

ANNUAL REPORT 2011-2012



NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR

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The National Institute of Technology, Silchar (An Institute of National Importance) is one of the premier national level institutions for technical education in North East India. Government of India as a joint venture with Government of Assam established Regional Engineering College, Silchar in 1967 with the objective of imparting quality-engineering education, providing cosmopolitan outlook among students and development of National Integrity. This institution has been transformed and upgraded to National Institute of Technology, Silchar with a Deemed University Status with effect from 28.06.2002. The institute has been subsequently made into a fully funded Government of India institution. The institute is situated in an extending campus about 540 acres of undulating land and lakes surround by tea estates and hillocks providing an ideal environment for studies.

The Institute offers programmes leading to the BTech degree in Civil Engineering, Computer Science & Engineering, Electrical Engineering, Electronics & Communication Engineering, Electronics & Instrumentation Engineering, and Mechanical Engineering. It also offers Postgraduate programmes in Technology & Science leading to MTech degree in nine specializations in Engineering disciplines and one MSc degree in Chemistry. The Institute also provides opportunities for Part-time MTech in selected fields and also doctoral research in various subjects.

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1. INTRODUCTION

1.1 MISSION

The mission of NIT Silchar is to train and transform young men and women into responsible thinking engineers, technologists and scientists, to motivate them and to attain professional excellence and to inspire them to proactively engage themselves for the betterment of the society.

1.2 VISION

The vision of NIT Silchar is establishing unique identity by development of high quality human and knowledge resources in diverse areas of technologies to meet local, national, and global economic and social need and human society at large in self-sustained manner.

1.3 OBJECTIVES

- To impart the best technical education at both the UG and PG level, so as to train the students to be able to boldly face a world, that is being transformed by Scientific and Technological advances.
- To engage in research work beneficial to Industry as well as Society and disseminate the research findings.
- To provide knowledge based technological services to satisfy the needs of the Industry as well as Society.
- To help in building national capabilities in developing technologies, opening up new vistas in Education and Research.
- To promote Institute-Industry Interaction through sponsored research, sponsoring faculty to work in Industry for short term, inviting people from Industry to deliver lectures etc.
- To promote national integration and impart value based education.

1.4 EDUCATION SYSTEM

1.4.1 Under Graduate Programme

The Institute offers six undergraduate programmes in various branches of Engineering & Technology. The minimum educational qualification required for admission into any such programme is a pass in 12th standard examination conducted by either CBSE or any recognised State Board Examination with English, Physics, Chemistry and Mathematics as compulsory subjects. The students are admitted into the programme based on their rankings in the All India Engineering Entrance Examination (AIEEE) conducted by CBSE. The entire admission process is governed as per the Central Counselling Board (CCB) guide lines and instruction received from MHRD, Govt. of India.

1.4.2 Post Graduate Programme

The Institute offers 8 Post Graduate programme in Engineering and 2 programmes in Science stream. Admission to the entire Post Graduate programme is preferably done through the GATE score of the candidates. In cases where seats remain vacant due to non availability of GATE qualified students, the seats are filled up with non GATE qualified students, based on their performance in written test and interview. A few seats are also kept reserved for sponsored candidates, project fellows and Institute staff. Candidates' belongings to those categories are admitted to the programme as per the prescribed rules of the Institute.

2. OVERVIEW

2.1 Historical Background

In the late fifties, the Government of India decided to establish Regional Engineering Colleges (RECs) under the Quality Technical Education Policy – one each in every major state – with the prime objective of imparting quality technical education throughout the country and to foster national integration. These Regional Engineering Colleges were established as joint ventures of the Government of India and the respective State Governments. Assam is a major state in the North-East region of India and the 15th REC was officially established in Silchar in 1967. Though 14 other RECs started functioning within 1967, it took about another decade for REC Silchar to start its academic programmes due to various constraints.

The first batch of students was admitted in 1977 in the BE programmes in 3 branches of Engineering, namely, Civil Engineering, Mechanical Engineering and Electrical Engineering. The total intake in the first batch was 60 students. The meager infrastructure facilities consisted of only a part of a hostel, two Assam type buildings (for classes and administration), a workshop building, seven faculty quarters and a few staff quarters of the College when the College started its academic programme in November 1977. Initially, the classes started with only 4 full time teachers and with Dr. H. R. Chablani as Principal. The College started its academic programme with affiliation to Gauhati University. The first batch of BE students was awarded degrees in the year 1982-83. Subsequently, two more branches, namely, (i) Electronics and Telecommunication Engineering and (ii) Computer Science and Engineering started functioning from the year 1983 and 1987, respectively. The affiliation was later shifted to Assam University in 1994.

On the basis of the report of the High Powered Joint Expert Committee of AICTE and UGC under the chairmanship of Prof. S. K. Joshi, Director General of Council for Scientific and Industrial Research (CSIR), Regional Engineering College Silchar has been transformed and upgraded to National Institute of Technology, Silchar with a Deemed University status with effect from 28 June 2002. The institute has been taken over by Government of India and subsequently made into a fully funded Central Government Autonomous Institution. This ensures a better financial status for NIT Silchar and will accelerate its growth ensuring that it becomes one of the premier technological institutes of not just the North-East but the entire nation. The institute has remodeled its curriculum and academic activities in line with that of IITs. With its Deemed University status, the institute started awarding degrees from the year 2002 and the first convocation of the institute was held on 16 February 2004 to award degrees to all students who qualified for degree after its transformation into an NIT. Now, it is a prestigious Institute with reputation for excellence at both Under Graduate and Post Graduate level.

2.2 Location

The institute is situated at Silchar (latitude 24.5⁰N, longitude 92.51⁰E, at a height of 114.68m above MSL), the headquarters of the district of Cachar in Assam. The location of the institute is at a distance of about eight kilometers to the south of the town of Silchar on the Silchar-Hailakandi road. Cachar is the southernmost district of Assam bordering Mizoram on south, Manipur on east and Tripura and Meghalaya on west. Silchar is well connected with the rest of the country via Guwahati, the major city of the North East region, by air and road and by air via Kolkata. Silchar has direct air link with Imphal, Aizawl and Agartala as well. Buses, Auto-Rickshaws and Taxis are available from Silchar town to the College campus.

The Institute boasts of state-of-the-art academic and research infrastructure-lecture galleries, laboratories, resource-centres, sports grounds, open-air theatre, hospital, food-courts and many more being embraced by the greenery, expansive teagardens and lakes.



2.3 Campus

The campus of the institute is spread over an area of 1643 bighas, set amidst a sprawling landscape of natural quietness, bordered on expansive teagardens. It presents a spectacle of harmony in modern architecture, natural beauty and picturesque surroundings.



Campus View

The campus area has been organized in three functional sectors:

- Hostel for students
- Instructional buildings and administrative block
- Residential sectors for the staff

The instructional buildings have been so located that these are fairly near to both the hostels and the staff quarters. There is a full-fledged computerized branch of State Bank of India, a Post-Office, and a number of telephone booths with STD/ISD facilities in the campus. The Institute has its own Dispensary with a full-time Lady Medical Officer and Medical Officer on contractual basis to attend to the regular medical needs of the students, staff and their families. Patients suffering from serious illness, requiring intensive care, are referred to the Silchar Medical College & Hospital, which is only about two kilometers from the campus. An adequately equipped Canteen is there near the instructional zone and two more buildings for this purpose are under consideration – one of which is now complete – which will provide facilities to the students and the staff during and beyond the working hours. There is a well-equipped Gymkhana and a Students Activity Center which are utilized by students for activities like bodybuilding, indoor games and similar other pursuits. There is a 12 room Guest House in the campus for the visitors. At present, for the extra-curricular activities of the students and staff, there is an Institute hall with a sitting arrangement for an audience of around five hundred. The institute has two buses, which make morning and evening trips to Silchar town. City buses and Auto rickshaws ply between Silchar town and the institute campus. There is a Lower Primary School in the campus for the schooling of children and a central school upto class VIII.



Campus View

Functionally and aesthetically spread out, the campus aims at intellectual growth in an ambience that is free-flowing and community-friendly. The soothing breeze rustling through the naturally gifted lustrous greenery and bluish lakes is just one of the several ingredients that create an amazing atmosphere; just the right conditions essential to concentrate on studies.



Administrative Building

2.4 Administration

NIT Silchar is administered by a society registered under Societies Registration Act. According to the Memorandum of Association of this society, a Board of Governors (BOG) is made responsible for superintendence, direction and control of the affairs of the Institute. The Director is the principal academic and executive officer of the Institute. Besides the Board of Governors, there is a Senate, a Finance Committee and a Building and Works Committee to carry out different responsibilities of the institute.

2.5 Academic Programme

The Institute offers programmes leading to the BTech degree in Civil Engineering, Computer Science & Engineering, Electrical Engineering, Electronics & Communication Engineering, Electronics & Instrumentation Engineering, and Mechanical Engineering. It also offers Postgraduate programmes in Technology & Science leading to MTech degree in nine specializations in engineering disciplines and one MSc degree in Chemistry. The Institute also provides opportunities for Part-time MTech in selected fields and also doctoral research in various subjects. During the period under report, the Institute had about 1669 students in the four year BTech Programmes, 122 students in MTech Programmes, 14 students in MSc Programme, and 90 PhD research scholars. All academic programmes are governed by specified regulations duly approved by Senate from time to time.

2.6 Duration of Courses Offered

2.6.1 Graduate Courses

A. Post Graduate Courses

SI No	MTech	Duration of Programme
1.	Earthquake Engineering	2 years (4 semesters)
2.	Geo-Technical Engineering	2 years (4 semesters)

3.	Transportation Engineering	2 years (4 semesters)
4.	Water Resources Engineering	2 years (4 semesters)
5.	Microelectronics & VLSI Design	2 years (4 semesters)
6.	Power & Energy System Engineering	2 years (4 semesters)
7.	Design & Manufacturing	2 years (4 semesters)
8.	Thermal Engineering	2 years (4 semesters)
9.	Control & Industrial Automation	2 years (4 semesters)
10.	Applied Chemistry (MSc)	2 years (4 semesters)

B. Under Graduate Courses

SI No	BTech	Duration of Programme
1.	Civil Engineering	4 years (8 Semesters)
2.	Computer Science & Engineering	4 years (8 Semesters)
3.	Electrical Engineering	4 years (8 Semesters)
4.	Electronics & Communication Engineering	4 years (8 Semesters)
5.	Electronics & Instrumentation Engineering	4 years (8 Semesters)
6.	Mechanical Engineering	4 years (8 Semesters)

2.6.2 PhD Programme

PhD (Part time/Full time) program is offered in all branches of Science, Mathematics, Humanities and Social Sciences and in Civil, Electrical, Electronics & Communication and Mechanical Engineering.

2.7 Admission Procedure

(i) BTech

The admission to 1st year of BTech Programme is made through the All India Engineering Entrance Examination (AIEEE) conducted by CBSE and as per the guidelines framed by Department of Secondary and Higher Education, Ministry of Human Resource Development, Govt. of India. This institute acts as one of the Counseling Centers.

(ii) MTech

The advertisement for MTech Programme is released in leading national newspapers, local dailies and in the website of the institute. Admissions are offered on the basis of marks in the qualifying examination (BE/BTech), performance in interview and on the GATE score. GATE qualified candidates are eligible for institutional financial assistance. Candidates are required to have a minimum of 60% of marks or its equivalent in Bachelor of Engineering/Technology degree. When GATE qualified candidates are not available, admission may be given to those who are not qualified in GATE on the basis of merit as detailed in P.G. regulation.

(iii) MSc (Basic Sciences)

Admission to MSc courses in Chemistry and Physics are based on career marking (weightage for 10th, 12th and B.Sc. are 25%, 25% and 50% respectively). Applicants must have secured at least 50% of total mark in aggregate at BSc level and preference is given to students having Honours in the applied discipline.

(iv) PhD

The advertisement for PhD programme is released in leading national newspapers, local dailies and in the website of the institute. The candidates are selected on the basis of marks in the qualified examinations and on the basis of performance in the interview. The candidates with at least 60% of marks (or CPI 6.5) in ME/MTech for engineering departments, first class with 60% of marks in MSc for science departments, and Masters degree with a minimum of 55% marks or equivalent for Humanities and Social Sciences department are eligible to apply. BE/BTech degree holders with excellent academic record with CPI at least 8 (70% of marks) are also allowed to apply. Assistantship to regular full-time students with valid GATE/NET score are permitted subject to availability of fund.

(v) **Sponsored Students for Post-Graduate programmes (MTech, MSc, & PhD)**

- a) Preference will be given to those candidates who are GATE qualified. Sponsored candidates will not be eligible to receive scholarship even if they are qualified in GATE.
- b) The candidates must have a total of minimum two years full time work experience in the sponsored organisation which should be a reputed one.
- c) There will not be any age restriction.
- d) Sponsorship certificate in proper proforma has to be produced from the employer at the time of admission.

2.8 Students

National Institute of Technology, Silchar has always been the preferred destination of the bright students. The present student strength of approximately 2000 can be doubled within the next five years. Students of NIT, Silchar are also known for their excellence in socio-cultural activities and in sports. The institute is open to persons of either sex and of whatever race, creed, caste or class and no condition is imposed as to religious belief or profession or any other condition whatsoever in admitting students. MTech, MSc and PhD programmes are also open to all. This multilingual and multi-cultured environment is particularly conducive to its future development. The alumni of NIT, Silchar have made a mark in industry and public life. They are taking significant interest in the affairs of the Institute and will continue to do so in future. It has approx. 8000 strong alumni dedicating to further development of the Institute.

2.9 Examination and Evaluation

Since the institute became an Institute of National Importance (Deemed to be University status), the entire examinations and evaluations leading to finalization of B. Tech results, for students admitted from 2002 batch onwards, were conducted under the direct control and supervision of the office of the Dean (Academic). The evaluations are done based on the Grade system, where examination marks are awarded on credit based system. The grades are awarded on the marks scored by the students in the Sessional, Mid Semester and End Semester examination assessment taken together. There is also provision for improvement of Grades for all those students whose CGPA is below 6.0.

2.10 Placement

The Institute has a separate full-fledged Training and Placement (T&P) Section headed by a Faculty-in-Charge. In addition to placement and arrangement for industrial training to the students, the Section is responsible for issuing railway and air concession, bona-fide certificates. During the academic session 2011-12, More than 95% students have been placed through campus interview in various organizations. The detailed break up in Section 4.11.

2.11 Games & Sports

The institute recognizes the extracurricular activities as a part to student's life and hence well equipped facilities for games and sports are provided within the hostels premises, in other general locations and in the Student Activity Centre (SAC). Hostels are equipped with most of the indoor games facilities. The SAC building is also used as an indoor stadium. A well maintained play ground with fencing is used for all types of outdoor games, athletics events and tracking events. Besides these, students, faculty and staff have been provided facility for Tennis, Basketball, Volleyball, Badminton, etc. Inter-hostel cricket, football and volleyball events are regularly conducted in the institute. A gymnasium hall with all types of modern body building equipments is also in operational during the reporting year.

2.12 Staff Position

i. Administrative Staff

Name of the post	Sanctioned Strength	Staff in Position
Director	01	01
Registrar	01	---
Dy. Registrar (Accounts)	01	01
Asstt. Registrar (Acad)	01	---
Asstt. Registrar (Admn)	01	---
Senior Medical Officer	01	---
Lady Medical Officer	01	01
Asstt. Estate Engineer	01	01
Librarian	01	01
Stores Officer	01	01
Total	10	06

ii. Academic Staff

Name of the post	Sanctioned Strength	Staff in Position		
		Regular	CAS	Total
Professor	17	9 (including 1 deputation)	04	13
Associate Professor	33	23	--	23
Assistant Professor	66	47	---	47
Total	116	79	04	83

iii. Faculty Position (Department wise break up)

Name of Deptt.	Professor			Associate Professor			Assistant Professor		Total sanctioned posts Department-wise.
	Sanctioned Strength	In position		Sanctioned Strength	In position		Sanctioned Strength	In position	
		Regular	CAS		Regular	CAS		Regular	
CE	03	02	01	07	07	--	10	06	20
ME	03	03	01	05	05	---	10	03	18
		(1 deputation)							
EE	03	02	01	05	03	---	11	07	19
ECE	02	02	--	06	03	---	09	07	17
CSE	02	---	---	05	01	---	09	09	16
Phy	01	---	---	01	01	--	04	04	06
Chem	01	---	01	01	---	---	04	04	06
Math	01	---	---	02	02	---	06	04	09
HSS	01	---	---	01	01	---	03	03	05
Total	17	09	04	33	23	--	66	47	116
		(1 deputation)							

iv. Supporting Staff (Administration)

Name of the Post	Sanctioned strength	Staff in position
1. Superintendent	3	1
2. P. S. to Director/Supdt MC	1	Nil
3. P. A. to Director/Steno Gr-II	1	1
4. Stenographer/Steno Gr-III	6	6
5. Sr Accounts Assistant.	1	1
6. Accounts Assistant	2	1
7. Supervisory Assistant	3	2
8. UD Assistant	18	14
9. LD Assistant	18	13
10. Chief Store Keeper	1	Nil
11. Store Keeper	5	1
Total	59	40

v. Supporting Staff (Academic)

Name of the Post	Sanctioned strength	Staff in position
1. System Programmer	2	Nil
2. Workshop Superintendent	1	Nil
3. Assistant Librarian	2	1
4. Foreman	1	1
5. Assistant Foreman	1	Nil
6. Sports-cum- PT Officer	1	Nil
7. Professor T. & P.	1	Nil
8. Library Assistant	6	1
9.. Laboratory Assistant	2	2
10. Sr Instructor/Tech Gr-A	4	1
11. Jr. Instructor/Tech Gr-B	15	12
12. Asstt Instructor/Tech Gr-C	10	08
13. Laboratory Attendant	21	16

14. Workshop Attendant	10	4
15. Library Attendant	4	2
16. Class Room Bearer	1	1
Total	82	40

vi. Technical & Other Supporting Staff

Name of the Post	Sanctioned strength	Staff in position
1. Pharmacist	1	1
2. Nurse-cum-Midwife	1	1
3. Jr. Engineer	2	1
4. Muharrier	2	1
5. Electrician-cum-Wireman	2	1
6. Wireman	2	1
7. Carpenter (Estate)	1	Nil
8. Draughtsman	4	4
9. Tracer	2	2
10. Plumber	3	2
11. Driver	5	4
12. Bus Conductor	2	2
13. Pump-Operator-cum-Mechanics	2	2
14. Mason (Estate)	1	1
15. Classifier (library)	1	Nil
16. Store Attendant	2	2
17. Plumber Attendant	1	Nil
18. Medical Attendant	3	3
19. Reneo Machine Operator	1	1
20. Gate Keeper (library)	2	2
21. Vehicle Cleaner	1	Nil
22. Mason Helper	1	Nil
23. Peon	25	17
24. Head Watchman	1	Nil
25. Watchman	24	7
26. Duftary	4	Nil
27. Guest House Cook	1	Nil
28. Guest House Bearer	1	Nil
29. Guest House Helper	1	Nil
30. Cook (Hostel)	6	2
31. Cook-cum-helper (Hostel)	64	56
32. Mali	9	6
33. Sweeper	13	8
Total	191	127

