume 287 Page no: 196-202, Impact Factor: 1.517,
ArdhenduSaha, Smita Banik	Article accepted for publication	Numerical analysis of broadband second harmonic generation using TIR-QPM in a parabolic profiled isotropic semiconductor slab (Accepted)	Optics Communications (Elsevier Journal)	Article accepted for publication: 17 Dec 2012 :17 Dec 2012 DOI: 10.1016/j.optcom.

				2012.12.052
Ardhendu Saha; Nabamita Goswami	2 January 2013	Long Range Surface Plasmon Enhanced Reflected Second Harmonic and Fourth Harmonic Generation in the Same Fused Silica Prism.	Optics Communications (Elsevier Journal),	Volume Number: 297, Page Number: 109-112
Arijit Ghosh, Nabamita Goswami, Ardhendu Saha.	-	Long Range surface Plasmon Enhanced tunable Goos-Hanchen Shift in Rutile Prism.	International Journal of Systems, Algorithms & Applications.	Volume 3 Issue ICRAET 13, ISSN Online: 2277-2677
Nabamita Goswami, Ardhendu Saha, Arijit Ghosh.	-	Surface Plasmon Enhanced Optical Amplification using Total Internal reflection.	International Journal of Systems, Algorithms & Applications.	Volume 3 Issue ICRAET 13, ISSN Online: 2277-2677
S. Bhattacharjee et.al	2012-13	Performance Prediction of 60 kW _p PV Power Plant in an Educational Institute	International Journal of Ambient Energy (Taylor & Francis) (ISSN: 0143-0750 (Print), 2162-8246 (Online))	DOI:10.1080/01430750.2012.740425
Samima Akter, Anulekha Saha, Priyanath Das	November, 2012	Modeling simulation and comparison of various FACTS devices in power system	International Journal of Engineering Research & Technology (IJERT)	Vol. 1 Issue 8, ISSN: 2278-0181,
Kallol Das, Priyanath Das, Sharmistha Sharma	March, 2012	Load Frequency Control Using Classical Controller In An Isolated Single Area And Two Area Reheat Thermal Power System	International Journal of Emerging Technology and Advanced Engineering.	Vol. 2, Issue 3, pp. 403-409,
Anulekha Saha, Priyanath Das, Ajoy Kumar Chakraborty	May 2012	Performance Analysis and Comparison of Various FACTS Devices in Power System	International Journal of Computer Applications 11(0975-8887).	Vol. 46- No. 15
Priyanath Das, Sunita Halder nee Dey, Abhijit	June, 2012	A unique method of study on power and loss allocation of a multibus power system employing facts controllers	International Journal of Emerging Technology and Advanced Engineering.	Vol. 2, Issue 6,

Chakrabarti Madhumita Mandal				
Debika Debnath, Dr. A.K.Chakra borty & Dr. S. Ray	2013	Development Of A Cost Optimized Hybrid Off-Grid Power System For A Model Site In North-Eastern India Involving Photovoltaic Arrays, Diesel Generators And Battery Storage.	International Journal of Chem Tech Research	Vol.5, No.2, pp. 771-779.
Tulika Bhattacharj ee & Dr. A. K. Chakrabort y	2013	NSGAIL-based Congestion Management in a Pool-based Electricity Market Incorporating Voltage and Transient Stability	Electric Power Components and Systems (Taylor & Francis) (SCI)	Vol.41, no.10, pp.990-1001
Debika Debnath, Dr. A.K.Chakra borty & Dr. S. Ray	2012	Optimization and Modeling of PV/ FC/Battery Hybrid Power Plant for Standalone Application	IJERT	Vol. 1 Issue 3, pp.1-10.
Tulika Bhattacharj ee & Dr. A. K. Chakrabort y	2012	Fuzzy system approach to power purchases in a power pool of a deregulated power system	International Journal of Artificial Intelligence and Soft Computing	Vol. 3, pp. 39-49
Dr. A. K. Chakrabort y, Subrata Majumder, P.K. Chattopadh yay and Tulika Bhattacharj ee	2012	Modified simulated annealing Technique Based Optimal Power Flow with FACTS devices	International Journal of Artificial Intelligence and Soft Computing	Vol. 3, pp. 81 -93
Anulekha Saha, Priyanath Das & Dr. A. K. Chakrabort y	2012	Performance Analysis and Comparison of Various FACTS Devices in Power System	International Journal of Computer Applications	Vol. 46, pp. 9-15
Suman kr	2012	An ANN based Relay	International Journal of	

saha, Priyanath Das & Dr. A. K. Chakraborty		design for identification of Faults of 400kv EHV Transmission line	Computer Applications	Volume 46– No.20, pp.8– 13.
Champa Nandi , S. Dutta, T. Deb & Dr. A. K. Chakraborty	2012	Modeling and Simulation of Wind Power Plants Framed with Self Excited Induction Generator as well as DFIG and a comparative performance Study thereof in PSCAD/EMTDC Environment	International Journal of Electrical Engineering Technology	Volume 3, pp. 123-139
Prasenjit Dey, Priyanath Das & Dr. A. K. Chakraborty	2012	Implementation of Power Transformer Differential Protection Based on Clarke's Transform and Fuzzy Systems	International Journal of Engineering Research & Technology (IJERT)	Vol.1, Issue 7, pp.1-11.
Champa Nandi, Sumita Deb, Minakshi Deb Barma& Dr. A. K. Chakraborty	2012	Study and Simulation of the SVC and STATCOM effect on Voltage Collapse and Critical Fault Clearing Time	International Journal of Modelling and Optimization	Vol.2, pp. 462-465
Arup Ratan Bhowmik, Dr. A.K.Chakra borty & Priyanath Das	2012	Optimum Cost of Generation and Active Power Loss Minimization using GA and PSO Techniques in a Power System Network	Asian Power Electronics Journal (APEJ)	Vol.2, no.2, pp.7-12.
Soumitra Mondal, A. Bhattacharya, Sunita Halder nee Dey	January 2013	Multi-Objective Economic Emission Load Dispatch Solution using Gravitational Search Algorithm and Considering Wind Power Penetration	International Journal of Electrical Power and Energy Systems (Elsevier)	Vol.44, No. 1, pp. 282-292
Bikram Das,	May 2012	"Power Electronics based voltage and frequency	International Journal on , IJERT, ISSN: 2278-	volume 1.Issue 3

Naireeta Deb, Prabir Rn. Kasari & Abanishwar Chakraborti		controller feeding fixed loads for application in standalone wind energy conversion systems"	0181	
Bikram Das, Anindita Jamatia, Abanishwar Chakraborti, Prabir Rn. Kasari & Manik Bhowmik	July 2012.	"New Perturb and Observe MPPT algorithm and its validation using data from PV Module"	International Journal on IJAET, ISSN: 2231-1963 GEI-1.59	volume 4, issue 1, pp 579-591
Bikram Das, Suvamit Chakraborty, Prabir Rn. Kasari, Abanishwar Chakraborti, Manik Bhowmik	Sept' 2012	"Speed Control of BLDC Motor using Soft Computing Technique and its Stability Analysis"	International Journal on IJECCE, ISSN (Online): 2249-071X, ISSN (Print): 2278-4209, I.F-1	Volume 3, Issue 5, pp 1046-1051
Bikram Das, Suvamit Chakraborty, Abanishwar Chakraborti & Prabir Rn. Kasari,		"Performance Analysis Of BLDC Motor Using Basic Switching Converters "	International Journal on IJITEE (ISSN: 2278 - 3075 Online, Reg. No.: 5021/BPL/CE/12	PP 11-14, I.F-1
Bikram Das, Prabir Rn. Kasari, Abanishwar Chakraborti, Prasul Jain, Sanjay Raghuwanshi and Pawan Kr. Navin	March - April (2013),	<u>"Battery Energy Storage And Power Electronics Based Voltage And Frequency Controller For Wecs Connected To Grid"</u>	International Journal of Electrical Engineering & Technology (IJEET); ISSN 0976 - 6545(Print); ISSN 0976 - 6553(Online); Journal Impact Factor (2013): 5.5028 (Calculated by GISI).	Volume 4, Issue 2, pp. 283-292
Prabir Ranjan Kasari, Prashanta Saha,		"Transformer Winding Insulation Measurement Using Phase Difference Technique"	International Journal of Recent Technology and Engineering(IJRTE) ISSN: 2231-2307,	Volume 1, Issue 6, January 2013; PP-76-80

Abanishwar Chakrabarti & Bikram Das				
Soumesh Chatterjee & Sharmistha Sharma	November-December 2012	Advantage of DG To Mitigate Voltage Collapse over Facts Devices	International Journal of Engineering Research and Applications	Vol. 2, Issue 6 pp.1253-1257
Nibedita Ghosh, Sharmistha Sharma and Subhadeep Bhattacharjee	July 2012	A Load Flow based Approach for Optimum Allocation of Distributed Generation Units in the Distribution Network for Voltage Improvement and Loss Minimization	International Journal of Computer Applications	Volume 50, Issue No.15, pp. 15-22
Saheli Ray	September 2012	Calculation of Sun Position and Tracking the Path of Sun for a Particular Geographical Location	International Journal of Emerging Technology and Advanced Engineering	Vol. 2, Issue 9, pp. 81-84.
Prashanta Sarkar, Soumesh Chatterjee & Saheli Ray	March 2013	Optimal Placement of Capacitor for Voltage Support and Minimizing Overall Cost in Radial Distribution System	International Journal of Computer Applications	Volume 65, No.2, pp. 1-5.
B. K. Saha Roy, A. K. Sinha, A.K. Pradhan	2012	An Optimal PMU placement Technique for Power System Observability	International Journal of Electrical Power & Energy System	Vol. 42, no. 1, pp. 71-77
B. K. Saha Roy, A. K. Sinha and A.K. Pradhan	2013	Synchrophasor Assisted Prediction of Stability/Instability of a Power System	Accepted, International Journal of Emerging Electric Power System	vol.14, no.1, pp. 1-7

In Proceedings of National Conference:

1. Nabamita Goswami, Ardhendu Saha,, Gargi Chakraborty, priyanka Dey conference on "Surface Plasmon Enhanced Ultra Low threshold Parametric Down Conversion in Periodically Poled Whispering Gallery Resonator" in Annual International Conference of Optoelectronics, photonics & Applied Physics (OPAP 2013), ISSN: 2301-3516.
2. Ardhendu Saha, Nabamita Goswami, Priyanka Dey conference on "Surface Plasmon Enhanced Reflected second Harmonic Generation in Periodically Poled Whispering Gallery Resonator" in SPIE 8604, Nonlinear Frequency Generation and Conversion:

Materials, devices and applications XII, 86040W, Conference Volume: 8604, March 12, 2013

3. Prabir Rn. Kasari, Prashanta Saha, Abanishwar Chakraborti & Bikram Das. National Conference on "Condition Monitoring of transformer winding" in Proceeding of fifth national Conference on Advances in Energy Conversion Technology(AECT 2012).
4. B. K. Saha Roy, A. K. Sinha and A.K. Pradhan, "Synchrophasor Assisted Prediction of Stability/Instability of a Power System" National Power System Conference, India, 2012.

In Proceedings of International Conference:

Authors	Period	Paper Title	Conference Title	Venue
Dr. Bidyut K. Bhattacharyya	pp. 1-6, 2013	Method to Simulate Rise Time of Current Drawn by a Microprocessor",	Ieee Transactions On Components, Packaging And Manufacturing Technology	
Nabamita Goswami (PhD Scholar), Priyanka Dey (Mtech Scholar)	01-2nd Dec, 2011	Long range surface Plasmon enhanced refracted second harmonic generation	ICTAP 2011	IIT Kharagpur
Nabamita Goswami, Ardhendu Saha, Gargi Chakraborty, priyanka Dey.	2013, ISSN: 2301-3516	Surface Plasmon Enhanced Ultra Low threshold Parametric Down Conversion in Periodically Poled Whispering Gallery Resonator	Annual International Conference of Optoelectronics, photonics & Applied Physics (OPAP 2013)	
Ardhendu Saha, Nabamita Goswami, Priyanka Dey.	Conference Volume: 8604, March 12, 2013	Surface Plasmon Enhanced Reflected second Harmonic Generation in Periodically Poled Whispering Gallery Resonator.	SPIE 8604, Nonlinear Frequency Generation and Conversion: Materials, devices and applications XII, 86040W	
Arijit Ghosh (Mtech Scholar), Nabamita Goswami (PhD Scholar)	February 1-2 2013, Published in AIP Conference Proceeding	Long Range Surface Plasmon Enhanced Tunable Goos-Hänchen Shift in ZnSe Prism	International Conference on Recent Trends in	

	dings 1536,			
Arijit Ghosh (Mtech Scholar), Nabamita Goswami (PhD Scholar)	1310- 1311 (2013), ISBN 978-0- 7354- 1160-9	Long Range Surface Plasmon Enhanced Tunable Goos-Hänchen Shift in Rutile Prism	Applied Physics & Material Science (RAM2013),	
Nabamita Goswami (PhD Scholar), Arijit Ghosh (Mtech Scholar)	Febru ary 27, 2013, ISBN	Surface Plasmon Enhanced Optical Amplification using Total Internal Reflection		Bikaner, Rajasthan
S. Bhattacharjee and S. Acharya	Decem ber'20 12	Exploring Wind Energy for Hybrid Power Generation in Low Wind Regime	1 st IEEE International Conference on Power and Energy System (ICPEN 2012)	NERIST, Itanagar, Arunachal Pradesh
S. Bhattacharjee and S. Acharya	Decem ber, 2012	Energy Storage System for Wind Power Plant	IEEE International Conference on Power Control and Embedded Systems (ICPCES- 2012)	MNNIT, Allahabad
S. Bhattacharjee and A. Dey	Augus t 2012	Economic Analysis of a Biomass/PV/Diesel Autonomous Power Plant	Proceedings Series: Communication in Computer and Information (Springer) (ISBN: 978-3-642-32111-5)	Kochi, (ICECCS 2012)
S. Bhattacharjee and B. Medhi	Augus t 2012	Soft Computing Techniques for Distillation Column Composition Control	Proceedings Series: Communication in Computer and Information (Springer) (ISBN: 978-3-642-32111-5)	Kochi, (ICECCS 2012)
A. Chakrabarti, D. Kastha, B. M. Mohan, B. Das & P.R.Kasari	Nov 22-23, 2012	Nonlinear Transient Modeling of a Diesel Engine	International Conference on Advances in Power Electronics and Control System	PECS 2012,, Amsterda m, Netherlan ds
A. Chakrabarti, N.Sharma, P.Banik, S.Bhattacharje e, R.Patwari, K.Singh, B.Das,		Observer based speed control of DC machine	International Conference	IEEE – ICPEN – 2012, NERIST, Nirjuli

P.R.Kasari				
B.Das, A. Chakrabarti, P.R.Kasari and N.Sharma	(6-8) th February '13	Power, Energy and Control (ICPEC) "Sensorless speed control of dc machine"	2013 International Conference on "PSNA College, Dindigul Tamil Nadu State IEEE Digital Library."	. DOI: 10.1109/ICPEC.2013.6527723 , PP 572-577
Bikram Das, Suvamit Chakraborty, Prabir Rn. Kasari, Abanishwar Chakraborti	(12-13 Oct '13	Reverse regeneration technique of BLDC motor for Capacitor Charging"	international Conference on "ACEC-2013,)	Zurich, Switzerland. ACCEPTED
A. Bhattacharya, Shatadru Datta and Meheli Basu	13-15 December 2012	Gravitational Search Algorithm Optimization for Short-term Hydrothermal Scheduling	International Conference on Emerging Trends in Electrical Engineering and Energy Management (ICETEEEM-2012), IEEE Conference	Chennai, Tamil Nadu, India
Shatadru Datta and Meheli Basu and A. Bhattacharya	13-15 December 2012	Biogeography-Based Optimization for Short-term Hydrothermal Scheduling	International Conference on Emerging Trends in Electrical Engineering and Energy Management (ICETEEEM-2012), IEEE Conference	Chennai, Tamil Nadu, India

Distinguished Visitors to the Departments:

- Dr. Sujit kumar Biswas, Prof, Jadavpur University
- Dr. A. K. Roy, Prof, NIT Silchar
- Prof. K. Thygarajan, HOD Physics, IIT Delhi
- Dr. Siddhartha Sen, IIT KGP
- Dr. Prasanta Kanungo, DGM, PGCL Shilong

10.6 Other Activities:

Students of different semesters are frequently doing seminars on different interesting topics mainly related to their specialization by both B.Tech & M.Tech Students.

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 interms of excellence in UG & PG teaching standards. 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 advanced technology and the nation as a whole. The Department is always updating 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. Between all branches of Engineering Sciences, Electronics and Communication Engineering changes in extremeting fast pace, so fast that which is a 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, 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 present leadership in nano-electronics is given by Professor K. P. Ghatak, who is the First Recipient of the Degree of Doctor of Engineering of Jadavpur University in 1991 since the University inception in 1955, the principal co-author of more than 200 research papers in International Journals of repute and 6 research monographs in nanotechnology from Springer Verlag Germany. The Department has deeply involved in multidimensional aspects of teaching and research under the able leadership of Dr. S.N. 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 and with respect to UG placement, it occupies the 2nd position in NIT Agartala presently.

11.2 Academic Programme:

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

Under Graduate programme:

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

Post Graduate programmes:

M.Tech in Electronics & Communication Engineering under VLSI and NANO Electronics and Communication Engineering.

11.3 Lab Facilities:

Sl. No.	Name of the Laboratories	Max Batch Size	Weekly hours required as
1.	BASIC ELECTRONICS LABORATORY	40 students	42 hrs
2.	ANALOG ELECTRONICS LABORATORY	20 students	9 hrs
3.	DIGITAL ELECTRONICS LABORATORY	20 students	9 hrs
4.	MICROPROCESSOR LABORATORY	20 students	9 hrs
5.	NETWORK LABORATORY	20 students	9 hrs
6.	COMMUNICATION LABORATORY	20 students	9 hrs
7.	DSP & VLSI LABORATORY	30 students	9 hrs
8.	COMPUTER LABORATORY	30 students	9 hrs
9.	MICROWAVE LABORATORY	20 students	9 hrs
10.	RF COMM. LABORATORY	30 students	9 hrs
11.	DEVICE FABRICATION LABORATORY	15 students	9 hrs

11.4 Faculties and their Activities:

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

Sl. No.	Name of Faculty	Title	Period
CONFERENCE:			
1	Dr. Aniruddha Mondal	International Conference for young Researchers and advanced Materials (ICYRAM) 12	1-6 July, 2012
2	Dr. Aniruddha Mondal	The 8 th International Conference on Microwaves, Antenna Propagation and Remote Sensing 'ICMARS-2012'	11 – 15 th December, 2012
3	Dr. Dibyendu Ghoshal	Technical and Managerial innovation in computing and communications in industry and academia (IEMCON 2012)	18-19 August 2012
4	Dr. Dibyendu Ghoshal	Machine Vision and Image processing (MVIP 12)	(14-15) December 2012
5	Dr. Dibyendu Ghoshal	Machine Vision and Image processing (MVIP 12)	(14-15) December 2012
6	Somnath Roy Choudhury	International conference on Electrical and Computer Engineering (ICECE 2012)	20-22 December 2012
7	Dr. Sambhu Nath Pradhan	5 th International conference on Computers and Devices for Communication (CODEC-2012)	17-19 TH , DEC 2012

8	Atanu Chowdhury	ISTE 2 days ISTE workshop on "AAKASH FOR EDUCATION"	10 th & 11 th November
9	Biman Debbarma	ISTE 2 days ISTE workshop on "AAKASH FOR EDUCATION"	10 th & 11 th November
10	Dr.Sambhu Nath Pradhan	ISTE 2 days ISTE workshop on "AAKASH FOR EDUCATION"	10 th & 11 th November
11	Kamalesh Debnath	ISTE 2 days ISTE workshop on "AAKASH FOR EDUCATION"	10 th & 11 th November

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	A. MICROWAVE TEST BENCH WITH REFLEX KLYSTRON AT X-BAND(8.2-12.4GHZ); B.USB POWER SENSOR / METER C. MICROWAVE TEST BENCH FOR MEASUREMENT OF RADIATION PATTERN & GAIN OF ANTENNA AT X-BAND D. MICROWAVE POWER METER WITH SENSOR & WAVEGUIDE TO CO-AXIAL ADAPTER AT X-BAND (8.2-12.4GHZ) E. MICROWAVE TEST BENCH WITH GUNN OSCILLATOR AT X-BAND (8.2-12.4GHZ)
2.	VLSI LABORATORY	A.ISE FOUNDATION XILINX SYSTEM EDITION 11.1I LOGIC EDITIONNM EDK SYSTEM GENERATOR + ACCEL DSP B.CPLD-DESIGN-KIT C. COOLRUNNER-II CPLD STARTER KIT D. COOLRUNNER-II STARTER KIT PERIPHERAL MODULE BUNDLE E. BASYS SPARTAN 3E XC3S100E STUDENT BOARD, USB CABLE F. NEXYS 2 SPARTAN 3E XC3S500E STUDENT BOARD, USB CABLE G. XUP SPARTAN 3E STARTER KIT WITH USB PROGRAMMING CABLE

		<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 & DEVELOPMENT PLATFORM</p> <p>L. UNIVERSITY TRAINER KIT</p> <p>M. VIRTEX-4 ML 403 EMBEDDED PLATFORM</p> <p>N. Cadence CAD Tool I. ANALOG & MIXED SIGNAL DESIGN - FRONT END TOOLS II. INTERFACE III. BACK END TOOLS IV. DIGITAL DESIGN-FE SIMULATION AND VERIFICATION V. SYNTHESIS & DFT TOOLS VI. LOW POWER DESIGN TOOLS VII. STA/SI/PHYSICAL IMPLEMENTATION TOOLS VIII. IR DROP & EM ANALYSIS TOOLS IX. COMMON TOOLS TO DIGITAL AND AMS DESIGNS TOOLS X. ADVANCED PCB SOLUTIONS</p> <p>O. Synopsys CAD Tool</p>
3.	DSP LAB	<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.	RF COMMUNICATIO	<p>A. NI PXI-8106 CORE 2 DUO 2.16GHZ,CONTROLLER WITH WINDOWS VISTA</p>

N LAB	<p>B. 1 GB DDR2 RAM FOR NI 8106, NI 105 AND NI 8104 CONTROLLERS</p> <p>C. NI PXI-4072 6 & 1/2 DIGIT FEX DMM & LCR METER (1.8 MS/S DIGITIZER, 100 NV-300 V, 10 NA-1 A, 2 YR 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 (1 CH)/1 GS/S (2 CH) DIGITIZER W/128 MB MEMORY</p> <p>H. SMA 100, SMA MALE TO SMA MALE FLEXIBLE CABLE, 88.1 CM</p> <p>I. SMB 112, DOUBLE SHIELDED SMB AND SMA TO BNC, MALE COAX CABLE 50 OHM 1 M</p> <p>J. CABLES SMA TO SMB AND SMA TO BNC, PXI-5600 TO PXI-5122 & PXI-5142</p> <p>K. NI PXI-1042 8 SLOT 3U CHASSIS WITH UNIVERSAL AC POWER SUPPLY</p> <p>L. POWER CORD, 250 V, 10 A, INDIA</p> <p>M. SE START UP ASSISTANCE AT YOUR SITE FOR 2 DAYS</p> <p>N. CABLE ASSY, TYPE SH100-10-FLEX, 2 M</p> <p>O. SCB-10 SHIELDED CONNECTOR BLOCK I/O</p> <p>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>Q. NI PXI-5660 RF SIGNAL ANALYZER & NI PXI 5670 2.7 GHZ RF VECTOR SIGNAL GENERATOR WITH ACCESSORIES AS PER SPECIFICATION MENTIONED BELOW-</p> <ul style="list-style-type: none"> • 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 • SMA 100, SMA MALE TO SMA MALE FLEXIBLE CABLE, 12.7 CM • NI PXI-5670 2.7 GHZ RF VECTOR SIGNAL GENERATOR WITH 8 MB MEMORY • SMA 100, SMA MALE TO SMA MALE FLEXIBLE CABLE 38.1 CM • POWER CHORD, 250 VOLT, 10 A INDIA
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		<ul style="list-style-type: none"> • PXI-5670 RF REPLACEMENT CABLE KIT • PXI -5670/5671 NAD PXI E RF REPLACEMENT CABLE KIT • NI MODULATION TOOLKIT FOR LABVIEW • NI MEASUREMENTS TOOLKIT.
5.	COMPUTER LABORATORY	DESKTOP COMPUTER HP COMPAQ 8000 ELITE PC SERIES
6.	BASIC ELECTRONICS LAB	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.
7.	ANALOG ELECTRONICS LAB	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.	DIGITAL ELECTRONICS LAB	ADDER, SUBTRACTOR, COUNTER, REGISTER, MULTIPLEXER, ETC KITS, ICS
9.	ANALOG & DIGITAL COMMUNICATION LAB	<p>A. AGILENT MXA SIGNAL N9020A-50S ANALYZER WITH</p> <p>1) AGILENT N9068A-2FP</p> <p>2) AGILENT 89601BSPC-HE1</p> <p>B. ARBITRARY/FUNCTION GENERATOR, 240MHZ, 2 CHANNELS.</p> <p>C. LOGIC ANALYZER, 136 CHANNELS, 2GHZ, TIMING WITH 125PS MAGNITUDE 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.	MICROPROCESSOR LAB	<p>ADVANCE 8086 MICROPROCESSOR TRAINER(AMP-86)</p> <p>ADVANCED 8051 MICROCONTROLLER TRAINER KIT(AMC-51)</p> <p>BASIC 8085 MICROPROCESSOR TRAINER KIT(MP-85)</p>
11.	EMBEDDED SYSTEM LAB	<p>Embedded kit name</p> <p>1.AVR32EVK1100</p> <p>2.AVRDRAGON</p> <p>3.AVRXMEGA-A1</p>

12.	MICROELECTRONICS & NANO-ELECTRONICS LAB	<p>"E-BEAM EVAPORATOR": MODEL NO: 1576 100MM DIAMETER SUBSTRATES "E-BEAM POWER SUPPLY(EB3)" SL NO:3PSU-060-10 "CLEAN AIR" 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>
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11.6 Research and Consultancy :