2.13 Staff Relieved on Retirement

Sl No	Name	Designation	Date of Retirement
1	Prof. D. N. Bhattacharjee	Professor (CE)	29.02.12
2	Dr. Dilip Datta	Associate Prof. (ME)	25.11.11
3	Ms. Susmita Deb	Asstt. Professor (EE)	11.04.11
4	Mr. Sushil Kumar	Registrar	04.07.11

5	Mr. Jitesh Roy Choudhury	Supervisory Asstt	31.05.11
6	Mr. Prabir Kr. Bhattacharjee	Store-Keeper	29.02.12
7	Mr. Basir Uddin Mazumder	Lab. Attendant	30.06.11
8	Mr. Champalal Nunia	Watchman	30.06.11
9	Mr. Sukur Ali Laskar	Watchman	31.10.11
10	Mr. Giridhari Kurmi	Watchman	31.12.11
11	Mr. Ananta Dey	Cook-cum-helper	31.08.11
12	Mr. Jayanta Ghosh	Cook-cum-helper	23.04.11

2.14 Staff Expired

SI No	Name	Designation	Date of Retirement
1	Mr. A. K. Biswas	Associate Prof. (ME)	12.12.11
2	Mr. Sankar Kumar Nath	Accounts Assistant	23.12.11
3	Ms. Lakhi Rani Sabdakar	Peon	16.03.12

2.15 Staff Members (Non-Teaching) Deputed/Sponsored for Training/Learning

SI No	Name of Staff	Name of Programme	Organizing Institute	Duration
1	Mr. Dipak Roy	RTI Act & Citizen Charter	ITPR, New Delhi	16-17 March, 2012
2	Ms. B. Roy Choudhury	Pensionary Benefits	CTSR, New Delhi	9-11 February, 2012
3	Ms. Shefali Sinha	-do-	-do-	-do-

3. THE STAFF

3.1 ACADEMIC STAFF (TEACHING) & DEPARTMENTAL ACTIVITIES

3.1.1 DEPARTMENT OF CIVIL ENGINEERING

3.1.1.1 Academic Staff

Name	Qualification	Specialization Area(s)
Prof. S. Choudhury	PhD	Earthquake Engineering
Name of the Faculty		
Professor		
1. Prof. S. Choudhury	PhD	Earthquake Engineering
2. Prof. A. K. Dey	PhD	Geotechnical Engineering
3. Prof. P. S. Choudhury	PhD	Water Resource Engineering
Associate Professor		
4. Dr. A. K. Das	PhD	Geology
5. Dr. D. Chakraborty	PhD	Water Resource Engineering
6. Dr. M. A. Ahmed	PhD	Transportation Planning
7. Dr. P. Rajbangshi	PhD	Transportation Engineering
8. Dr. A. K. Barbhuiya	PhD	Water resource Engineering
9. Dr. A. I. Laskar	PhD	Building Technology
10. Dr. U. Kumar	PhD	Environmental Engineering
11. Dr T. Rahman	PhD	Structural Engineering
Assistant Professor		
12. Dr. A. M. Choudhury	PhD	Structural Engineering

13.	Mr. P. Roy	MTech	Water Resource Engineering
14.	Mrs. N. Borthakur	MTech	Geotechnical Engineering
15.	Mr. P. Das	MTech	Structural Engineering
16.	Mrs. P. Sultana	MTech	Geotechnical Engineering

3.1.1.2 Research and Development

(i) PhD Programs existing :				
SI No	Specialization Areas			
1	Water Resource Engineering			
2	Geotechnical Engineering			
3	Earthquake Engineering			
4	Structural Engineering			
5	Transportation Engg			
(ii) Thrust Areas:				
1	Water Resource Engineering			
2	Geotechnical Engineering			
3	Earthquake Engineering			
4	Structural Engineering			
5	Transportation Engg			
(iii) On-going research projects				
Sponsored Research Projects (Innovation and Technology Transfer):				
SI No	Title of the project	Sponsor(s)	Name of P.I.	Amount(Rs)
1	Riverbank Erosion and Its Counter Measures	DST	Dr. A. K. Barbhuiya	30.23 Lac(s)
2	Seismic behaviour of beam-column joint made with geopolymer concrete	AICTE	A. I. Laskar	9.00 Lac(s)
3	Utility of Paratransit Modes in Regional Passenger Transportation	AICTE	Dr. M. Ali Ahmed	17.50 Lac(s)
4	Eco-restoration of soil and Land Resources of some Barak Watersheds using Remote Sensing & GIS	DST	D. Chakrabarty	25.00 Lac(s)

3.1.1.3 Paper Reviewed:

SI No	Name of Faculty	Name of Journal or Conference or Name of Organizing Institute	Number of Papers Reviewed
1.	Dr. Upendra Kumar	Desalination (Elsevier Journal)	1
		International Research Journal of Pure and Applied Chemistry	1
		International Journal of Chemical Engineering and Applications	1
		4th IEEE International Conference on Computer Science and Information Technology (IEEE ICCSIT 2011) Chengdu, China, 10-12 June 2011	5
2	Dr. P. Rajbongshi	Jr. of Transp. Engg. ASCE	1
		Int. Jr. of pavt. Engg.	1
		Int. Jr. of pavt. & Research Technology	1
3	Dr. A. I. Laskar	American Concrete Institute	1
		Construction and Building materials, Elsevier	2
		Journal of Civil Engineering and Construction Technology	1
4	Dr. T. Rahman	Seismological Research letter	4
5	Prof. S. Choudhury	Journal of Earthquake Engg and Engineering Vibrations	2
		Bulletin of Earthquake Engineering	2
6	Dr. M. Ali Ahmed	ENSURE 2012: Environmentally Sustainable Urban Ecosystems, Indian Institute of Technology Guwahati, Assam	5
7	Dr. Dibakar Chakrabarty	J. of Hydrologic Engineering, ASCE	1
		J. of Hazardous Material, Elsevier	1

3.1.1.4 Visits Abroad By Faculty Members:

Sl No	Faculty Name	Details
1	Dr. A. K. Barbhuiya	Participated in the 6 th International Symposium on Advances in Science and Technology (SASTech 2012) at Kua lalampur, Malayasia
2	Dr. M. Ali Ahmed	Visited Kuala Lumpur, Malaysia for paper presentation in SAS Tech: 6th International Symposium on Advances in Science and Technology during 24– 25 March 2012
3	Mr. Pallab Das	i) International Conference of Vibration, Structural Engineering and Measurement, Shanghai China, 21-23 October 2011 ii)International Conference on Advanced Science, Engineering & Information Technology, Kuala Lumpur, Malaysia, 12-13December 2011
4	Dr. Dibakar Chakrabarty	Visited Reykjavik University, Iceland in August 2011 for oral presentation of a paper “Identification of Unknown Groundwater Pollution Sources – A linked Simulation-Optimization Approach”

3.1.1.5 Invited Lectures by Faculty Members:

Sl No	Faculty Name	Details
1	A. I. Laskar	Engineers’ day organized by the Institution of Engineers (India) Silchar local chapter

3.1.1.6 Chairing of any technical session by Faculty Members:

Sl No	Faculty Name	Details
1.	Dr. Upendra Kumar	Technical session of International Congress of Environmental Research-11; SVNIT, Surat; 16 December, 2011

3.1.1.7 List of PhD thesis submitted and degree awarded: (Dr. A. I. Laskar)

Sl No	Name of Scholar	Title of Thesis	Status
1	Rajan Bhattacharjee	Study of rheological behaviour of fly ash based geopolymer concrete	submitted

3.1.1.8 Thesis : MTech

Sl No	Name of Scholar	Title of Thesis	Name of the Supervisors
1	R Oinam Babu Singh	Study of beam-column joints with fibbers under cyclic loading	Dr. A. M. Choudhury & A. I. Laskar
2	Ms. Yanglem Sonia Devi	Flow analysis around a semi-circular abutment using FLUENT software	Dr. A. K. Barbhuiya
3	Ms. Pia Biswas	Study of scour at 90° horizontal bend and its protection using riprap	
4	Thokchom Bebina Devi	Study of Collar As Countermeasure Against Local Scour In Cohesive Soils	
5	Satarupa Majumder	Dowel Bar Analysis and Parametric Studies on Dowel Behaviour	Dr. P. Rajbongshi
6	Gobin Engleng	Parametric Studies on Multilayer Flexible Pavements	Dr. P. Rajbongshi
7	Ms. S. Paul	Granular soil stabilization with geopolymer	Dr. A. I. Laskar and Prof A. K. Dey
8	R Oinam Singh	Study of beam-column joints with fibers under cyclic	Dr. A. M. Choudhury

		loading	and Dr. A. I. Laskar
9	T. Rika	Effect of fault in the Gandhi Bridge, Arunachal Pradesh	Dr. T. Rahman
10	Mithun Das	Seismic Vulnerability of Building in Sikkim	
11	Rajib Haldar	Seismic hazard study of Agartala city	
12	N. M. Kumar Singh	Performance of RC Frame Buildings on Slopes	Prof. S. Choudhury
13	Waikhom Victory	Assessment of the Role of Paratransit in Urban Passenger Movement – Imphal, Manipur	Dr. M. Ali Ahmed
14	Ratnadeep Das	Performance of RC Frame-Shear Wall Building with Infill Panel	Mr. Pallab Das
15	Joydeep Bhattacharjee	Effect of Infill in Code Designed RC Frame-Shear Wall Buildings	

3.1.1.9 Seminar/Workshops/Conference/Symposia/Short Term Courses Attended:

Sl No	Name of Faculties	Name of programme	Organizing Institute	Duration
1.	Dr. A. M. Choudhury	Analog/Mixed Signal design	NIT Silchar	20 Jan, 2012
2.	Dr. A. K. Barbhuiya	Participated in the 6 th International Symposium on Advances in Science and Technology (SASTech 2012) at Kuala Lumpur, Malaysia	Khavaran Institute of Higher Education, Iran	24-25 March, 2012
3	Dr. Upendra Kumar	International Congress of Environmental Research-11	SVNIT, Surat	15-17 December, 2011
		Analog/Mixed Signal Design	NIT Silchar, TEQIP-II	16-20 January, 2012
		Solar Energy and its Applications	NIT Silchar, TEQIP-II	29-31 March, 2012
		Solar Energy and its Applications	NIT Silchar, TEQIP-II	29-31 March, 2012
4	Dr. M. Ali Ahmed	Solar Energy and its Applications	NIT Silchar	29-31 March, 2012
5	Pallab Das	International Conference of Vibration, Structural Engineering and Measurement, Shanghai China	Guangzhou University, China	21-23 October, 2011
		International Conference on Advanced Science, Engineering & Information Technology, Kuala Lumpur, Malaysia	Universiti Kebangsaan Malaysia	12-13 December, 2011
6	Dibakar Chakrabarty	Advances in Simulation-Driven Optimization and Modeling (ASDOM, 2011)	Reykjavik University, Iceland	13-14 August, 2011

3.1.1.10 Research Publications:

(i) Published in International Journals			
Sl No	Author (s)	Title	Publication details
1	A. M. Choudhury	Experimental study on ductility emphasizing size effect for plain and Retrofitted Beam-Column joint under cyclic loading	International journal of civil and structural Engineering Vol.2 (2), 648-660, 2011
2	A. I. Laskar	Mix Design of High-Performance Concrete	Materials Research, Vol.14 (4), 429-433, 2011
3	A. I. Laskar and R. Bhattacharjee	Torque-speed relationship in a concrete rheometer with vane geometry	Construction and Building Materials, Elsevier, Vol.25, 3443-3449, 2011.
		Rheology of fly ash based geopolymer concrete	ACI Materials Journal, American Concrete Institute, Vol.108 (5), 536-542, 2011

4	Upendra Kumar	Thermodynamics of the Adsorption of Cd (II) from Aqueous Solution on NCRH	International Journal of Environmental Science and Development. Vol. 2 (5), 334-336, 2011
5	U. Kumar And J. Acharya	Thermodynamics of the Sorption of Pb (II) from Aqueous Solution on NCRH.	International Journal of Chemical Engineering and Applications. Vol. 3 (1), 2012
6	K. M. Pandey, U. Kumar and S. D. Verma	CFD Analysis of Flow Field inside the Expansion Chamber of Internal Combustion Engines	International Journal of Engineering and Advance Technology. Vol. 1 (3), 2012
7	J. Acharya, U. Kumar and B. C. Meikap	Thermodynamic study for Adsorption of Pb (II) from aqueous solution using ATW	The South African Journal of Chemical Engineers (SAJChE). Under Review
8	Pallab Das, Anjan Dutta and Sudip Talukdar	Detection of Cracks in Beam Structures Using Modal Analysis	International Journal of Vibration, Structural Engineering and Measurement. Vol. 105-107, 689, 2011
9	Dr. P. Rajbongsh Kunal Kachru and A. Das	Sampling Strategy for Road Distress Survey : A case Study	Proceedings of the Institution of Civil Engineers (ICE) Transport Vol.165, 131 -138, 2012
		A Comparative Study on Temperature Stresses in Asphalt Material using Nonlinear Viscoelastic Approach	Jr of Transportation Engineering ASCE , Vol.137 (10) 717-722, 2011
		Reliability Calculation Considering Non-Linear Fatigue Damage in Asphalt Pavements	Int. Jr. of Road Materials and Pavement Technology, Vol.4 (3),162-167, 2011
10	Dr. T. Rahman	Seismological model pavements of NERA surrounding reason of India Earthquake scheme	In the international Journal "seismological model parameters for the North Eastern and surrounding region of India" Accepted in the international Journal Earthquake Science
11	Pallab Das, Anjan Dutta and Sudip Talukdar	Detection of Cracks in Beam Structures Using Modal Analysis	International Journal of Vibration, Structural Engineering and Measurement. Vol. (105-107), Page-689, Publication Date,27, September, 2011
12	Pallab Das	Detection of Cracks in Beam Structures Using Modal Analysis	International Conference of Vibration, Structural Engineering and Measurement, Shanghai China, 21-23, 2011
		Assessment of Damage in Prismatic Beams Using Modal Parameters	International Conference on Advanced Science, Engineering & Information Technology, Kuala Lumpur, Malaysia, 12-13, 2011
13	Dr. Dibakar Chakrabarty & Others	Identification of unknown groundwater pollution sources using classical optimization with linked simulation	Journal of Hydro-Environment Research, Elsevier Vol-5 (1), 25-36, 2011
		Multi-objective Optimization of Pump-and-Treat Based Optimal Multilayer Aquifer Remediation Design with Flexible Remediation Time	J. of Hydrologic Eng., ASCE Vol.16 (5), 413-420, 2011
		Discussion of "Multiobjective Groundwater Remediation System Design Using Coupled Finite Element Model and Nondominated Sorting Genetic Algorithm II"	J. of Hydrologic Eng., ASCE Vol.16, 696, 2011

(ii) Published in National Journals

Sl No	Author (s)	Title	Publication details
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1	P. Brahmachary, Prof. S. Choudhury	Effect of Infill on Performance of Frame Buildings	Journal of Institute of engineers (I), Vol. 92, 2011
2	Dr. A. M. Choudhury, A. Dutta, S. K. Deb	Effective retrofitting of plain concrete elements using fibre reinforced polymer wrapping	Journal of structural engineering Accepted 2011

3.1.1.11 Published in Conferences / Seminars / Workshops:

(i) International			
Sl No	Authors(s)	Title	Publication details
1	A. K. Barbhuiya, M. H. Mazumder	Live-Bed Local Scour around Wing-wall Abutments	Proceedings of the 6 th International Symposium on Advances in Science and Technology (SASTech 2012), Malaysia, Kuala Lumpur, 24-25 March, 2012
2	S.A. Begum, A.K.M Fujail, Dr. A.K Barbhuiya	“Artificial Neural Network to Predict Equilibrium Local Scour Depth around Semicircular Bridge Abutments	Proceedings of the 6 th International Symposium on Advances in Science and Technology (SASTech 2012), Malaysia, Kuala Lumpur, 24-25 March, 2012
3	A. M. Choudhury, A. Dutta, S. K. deb	Study on size effect of RC deficient beam-column joints with and without retrofitting under cyclic loading	6 th International symposium on advances in science and technology , Malaysia (24- 25, March, 2012) In CD Rom
4	J. Acharya, Dr. U. Kumar, B. C. Meikap	Thermodynamic study for Adsorption of Pb (II) from aqueous solution using ATW	International Congress of Environmental Research 2011; SVNIT, Surat; 15-17 December, 2011
5	Dr. T. Rahman	Ground motion Relation attenuation Rebellion of	NERI
		Seismic hazard microzonation of Guwahati city	Malayasia International Conference
6	Dr. M. Ali Ahmed Binod Singhi	“Google – Earth: a better solution for Topo-Maps” Proceedings of ENSURE 2012: Environmentally Sustainable Urban Ecosystems, Indian Institute of Technology Guwahati, Assam.	24-26 February 2012, PID 287
		“Road Category wise Use of Modes in Guwahati, Assam” Proceedings of (SAS Tech :) 6th International Symposium on Advances in Science and Technology, Kuala Lumpur, Malaysia	24-25, March, 2012, PID: 6 – 24 – 12 – 9000
(ii) National			
Sl No	Authors(s)	Title	Publication details
1	Dr. A. M. Choudhury, A. Dutta, S. K. Deb	Experimental study on energy dissipation with emphasizing on size effect for plain and retrofitted beam-column joint under cyclic loading	4 th International conference on structural stability and Dynamics, Jaipur (4-6 January, 2012) 115-125
2	Dr. T Rahman	Effect of fault on the Engineering structure	National conference in structural Engineering at Chandigarh

3.1.1.12 Award Received & Achievements

Sl No	Name of Faculty	Details of the Award / Achievements
1	Dr. A. K. Barbhuiya	Best paper presentation award at the 6 th International Symposium on Advances in Science and Technology (SASTech 2012) at Kuala Lumpur, Malaysia
2.	Dr. Upendra Kumar	Awarded as Senior Member of Asia-Pacific Chemical, Biological & Environmental Engineering Society

3.1.2 DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

3.1.2.1 Academic Staff

Co-ordinator		
Name	Qualification	Specialization Area(s)
Mr. Samir Borgohain	MTech	Symbol Grounding, NLP
FACULTY		
Associate Professor		
Dr. B. Purkayastha	PhD	Soft Computing, Image Processing
Assistant Professor		
Dr. A. Bhattacharjee	PhD	Computer Science and Engineering
Ms. Ujwala Barua	MTech	
Ms. Pinki Roy	MTech	Speech Processing of Languages
Mr. P. S. Neog	MTech	Distribute and Ubiquitous Systems, Information Security
Mr. Samir Borgohain	MTech	Symbol Grounding, NLP
Mr. Biswanath Dey	MTech	Computer Network, Wireless Sensor Network, Soft Computing
Mr. Pantha Kanti Nath	MTech	Human Computer Interaction, Computer Network
Mr. Marchang Jims	MTech	Computer Networks
Mr. Saroj K. Biswas	MTech	Multimedia and Software System, VLSI

3.1.2.2 Research and Development

On-Going Research Projects:					
Sponsored Research Projects (Innovation and Technology Transfer):					
Sl No	Faculty Name	Title of the project	Sponsor(s)	Name of P.I.	Amount(Rs.)
1.	Ujwala Baruah	Development of Speech based multi-level person authentication system	DIT, MHRD, GOI	R.H. Laskar (P.I.) & Ujwala Baruah (Co-op)	57.93 Lac(s)

3.1.2.3 Visits Abroad by Faculty Member

Sl No	Faculty Name	Details
1.	Pinki Roy	Went for presenting paper titled "Automatic Language Identification of three Indian Languages using Vector Quantization", at 4 th International Conference on Computer and Electrical Engineering, ICCEE'2011 held from 14-16 October, 2011, Singapore

3.1.2.8 Seminars / Workshops / Conferences / Training Programme Attended

Sl No	Name of Faculty	Name of Programme	Organizing Institute	Duration
1.	Nabajoyti Medhi	IEEE Indicon 2011	BITS Pilani, Hyderabad	16-18 December, 2011

2.	Ujwala Baruah Saroj Kr. Biswas	Analog / Mixed Signal design workshop	NIT, Silchar	16 -20 January, 2012
3.	Ujwala Baruah	STTP on recents in evolutionary optimization techniques and applications	NIT, Silchar	1-7 June, 2012
4.	Ujwala Baruah Pantha K. Nath Saroj Kr. Biswas S. K. Borgohain	One Week FDP on effective teaching	NIT, Silchar	30 April - 4 May , 2012

3.1.2.10 Research Publications (pl. provide the bibliographical details)

A. Published in International Journal			
Sl No	Author(s)	Title	Publication details
1.	Pinki Roy, Pradip K. Das	“Language Identification of Indian Languages based on Gaussian Mixture Model”	International Journal of Wisdom Based Computing, Vol. 1 (3), 54-59, 2011 ISSN 2231-4857
2.	Samir Kr. Borgohain, Shivashankar Nair	Towards a pictorially grounded language for Machine-Aided translation	Internatioan Journal of Asian Language Processing, Vol. 20, (3), 87-109, 2010

B. Published in International Conferences/ Seminars/Workshops			
Sl No	Author(s)	Title	Publication details
1.	Pinki Roy, Pradip K. Das	Automatic Language Identification of three Indian Languages using Vector Quantization	4 th International Conference on Computer and Electrical Engineering ICCEE, 14-16, October 2011, Singapore
2.	Nabajoyti Medhi, N. Sarma	Mobility Aided Co-operative MIMD Transmission in WSN	ICCCS 2012

C. Published in National Conferences/ Seminars/Workshops			
Sl No	Author(s)	Title	Publication details
1.	Nabajoyti Medhi, N. Sarma	On Demand K-coverage with purposeful mobility in WSN	IEEE Indian 2011

3.1.2.11 Paper Reviewed

Sl No	Name of Faculty	Name of Journal or Conference or Name of Organizing Institute	Number of Papers Reviewed
1.	Saroj Kr. Biswas	International Journal of Research in Computer Science.	“2”
2.	Samir Kr. Borgohain	National Conference on Emerging Trends and Applications in Computer Science (NCETACS) – 2011, Dept. of CSE, St. Anthony’s College, Shillong, Meghalaya	“3”

3.1.3 DEPARTMENT OF ELECTRICAL ENGINEERING

3.1.3.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
Dr. A. K. Roy	BE, MTech, PhD	Electric Drives
FACULTY		
Professor	Qualification	Specialization Area(s)
Prof. A. K. Sinha	BE, MTech, PhD	Power System Protection
Prof. N. Sinha	BE, MTech, PhD	Power System Optimization
Associate Professor		
Dr. B. K. Roy	BE, MTech, PhD	Control System
Dr. S. Choudhury	BE, MTech, PhD	CAD of VLSI
Mr. S. H. Laskar	BE, MTech	Instrumentation

Assistant Professor		
Dr. N. B. Dev Choudhury	BE, MTech, PhD	Power System Economics
Dr. L. C. Saikia	BE, MTech, PhD	Power System
Mr. T. Malakar	BE, M. E. E	Power System
Dr. J. P. Mishra	MTech, PhD	Energy Management, Electric Drives
Mr. D. C. Das	BTech, MTech	Power and Energy System
Mr. C. Bhattacharjee	BE, MTech	Elect. Machine, Power System
Dr. Arup Goswami	MTech, PhD	Power System
(A) Research and Development		
(i) PhD Programs Existing:		
Sl No	Specialization Areas	
1	Electric Drives	
2	Signal Processing in Electrical Engineering	
3	Wavelet Applications in Electrical Engineering	
4	Power System Protection	
5	Control Systems	
6	Industrial Automation	
7	Automatic Generation and Control	
8	Power Quality	
9	Fault Detection, and Diagnosis of Dynamic System	
10	Soft Computing Techniques	
11	Power System Optimization, Deregulation	
12	Power System Economics	
13	VLSI Design	
(ii) PhDs done so far:		
Sl No	Completed	Continuing
1	01	07
(iii) Proposed Plan for Research:		
Sl No	Name of the lab / Workshop	Purpose/linkages to an existing/new programme
1	High Voltage Lab	Power System
2	Advanced Power System Lab	Power System
(iv) Thrust Areas:		
1	Power and Energy System	
(v) New Acquisitions:		
Sl No	Name of Laboratory	Equipment Details (purpose, facilities, etc.)
1	Control Systems	<ul style="list-style-type: none"> NI Academic Site License - Department Teaching Includes 1 Year standard service for Site License of all adds on software's available in NI self till date complete 1 year free upgrade & updates + maintenance. Onsite complete installation & Training Start up assistance by NI Person (Free) SHC68-C68-S, 68 pin VHDCI to 68 pin VHDCI, 2m UMI-7774 4-Axis Motion Interface with D-Sub Connectors for Industrial Applications P70360 Stepper Drive, 120 or 240 VAC powered, 2.5 A continuous current, 1 Axis Serial Programming Cable for P70530 & P70360 Stepper Drives D-Sub to D-Sub Cable to connect P70530 & P70360 Stepper Drives & UMI 7774, 2.5 m T22NRLC-LDN-NS-00 Stepper Motor for P70360 AC drive, NEMA 23, 280 oz-in, dual shaft 2-pin connection IMI Accelerometer 100 mV/g General Purpose Shear Accelerometer, 10 mV/g BNC to MIL-type2-socket conn cable for IMI Accelerometer; Cable length 10 ft Coaxial cable: 10-32 plug to BNC plug for shear Accelerometer; Cable length 10 ft

		<ul style="list-style-type: none"> • NI ELVIS II+ Basic (For Academic Use Only) • Camera, NI 1744 Smart Camera • NI 17xx 5m Pigtail breakout cable • E - Type Thermocouples Wire, Fiberglass (32 deg F to 900 deg F) 2 m • J - Type Thermocouples Wire, Fiberglass (32 deg F to 900 deg F) 2 m • K - Type Thermocouples Wire, Fiberglass (32 deg F to 900 deg F) 2 m • T - Type Thermocouples Wire, Fiberglass (32 deg F to 500 deg F) 2 m • Lens, 16mm, F1.4, Megapixel, Computer • Light, Ring Light (Red)
2	Process Control	<p>The newly commissioned Process Control Lab has industrial setup rather than usual laboratory prototype to measure and control</p> <ol style="list-style-type: none"> 1. Temperature Profile Control Loop 2. Level Control Loop 3. Flow Control Loop 4. Pressure Control Loop 5. Typical Duct Air Flow Control Loop <p>All these loops have</p> <ol style="list-style-type: none"> (a) Local PID controller (b) Controlled through PLC and SCADA (c) Control through DCS and SCADA

(vi) On-Going Research Projects

Sponsored Projects:

SI No	Title of the project	Sponsor(s)	Name of the P. I.	Amount (Rs.)
1	'Non-conventional Energy Systems'	AICTE	A. K. Roy	Rs 20 lac(s)
2	Design & Implementation of pure sine wave inverter for residential solar power system in India	RPS , AICTE	Dr. A. K. Goswami	15 Lac(s)
3	The National Mission Project on Education through ICT on 'Developing suitable pedagogical methods for various classes, intellectual calibers and research in e-learning' Participating as Co-developer of 'Control System' course	MHRD	Prof. A. K. Roy IIT Kharagpur	Multi cores
4	Design, Simulation and Implementation of Carbon Nanotube based FET Logics for VLSI Applications	AICTE	Dr. Saurabh Chaudhury	8.0 lac(s)

(B) Visits Abroad By Faculty Member

SI No	Faculty Name	Details
1	Mr. D. C. Das	Visited Malaysia for presenting paper in Int Conf. WCAC, 17-18 Nov, 2011.
2	Dr. B. K. Roy	Presented one paper in the International Multi Conference of Engineers and Computer Scientists 2012 held during 14-16 March, 2012 in Hong Kong
3	Dr. J. P. Mishra	To participate in IEEE 8th International Conference on Power Electronics, "ICPE2011-ECCE Asia", 30 May – 3June, 2011, Jeju, Korea
4	C. Bhattacharjee	ICHQP 2012, HONG KONG, 17-20 June ,2012

(C) Theses: MTech

SI No	Superviso	Name of Scholar	Title of Thesis
1	Mr. D. C. Das	Rashmi Rani	GA Based Frequency Control of an Autonomous Hybrid Power System
2	Dr. A. K. Roy	Israfil Hussain	'Optimal placement of distributed generation and restructuring of distribution system for enhancement of voltage stability and reduction of line loss using AI technique'.
3	Dr. A. K. Roy	Bappi Das	'Enhancement of power system voltage stability using STATCOM based controller'.

4	Dr. A. K. Goswami	Ms. Rashmi Rani	GA based frequency control of an autonomous hybrid power system
5	Dr. J. P. Mishra	Asadur Rahman	Artificial Neural Network based Improved Pitch Controller for Variable Speed Wind Power Generating System Using Doubly Fed Induction Generator
6	Dr. L. C. Saikia	Sanjoy Debbarma	Some Studies on Automatic Generation control of interconnected thermal system under deregulated environment
7	Dr. N. B. Dev Choudhury	Nilamber Panda	Differential Evolution based optimal location and parameter settings of SSSC by minimization of Generation Cost and Transmission Loss.
8	Dr. S. Chaudhury	Anirban Sengupta	Some Studies on Power Line Communication and Designing an Adaptive Filter Bank for Eliminating Noises in power Line Communication Channel
9	Mr. C. Bhattacharjee	Sourav Bose	PQ improvement of wind, solar based distributed system in a isolated rural network
10	Mr. C. Bhattacharjee	Debapriya Das	Analysis of UPFC controlled PQ improvement in WECS connected to the grid

(D) Paper Reviewed:

Sl No	Name of Faculty	Name of Journal or Conference or Name of Organizing Institute	Number of Papers Reviewed
1	Mr. T. Malakar	Swarm and Evolutionary Computation, Elsevier	1
2	Dr. Saurabh Chaudhury	IEEE International Conference, ICCCT, MNNIT Allahabad	05
3.	Mr. L. C. Saikia	INTERNATIONAL JOURNAL OF POWER AND ENERGY SYSTEM	2
4	N. B. D. Choudhury	Electric Power Component and Systems, Taylor & Francis	03
		International Journal of Electric Power and Energy Systems, Elsevier	02
		Journal of Economics and International Finance	02
		Journal of ASME	01
		Journals of Electrical & Electronics Engineering Research	01
		Journal of Ambient Intelligence and Humanized Computing	01
		Journal of Computer Engineering Research (JCER)	02
Herald Journal of Electrical and Electronics Engineering	01		

(E) Seminars / Workshops / Conferences / Symposia / Short Term Courses / Training Programme Attended

Sl No	Name of Faculty	Name of Programme	Organizing Institute	Duration
1	A. K. Roy	IEEE – International Conference on Advances in Engineering, Science and Management	E G S Pillay Engineering College, Nagapattinam	30-31 March, 2012
2	Mr. D. C. Das	Five days workshop on Analog/Mixed Signal Design	NIT Silchar	16-20 January, 2012
3	Dr. A. K. Goswami	Analog/Mixed Signal Design	NIT Silchar	06-20 January, 2012
4	Dr. A. K. Goswami	Solar Energy and its Applications	NIT Silchar	29- 31 March, 2012
5	B. K. Roy	Three-Day Workshop on Solar Energy and its Applications	N I T Silchar	29-31 March, 2012
6	Dr. J. P. Mishra	IEEE 8th International Conference on Power Electronics, “ICPE2011-ECCE Asia”, Jeju, Korea	KIPE; IEEE PELS & ECCE-Asia Cooperation (CES; IEEEJ IAS; EPE)	30 May-3 April, 2011

7	Dr. J. P. Mishra	Preconference Tutorials on “Power Electronics - the intelligent interface between renewable energy systems and the grid” by Prof. Frede Blaabjerg (Aalborg Univ., Denmark)	KIPE; IEEE PELS & ECCE-Asia Cooperation (CES; IEEEJ IAS; EPE)	30 May, 2011
8	Dr. J. P. Mishra	Preconference Tutorials on “Sensorless Operation of Permanent Magnet Brushless DC and AC Drives - Basic and Novel Machine Design and Control Aspects” by Prof. Zi-Qiang Zhu (Sheffield Univ., UK)	KIPE; IEEE PELS & ECCE-Asia Cooperation (CES; IEEEJ IAS; EPE)	30 May, 2011
9	Dr. J. P. Mishra	Workshop on Analog/Mixed Signal Design	Dept. of ECE., NIT Silchar, Assam under TEQIP - II	16-20 January, 2012
10	Dr. J. P. Mishra	Workshop on “Solar Energy and its Applications”	Dept. of ME & EE, NIT Silchar, Assam under TEQIP - II	29-31 March, 2012
11	L. C. Saikia	Solar Energy and its applications	NIT Silchar	3 Days
12	L. C. Saikia	Analog and Mixed signal design	NIT Silchar	5 days
13	N. B. D. Choudhury	Solar Energy and its Application	NIT Silchar	29-31 March, 2012
14	Dr. Saurabh Chaudhury	Workshop on Creativity and Patentibility in India and Abroad	NIT Silchar	One week
15	C. Bhattacharjee	Solar Energy and its applications Creativity and innovation techniques and patenting in India and abroad	NIT Silchar	3 days 3 days
16	T. Malakar	Solar Energy and Its Application	NIT Silchar under TEQIP-II	29-31 March, 2012

3.1.3.2 Research Publications

(A) Published in : International Journals			
Sl No	Author(s)	Title	Publication details
1	A. K. Roy	GA based frequency controller for solar thermal–diesel–wind hybrid energy generation /energy storage system	Int J Electrical Power and Energy System, Vol 42, 62-279, 2012
2	A. K. Goswami, C. P. Gupta and G. K. Singh	Voltage sag assessment in a large chemical industry	IEEE Transaction in Industry Application , Vol 48 (5), 2012
3	B. K. Roy	A Smart Temperature Measuring Technique Using Thermistor A Robust Level Measuring Technique using Capacitance Level Sensor Inline Monitoring of Bottle filling Process Using Image Processing	International Journal on Engineering Science and Management, vol 1(2), 62-68, 2011 Journal International Journal of Instrumentation Science and Engineering, vol 2 (1), 1-12, 2012. International Journal on Engineering Science and Management, vol 2 (1), 33-38, 2012
4	L. C. Saikia, S. Mishra, Nidul Simha, J. Nanda	Automatic generation control of a multi area hydrothermal system using reinforced learning neural network controller	International Journal of Electrical Power & Energy Systems, Vol. 33 (4), 1101-1108, 2011
5	N. B. D. Choudhury, S. K. Goswami	Artificial Intelligence Solution to Transmission Loss Allocation Problem	Expert Systems with Applications (Elsevier), Vol 38 (4), 3757-3764, 2011

6	Saurabh Chaudhury and Anirban Dutta	Algorithmic Optimization of BDDs and Performance Evaluation for Multi-level Logic Circuits with Area and Power Trade-offs	Circuits and Systems, Scientific Research Publication, Vol. 2 (3), 217- 224, 2011
(B) Published in : National Journals			
Sl No	Author(s)	Title	Publication details
1	Chayanika Saikia, Bristi Saikia, A. K. Goswami	Pollution control in thermal power plants	Electrical India, Vol. 51(11), 98-106, 2011
2	B. K. Roy	An Improved Technique For Extending the Linearity Range of Thermistor Using ANN	Journal Instrumentation Society of India, vol. 41 (3), 2011
3	T. Malakar, N. Sinha, S. K. Goswami, A. K. Sinha	Application of NSGA-II in Solving Multiobjective Optimal Power Flow	The Journal of CPRI Vol. 7 (2), 2011
(C) Published in : International Conferences / Seminars / Workshops			
1	D. C. Das, A. K. Roy, N. Sinha	PSO Optimized Frequency Controller for Wind- Solar thermal- Diesel Hybrid Energy Generation System: A Study”	Int Conf. WCAC, 17-18 November, 2011, Malaysia
2	D. C. Das, A. K. Roy, N. Sinha	“PSO Based Frequency Controller for Wind-Solar-Diesel Hybrid Energy Generation/Energy Storage System”	ICEAS-2011, 28–30 December, 2011 Bhubaneswar, India
3	A. K. Roy	“PSO Optimized Frequency Controller for Wind- Solar thermal- Diesel Hybrid Energy Generation System: A Study”	Intl. conf. on Wisdom Computing and Communication (WCAC-2011), Malaysia, 17-18 Novemver, 2011
4	A. K. Roy	“PSO Based Frequency Controller for Wind-Solar-Diesel Hybrid Energy Generation/Energy Storage System”	Intl. Conf. on Energy, Automation, and Signals (ICEAS-2011) Bhubaneswar, India, 28–30 December, 2011
5	A. K. Goswami, C. P. Gupta, G. K. Singh	Effect of Equipment Sensitivity on Placement of FACTS Devices for Voltage Sag Mitigation	IEEE INDICON 2011 held at BITS Pilani Hyderabad Campus, 16-18 December,2011, 10.1109/INDCON.2011.6139527, pp-1- 6
6	B. K. Roy	An Intelligent Instrument For Measuring Level	IEEE conference on process automation control and computing (PACC 2011), Coimbatore, India, 20-22 July, 2011
7		Oxygen Level Monitoring in an Oxygen Cylinder	IEEE International Conference on Advances in Engineering, Science and Management, Nagapattinam, India, 30- 31 March, 2012
8		Advanced Optimized Cooling System For Air Cooled and Coolant Cooled IC Engines Using Fuzzy Logic	International Conference on Advances in Computer, Electronics and Electrical Engineering, Bombay, India, 25-27 March , 2012
9		An Improved Intelligent Temperature Measurement by RTD using Optimal ANN	International Conference on Advances in Computer, Electronics and Electrical Engineering, Bombay, India, 25-27 March, 2012
10		An Intelligent Flow Measuring Technique Using Venturi	International Conference of IAENG on Control and Automation, Hongkong, 14- 16 March, 2012
11		A Smart Displacement Measuring Technique Using Linear Variable	International Conference on Computer, Communication, Control and