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	SYNTHESIS OF IN_2O_3 NANO-WIRE ASSEMBLY AND UV DETECTOR	2012-13	AICTE	53.96 LAKHS	ANNIRUDDHA MONDAL
2	DEVELOPMENT OF SLOT/PATCH ANTENNA AT KA BAND(AROUND 35 GHZ)	2012-13	AICTE	15 LAKHS	DIBYENDU GHOSHAL
3	MODROBS F.NO.8024/RIFD/ MOD(NER)-35/2011-12 MODERNISATION OF AUDIO VIDEO LABORATORY	2012-13	AICTE	10.00 LAKHS	DR SAMBHUNATH PRADHAN

Research Publications:

Total No. of papers published in Refereed International Journals	: 59
Total No. of papers presented in International Conferences	: 26

In Refereed International Journals:

1. "Influence of Light Waves on the Effective Electron Mass in Quantum Wells, Wires, Inversion Layers and Superlattices" P. K. Bose, N. Paitya, S. Bhattacharya, D. De, S. Saha, K. M. Chatterjee, S. Pahari, and K. P. Ghatak Quantum Matter 1, 89-126 december (2012).
2. "On the Fowler-Nordheim Field Emission from Quantum-Confining Optoelectronic Materials in the Presence of Light Waves "K. P. Ghatak, S. Bhattacharya, A. Mondal, S. Debbarma, P. Ghorai, and A. Bhattacharjee Quantum Matter 2, 25-41 february (2013).
3. "Influence of Quantizing Magnetic Field on the Fowler-Nordheim Field Emission from Non-Parabolic Materials" N. Paitya, S. Bhattacharya, D. De, and K. P. Ghatak Quantum Matter 1, 63-85 june (2012).
4. "Simple Theoretical Analysis of the Magneto Seebeck Coefficient in Quantum Dot Super Lattices of Heavily Doped Semiconductors " N Paitya, KP Ghatak Journal of Advanced Physics 1 (2), 161-182 ,2012
5. "Effective Electron Mass in Quantum Wires of III-V, Ternary and Quaternary Materials "N Paitya, KP Ghatak Journal of nano-science and nanotechnology 12 (12), 8985-8993, 2012.
6. "Simple Theoretical Analysis of the Magneto Thermoelectric Power in Semiconductor Quantum Dots of Heavily Doped Non-Parabolic Materials "N Paitya, KP Ghatak Journal of Nanoengineering and Nanomanufacturing 2 (4), 347-366 ,2012.
7. "Influence of Light Waves on the Effective Electron Mass in Quantum Wells, Wires, Inversion Layers and Super lattices" PK Bose, N Paitya, S Bhattacharya, D De, S Saha, KM Chatterjee, S Pahari, KP Ghatak ,Quantum Matter 1 (2), 89-126,2012.
8. "On the Field Emission from Quantum Wires of Non-Parabolic Semiconductors: Simplified Theory and Relative Assessment" S Bhattacharya, D De, N Paitya, SM Adhikari, KP Ghatak Advanced Science Letters 16 (1), 348-361,2012.
9. "Simplified Fowler-Nordheim Field Emission from Quantum Wires of Non-Parabolic Materials" N Paitya, S Bhattacharya, D De, S Ghosh, KP Ghatak Journal of Nanoengineering and Nanomanufacturing 2 (3), 211-228,2012.
10. "Influence of Quantizing Magnetic Field on the Effective Electron Mass in Nonlinear Optical, Optoelectronic and Related Materials" Simplified Theory and Relative Assessment S Debbarma, ABhattacharjee, S Bhattacharyya, A Mondal, KP Ghatak Journal of Advanced Physics 1 (1), 84-109,2012.
11. "Influence of Quantizing Magnetic Field on the Fowler-Nordheim Field Emission from Non-Parabolic Materials "N Paitya, S Bhattacharya, D De, KP Ghatak Quantum Matter 1 (1), 63-85,2012.
12. "Einstein's Photoemission from Quantum Wires of Optoelectronic Materials in the Presence of Intense Electric Field" D De, S Bhattacharaya, S Ghosh, KP Ghatak Advanced Science, Engineering and Medicine 4 (3), 211-221,2012.
13. "FowlerNordheim Field Emission from Quantum Confined Superlattices "N Paitya, S Bhattacharya, D De, KP Ghatak Advanced Science, Engineering and Medicine 4 (2), 96-115,2012.
14. "On the two dimensional effective electron mass in quantum wells, inversion layers and NIPI superlattices of Kane type semiconductors in the presence of strong light waves" Simplified theory and relative comparison S Bhattacharya, D De, SM Adhikari, KP Ghatak Superlattices and Microstructures 51 (2), 203-222,2012.
15. "Fowler-Nordheim Field Emission from Carbon Nanotubes Under Intense Electric Field" S Bhattacharya, D De, S Ghosh, KP Ghatak Journal of Computational and Theoretical Nanoscience 10 (3), 664-668,2013.

16. "The Effective Electron Mass in Quantum Wells of Nonlinear Optical, IIIV, Ternary and Quaternary Materials" PK Bose, S Bhattacharya, D De, N Paitya, KP Ghatak *Advanced Science, Engineering and Medicine* 5 (3), 245-257, 2013.
17. "On the Fowler-Nordheim Field Emission from Quantum-Confined Optoelectronic Materials in the Presence of Light Waves "KP Ghatak, S Bhattacharya, A Mondal, S Debbarma, P Ghorai, A Bhattacharjee *Quantum Matter* 2 (1), 25-41, 2013.
18. "Fowler-Nordheim Field Emission from Carbon Nanotubes under Intense Electric Field" Bhattacharya S., De D., Ghosh S. *Journal of Computational and Theoretical Nano Science, USA*, 2013.
19. A. Chakraborty and S. N. Pradhan, "Gate Level Leakage Minimization at 90 nm Technology," *International Journal of Computer Aided Engineering and Technology (IJCAET)*, Inderscience Publication, Vol. 5, No. 4, pp. 375-386, 2013.
20. A. Chakraborty and S. N. Pradhan, "A New High Speed Low Power 1 Bit Full Adder," *Journal of VLSI Design Tools and Technology*, vol. 3, No. 1, 2013. ISSN: 2249 – 474X.
21. A. Chakraborty and S. N. Pradhan, "Majority Function Based Ultra Low Power High Speed Adder Design using 6 Transistors", *International Journal of Electronics and Communication Engineering & Technology (IJECET)*, Volume 3, Issue 2, July- September (2012) issue.
22. P. Choudhury and S. N. Pradhan. Article: Switching Reduction in Power Gated Design. *IJCA Proceedings on International Conference on Communication, Circuits and Systems 2012 iC3S(3):22-25*, June 2013. Published by Foundation of Computer Science, New York, USA.
23. P. Choudhury and S. N. Pradhan, "An Approach for Low Power Design of Power Gated FSM Considering Partitioning and State Encoding Together", *Journal of Low Power Electronics*, American Scientific Publishers, USA, Vol. 8, No. 4, August 2012.
24. A. Chakraborty and S. N. Pradhan, "A Technique to Reduce Leakage of CMOS Circuit at Submicron Technology", *International Journal of Advanced Computer Engineering and Architecture*, Vol. 2 No. 2, June-December, 2012.
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27. P Chinnamuthu, A Mondal, N K Singh, J C Dhar, K K Chattopadhyay, Sekhar Bhattacharya, 'Band gap enhancement of glancing angle deposited TiO₂ nanowire array' *J. Appl. Phys.*, 112, 054315 (2012).
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32. J C Dhar, A Mondal, N K Singh and K K Chattopadhyay, "Enhanced photoemission from glancing angle deposited SiO_x-TiO₂ axial heterostructure nanowire arrays" *J. Appl. Phys.*, 113, 174304 (2013).
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36. Jay Chandra Dhar, Aniruddha Mondal, Naorem Khelchand Singh, P Chinnamuthu "Low Leakage TiO₂ Nanowire dielectric MOS device Using Ag Schottky Gate Contact" *IEEE Transactions on Nanotechnology (TNANO)*, 2013 (accepted with minor revision).
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43. P. Acharya and Dibyendu Ghoshal "A comparative study on image segmentation using various combinations of spatial filters and structuring elements in watershed algorithm", *International Journal of Electronics Communication and Computer Engineering*, March 2013 Vol.4, No.3, pp.935-939.
44. P.Acharya and Dibyendu Ghoshal "A gradient based morphological watershed segmentation approach suitable for human visual system", *International Journal of Computer Science and Engineering*, February 2013 Vol. 2, No.1, pp.59-68.
45. Dibyendu Ghoshal and P.Acharya "A modified watershed algorithm for stellar image" *International Journal of Computer Applications*, June 2012 Vol.41, No.13, pp.38-42.
46. P.Acharya and Dibyendu Ghoshal "A modified watershed segmentation algorithm using distances transform for image segmentation" *International Journal of Computer Application*, August 2012 Vol. 52, No.12, pp.46-50.
47. P.Acharya and Dibyendu Ghoshal "A new image segmentation algorithm for grid computing" *International Journal of Scientific Research Publication*, October 2012 Vol. 2, No.10, pp.1-4.

48. P.Acharya, R.Das and Dibyendu Ghoshal "A study on image edge detection using the gradients" International Journal of Scientific Research Publications, December 2012 Vol. 2, No.12, pp.1-5.
49. P.Acharya and Dibyendu Ghoshal "An effective human finger print segmentation method using watershed algorithm" International Journal of Computer Applications, September 2012 Vol. 53, No.13, pp.23-26.
50. P.Acharya, S.Santra and Dibyendu Ghoshal "An improved scheme on morphological image segmentation using the gradients" International Journal of Advanced Computer Science and Applications, February 2013 Vol. 4, No. 2, pp.100-104.
51. P.Acharya and Dibyendu Ghoshal "An overview of watershed transform and its consequence", International Journal of Engineering and Innovative Technology, May 2012 Vol. 1, No. 5, pp.168-172.
52. Dibyendu Ghoshal and P.Acharya "Marker controlled image segmentation for detecting adjacent objects based on watershed transform" International Journal of Computer Science and Technology, April 2012 Vol. 3, No. 2.
53. Dibyendu Ghoshal and P.Acharya "MRI image segmentation using watershed transform" International Journal of Emerging Technology and Advanced Engineering, April 2012 Vol. 2, No. 4, pp. 373-376.
54. P.Acharya, R.Das and Dibyendu Ghoshal "Study and Comparison of different edge detectors for image segmentation" Global Journal of Computer Science and Technology Graphics and Vision, July 2012 Vol. 12, No. 13, pp. 28-32.
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56. V.S. Bhadouria and Dibyendu Ghoshal "A study on computationally fast colour image enhancement based on fuzzification of saturation and intensity components" International Journal of Innovative computing and Applications, May 2012 Vol. 4, No. 2, pp. 67-74.
57. A.Das and Dibyendu Ghoshal "Human face detection in colour images using blue-difference chrominance component and morphological operations" IEM International Journal of Management and Technology. August 2012 Vol. 2, No.2, pp. 26-29.
58. Tamasi Moyra, Susanta Kumar Parui and Santanu Das "Design of High Quality Factor and Harmonic Reduced Bandpass Filter Using Coupled Resonators and Defected Ground Structures" International Journal of Soft Computing and Engineering Vol.-1, No.-6. PP-185-188.2012.
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In Proceedings of International Conference:

1. Technical and Managerial innovation in Computing and Communications in industry and Academia (IEMCON 2012) Institute of Engineering and Management, Salt Lake, Kolkata, India A.Das and Dibyendu Ghoshal 18-19 August 2012.
2. Machine Vision and Image Processing (MVIP 12) Coimbatore, India Vivek Singh Bhadouria and Dibyendu Ghoshal (14-15) December 2012.
3. Machine Vision and Image Processing (MVIP 12) Coimbatore, India Vivek Singh Bhadouria and Dibyendu Ghoshal (14-15) December 2012.

4. Emerging trends in Electrical Engineering and Energy Management Arupadai Vidu Institute of Technology, Kanchipuram, Tamil Nadu, India A.Das and Dibyendu Ghoshal 13-15 December, 2012.
5. International Conference on Computer Communication and Informatics (ICCCI-2013) Sri Sakthi Engineering College, Coimbatore, Tamil Nadu, India A.Das and Dibyendu Ghoshal 9-11 January, 2013.
6. S.N. Pradhan, D. Nath, P. Choudhury, A. Nag, "Within-Clock Power Gating Architecture Implementation to Reduce Leakage", "5th International Conference on Computers and Devices for Communication (IEEE CODEC-2012)", University of Calcutta, Kolkata, Dec. 17-19, 2012.
7. S. N. Pradhan, P. Chakraborty and O. Chakraborty, "Test Power Reduction by Filling Don't Cares in Test Patterns," accepted for oral presentation in IET International Conference on Information Science and Control Engineering (ICISCE 2012) will be held from December 7th to 9th, 2012, in Shenzhen, China.
8. A. Chakraborty and S. N. Pradhan, "Two New Techniques to Reduce Gate Leakage at 65 nm Technology," accepted in 5th International Conference on Computers and Devices for Communication (CODEC-2012), Institute of Radio Physics and Electronics, University of Calcutta, December-17-19, 2012.
9. A. Das, S. R. Choudhury, B. K. Kumar and S. N. Pradhan, "An elitist area-power density trade-off in VLSI floorplan using genetic algorithm," accepted for publication in Proc. IEEE ICECE, Bangladesh, Dec 20-22, 2012.
10. P. Choudhury and S. N. Pradhan, "Switching Reduction in Power Gated Design", accepted for publication in Proc. International Conference on Communication, Circuits and Systems (iC3S-2012), Bhubaneswar, India.
11. P. Chakraborty, O. Chakraborty and S. N. Pradhan, "Test Power Reduction by Filling Don't Cares Present in Test Patterns", accepted for publication in in Proc. International Conference on Communication, Circuits and Systems (iC3S-2012), Bhubaneswar, India.
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14. S. Roychoudhury, A. Das and S. N. Pradhan, A Genetic Algorithm Approach for Area and Wire Length Optimization in VLSI Floor Plan, Proc. in National Conference on Recent Trends of Research in Physics, Tripura University, 2012.
15. Aniruddha Mondal, Jay Chandra Dhar, P Chinnamuthu, Naorem Khelchand Singh, 'Advantage of Schottky-gate, TiO_2 Nanowire Dielectric for MOS Device', ICYRAM12, Singapore (Accepted for Oral presentation).
16. Naorem Khlechand Singh, Aniruddha Mondal, Jay Chandra Dhar, P Chinnamuthu, Swarup Paul, 'Enhanced Light Absorption Using GLAD Synthesized Si/SiO_x Core-Shell Nanowires', ICYRAM12, Singapore (Accepted for Poster presentation).
17. P Chinnamuthu, Jay Chandra Dhar, Naorem Khelchand Singh and Aniruddha Mondal, 'TiO₂ nanowire array based detector using GLAD,' International Conference on Nanotechnology (NANOCON) -2012, Pune, India on 18 - 19 October 2012. (oral presentation).

18. Jay Chandra Dhar, P Chinnamuthu, Naorem Khelchand Singh and Aniruddha Mondal 'Low Leakage TiO_2 Nanowire dielectric MOS device Using Ag Schottky Gate Contact', International Conference on Nanotechnology (NANOCON) -2012, Pune, India on 18 – 19th October 2012. (Oral presentation).
19. Naorem Khelchand Singh, Jay Chandra Dhar, P Chinnamuthu and Aniruddha Mondal, 'SiO₂ nanowire (NW) based Photodetector', International Conference on Nanotechnology (NANOCON)-2012, Pune, India on 18 – 19th October 2012. (Oral presentation).
20. P Chinnamuthu, J C Dhar, N K Sing, A Mondal and S Choudhury, 'Synthesis of Wide Band Gap TiO_2 Nanowire Arrays using GLAD', International Conference on Radar, Communication and Computing (ICRCC)-12, Thiruvananthapuram, Tamil Nadu, India on 21-22nd December (2012).
21. A Ganguly, A Mondal, J C Dhar, N K Singh and P Chinnamuthu, 'GLAD Synthesized Ag Nanoparticles Array on TiO_2 Thin Film and Plasmonic Light Absorption', The 8th International Conference on Microwaves, Antenna Propagation and Remote Sensing 'ICMARS-2012, Jodhpur, India on 11 – 15th December (2012).
22. Naorem Khelchand Singh, Jay Chandra Dhar, P Chinnamuthu, Aniruddha Mondal "GLAD Synthesized SiO_x Nanowires Array for Visible Light Absorption", International Conference on Material Science (ICMS) 2013, Tripura University, India during 14 – 16th February, 2013.
23. Jay Chandra Dhar, Naorem Khelchand Singh, P Chinnamuthu, Aniruddha Mondal "Interface Trap, Series Resistance and Conductance Study of High-k TiO_2 Nanowire MOS Device" International Conference on Material Science (ICMS) 2013, Tripura University, India during 14–16th February, 2013.
24. P Chinnamuthu, Jay Chandra Dhar, Naorem Khelchand Singh, Aniruddha Mondal " TiO_2 Nanowire Arrays Based Photodetector", International Conference on Material Science (ICMS) 2013, Tripura University, India during 14–16th February, 2013.
25. Aparna Ganguly, Aniruddha Mondal, Jay Chandra Dhar, Naorem Khelchand Singh And P Chinnamuthu "Synthesis of silver Nanoparticles Array on TiO_2 Thin Film using GLAD and Plasmonic Light Absorption", International Conference on Material Science (ICMS) 2013, Tripura University, India during 14–16th February, 2013.
26. Apangshu Das, Somnath Roy Choudhury, Balla Kiran Kumar, and Sambhu Nath Pradhan, "AN ELITIST AREA-POWER DENSITY TRADE-OFF IN VLSI FLOORPLAN USING GENETIC ALGORITHM", 7th International Conference on Electrical & Computer Engineering (ICECE), 2012, Dhaka. Digital Object Identifier: 10.1109/ICECE.2012.6471654, Publication Year: 2012, Page(s): 729 – 732

Research Monographs/ BOOKS:

1. **Title:** Fowler-Nordheim Field Emission Effects in Semiconductor Nanostructures
Author: S. Bhattacharya and K.P. Ghatak
Publisher: Springer-Verlag, Germany in their Material Science Series (Vol. 170, 2012)
2. **Title:** Effective Electron Mass in Low-Dimensional Semiconductors
Author: S. Bhattacharya and K.P. Ghatak
Publisher: Springer-Verlag, Germany in their Material Science Series (Vol.167, 2013).

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 had been converted from state Engineering College to National Institute of Technology Agartala in the year 2006. Presently B.Tech course in the Electronics & Instrumentation Engineering Department has been started from July 2009. At present the final year in UG course will start from July 2013. 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 numbers of common laboratories of Electrical engineering and Electronics and communication engineering departments are jointly being used for the routine laboratory classes of the students. Industry oriented two new laboratories 'DCS & PCS' and 'Hydraulic & Pneumatic' control system have already been set up in the department.

Sl. No	Name of the laboratories	Maximum Batch Size	Weekly hours required as per curricula	No. of Experiments	
				Prescribed	Conducted
1	Network Analysis and Synthesis lab	25	03	10	10
2	Electrical Measurement and Measuring Instruments lab	25	03	10	10
3	Analog Electronic Circuits lab	25	03	10	10
4	Programming in C lab	25	03	10	10
5	Industrial Instrumentation lab	18	03	10	10
6	Electronic Instrumentation and Measurement lab	18	03	10	10
7	Linear Control Systems lab	18	03	10	10
8	Process Control-II	15	03	10	10
9	Digital Signal Processing Lab	15	03	10	10
10	Digital Image Processing(Elective-I) Lab	15	03	10	10

12.4 Faculties and their Activities:

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

Sl. No.	Name of Faculty	Title	Period
Workshop:			
1.	Mr. Jayanta Kumar Rakshit	Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities.	04 th February 2013
		Aakash for Education.	10 th & 11 th Nov 2012
2.	Prasenjit Ghorai	Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities.	04 th February 2013
		Aakash for Education.	10 th & 11 th Nov 2012
3.	Apangshu Das	Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities.	04 th February 2013
4.	Mrs. Priyanka Dey	Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities.	04 th February 2013
5.	Mr. Souvik Bag	Aakash for Education.	10 th & 11 th Nov 2012
Conference:/Seminar:			
1.	Dr. Dibyendu Ghoshal	Technical and Managerial innovation in Computing and Communications in industry and Academia (IEMCON 2012)	18-19 August 2012
2.	Dr. Dibyendu Ghoshal	Machine Vision and Image Processing (MVIP 12)	(14-15) December 2012
3.	Dr. Dibyendu Ghoshal	Machine Vision and Image Processing (MVIP 12)	(14-15) December 2012
4.	Mr. Jayanta Kumar Rakshit	5 th International conference on computers and devices for communication, (CODEC 2012)	December 17-19, 2012
5.	Mr. Jayanta Kumar Rakshit	5 th International conference on computers and devices for communication, (CODEC 2012)	December 17-19, 2012
6.	Mr. Jayanta Kumar Rakshit	37 th OSI symposium	January 23-26, 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	:21
Total No. of papers presented in National Conference	: 01
Total No. of papers presented in International Conferences	: 11

In Refereed International Journals

Sl. No.	Name of the Authors	Title of the Journals	Date of publication	Pages/Vol. No.
1.	S.Pande, V.S.Bhadouria and Dibyendu Ghoshal	"A study on edge marking scheme of various standard edge detectors" International Journal of computer Applications,	April 2012	Vol.44, No.9, pp.34-37
2.	Dibyendu Ghoshal, P.De and B.Saha	"Identification of tigers for census by the method of tiger iris pattern matching and Recognition" International Journal of Computer Applications,	July 2012	Vol. 49, No.2, pp.19-23
3.	S.Das and Dibyendu Ghoshal	"A proposed block coding technique of an image based on fractal compression" International Journal of Computer Applications,	November 2012	Vol. 57, No.5, pp.35-41
4.	B.Debbarma and Dibyendu Ghoshal	"A modified Canny edge detection algorithm with variable sigma" International Journal of Emerging Trends in Electrical and Electronics,	March 2013	Vol. 1, No.2, pp.1-3
5.	A. Das and Dibyendu Ghoshal	"Extraction of time invariant lips based on morphological operation and corner detection method" International Journal of Computer Applications,	June 2012	Vol. 48, No.21 pp.7-11
6.	P. Acharjya and Dibyendu Ghoshal	"A comparative study on image segmentation using various combinations of spatial filters and structuring elements in watershed algorithm", International Journal of Electronics Communication and Computer Engineering,	March 2013	Vol.4, No.3, pp.935-939

7.	P.Acharjya and Dibyendu Ghoshal	"A gradient based morphological watershed segmentation approach suitable for human visual system", International Journal of Computer Science and Engineering ,	February 2013	Vol. 2, No.1, pp.59-68
8.	Dibyendu Ghoshal and P.Acharya	"A modified watershed algorithm for stellar image" International Journal of Computer Applications,	June 2012	Vol.41, No.13, pp.38-42
9	P.Acharya and Dibyendu Ghoshal	"A modified watershed segmentation algorithm using distances transform for image segmentation" International Journal of Computer Application,	August 2012	Vol. 52, No.12, pp.46-50
10.	P.Acharya and Dibyendu Ghoshal	"A new image segmentation algorithm for grid computing" International Journal of Scientific Research Publication,	October 2012	Vol. 2, No.10, pp.1-4
11.	P.Acharya, R.Das and Dibyendu Ghoshal	"A study on image edge detection using the gradients" International Journal of Scientific Research Publications,	December 2012	Vol. 2, No.12, pp.1-5
12.	P.Acharya and Dibyendu Ghoshal	"An effective human finger print segmentation method using watershed algorithm" International Journal of Computer Applications,	September 2012	Vol. 53, No.13, pp.23-26
13.	P.Acharya, S.Santra and Dibyendu Ghoshal	"An improved scheme on morphological image segmentation using the gradients" International Journal of Advanced Computer Science and Applications,	February 2013	Vol. 4, No. 2, pp.100-104
14.	P.Acharya and Dibyendu Ghoshal	"An overview of watershed transform and its consequence", International Journal of Engineering and Innovative Technology,	May 2012	Vol. 1, No. 5, pp.168-172
15.	Dibyendu Ghoshal and P.Acharya	"Marker controlled image segmentation for detecting adjacent objects based on watershed transform" International Journal of Computer Science and	April 2012	Vol. 3, No. 2

		Technology ,		
16.	Dibyendu Ghoshal and P.Acharya	"MRI image segmentation using watershed transform" International Journal of Emerging Technology and Advanced Engineering,	April 2012	Vol. 2, No. 4, pp. 373-376
17.	P.Acharya, R.Das and Dibyendu Ghoshal	"Study and Comparison of different edge detectors for image segmentation" Global Journal of Computer Science and Technology Graphics and Vision,	July 2012	Vol. 12, No. 13, pp. 28-32
18.	P.Acharya and Dibyendu Ghoshal	"Watershed segmentation based on distance transform and Edge detection Techniques" International Journal of Computer Applications,	August 2012	Vol. 52, No.13, pp. 6-10
19.	V.S. Bhadouria and Dibyendu Ghoshal	"A study on computationally fast colour image enhancement based on fuzzification of saturation and intensity components" International Journal of Innovative computing and Applications,	May 2012	Vol. 4, No. 2, pp. 67-74
20.	A.Das and Dibyendu Ghoshal	"Human face detection in colour images using blue-difference chrominance component and morphological operations" IEM International Journal of Management and Technology.	August 2012	Vol. 2, No.2, pp. 26-29
21.	J.K.Rakshit, T.Chattopadhyay and J.N.Roy	"Design of Micro Ring Resonator Based all Optical Adder/Subtractor", Progress in Theoretical and Applied Physics,	31/01/2013	1, 32-43.