		Displacement Transducer	Information Technology, Kolkata, India, 25-26 February, 2012
12		An Improved Smart Pressure Measuring Technique	The International Joint Colloquiums on Computer Electronics Electrical Mechanical and Civil, (CEMC- 2011), Muvatupuzha, India, 20-21 September, 2011
13		An Intelligent Pressure Measuring Instrument	International conference on modern trends in instrumentation and control (ICIC 2011), Coimbatore, India, 4-5 September 2011
14		Quantitative Measurement Of Pranayam By Edge Detection	International conference on modern trends in instrumentation and control (ICIC 2011), Coimbatore, India, 4-5 September, 2011
15	J. P. Mishra, Debirupa Hore, Asadur Rahman	Fuzzy logic based improved Active and Reactive power control operation of DFIG for Wind Power Generation	Available in ieeexplore.ieee.org; Page(s): 654 – 661; 2011
16	Sanjoy Debbarma, L. C. Saikia,	Application of a non integer controller in AGC of a two area thermal system under deregulated environment	IET international conference on sustainable energy and intelligence system, SEISCON, 2011
17		Effect of Fractional order controller on Automatic generation control of a multiarea thermal system	IET international conference on sustainable energy and intelligence system, SEISCON, 2011
18	C. Bhattacharjee	Improvement of Available load voltage for a constant speed WECS with fuzzy controlled DSTATCOM	ICHQP, 2012, No.186
19	S. Gope, T. Malakar	Contingency Constraint Corrective Rescheduling with the Presence of Wind Farm	20-22 July, 2011 IET Conf. Pub. / Volume 2011 / Issue CP583/ p. 137 – 142. Available in IET Digital Library (www.ietdl.org)

(D) Published in : National Conferences / Seminars / Workshops

Sl No	Author(s)	Title	Publication details
1	B. K. Roy	A Technique for extending linear range of Thermistor	National conference on computational control system and optimization (CCSO 2011), Bangalore, India, 4-5 May, 2011
2		An Intelligent Temperature Measuring Technique Using RTD	National Conference on Advanced Control in engineering systems (NACES 11), Bangalore, India, 21-23 September, 2011

(E) Award Received & Achievements

Sl No	Name of Faculty	Details of the Award / Achievements
1.	A. K. Roy	Serving as member of the National Board of Accreditation (NBA) team for accreditation of Electrical Engineering courses at different institutes in India
2	B. K. Roy	Received the “Certificate of Merit” in the 2012 IAENG International Conference on Control and Automation held at Hong Kong, 14-16, Mach, 2012 for the paper entitled ‘An Intelligent Flow Measuring Technique using Venturi’

(F) Any Other Additional Information:

Sl No	Name of Faculty	Details of the Award / Achievements
1.	A. K. Roy	Served as member of various Teaching Faculty Selection Committees

2	B. K. Roy	The only technical club, namely 'Virtual Instrument (VI) Club' at NIT Silchar was launched during 2011 under my initiation. We are guiding / offering training courses on LabVIEW, Matlab, etc to our students and helping them to take up practical projects
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3.1.4 DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

3.1.4.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
Mrs. Madhumita Paul	MTech	Radiophysics and Electronics, Nano Technology, Communication Engg etc.
FACULTY		
Professor		
Prof. F. A. Talukdar	PhD	Energy, Analog Circuit Design for Soft Computing, Power Electronics and Drives
Prof. S. Baishya	PhD	Semiconductor Devices Physics, MOS Modelling, VLSI, MEMS
Associate Professor		
Mr. P. K. Paul	MTech	Analog VLSI Design.
Ms. M. Chaudhury	MTech	Automation & Control
Ms. M. Paul	MTech	Radiophysics & Electronics
Assistant Professor		
Mr. K. L. Baishnab	MTech	Mobile and Wireless Communication System Design, Digital Signal Processing Analog CMOS Circuit Design
Mr. R. H. Laskar	MTech	Signal Processing
Mr. S. K. Gupta	MTech	Digital Signal Processing, VLSI Design
Ms. B. Bhowmic (Shome)	MTech	Power Electronics ,Solid State Device
Mr. J. Mehedi	ME	Ad-hoc and Sensor Networks, Digital System Design
Mr. Wasim Arif	ME	Communication System & MEMS
Mr. Kaushik Guha	MTech	Microwave, Antenna & RF Circuit

3.1.4.2 Research and Development

(i) PhD Programs Existing:		
SI No	Specialization Areas	
1	Semiconductor Device Modelling and Simulation	
2	Microelectronics & VLSI Design	
3	Power Electronics & MEMS	
4	Mobile Communication	
(ii) PhD done so far :		
Completed : Submitted 01		Continuing: 11
(iii) Proposed Plan for Research:		
SI No	Name of the Lab / Workshop	Purpose/linkages to an existing/new programme
1	National MEMS Design Center	Device Simulation Lab
2	Advance Electronics Lab	Circuit design and PCB design.
3	Image and Vision Lab	Development of Video surveillance system and Image Processing
(iv) Brief Descriptions of On-going Activities:		
(i)	Field #1: MOS Modelling and Simulation	
	Modelling and Simulation of FinFETs and TunFETs	
(ii)	Field #2: MEMS Design Center, Analog VLSI Design	
	Micro-Actuator	
(iii)	Field #3: Development of speech based multilevel person authentication system and Speech Processing	
(v) Thrust Areas :		
1	MEMS Design, Analog VLSI Design, Speech and Image Processing.	
(vi) New Acquisitions:		
SI No	Name of Laboratory	Equipment Details (purpose, facilities, etc.)

1	AEC Laboratory	Advance Electronics Circuit Design, PCB Design		
2	Advance Communication Lab	RF Design		
3	DSP Lab	Embedded System Development		
(vii) On-Going Research Projects				
Sponsored Research Projects (Innovation and Technology Transfer):				
Sl No	Title of the project	Sponsor	Name of P.I.	Amount (Rs.)
1	Modelling and Simulation of FinFETs	AICTE	Prof. S. Baishya	8.30 Lac(s)
2	National MEMS Design Center	DRDO	Prof. S. Baishya	---
3	Investigation of some binary Metal Oxide material for Resistive Switching Memory Applications	AICTE	Prof. F. A. Talukdar	18.40 Lac(s)
5	Development of speech based multilevel person authentication system	DIT, MHRD	Mr. R. H. Laskar	57,93,000 Lac(s)
6	SMDP-III	DIT, MHRD	Mr. S. K. Gupta	50,00,000 Lac(s)

3.1.4.3 Visits Abroad by Faculty Member

Sl No	Faculty Name	Place Visited
1	Dr. Jishan Mehedi	Dhaka, Bangladesh
2	Prof. S. Baishya	Dhaka, Bangladesh, Dubai.
3	Mr. S. K. Gupta	Kuala Lumpur, Malaysia
4	Mr. W. Arif	Dhaka, Bangladesh
5	Mr. K. Guha	Dhaka, Bangladesh

3.1.4.4 Invited Lectures by Faculty Members

Sl No	Faculty Name	Details
1	S. Baishya	“One day national workshop on recent trends in electronics and communication,” organized by ECE dept of Mizoram university, Aizawl on 01, November, 2011

3.1.4.5 Chairing of any technical session by Faculty Members

Sl No	Faculty Name	Details
1	S. Baishya	International Conference (ICAEE 11) during 19-21 December, 2011

3.1.4.6 Theses: MTech

Sl No	Name of Scholar	Title of the Thesis	Name of Guide
1	Victor Pal	Ultra thin body partial SOI MOSFET with suppressed floating body effect	S. Baishya + R. H. Laskar
2	Rajsekhar Kar	Optimization of hetero-material gate tunnel source (PNPN) MOSFET	B. Bhoumik+ S. Baishya
3	Janhvi Sen	Optimization and length scaling of tunnel FET	B. Bhoumik + S. Baishya
4	Achinta Baidta	Simulation And analysis of lightly doped ultrathin triple metal double gate (TM/DG) mosfet with high-K dielectric for diminished short channel effects	S. Gupta
5	Amit Jain	Ultra low voltage low power cmos LNA Design.	K. L. Baishnab
6	A. Panigrahi	Design of low voltage ,low power four Quadrant anlog multiplier in weak inversion	P. K. Paul

3.1.4.7 Seminars/Workshops/Conferences/Symposia/ShortTermCourses Attended

Sl No	Name of Faculty	Name of programme	Organizing Institute	Duration
1	Mr. S. K. Gupta	Exposition of DIT's R&D initiatives in the area of Information Technology-North-East Focus	IITG	01
		7 th ZOPP workshop	IITK	02
		Simulation and Optimization of Lightly-Doped	MNIT.	

		Ultra-Thin Triple Metal Double Gate (TM-DG) MOSFET with High-K Dielectric for Diminished Short Channel Effect	Allahabad	02
2	W. Arif	NPMASSTools Workshop MEMS CoventorWare	IITG	02
3	Dr. Jishan Mehedi	National Conference on Advanced Communication Systems and Design Techniques (NCACD) 2011, Haldia, West Bengal	Haldia Institute of Technology	02
4	K. L. Baishnab	IEEE lecture Series on Analog/Mixed Signal Design	IITB	01
5		Effective teaching	NITS	05
6		Solar energy and its applications	NITS	03

3.1.4.8 Seminars / Workshops / Conferences / Training Programme Organised:

Sl No	Name of Faculty	Name of Programme	Sponsoring Agency	Duration
1	K. L. Baishnab	One day Talk of technology incubation Centre and its influence to its stake holder	TEQIP	6 Jan, 2012
2		Talk on Radar Signal Processing	TEQIP	7 Jan, 2012
3	K. L. Baishnab (Co-ordinator) W. Arif K. Guha (Organizer)	Workshop on Analog/Mixed Signal Design	TEQIP	16-20 January, 2012

3.1.4.9 Research Publications

A. Published in International Journals			
Sl No	Author(s)	Title	Publication details
1	J. Mehedi, M. K. Naskar	A Fuzzy Based Distributed Algorithm for Maintaining Connected Network Topology in Mobile Ad-Hoc Networks Considering Freeway Mobility Model	Journal of Computing and Information Technology, vol.20, 2012 (accepted)
2	J. Mehedi M. K. Naskar,	Fuzzy Based Algorithms for Connectivity Maintenance in MANET	Lambert Academic Publishing (LAP), Germany, ISBN: 978-3-8484-2930-1, 2012
4	K. L. Baishnab, F. A. Talukdar	“A Low Power Current Mode CMOS Winner-Take-All (WTA) Circuit”	Int. J. on Recent Trends in Engineering and Technology, Vol. 6 (1), 2011
5	M. Choudhury	Synthesis of PVP embedded ZnO quantum dots and the investigation of maths nol sensing properties	S. S Nath, M. Choudhury, R. K Nath
6	M. Choudhury, R. K. Nath	ZnO: PVP Quantum dot Ethanol Sensor	Journal of Sensor Technology, Vol.1, 86-90, 2011
7	S. K. Gupta, S. Baishya	Design considerations of Electrically Induced Source/Drain Junction SOI MOSFETs for the Reduced Short Channel and Hot electron Effects	IACSIT International Journal of Computer and Electrical Engineering (IJCEE), ISSN: 1793-8198 (Online Version); 1793-8163 (Print Version), Vol.3 (6), 869-872, December 2011
8	S. K. Gupta, Gaurab Gunjan Pathak, Debajit Das, Chandan Sharma	Design and Simulation of a Two Stage OPAMP Using DG MOSFETs for Low Power and Low Voltage Applications	International Journal of Wisdom Based Computing, Vol. 1 (3), 60-63, December 2011
9	S. K. Gupta, Achinta Baidya, S. Baishya	Simulation and Analysis of Gate Engineered Triple Material Double Gate MOSFETs for Diminished Short Channel Effects	SERSC International Journal of Advanced Science and Technology, ISSN: 2005-4238, Vol. 38, 15-24, January, 2012
10	Brinda Bhowmick,	An Analytical Model for Fringing	International Journal of VLSI

	S. Baishya	Capacitance in Double gate Hetero Tunnel FET and Analysis of effect of Traps and Oxide charges on Fringing Capacitance	design and Communication Systems, vol. 3 (1), 1-11, February 2012
11		A Physics-based Model for Electrical Parameters of Double gate Hetero-material Nano Scale Tunnel FET	International Journal of Applied Information Systems (IJ AIS), 25-32, Vol. 1 (3), February 2012
12		Influence of Hetero material gate dielectric of double gate tunnel FET on electrical Characteristics	International Journal of Wisdom Based Computing, Vol. 1 (3), 28 – 31, December 2011
13	S. K. Gupta, Kaushik Guha, S. Baishya	A Two Dimensional Surface Potential Model of Double Material Double Gate Surround Gate (DMDG-SG) MOSFETs	Proceedings of the International Conference on Artificial Intelligence and Machine Learning (AIML) 2011, Dubai, United Arab Emirates, 143 – 147, 12-14 April, 2011
14	M. Paul, P. Bhattacharjya, B. Das & S. Rani	Dependence of second order nonlinear susceptibility and efficiency on Shape of CdS quantum Dot	Journal of Electrical and Electronics Research Vol.3 (7), 134-142, September, 2011
B. Published in International Conferences / Seminars / Workshops			
SI No	Author(s)	Title	Publication details
1	Satyanand Namana, S. Baishya	Threshold Voltage Modelling of Drain/Source Edge Effect on Double Gate MOS Transistor	Proceedings of the International Conference of Artificial Intelligence and Machine Learning (AIML) 2011, Dubai, UAE, 155-159, 12-14 Apr, 2011
2	B. Bhowmick, S. Baishya, J. Sen	Capacitance Measurement of a SOI Tunnel FET	Proceedings of the International Conference on Advances in Electrical Engineering (ICAEE), Dhaka, Bangladesh, 264 – 267, 27- 29 December, 2011
3	B. Bhowmick S. Baishya	Heterogate Double Gate Dielectric Tunnel FET With Record High on/off Current Ratio	Proceedings of the International Conference on VLSI, Communication, and Instrumentation (ICVCI), Kottayam, India, 7–9, Apr 2011
4		Performance Analysis of Double Hetero-gate Tunnel Field Effect Transistor	Proceedings of the Second International Conference on Advances in Electrical and Electronics (AEE), Noida, India, 157 – 160, December, 2011
5	B. Bhowmick, S. Baishya, R. Kar	Length Scaling of Hetero-gate Dielectric SOI PNP TFET	Proceedings of the India Conference (INDICON), Hyderabad, India, 1 – 4 December, 2011
6	S. K. Gupta, S. Baishya	3D-TCAD Simulation Study of an Electrically Induced Source/Drain Cylindrically Surrounding Gate MOSFETs for Reduced SCEs and HCEs	Proceedings of the third International Conference on Electronics Computer Technology (ICECT), Kanyakumari, India, vol. 2, 429 – 432, Apr, 2011
7	S. K. Gupta, Achinta Baidya, S. Baishya	Simulation and Optimization of Lightly-Doped Ultra-Thin Triple Metal Double Gate (TM-DG) MOSFET with High-K Dielectric for Diminished Short Channel Effects	Proceedings of the International Conference on Computer and Communication Technology (ICCCT) 2010, MNNIT Allahabad, India, 221 – 224, September 2011
8	R. H. Laskar, J. Mehedi, Priyesh Sethia, Sriyans Patwa, A. Sarkar, G. Snigdha	Offline Handwritten Character Recognition using Artificial Neural Network	ICEE2011, Dhaka, Bangladesh, 302 – 306, 19-21 December, 2011

4	W. Arif, S.K.Saynal	Designing of a fast LUT based DDA FIR system with adaptive Co-efficient for Spectrum Sensing in Cognitive Radio	AIML-11, ISSN: 1687-4846,1687-4854
5	W. Arif, N.M.Rao	Distributed Cooperative Spectrum Sensing Based Cognitive Radio Prototype for reliable Spectrum sharing	ICAEE-2011 ISBN 978-974-33-4342-0, 51-55
6	K. Guha, A. Mukherjee	“RF controlled vehicle tracking system”	International conference held at Dhaka, Bangladesh on 27- 29 December, 2011

C. Published in National Conferences / Seminars / Workshops

SI No	Author(s)	Title	Publication details
1	M. Paul, P. Bhattacharjya, B. Das.	Application Of some characteristics of Quantum Dots in the field of optical Communication	UGC, BRNS, DST INSA sponsored National Seminar on Frontier research in Physics 22-24 December 2011
2	S. K. Gupta, S. Baishya	Physics Based Surface Potential Modeling of triple metal Cylindrical Surround Gate (TMCSG) MOSFETs	National Conference on Advances in Computer Communication and Embedded Systems (ACCES-2012), M. M. M. Engineering College, Gorakhpur (U.P.), India, 12-13 Apr ,2012
3	D. Saikia, D. Bashist, M. Verma, B. S. Jyani, W. Arif	Study and Design of Cyclostationary Feature Detection for Spectrum Sensing in Cognitive Radio	Proceedings of the workshop on Analog/ Mixed signal design
4	S. Pal Chodhury, Bandita Sarma, J. Mehedi, M. K. Naskar	A Centralized Movement Control Algorithm for Wireless Mobile Adhoc Networks	National Conference on Advanced Communication Systems and Design Techniques (NCACD) 2011, Haldia, West Bengal
5	S. Nandi, S. Pandey P. Sonowal S. Kashyap W. Arif	Study and design of microtweezer using capacitive comb drive actuator	Proceedings of the workshop on Analog/ Mixed signal design

3.1.4.10 Paper Reviewed

SI No	Name of Faculty	Name of Journal or Conference or Name of Organizing Institute	Number of Papers Reviewed
1	S. K. Gupta	IEEE Students' Conference on Electrical, Electronics and Computer Science 2012 (SCEECS 2012)	3
2	S. Baishya	IEEE Transactions on Electron Devices	1
3	S. Baishya	International Conference IMPACT 2011 organized by AMU	3

3.1.4.11 Award Received & Achievements

SI No	Name of Faculty	Details of the Award / Achievements
1	K. L. Baishnab	Accepted for final round in Cadence Design Contes
2	R. H. Laskar, M. Choudhury, K. Chakraborty, S. Chakraborty	Best paper award at International conference on Information Processing (ICIP) 2011, Bangalore “A joint DWT-DCT based robust watermarking algorithm for ownership verification of digital images,” <i>in Proc. of CCIS, Springer</i> , 482-491, 2011

3.1.5. DEPARTMENT OF ELECTRONICS & INSTRUMENTATION ENGINEERING

3.1.5.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
S. H. Laskar	MTech, PhD (submitted)	Instrumentation & Control, Sensors & Transducers, Measurements, Acquisition of Signals, Power Quality Monitoring Instrumentation, Biomedical Signal Processing,

3.1.5.2 Research and Development

(i) PhD Programs Existing: Nil				
SI No	Specialization Areas			
1	Transducers & Sensors			
2	Microelectronics & VLSI Design			
3	Biomedical Signal Processing			
4	Instrumentation, Industrial Instrumentation			
5	Data acquisition			
6	Process Control			
(ii) PhDs done so far : Nil				
Completed : Nil			Continuing: 0	
(iii) Proposed Plan for Research:				
SI No	Name of the Lab / Workshop	Purpose/linkages to an existing/new programme		
1	Instrumentation Lab	Lab experiments, projects and research works in the dept and on institutional basis		
2	Process Control Instrumentation Lab	-do-		
3	VLSI lab	-do-		
(iv) Brief Descriptions of On-going Activities:				
(i)	Set up of a new state-of-the-art Instrumentation lab with modern equipments, data acquisition systems, sensors and softwares.			
(ii)	Set up of process control instrumentation lab based on international standard equipments & meters and systems.			
(v) Thrust Areas :				
1	Sensors, Instrumentation, Signal Processing			
(vi) New Acquisitions:				
SI No	Name of Laboratory	Equipment Details (purpose, facilities, etc.)		
1	VLSI laboratory	1. Nano-boards NB 3000 as an Evaluation cum Development Processing 2. Video Starter kit-High End V4 SX (DSP slices) based with High End Digital Camera and related Accessories for Image Processing and Live Video Processing 3. Interfacing Equipments (a) Stepper motor (b) Traffic Light Controller (c) Webcam (d) Seven Segment Display (e) Keypad (f) LCD Module (g) DC Motor Controller 4. Nano-board NB2 for High End Project and Research Activities based on Spartan 3A device 5. Xilinx Development Board 6. Circuit Simulation S/W and PCB Design equipment (MITS) 7. Circuit Simulation & PCB layout equipment		
(vii) On-Going Research Projects- Nil				
Sponsored Research Projects (Innovation and Technology Transfer):				
SI No	Title of the project	Sponsor(s)	Name of P.I.	Amount(Rs.)
1	Intelligent Instrumentation Lab (Already completed)	MHRD under TAT, TAPTEC project	S. H. Laskar	7.00 lac(s)

3.1.5.3 Visits Abroad by Faculty Member

Sl No	Faculty Name	Places Visited
1	S. H. Laskar	Southampton(UK)-2007; Penang (Malaysia)-2010; Soest (W. Germany)-2011; Boston, Cambridge (MIT & Harvard univ.)(USA)- 2012

3.1.5.4 Theses: MTech

(A) THESES: MTech :			
Sl No	Name of Scholar	Supervisor	Title of Thesis
1	Anu Kr. Das	S. H. Laskar	Stand Alone Solar PV Module using PSCAD
2	Santa Saha	S. H. Laskar	An Intelligent PQ monitoring
3	Asish Roy	S. H. Laskar	An Intelligent and Efficient Solar PV Module

3.1.5.5 Seminars/Workshops/Conferences/Symposia/Short Term Courses Attended

Sl No	Name of Faculty	Name of programme	Organizing Institute	Duration
1	Mr. S. H. Laskar	National Conference on Power, Instrumentation & Control (PICON)	Z.H.College of Engg & Tech, AMU, Aligarh	12-13 February, 2011
2		UPEC 2011, Soest W. Germany)	IEEE & Westphalia Univ.,Germany	5-8 September, 2011
3		International Conference (IMPACT)	IEEE & AMU, Aligarh	17-19 December , 2011
4		LabVIEW Mechatronics(LAM)	NI & MED, AMU, Aligarh	6 April, 2011
5		Analog/Mixed Signal Design	NIT Silchar	16-20 Jan, 2012

3.1.5.6 Patents Granted: Two

Sl No	Name of Faculty	Title of Patent
1	Mr. S. H. Laskar, S. J. Arif	A Rotating Magnetic Field Based High Resolution Measurement of Velocity and Acceleration of Seismic Vibration,” Patent Application number 778/DEL/2011A, Indian Official Journal of the Patent Office, Issue No. 17/2011, p-7116, 29 Apr, 2011
2		A Rotating Magnetic Field Based Ultra Fast Measurement of Speed,” Patent Application No.777/DEL/2011A, Indian Official Journal of the Patent Office, Issue No. 18/2011, p-8219, 06 May, 2011

3.1.5.7 Laurels & Distinctions:

Sl No	Name of Faculty	Details
1.	Mr. S. H. Laskar	Elected as IEEE Senior member (2012)

3.1.5.8 Research Publications

A. Published in International Journals			
Sl No	Author(s)	Title	Publication details
1	S. H. Laskar	A frequency invariant digital phase angle meter	AMSE transactions (UK), Vol.5 (5), 57-64, 1990
2	N. Sinha S. H. Laskar	Design of a microprocessor based novel braking of three phase induction motor	IEEE Energy Management and Power Delivery, 1995, Vol. 2, 620-623. ISBN: 0-7803-2981-3
3	S. H. Laskar, S. J. Arif, Imdadullah	Instantaneous Angular Speed Measurement for Low Speed Machines	IISTE journal on Innovative Systems design & Engineering (USA), ISSSN 2222-1727, Vol.3, No.5(2012)

4	S. H. Laska, Mohibullah	PQ issues and need of intelligent PQ monitoring in the smart grid environments	Int. Journal of Emerging Tech & Applied Engg (IJETA), ISSN 2250-2459, Vol.2 (09), 2012
B. Published in International Conferences / Seminars / Workshops			
Sl No	Author(s)	Title	Publication details
1	S. H. Laskar, Mohibullah	PQ monitoring by Software development	World Academy of Science(WASET conf. ICEPSE (Penang, Malaysia, 24-26 February, 2010) proceedings, 62, 2010, 586-591
2		Power Quality Monitoring by Virtual Instrumentation using LabVIEW	IEEE Xplore, UPEC 2011 proceedings, 1-6. ISBN:978-3-8007-3402-3(19 January, 2012)
3	S. H. Laskar, S. J. Arif, Imdadullah	Measurement of machine vibrations by using a fast rotating magnetic field	IEEE Xplore, IMPACT 2011 proc, 288-291; ISBN 978-1-4577-1105-3, December, 2011.
4	S. H. Laskar, Sanaullah, Mohibullah	Power Quality Monitoring in Sustainable Energy Systems	Sustainable Systems & Technology (ISSST) 2012, IEEE Intern. Symposium. D.O.I.: 10.1109/ISSST2012.6228002 1-6, 2012
C. Published in National Conferences / Seminars / Workshops			
Sl No	Author(s)	Title	Publication details
1	S. H. Laskar, Jamil Ahmad	Oxford Solar initiative and the Oxford Climate Change Action Plan	National Conf. on Renewable Energy (NCRE 2010), proc. 23-26 March, 2010
2	S. H. Laskar, Mohibullah	PQ issues and Impacts of Poor PQ on Global Economy with a special reference to India	PICON proceedings, 1-6 February, 2011)
D. Patents : published in Indian Official Journal of Patents			
Sl No	Author(s)	Title	Publication details
1	S. J. Arif, S. H. Laskar	A Rotating Magnetic Field Based High Resolution Measurement of Velocity and Acceleration of Seismic Vibration	Patent Application number 778/DEL/2011A, Indian Official Journal of the Patent Office, Issue No. 17/2011, p-7116, 29 April, 2011
2	S. H. Laskar, S. J. Arif	A Rotating Magnetic Field Based Ultra Fast Measurement of Speed	Patent Application No.777/DEL/2011A, Indian Official Journal of the Patent Office, Issue No. 18/2011, p-8219, 06 May, 2011

3.1.5.9 Staff

A. Technical staff: -

Sl No	Name	Designation	Qualification
1	Mr. Ruhul Amin Laskar (Contract)	Technical Asstt.	BTech

B. Office staff: -

Sl No	Name	Designation	Qualification
1.	Mr. Sudipta Kumar Bhattacharjee	Stenographer	HSSC, Stenography
2.	Mr. Santanu Chakraborty(Contract)	Office asstt(Special officer)	HSLC, Graduate(army)
3.	Mr. Faizul Hussain Laskar	Peon	Class IX

3.1.6 DEPARTMENT OF MECHANICAL ENGINEERING

3.1.6.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
Prof. R. D. Misra	PhD	Thermal Engineering, Refrigeration & Air Conditioning, Alternative Fuels, IC Engine
FACULTIES		
Professor		

Name	Qualification	Specialization Area(s)
Prof. N. V. Deshpande	PhD	Production and Thermal Engineering
Prof. R. Gupta	PhD	Thermo-Fluid, Design of two-phase Flow Systems, Non-conventional Energy, CFD, Soft-computing
Prof. K. M. Pandey	PhD	Combustion, IC Engine, CFD, Gas Dynamics, Numerical Methods
Prof. A. C. Paul	PhD	Design
Prof. R. D. Misra	PhD	Thermal Engineering, Refrigeration & Air Conditioning, Alternative Fuels, IC Engine
Associate Professor		
Name	Qualification	Specialization Area(s)
Dr. K. Chakraborty	PhD	Machine Tools, Material Science
Mr. D. H. Das	MTech	Thermal Engineering
Dr. K. K. Sharma	PhD	Machine Design, Renewable Energy Systems
Dr. P. K. Patowari	PhD	Manufacturing
Assistant Professor		
Name	Qualification	Specialization Area(s)
Mr. P. L. Choudhury	MTech	Design
Mr. L. Roy	MTech	Tribology, Vibration, Kinematics
Mr. S. K. Pattanayak	ME	Production Engg.
Mr. S. Chatterjee	MME	Applied Mechanics, Energy, Alternative Fuels
Faculty Appointment, Promotion, Retirement, Re-Employment Andresignation		
Faculty promotion	Prof. R. Gupta (Joined as the Director of NIT Srinagar on Deputation from 15-10-11)	
Faculty retirement	Mr. A. Biswas (Expired on 11.12.2011)	
Faculty resignation	Dr. D. Datta (Resigned on 25-11-2011)	

3.1.6.2 Research and Development

(i) PhD Programs existing:		
Sl No	Specialization Areas	
1	Renewable Energy	
2	Alternative Fuels	
3	Combustion	
4	Computational Fluid Dynamics	
5	Thermo-Fluid	
6	Energy, productivity & quality management	
(ii) PhDs done so far:		
Completed: 04		Continuing: 07
(iii) Proposed Plan for research:		
Sl No	Name of the Lab / Workshop	Purpose/linkages to an existing/new programme
1	Energy (Petroleum) Engg. Lab	Alternative Fuels Research, IC Engine Research
2	Gas Dynamics Lab.	Wind Tunnel, Air-flow Bench, Fluid Mechanics Laboratory
3	Advanced Manufacturing Lab	Research on Non-traditional/Advanced Manufacturing Process and this is linked to RPS of AICTE titled: Experimental Investigation of Surface Integrity in Electrodischarge Machining (EDM)
(iv) Brief descriptions of on-going activities:		
(i)	Field # 1: Alternative fuels	
	(a)	Engine performance & emission characteristics with Bio-fuels
	(b)	Engine combustion characteristics study with CFD
(ii)	Field # 2: Renewable Energy	
	(a)	Experimental & computational works
(iii)	Field # 3: Combustion in supersonic flow	
	(a)	Supersonic nozzle
(iv)	Field # 4: International collaborative works on Operational Research	
	(a)	Spatial aggregation and compactness of census areas in Canada with a multi-objective genetic algorithm. Collaboration with Instituto Superior Técnico, Portugal, and University of Western

		Ontario, Canada	
	(b)	Efficient health geographies for England: A multi-objective optimisation approach. Collaboration with Instituto Superior Técnico, Portugal, and London School of Economics and Political Science, UK	
	(d)	Satellite image segmentation through multi-objective metaheuristics. Collaboration with Instituto Superior Técnico, Portugal, and Complutense University of Madrid, Spain	
	(e)	Facility layout with minimum cost. Collaboration with Instituto Superior Técnico, Portugal, and Nancy School of Mines, France	
(v)	Field #5: International collaborative works on Optimization		
	(a)	Integer-coded differential evolution for design problems. Collaboration with Instituto Superior Técnico, Portugal, and Nancy School of Mines, France	
	(b)	Integer-coded particle swarm optimization for design problems. Collaboration with Instituto Superior Técnico, Portugal, and Nancy School of Mines, France	
	(c)	Graph partitioning by multi-objective real-valued metaheuristics. Collaboration with Instituto Superior Técnico, Portugal, and Nancy School of Mines, France	
	(d)	M-ary metrics for comparing performances of multi-objective optimizers. Collaboration with Instituto Superior Técnico, Portugal, and Nancy School of Mines, France	
(vi)	Field #6: Advanced manufacturing processes		
	(a)	Study on Surface integrity in EDM	
(vii)	Field #7: MEMS		
	(a)	Design and analysis of Electrothermal actuators for MEMS applications using COMSOL	
(viii)	Field #8: Energy, productivity & quality management		
	(a)	Experimental & computational works	
(v)	Thrust Areas:		
1	Renewable energy		
2	Alternative fuels		
3	Combustion		
4	CFD		
5	Non-traditional machining		
(vi)	New Acquisitions:		
Sl No	Name of Laboratory	Equipment Details (purpose, facilities, etc.)	
1	IC Engine Lab	Carbon Residue Apparatus, Cloud point and Pour point apparatus, Copper strip corrosion Apparatus, Precision Weigh Balance, Viscosity and Density meter, Heating Mantle	
2	Advanced Manufacturing Lab	A Die Sinking EDM machine	
(vii)	ON-GOING RESEARCH PROJECTS		
Sponsored Research Projects (Innovation and Technology Transfer):			
Sl No	Title of the project	Sponsor(s)	Amount (Rs.)
1.	On establishing an institute of excellence for advanced studies, training and research in mechanical engineering at lead institution IIT Guwahati. NIT Silchar and NERIST Itanagar are the two other participating institutions	AICTE, A nationally co-ordinated project	4.25 Lac(s)
2	Energy. Quality and Productivity audit of KVIC based industries of Barak Valley of Assam	KVIC	5.106 Lac(s)
3	Extraction of pineapple fibres for making commercial products	KVIC	5.681 Lac(s)
4	Experimental Investigation of Surface Integrity in Electro discharge Machining (EDM)	RPS of AICTE	20.00 Lac(s)
5	National MEMS Design Center (NMDC) Project of National Program on Micro and Smart Systems (NPMAS)	DRDO, GOI	Software support only
6.	Development of an Enzymatic Process for Production of Microalgaecal Biodiesel	AICTE	10.4 Lac(s)

3.1.6.3 Visits Abroad by Faculty Member

Sl No	Faculty Name	Details
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1.	Dr. K. M. Pandey	IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, 11-17 November ,2011, Denver, USA
2	Dr. A. C. Paul	For attending “International Conference on MATLAB Applications in Engineering and Technology (ICMAET-2012)” held at Singapore during 24-25 February, 2012 For attending “International Conference on Mechanical and Industrial Engineering (ICMIE)” held at Singapore during 25-26 February, 2012.
3	Dr. R. D. Misra	Attended the International Conference on “2011 IEEE First Conference on Clean Energy and Technology CET”, in Kuala Lumpur, Malaysia, 27-29 June, 2011 Attended the International Conferences on Emerging Trend in Engineering & Technology (i) “Mechanical & Industrial Engineering (ICMIE-2012)” and (ii) “MATLAB Applications in Engineering & Technology (ICMAET-2012)”, in Singapore, 24-26 February, 2012
4	Dr. P. K. Patowari	To present paper at World Congress on Engineering 2011 (WCE 2011) organized by IAENG and held at Imperial College, London, U.K. during 6-8 July, 2011 To present paper at 6 th Symposium on Advances in Science and Technology (6 th SASTech) held at Kuala Lumpur, Malaysia, during 24-25 March, 2012
5	Mr. S. K. Pattanayak	International Conference on MATLAB Applications in Engineering and Technology (ICMAET-2012) held at Singapore during 24-25February, 2012. International Conference on Electrical and Electronics Engineering (ICEEE – 2012) held at Singapore during 24-25 February, 2012 For attending “International Conference on Mechanical and Industrial Engineering (ICMIE)” to be held at Singapore during 25-26 February, 2012
6.	Sushovan Chatterjee	International Conference on Wisdom Computing and Communications (WCAC 2011, Kauala Lumpur, Malaysia, on 17 November, 2011

3.1.6.4 Invited Lectures by Faculty Members

Sl No	Faculty Name	Details
1.	Dr. K. M. Pandey	Delivered a lecture on “Numerical analysis of the temperature distribution in a work roll in cold working process, NITTR Chandigarh during 15-16 March, 2012 in Ntional Conference on Recent Advances in Manufacturing Technology

3.1.6.5 Chairing of any technical session by Faculty Members

Sl No	Faculty Name	Details
1.	Dr. K. M. Pandey	Chaired a Technical Session in IMECE2011, 2011 ASME International Mechanical Engineering Congress and Exposition, 11-17, 2011, Denver, USA Chaired a Technical Session on 22 November 2011 in the 11 th Asian International Conference on Fluid Machinery and the 3 rd Fluid Power Technology 21-23 November, 2011, Department of Mech. Engg., IIT Madras, Chennai, India Chaired a Technical Session in ICER-11 in December 2011 at NIT Surat Chaired a Technical Session in NITTR Chandigarh during March 15-16, 2012 in a National Conference on recent advanced in Manufacturing Technology
2	Dr. R. D. Misra	Chairing a session in the “International Conference on MATLAB Applications in Engineering and Technology (ICMAET-2012)” held at Singapore during 24-26 th February, 2012
3.	Dr. A. C. Paul	Chairing a session in the "International Conference on Mechanical and Industrial Engineering (ICMIE)" held at Singapore during 25-26 th February, 2012

3.1.6.6 List of PhD thesis submitted and degree awarded:

Sl No	Name of Scholar	Title of Thesis
1	Dr. A. P. Singh (Guide: Prof. K. M. Pandey)	Numerical investigation of combustion chamber designfor supersonic and hypersonic flow regimes
2	Dr. M. S. Murthy (Guide: Prof. R.	Soapnut oil as a biofuel source for compression ignition engine: A feasibility investigation through engine performance, emission, and thermodynamic

	D. Misra)	analysis
3	Dr. Kaushal Kumarsharma (Guide: Prof. R. Gupta)	Performance Analysis of Savonius rotor and Combination of Savonius Darrieus rotors through Experimental and Computational Approaches
4.	Dr. Sanjay Kumar Dey(Guide: Prof. R. Gupta)	Studies on Productivity, Energy, Safety, Environmental Impact and CFD Analysis on Withering Process of CTC Tea Manufacturing