In Proceedings of National Conference:

Sl. No.	Name of the Conference	Place of the Conference	Name of the participants	Date/Duration
1.	37 th OSI symposium	Pondicherry, India.	J.K.Rakshit, J.N.Roy, T.Chattopadhyay	January 23-26, 2013,

In Proceedings of International Conference:

Sl No.	Name of the Conference	Place of the Conference	Name of the participants	Date/Duration
1.	Technical and Managerial innovation in Computing and Communications in industry and Academia (IEMCON 2012)	Institute of Engineering and Management, Salt Lake, Kolkata, India	A.Das and Dibyendu Ghoshal	18-19 August 2012
2.	Machine Vision and Image Processing (MVIP 12)	Coimbatore, India	Vivek Singh Bhadouria and Dibyendu Ghoshal	(14-15) December 2012
3.	Machine Vision and Image Processing (MVIP 12)	Coimbatore, India	Vivek Singh Bhadouria and Dibyendu Ghoshal	(14-15) December 2012
4.	Emerging trends in Electrical Engineering and Energy Management	Arupadai Vidu Institute of Technology, Kanchipuram, Tamil Nadu, India	A.Das and Dibyendu Ghoshal	13-15 December, 2012
5.	International Conference on Computer Communication and Informatics (ICCCI-2013)	Sri Sakthi Engineering College, Coimbatore, Tamil Nadu, India	A.Das and Dibyendu Ghoshal	9-11 January, 2013
6.	Photonics 2012	IIT Madras, Chennai, India	J.K.Rakshit , T.Chattopadhyay and J.N.Roy	10-12, December 2012.
7.	5th International conference on computers and devices for communication, (CODEC 2012)	Kolkata, India	J.N.Roy, J.K.Rakshit , and T.Chattopadhyay	December 17-19, 2012,
8.	5th International conference on computers and devices for communication, (CODEC 2012)	Kolkata, India	J.K.Rakshit , J.N.Roy and T.Chattopadhyay	December 17-19, 2012,
9.	An Elitist Area-Power Density Trade-off in VLSI Floorplan using Genetic Algorithm	IEEE ICECE, Bangladesh,	A.Das, S. Roychoudhury, B.K. Kumar, S. N. Pradhan.	Dec 20-22, 2012

10.	"Surface Plasmon enhanced reflected second harmonic generation in periodically poled whispering gallery resonator", "Nonlinear Frequency Generation and Conversion: Materials, Devices and Applications XII	California	Ardhendu Saha, Nabamita Goswami, Priyanka Dey	SPIE 12/03/2013
11.	"Surface Plasmon enhanced ultra low threshold parametric down conversion in periodically poled whispering gallery resonator", Annual International Conference on Optoelectronics, Photonics & applied Physics	Singapore	Nabamita Goswami, Priyanka Dey, Ardhendu Saha, Gargi Chakraborty	(OPAP 2013)

Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1.	Mr. Ashis Saha, Chief Manager, Tata Consulting Engineering Limited (TCEL)	April 2013	To conduct Grand Viva of 8 th Semester B.Tech

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 Academic Programme:

The Department of Humanities & Social Sciences offers undergraduate courses in Economics, Costing, Accountancy, Management and English to the B. Tech. students. Besides that the Department is also running Ph.D. programmes. It offers the perfect ambience to research scholars to undertake Ph.D work. Emphasis is given to taking up interdisciplinary research work.

13.3 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 which 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	Available Floor Area (sq.m)	Maximum Batch Size	Weekly hours required as per curricula	No. of Experiments	
					Prescribed	Conducted
1	Language Lab	800 sq. ft	40	2 hrs.	Practice in Basic Language, Body Language, Listening Practice, GD, Debate, Communication Skills	Practice in Basic Language, Body Language, Listening Practice, GD, Debate, Communication Skills

13.4 Faculties and their Activities:

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

Sl. No.	Co-ordinators	Title	Period
Short Term Courses			
1.	Dr. Debasis Neogi	Introduction to Research Methodology	25.06.2012 to 04.07.2012

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.Gyanabati Khuraijam	Introduction to Research Methodologies	25.06.2012 to 04.07.2012
Conference:			
1.	Dr.Gyanabati Khuraijam	International Seminar on Ethnicity, Identity and Literature	11.10.2012 to 14.10.2012
2.	Dr.Gyanabati Khuraijam	National Seminar on Ethnic Integration in The North-East India: Issues & Challenges	21.12.2012 to 22.12.2012
3.	Dr. Debasis Neogi	National Seminar on Equal Opportunity in the context of Social & Human Development	13-7-2013 to 14-7-2012
4.	Dr. Debasis Neogi	Human Rights in 21 st Century	02-12-2012

Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1.	Dr. Debasis Neogi	Taiwan	8-10 January, 2013	To present paper in International Conference on Social Sciences & Business, 2013.

13.5 Research and Consultancy:

Research Publications:

Total No. of papers published in Refereed National Journals	:	01
Total No. of papers published in Refereed International Journals	:	04
Total No. of papers published in Refereed National Journals	:	05
Total No. of papers presented in National Conference	:	01

In Refereed National Journals:

1. Neogi Debasis and Papiya Dutta, "Does earning compulsion encourage gender discrimination when sending children to work? – Household perception analysis"; American Journal of Social Issues and Humanities; Vol. 2 (2), March, 2012, pp. 31-40.

In Refereed International Journals:

1. Neogi Debasis and Anamika Dey, "Does Employment Opportunity Ensure Women Empowerment? : A Study with Special Reference to Women Engaged in Group Activities in North-East India", in *Afro Asian Journal of Social Sciences*, Volume 3, No. 3.3 Quarter III 2012, pp. 1-16.
2. Neogi Debasis and Papiya Dutta, "Violation of Child Rights: Compulsions and Impact on Health Conditions of Working Children", in *Asian Journal of Research in Social science & Humanities*, Vol.II, Issue IX, September 2012, pp. 27-34.
3. Singh, Y. Oken, and Gyanabati Khuraijam, "*Aestheticism, Decadence and Symbolism: Fin de Siecle Movements in Revolt*," *Journal of Literature, Culture and Media Studies*, Vol. IV.7.ISSN- 0974 – 7192, 2012, pp. 71-84.
4. Khuraijam, Gyanabati, and Y. Oken Singh, "*In An Antique Land: A Voice of the Subaltern*", *Spectrum*, Vol. 1. ISSN: 2319-6076. PP. 8-17.

In Proceedings of National Conference:

1. Neogi, Debasis; "National Seminar on Equal Opportunity in the context of Social & Human Development", 13th – 14th July 2012, Dasarath Deb College, Khowai.
2. Debasis Neogi; "Indian Higher Education in the 21st Century: Constraints & Possibilities", 22-23 March 2013, University of Science & Technology, Meghalaya.
3. Debasis Neogi; "Ethnic Integration in the North-East India: Issues and Challenges", 21-22 December, 2012, Netaji Subhash Mahavidyalaya, Udaipur.
4. Debasis Neogi, "Human Rights in 21st Century", Directorate of Distance Education, Tripura University, 02-12-2012.
5. Dr. Gyanabati Khuraijam, "Ethnic Integration in the North-East India: Issues and Challenges", 21-22 December, 2012, Netaji Subhas Mahavidyalaya, Udaipur.

In Proceedings of International Conference:

1. Khuraijam, Gyanabati and Y. Oken Singh, "Amitav Ghosh's Te Glass Paface: Reflections on Colonialism", International Seminar on Ethnicity, Identity and Literature, Sibsagar College, Assam, 10.10.2012 to 14.10.2012.

14.0 MECHANICAL ENGINEERING DEPARTMENT

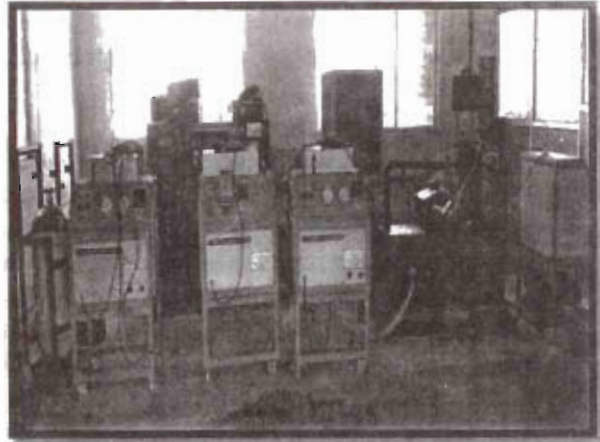
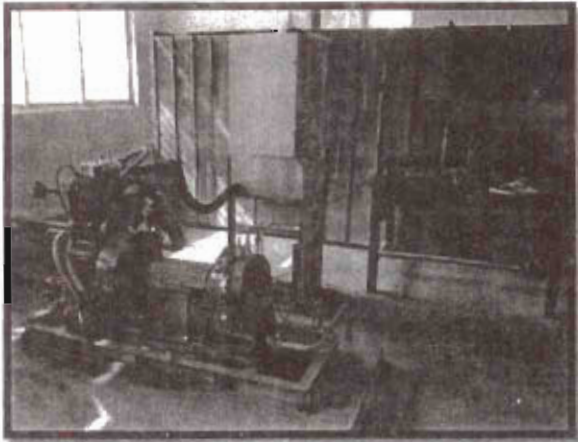
14.1 Introduction:

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 which had resulted in a couple of patents being 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 organizes 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 (sixty) students per year in the first semester of the four year Degree course, besides considerable numbers of PhD students. The department is hosting three programmes at PG level.

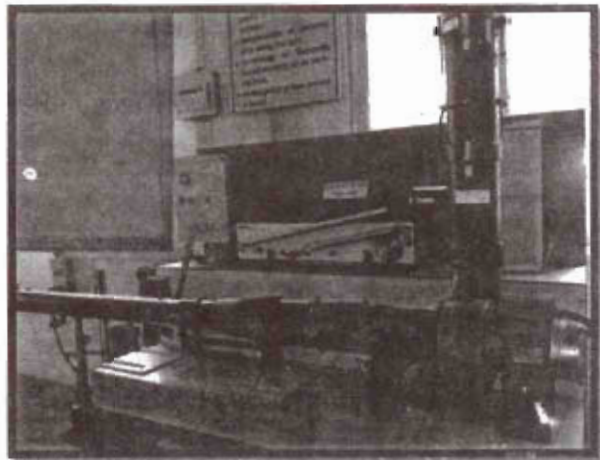
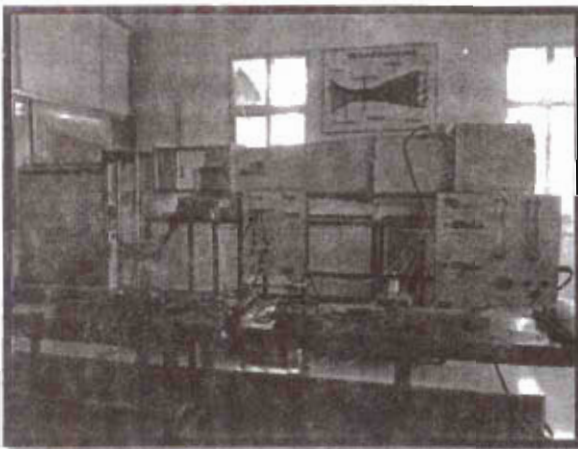
The Department has 25 (twenty five) nos. of faculty members. Among them 1 (one) Professor, 5 (five) numbers of Associate Professors, and rest as Assistant Professor. All the faculties are involved with different consultancy, research and developmental works along administrative activities of the Institute.

14.2 Lab Facilities:

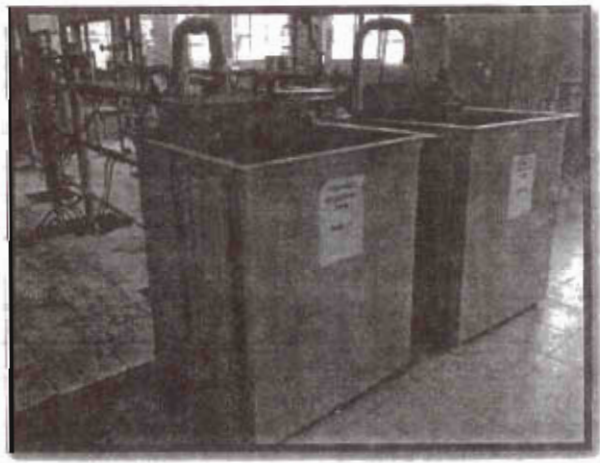
Sl. No.	Name of the Laboratories	Available Floor Area (sq.m)	Max. Batch Size	Weekly Hours Required as per Curricula	No. of Experiments	
					Prescribed	Conducted
1	Refrigeration & Air Conditioning Lab.	30	20	3	4	4
2	Thermal Power lab.	30	20	3	6	6
3	CNC M/C Lab		20	3	2	1
4	Mechanical Measurement Laboratory	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	Computer Laboratory	40	20	3	3	3
11	Tribology Lab	30	20	3	2	2
12	CFD Lab	40	5	3	5	5
13	FEM Lab	40	5	3	5	5



IC Engine Lab



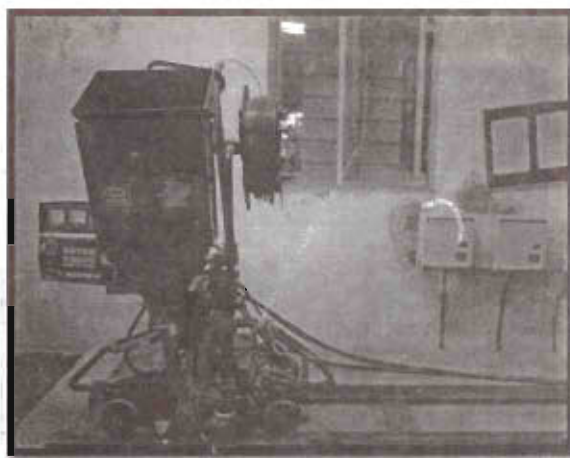
Wind Tunnel Lab



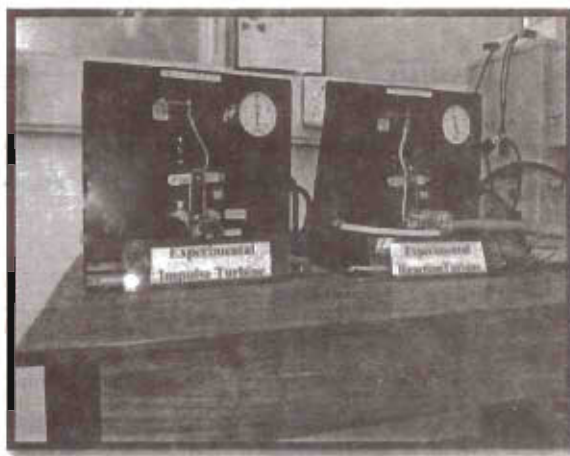
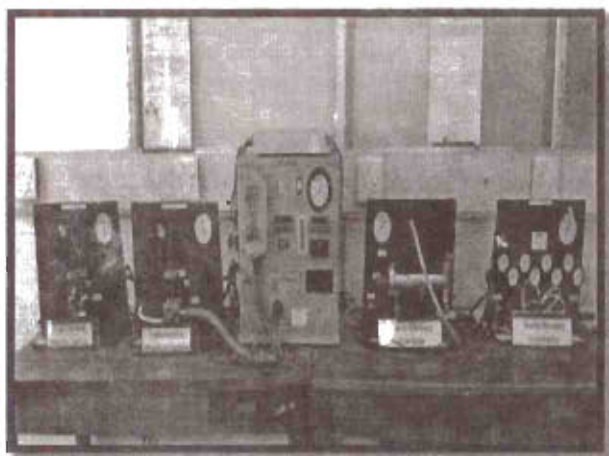
Fluid Mechanics Lab.



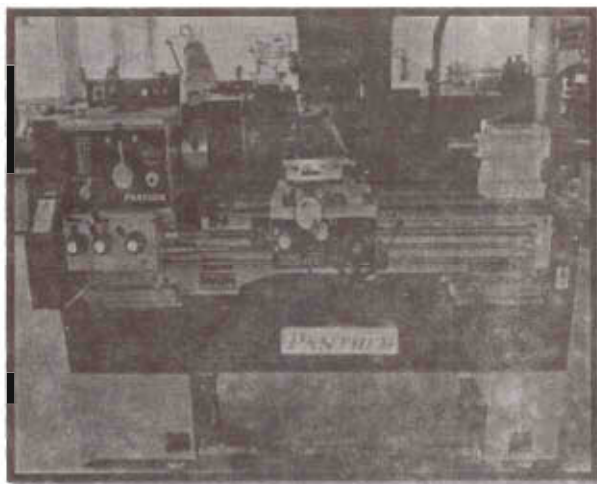
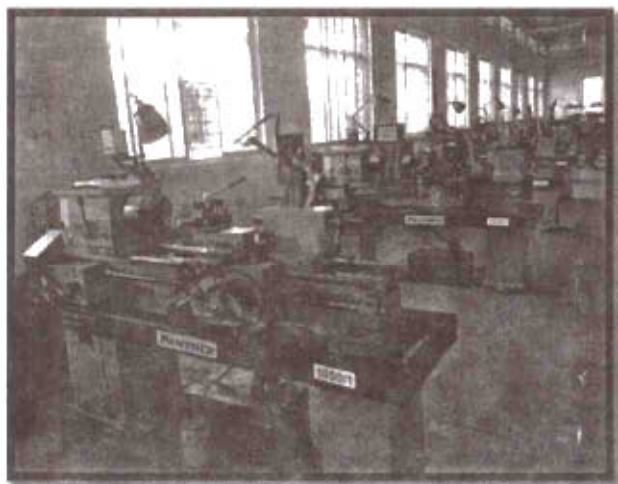
Carpentry Shop



Welding Shop



Thermal Power Lab.



Machine Shop



Some Student Projects

14.3 Faculties and their Activities:

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

Sl. No	Name of the Faculty	Paper Presented	Name of the conference.
1	Dipak Sen (Co-Authors- Dharpohari Das, Rajsekhar Panua, Pulak Sen)	Thermodynamic analysis and cogeneration of a cement plant in India-A case study	IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS'13)
2	Abhishek Paul (Co-Authors- Rajsekhar Panua, Probir Kr Bose)	An experimental study of performance and emission parameters of a compression ignition engine fueled by different blends of Diesel-Ethanol- biodiesel.	IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS'13)
Short term Course/ Workshop:			
1.	Madhujit Deb	Introduction to Research Methodologies	Two weeks ISTE workshop (25 th June-04 July,2012)
2.	Arindam Majumder	Introduction to Research Methodologies	Two weeks ISTE workshop (25 th June-04 July,2012)

Visits Abroad by Faculty:

Sl. No.	Name of Faculty	Country Visited	Date	Purpose of Visit
1	Prof. S.C. Saha	China		Attending International Conference
2	John Deb Barma	Cambodia	26 -27 September, 2012	Attending International Conference (ICEIM 2012)
3	Barnik Saha Roy	Cambodia	26 -27 September, 2012	Attending International Conference (ICEIM2012)

Research and Consultancy:

SL No.	Project Title	Project Duration	Funding Agency	Amount Received	Co-ordinators
1	AICTE, New Delhi sponsored RPS project title "Parametric Optimization And Heat Transfer Study During Submersed Arc Welding"	3 years	AICTE, New Delhi	Rs.10lakhs	Dr. Ajay Biswas And Dr. Swapan Bhaumik
2	MODROBS Project titled "Modernisation of Fitting Shop, Carpentry Shop, Machine Shop,	3 years	AICTE, New Delhi	Rs.12 lakhs	Dr. Ajay Biswas
3	Feasibility Study of Nano Particle Based Two Phase Air Water Heat Exchanger (Ref No. 8023/RID/RPS/(POLICY III)(NER)/2011-2012 dated 23/03/2012)	2 years	AICTE	Rs 1280000/-	Shri. Abhik Majumder

14.4 Research Publications:

Total No. of papers published in Referred National Journals	:	1
Total No. of papers published in Referred International Journals	:	17

Total No. of papers presented in National Conference	:	1
Total No. of papers presented in International Conferences	:	8
Total No. of books published	:	1
Total No. of patents filed	:	2

In Referred National Journals:

1. An Experimental Investigation On Performance And Emissions Characteristics Of Jatropa Oil Blends With Diesel In A Direct Injection Compression Ignition Engine By B. De, P. K. Bose Journal Of Institute Of Engineers, Vol:93, No3, Pp:203-208, 2012, ISSN: 2250-0553.

In Referred International Journals:

1. Majumder A., Mehta B. and Khandekar S., Local Nusselt Number Enhancement during Gas-liquid Taylor Bubble Flow in a Square Mini-channel: An Experimental Study, *International Journal of Thermal Sciences*, Vol. 66, pp. 8-18, 2013.
2. Sarkar A., Sarkar B. and Panja S. C., [January 2, 2013], "Reliability modeling of GTPPS, A case study of Rukhia Gas Turbine Power plant", The paper is accepted in American Journal of Operation research, Paper ID: 1040093.
3. D. K. Behera and Asis Sarkar, "A TOPSIS-based multi-criteria approach to faculty recruitment: A Case study" *Applied Mechanics and Materials* Vol. 415 (2013) pp 741-744, © (2013) TransTechPublications, Switzerland, doi:10.4028/www.scientific.net/AMM.415.741.
4. Bose, P. K., Rahul Banerjee, and Madhujit Deb. "Effect of hydrogen-diesel combustion on the performance and combustion parameters of a dual fuelled diesel engine." *Int. J. Energy Environ. (IJEE)* 4.3 (2013): 497-510.
5. Probir Kumar Bose, Rahul Banerjee and Madhujit Deb: "Hydrogen combustion in a single Cylinder diesel engine and to study its performance and combustion parameters", *Int. J. Mech. Eng. & Rob. Res.* 2012, Vol. 1, No. 3, October 2012.
6. 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" *Energy (Elsevier)*, Vol: 55, No 6, PP: 787-802 A. Paul, P.K. Bose, R.S. Panua. ISSN: 0360-5442.
7. "Laminar Natural Convection Study In A Quadrantal Cavity Using Heater On Adjacent Wall " *Frontiers In Heat And Mass Transfer (FHMT)* Dipak Sen, R.S. Panua, DOI: 10.5098/hmt.v4.1.3005, ISSN: 2151-8629.
8. An Experimental Investigation Of Fluid Flow In Horizontal Enclosure With Baffle Plates On Two Opposite Walls: D. Sen, P. K. Bose And A. Das "Visualization Of Mechanical Process" Doi: 10.1615/Vismechproc.2013004763 (Begellhouse) 2012.
9. Ghosh, S.K., Bandopadhyay, K. & Saha, P. (2013). Development of an in-situ multi-component reinforced Al-based metal-matrix composite by direct metal laser sintering technique - Optimization of process parameters. *Material Characterization (MTL-11764)* (Under Review).
10. Majumder. A: "Parametric Optimization of electric Discharge Machining by GA-based Response Surface Methodology", *Journal for Manufacturing Science and Production*, Vol. 12. (1), pp. 25-30, 2012.

11. Majumder, A: "Study of The Effect of Machining Parameters on Material Removal Rate and Electrode Wear during Electric Discharge Machining of Mild Steel", *Journal Engineering Science and Technology Review*, Vol. 5.(1), pp-14-18.
12. Roy, J, Majumder, A, Barma, J. D, Rai, R. N, Saha S. C: "An approach for solving multicharacteristics optimization of submerged arc welding process parameters by using grey based genetic algorithm" *Journal of Scientific and Industrial Research*, Vol. 72.(6), pp-340-347, 2013.
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15. Chaudhury, A, Das, S and Bhaumik, S. "Development of Empirical Relations for the Prediction of Heat flux using Al_2O_3 -Water Nanofluid", *International Journal of Mechanical Engineering*, 2(1), 75-86, (2013).
16. Das, S; Ray, M; Debbarma, B; Singh H and Bhaumik S, "Review of Boiling to Pool Boiling Heat Transfer using Nanofluids", *International Journal of Engineering, Science and Mathematics*, 1(1), 48-73, (2012).
17. Das, S and Bhaumik, S. "Nucleate pool boiling heat transfer in multicomponent mixtures on surfaces: a review", *International Journal of Mechanical and Industrial Engineering*, 2(4), 98-106, (2012).

In Proceedings of National Conference:

1. Sen, B., Adak, T., Anand, A. S., & Sikdar, B. K. (2011, November). Synthesis of reversible universal QCA gate structure for energy efficient digital design. In *TENCON 2011-2011 IEEE Region 10 Conference* (pp. 806-810). IEEE.

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1. Majumder A., Mehta B. and Khandekar S., An Experimental Study of Local Nusselt Number for Gas-Liquid Taylor Bubble Flow in a Mini-Channel, *16th International Heat Pipe Conference*, Lyon, France, Paper Reference Number 066, May 20-24, 2012.
2. Asis Sarkar, D.K. Behera, "A TOPSIS Method-based Approach to Machine Tool selection Problem of N.I.T Agartala", *2nd International Conference on Advanced Manufacturing and Automation (INCAMA-2013)*, Kalasalingam University, Krishnankoil-626126, Tamil Nadu, India.
3. A sarkar and DK Behra "Design of Optimal Maintenance Strategy", *Emerging Trends in Science, Engineering and Technology ,Lecture Notes in Mechanical Engineering 2012*, pp 383-389 ,Springer India ,2012, *Proceedings of International Conference, INCOSSET 2012*.
4. Bose, Probir Kumar, Rahul Banerjee, and Madhujit Deb. "Hydrogen and Diesel Combustion on a Single Cylinder Four Stroke Diesel Engine in Dual Fuel Mode with Varying Injection Strategies." *Proceedings of World Academy of Science, Engineering and Technology*. No. 70. World Academy of Science, Engineering and Technology, 2012.
5. D.Sen, Dharpohari Das, Rajsekhar Panua, Pulak Sen, Thermodynamic Analysis And Cogeneration Of A Cement Plant In India –A Case Study" *International Conference on Energy Efficient Technologies for Sustainability (ICEETS) 2013*.

6. A, Paul and R.S. Panua, P.K.Bose, " 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.
7. Das, S; Bhowmik, A and **Bhaumik, S**, "A review of correlation for Nucleate pool boiling heat transfer", 2nd National Conference on Advances in Heat Transfer and Fluid Mechanics, 22-23 Feb'2013, Aligarh Muslim University, Uttar Pradesh, India.
8. Dubba Santosh Kumar and **Bhaumik, S**, "Review of Nucleate pool boiling heat transfer of Refrigerants", 2nd National Conference on Advances in Heat Transfer and Fluid Mechanics, 22-23 Feb'2013, Aligarh Muslim University, Uttar Pradesh, India.

Books Published:

1. Probir Kumar Bose, Madhujit Deb and Abhishek Paul (2012). Operation of Diesel Engine using Waste cooking oil: It's combustion and performance studies, ISBN: 978-3-659-27335-3. Lambert Academic Publisher, Germany.