3.1.6.7 Theses: MTech

(a) Thermal Engineering

SI No	Name of Scholar	Title of the Thesis
1	T. Sivasakthivel	Numerical Simulation of Mixing and Combustion of a Hydrogen Fueled Scramjet Combustor using Strut Injectors
2	Surya Kumar	Computational Simulation and Effects of Swirl Angles on No _x generation in 2D Swirl Burner of Gas Turbine
3	Oveepsa Chakraborty	CFD Analysis of Cavity based Combustion of Hydrogen in low supersonic region of flow
4	K. K. Siva Kumar Reddy	Numerical Simulation of flow and Heat Transfer in Combustion chamber of Rocket Engines
5	Shahnawaj Khan	Computation Analysis of Erosion Effect due to Cavitation in Injecstpr Nozzle of CI Engine
6	Ashok Kumar	An experimental study of compression ignition engine performance and emission characteristics using bio-fuel
7.	Bapi Sarkar	Cfdanalysis of Combined Savonius and Darrieus Rotor
8.	Abhijit Sinha	Design and Analysis of Different Types of Energy Efficient Stoves for the Silk Production unit of Assam under Khadi and Village Industries Commission (KVIC) using CFD
9.	Saswata Sarkar	Analysis of Combined Three Bucket-Savonius- Three Blanded Darrieus Wind Rotor using Artificial Neural Network
10.	Apu Roy	CED Analysis of Finned Tube Heat Exchanger for Waste Heat Recovery Applications
11.	Bachu Deb	Analysis of a Two-Bucket Helicalsavonius Rotor With Shaft and a Two Bucket Helical Savonius Rotor Without Shaft at 45 ⁰ Twist Angel

(b) Design and Manufacturing

SI No	Name of Scholar	Title of the Thesis
1	N. Pradeep Kumar	Numerical Simulation of Thin Film Lubricated Journal Bearing an Unsteady Analysis
2	Sujoy Chakraborty	Numerical Analysis of Performance of Centrifugal Pumps
3	Nabarun Biswas	CFD Analysis of Multi-Lobe Bearings at Unsteady Conditions
4	Eswara Krishna Mussada	Surface Modification of Steel Using Tungsten-Copper Powder Metallurgical Green Compact Electrodes in EDM
5	Akash Limbraj Suryawanshi	An Experimental Study of Powder Suspension EDM Using Rotating Tubular Electrode Attachment and Tools with Offset Holes
6.	Saptarshi Dutta	Mixed-Integer Metaheuristics for Unit Commitment Problem
7.	Maneswar Rahang	Some Studies on the Cutting Tool Condition During Machining

3.1.6.8 Books / Chapters Published

SI No	Name of Author(s)	Title	Publisher	Year
1.	R. Gupta, S. K. Dey	Tea production in Barak Valley, Assam: Issues & Challenges. In: North East India- Approaches Towards Sustainable Development	Southern Economist, Bangalore, India, ISBN 978-81-	May 2011

			910247-1-5	
2	R. Gupta, A. Biswas	Comparative Performance of a 3-bladed Airfoil Chord H-Darrieus & a 3-bladed Straight Chord H-Darrieus Turbines using CFD. In: CFD Modeling in Development of Renewable Energy Applications. ISBN: 978-1466231313	International Energy and Environment Foundation (IEEF)	2011
3	Nitul Kalita, Rahul Dev Misra	CFD Analysis of Room Air Distribution: For Comfort Air Conditioning	LAP LAMBERT Academic Publishing GmbH & Co. KG USA, U.K.	2011

3.1.6.9 Paper Reviewed

Sl No	Name of Faculty	Name of Journal or Conference or Name of Organizing Institute	Number of Papers Reviewed
1.	Prof. Rajat Gupta	Sharjah International Conference on Nuclear & Renewable Energies for 21 st Century (SHJ-NRE11)	3
		Journal of Engineering & Technology Research (JETR)	1
2.	Dr. K. M. Pandey	Reviewed one paper for Journal of Mechanical Science and Technology, Springer Publications	1
		Reviewed one paper for IMECE2010, 2011 ASME International Mechanical Engineering Congress and Exposition, November 11-17, 2011, Denver, Colorado, USA (IMECE 2011-62310)	1
		Reviewed one paper for the 11 th Asian International Conference on Fluid Machinery and the 3rd Fluid Power Technology Exhibition. Paper ID: AICFM_ES_001, November 21-23, 2011, Department of Mechanical Engineering IIT Madras, Chennai, India	1
		Reviewed one paper for the international Journal Educational Research, paper no-ER-12-010 on 16 January 2012.(www.interestjournals.org)	1
		Reviewed one paper of Educational Research on 25-2-2012.Journal of Engineering and Technology Research-reviewed one paper	1
		Universal Journal of Education and General Studies http://universalresearchjournals.org/ujegs	1
		Journal of Research in International Business and Management (formerly, International Research Journal of Management and BusinessStudies) www.interestjournals.org/JRIBM	1
		International Research Journal of Library, Information and ArchivalStudies(IRJLIAS) EMail:irjlias@intersjournals.org or irjlias.submit@interestjournals.org www.interestjournals.org	1
		Reviewed one journal paper of IJET T858 on 1December, 2011.(www.ijetch.org)	1
Reviewed one paper for the international Journal Educational Research, paper No.-ER-12-013 on 23 January, 2012. (www.interestjournals.org)	1		
3.	Dr. P. K. Patowari	International Journal of Advanced Manufacturing Technology, Springer	4

3.1.6.10 Seminars / Workshops / Conferences / Training Programme Attended

Sl No	Name of Faculty	Name of Programme	Organizing Institute	Duration
1.	Dr. P. K.	World Congress on Engineering 2011	IAENG held at Imperial	6-8 July,

	Patowari	(WCE 2011)	College, London, U.K.	2011
		International Conference on Computational Methods in Manufacturing (ICMCM 2011)	IIT Guwahati	15-16 December, 2011
		6 th Symposium on Advances in Science and Technology (6 th SASTech)	Khavaran Institute of Higher Education, Iran, held at Kuala Lumpur, Malaysia	24 -25Mar, 2012
2	L. Roy	Optimization using Genetic Algorithm	IIT Guwahati	29Feb - 2Mar , 2012
3.	Mr. S. Chatterjee	Short-term course on Recent trends in fuels and combustion	IIT Guwahati	29 Aug -2 Sep , 2011
		Workshop on “Engineering optimization using Matlab and Excel”	IIT Guwahati	29 Feb -02 Mar, 2012
		Workshop on “Solar energy and its application”	NIT Silchar	29-31Mar, 2012

3.1.6.11 Seminars/Workshops/ /ShortTermCourses/Training Programme Organised

Sl No	Name of Faculty	Name of Programme	Sponsoring Agency	Duration
1.	Dr. P. K. Patowari	Special lecture on Solar Energy by Secretary General and member of Solar Energy Society of India (SESI)	TEQIP-II	3 Mar, 2012
		A three day workshop on Solar Energy and its Applications		29 -31March, 2012

3.1.6. 12 Research Publications

A. Published in : International Journal			
Sl No	Author(s)	Title	Publication details
1	R. Gupta, K. K. Sharma	“Flow Physics of a three-bucket Savonius rotor using Computational Fluid Dynamics(CFD)”	International journal of Research In Mechan Engineering and and Technology(IJRMET), October 2011 ISSN: 2249-5762
2.		“Flow physics of a combined darrieus-savonius rotor using computational fluid dynamics (CFD)”	Int. Res. J. Eng. Sci. Technol. Innov Vol.1 (1), 1-13 April, 2012
3.	R. Gupta, S. K. Dey, A. Sinha	Analysis of Tea Withering Process through Fuzzy Logic Approach.	Global Advanced Research Journal of Engineering, Technology and Innovation (Accepted)
4.	R. Gupta, S. K. Dey	Energetic and exergetic analysis of the withering heater of a tea industry	Journal of Engg. Science and Technology (Accepted)
5.	R. Gupta, S. K. Dey	Analysis of temperature and velocity distributions over a withering trough for CTC tea manufacturing units using computational fluid dynamics	British journal of applied science and technology (Accepted)
6	K. M. Pandey, Kalita P Barman, Rajkhowa K., Saikia S. N	"CFD Analysis of Wall Injection with Large Sized Cavity Based Scramjet Combustion at Mach 2	<i>International Journal of Engineering and Technology</i> Vol. 3 (2). 116-121 April, 2011
7	K. M. Pandey, A. P. Singh	"Numerical Analysis of Supersonic Combustion by Strut Flat Duct Length with S-A Turbulence Model"	<i>International Journal of Engineering and Technology</i> Vol. 3 (2), 193-198, 2011
8.	Amrit Sarkar	Structural Analysis of Nuclear Fuel Element with Ansys Software, , International Journal of	Vol.3 (2) 87-192, April 2011, Published by IACSIT, International Association for Computer Science and Information

		Engineering and Technology	Technology, Singapore
9.	Geeta Kumari, K. M. Pandey	"Analysis of an Individual's Behaviour in Work Environment for a Better Output	," <i>International Journal of Innovation, Management and Technology</i> Vol. 2 (2), 156-161, 2011
10	K. M. Pandey, K Sahu Azad B., S. P. , Prajapati M.	"Computational Analysis of Mixing in Strut Based Combustion at Air Inlet Mach number 2,"	<i>International Journal of Environmental Science and Development</i> Vol. 2 (1), 73-80, 2011
11.	K. M. Pandey, A. P. Singh	","Numerical Analysis of Combustor Flow Fields in Supersonic Flow Regime with Spalart-Allmaras and k-ε Turbulence Models"	International Journal of Engineering and Technology Vol. 3 (3), 208-214, June, 2011
12		CFD Analysis of Turbulence Combustion	International Journal of Fluids Engineering, ISSN 0974-3138 Vol 3, (2) 2011, pp.173-186, International Research Publication House, http://www.irphouse.com
13.	S. N. Pandey, K. M. Pandey	Transient CFD Analysis of Multi-Lobe Bearings for A Gas Turbine at 60000 RPM, Vol.3 No.5, October 2011, PP.512-517	International Journal of Engineering and Technology, Published by IACSIT, International Association for Computer Science and Information Technology, Singapore
14.	N. Biswas, K. M. Pandey	Numerical Studies on Effects of Blade Number Variations on performance of centrifugal Pumps	International Journal of Engineering and Technology Vol.3(4), 410-416, August 2011 ,Published by IACSIT, International Association for Computer Science and Information Technology, Singapore
15	S. Chakraborty, K. M. Pandey	Transient analysis of 3-lobe bearings at 20,000 RPM for a gas turbine	INTERNATIONAL JOURNAL OF APPLIED ENGINEERING RESEARCH (IJAER) ISSN 0973-4562, Vol.6 (10), 1247-1261(2011), Research India Publications
16.	K. M. Pandey, Sujoy Chakraborty, A. P. Singh	Numerical analysis of Centrifugal Pumps with Fluent Software	INTERNATIONAL JOURNAL OF APPLIED ENGINEERING RESEARCH (IJAER) ISSN 0973-4562, Vol. 6 (9), 1117-1126, (2011), Research India Publications
17.	K. M. Pandey, T. Sivasakthivel	CFD Analysis of Mixing and Combustion of a Hydrogen Fueled Scramjet Combustor with a Strut Injector by Using Fluent Software	International Journal of Chemical Engineering and Applications, Vol.3, (5), October 2011,446-453, published by IACSIT, International Association for Computer Science and Information Technology, Singapore. Vol.2, no.5, October 2011
18.	Geeta Kumari, K. M. Pandey	Studies on Stress Management: A Case Study of Avtar Steel Industries, Chennai, India	International Journal of Innovation, Management and Technology 2011, 360-367
19.	K. M. Pandey, A. P. Singh	"Computational analysis of Supersonic combustion with Co-axial Jet flow",	International Journal of Environmental Research and Development (JERAD), Vol. 06 (2), Oct-Dec 2010, 344-355.(0.157)
20.		"Numerical Analysis of Hypersonic Combustion with Cavity Based Injection with Finite Rate Chemistry Model "	Accepted in Journal of Science and Technology, Published by Assam University, Silchar, Assam
21.	K. M. Pandey, Anup Baishya,	"A Comparative Study of Cantilevered Ramp Injector with	"International Journal of Chemical Engineering and Applications vol. 2(5),

	Vishwa Bhushan Singh	Standard k-ε and RNG k-ε Turbulence Models	352-358, 2011
22.	K. M. Pandey, G. Kumar, D. Das, D. Deka, A. Surana, H. J. Das	CFD analysis of an isolated main helicopter rotor for a hovering Flight, IRACST-Engineering Science and Technology:	An International journal (ESTIJ), Vol. 2(1), 131-137, Feb, 2012
23.	K. M. Pandey, D. Deka, A. Surana	Numerical Analysis Of Helicopter Rotor at 400 Rpm	International Journal of Soft Computing and Engineering (IJSCE), ISSN: 2231-2307, Vol-2(1), 253-258, March 2012 (impact factor 0.52)
24.	K. M. Pandey, A. P. Singh	Numerical Simulation of Wall Injection with Cavity in Supersonic Flows of Scramjet Combustion	International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Vol. 2 (1), 142-150, March 2012. (impact factor 0.52)
25.	K. M. Pandey, Jagannath Rajshekharan, Sukanta Roga	Wall Static Pressure Variation In Sudden Expansion In Flow Through De Laval Nozzles At Mach 1.74 And 2.23 In Circular Ducts Without Cavities: A Fuzzy Logic Approach	International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Vol. 2 (1), 303-310, March, 2012. (impact factor 0.52)
26.	K. M. Pandey, S. Chakraborty, K. Deb	CFD Analysis of Flow through Compressor Cascade	International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Vol. 2 (1), 362-371, March 2012. (impact factor 0.52)
27.	K. M. Pandey, Sushil Kumar, Jyoti Prakash Kalita	Wall Static Pressure variation in sudden expansion in cylindrical ducts with cavities for supersonic flow for Mach 1.58 and 2.06: A Fuzzy Logic Approach,	International Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Vol. 2(1), 372-378 March 2012 (impact factor 0.52)
28.	P. Bose, K.M. Pandey	Recent Advances in Solid Fuels for Rockets of Multi Barrel Rocket Launchers	IRACST – Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol. 2(1), 83-89, 2012
29.	Ravindra Kumar, K. M. Pandey.	CFD Analysis of Circulating Fluidized Bed Combustion	IRACST – Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol. 2 (1), 2012, 163-174
30.	K. M. Pandey. Upendra Kumar, Subodh Deb Verma	CFD Analysis of Flow Field inside the Expansion Chamber of Internal Combustion Engines	International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249–8958, Vol. 1 (3), 25-29, February 2012
31.	P. Bose, K. M. Pandey	Analysis of Thrust Coefficient in a Rocket Motor,	International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Vol.1 (3), 30-33 February, 2012
32.	K. M. Pandey, Ravindra Kumar	Numerical Analysis of Coal Combustion in Circulating Fluidized Bed.	"International Journal of Chemical Engineering and Applications vol. 2(6), 390-394, 2011
33.	K. M. Pandey, T. Sivasakthivel	CFD Analysis of a Hydrogen , " Fueled Mixture in Scramjet Combustor with a Strut Injector by Using Fluent Software	International Journal of Engineering and Technology vol. 3(2), pp.109-115, 2011
34.	R. D. Misra, M. S. Murthy	Blending of additives with bio-diesels to improve the cold flow properties, combustion and emission performance in a Compression ignition engine – A review	Renewable and Sustainable Energy Reviews, 15 (1), 2413–22, 2011

35.		Jatropa-The future fuel of India	Renewable and Sustainable Energy Reviews, 15 (2), 2011, pp. 1350-1359
36.		Performance, emission and combustion evaluation of soapnut oil blends with diesel in a compression ignition engine	Fuel 90 (7) 2011 pp. 2514–18
37.		The Application of Energy and Exergy Analyses to Identify Suitable Blend of Karanja Biodiesel and Diesel for Usage in Compression Ignition Engine	International Journal of Engineering Science and Research (IJESR), 3 (1), 627-632, 2012, ISSN: 2230-8504
38.	P. K. Patowari, Partha Saha, Prasanta K. Mishra	Taguchi Analysis in Surface Modification Technique using W-Cu P/M Sintered Electrodes in EDM and Characterization of the Deposited Layer	International Journal of Advanced Manufacturing Technology, Vol. 54, pp 593–604, 2011
39.	P. K. Patowari, U. K. Mishra, P. Saha, P. K. Mishra	Surface Integrity of C-40 Steel Processed with WC-Cu Powder Metallurgy Green Compact Tools in EDM	Materials and Manufacturing Processes, Vol. 26, 668–676, 2011
40.	P. K. Patowari, M. M. Nath, A. S. Bharali, C. K. Singh	Comparative Study of Different Micro-Thermal Actuators for Micro-Electro-Mechanical-System Application	Journal of Advanced Manufacturing Systems, Vol. 11(1), 17–26, 2012
41.	Mr. S. Chatterjee	Breathing crack in beam and cantilever using contact model dynamic analysis-a study	Journal of Wisdom Based Computing (IJWBC) Year: 1(3):39-42, 2011

B. Published in International Conferences / Seminars / Workshops

Sl No	Author(s)	Title	Publication details
1.	R. Gupta, B. Deb	CFD analysis of two-bucket helical Savonius rotor with shaft at 45 ^o twist angle	Sharjah International Symposium of Nuclear & Renewable Energies for 21 st Century (SHJ-NRE11), April 3-5, 2011, College of Sciences, University of Sharjah, UAE
2.	S. K. Dey, R. Gupta	Impact Analysis of a Tea Industry- a Case Study	Accepted in 2 nd International Conference on Environment Science & Engg., ICESE-2012, April 7-8, 2012, Bangkok, Thailand
3.	R. Gupta, K. K. Sharma	Performance measurement of a two-bladed combined Darrieus-Savonius rotor	Accepted in Power Engineering and Automation Conference (PEAM 2012)
4.	K. M. Pandey, S. S. Vel	CFD Analysis of Scramjet Combustor Using Strut with Circular and Planer Injector presented and	published in IMECE2011, ASME International Mechanical Engineering Congress and Exposition, November 11-17, 2011, Denver, Colorado, USA (IMECE 2011-62310)
5.	S. K. Reddy, K. M. Pandey, A. P. Singh	“Numerical Simulation with k-ε Turbulence Model for Combustion Chamber of Rocket Engines”	The 11 th Asian International Conference on Fluid Machinery and the 3 rd Fluid Power Technology Exhibition. Paper ID: AICFM_ES_001, November 21-23, 2011, IIT Madras, Chennai, India
6.	A. P. Singh, Oveepa Chakraborty, K. M. Pandey	CFD Analysis of Cavity Based Combustion of Hydrogen at Mach number 1.2”	The 11 th Asian International Conference on Fluid Machinery and the 3 rd Fluid Power Technology Exhibition. Paper ID: AICFM_ES_002, November 21-23, 2011, IIT Madras, Chennai, India
7.	P. Bose, K. M. Pandey	Structural failure analysis of rocket motors	4 th International Congress on Environmental Research, SVNIT Surat,