Patents Filed:

1. Debbarma. Shubhendu, Deb Barma. John, Majumder. Arindam : 'A POLISHING SYSTEM FOR POLISHING OF SURFACE OF SUBJECTS SUCH AS THE INCENSE STICKS' Application.No.1370/KOL/2012, Applied To: Indian Patent Office. (Applied).
2. Bose Probir Kumar, Banerjee Rahul: 'PROCESS FOR ELECTRO MECHANICALLY CONTROLLED TIMED MANIFOLD HYDROGEN INDUCTION SYSTEM FOUR STROKE SINGLE CYLINDER DIESEL ENGINE AND THE APPARATUS USING THE PROCESS', Application.No.1170/KOL/2011, Applied To: Indian Patent Office.

15.0 MATHEMATICS DEPARTMENT

15.1 Introduction:

The Mathematics Department is as old as the Institute (NIT, Agartala in 2006, formerly and Tripura Engineering College) itself a venerable forty eight years of age, was 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 the department has initiated to start 5-years Integrated M.Sc. programme 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 five 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:

- PG in Science Programme: PG courses are available in Mathematics
- Initiate to start 5 years Integrate M.Sc. Programme.
- 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 these courses on Numerical Methods and Analysis (4th Semester EE, EI, CHE & PE, 5th Semester ECE and 6th Semester EIE), Operation Research & Mathematical foundation (MCA-2nd and 4th), courses on Higher Engineering Mathematics in M.Tech curriculum (CE, ME and ECE), M.B.A. M.Sc. courses in Mathematics with specialization in OR and Topology and Ph.D. programmes are also run under the Department.

15.3 Lab Facilities: One Computer Laboratory

Sl. No.	Name of the Laboratory	Available Floor area (Sq.m)	Maximum Batch Size	No. of Experiments
1.	Computer Laboratory	69.485	10	a) 20 C-program on numerical analysis b) 15 MATLAB prog on numerical analysis c) 19 C-program on Adv numerical analysis

15.4 Faculties and their Activities:

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. U.K.Bera	International Conference on Frontiers of Mathematical Science with Application	International Conference on Frontiers of Mathematical Science with Application, Calcutta Mathematical Society, 07-09 Nov., 2012.
2.	Dr. U.K.Bera	One Day Workshop on "Intellectual Property Rights".	Sponsored by National Institute of Technology, Agartala & TIFAC (DST) Govt. of India, New Delhi in collaboration with MHRD IPR Chair at Tezpur University at NIT Agartala on 10 th August 2012.
3.	Dr. U.K.Bera	Two day ISTE Workshop on "Aakash for Education"	Conducted by IIT Bombay on 10-11 November 2012.
4.	Dr. U.K.Bera	One day National workshop on Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities	4 th February 2013 at NIT Agartala.
5.	Dr. U.K.Bera	International Workshop on Optimization, Computing and business Analytics	Organised by Operation Research Society of India, Dec.19, 2012.
6.	Dr. U.K.Bera	International Conference on Optimization, Computing and business Analytics	Organised by Operation Research Society of India, Dec.20-22, 2012.
7	Dr. U.K.Bera	2 nd International Conference on Rough Sets, Fuzzy Sets and Soft Computing	2 nd International Conference on Rough Sets, Fuzzy Sets and Soft Computing held at T.U Jan 17-19 th , 2013.
8	Dr. U.K.Bera	Regional Science Congress Conference	Regional Science Congress Conference, National Institute of Technology – Arunachal Pradesh, 11-13 March 2013
9.	Dr. Susmita Roy	On IF-rough oscillatory region and it's application in decision making	2 nd National Conference on <i>Mathematical Analysis and Its Applications</i> , April 5-6, 2012, Tripura University, Tripura, India.
10.	Jayanta Debnath	On I statistical convergent sequence spaces defined by an orlicz function using	2 nd National conference on Mathematical analysis and it's applications, Tripura University,

		matrix transformation.	April 5-6,2012.
11.	Dr. Susmita Roy	Attended only	Workshop on Rough set and its Applications, November 16-17, 2012, Tripura University.
12.	Dr. Susmita Roy	Attended only	2 nd International Conference on Rough Sets, Fuzzy Sets and Soft Computing, January 17-19, 2013, Tripura University.
13.	Dr. Paritosh Bhattacharya	One Day Workshop on "Intellectual Property Rights".	Sponsored by National Institute of Technology, Agartala & TIFAC (DST) Govt. of India, New Delhi in collaboration with MHRD IPR Chair at Tezpur University at NIT Agartala on 10 th August 2012.
14.	Dr. Paritosh Bhattacharya	Brain Storming workshop	Funded by DST Government of India 18-19 October 2012 at Pragna Bhawan Agartala.
15.	Dr. Paritosh Bhattacharya	Annual Review Respond Projects programme	Sponsored by ISRO Space Application Centre Ahmedabad from 1-2 Nov 2012 at ISRO , SAC, Ahmedabad.
16.	Dr. Paritosh Bhattacharya	Two day ISTE Workshop on "Aakash for Education"	Conducted by IIT Bombay on 10-11 November 2012.
17.	Dr. Paritosh Bhattacharya	One day National workshop on Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities	4 th February 2013 at NIT Agartala.
18.	Dr. Baby Bhattacharya	Attended only	2 nd International Conference on Rough Sets, Fuzzy Sets and Soft Computing held at T.U Jan 17-19 th ,2013.
19.	Dr. Baby Bhattacharya	δ -S Pre- Induced L- fuzzy supra topological spaces and fuzzy supra δ -S Pre-S-Closedness.	2 nd National conference on Mathematical analysis and it's applications, Tripura University, April 5-6,2012.
20.	Dr. Baby Bhattacharya	Contemporary and Future Perspectives of Physics Applicable to Science and Technology: Challenges and Opportunities.	One Day National Workshop on 4 th February, 2013 organized by Department of Physics, NIT, Agartala.

15.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1	Modernization of computing laboratory	01 year	AICTE	10.00	Dr. U.K.Bera

Research Publications:

Total no. of papers in Refereed National Journals	: 01
Total no. of papers in Refereed International Journals	: 28
Total no. of papers in Refereed National Conference	: 03
Total no. of papers in Refereed International Conference	: 07

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).

In Refereed International Journals:

1. Gupta M, Bhattacharya D,'Solving Multi-Objective Problems by Using Weighted Fuzzy Goal Programming Methods', Archives Des Sciences, Volume 65, No. 5, May 2012, P-51-62. (Sci indexed, IF = .474)
2. Gupta M, Bhattacharya D, 'A New Concept of Membership Function for the solution of Fuzzy Multi Objective Linear Goal Programming Problem', Archives Des Sciences, Volume 65, No. 5, May 2012, PP-374-388. (Sci indexed, IF = .474)
3. Gupta M, Bhattacharya D, 'Two Weighted Fuzzy Goal Programming Methods to Solve Multi-Objective Goal Programming Problem', Journal of Applied Mathematics, Volume 2012, Article ID 796028, pp-1-21 (Sci indexed, IF = .656).
4. D. Bhattacharya, LipikaDey, r-realcompact spaces, Commentationes Mathematicae Universitatis Carolinae, vol 53,no 2(2012) 253-267.
5. Bhattacharya D, Pal D A Study of Road Traffic Noise Annoyance on Daily Life in Agartala City Using Fuzzy Expert System and Multiple Regression Analysis, Int.J. of Scientific and Research Publications, Vol 2,Issue 5, May 2012,ISSN 2250-3153.
6. Bhattacharya D, Pal D Effect of Road Traffic Noise Pollution on Human Work Efficiency in Government Offices, Private Organizations, and Commercial Business Centres in Agartala City Using Fuzzy Expert System: A case Study, Advances in Fuzzy Systems, Vol. 2012, Article ID 828593, 9 pages, Hindawi Pub Cor. Int.
7. Bhattacharya D, Pal D A Fuzzy Rule-based Expert System for Diagnosing Gall Stone, Int J. of Current Scientific Research 2012;2(2),p. 305-311.
8. Bhattacharya D, Chakraborty S, A New Approach of Solution of Multi -Stage and Multi objective Decision-Making Problem Using De-Novo Programming, E.J.S.R, Vol.79 No 3(2012),pp393-417 ISSN 1450-216X.
9. U.K.Bera,, M.K.Maity and M. Maiti, "Inventory model with fuzzy lead-time and dynamic demand over finite time horizon using multi-objective genetic algorithm", Computers and

- Mathematics with Applications, Elsevier Publisher, Vol. 64, No.6, 2012, pp1822-1838, IF:1.747
10. A.Baidya, U.K.Bera and M. Maiti, "Solution of multi-item interval valued solid transportation problem with safety measure using different methods", OPSEARCH, Springer, Accepted on 02/03/13, DOI: 10.1007/s12597-013-0129-2.
11. 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, 28/03/13, 2013.
12. N. K. Mahapatra, U.K.Bera and M. Maiti, "A Production Inventory Model with Shortages, Fuzzy Preparation Time and Variable Production and Demand", American Journal of Operations Research, Vol. 2, 2012, 183-192.
13. J.K.DEY & M.MAITI, "Inventory Model With Fuzzy lead-time and Dynamic Demand over Finite Time Horizon using Interactive Fuzzy Method", International Journal of Applied Mathematics & Statistical Sciences (IJAMSS), Vol.1, Issue 1 2012, 50-72.
14. U. K. Bera, A.K.Bhunia, M. Maiti, "Optimal partial backordering two-storage inventory model for deteriorating items with variable demand", Int. J. of Operation Research(IJOR), Vol.16, No.1, 2012, 96-112.
15. U. K. Bera, A.K. Maiti, "A soft-computing approach to multi-item fuzzy EOQ model incorporating discount", Int. J. of Information and Decision Science(IJIDS), Vol.4, No.4, 2012, 313-328.
16. 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
17. Susmita Roy and S.Bhattacharya, "On IF-rough oscillatory region and its application in decision making", International Journal of Annals of Fuzzy Mathematics and Informatics, ISSN: 2093-9310, Vol. 5, No. 1(January 2013), p. 241-267.
18. Susmita Roy and S.Bhattacharya, "On fuzzy m_x^* -oscillatory region and its application in image processing, Accepted in Annals of Fuzzy Mathematics and Informatics, ISSN: 2093-9310, accepted on May, 2013, article in press.
19. S.Debnath and J.Debnath, "Some generalized statistical convergent sequence spaces", Mathematical Science Letters, Vol.2(2), 2013, p.151-154
20. S. Debnath and J.Debnath, "Some ideal convergent sequence spaces of fuzzy real numbers", Palestian journal of Mathematics (published online), Vol.3(1), p.27-32, 2013(May).
21. Bhattacharya D, Saha A.K, "Compactness in Countable Fuzzy Topological Spaces", Current Trends in Tech. and Science, vol-1, issue-2, 2012, pp 74-78.
22. Bhattacharya D, Saha A.K, "Normal Induced Fuzzy Topological Space", Accepted in Italian Journal of pure & Applied Math vol 32, 2012.
23. Bhattacharya D, Saha A.K, "Journal of Mathematical and Fundamental Science, issue-1, vol 45, p.61-82, 2012.
24. B.Bhattacharya and J. Chakraborty, "On L -fuzzy σ -Generalized closed sets and their properties", International journal of Computer Applications (0975-8887) vol-70-No.4, May 2013, 49-52.
25. B.Bhattacharya and J. Chakraborty, "On σ -induced L -fuzzy topological spaces", Int. J. Pure App. Sci. Technol, 16 (1), (2013), pp. XX-XX.

26. B.Bhattacharya and S. Biswas, γ -induced Fuzzy Supra topological Spaces and Fuzzy Supra γ -s-closed spaces, International Journal of Computer Applications (0975-8887) vol-70-No.2, May 2013,26-29.
27. B. Bhattacharya and A. Paul, On Bitopological γ -Open Sets, IOSR Journal of Mathematics (IOSR-JM), Volume 5, Issue 2 (Jan. - Feb. 2013), PP 10-14.
28. P. Bhattacharya, S. Mukhopadhyay, P.K.Bose, B.B.Ghosh " Optimized use of Solar Tracking System and Wind Energy" Elsevier Procedia Technology 4 (2012) 834 – 839.

In Proceedings of National Conference:

2. S. Mukhopadhyay, P. Bhattacharya, P. Das, "Possibility Determined by Weibull Parameters for Wind Farm installation in Midnapore Zone", IETE Annual Seminar, 8-9 September, 2012, Kolkata.
3. S. Mukhopadhyay, P. Bhattacharya, P. Das, "Sustainable Development Using Wind Power in Rural Area", National Conference on Sustainable Development through Innovative Research in Science and Technology sponsored by DST PURSE PROGRAMME, 28-29th September, 2012 at Jadavpur University, Kolkata.
4. S. Mukhopadhyay, Paritosh Bhattacharya, "Minimum Vertex Colored Wavelet Packets to prove the Kraft's Inequality", 100th Indian Science Congress, 3-7 January 2013, Calcutta University, Kolkata, India.

In Proceedings of International Conference:

1. S. Mukhopadhyay, Paritosh Bhattacharya, "Optimized DHT-RBF model as replacement of ARMA-RBF model for wind power forecasting" in IEEE International Conference in Emerging Trends in computing, communication and Nanotechnology (ICE-CCN) ,25-26 March 2013 at Tirunelveli, India.
2. S. Mukhopadhyay, Paritosh Bhattacharya, R. Bhattacharjee, P.K.Bose "Discrete Hilbert Transform as Minimum Phase Type Filter for the Forecasting and the characterization of Wind Speed", IEEE International Conference on Communications, Devices and Intelligent Systems (CODIS), December 28 & 29, 2012 at Jadavpur University, Kolkata.
3. B. Bhattacharya and A. Paul, On γ^* -Semi open sets in Bitopological Spaces, accepted in the 2nd international Conference on Rough Sets, Fuzzy Sets and soft Computing held at Tripura University, Jan 17-19th, 2013.
4. B.Bhattacharya and S. Biswas, On γ -induced L- fuzzy Supra topological spaces, accepted in the 2nd international Conference on Rough Sets, Fuzzy Sets and Soft Computing held at Tripura University, Jan 17-19th, 2013.
5. B.Bhattacharya and J. Chakraborty, On L-Fuzzy Topological Spaces Induced by Scott - σ -continuous functions, accepted 2nd international Conference on Rough Sets, Fuzzy Sets and Soft Computing held at Tripura University, Jan 17-19th, 2013.
6. U.K.Bera and A.Baidya, Multi-item solid Transportation problem with safety measure, accepted in the 2nd International conference on Rough Sets, Fuzzy Sets and Soft Computing, Tripura University, 17-19 January, 2013.
7. U.K. Bera and Pinki Mazumder, An Inventory model for deteriorating items with two credit period in fuzzy environment, accepted in the 2nd International conference on Rough Sets, Fuzzy Sets and Soft Computing, Tripura University, 17-19 January, 2013.

Books / Monographs / Edited Volumes: Dr. Paritosh Bhattacharya

Sl. No.	Title	ISBN and Publisher
1	Vertex Coloring: For the analysis of Gaussian & Laplacian Image Pyramid by Dr. P.Bhattacharya	ISBN-13:978-3659200663, Publisher: LAP LAMBERT Academic Publishing, Germany.
2	Hilbert Transform in Engineering by Dr. P.Bhattacharya	ISBN-13: 978-3-659-22902-2 Publisher: LAP LAMBERT Academic Publishing, Germany.
3	On fuzzy-rough oscillatory region and it's applications on data mining by Dr. S.Ray	ISBN- 13:978-3-659-33536-5,ISBN-10: 3659335363,EAN: 9783659335365, no. of page-232,2013. Publisher: LAP LAMBERT Academic Publishing, Germany.

Distinguished Visitors to the departments:

Sl. No.	Name of the visitors and Designation	Date of Visit	Purpose of Visit
1	Dr. K.S.Choudhury, Emeritus Professor, Jadavpur University	10-11 April, 2013	Delivered a lecture on Bio-Mathematics

16.0 PHYSICS DEPARTMENT

16.1 Introduction:

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

16.2 Academic Programme:

- The department currently offers the course of Engineering Physics to 1st, 2nd semesters of engineering undergraduates (**B.Tech**) and Material Science to the 4th semester engineering undergraduates of Electrical, Electronics and Communication branches.
- 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 also runs the **PhD (Physics)** programme.

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. Recently three research scholars have been admitted in Ph.D. 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

16.3 Lab Facilities:

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

16.4 Faculties and their activities:

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

Sl. No.	Co-ordinator	Title	Period
Workshop			
One day National Workshop	Dr. J. N. Roy Associate Professor	Contemporary and Future Perspective of Physics applicable to Science and Technology: Challenges and Opportunities	4 th February, 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
Workshop:			
1.	Ms. Sohini Goswami	Contemporary and Future perspectives of Physics applicable to Science and Technology: Challenges and Opportunities	4 th February, 2013
2.	Dr. R. K. Yadav	ISTE Workshop on Introduction to Research Methodology conducted by IIT Bombay at NIT Agartala	from 25 th June to 04 th July, 2012
Conference:			
1.	Dr. Biswajit Saha	Studies on Transport Properties of Ti incorporated CdO Thin Film Prepared by Radio Frequency Magnetron Sputtering Technique.	21 st -23 rd February, 2013.
2.	Dr. Manash Kumar Paul	Physics Aspects of Plasma-Surface Interaction during ICRF-Wall Conditioning	21-23 Feb. 2013
3.	Ms. Sohini Goswami	National Seminar on Green Chemistry & Nanoscience : Theory & Applications	20 th to 21 st July, 2012
4.	Ms. Sohini Goswami	International Conference on Material Science	21 st to 23 rd February, 2013
5.	Dr. J. N. Roy	International conference on fiber optics and photonics PHOTONICS 2012.	IITM , December 9-12, 2012
Symposia			
1.	Dr. J. N. Roy	XXXVII th Optical Society of India Symposium	Pondicherry University, 23 rd - 25 th Jan 2013

Honours and Awards obtained:

Sl. No	Name of the Faculty	Name of Award	Awarded by	Award for	Date
1	Dr. J. N. Roy	International Sardar Patel Award	Sardar Vallabhbhai Patel Foundation http://www.sardarpatelaward.org/awardgallery.hp	Achievement in Physical Sciences	2012

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.	Functionally Graded Ferrite-Ferroelectric Multiferroic Nanocomposites and Development of Magneto-electric (ME) coupling set-up for Magnetic Field Sensors	3 years	DST, New Delhi, D.O. No. SR/FTP/PS-019/2012	28 lacks	Dr. S. K. Mandal

Research Publications:

Total No. of peer reviewed international Monographs/Books	:	02
Total No. of papers published in Refereed International Journals	:	10
Total No. of papers published in National Conference proceedings	:	04
Total No. of papers published in International Conference proceedings	:	08

Peer reviewed International Monographs/Books:

1. **Applications of Inductive Sources of Discharge in Nuclear Fusion: Advances and Innovations** Publisher: Lambert Academic Publishing, AV Akademikverlag GmbH & Co. KG, Germany ISBN: 978-3-659-20576-7, Category: Physics, Astronomy (8/2012)
2. **Physics of Oxide Materials for Spintronics**, S. K. Mandal, P. Dey and T. K. Nath, Scholars' Press, Germany, 2013. ISBN No. 978-3-639-51305-9.

In Referred International Journals:

1. **Manash Kumar Paul**, A. Lyssoivan, R. Koch, T. Wauters, D. Douai, V. Bobkov, D. Van Eester, E. Lerche, J. Ongena, V. Rohde, J.-M. Noterdaeme, M. Graham, M.-L. Mayoral, I. Monakhov, M. Nightingale, V.V.Plyusnin, the ASDEX Upgrade Team and JET-

- EFDA Contributors, Fusion Engineering and Design (*Elsevier Pubs.*) 87 (2012) 98, **Imp. Factor: 1.49.**
2. A Lysoivan, D Douai, R. Koch, J Ongena, V Philipps, F C Schuller, **M. K. Paul**, R A Pitts, V Plyusnin, G Sergienko, M Shimada, V L Vdovin, Plasma Physics & Controlled Fusion (*IoP Pubs.*) 54 (2012) 074014, **Imp. Factor: 2.73.**
 3. **Manash Kumar Paul**, A. Lysoivan, R. Koch, G. Van Wassenhove, M.Vervier, G. Bertschinger, R.Laengner, B.Unterberg, G. Sergienko, V. Philipps, T. Wauters and the TEXTOR Team, Fusion Engineering and Design (*Elsevier Pubs.*) 88 (2013) 51, **Imp. Factor: 1.49.**
 4. T.Chattopadhyay and **J.N.Roy** "Design of polarization encoded all-optical 4-valued MAX logic gate and its applications" *Optics Communication*. 300 (2013) 119-128. <http://dx.doi.org/10.1016/j.optcom.2013.02.025>. [15.03.2013].
 5. T.Chattopadhyay and **J.N.Roy** "All-optical Quaternary Computing and Information Processing: a promising path" *J.of Optics* (Springer publication) 2013 [in press] DOI: 10.1007/s12596-013-0126-0. [17th March 2013].
 6. D.K.Gayen, A. Bhattacharyya, T.Chattopadhyay and **J.N. Roy** "Ultrafast All-Optical Half Adder using Quantum-Dot Semiconductor Optical Amplifier-based Mach-Zehnder Interferometer" *Journal of Light wave Technology*. (IEEE), 30(21), (2012), 3387-3393. [Link](#) [publisher: IEEE-OSA] DOI: 10.1109/JLT.2012.2215579 [01.11.2012].
 7. T.Chattopadhyay, P.Bhowmik and **J.N.Roy**, "Polarization encoded optical N-valued inverter", *Journal of Optical Society of America B*, (OSA), 29(10), (2012), 2852-2860. [Link](#) [01.10.2012].
 8. J.K.Rakshit, T.Chattopadhyay and **J.N.Roy** "Design of Micro Ring Resonator Based all Optical Adder/Subtractor", *Progress in Theoretical and Applied Physics*, 1(1) 2012, 32-43. www.researchmathsci.org [31st January 2013].
 9. M. K. Das .T. Chattopadhyay, **J.N.Roy**, Passive all-optical tree architecture (PATA) based scheme for conversion of 2^n radix based number to its binary form" *IET Optoelectronics* . In press (2012), doi: 10.1049/iet-opt.2011.0088 [Link](#) [October 2012]
 10. B. K. Agrawal, **R. K. Yadav** and P. S. Yadav, "Density Functional Theory Study of Small SiC Nanoclusters", *Journal of Computational and Theoretical Nanoscience*, 9(11), November 2012, 1830-1849.

In Proceedings of National Conference:

1. **27th National symposium on Plasma Science and Technology**, Department of Physics, Pondicherry University, India, 10 -13 December, 2012, **Manash Kr. Paul et al., Proc. of 27th National symposium on Plasma Science and Technology.**
2. **National Seminar on Green Chemistry & Nanoscience : Theory & Applications**, M.B.B. College, Agartala, Tripura, 20th to 21st July, 2012, **Sohini Goswami.**
3. **XXXVII OSI Symposium**, Pondicherry University, 23rd -25th Jan 2013, "All – optical ternary shift operators", **J.N.Roy, P.Bhowmik and T.Chattopadhyay.**
4. **XXXVII OSI Symposium**, Pondicherry University 23rd -25th Jan 2013, "Design of micro ring resonator based all-optical binary to gray code converter", **J.K.Rakshit, J.N.Roy and T.Chattopadhyay**

In Proceedings of International Conference:

1. **International Conference on Material Science (ICMS-2013)**, Department of Physics, Tripura (Central) University, India, 21-23 February, 2013, **M. K. Paul**, Proc. of International Conference on Material Science (ICMS-2013).
2. **International Conference on Complex Processes in Plasmas and Nonlinear Dynamical Systems**, Institute for Plasma Research, Gujarat, India, 6-9 November, 2012, **M. K. Paul et al.**, Proc. of International Conference on Complex Processes in Plasmas and Nonlinear Dynamical, Systems, pg. 57.
3. **International Conference on Material Science (ICMS-2013)**, Department of Physics, Tripura (Central) University, India, 21-23 February, 2013, **Sohini Goswami**, Proc. of International Conference on Material Science (ICMS-2013).
4. **International Conference on Material Science (ICMS-2013)**, Tripura University (Central University), 21-23 February 2013, Designing of ternary half adder with optical nonlinear material (OPNLM) switch, **P.Bhowmik, T.Chattopadhyay, and J.N.Roy**.
5. **International conference on fiber optics and photonics PHOTONICS 2012**, IIT Madras, India, December 9-12, 2012, All-Optical Clocked D flip-flop using a single micro-ring resonator", **J.K.Rakshit, T.Chattopadhyay and J.N.Roy**.
6. **5th International conference on computers and devices for communication, CODEC 2012** Kolkata, W.B., India, December 17-19, 2012, All-optical XOR/XNOR logic gate using micro-ring resonator, **J.K.Rakshit, J.N.Roy and T.Chattopadhyay**.
7. **5th International conference on computers and devices for communication, CODEC 2012** Kolkata, W.B., India, December 17-19, 2012, All-optical conversion scheme from n to 2ⁿ line decoder using micro-ring resonator, **J.K.Rakshit, J.N.Roy and T.Chattopadhyay**.
8. **5th International conference on computers and devices for communication, CODEC 2012** Kolkata, W.B., India, December 17-19, 2012, 2D matrix switching with optical phase conjugation in gold nanoparticle doped-alumina (Au:Al₂O₃): a theoretical study, **T.Chattopadhyay, P.Bhowmik and J.N.Roy**

Distinguished Visitors to the Departments:

Sl. No.	Name of the Visitors and Designation	Date of Visit	Purpose of Visit
1	Padma Bhushan Prof. Bikash Sinha , Former Director SINP and VECC	4 th February, 2013	To deliver lecture at one day national workshop
2	Prof. Alok Krishna Gupta Emeritus Professor, Allahabad University	4 th February, 2013	
3	Prof. Deepak Mathur Senior Professor, TIFR Bombay	4 th February, 2013	
4	Prof. Kehar Singha Emeritus Professor, IIT Delhi	10 th October 2012	To visit our lab and to attend Senate meeting

17.0 PRODUCTION ENGINEERING DEPARTMENT

17.1 Introduction:

The 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, as well as the department also offers Doctoral Program.

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

Vision:

To become a recognizable department of repute which can provide a world class, technologically rich academic and research environment at the highest level of excellence and thus providing to be one of the best technical educations in the field of Production Engineering

Mission:

- To provide high class teaching and research environment meeting global standards.
- To participate in research activities to continue at the grass root level of society.
- To disseminate information and knowledge through certain of conducive environment to maximize the potential of teachers, staff and student.

17.2 Academic Programme: Presently the department is offering *B. Tech, M. Tech & Ph.D.*

17.3 Lab Facilities:

The 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

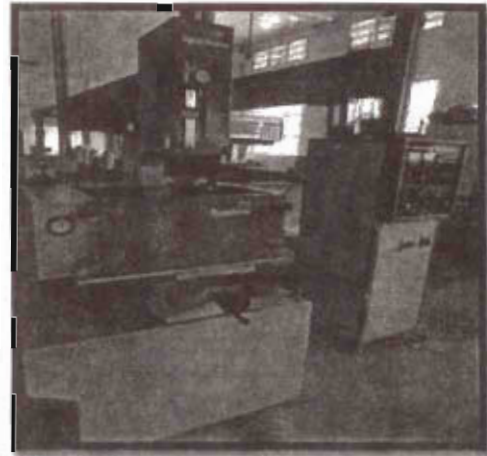
Laboratory details:

Sl. No	Name of the Laboratories	Available Floor Area (sq.m)	Maximum Batch Size	Weekly hours required as per curricula	No. of Experiments Prescribed	
					Prescribed	Conducted
1	Metallographic	20	6	6	10	7
2	Non Traditional Machining	56	20	9	10	10

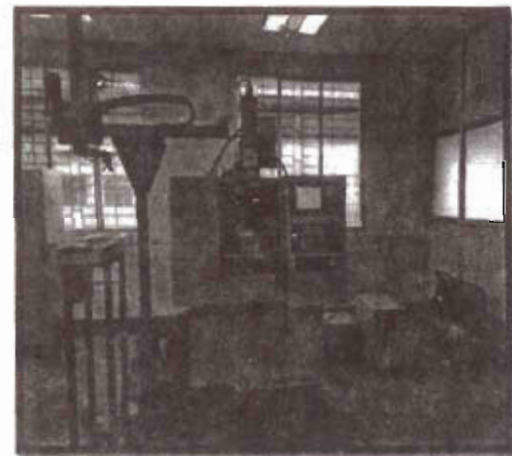
3	CNC automation & Robotics	56	20	9	10	7
4	Ergonomics & Condition Monitoring	40	15	6	6	5
5	CAD/CAM	56	30	12	10	10
6	Metal Forming and Metal Casting	56	20	6	8	7

UPCOMING LABS:

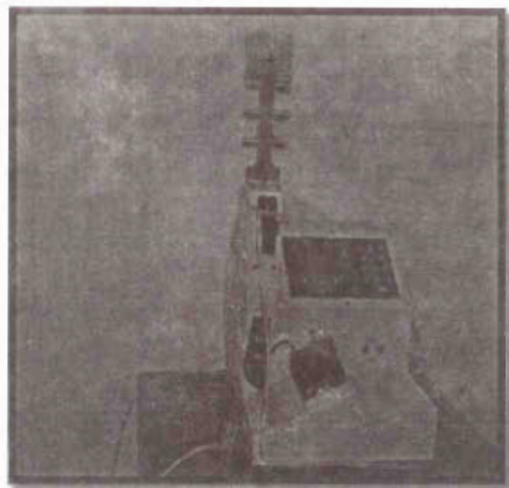
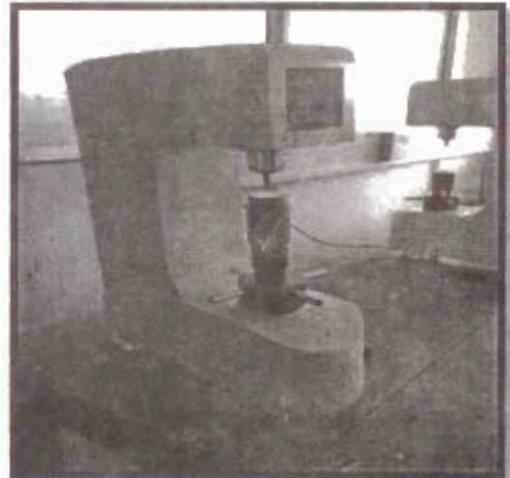
1. Mechatronics lab
2. Quality assurance lab
3. Metrology lab
4. Theory of Machines Lab.



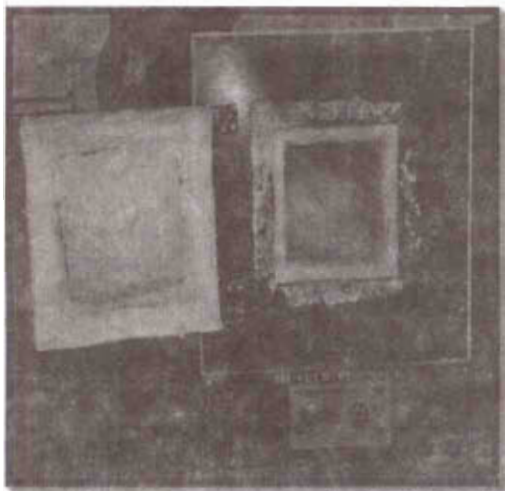
PICTURES OF NON TRADITIONAL MACHINING LABORATORY



PICTURES OF CNC, AUTOMATION AND ROBOTICS LABORATORY



PICTURES OF CONDITIONING MONITORING LABORATORY





PICTURES OF METAL CASTING AND METAL FORMING



PICTURE OF METALLOGRAPHY
LABORATORY



PICTURE OF CAD/CAM
LABORATORY

17.4 Faculties and their activities:

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

Sl. No.	Name of Faculty	Title	Period
Workshop:			
1	Dr. Rabindra Nath Barman	One day national workshop on contemporary and future perspectives of physics applicable to science and technology: challenges and opportunities	4 th February 2013

17.5 Research and Consultancy:

Sponsored Research Projects:

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs)	Co-ordinators
1.	Condition monitoring of agricultural diesel engines run by vegetable oils through tribo analysis of used lubricants		AICTE	Rs. 15.75	Swarup Pal
2.	Development of GIS based Real Time Monitoring Software for Maximizing Efficiency of Water Treatment Plants	3 years	DST	Rs. 25.00	Dr. Rabindra Nath Barman
3.	Maximization of Water Efficiency by Minimizing Water Footprint of NIT, Agartala with the help of Neuro-Genetic Algorithms	2 years	AICTE	Rs. 20.00	Dr. Rabindra Nath Barman
4.	Machinability studies on Al-Cu-TiC metal matrix composites	2 years	AICTE	Rs. 16.00	Dr. Ram Naresh Rai

Research Publications:

Total No. of papers published in Refereed National Journals : 01

Total No. of papers published in Referred International Journals : 11

In Referred National Journals:

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.

In Referred International Journals:

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. 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 multiobjective threshold acceptance algorithm." Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture (2013).
6. Ram Naresh Rai, A. K. Prasad 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.
9. Dr. G.R.K Sastry ; K.Venkateswarlu; Performance, Vibration and Emission Analysis of Diesel Engine fuelled with Fish oil Bio diesel blends; International Journal of Advanced Engineering Technology; Vol.III/ Issue I/January-March, 2012/116-120 E,-ISSN 0976-3945.
10. Dr. G.R.K Sastry; K.Venkateswarlu ; Effect of Compression Ratio and Equivalence Ratio on the Emission Characteristics of a Hydrogen-Ethanol Fuelled Spark Ignition Engine; International Journal of Advanced Science and Technology; Vol:40, ,Page:91-100.Mar 2012.ISSN 2005-4238.
11. K. M. N. Jha; D. K. Pratihari; A. V. Bapat; V. Dey; Maajid Ali; A. C. Bagchi ; Knowledge-based systems using neural networks for electron beam welding process of reactive material (Zircaloy-4); Published online on 1st Feb 2013; Journal of Intelligent manufacturing Springer.

Books:

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

18.0 SCHOOL OF HYDRO-INFORMATICS ENGINEERING

18.1 Introduction:

Water is an issue of strategic importance, with strong environmental, social and economic implications, as expressed in global dialogues, such as the UN Millennium Summit, the World Water Forum, the Bonn Freshwater Conference and the World Summit on Sustainable Development. Modern water resource engineers and managers face increasing challenges in the light of rapidly growing populations and competing demands for an increasingly scarce resource.

One message is clear: the need for a more integrated approach to water and environmental resources management calls for professionals with a high degree of specialization as well as generalists equipped to lead and manage multidisciplinary efforts, individuals and organizations in the water and environment sectors world-wide.

18.2 Academic Programme:

The M. Tech program offered by the School of Hydro-Informatics Engineering is a unique interdisciplinary course in Hydro-Informatics Engineering in the North Eastern part of India.

To the best of our knowledge, such programme is presently being offered by only a few Universities/ Institutes in the country.

The problems of water management in developing countries require integrated interdisciplinary approaches rather than single track /stream approach which is normally followed in undergraduate engineering courses. Therefore, the course contents of the M. Tech programme has been framed focusing on interdisciplinary approaches. This integrates technical aspect of execution of water projects with cultural, socio-economic and ecological peripheral condition.

Thus the programme fulfils the requirement of adequately equipping the graduate engineer with appropriate knowledge of Hydro-Informatics Engineering and thus enhancing their professional competence for effectively solving complex problems in the realm of water (a sector of National priority) on both regional and national fronts namely integrated, management of water and waste water, flood and drought mitigation, river bank erosion etc.

The enrolment of M. Tech Students of the School for Ph. D programs in institutes of National & International repute substantiates the quality/standard of M. Tech Course offered by the School.

18.3 Lab Facilities:

Sl. No	Name of the Laboratories	Maximum Batch Size	No. of Experiments	
			Prescribed	Conducted
1	Hydraulics & Hydrology Laboratory	10		
2	Water Quality Laboratory	10	16	10
3	Computer Laboratory	20		

18.4 Faculties and their Activities:

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

Sl. No.	Name of Faculty	Title
Conference:		
1.	Dr. Mrinmoy Majumder	Impact of Climatic Uncertainty on Water Balance of West Tripura with the help of Decision Tree Algorithm
		Implication in Water Footprint due to Climate uncertainties of Teesta Torsa River Basin, National Conference Advances in Environmental Engineering, (AEE-09)
		Estimation of Relationship between Surface and Ground Water Quality with the help of Neuro-genetic Models, National Conference on "Integrated Water and Wastewater Management

18.5 Design and Development Activities:

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

Software Designed and developed:

1. CLIMAGE: A New Software for the Prediction of Short-Term Weather with the Help of Satellite Data and Neuro-Fuzzy Clustering: Mrinmoy Majumder, Tilottama Chackraborty.
2. OPTIDAL: A New Software for Simulation of Climatic Impacts on Tidal Power: Mrinmoy Majumder, Soumya Ghosh, Rabindra Nath Barman.
3. AGROSIM: A New Model for Predicting Water Productivity from Crop Characteristics: Mrinmoy Majumder, Tilottama Chackraborty, Rabindra Nath Barman.
4. QUALTR: Software for Simulating Output from Water Treatment Plants in the Face of Extreme Events: Mrinmoy Majumder, Paulami De, Rabindra Nath Barman.
5. Development of a Neuro-Fuzzy System for Selection of Tree Species for Afforestation Purpose: Mrinmoy Majumder, Tilottama Chackraborty, Santanu Datta, Rajesh Chakraborty.

18.6 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

Research Publications:

Total No. of papers published in Refereed International Journals : 21

In Refereed International Journals:

1. Majumder, M., Pramanik, S., Bera, S., Roy, P.K. and Mazumdar, A.; Impact of Climate Change on Outflow of a Tropical Multi-Reservoir System with the help of NSRRM Model, *Journal of Flood Engineering*, 1(2), 2010. ISSN : 0976-6219.
2. Majumder, M., Roy, P.K. and Mazumdar, A.; Impact of Climatic Uncertainty on Water Limitation of River Damodar, *International Journal of Water Resource Management*, 2009; 2009(1):17-38. eISSN:1857-7943.
3. Majumder, M., Roy, P.K.; Barman, R.N; and Mazumdar, A Estimating Impact of Climate Change on Water Efficiency of River Damodar and Rupnarayan with the help of Water Footprint and Virtual Water, *International Journal of Hydrologic Engineering*, 2009; 2009(i). eISSN:1977-7845.
4. Majumder, M., Roy, P.K. and Mazumdar, A Impact of Climate Change on Agricultural Productivity of Two Large Scale Indian River Basin, *Journal of Hydrologic Simulations*, 2009; 1(i):115-146. eISSN:1987-4547.
5. Majumder, M., Barman, R.N; Roy, P.K. and Mazumdar, A; Estimating Uncertainty in Reservoir Storage with the help of GIS and Neuro-genetic models, *International Journal of Integrated Resource Management*, *International Journal of Integrated Resource Management*, 2009; 2009 (i). eISSN:9999-0518.
6. Majumder, M., Barman, R.N; Roy, P.K. and Mazumdar, A; Estimating Spatial Variation of Time of Concentration in an Undulating River Basin, *International Journal of Hydro-Climatic Engineering*, 2009; 2009(i). eISSN:1977-4556.
7. Majumder, M., Barman, R.N.; Jana, B., Roy, P.K. and Mazumdar, A Application of Neuro-Genetic Algorithm to Determine Reservoir Response in Different Hydrologic Adversaries, *Journal of Soil & Water Research*, Institute of Agricultural Economics and Information, Volume 4, Issue 1, pp.17-27, Prague, 2009. ISSN: 1801-5395 . (SCOPUS).
8. Majumder, M., Roy, P.K. and Mazumdar, A; Optimization of the water use in the river Damodar in West Bengal in India: An integrated multi-reservoir system with the help of artificial neural network, *Journal of Engineering, Computing and Architecture*. Volume 1, Issue 2, Article No. 1192, New York, 2007. ISSN: 1934-7197.
9. Nath Barman, R., Majumder, M., Mukhopadhyay, B., Kumar Roy, P., Mazumdar, A., "Estimation & Calculation of a relationship between Dispersion no., Reynolds no., Porosity & Hydraulic Gradient in Horizontal Roughing Filter", *Journal of Agricultural, Food & Environmental Sciences*, New York, USA, Vol. 2, Issue. 1, 2008, Web-Version, November, 2008, ISSN: 1934-7235
10. Mukhopadhyay, B., Majumder, M., Nath Barman, R., Kumar Roy, P., and Mazumder, A.: Verification of filter efficiency of horizontal roughing filter by Weglin's design criteria and Artificial Neural Network, *Journal of Drinking Water and Engineering Science Discussions*, Volume 1, pp.117-133, 2008, ISSN : 1996-9473, eISSN : 1996-9481.
11. Nath Barman, R., Majumder, M., Mukhopadhyay, B., Mazumdar, A. (2008), "Performance of HRF as a pretreatment unit before SSF against conventional water treatment systems", *Journal of Engineering*, PHILICA.COM Article number 133, ISSN 1751-3030
12. Majumder, M., Barman, R.N., Roy, P.K., Jana, B.K., Mazumdar, A., 2009, Application of Neuro-genetic Algorithm to Determine Reservoir Response in Different Hydrologic Adversaries, *Journal of Soil & Water Resources*, Vol - 4, Issue - 2009(1), Prague, Checkoslovakia, ISSN 1801-5395
13. Nath Barman, R., Majumder, M., Mukhopadhyay, B., Paul, S., Benerjee, G., Mazumdar, A. (2009), Estimation of Run time Duration Incase of Horizontal Roughing Filter with the

- help of Accumulation Rate and Neuro- Genetic Models, Journal of Water Quality Engineering Assoc. Water and Enviro-Modeling eISSN – 99990001
14. Barman, R.N. Majumdar, M. Roy, P.K. and Asis Mazumdar. 2009. Impact of Climate Change on Greenwater of Teesta Torsa River Basin. Journal of Water Resource Management, 1(i), 12-27. ISSN: 1887-5718
 15. Barman .R.N., Majumder. M., Roy.P.K., Mazumdar.A. 2009. Impact of Climate Change on Water Sequestration of Teesta Torsa. Journal of Hydrologic Engineering. 2009 (i). 1-28, Picadel Publishers, USA, ISBN: 1977-4501
 16. Majumder, M; Barman, R.N; Deb. M, 2010, Development of Water Distribution System Simulator with GIS, to Solve Water Allocation Problems, International Journal of Water Resource Management, 2010(1), 1-10. ISBN: 1981-7075
 17. Barman, R.N; Majumder, M; Deb, M, 2010, Impact of Climate Change on Design of Water Distribution System, International Journal of Watershed Management, 2010(i), 1-25. eISSN: 1387-5592
 18. Majumder, M; Barman, R.N; Deb, M; Roy, P.K. and Asis Mazumdar, 2010, Role of Climate Change in Watershed Management: A Discussion, International Journal of Integrated Resource Management, 2010(i), 1-22.
 19. Majumder, M; Barman, R.N. and Deb, M, 2010, Role of Evapotranspiration in Dam Break Analysis, International Journal of Water Engineering, 2010(1), 1-7. eISSN: 1985-0909
 20. "A study for estimating the effect of hydraulic parameters on bacteriological removal efficiency of HRF in combination with SSF", Journal of Public Health Engineers, (India), Vol: 2008-09 No: 1 p: 10-15, 2008, ISSN-0970-3195.
 21. "Management Plan of an Alpine Wetland: Mirik lake, A Case Study" Journal of the River Research Institute, West Bengal, Vol: 28 No: 2007-08, p: 13-21, 2008, ISSN: 0970-9258.

19.0 SCHOOL OF MANAGEMENT

19.1 Introduction:

Looking at the economic potential of the North-Eastern states, a management school was a logical extension of National Institute of Technology, Agartala. School of Management Studies has started operations from July 2012.

The objective of the School of Management is to develop management professionals, skilled with analytical and administrative ability. The School also puts effort to enrich them with adequate values of the humanities and societal care that would help them to exercise the social responsibility more effectively.



19.2 Academic programme:

Currently, the School of Management has started two years (four semester) full time MBA programme. This Programme aims at providing in-depth understanding of 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 week summer internship programme for students, after completion of first year course to develop business acumen.

19.3 Research and consultancy:

Research publications:

Total number of papers published in refereed international Journals : 02

In refereed international Journals:

1. Chakraborty, K., and Dutta, A., Sengupta, "Efficiency and Productivity of Indian Life Insurance Industry", *Asia Pacific Journal of Risk and Insurance*, ISSN (Online) 2153-3792, January 2013 ,Issue-1, Vol:7, PP- 1-23.
2. Dutta, A., "Impact of Privatization on Productivity – A Non Parametric Analysis of Indian Insurance Sector" *Global Business Review*, January 2013, Issue-2, Vol: 14, pp-297-314.

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 new sections namely, digital library, periodical section for printed journals, foreign book collection section, reprography section. 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:

<i>Item</i>	<i>2011-2012</i>	<i>2012-2013</i>	<i>Remarks</i>
A. Collections:			
Books	73719	78879	Physical book of 2011-12 is 57805 and 2012-13 is 62965. As because 15914 nos of books fall under damaged, written off, missing, Accession dropped, torned etc. categories though officially may not be declared.
Ph. D. Theses	04	04	0 No's added in 2012-13
Pamphlets and Reports	Nil	Nil	
Microfilms / fiche	Nil	Nil	
Book Bank (General)	375	5160	5160 No's added in 2012-13
Book Bank (Weaker Section)	402	Nil	0 No's added in 2012-13
Current Periodicals by Subscription	16	8	
Current Periodicals by Exchange/ Gift	197	246	
Back volumes of Periodicals	Nil	3	Online archive of T&F science & technology, AIP select online with extended back file and Springer journals archives
Patents & Specifications	Nil	Nil	
Faculty Publications	Not received	2	
German Collection	Nil	Nil	
C.D	612	612	0 No's added in 2012-13
Video Cassettes	Nil	Nil	
Total	75325	79751	
B. Membership:			
Staff	09	09	9 Nos added in 2012-13
Faculty	32	16	16 Nos added in 2012-13
Students	777	1047	1047 Nos added in 2012-13

Alumni Members	Nil	Nil	
Corporate Members	Nil	Nil	
Industrial Associate Members	Nil	Nil	
Special Members	Nil	Nil	
Project Co-ordinators	Nil	Nil	
Total	818	1072	1072 Nos added in 2012-13
C. Services : Circulation			
Number of Readers visited	42805	32316	
Number of Books/Journals issued	18763	19772	
Number of Books issued through Book Bank (General)	15949	15796	
Number of Books issued Book Bank (Weaker Section)	2814	3976	
Consultation cards issued to users	Nil	Nil	
Overdue & other charges collected	375	Nil	
Xerox charges collection	Nil	1518	Period from 07/12/12 to 30/04/13
D. Reservation of Books:			
Registered	790	1547	
Fulfilled	Nil	Nil	
E. Loans			
Department Loan (Under issue)	58	64	
Permanent Loan issued	Nil	Nil	
F. Inter Library Loans:			
Borrowed from other Libraries	Nil	Nil	
Loaned to other Libraries	Nil	Nil	
G. Literature Search :			
CD-ROM search by users	3	1	
H. Reprint Service:			
Reprints received from other Institutions	Nil	1	From ISRO
Reprint supplied to other institutions	Nil	Nil	
I. Reprography Service:			
Number of Xerox	Nil	2024	

copies supplied			
Barcode-ID cards Generated	Nil	Nil	
J. Binding:			
Number of Books and journals bound (internal)	Nil	Nil	
Number of Miscellaneous publication bound (internal)	Nil	Nil	
Cutting/ Trimming (sheets)	Nil	Nil	
K. Expenditure on :			
Books Printed	2982385	8150912	
Printed Journals	11532	13635	
E-books	1254424	25860259	In addition to this, purchase orders have been issued for Scopus \$19585.91, Science Direct 5 subject collection \$96893.21, Elsevier ebooks \$155541.75 to Allied publishers and willey online journals 2013 of \$130730.70 to Willey; but invoices/bills yet not available in the library. (TMH ebook, Mcgrawhill ebooks, Elsevier e-books and Pearson ebooks)
E-journals	7		
	1247163	27515880	
	1		
L. New Journals Added	1 (Access Engg.)	4 new subscriptions	
M. Any other material, if any:		1 (ithenticat e)	The anti plagiarism web tool

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 the 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 have been started in Aug'12. And during this period NIT Agartala has subscribed 62036 e-books and 14084 e-journals and 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 the NITA library in July' 12. This technology includes self check-in and a self check-out system which 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 the library can be fully computerised.

20.5 Future Plan:

- i. Fully computerisation 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.

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	92
Gomati Hostel	128
Gargi (Girls Hostel)	463

21.2 Medical Facilities:

A well equipped Medical Unit with two Medical Officers, Pharmacists 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 Ambulance 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 26th January and of 15th August; tree plantations of 15th August, a rally on 20th 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.

2012-13:

Athletics and Carrom team of NIT Agartala participated in the Inter NIT meet held at NIT Surathkal from 9th March to 11th March 2012.

The Football team of NIT Agartala played an exhibition football match with the Agartala Government Medical College, Agartala on 31st July, 2012.

The Volleyball team of NIT Agartala participated in the East Zone Inter University Volleyball tournament (Men's) organized by the Tripura University from 15th November, 2012.

In January, 2013, Annual Sports Week was organized. The sports meet held between 23rd January and 26th January, 2012. Students, both boys and girls, took part in athletics, badminton, basketball, cricket, football, table tennis, volleyball and kabadi. Events were also organized for faculties, staff and for their family also.

A 40 member contingent from NIT Agartala took part in the Inter NIT meet at NIT Trichy from 2nd February to 5th February, 2013. Competitions were held in basketball (men's & women's), chess (men's & women's), cricket and table tennis.

This year Inter Departmental Sports Competition will be organized. Football tournament has already been started. The rest of 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 and this year it was held in 11-13th November 2011. Mega events like music, dance, instrument playing, drama competition and inter-college dance, band competition were held during the festival.

In the year 2012 Moksha was organized from 8th November to 11th November, 2012. Anjika Marshal Art Dance Group, Kolkata and Parikrama Band, New Delhi, entertained the campusites with their scintillating performance.

Moksha' 2013 will be organized from 7th November to 10th November, 2013.

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 13th to 15th March 2012.

21.9 Other Activities:

The students of NITA 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 the UG & PG students. Besides this, the cell arranges for internships, industrial training and invited talks from the 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 who have been placed during the period under report are given below as against those registered during 2012-2013.

Campus Recruitment

Branch	Name of the company/ industry	Bachelors Degree level	Masters Degree level	Ph. D.	Total
EE	ABB	02	00	00	02
CSE, ECE	Samsung Research India	08	00	00	08
EE, CSE, ECE, EIE	Aricent Technologies	14	00	00	14
All Branch	Capgemini	22	02	00	24
ME	Maruti Suzuki	04	00	00	04
CSE	Samsung Engineering Lab	01	00	00	01
CSE, ECE	Rancore	05	00	00	05
ME	Mahindra & Mahindra Ltd.	02	00	00	02
ME	L&T	02	00	00	02
CE, ME, EE	Sankalp Semiconductor	02	00	00	02
CE	ITD Cementation	02	00	00	02
CSE	Polaris	06	00	00	06
CSE, MCA	Intecons Software Lab	00	01	00	01
CSE	Drishti Soft	01	00	00	01
EE, EIE	MECON	01	00	00	04
ME, EE, EIE	IOCL	10	00	00	10
EE	Power Grid	00	03	00	03
ME, PE, EIE	Hindustan Motors	04	00	00	04
EE, ME	Denso India Pvt. Ltd.	09	00	00	09
ME, CHE, EE	Vedanta Resources	13	00	00	13
CHE	Sharp Corp	02	00	00	02
CSE	SISO	02	00	00	02
EE, ME, CHE,	KRIBHCO	03	00	00	03
CE	ABCI Infra	05	00	00	05
M. Tech All Br.	Royal Group of Institutions	00	07	02	09
CSE, MCA, ECE	Techno Soft	03	00	00	03
CE, ME	Jindal Steel & Power Ltd.	05	00	00	05
B.TECH All	Indian Army (3 rd Students for SSB interviews.)	17	00	00	17

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 / scholarship/ 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
B. Tech. students						
1	S C Stipend	Hosteller	740/-	2.50 Lac	147	10 month
		Days' Scholar	330/-			
2	S T Stipend	Hosteller	740/-	2.50 Lac	169	10 month
		Days' Scholar	330/-			
3	OBC Stipend	Hosteller	750/-	1.00 Lac	98	10 month
		Days' Scholar	350/-			

23.0 CAMPUS AMENITIES AND INFRASTRUCTURE DEVELOPMENT INITIATIVES

23.1 Introduction:

The Institute has gone through a rapid growth in its Infrastructural 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 took 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.