			India, December 15-17, 2011
8.	K. M. Pandey, S. N. Pandey	Comparative study of CO ₂ capture and storage technology : A Review	4 th International Congress on Environmental Research, SVNIT Surat, India, December 15-17, 2011
9.	K. M. Pandey, P. L. Choudury, N. Pradeep. Kumar	Transient analysis of a thin film lubricated journal bearing at 1500 rpm.	4 th International Congress on Environmental Research, SVNIT Surat, India, December 15-17, 2011
10.	K. M. Pandey, Surya Kumar	Computational Simulation and Effect of Swirl Angle on Soot Formation of 2D Swirl Burner in Gas Turbine	4 th International Congress on Environmental Research, SVNIT Surat, India, December 15-17, 2011
11.	B. Priya Ranjan, P. Sujit Kumar, Paul Arun Chandra	Design, Modeling and Analysis of a Piston and Connecting Rod Assembly	International Conference on Mechanical and Industrial Engineering (ICMIE - 2012) Proceedings of ICETET, p.p. 41-46
12.	Zaman Mehdiuz, S. K. Pattanayak, A. C. Paul	Diagnosis of Causes of Perennial Vibration in a Centrifugal Pump of an Oil Refinery Using DMAIC Approach: A Case Study	International Conference on Mechanical and Industrial Engineering (ICMIE - 2012) Proceedings of ICETET, p.p. 35-40
13.	Papiya, S. K. Bhowmik, Pattanayak, A. C. Paul	Minimization of Total Makespan of Hybrid Flowshop Scheduling with Genetic Algorithm Using MATLAB	International Conference on MATLAB Applications in Engineering and Technology (ICMAET-2012) Proceedings of ICETET, p.p. 112-117
14.	R. D. Misra, M. S. Murthy	Comparative Performance Evaluation of Karanja Vegetable oil and Karanja Biodiesel Blends with Diesel in C.I. Engine	In the Proceedings of the International Conference on "2011 IEEE First Conference on Clean Energy and Technology CET", Kuala Lumpur, Malaysia, June 27-29, 2011
15.	R. D. Misra, M. S. Murthy	The Application of Energy and Exergy Analyses to Identify Suitable Blend of Karanja Biodiesel and Diesel for Usage in Compression Ignition Engine	In the Proceedings of the 2 nd National Seminar on "Renewable Energy Technology: Issues and Prospects", in NERIST, Nirjuli, India, Sept. 2-3, 2011, pp. 627-632
16.	R. D. Misra, J. Mahakud, J. Jena	Exergy Analysis for Biomass Co-Firing Coal Fuel Based Thermal Power Plant	In the Proceedings of the International Conference on "Emerging Trend in Engineering & Technology: Mechanical & Industrial Engineering", in Singapore, Feb. 24-26, 2012, pp. 64-70
17.	R. D. Misra, J. Jena	Thermoeconomic Optimization of an Aqua-Ammonia Vapour Absorption Refrigeration System using Structural Method	In the Proceedings of the International Conference on "Emerging Trend in Engineering & Technology: MATLAB Applications in Engineering & Technology", in Singapore, Feb. 24-26, 2012, pp. 104-111
18.	P. K. Patowari, J. Chatterjee , P. S., Ramachandra, Ashwin P. G. S. Baishya	Analysis of a Comb Type Microactuator Used in Micro Thermal Switches	World Congress on Engineering 2011 (WCE 2011), London, U.K., July 6-8, 2011, pp 1471-1474
19.	Eswara M. Krishna, P. K. Patowari	Development of a 3D Process Model for EDM using Powder Metallurgical Compact Electrodes for Surface Modification	International Conference on Computational Methods in Manufacturing (ICMCM2011), Indian Institute of Technology Guwahati, December 15-16, 2011, pp 377-384
20.	P. K. Patowari, G. Dutta,	Design, Analysis and Comparison of Multilayer Electro Thermal	6 th SASTech 2012, Kuala Lumpur, Malaysia, March 24-25, 2012

	K. Kalita, G. C. T. Reddy, S. K. Saikia, H. Kalita	Micro Actuators for MEMS Application	
21	B. Priya Ranjan, P. Sujit Kumar, Arun Chandra Paul	Design, Modeling and Analysis of a Piston and Connecting Rod Assembly	International Conference on Mechanical and Industrial Engineering (ICMIE-2012) Proceedings of ICETET, p.p. 41-46
22.	B. P. Pattanaik, N. B. Kumar, P. Sujit Kumar.	Performance & Emission Studies on a Single Cylinder Direct Injection Diesel Engine Using Nahar Oil Biodiesel & Diesel Blends as Alternative Fuel	International Conference on Mechanical and Industrial Engineering (ICMIE - 2012) Proceedings of ICETET, p.p. 59-63
23.	Mehdiuz Zaman, S. K. Pattanayak, A. C. Paul	Diagnosis of Causes of Perennial Vibration in a Centrifugal Pump of an Oil Refinery Using DMAIC Approach: A Case Study	International Conference on Mechanical and Industrial Engineering (ICMIE - 2012) Proceedings of ICETET, p.p. 35-40
24.	P. Bhowmik, S. K. Pattanayak, A. C. Paul	Minimization of Total Makespan of Hybrid Flowshop Scheduling with Genetic Algorithm Using MATLAB	International Conference on MATLAB Applications in Engineering and Technology (ICMAET-2012) Proceedings of ICETET, p.p. 112-117
25.	Debashish Dash, S. K. Pattanayak, Rout Manoj Kumar	Mobile Controlled Robotic Arm	International Conference on Electrical and Electronics Engineering (ICEEE - 2012) Proceedings of ICETET, p.p. 93-99
26.	S. Chatterjee, S. Chatterjee, Bidyot Doley	Breathing crack in beam and cantilever using contact model dynamic analysis-a study	International Conference on Wisdom Computing and Communications (WCAC 2011)
C. Published in : National Conferences / Seminars / Workshops			
Sl No	Author(s)	Title	Publication details
1	Bose P. And Pandey K.M.	Analysis of manufacturing processes of various solid propellants and preferred solid propellants for multi barrel rocket launcher application	NITTR Chandigarh during March-15-16, 2012 in a national conference on recent advances in Manufacturing Technology

3.1.7 DEPARTMENT OF CHEMISTRY

3.1.7.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
Dr. M. A. Zaman	PhD	Energy and Environment
FACULTY		
Professor		
Prof. A. K. Sil	PhD	Environmental Chemistry specific to water
Associate Professor		
NIL		
Assistant Professor		
Dr. S. S. Dhar	PhD	Green Chemistry
Dr. M. A. Zaman	PhD	Energy and Environment
Dr. P. Barman	PhD	Synthetic Organic Chemistry
Dr. (Mrs) R. Rano	PhD	Coal Utilization

3.1.7.2 Research and Development

PhD Programs existing:	
Sl No	Specialization Areas
1	Energy & Environment, Green chemistry, Reaction mechanism and Kinetics
2	Synthetic Organic Chemistry, Coal utilization
PhDs done so far :	

Completed: Nil		Continuing: 06		
Proposed Plan for Research:				
SI No	Name of the Lab / Workshop	Purpose/linkages to an existing/new programme		
1	NA	PhD programmes will continue in the existing areas		
Brief descriptions of on-going activities :				
(i)	Field #1: Research and Development			
	(a)	Energy & Environment, Green chemistry and Reaction mechanism		
	(b)	Synthetic Organic Chemistry, Coal utilization		
(ii)	Field #2: MSc Programme			
	(a)	Applied Chemistry started in July 2009		
Thrust Areas:				
1	Green Chemistry and Energy and fuels			
New Acquisitions :				
SI No	Name of Laboratory	Equipment Details (purpose, facilities, etc.)		
1	MSc Laboratory	Major equipment yet to be purchased		
On-Going Research Projects				
Sponsored Research Projects (Innovation and Technology Transfer):				
SI No	Title of the project	Sponsor(s)	Name of P.I.	Amount (Rs.)
1	Solvent free oxidations and bromination of organic substrates catalyzed and/or promoted by peroxo-metal complexes	DST, New Delhi	Dr. S. S. Dhar	8.52 Lacs
2	Studies of Co-operative assistance of nucleophilic substitution reactions at disulphide bridge	AICTE	Dr. P. Barman	10.00 Lacs
3	Development of Surface modified adsorbents for the removal of Cr (VI) and Fe (III) from freshwater	AICTE	Dr. M. A. Zaman	10.00 Lacs
4	Solvent free oxidations and brominations of organic substrates catalyzed and / or promoted by peroxo – metal complexes	DST- SERC	Dr. S. S. Dhar	8.52 Lacs
Theses: MSc				
SI No	Name of Scholar	Title of the Thesis	Name of Guide	
1	Mukul Kalita 09-2-8-108	A New Green Method of Synthesis of Organic Ammonium Tribromides using Ammonium Persulfate as Oxidant under Solvent-free Condition	Dr. S. S. Dhar	
2	Manas Pratim Saikia 09-2-8-107	A Green Method for the Synthesis of 2-Substituted Benzimidazoles using Ammonium Chloride as a catalyst	Dr. S. S. Dhar	
3	Manas jyoti Sarma	Synthesis of substituted 1-benzylsulfanyl-2-[aryldiazenyl] benzene and oxidative approach towards thio-ether moiety.	Dr. P. Barman	
4	Mr. Prasanta Gogoi	Synthesis of 2-(N-aryl) aminobenzo[d]-1,3-thiazoles from aromatic amines involving a thiourea derivative	Dr. P. Barman	
5	Mr. Juned Khanam Ahmed	Desulphurization of Diesel by selective adsorption on activated coconut husk and rice husk	Dr. M. A. Zaman	
6	Mr. Biki Mahanta	Minimization of Organic Load from Wastewater obtained from paper Industry	Dr. M. A. Zaman	
7	Mr. Ruhul Amin Reza	Assessment of iron conc. of ground water in and around Silchar town and feasibility study for removal of iron by using tea waste as an adsorbent	Dr. M. A. Zaman Dr. A. K. Sil	

Seminars / Workshops / Conferences / Training Programme Attended

SI No	Name of Faculty	Name of Programme	Organizing Institute	Duration
1.	Dr. P. Barman	A Three-Day Workshop on Solar	Department of ME & EE,	3 days

		Energy and Its Applications	NIT Silchar	
2.	Dr. M. A. Zaman	A Three-Day Workshop on Solar Energy and Its Applications	Department of ME & EE	3 days
3	Dr. S. S. Dhar	A Three-Day Workshop on Solar Energy and Its Applications	Department of ME & EE	3 days
4		Celebration of International Year of Chemistry (IYC 2011)	Cachar College, Silchar	One day

3.1.7.3 Paper Reviewed

Sl No	Name of Faculty	Name of Journal or Conference or Name of Organizing Institute	Number of Papers Reviewed
1.	Pranjit Barman	Journal of Molecular Structure	1
		synthetic communications	1
2	Md. Ahmaruzzaman	1. International Journal of Environmental Science and Technology	05
		2. Chemical Engineering Journal	02
		3. Environmental Progress and Sustainable Energy	04
		4. Environmental Engineering Science	04

3.1.7.4 Research Publications

A. Published in International Journal			
Sl No	Author(s)	Title	Publication details
1.	Pranjit Barman, Saibal Kanti Bhattacharjee, Tirtha Bhattacharjee	One-pot oxidation of alanine and its ethyl ester with a mild oxidant 4'-methylazobenzene-2-sulfonyl bromide	Synthetic Communications 2011, 41, 2870-2875
2.	Md. Ahmaruzzaman	Rice Husk and Its Ash as Low-Cost Adsorbents in Water and Wastewater Treatment	Ind. Eng. Chem. Res., 2011, 50 (24), pp 13589–13613
3.	Md. Ahmaruzzaman	Activated Neem Leaf: A Novel Adsorbent for the Removal of Phenol, 4-Nitrophenol, and 4-Chlorophenol from Aqueous Solutions	J. Chem. Eng. Data, 2011, 56 (7), pp 3004–3016
4.	Md. Ahmaruzzaman	Industrial wastes as low-cost potential adsorbents for the treatment of wastewater laden with heavy metals	Advances in Colloid and Interface Science, <u>Volume 166, Issues 1–2</u> , 10 August 2011, Pages 36–59
5.	Madhudeepa Dey, Krishnaji Deb and Siddhartha S Dhar	VO(acac) ₂ catalyzed condensation of <i>o</i> -phenylenediamine with aromatic carboxylic acids/aldehydes under microwave radiation affording benzimidazoles	Chinese Chemical Letters, 2011, 22, 296
6.	Madhudeepa Dey, Siddhartha S. Dhar & Mukul Kalita	Novel Method of Synthesis of Quaternary Ammonium Tribromides and Investigation of Catalytic Role of Benzyltrimethylammonium Tribromide in Oxidation of Alcohols to Carbonyl Compounds	Synthetic Communications (2012) (doi:10.1080/00397911.2012.666694)
7.	Madhudeepa Dey & Siddhartha S. Dhar	Synthesis of Quaternary Ammonium Tribromides: A Novel Green Approach	Green Chemistry Letters & Reviews (2012) (doi. 10.1080/17518253.2012.692820)
B. Published in National Journal			
Sl No	Author(s)	Title	Publication details
1.	Pranjit Barman, Tirtha Bhattacharjee	Azobenzene-2-sulfonyl thiocyanate: Aqueous medium synthesis and sulfonylation of resorcinol tautomer	Journal of Science forum, Karimganj College 2011, II, 41-45

C. Published in International Conferences/ Seminars/Workshops			
SI No	Author(s)	Title	Publication details
1.	Pranjit Barman, Tirtha Bhattacharjee	Synthesis of substituted 2-(N-aryl) aminobenzothiazoles via an intramolecular cyclization of corresponding symmetrical thioureas using newly synthesized tetrabutylammonium tribromide (TBATB) as brominating agent	14 th International Conference of International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity 2011 organized by S.V. NIT
2.		Synthesis of unsymmetrical thioethers and their oxidation by using hydrogen peroxide in different solvent systems	14 th International Conference of International Academy of Physical Sciences (CONIAPS-XIV) on Physical Sciences Interface with Humanity 2011 organized by S.V. NIT
3.	Pranjit Barman, Prasanta Gogoi, Tirtha Bhattacharjee	Synthesis of substituted 2-(N-aryl) aminobenzothiazoles via intramolecular cyclization of corresponding symmetrical thioureas using TBATB as brominating agent	18th International Conference (Post ISCBC) Perspective and Challenges in Chemical and Biological Sciences organized by IASST Assam and ISCB Lucknow
4.	Madhudeepa Dey Siddhartha Sankar Dhar	'Expeditious Green Synthesis of Benzimidazoles using VO(acac) ₂ as catalyst under microwave irradiation'	14 th International Conference of International Academy of Physical Sciences on "Physical Science Interface with Humanities" at SVNIT, Surat
5.		'A Green Protocol for the Organic Transformation of Aldehydes to Carboxylic acids'	International Conference on Global Ecosystem, Biodiversity and Environment Sustainability in the 21 st Century" at Assam University during February 15-17, 2012
D. Published in National Conferences/ Seminars/Workshops			
SI No	Author(s)	Title	Publication details
1.	Tirtha Bhattacharjee, Pranjit Barman	Azobenzene-2-sulphenyl thiocyanate: Aqueous medium synthesis and sulphenylation of resorcinol tautomer.	Abstract book 2011

3.1.8 DEPARTMENT OF PHYSICS

3.1.8.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
Dr. Asim Roy	MSc, PhD	Experimental Condensed Matter Physics
FACULTY		
Professor	NIL	
Associate Professor		
Dr. (Mrs) B. Choudhury	PhD	Condensed Matter Physics (Liquid Crystals)
Assistant Professor		
Dr. A. Roy	PhD	Semiconductor nanostructures and high-k gate dielectric for nano-scaled MOSFETs
Dr. A. Bhattacharjee	PhD	Condensed Matter Physics, Raman Spectroscopy, Thin Films
Dr. Smrutisikha Bal	PhD	Polymer Nano Composite
Dr. Subrat Kumar Barik	PhD	Ferroelectric Materials

3.1.8.2 Research and Development

(i) PhD Programs existing :				
Sl No	Specialization Areas			
1	Semiconductor nanostructures and high-k gate dielectric for nano-scaled MOSFETs			
2	Field of Liquid Crystals			
3	Polymer Nano Composite			
4	Ferroelectric Materials			
(ii) Ph Ds done so far :				
Completed : 01			Continuing: 08	
(iii) Proposed Plan for Research:				
Sl No	Name of the Lab / Workshop	Purpose		
1	Multifunctional Materials	Synthesis and Characterization of ferroelectric and dielectric materials		
2	Polymer nano-composite	Processing and Characterization of Polymer nano-composite		
3	Liquid Crystal	Characterization of Liquid Crystal		
4	Microscience	Growth of Semiconductor nanostructure High-k dielectric for nano-scaled devices		
(iv) On-Going Research Projects				
Sponsored Research Projects (Innovation and Technology Transfer):				
Sl No	Title of the project	Sponsor(s)	Name of P.I.	Amount (Rs.)
1.	Study of Bi-Layered Pervoskite oxides: Thin films for non-volatile ferroelectric memory application	AICTE	Dr. Asim Roy	17.50 lakhs
2.	Investigation of some binary metal oxide materials for resistive switching memory applications	AICTE	Prof. F A. Taulkdar (PI) & Dr. Asim Roy (Co-PI)	19.50 lakhs
3.	Modernization of thin films. (MORDOB)	AICTE	Dr. Asim Roy (HOD)	10.00 lakhs
4.	Synthesis & Characterization of BST-BFO Composites for Devices	AICTE	Dr. B. Choudhury (PI) & Dr. S. K. Barik (Co-PI)	16.00 Lakhs
5.	Development of Carbon nanotube Reinforced Polymer Composites for Naval Applications	DRDO (Naval Research Board)	Dr. Smrutisikha Bal	19.38 lakhs

3.1.8.3 Paper Reviewed:

A. Published in National Journals		
Sl No	Name of Faculty	Details
1	Dr. S. K. Barik	Advanced Materials Letters (VBRI Press) Applied Physics A: Material Science & Processing (Springer)
2	Dr. S. Bal	eXPRESS Polymer Letters, Journal of Composite Material

3.1.8.4 Research Publications:

B. Published in International Journals			
Sl No	Author(s)	Title	Publication details
1	S. K. Barik, R. N. P. Choudhary, A. K. Singh	Ac impedance spectroscopy and conductivity studies of $Ba_{0.8}Sr_{0.2}TiO_3$ ceramics	Advanced Materials Letters 2 (2011) 419-424
2	S. K. Bera, S. K. Barik, R. N. P. Choudhary, P. K. Bajpai	Electrical and magnetic properties of $(BiNa)_{1/2}(FeV)_{1/2}O_3$	Bulletin of Material Science 35 (2012) 47-51
3	S. K. Barik, S. K. Bera	Electrical and magnetic properties of $(BiLi)_{1/2}(FeV)_{1/2}O_3$	Applied Mechanics and Materials 110 (2012) 5437-5441
4	S. Bal, S. S. Samal, U. K. Mohanty	Mechanical and Microstructural Analysis of Carbon nanotube Composites Pretreated at Different Temperatures	American Journal of Material science, Vol. 1(1), 2011, pp. 5-11