<i>Sl. No.</i>	<i>Name of the Works</i>	<i>Rupees in Lakhs</i>
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.

<i>Sl. No.</i>	<i>Name of the Works</i>	<i>Rupees in Lakhs</i>
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

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 have also been completed and is presently occupied by the Director. 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 18 Nos. double bed living rooms. There is also a Transit House in 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 suites and five VVIP Suits has been constructed.

23.5 Bank:

Three banks are operating in the NIT Agartala campus i.e (1) State Bank of India, (2) Canara Bank and (3) Tripura Gramin Bank.

23.6 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	CPRI	Development of Nano-structured material composition for next generation solar cells	Dr. Mitali Saha	25.00
2	DBT	Design of efficient method for the synthesis of RNA nucleobases.	Dr. Subrata Das	47.57
3	DST	Nitroso-Diels-Alder (NDA) reaction for the synthesis of some Heterocyclic compounds.	Dr. Subrata Das	26

24.3 Consultancy Programmes:

The Institute is actively engaged in performing various consultancies and testing works. Department of Civil Engineering has been performing various testing related to the PMGSY project associated with NBCE, CPWD and BRO. Institute has also earned more than 12 lac. rupees from different testing activities in the last financial year.

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	Patent	Status	Application No	Date of Filing	Title of the patent	Inventors
1	Indian	Filled	1170/KOL /2011	24/08/ 2012	Process for electro mechanically controlled timed manifold hydrogen induction system four stroke single cylinder diesel engine and the apparatus using the process.	Prof. (Dr). Probir Kumar Bose, Rahul Banerjee
2	Indian	Filled	Ref: 1532/ASA/ PP – 1161/NIT A	30/11/ 2012	A Polishing system for Polishing of Surface of subjects such as the Incense Sticks	Subhendu Debbarma, John Debbarma & Arindam Majumder

25.0 CENTRAL WORKSHOP FACILITIES

25.1 Introduction:

Since inception of this college during the year 1965, the Fitting and Tool room shops exist with sufficient number of Machine Tools, Hands Tools and Power Tools etc. and presently well equipped to perform its activities very smoothly. From 1st April 2006, this institute was converted into National Institute of Technology, Agartala and day by day it is upgrading depending on the advancement of technology and increase of student intake. Apart from that, continuous effort is being devoted for its up gradation.

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.

25.2 Central Workshop Facilities:

In this financial Year i.e 2012-13, Presently Workshop of our Institute is having the following shops and their activities during the period 2011-2012 are given below: (Under the direct supervision of the Workshop Superintendent)

Sl. No.	Shops	Facilities
1.	Pattern Shop	<p>The Pattern shop is equipped with the following machineries and different types of cutters (Chisel) for conducting regular practical classes for B. Tech. 2nd semester students (all branches). B. Tech. students of Production and Mechanical branches, M. Tech. and Ph D students of Production and Mechanical, Civil engineering branches do their project work etc.</p> <ol style="list-style-type: none"> 1. Wood working lathe – 4 Nos. 2. Cutter in different sizes – 10 Nos. 3. Circular cutting Saw 4. Wood planer <p>The above items are in working condition and engaged in making different types of patterns for casting shop.</p>
2.	Machine Shop	<p>Machine shops imparts practical classes to all the students of the Second semester of all engineering discipline and the third, fourth, fifth, sixth semester in the Mechanical & Production engineering discipline.</p>

		<p>B. Tech. third year students are given projects involving work in the machine shops and the final year students undergo specialized training in the manufacturing process. The post graduate students are also utilizing the facilities of machine shop through the various types of machine tools like all geared lathe, milling machine, planer machine, shaper machine, tool and cutter grinder etc. for carrying out precision works in connection with their project work.</p> <p>Facilities available:</p> <ol style="list-style-type: none"> 1. All geared Lathe (small and medium type). 2. Heavy duty Shaper. 3. Pillar drilling. 4. Radial drilling. 5. Capstan Lathe. 6. Hydraulic power Saw. 7. Horizontal milling Machine. 8. Universal Swivel head Milling Machine. 9. Pedestal Grinder. 10. Hand grinder. 11. Band Saw etc.
3.	Fitting & Tool Room Shop	The facilities existing at the Fitting and Tool Room shop are very good or rather say excellent condition for classes and other maintenance and proto type work.
4.	Welding Shop	<p>The facilities are available in Welding shop are :</p> <ol style="list-style-type: none"> 1. Arc Welding – It is used for student practical classes, project works and institute maintenance purpose. 2. Multi Function Spot welding – it is also used for student practical classes especially for 3rd Semester to 7th semester. 3. Gas welding – There are four sets of gas welding. It is used for various projects as well as class works. 4. Submerged welding – This machine is newly introduced in the welding shop for conducting project/research work especially for M. Tech. / PhD scholars. <p>New Inclusions TIG welding machine MIG welding Machine Plasma Arc welding Machine Plasma Cutter and Gouging Machine Induction heating System</p> <p>All the existing tools and machineries of the shop are sufficient enough for conducting smooth running of all the activities related to fabrication works as and when required by the institute.</p>
5.	Sheet Metal Shop	<p>The Sheet Metal shop is equipped with the following machine and dies for conducting practical classes for B. Tech and project works especially for M. Tech/ PhD scholars. The following are the list of the machinery and equipment</p> <ol style="list-style-type: none"> 1. Sheet Bending Machine -- it is used for bending different sizes of sheet related to practical and project works.

		<p>2. Pipe bending machine – it is used for bending MS pipes in different angles and shapes for making different project work.</p> <p>3. Scissor – it is used for cutting different thickness of sheet by pressing the blade with the help of a lever.</p> <p>4. Vacuum Pumps -This shop is also engaged in fabrication work maintenance soldering work as and when required by the institute.</p>
6.	Smithy Shop	<p>The Smithy shop is equipped with sufficient numbers of following hand tools, machine tools etc., for conducting practical classes of 1st semester and 2nd semester of all branches.</p> <p>1. Electric Hearth– 2 Nos. 2. Manual Hearth– 1 No. 3. Swage Block – 2 Nos. 4. Anvil – 10 Nos.</p> <p>The shop is engaged for specially M. Tech / PhD project works and also engaged in making different types of works as and when required by the institute.</p>
7.	Foundry/ Casting Shop	<p>The Foundry/Casting shop is equipped with the following machineries for conducting practical classes of 3rd semester to 8th semester of Mechanical and Production Department.</p> <p>1) Pit Furnace – 1 No. 2) Tilting Furnace – 1 No. 3) Cop & Drag boxes – 5 pairs 4) And different types of tools for making moulds for casting.</p> <p>All the above items are in working condition and the shop is also engaged for M. Tech. / PhD project works.</p>
8.	Carpentry Shop	<p>The Carpentry shop is equipped with the following machine for conducting practical class of 1st Semester of all Branches and 2nd Semester of all branches.</p> <p>1. Circular Saw – 2 Nos. 2. Bend Saw – 1 No. 3. Wood working lathe – 4 Nos. 4. Wood planner – 1 no. 5. Scroll saw – 1 no.</p> <p>All the above mentioned machines are in working condition and also used for repairing works project works, especially for M. Tech/ PhD scholars.</p> <p>The shop is also engaged in making different types of works as and when required by the institute.</p>

26.0 FINANCE & ACCOUNTS

26.1 Analysis of Plan and Non-Plan Fund:

(Rs. in lakh)

<i>Head</i>	<i>2011-2012</i>	<i>2012-2013</i>
1. Non-Plan		
Income		
Grant from MHRD	2100.00	2200.00
Total	2100.00	2200.00
Expenditure		
Recurring	2800.10	3820.91
Total	2800.10	3820.91
2. Plan		
Grant from MHRD	12045.85	14450.00
Corpus Fund Transfers		
Total	12045.85	14450.00
Expenditure		
Non-recurring	13092.84	14539.26
Total.	13092.84	14539.26

26.1.1 Plan Fund:

(Rs. in Lakhs)

Plan

Opening Balance	:	(-) 531.58
Grant Sanctioned during 2012-2013	:	14450.00
Funds from other sources	:	205.11
Total available	:	14123.53
Capital Expenses during 2012-2013	:	
Building & Construction	:	11324.14
Furniture & Fixtures	:	251.89
Equipments	:	2960.86
Others Exp.	:	2.37
Total Utilized	:	14539.26
Unutilized Balance	:	(-) 415.73

26.1.2 Non-Plan Fund:

		(Rs. in Lakhs)
<u>Non-Plan</u>		
Opening Balance	:	455.57
Grant Sanctioned during 2012-2013	:	2200.00
Funds from other sources	:	2321.85
Total available	:	4976.92
Expenditure during 2012-2013:		
Pay & Allowances	:	1629.49
Retirement Benefits	:	75.00
Library Services	:	622.27
Health Services	:	4.17
Students Scholarship	:	139.05
Administrative Expenses	:	932.95
Student support Activities	:	26.00
House Keeping & Estate Maintenance	:	246.93
Water/ Electricity Charges	:	145.05
Total Utilized	:	3820.91

26.2 Establishment Expenditure:

<i>Sl. No.</i>	<i>Head</i>	<i>Amount (in lakhs)</i>
1	Pay & Allowances	1629.49
2	Retirement Benefits	75.00

Audit Report & Annual Accounts 2012 -2013

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 2013.

We have audited the attached Balance Sheet of NIT, Agartala as at 31 March 2013, the Income and Expenditure Account and Receipts and Payment Account for the year ended 31 March 2013, 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 explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.

ii. The Balance Sheet, Income and Expenditure Account 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 Current liabilities and Provision:- Rs.71,50,79,772

A.1.1 The above does not include Rs.15,67,926/- payable against the arrear wages bill for Security and Sweeping Services for the financial year 2012-13.

Non provision of these liabilities resulted in understatement of Current Liabilities and also understatement of Net deficit for the year to the same extent.

A.1.2 The above does not include outstanding Electricity Bill of Rs. 13,13,428/- for the month of March 2013 resulting into understatement of Current Liabilities and also understatement of Net deficit to that extent.

A.2 Fixed Assets:- Rs.3,52,18,79,378/-

A.2.1 Work-in-progress

The fixed assets included Rs.5,09,36,405/- which were capitalized in earlier years though these items were either in progress or completion report was yet to be submitted by the contractors. This has resulted in overstatement of fixed assets and understatement of capital work-in-progress by Rs.5,09,36,405/-.

This has also resulted into overstatement of depreciation and net accumulated deficit and understatement of Fixed Assets by Rs. 1,59,40,665 /-.

A.3 Current Assets, Loans, Advances etc. Rs.1,19,25,43,813/-

A.3.1 Cash at bank (Plan Fund/Non Plan Fund) –Rs. 16,87,511/-

The above includes 6(six) stale cheques aggregating to an amount of Rs. 16,87,511/- issued on different dates during the period from 2010-11 to 2012-13, but not presented before the bank for realization. Non accounting of reversal of cheques has resulted in understatement of Current Liabilities and also Bank Balances by Rs. 16,87,511/-.

A.4 Grants in aid

A.4.1. Out of the grants in aid of Rs.185.35 crore received during the year (including unutilized grants of previous year), the Institute could utilize a sum of Rs.183.60 crore leaving a balance of Rs. 1.75 crore as unutilized grants as on 31st March 2013.

(v) Subject to our observation in the preceding paragraph, we report that the Balance Sheet, Income and Expenditure Account and Receipts and Payments Account dealt with this report are in agreement with books and accounts.

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

i. In so far as it relates to the Balance Sheet of the state of affairs of the NIT, Agartala as at 31 March 2013.

ii. In so far as it relates to Income and Expenditure Account of the deficit for the year ended on that date.


Accountant General (Audit)

Annexure

1. **Adequacy of Internal Audit System:-** The Institute does not have an effective Internal Audit System. No Internal Audit was conducted during the year 2012-13.
2. **Inadequate Control System:-** Daily closure of Cash Book and regular verification of Cash in Chest/Bank, was not done in the Institution. Advances given to employees for different works were not being adjusted in time.
3. **Physical verification of fixed assets and inventory:-** Annual verification of Fixed Assets was not done during 2012-2013.
4. **Payment of Statutory dues:-** Records relating to recovery and payment of statutory dues were not properly maintained by the NIT, Agartala to ensure that no statutory dues were outstanding for more than six months at the close of the financial year.

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
BALANCE SHEET AS AT 31.03.2013

CORPUS / CAPITAL FUND AND LIABILITIES	Schedule	Current year 2012-2013	Amount Rs Previous year 2011-2012
CORPUS / CAPITAL FUND	1	3775438441	3061958868
RESERVES AND SURPLUS	2	0	0
EARMARKED / ENDOWMENT FUNDS	3	1494122059	768419933
SECURED LOANS AND BORROWINGS	4	0	0
UNSECURED LOANS AND BORROWINGS	5	0	0
DEFERRED CREDIT LIABILITIES	6	0	0
CURRENT LIABILITIES & PROVISION	7	715079772	461704522
GOVT FUND-DONOR PROJECT		112637000	112637000
OTHERS INCOME- PLAN FUND		115880	115880
GRANT FROM MMEICT		500000	0
TOTAL		6097893152	4404836203
ASSETS			
FIXED ASSETS	8	3521879378	2829520764
INVESTMENTS - FROM EARMARKED / ENDOWMENT FUNDS	9	0	0
INVESTMENTS OTHERS	10	0	0
CURRENT ASSETS, LOANS, ADVANCES ETC	11	1192543813	759445478
LOANS & ADVANCES-PLAN FUND	3(ii)	1383469961	815869961
TOTAL		6097893152	4404836203
SIGNIFICANT ACCOUNTING POLICIES	24		
CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	25		

For

M/S RATAN KUMAR DAS & CO
 (Chartered Accountants)



(R. K. Das)
 Chartered Accountant

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA

INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013

Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012
INCOME			
1. Income from Sales / Services-	12	0	0
2. Grants / Subsidies from AICTE (Govt. of India) Non Plan Fund	13	220000000	210000000
Plan Fund- Revenue Purpose	3	237196	371718
3. Fees / Subscriptions	14	129089919	93685014
4. Interest Earned	17	28401885	20340340
TOTAL (A)		377729000	324397072
EXPENDITURE			
Establishment Expenses	20	162949273	126188285
Other Administrative Expenses	21	83051769	47949443
Expenses of Plan Fund	3(u)	237196	371718
Depreciation	8	115242862	88200855
Grant to KV, NIT Agartala		7639005	5923237
Contribution to: Retirement Benefit Fund		7500000	5300000
Inst. Dev. Fund		6690000	7150000
TOTAL (B)		383310105	281083538
Balance being Excess of Income over Expenditure (A - B)		(5681105)	43313634
transferred to Capital Fund	24		
Significant Accounting policies	25		
Contingent liabilities and notes on Accounts			

For

M/S RATAN KUMAR DAS & CO
(Chartered Accountants)

(R. K. Das)

Chartered Accountant



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY AGARTALA

RECEIPTS AND PAYMENTS FOR THE PERIOD / YEAR ENDED ON 31.03.2013

RECEIPTS	(Amount - Rs.) Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012	PAYMENTS	(Amount - Rs.) Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012
I) Opening Balance: (In Current Account/Non-Plan) Bank (SBI, NIT Agt Br) Bank (Canara Bank Agt Br) Cash	192129615 448935 3492306	105458831 358247 434069	II) EXPENSES: a) Establishment Expenses (corresponding to schedule 20) b) Administrative Expenses (corresponding to schedule 21)	157791026 81751502	115147662 43048907
Opening Balance: (Plan) Bank SBI, NITA Br. Bank (Canara Bank Agt Br) Cash	91290140 18780 67780	89251754 18073 82308	III) Expenditure on Fixed Assets & Capital Work-in-progress: Fixed Assets: Plant Non-Plan	719060678 88540796	159847345 55055573
II) GRANTS RECEIPTS: From MHRD (Govt. Of India)			II) Other Payments: a) Stipend NEC-Stipend	818800 7636894	14458800 2500770
a) Non Plan	2200000000	89352135	Overseas Stipend Post Matric Scholarship-SC & OBC Post Matric Scholarship-ST Post Madhyamik Stipend Post Madhyamik Scholarship-OBC	6876970 4259870 990750 230775	3104160 5143200 0 1051105
III) Interest Received			IV) Advances: a) Plan b) Non-Plan	567600000 5101053	1097926638 633045
a) Plan Fund By Non-Plan Fund	9491687 7344957	9225097 4276815	Payment to S. Creditors Inst Dev Fund Exp. for CCB Retirement Benefit Fund Library Caution Money Grant to KV, NIT Agartala Fund for SC Welfare Dept(Booksh) Exp. For Virtual Class Room	6690000 1740973 7500000 522000 7639005 17183 825123	17119784 1080711 5300000 131500 5923237
(V) Any other received a) Academic Collection By Miscellaneous Receipts c) Library caution money d) CCB Fees e) Security Deposit f) State of Tender Form g) Recruitment Fee(Interview)	127759161 31875 4125000 2094543 194000	97762967 307497 0 1517815 6380 386850 0	LTC Advance to Faculty & Staff Exp for Staff Dev. Fund EMD Realised Exp for Tripura Science Congress Exp. for Rubber Processing Other Payments: Plant Expenditures (corresponding to schedule 3)	2626273 6697 225043 215683 479241	5905227 6697 225043 215683 479241
Other Fund (corresponding to schedule 13A)	18585031	15285095			
Init on Mobilisation Advance Advance Received LTC Advance Received	9689827 0	6475226 1346772			
Fund from Tripura Science Congress Fund for Rubber Processing		145100 162892		237196	

B) PLAN FUND							
(i) DEBIT RECEIPTS:							
From AICTE (Govt. of India)							
a) Plan	1198501000						
b) Grant from DHE(DONER Project)							
c) Fund for Virtual Class Room	829780						
d) Fund from NMEICT	500000						
(ii) Any other received							
a) Miscellaneous Receipts	0						
b) Advance Received							
TOTAL	1886594437						
		1810674664	TOTAL				
V) Closing Balance							
a) In Current Account (Non-Plan)							
Bank-Canara Bank, AOT Br				448955		448955	
Bank-SBI, NITA Br				204201737		192129615	
Cash				510706		3492306	
b) In Current Account (Plan)							
Bank-Canara Bank, AOT Br				19541		18780	
SBI, NITA Br				1288849		91290140	
Cash				67780		67780	
					12976170		91376700
TOTAL	1886594437						1810674664



For
N/S RATAN KUMAR DAS & CO
Chartered Accountants
(R. K. Das)
Chartered Accountant

Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013			
STUDENT WELFARE FUND			
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012
INCOME			
1. Opening Bank Balance(S.B.A/c)		341522	358597
2. Income from Sales / Services-			
3. Fees / Subscriptions		76742	17097
4. Interest Earned		13573	13026
TOTAL		431837	388720
EXPENDITURE			
Bank Charges		84994	47198
Closing Bank Balance (S.B.A/c)	11	346721	341522
TOTAL		431837	388720
NEW PENSION SCHEME-TIER-I FUND			
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012
INCOME			
1. Opening Balance: S.B.A/c		7536	1871
Fixed Deposit		20280151	13211023
2. Income from Sales / Services-			
3. Fees / Subscriptions		0	0
Employee/ Employer's Contribution		8720890	5935422
Employee/ Employer's Contribution- FD		0	0
4. Interest Earned-S.B.A/c		15050	14858
5. Interest Earned-F.D.A/c		1671347	1342128
TOTAL		30694974	20905302
EXPENDITURE			
Bank Charges		0	217615
Fixed Deposit	11	30690998	20280151
Bank Balance (S.B.A/c)	11	3876	7536
TOTAL		30694974	20905302

For
M/S RATAN KUMAR DAS & CO
(Chartered Accountants)

(R. K. Das)
Chartered Accountant



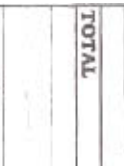
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013				
Particulars	Schedule	RETIREMENT BENEFIT FUND		
		Current year 2012-2013	Previous year 2011-2012	
INCOME				
1. Opening Balance:				
S.B. A/c		344615	5246164	
Fixed Deposit		31276506	11200000	
2. Income from Sales / Services-		0	0	
3. Fees / Subscriptions		14414803	15925521	
4. Fees / Subscriptions-FD		0	0	
5. Interest Earned-S.B. Accounts		273105	298040	
6. Interest Earned-F.D. Accounts		1047664	1076506	
TOTAL		47356693	33746231	
EXPENDITURE				
EXPENDITURE (Pension/Gratuity)		6900742	2125110	
Bank Charges		112	0	
Fixed Deposit	11	33324170	31276506	
Bank Balance (S.B. A/c)	11	8131669	344615	
TOTAL		47356693	33746231	
INSTITUTE DEVELOPMENT FUND				
INCOME				
1. Opening Balance:				
S.B. A/c		301571	5816641	
Fixed Deposit		19968437	13000000	
2. Income from Sales / Services-		0	0	
3. Fees / Subscriptions		14277045	295666	
4. Interest Earned-S.B. Accounts		269278	189264	
5. Interest Earned-F.D. Accounts		1566573	968437	
TOTAL		36382904	20270008	
EXPENDITURE				
Expenditure		2966659	0	
Fixed Deposit	11	18330400	19968437	
Bank Balance (S.B. A/c)	11	15085845	301571	
TOTAL		36382904	20270008	
For				
M/S RATAN KUMAR DAS & CO				
(Chartered Accountants)				
(R. K. Das)				
Chartered Accountant				


Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013				
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012	
INCOME				
1. Opening Balance:				
S.B. A/c		26176	13907	
2. Income from Sales / Services		0	0	
3. Fees / Subscriptions		8577	11597	
4. Interest Earned-S.B. Accounts		1197	672	
TOTAL		35950	26176	
Bank Balance (S.B. A/c)	11	35950	26176	
TOTAL		35950	26176	
PROJECT FUND				
INCOME				
1. Opening Bank Balance (S.B. A/c)		247020	2078975	
1. Income from Sales / Services		0	0	
2. Fees / Subscriptions		5518007	2450341	
3. Fees / Subscriptions-Tr. From College A/c		0	0	
4. Interest Accrued-S.B. Accounts		69993	84518	
TOTAL (A)		5836020	4613834	
EXPENDITURE				
Service Tax		140234	227065	
Refund to Parties		0	0	
Exp. & Distribution to Faculties & Staffs		2269201	1136994	
Bank Charges		3262	2755	
Fixed Deposit	11	0	3000000	
Closing Bank Balance (S.B. A/c)	11	3422323	247020	
TOTAL (B)		5836020	4613834	

For
M/S RATAN KUMAR DAS & CO
(Chartered Accountants)
(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AQARTALA					
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013					
DEPARTMENTAL PROMOTIONAL FUND(CIVIL)					
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012		
INCOME					
1. Opening Balance:					
S.B. A/c		847980		606844	
2. Income from Sales / Services-					
3. Fees / Subscriptions		519449		215125	
4. Interest Earned-S.B.Accounts		41362		26011	
TOTAL		1408791		847980	
Bank Balance (S.B. A/c)	11	1408791		847980	
TOTAL		1408791		847980	
NSS UNIT					
INCOME	Schedule	Current year 2012-2013	Previous year 2011-2012		
1. Opening Balance:					
S.B. A/c		10238		7507	
2. Income from Sales / Services-					
3. Fees / Subscriptions		0		0	
4. Interest Earned-S.B.Accounts		55855		43943	
		1240		288	
TOTAL		67333		51738	
EXPENDITURE					
Bank Charges		59050		41500	
		56		0	
Bank Balance (S.B. A/c)	11	8227		10238	
TOTAL		67333		51738	

For
M/S RATAN KUMAR DAS & CO
(Chartered Accountants)

(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013				
Particulars	Schedule	EMD & SECURITY DEPOSIT		
		Current year 2012-2013	Previous year 2011-2012	
INCOME				
1. Opening Balance:				
S.B. A/c		4120331	11561671	
Fixed Deposit		15000000		
2. Income from Sales / Services:		0	0	
3. Fees / Subscriptions		17401396	27986531	
4. Interest Earned-S.B. Accounts		52399	711982	
5. Interest Earned-F.D. Accounts		597160	0	
TOTAL		37171286	40262184	
EMD & Security Released				
Bank Charges		9522580	21130851	
Fixed Deposit	11	14077	11002	
Bank Balance (S.B. A/c)	11	15000000	15000000	
		12634629	4120331	
TOTAL		37171286	40262184	
INFRASTRUCTURAL DEVELOPMENT FUND				
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012	
INCOME				
1. Opening Balance:				
S.B. A/c		632870	447834	
Fixed Deposit		5000000	5000000	
2. Income from Sales / Services:		0	0	
3. Fees / Subscriptions		0	0	
4. Interest Earned-S.B. Accounts		0	185036	
TOTAL		5632870	5632870	
Accrued Interest-F.D.		0	0	
Fixed Deposit	11	5000000	5000000	
Bank Balance (S.B. A/c)	11	632870	632870	
TOTAL		5632870	5632870	



For
UMAR D. M/S RATAN KUMAR DAS & CO
(Chartered Accountants)
(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013			
SPONSORED PROJECT FUND			
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012
INCOME			
1. Opening Balance:			
S.B. A/c		546607	4213604
Fixed Deposit		68130841	27007930
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		52425675	40340400
4. Other Income		0	0
4. Interest Earned-S.B. Accounts		369692	801659
5. Interest Earned- F.D. A/c		5608645	2122911
TOTAL		127081460	74486504
EXPENDITURE			
Bank Charges		20395460	5798073
Fund Tr. To Inf. Dev. Fund		5075	10983
Accrued Interest-F.D. A/c	11	0	0
Fixed Deposit	11	64739837	68130841
Bank Balance (S.B. A/c)	11	41941098	546607
TOTAL		127081460	74486504

For
M/S RATAN KUMAR DAS & CO
(Chartered Accountants)

(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013				
STAFF BENEFIT TRUST (GPF)				
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012	
INCOME				
1. Opening Balance:				
S.B. A/c		382899	45579	
2. Income from Sales / Services:				
3. Fees / Subscriptions		0	0	
4. Interest Earned-S.B. Accounts		5579939	3729800	
		28348	12920	
TOTAL		5991186	3788299	
EXPENDITURE				
Remittance		0	6300	
Bank Charges		5462239	3399100	
Bank Balance (S.B. A/c)	11	126	0	
		528821	382899	
TOTAL		5991186	3788299	
DIRECTOR'S RELIEF FUND				
INCOME				
1. Opening Balance:				
S.B. A/c		366	353	
2. Income from Sales / Services:				
3. Fees / Subscriptions		0	0	
4. Interest Earned-S.B. Accounts		300000	0	
		7318	13	
TOTAL		307684	366	
EXPENDITURE				
Bank Charges		0	0	
Bank Balance (S.B. A/c)	11	325	0	
		307359	366	
TOTAL		307684	366	



(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013			
Particulars	Schedule	SCHOOL OF CONTINUING EDUCATION	
		Current year 2012-2013	Previous year 2011-2012
INCOME			
1. Opening Balance:			
S.B. A/c		20349	9900
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		9000	10000
4. Interest Earned-S.B. Accounts		879	504
TOTAL		30228	20404
Bank Charges		0	55
Bank Balance (S.B. A/c)	11	30228	20349
TOTAL		30228	20404
GUEST HOUSE FUND			
INCOME			
1. Opening Balance:			
S.B. A/c		368990	52100
2. Income from Sales / Services-		0	0
3. Fees / Subscriptions		231850	311850
4. Interest Earned-S.B. Accounts		17887	5040
TOTAL		618727	368990
EXPENDITURE			
Bank Charges		0	0
Bank Balance (S.B. A/c)	11	618727	368990
TOTAL		618727	368990



For
M/S RATAN KUMAR DAS & CO
(Chartered Accountants)

(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013				
Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012	
INCOME				AYAM
1. Opening Balance:				
S.B. A/c		518531	80127	
2. Income from Sales / Services-		0	0	
3. Fees / Subscriptions		1587000	659000	
4. Interest Earned-S.B. Accounts		6368	1110	
TOTAL		2111899	740237	
EXPENDITURE				
Bank Charges		1043171	221526	
Bank Balance (S.B. A/c)	11	336	180	
		1068392	518531	
TOTAL		2111899	740237	
INCOME	Particulars	Schedule	Current year 2012-2013	Previous year 2011-2012
1. Opening Balance:				
S.B. A/c			124012	169950
2. Income from Sales / Services-			0	0
3. Fees / Subscriptions			1295000	968000
4. Interest Earned-S.B. Accounts			8007	6994
TOTAL			1427019	1144944
EXPENDITURE				
Bank Charges			1162867	1020739
Bank Balance (S.B. A/c)	11		0	193
			264152	124012
TOTAL			1427019	1144944

For
M/S RATAN KUMAR DAS & CO
Chartered Accountants
(R. K. Das)
Chartered Accountant



Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED ON 31.03.2013				
Particulars	Schedule	Current year 2012-2013	TEQIP FUND Previous year 2011-2012	
INCOME				
1. Opening Balance:				
S.B. A/c		20000000		0
2. Income from Sales / Services-				
3. Fees / Subscriptions		0		0
4. Interest Earned-S.B.Accounts		39300000		20000000
TOTAL		60302945		20000000
EXPENDITURE				
Bank Charges		5940532		0
Bank Balance (S.B. A/c)	11	54361213		0
TOTAL		60302945		20000000

For
M/S RATAN KUMAR DAS & CO
(Chartered Accountants)
(R. K. Das)
Chartered Accountant



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013			
SCHEDULE 1- CORPUS / CAPITAL FUND :			(Amount - Rs.)
	Current Year	Previous Year	
	2012-2013	2011-2012	
Balance as at the beginning of the year	3061958868	1287775021	
Add Contributions towards Earmarked/Endowment Fund	719060678	1730870313	
Add (Deduct) balance of Net Income/ Expenditure transferred from the Income and Expenditure Account.	(5581105)	43313534	
BALANCE AS AT THE YEAR - END	3775438441	3061958868	
FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013			
SCHEDULE 2- RESERVE AND SURPLUS:	Current Year	Previous Year	
	2012-2013	2011-2012	
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	-	-	
TOTAL	-	-	



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013

SCHEDULE 3- EARMARKED / ENDOWMENT FUNDS	FUND- WISE BREAK UP		TOTALS
	Current Year 2012-2013	Previous Year 2011-2012	
a) Opening Balance of the Funds			
b) Additions to the Funds:			
i) Donations / Grants From AICTE	(32900310)	0	(32900310)
Fund for Capital Assets (to Balance Sheet)	144762804	3628717417	5073480221
Less: Tr. To Corpus/Capital Fund	719060678	2860297484	3579358162
Net Fund for Capital Assets (to Balance Sheet)	725702126	768419933	1494122059
Fund for Revenue Purpose (to Income & Expenditure A/C)	237196	371718	608914
ii) Income from Investments made on account of funds			
iii) Other additions (specify nature)			
a) Fund from DHE, Govt of Tripura (DONER Project)	0	112637000	112637000
b) Bank Interest (S.B. A/C) (Forming part of Sch. 17)	19181514	23482855	42664369
IV) Others Income	0	115880	115880
V) Advance Received back from Parties	829780	245190069	245190069
VI) Fund for Virtual Class Room	500000	3116153	3945933
VII) Grant from NEICT		0	500000
TOTAL (a+b)	713550306	1163333608	1866883914
c) Utilisation / Expenditure towards objectives of funds			
i) Capital Expenditure			
- Fixed Assets			
Vehicle	325892	1360189	1686081
Electric Installations	0	28455583	28455583
Hostel Building, quarters etc	0	24896321	24896321
Const. of Ladies Toilets	0	115284	115284
Furniture & Fittings	14981193	63521516	78502709
Equipment & Machinery-Grass Cutter	0	40000	40000
Computer & Accessories	31305163	37301019	68606182
Plant & Machinery	0	385000	385000
Generator	0	51000	51000
Machinery & Equipments-Air Conditioner	1070127	3471851	4541978
Equipment & Machinery	74485887	255992183	330478070
EPBX Machine	0	409937	409937
Books & Journals	0	3032073	3032073
Const of Workshop	7111100	9380719	16491819
Const of Boundary Wall	294608	31438514	31733122
Type II & III Quarters	3801095	19133497	22934592
Boundary Wall	0	995600	995600
Admn Building & Class Room	0	18621297	18621297
Auditorium Buildings	4930442	16281407	21211849
Academic, Library Building	11908405	115016975	126925380



Networking(Equipments)	32078835	23949214	56028049
Internal Road	27064065	162054365	189118430
Const of Boys & Girls Hostels	41877443	1203704601	1245582044
Const of Main Gate & Sub Gate	541547	8352958	8894505
Const of Basket Ball Court	0	785976	785976
Const of Watch Tower & Security Barrack	447053	2889598	3336651
Const of Market Complex	3389596	8554373	11943969
Const of School of Management	100022070	214580851	314602921
Const of Sewerage Treatment Plant (STP)	4437629	5152808	9590437
Const of Sports Complex	142497292	1676227	144173519
Const of Central School	0	54917000	54917000
Const of Housing & Guest House	122665704	383549350	506215054
Const of Admin Block & Seminar Hall	91405931	160230198	251636129
Const of Central Library	2419601	0	2419601
TOTAL	719060678	2860297484	3579358162
Less: Tr. to Fixed Assets (Schedule 8)	719060678	2860297484	3579358162
TOTAL (3ii)	0	0	0
Others			
Advance to Parties(Schedule 3A)	567600000	3308969456	3876569456
Less: Adjustment Tr to Fixed Assets	0	2493099495	2493099495
Security Deposit to TSECL	567600000	815869961	1383469961
Temporary Adv to Monajit Das	0	5100	5100
	0	15000	15000
	0	0	0
Stock in Transit:			
Machinery & Equipments	223235907	102262211	325498118
Networking in Transit	7924964	0	7924964
Computer & Accessories	0	9617728	9617728
Furniture & Fittings in Transit	10207671	10976845	21184516
Exp. For Virtual Class Room	825123	1925286	2750409
TOTAL (3iii)	809793665	940672131	1750465796
II) Revenue Expenditure			
-Other Administrative Expenses			
Bank Charges	87196	221718	308914
Internet Connectivity Expenses	0	0	0
NIT Transit House-Delhi	150000	150000	300000
TOTAL(3iii)	237196	371718	608914
GRAND TOTAL (3i+3ii+3iii)	810030861	941043849	1751074710
Un-Spent Grant(Plan Fund)	(964805551)	(329003101)	

NOTE: Rs.2,37,196/- spent for revenue purpose which could not be capitalised. The said amount of Fund has been transferred to Income and Expenditure Account as Plan Fund-Revenue



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF SCHEDULE 3 AS AT 31.03.2013

SCHEDULE 3 A- DETAILS OF ADVANCE TO PARTIES	Current Year	Previous Year	Adjustment	TOTALS
	2012-2013 (1)	2011-2012 (2)	tr to Fixed Assets (3)	(1+2-3)
Advance to:				
R.D. Deptt(Const of Boundary Wall)	0	27111843	0	27111843
B.S.N.L.(Call User Group-CUG)	0	172764	0	172764
R.D. Deptt(Repairing of Administrative Building)	0	1066603	0	1066603
R.D. Deptt(Hostel Building & Others)	0	2306504	0	2306504
P.H.E(iron Removal Plant)	0	1560100	0	1560100
Tripara Housing Board(Academic Building, Library)	0	7640420	0	7640420
TSECL-Dedicative Power Supply	0	40800000	0	40800000
R.D. Deptt(Auditorium)	0	1940052	0	1940052
R.D. Deptt(Boundary Wall & Septic Tank)	0	1344600	0	1344600
R.D. Deptt(Boundary Wall & Type IV)	0	995600	0	995600
R.D. Deptt(Multipurpose Buildings)	0	1018605	0	1018605
R.D. Deptt(Security Barrack)	0	778822	0	778822
R.D. Deptt(Const of Class Room)	0	4393280	0	4393280
NCCL (Const of Hostel)	0	0	0	0
NCCL (Housing & Guest House)	0	0	0	0
NCCL (Admn. Block & Seminar Hall)	0	0	0	0
NCCL (School of Management)	0	0	0	0
BRTF(Internal Road Development)	0	20645965	0	20645965
DWS Deptt (Water Supply)	0	2695300	0	2695300
EPIL(Const of Workshop)	50000000	405000000	0	455000000
PWD Deptt (Electrification)	0	843020	0	843020
TSECL-DGM Jirania	0	1400170	0	1400170
R.D. Deptt(Renovation of Workshop)	0	7088660	0	7088660
S.D. Hardson Co(Equipments)	0	1265505	0	1265505
Eastern Engg Corp(Equipments)	0	18000	0	18000
CPWD(Const of Central School)	132800000	75083000	0	207883000
CPWD(Const of H4B Building)	90000000	0	0	90000000
CPWD(Const of Duplex Building)	34800000	0	0	34800000
Bridge & Roof Co.(Const of Central Computer Centre & CSE I)	260000000	210000000	0	470000000
Cadence Design System, Ireland	0	701148	0	701148
TOTAL	567600000	815869961	0	1383469961



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013			
SCHEDULE 4 - SECURED LOANS AND BORROWINGS:		Current Year 2012-2013	Previous Year 2011-2012
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)			
TOTAL			
Note: Amount due within one year.			



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013

SCHEDULE 5- UNSECURED LOANS AND BORROWINGS		(Amount - Rs.)	
	Current Year 2012-2013	Previous Year 2011-2012	
1) Central Govt.	0		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
TOTAL	0		0

Note: Amount due within one year.

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013

SCHEDULE 6- DEFERRED CREDIT LIABILITIES:		(Amount - Rs.)	
	Current Year 2012-2013	Previous Year 2011-2012	
a) Acceptances secured by hypothecation of capital equipment and other Assets.			0
b) Others			
TOTAL			

Note: Amount due within one year.



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013			
SCHEDULE 7- CURRENT LIABILITIES AND PROVISIONS	Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012	
ACCURRENT LIABILITIES			
1) Acceptances	0		
2) Sundry Creditors			
For Plan Fund	280279954	124262009	
For Non-Plan Fund	84924836	109523595	
Outstanding Liabilities:			
a) Travelling & Conveyance	1210	15768	
b) Telephone Re-Imbursement	16404	11555	
c) Printing & Stationery	0	52640	
d) Scholarship	532840	515772	
e) Allowance & Bonus	0	556783	
f) Salaries & Wages	16495110	10780090	
g) Electricity & Power	0	1214416	
h) Telephone Expenses	0	40894	
i) CPDA	28762	0	
j) Advertisement & Publicity	2614787	525469	
k) Postage	0	3926	
TOTAL (7A)	384893903	247502907	
PROVISION:			
a) Adm. Fees payable to Students	0	1149500	
b) Testing/Earthquake & Water quality etc	0	0	
c) Mess Fees Payable to Hostel	0	0	
d) CCB Fees	881347	527777	
e) Counselling Fees-Payable to Students	100000	100000	
TOTAL (7B)	981347	1777277	
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.			
TOTAL (7C)	0	0	
5) Statutory Liabilities:			
a) Overdue			
b) Others			
Project Fund	3422323	3247020	
New Pension Scheme-Tier-I Fund	30694874	20287687	



Retirement Benefit Fund	40455839	31621121	
Student Welfare Fund	346721	341522	
Staff Development Fund	120379	120379	
Institute Development Fund	33416245	20270008	
EMD & Security Deposit	27634629	19120331	
Infrastructural Development Fund	5632870	5632870	
Sponsored Project Fund	106680925	68677448	
Staff Welfare Fund	35950	26176	
Departmental Promotional Fund(Civil)	1408791	847980	
NSS Unit	8227	10238	
Staff Benefit Trust	528821	382899	
Director's Relief Fund	307359	366	
School of Continuing Education	30228	20349	
Guest House Fund	618727	368990	
Aayam	1068392	518531	
Moksha	264152	124012	
TEQIP Fund	54361213	20000000	
NSS Unit Prog.	13182	13182	
Renewable Energy Club(TREDA)	24	24	
Stipend Payable to Students(Forming Part of Schedule 13A)	477490	2706518	
Fund from ST Welfare Deptt(Booke)	817500	817500	
Fund from SC Welfare Deptt(Booke)	27817	45000	
Fund from NIMCET(Students Welfare Fund)	0	0	
Fund for Rubber Processing	156250	156250	
Fund for Virtual Class Room (Plan Fund)	1195524	1190867	
TOTAL (7D)	309724452	196547268	
6) Other current Liabilities			
ii) Library Caution Money			
Opening Balance	10132500	6074000	
Add: This year	4125000	4190000	
	14257500	10264000	
Less: Payment this year	522000	131500	
TOTAL (7E)	13735500	10132500	
i) Loan from DHE(Staff Salaries)	5629954	5629954	
iii) Earnest Money Deposit	114616	114616	
TOTAL (7F)	5744570	5744570	
TOTAL (I)	715079772	461704522	
B. PROVISIONS			
1) For taxation	0	0	
2) Gratuity	0	0	



3) Superannuation / pension	0	0
4) Accumulated Leave Encashment	0	0
5) Trade Warranties / Claims	0	0
6) Others (Specify)	0	0
TOTAL (iii)	0	0
TOTAL (i+ii)	715079772	461704522



FORM OF FINANCIAL STATEMENTS (FOR PROFIT ORGANIZATIONS)											
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA											
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013											
DESCRIPTION	Rate of Depn	Cost/valuation As at beginning of the year	GROSS BLOCK		Cost/valuation at the year-end	As at the beginning of the year	DEPRECIATION		Total up to the year-end	NET BLOCK	
			Additions during the year	Deductions during the year			On additions during the year	On deduction during the year		As at the Current year-end	As at the Previous year-end
PLAN FUND											
LAND											
Freehold		0							0	0	
Leasehold									0	0	
Building	10%	24896321	0		24896321	7859224	1703710		9562904	1533387	17037097
Ladies Toilet	10%	115284	0		115284	43428	7186		50614	64670	71856
Furniture & Fittings	10%	63521516	14981193		78502709	10238724	6012557		16251281	62251428	53282792
Machinery & Equipments	15%	255992183	74485887		330478070	58333553	33009164		91342717	239135353	197658630
Machinery & Equipments (Crass)	15%	40000	0		40000	18494	3226		21720	18280	21506
EPBX Machine	15%	409937	0		409937	144071	39880		183951	225986	265966
Library Books	100%	3032073	0		3032073	3032073	0		3032073	0	0
Machinery & Equipments/Air Con Generator	15%	3471851	1070127		4541978	1064711	361071		1425782	3116196	2407140
Computer & Accessories	60%	37301019	31305163		51000	26375	3694		30069	20931	24625
Plant & Machinery (Tractor)	15%	385000	0		68606182	31861730	11370900		43232630	25373552	5439289
Vehicle	15%	1360189	325892		1686081	199101	27885		226586	158014	185899
ELECTRIC INSTALLATIONS	10%	28455583	0		28455583	4765423	2369016		7134439	21321144	20690160
Type II & III Quarters (Buildings)	10%	19133497	3801095		22934592	3182229	1704413		4886642	18047950	15951268
Boundary Wall	10%	995600	0		995600	236224	79338		312162	683438	759376
Admin Building & Class Room	10%	18621297	0		18621297	4418248	1420308		5838556	12782741	14203049
Auditorium Buildings	10%	0	0		0	0	0		0	0	0
Academic, Library Building	10%	115016975	11908405		126925380	8342098	11321690		19663788	107261592	106674877
Networking (Equipment)	10%	23949214	32078835		56028049	2814644	2166189		4980833	51047216	21134570
Internal Road	10%	0	0		0	0	0		0	0	0
TOTAL (I)		596748539	169956597	0	766705136	137222803	71726853	0	208949666	687785480	489528726
NON-PLAN FUND											
FURNITURE & FIXTURES	10%	328363	0		328363	119424	20894		140318	188045	208939
COMPUTER/PERIPHERALS	60%	1417635	0		1417635	1149066	161141		1310207	107428	268569
ELECTRIC INSTALLATIONS	10%	23504570	13637818		37228388	2304873	2512338		4817211	32411177	21285697
EPBX Machine	15%	421438	0		421438	232735	28305		261040	160398	188703
Water Purifier	15%	126406	0		126406	43171	14429		57600	68806	83235
Fax Machine	15%	9000	0		9000	4654	652		5306	3694	4346
INTERNET / V.SET	5%	123291	0		123291	37432	4293		41725	81666	85859
Hostel building, quarters etc	10%	19500000	0		19500000	1887498	1761250		3648748	15851252	17612502
Sports Goods & Equipments	15%	955933	71711		1027644	293036	108453		401489	628155	662897
Machinery & Equipments	15%	5058013	2142652		7200665	878197	875478		1753675	5446790	417994
Office Equipments	10%	532727	159705		692432	63290	51512		114802	577630	492412
Musical Instruments	10%	125271	0		125271	30829	9444		40273	84598	84598
Medical Equipments	15%	38749	0		38749	14412	3651		18063	20256	20256
Podium	10%	34000	0		34000	6467	2753		9220	24780	24780



Library Books	100%	6130415	763499		6893914	3280570	3199172		6479742	414172	2849845
Books & Journals	100%	372453290	61463206		98708456	32811123	31233581		64044704	34663752	4434127
Type IV Quarters (Building)	10%	17342684	10051202		27393886	1064752	1904190		2968942	24424944	16277532
Networking (Equipment)	10%	2242630	0		2242630	148074	209465		357529	1865091	2094546
Auditorium Building	10%	14838699	0		14838699	875570	1396313		2271883	12566810	13963129
Boundary wall	10%	0	251005		251005	0	18705		18705	3232300	0
TOTAL (ii)		130061064	88540798	0	218601862	45246173	43616009	0	86761182	129840680	84815891
TOTAL (i + ii)		726809603	258497395	0	985306998	182467976	115242862	0	297710838	687596160	544341627
CAPITAL WORK IN PROGRESS											
PLAN FUND											
Const. of Workshop		9380719	7111100		16491819	0	0		0	16491819	9280719
Const. of Boundary Wall		31438514	294608		31733122	0	0		0	31733122	31438514
Const. of Boys & Girls Hostels		1203704601	4187443		1245582044	0	0		0	1245582044	1203704601
Const. of Main Gate & Sub Gate		8352958	541547		8894505	0	0		0	8894505	8352958
Const. of Basketball Court		785976	0		785976	0	0		0	785976	785976
Const. of Watch Tower & Security Barrack		2889598	447053		3336651	0	0		0	3336651	2889598
Const. of Market Complex		8554373	3389596		11943969	0	0		0	11943969	8554373
Const. of School of Management		214580851	100022070		314602921	0	0		0	314602921	214580851
Const. of Internal Road		162054365	27064065		189118430	0	0		0	189118430	162054365
Const. of Auditorium Buildings		16281407	4930442		21211849	0	0		0	21211849	16281407
Const. of Sewerage Treatment Plant (STP)		5152808	4437629		9590437	0	0		0	9590437	5152808
Const. of Sports Complex		1676227	142497292		144173519	0	0		0	144173519	1676227
Const. of Central School		54917000	0		54917000	0	0		0	54917000	54917000
Const. of Housing & Guest House		383549350	122665704		506215054	0	0		0	506215054	383549350
Const. of Admin Block & Seminar Hall		160230198	91405931		251636129	0	0		0	251636129	160230198
Const. of Central Library		0	2419601		2419601	0	0		0	2419601	0
TOTAL (i)		2263548945	549104081	0	2812653026	0	0	0	0	2812653026	2263548945
NON-PLAN FUND											
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
TOTAL (ii)		21630192	0	0	21630192	0	0	0	0	21630192	21630192
TOTAL (i + ii)		2285179137	549104081	0	2834283218	0	0	0	0	2834283218	2285179137
GRAND TOTAL		3011988740	807601476	0	3819590216	182467976	115242862	0	297710838	3521879378	2829520764

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



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013

SCHEDULE 9- INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS:	Current Year	Previous Year
	2012-2013	2011-2012
1) In Govt securities	-	-
2) Other approved Securities	-	-
3) Shares	-	-
4) Deventures & Bonds	-	-
5) Subsidiaries & Joint Ventures	-	-
6) Others (to be specified)	-	-
TOTAL:	-	-

FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013

SCHEDULE 10- INVESTMENTS - OTHERS	Current Year	Previous Year
	2012-2013	2011-2012
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	0	0
4) Deventures & Bonds	0	0
5) Subsidiaries & Joint Ventures	0	0
6) Others (to be specified)	0	0
TOTAL:	0	0



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)				
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA				
SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2013				
SCHEDULE 11 CURRENT ASSETS, LOAN ADVANCES ETC.	Current Year 2012-2013	Previous Year 2011-2012		
Current Assets:				
1) Inventories:				
a) Stores and Spares				
Stock in Transit				
NON-PLAN FUND				
Library Books in Transit	8924143	0		
Computer in Transit	178947	0		
Medicine in Transit	126059	0		
Machinery & Equipments	619140	7691784		
Work-in-Progress	4553930	55499652		
Books & Journal in Transit	67291152	41955008		
Furniture & Fittings in Transit	0	990738		106137182
PLAN FUND				
Machinery & Equipments	258341636	102262211		
Machinery on Networking	7924964	0		
Computer & Accessories in Transit	543742	9617728		
Furniture & Fittings in Transit	12064387	10976845		122856784
b) Loose Tools				
c) Stock in Trade				
Finish Goods				
Work in progress				
Raw materials				
2) Sundry Debtors:				
a) Debts Outstanding for a period exceeding six months				
b) Others				
Security Deposit with TSECL		5100		5100
3) Cash balance in hand(including cheques / Drafts and Imprest				
Closing Cash Balance- Non Plan	510706	3492306		
Closing Cash Balance- Plan	67780	67780		
4) Bank Balances:				
a) With Scheduled Banks				3560086



- On Current Account					
Canara Bank- Non Plan A/c No- 876	448955		448955		
- On Savings Accounts					
SBI, NITA Br.-Non Plan/A/c-30369892838)	204201737		192129615		
SBI, NITA Br.-Plan/A/c-30358199684)	12888849		91290140		
Canara Bank, Agt Br.- Plan (A/c-9007)	19541		18780		
SBI, NITA Br.-N. P. S. Fund/A/c-30471674447)	3876		7536		
SBI, NITA Br.-Project Fund/A/c-30533908751)	3422323		247020		
SBI, NITA Br.-R. B. Fund/A/c-30693303036)	8131669		344615		
SBI, NITA Br.-Student Welfare Fund/A/c-30534089717)	346721		341522		
SBI, NITA Br.-Inst. Dev. Fund/A/c-30534091012)	15085845		301571		
SBI, NITA Br.-EMD & Security Deposit/A/c-30936141729)	12634629		4120331		
TGB, NITA Br.-Inf. Dev Fund/A/c-8026010030064)	632870		632870		
SBI, NITA Br.-SDP Fund/A/c-30773081908)	41941088		546607		
SBI, NITA Br.-Staff Welfare Fund/A/c-30534092027)	35950		26176		
SBI, NITA Br.-DPF/Civil/A/c-30534090278)	1408791		847980		
SBI, NITA Br.-NSS Unit/A/c-30786417404)	8227		10238		
SBI, NITA Br.-Staff Benefit Trust/A/c-31509918149)	528821		382899		
SBI, NITA Br.-Director's Relief Fund/A/c-31536875510)	307359		366		
SBI, NITA Br.-School of Cont. Edu./A/c-30939795485)	30228		20349		
SBI, NITA Br.-Guest House Fund/A/c-31664487420)	618727		368990		
SBI, NITA Br.-Aayam/A/c-31441172525)	1068392		518531		
SBI, NITA Br.-TEQIP Fund/A/c-32067844633)	54361213		20000000		
SBI, NITA Br.-Moksha/A/c-31623482000)	264152		124012		312729103
- On Deposit Account(Including Margine Money)					
Fixed Deposit with SBI Agt Br.-General A/c	2572324		2341082		
Fixed Deposit with Canara Bank, Agt. Br.-General A/c	19140221		17496049		
Fixed Deposit with SBI Agt Br.-NPS Fund	30690998		20280151		
Fixed Deposit with SBI Agt Br.-RPF Fund	32324170		31276506		
Fixed Deposit with TGB NITA Br.-Inf. Dev Fund	5000000		5000000		
Fixed Deposit with TGB NITA Br.-SDP Fund	64739837		68130841		
Fixed Deposit with SBI Agt Br.-Project Fund	0		3000000		
Fixed Deposit with SBI Agt Br.-EMD & Security Deposit	15000000		15000000		
Fixed Deposit with TGB NITA Br.-Inst. Dev. Fund	18330400		19968437		182493066
b) With Non Sheded banks					
- On Current Account					
- On Deposit Account					