5	Suchismita Datta Sarkar, Basana Choudhury, Malay Kumar Das	Phase transition and some physical properties of binary mixtures of two nematogenic compounds showing induced smectic phase	Phase Transitions, Vol. 85 , Issue 1-2, pages 85-95 (2012)
6	S. Datta Sarkar, Th. K. Devi, B. Choudhury, M. K. Das	Induced Smectic Phase in a Binary Mixture of Nematogens	Mol.Cryst. Liq. Cryst. Vol. 557, Issue 1, pages 134-143 (2012)
7	Suchismita Datta Sarkar, Basana Choudhury	Density, Optical and Static Dielectric Studies of a Nematogenic Tolan Compound	Molecular Crystals and Liquid Crystals Vol. 543, Issue 1, pages 214/[980]-222/[988] (2011)
8		Optical Microscopy, X-Ray Diffraction, and Dielectric Permittivity Studies in Binary Mixtures of Nematogens Showing Induced Smectic Phase	Physics Research International Vol. 2011 , Article ID 786849 (2011)
9	A. Roy, A. Dhar, S. K. Ray	Characteristics of Strontium Bismuth Tantalate Film with ZrO ₂ buffer Layer for Non-Volatile Memory Application	Integrated Ferroelectrics Pp.119-124, Vol.124, Issue no.1 2011
10	N. Roy, M. Nath, A. Roy, S. K. Ray, A. Dhar	Optical Characteristics of Pulsed Laser Deposited Ba _{0.8} Sr _{0.2} TiO ₃ Thin Films Grown on Fused Quartz Substrate	AIP Conference Proceeding 1451, 139 (2012); doi: 10.1063/1.4732393

C. Published in National Journals

SI No	Author(s)	Title	Publication details
1	S. Datta Sarkar, B. Choudhury	Static dielectric studies on two liquid crystalline polar-nonpolar compounds and their eutectic mixture	Assam University Journal of Science & Technology Vol 7, II, 13-17 (2011)

3.1.8.5 Published in Conferences / Seminars / Workshops:

(i) International Conference:

SI No	Author (s)	Title	Publication details
1	A. Roy, A. Dhar, S. K. Ray	Effect of erbium dopant on the band gap energies of rf sputtered Ba _{0.8} Sr _{0.2} TiO ₃ thin films	ISIF 201, Cambridge University, Cambridge, UK
2	S. Bal, J. P. Borah, C. Bergheim	Microscopic analysis of mechanical properties of aligned carbon nanotube/epoxy composite	ICANN 2011, IIT GUWAHATI. December 8-10, 2011
3	S. K. Barik, S. Bera	Electrical and magnetic properties of (BiLi) _{1/2} (FeV) _{1/2} O ₃	International Conference on Physics Science and Technology (ICPST 2010), December 28-30, 2010, Hong Kong, China
4	S. Tewari, A. Bhattacharjee	Studies on Structural, Electrical and Dielectric properties of Thermally evaporated Cadmium Sulphide (CDs) Thin films.	Solar Asia 2011, Institute of Fundamental Sciences, Kandy, Sri Lanka, 28-30 July, 2011
5	S. P. Choudhury, A. Bhattacharjee, S. Bal	Carbon Nanotube Dispersed Liquid Crystal Medium: A State of the Art	International Conference on Nanotechnology, ICNANO 2011, Delhi University, Delhi, 18-21 Dec, 2011
6	N. Kumari, A. Ghosh, S. Tewari, A. Bhattacharjee	Studies on Structural, Electrical Properties of Sintered SnO ₂ pellets and Dielectric	International Conference on Nanotechnology, ICNANO 2011, Delhi University, Delhi, 18-21 Dec, 2011
7	S. P. Choudhury, A. Bhattacharjee, S. Bal	Carbon Nanotubes making a pathway in the generation of Solar Energy	IAWNMEA, Jadavpur University, Kolkata, 29-31 Dec, 2011

(ii) National Conference:

SI No	Author (s)	Title	Publication details
1	Th. Kiranmala Devi, B. Choudhury, A. Bhattacharjee, and R. Dabrowski	Studies of birefringence and order parameter of a nematic liquid crystal	National Seminar on Frontiers of Research in Physics, 22-24 December, 2011. Dept. of Physics, Karimganj College
2	N. Kumari, A. Ghosh, S.Tewari, A. Bhattacharjee	Comparative Studies on electric and dielectric properties of sintered undoped and CuO doped ZnO pellets at room temperature	National Seminar on Frontiers of Research in Physics, 22-24 December, 2011. Dept. of Physics, Karimganj College
3	N. Kumari, A. Ghosh, S.Tewari, A. Bhattacharjee	Dielectric Studies on sintered SnO ₂ : Effect of SrO doping	National Seminar on Frontiers of Research in Physics, 22-24 December, 2011. Dept. of Physics, Karimganj College
4	N. Kumari, A. Ghosh, S.Tewari, A. Bhattacharjee	Studies on Frequency dependent conduction mechanism in thermally evaporated cadmium Sulphide (CdS) thin films.	National Seminar on Frontiers of Research in Physics, 22-24 December, 2011. Dept. of Physics, Karimganj College
5	Smrutisikha Bal	Mechanical characterization of epoxy composite doped aligned carbon nanotubes	National conference on processing and characterization of materials (NCPCM 2011), NIT Rourkela 2-3 December, 2011
6	Thingujam Kiranmala Devi, Suchismita Datta Sarkar, Basana Choudhury	Induced smectic phases in binary mixtures of pure nematic liquid crystals (CPPB + ME5O.6	18 th National conference on Liquid Crystals 15-17 th Nov' 2011. Deptt. Of Physics NERIST, NIRJULI, ITANAGAR, Arunachal Pradesh
7	Suchismita Datta Sarkar, Basana Choudhury	Dielectric Anisotropy Study of Binary Liquid Crystalline Mixtures in Induced smectic phase	National seminar on frontiers of research in physics 22-24 th Dec, 2011, Dept. of Physics, Karimganj College

3.1.8. 6 List of PhD thesis submitted and degree awarded:

SI No	Name of Scholar	Title of Thesis	Status
1	Suchismita Datta Sarkar	Studies on some liquid crystalline compounds and their Binary mixtures along with Nano Dispersed liquid crystalline compound	Provisional Ph. D degree was awarded on 01.11.2011

3.1.8.7 Invited Lectures by Faculty Members

SI No	Faculty Name	Details
1.	Dr. S. K. Barik	U.G.C. sponsored National Seminar on Recent Advances on Material Science (RAMS-2011), 24-25, November 2011, Betnoti College (North Odisha University), Mayurbhanj Odisha, India

3.1.8.8 Visits Abroad by Faculty Member

SI No	Faculty Name	Details
1	Dr. Ayon Bhattacharjee	Studies on Structural, Electrical and Dielectric properties of Thermally evaporated Cadmium Sulphide (CDs) Thin films by S. Tewari and A. Bhattacharjee, presented at Solar Asia 2011, Institute of Fundamental Sciences, Kandy, Sri Lanka, 28-30 July, 2011
2	Dr. Asim Roy	"Effect of erbium dopant on the band gap energies of rf sputtered Ba _{0.8} Sr _{0.2} TiO ₃ thin films" presented paper at ISIF 2011, Cambridge university, Cambridge, UK, , 1-4 August, 2011

3.1.9 DEPARTMENT OF MATHEMATICS

3.1.9.1 Academic Staff:

HEAD		
Name	Qualification	Specialization Area(s)
Dr. P. K. De	MSc, PhD	Fuzzy Optimisation & Decision Making
FACULTY		
Professor	Nil	
Associate Professor		
Mr. B. Nath	MSc	Modern Algebra & Functional Analysis
Dr. P. K. De	MSc, PhD	Fuzzy Optimisation & Decision Making
Assistant Professor		
Mr. S. Roy	MSc	Modern Algebra & Functional Analysis
Dr.(Mrs) M. Sen	MSc, PhD	Modern Algebra & Functional Analysis
Dr. G. Ramesh	MSc, PhD	Complex Analysis
Dr. K. N. Das	MSc, PhD	Operations Research, Evolutionary Computing

3.1.9.2 Research and Development:

(i) PhD Programs existing:		
Sl No	Specialization Areas	
1	Fuzzy Optimization and Decision Making, Optimization through Evolutionary Methods, Optimization Techniques	
(ii) PhDs done so far:		
Completed : Nil		Continuing: 07
(iii) Proposed Plan for Research:		
Sl No	Name of the Lab / Workshop	Purpose/Linkages to an existing/new programme
1	One Computational Lab having 20 PCs with internet connectivity	To start MSc Programme in Mathematics & taking more PhD scholars in diversity field
(iv) Thrust Areas:		
1	Fuzzy Mathematics, Optimization and Evolutionary Methods	

3.1.9.3 Paper Reviewed:

Name of the Faculty	Name of Journal	Number of Papers Reviewed
Dr. Kedar Nath Das	Applied Mathematics and Computation, Elsevier	02

3.1.9.4 Short term course/ workshop/ conference etc. organized by the deptt.

Sl No	Name of Faculty	Name of Programme	Sponsoring Agency	Duration
1.	Dr. P. K. De (Organized by Assam Academy of Mathematics in Association with Deptt. of Mathematics, NIT Silchar)	Mathematics Excursion (Workshop on Mathematics)	National Board of Higher Mathematics (NBHM), DAE	30 th June – 5 th July, 2011

3.1.9.5 Books/ books chapter published and journal paper reviewed by faculty:

Published in Book Chapters:			
Sl No	Author(s)	Title	Publication details
1	Kusum Deep, Kedar Nath Das	Hybrid Binary Coded Genetic Algorithm for Constrained Optimization,	Published in the BOOK: “Genetic Algorithms Theories and Applications, LAP LAMBERT Academic Publishing”, ISBN-13: 978-3848447084, pp. 177-182, March 2012

3.1.9.6 Visit Abroad by Faculty:

Sl No	Faculty Name	Details
1	Kedar Nath Das	Dubai , United Arab Emirates (12 th to 14 th April, 2011) in connection with the paper presentation in ICGST International Conference on “Artificial Intelligence and Machine Learning (AIML-11)”

3.1.9.7 Seminar/Workshop/ Short Term Course attended by faculty:

Sl No	Name of the faculty member	Title of Seminar/ Workshop/ Short Term Course	Duration	Name of the Organizer
1.	Prof. Bijan Nath	Workshop on “Analog/Mixed Signal Design”	16-20 Jan 2012	NIT Silchar
2	Prof. Santanu Roy	Workshop on “Analog/Mixed Signal Design”	16-20 Jan 2012	NIT Silchar
3.	Dr. M. Sen	1. Workshop on “Analog/Mixed Signal Design” 2. Workshop on “Solar Energy and its Applications”	16-20 Jan 2012 29-31 March 2012	NIT Silchar NIT Silchar
4.	Dr. G. Rasmesh	Workshop on “Analog/Mixed Signal Design”	16-20 Jan 2012	NIT Silchar
5.	Dr. P. K. De	1. National Workshop on “All India Survey on Higher Education” 2. Workshop on “Solar Energy and its Applications”	27 Sep 2012 29-31 March 2012	MHRD, New Delhi NIT Silchar
6.	Kedar Nath Das	1. ICGST International Conference on Artificial Intelligence and Machine Learning (AIML-11), Dubai, United Arab Emirates 2. Workshop on “Analog/Mixed Signal Design” 3. Workshop on “Solar Energy and its Applications”	12-14 April 2011 16-20 Jan 2012 29-31 March 2012	Dubai NIT Silchar NIT Silchar

3.1.9.8 Paper Publications:

(i) In the peer reviewed International Journal:

Sl No	Name of faculty	Title of Paper	Publication Details
1.	Santanu Roy	1. Paranormed type Fuzzy real valued class of sequence 2. Some new type of Fuzzy I -convergent double difference sequence spaces. 3. On Paranormed type Fuzzy real valued I -convergent double Multiplier Sequences 4. On Paranormed type Fuzzy real valued I -convergent double sequences	Kyungpook Math. J. 51(2011), 345-352 International Journal of Soft computing & Engineering (IJSCE) 1(6), Jan. 2012 Kuwait Journal of Science and Engineering, accepted on 29 th November, 2011 FJMS 53(1) (2011), 1-16
2.	M. Sen	1. Statistical convergence in intuitionistic fuzzy n -normed linear spaces 2. A Remark on the Separability and Approximation Property in Intuitionistic Fuzzy n -normed Linear Spaces 3. Lacunary statistical convergence in intuitionistic fuzzy n -normed linear Spaces	Fuzzy Information and Engineering, 3(3) (2011), 259-273 International Mathematical Forum, 6(39) (2011), 1933 – 1940 Mathematical and Computer Modelling, 54 (2011), 2978-2985
3.		1. A general approach for solving assignment problems involving with fuzzy cost coefficients’ 2. ‘An Algorithm to Solve Multi-Objective Assignment Problem using Interactive Fuzzy Goal Programming Approach’	Modern Applied Sciences, Vol.6. No.3, 2012 International Journal of Contemporary Mathematical Sciences, Vol. 6, No. 34, p. 1651 – 1662, 2011

	P. K. De	<p>3. “Dynamic Programming and Multi Objective Linear Programming approaches,”</p> <p>4. ‘A Mathematical Model of Multi-Criteria Transportation Problem with Application of Exponential Membership Function,’</p> <p>5. ‘An Algorithm for Obtaining Optimal Compromise Solution of a Multi Objective Fuzzy Linear Programming Problem,’</p>	<p>Applied Mathematics & Information Sciences , Vol. 5(2) , p. 253–49, 2011</p> <p>International Journal of Computational Science and Mathematics, Vol. 3, No. 1, p.111-120, 2011</p> <p>International Journal of Computer Applications, Vo. 17, No. 1, p.20-24., 2011</p>
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(ii) In the National Journal:

Name of faculty	Title of Paper	Publication Details
Dr. P. K. De	<p>1. ‘A fuzzy critical path analysis by ranking method’</p> <p>2. ‘New Algorithm for Finding Fuzzy Shortest Path Length in a Fuzzy Network’</p>	<p>Advances in Fuzzy Mathematics, Vol.7, No.1, p.25-34, 2012</p> <p>Advances in Fuzzy Mathematics, Vol. 6, No.2, p. 227-234, 2011</p>

3.1.9.9 Paper presented in Conference:

(i) Paper presented in International Conference:

Sl No	Name of faculty	Title of Paper	Publication Details
1.	M. Sen	Lacunary ideal convergent difference sequences of fuzzy numbers	Proc. of the 5th International Conference of IMBIC on “Mathematical Sciences for Advancement of Sc. and Tech.” MSAST 2011 held in Kolkata during Dec 18-20
2.	P. K. De	”Optimization of fuzzy inventory model under fuzzy demand and fuzzy lead time using exponential fuzzy number”	Proc. of the 9 th Int’l Conference on Fuzzy System and Knowledge Discovery 2012 IEEE FSKD 2012 p.465-467
3.	Kedar Nath Das	<p>1. “Hybrid Binary Coded Genetic Algorithm for Constrained Optimization”</p> <p>2. “Heuristics to find Maximum Independent Set: An overview”</p>	<p>Proceeding of ICGST International Conference on Artificial Intelligence and Machine Learning (AIML-11), Dubai, United Arab Emirates, ISSN: 1687-4846 Print, 1687-4854 Online, 1687-4862 CD-ROM, I.C.G.S.T. FZE, 12-14 April 2011</p> <p>Proceeding of International conference on Soft computing for Problem solving (SocPros-2011), Springer, organized by IIT Roorkee, 20-22nd Dec, 2011; Advances in Soft Computing 2012, Volume 130/2012, pp. 881-892, DOI: 10.1007/978-81-322-0487-9_83</p>

(ii) Paper presented in National Conference:

Sl No	Name of faculty	Title of Paper	Conference Details
1.	M. Sen	On fuzzy I-convergent difference sequence spaces	Proc. National Conference on Frontiers in Mathematics 2011, held at Gauhati University, Guwahati during Sept 29-30, 2011
2.	Kedar Nath Das	Accelerated Bacterial Foraging Hybridized Genetic	Proceeding of National conference, National Conference on Advances in Simulation & Optimization Techniques in Mechanical

		Algorithm	Engineering (NASOME-2012), KIIT University, Bhubaneswar, Orissa, 18-19th February, 2012
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3.1.9.10 List of Ph. D. thesis submitted and degree awarded:

Sl No	Name of Supervisor	Name of Scholar	Title of Thesis	Status
1	Dr. M. Sen	SANTANU ROY NIT Silchar	Generalized fuzzy real valued double sequence spaces	Submitted on June, 2012 at NIT Silchar
2.		PRADIP DEBNATH NIT Silchar	A study on intuitionistic fuzzy n-normed linear spaces	Submitted on June, 2012 at NIT Silchar
3.	Dr. P. K. De	BHARTI YADAV (Banasthali University)	“Mathematical Modelling of Transportation and Assignment Problems in Fuzzy Environment”	Submitted on January, 2012 at Banasthali University
4.		AMITA BHINCHER (Banasthali University)	“Mathematical Models for Network Optimization in Fuzzy Environment”	Submitted on January, 2012 at Banasthali University

3.1.10 DEPARTMENT OF HUMANITIES & SOCIAL SCIENCE

3.1.10.1 Academic Staff

HEAD		
Name	Qualification	Specialization Area(s)
Dr. Reena Sanasam	MA, PhD	Feminist Literature
FACULTY		
Associate Professor		
Dr. G. Das	MA (Economics), PhD	Development Economics & International Trade
Assistant Professor		
Dr. R. Sanasam	MA (English), PhD	Feminist literature
Dr. N. B. Singh	MA (Economics), PhD	Agricultural Economics & Econometrics
Dr. A. K. Das	MCom, MPhil, PhD	Financial Management

3.1.10.2 Research and Development

(i) On-Going Research Projects				
Sponsored Research Projects (Innovation and Technology Transfer):				
Sl No	Title of the project	Sponsor(s)	Name of P. I.	Amount (Rs.)
1	Conflict and Economic Development: In Search of an Alternative Model for India's North East	Ministry of Finance, Govt of India, New Delhi	Gurudas Das C. J. Thomas	Rs. 8.20 Lakhs
(ii) PhD Programs existing :				
Sl No	Specialization Areas			
1	Development Economics			
2	International Trade			
3	Economics of Education			
4	Economic Sociology			
5	Regional Economics			
6	Agricultural and Rural Development			
7	Small Scale Industry , Industrial Management			
8	Feminism and Post Colonial Literature and Cultural ethos and nuances in Indian Writings in English			
(iii) PhDs done so far:				
Completed: 02 Submitted: 02				

3.1.10.3 Seminars/Workshops/Conferences/Symposia/ShorTermCourses Attended

SI No	Name of Faculty	Name of programme	Organizing Institute	Duration
1	Dr. Reena Sanasam	Dynamics of Higher Education: Role of the Teacher	Assam University Teachers' Association at Assam University, Silchar	21-22 July 2011
2	Dr. Reena Sanasam	Linguistic Movement in Southern Assam	SS College, Hailakandi, Assam	19-20 Aug, 2011
3	N. B. Singh	13 th Annual Conference of North Eastern Economic Association (NEEA)	Assam University, Silchar	16-18 