On Savings Accounts				
5) Post office Savings Accounts:				
TOTAL (A)				
c) Other (Specify)				
LOANS, ADVANCES & OTHER ASSETS				
1) LOANS:				
a) Staff				
b) Other entities engaged in activities / objectives similar to that of the Entity				
c) Other (Specify)				
2) Advances and other amounts recoverable in cash or in kind or for value to be received.				
a) On Capital account.				
b) pre payments				
c) Others				
Temporary Advance to Sundry Parties		5725087		624034
LTC Advance				
a) Soma Nag	140000		0	
b) S.C. Saha	81000		0	
c) Mitali Saha	112034			
d) Pritam Saha	43000			
e) Umesh Mishra	112500			
f) P.K. Bose	123800			
g) Jitendra Nath Roy	173000			
h) Jayanta Kr. Rakshit	173000			
i) Uttam Kr. Bera	130000			
j) R.S. Panua	181600			
k) A.K. Chakraborty	173000			
l) R.N. Barman	87000			
m) Ratul Das	125000			
n) Mrinal Kn. Debbarna	108900			
o) Ajoy Kumar Das	97000			
p) Sumanta Chakraborti	98370			
q) Jadu Lal Debnath	23000			
r) Jagadish Bhownik	15800			
s) Madhujit Deb	0		58000	
t) Anuruddha Mandal	22275	2020279	22275	80275



Advance to:					
RD Debt(Repair & Maints)	0			0	
RD Debt(Electrification)	6873076			6873076	
RD Debt(Const of Security Barrack)	1252560			1252560	
RD Debt(Const of Market Complex)	22834212		30959848	22834212	30959848
3) INCOME ACCRUED					
a) On Investment - Others					
i) Interest on Fixed Deposit-General A/c	0			0	
ii) Interest on Fixed Deposit-SDP Fund	0		0	0	0
4) CLAIMS RECEIVABLE					
- Accrued Grant: Non Plan			0		0
- Accrued Grant: Plan			246499000		0
TOTAL		1192543813			759445478



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

SCHEDULE 11A: DETAILS OF FIXED DEPOSIT ACCOUNTS

Sl. No.	Date of Deposit	Certificate / Account No	Amount(₹)	Maturity date	Maturity Value(₹)	Name of Bank
i) General Accounts						
1	06.05.2012	30268531331/30772128735	2572324	07.11.2013	2940442	SBI Agt Br.
2	15.03.2012	234840100086372	5968365	15.03.2014	7166134	Canara Bank, Agt Br
3	09.10.2012	2348401002113	13172856	25.03.2014	14996391	Canara Bank, Agt Br
		TOTAL	21713545		25102967	
ii) Retirement Benefit Fund						
1	02.04.2011	30359168928	1531554	02.04.2014	1956711	SBI, NTA Br.
2	02.08.2012	503	2948154	30.07.2013	3254210	TGB NTA Br.
3	02.08.2012	504	2948154	30.07.2013	3254210	TGB NTA Br.
4	02.08.2012	505	2358522	30.07.2013	2603367	TGB NTA Br.
5	02.08.2012	506	1768893	30.07.2013	1952527	TGB NTA Br.
6	02.08.2012	507	1179262	30.07.2013	1301685	TGB NTA Br.
7	02.08.2012	508	589631	30.07.2013	650842	TGB NTA Br.
8	10.03.2012	81162	2500000	06.09.2012	2500000	SBI, NTA Br.
9	10.03.2012	10779	1500000	06.09.2012	1500000	SBI, NTA Br.
10	10.03.2012	62972	1500000	06.09.2012	1500000	SBI, NTA Br.
11	10.03.2012	66499	1500000	06.09.2012	1500000	SBI, NTA Br.
12	10.03.2012	68306	1500000	06.09.2012	1500000	SBI, NTA Br.
13	10.03.2012	69637	1500000	06.09.2012	1500000	SBI, NTA Br.
14	10.03.2012	71067	1500000	06.09.2012	1500000	SBI, NTA Br.
15	10.03.2012	72550	1500000	06.09.2012	1500000	SBI, NTA Br.
16	10.03.2012	79282	1500000	06.09.2012	1500000	SBI, NTA Br.
17	10.03.2012	80470	1500000	06.09.2012	1500000	SBI, NTA Br.
18	10.03.2012	82467	1500000	06.09.2012	1500000	SBI, NTA Br.
19	10.03.2012	94619	1500000	06.09.2012	1500000	SBI, NTA Br.
		TOTAL	32324170		33973552	
iii) New Pension Scheme Fund-Tier-I						
1	02.04.2011	30359167844	2034416	02.04.2014	2599167	SBI, NTA Br.
2	16.04.2011	30452528964	310191	16.04.2014	396300	SBI, NTA Br.
3	03.09.2012	30477089620	137022	03.09.2013	149194	SBI, NTA Br.
4	17.09.2012	30494319962	584989	17.09.2013	633626	SBI, NTA Br.
5	23.10.2012	30536974539	613885	23.10.2013	665801	SBI, NTA Br.



6	17.11.2012	30572693760	259767	17.11.2013	261850	SBI, NITA Br.
7	27.01.2013	30659251769	242775	27.01.2014	263663	SBI, NITA Br.
8	27.01.2013	30659223516	242775	27.01.2014	263663	SBI, NITA Br.
9	13.02.2013	30679572359	242801	13.02.2014	264019	SBI, NITA Br.
10	26.03.2013	30723233180	241923	26.03.2014	263034	SBI, NITA Br.
11	18.04.2012	30741450409	220015	18.04.2013	237268	SBI, NITA Br.
12	25.05.2012	30772790529	239823	24.05.2013	258629	SBI, NITA Br.
13	11.06.2012	30790483174	245959	11.06.2013	265246	SBI, NITA Br.
14	22.07.201	30833062025	247739	22.07.2013	270025	SBI, NITA Br.
15	26.08.2012	30869020196	248271	26.08.2013	270371	SBI, NITA Br.
16	16.09.2012	30894559896	248276	16.09.2013	268924	SBI, NITA Br.
17	26.10.2012	30935263512	248281	26.10.2013	269290	SBI, NITA Br.
18	12.11.2012	30954910750	246652	12.11.2013	266620	SBI, NITA Br.
19	18.12.2012	30995065723	2401708	18.12.2013	2666718	SBI, NITA Br.
20	27.01.2013	31036380751	250776	27.01.2014	272351	SBI, NITA Br.
21	06.02.2013	31048976850	420078	06.02.2014	456789	SBI, NITA Br.
22	26.03.2013	31110608821	263419	26.03.2014	286406	SBI, NITA Br.
23	28.04.2012	31149019728	257701	28.04.2013	281514	SBI, NITA Br.
24	03.06.2012	31195703339	389644	03.06.2013	425305	SBI, NITA Br.
25	15.06.2012	31211169672	263635	15.06.2013	287684	SBI, NITA Br.
26	29.07.2012	31295128285	132048	28.07.2013	143901	SBI, NITA Br.
27	20.08.2012	31345275995	670914	20.08.2013	726167	SBI, NITA Br.
28	22.09.2012	31438847121	396946	21.09.2013	429895	SBI, NITA Br.
29	21.10.2012	31473911005	398084	20.10.2013	432873	SBI, NITA Br.
30	12.11.2012	31498348868	544669	12.11.2013	592268	SBI, NITA Br.
31	09.12.2012	31531900439	781375	09.12.2013	849659	SBI, NITA Br.
32	18.01.2013	31590482761	551948	18.01.2014	600183	SBI, NITA Br.
33	21.02.2013	31638619142	555941	20.02.2014	604525	SBI, NITA Br.
34	24.03.2013	31683863334	552780	24.03.2014	601087	SBI, NITA Br.
35	11.04.2012	31705934269	496970	11.04.2013	535940	SBI, NITA Br.
36	12.05.2012	31744689276	538203	12.05.2013	580406	SBI, NITA Br.
37	22.07.2012	31847516759	1083705	22.07.2013	1178410	SBI, NITA Br.
38	07.09.2012	31926034223	542400	07.09.2013	589800	SBI, NITA Br.
39	21.09.2012	31950668862	523772	21.09.2013	569544	SBI, NITA Br.
40	16.11.2012	32036725156	523772	16.11.2013	569544	SBI, NITA Br.
41	16.11.2012	32036500878	547879	16.11.2013	595758	SBI, NITA Br.
42	16.12.2011	32088124959	547879	16.12.2012	595758	SBI, NITA Br.
43	20.01.2013	32150080442	320103	20.01.2014	347206	SBI, NITA Br.
44	16.02.2013	32194047063	580752	16.02.2014	631504	SBI, NITA Br.
45	22.03.2013	32249818696	558837	22.03.2014	607674	SBI, NITA Br.
46	11.04.2012	32280294988	518000	11.04.2013	567603	SBI, NITA Br.
47	11.05.2012	3232	525000	11.05.2013	573869	SBI, NITA Br.
48	29.06.2012	32401165700	565000	29.06.2013	617592	SBI, NITA Br.



49	19.07.2012	32435516795	725000	19.07.2013	792485	SBI, NITA Br.
50	30.08.2012	32509160200	690000	30.08.2013	754227	SBI, NITA Br.
51	22.09.2012	325602299037	755000	22.09.2013	821250	SBI, NITA Br.
52	12.10.2012	32599643066	743000	12.10.2013	808197	SBI, NITA Br.
53	16.11.2012	32659511373	791000	16.11.2013	860409	SBI, NITA Br.
54	07.12.2012	32697478395	793000	07.12.2013	862584	SBI, NITA Br.
55	11.01.2013	32764700868	858500	11.01.2014	933832	SBI, NITA Br.
56	19.02.2013	32834658624	910000	19.02.2014	969851	SBI, NITA Br.
57	07.03.2013	32868656275	866000	06.03.2014	944298	SBI, NITA Br.
TOTAL		30690998			33811756	0
iv) Sponsored Project Fund						
1	02.08.2012	459	1902681	23.07.2013	2100204	TGB NITA Br.
2	02.08.2012	460	2536908	23.07.2013	2800272	TGB NITA Br.
3	02.08.2012	461	3805362	23.07.2013	4200408	TGB NITA Br.
4	02.08.2012	462	3171135	23.07.2013	3500340	TGB NITA Br.
5	02.08.2012	463	1268454	23.07.2013	1400136	TGB NITA Br.
6	14.12.2012	476	1934214	14.12.2013	2129808	TGB NITA Br.
7	14.12.2012	477	1805267	14.12.2013	1987821	TGB NITA Br.
8	14.12.2012	478	1676319	14.12.2013	1845834	TGB NITA Br.
9	14.12.2012	479	1547371	14.12.2013	1703846	TGB NITA Br.
10	14.12.2012	480	1418423	14.12.2013	1561858	TGB NITA Br.
11	14.12.2012	481	1418423	14.12.2013	1561858	TGB NITA Br.
12	14.12.2012	482	1418423	14.12.2013	1561858	TGB NITA Br.
13	14.12.2012	483	1418423	14.12.2013	1561858	TGB NITA Br.
14	14.12.2012	484	1418423	14.12.2013	1561858	TGB NITA Br.
15	14.12.2012	485	1418423	14.12.2013	1561858	TGB NITA Br.
16	14.12.2012	486	1289475	14.12.2013	1419871	TGB NITA Br.
17	14.12.2012	487	1031581	14.12.2013	1135898	TGB NITA Br.
18	14.12.2012	488	773686	14.12.2013	851924	TGB NITA Br.
19	14.12.2012	489	515790	14.12.2013	567948	TGB NITA Br.
20	14.12.2012	490	257895	14.12.2013	283974	TGB NITA Br.
21	14.12.2012	8026142100058	5386663	14.12.2013	5931379	TGB NITA Br.
22	14.12.2012	8026142100067	5465300	14.12.2013	6017968	TGB NITA Br.
23	14.12.2012	8026142100076	5465300	14.12.2013	6017968	TGB NITA Br.
24	14.12.2012	8026142100085	5465300	14.12.2013	6017968	TGB NITA Br.
25	14.12.2012	8026142100094	4372239	14.12.2013	4814373	TGB NITA Br.
26	14.12.2012	8026142100100	3279180	14.12.2013	3610781	TGB NITA Br.
27	14.12.2012	8026142100119	2186120	14.12.2013	2407187	TGB NITA Br.
28	14.12.2012	8026142100128	1093059	14.12.2013	1203593	TGB NITA Br.
TOTAL		64739837			71320649	



vi) 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.
TOTAL		5000000		7521140	
vi) Institute Development Fund					
1	02.08.2012	509	3537784	30.07.2013	3905052 TGB NITA Br.
2	02.08.2012	510	2948154	30.07.2013	3254210 TGB NITA Br.
3	02.08.2012	511	2948154	30.07.2013	3254210 TGB NITA Br.
4	02.08.2012	512	2358522	30.07.2013	2603367 TGB NITA Br.
5	02.08.2012	513	1768893	30.07.2013	1952527 TGB NITA Br.
6	02.08.2012	514	1179262	30.07.2013	1301685 TGB NITA Br.
7	02.08.2012	515	589631	30.07.2013	650842 TGB NITA Br.
8	10.03.2012	64874	1500000	06.09.2012	1500000 SBI NITA Br.
9	10.03.2012	51480	1500000	06.09.2012	1500000 SBI NITA Br.
TOTAL		18330400		19921893	
vii) EMD & Security Deposit Fund					
1	10.03.2012	89138	1500000	06.09.2012	1500000 SBI NITA Br.
2	10.03.2012	13628	1500000	06.09.2012	1500000 SBI NITA Br.
3	10.03.2012	17395	1500000	06.09.2012	1500000 SBI NITA Br.
4	10.03.2012	20261	1500000	06.09.2012	1500000 SBI NITA Br.
5	10.03.2012	30257	1500000	06.09.2012	1500000 SBI NITA Br.
6	10.03.2012	35518	1500000	06.09.2012	1500000 SBI NITA Br.
7	10.03.2012	38439	1500000	06.09.2012	1500000 SBI NITA Br.
8	10.03.2012	40357	1500000	06.09.2012	1500000 SBI NITA Br.
9	10.03.2012	42548	1500000	06.09.2012	1500000 SBI NITA Br.
10	10.03.2012	44737	1500000	06.09.2012	1500000 SBI NITA Br.
TOTAL		15000000		15000000	
GRAND TOTAL			187798950		206651957



FORM OF FINANCIAL STATEMENTS (FOR PROFIT ORGANISATIONS)
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA
SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD / YEAR ENDED 31.03.2013

SCHEDULE 12 - INCOME FROM SALES / SERVICES	Current Year 2012-2013	Previous Year 2011-2012
	(Amount - Rs.)	
II Income from services		
a) Labour and Processing charges	0	0
b) Professional / Consultancy services	0	0
i) Fees on Testing charges	0	0
ii) Fees on Project Preparation	0	0
iii) Fees on earth quake training program	0	0
iv) Fees on Water quality monitoring	0	0
v) Fees on Miscellaneous purpose-Truck Terminal	0	0
vi) Fees on PMGSY	0	0
c) Agency Commission and brokerage	0	0
d) Maintenance services (Equipment / Property)	0	0
e) Others (Specify)	0	0
TOTAL	0	0



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 31.03.2013					
SCHEDULE 13 - GRANTS / SUBSIDIES	(Amount - Rs.)				
	Current Year 2012-2013	Previous Year 2011-2012			
(Irrevocable Grants & Subsidies received)					
1) Central Govt.					
a) From MHRD- Non Plan	220000000	210000000			
b) From AICTE	0	0			
c) Central Counselling Fees-MHRD	0	0			
2) State Govt.					
3) Govt. Agencies					
4) Institution / Welfare bodies		0			
5) Stipend-Other State	0	0			
6) International Organisations		0			
7) others (Specify)		0			
TOTAL	220000000	210000000			



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 31.03.2013			
SCHEDULE 13A - STIPEND FUND	Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012	
RECEIPTS			
Opening Balance	2706518	666458	
1) State Govt fund for Stipend			
a) SC & OBC Welfare Deptt	7356970	3342720	
b) SC Welfare Deptt-SC Stipend	0	0	
c) SDM-ST Stipend	4336350	5449800	
d) DHE- NEC Stipend	0	1422600	
e) Post Madhyamik & OBC	1179965	1507880	
f) ST Welfare Society			
2) Govt. Agencies			
a) NEC-Shillong- National Scholarship			
b) NEC-Shillong-Stipend	751600	0	
3) Institution / Welfare bodies	4960146	3562095	
4) Stipend-Other State	21291549	15951553	
TOTAL (i)			
EXPENDITURE:			
NEC-Stipend	818800	1445800	
Post Madhyamik Stipend	990750	0	
Otherstate-Stipend	7636894	2500770	
Post Matric Scholarship-SC & OBC	6876970	3104160	
Post Matric Scholarship-ST	4259870	5143200	
LIG-Stipend	0	0	
Post Matric Scholarship-OBC	230775	1051105	
Refund to SDM(ST Stipend)	0	0	
TOTAL (ii)	20814059	13245035	
Net Amount (Tr. to Schedule 7)	477490	2706518	



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 31.03.2013		
SCHEDULE 14 - FEES / SUBSCRIPTIONS	Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012
1) Academic Collection	128864044	92990667
2) Annual Fees / Subscription		
3) Seminar / program Fees		
4) Consultancy Fees		
5) Others (Specify)-		
a) Misc Income	31875	307497
b) Recruitment Fees(Interview)	0	0
c) Sale of Tender Form	194000	386850
	0	0
TOTAL	129089919	93685014



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF INCOME & EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED 31.03.2013			
	(Amount - Rs.)	(Amount - Rs.)	
	Investment from Earmarked Fund	INVESTMENT OTHERS	
SCHEDULE 15 INCOME FROM INVESTMENT			
(Income on Investment from Earmarked / Endowment funds)	Current Year 2012-2013	Previous Year 2011-2012	
Transfer to Funds)			
1) Interest			
a) On Govt. securities			
b) Other Bonds / Derivatives			
2) Dividends:			
a) On Shares			
b) On Mutual fund securities			
3) Rents			
4) Others (Specify)			
TOTAL			
Transferred to Earmarked / Endowment funds			
FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)			
Name of Entity: NATIONAL INSTITUTE OF TECHNOLOGY, AGARTALA			
SCHEDULES FORMING PART OF INCOME & EXPENDITURE ACCOUNT FOR THE PERIOD / YEAR ENDED 31.03.2013			
SCHEDULE 16 - INCOME FROM ROYALTY, PUBLICATION ETC.			
	Current Year 2012-2013	Previous Year 2011-2012	
1) Income from Royalty			
2) Income from Publications			
3) Others (Specify)			
TOTAL			



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 31.03.2013			
SCHEDULE 17 - INTEREST EARNED	Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012	
1) On Term Deposits:			
a) With scheduled Banks- Non-Plan Fund			
State Bank of India, NIT Agartala Br.	231242	363202	0
Canara Bank, Agartala Br	1644172	0	
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.	7344957	4276815	
Plan Fund:			
Canara Bank, Agartala Br	761	707	
State Bank of India, NIT Agartala Br.	9490926	9224390	
b) With Non scheduled Banks			
c) Post office savings Accounts			
d) Others			
3) On Loans:			
a) Employees / Staff			
b) Others			
4) Interest on Mobilization Advance(NCCI)	9689827	6475226	0
5) Interest on Debtors and Other Receivables			
TOTAL	28401885	20340340	



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 31.03.2013			
SCHEDULE 18 - OTHER INCOME	Current Year 2012-2013	(Amount - Rs.) Previous Year 2011-2012	
1) Profit on sales / Disposal of Assets:			
a) Owned Assets	0	0	
b) Assets acquired out of grants, or received free of cost	0	0	
2) Export incentive realised	0	0	
3) Fees for Miscellaneous services	0	0	
4) Miscellaneous Income	0	0	
TOTAL	0	0	
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 31.03.2013			
SCHEDULE 19 - INCREASE / (DECREASE) IN STOCK OF FINISHED GOODS		(Amount - Rs.) Current Year	
A) Closing Stock:			
- Finished Goods	0	0	
- Work in progress	0	0	
B) Less Opening Stock			
- Finished Goods	0	0	
- Work in progress	0	0	
Net Increase / Decrease (a-b)	0	0	



FORM OF FINANCIAL STATEMENTS (NON-PROFIT ORGANISATIONS)
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SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2013

SCHEDULE 20 - ESTABLISHMENT EXPENSES		(Amount - Rs.)	
	Current Year 2012-2013	Previous Year 2011-2012	
a) Salaries and Wages			
i) Regular Faculty & Staffs	110735920	82809781	
ii) Contractual Faculty & Staffs	45387142	38624809	
b) Allowances and Bonus	939237	1750044	
c) Contribution to Provident fund			
d) Contribution to other funds (Specify)			
e) Honorarium to Visiting Examiner	88831	0	
f) New Pension Scheme Fund-Tier-I	5798143	3003651	
g) Staff Welfare Expenses	0	0	
h) Expenses on Employees Retirement and Terminal benefits	0	0	
i) Other (Specify)			
TOTAL	162949273	126188285	

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SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD/ YEAR ENDED 31.03.2013

SCHEDULE 21 - OTHER ADMINISTRATIVE EXPENSES		(Amount - Rs.)	
	Current Year 2012-2013	Previous Year 2011-2012	
i) Purchases	0	0	
ii) Labour and processing expenses	0	0	
iii) Cartage and Carriage Inward	0	0	
iv) Electricity and Power	14505308	8689390	
v) Water Charges	0	0	
vi) Insurance on Plant & Machinery	0	0	
vii) Repair & Maintenance	2213367	2742669	
viii) Insurance on Land & Buildings	0	0	
ix) Rent Rates & Taxes	0	0	
x) Vehicle Repair & Maintenance	171914	366486	



xi) Postage	2951	60854
xii) Printing & Stationery	1132066	1408902
xiii) Travelling & Conveyance Expenses	724816	2568375
xiv) Expenses on Seminar	0	0
xv) Subscription expenses	0	0
xvi) Expenses on fees	0	0
xvii) Auditors Remuneration	0	0
xviii) Hospitality Expenses	175275	328957
xix) Professional Charges	0	0
xx) Provision for Bad & Doubtful Debts / Advances	0	0
xxi) Recoverable balance written off	0	0
xxii) Expenses for Networking	0	0
xxiii) Freight & Forwarding Expenses	0	0
xxiv) Distribution Expenses	0	0
xxv) Advertisement and publicity	5303795	2559778
xxvi) Others (Specify)	0	0
a) Bank Commission	175904	97258
b) Repairs & Maints-Electricals	471061	1512243
c) Newspaper & Periodical	12951	18425
d) Miscellaneous Expenses	139119	66471
e) Meeting & Conference Expenses	0	320051
f) Medicine Expenses	341377	681557
g) Freshers Welcome expenses	0	15330
h) Registration, Insurance etc. for new Car.	133839	96434
i) Chemical Goods	0	0
j) Examination Duty Expenses	578851	735194
k) Recruitment expenses	13904762	5748077
l) Scholarship-Institute	0	0
m) Tax Deducted at source	348820	138043
n) Expenses on Workshop	50000	50000
o) Institution Membership Exp	106827	96519
p) Telephone Re-imbursement	0	0
q) Senate Meeting Exp	0	0
r) Liveries	0	0
s) Telephone & Communication	490825	750752
t) Security Services	15928728	9003161
u) Gardening Expenses	1582780	979994
v) Master Plan Expenses	0	0
w) Medical re-imbursement	75566	170232



w) Farewell Ceremony Expenses	0	0
x) Transportation Expenses	1122720	1002945
y) Sweeping & Cleaning	8764546	2106481
z) Glow Sign Board	0	3300
1) LTC Expenses	742699	698799
2) Lawyer Fees	90780	32369
3) Networking Expenses	2859493	857923
4) Audit Fees-Assets Verification	0	0
5) BWC Meeting Expenses	0	0
6) Games, Sports & Cultural Activity	2600006	1572148
7) Books & Magazine	0	0
8) Internal Audit Fees-Ratan Kr. Das & Co	16854	13483
9) Statutory Audit Fees-A.G.	50000	50000
10) Rent to PWD-Agartala Transit House	17040	42660
11) BOG Meeting Expenses	901231	629134
12) Registration Charges	0	0
13) Convocation Expenses	206915	1649606
14) Cable Charges	7500	5500
15) Exp for Tripura Science Congress	0	79943
16) CPDA	2416372	0
17) Repair & Maintenance - Building	4684711	0
TOTAL	83051769	47949443



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SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD / YEAR ENDED 31.03.2013

SCHEDULE 22 - EXPENDITURE ON GRANTS, SUBSIDIES ETC.		(Amount - Rs.)	
	Current Year 2012-2013	Previous Year 2011-2012	
a) Grants given to Institutions / Organisations			0
b) Subsidies given to Institutions / Organisations			0
TOTAL			0

Note: Name of the Entities, their Activities along with the amount of Grants / Subsidies are to be disclosed.

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SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE PERIOD / YEAR ENDED 31.03.2013

SCHEDULE 23- INTEREST		(Amount - Rs.)	
	Current Year 2012-2013	Previous Year 2011-2012	
a) On Fixed Loans			0
b) On Other Loans (including Bank Charges)			0
c) Others (Specify)			0
TOTAL			0



SCHEDULE-24SIGNIFICANT ACCOUNTING POLICIES1. 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 2012-13.

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-1 on monthly basis.



SCHEDULE -25CONTINGENT 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: NIL

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

6. Schedules 1 to 25 are annexed to and form and integral part of the Balance Sheet as at 31.03.2013 and income and expenditure and Receipts and payment account for the year ended on that date.



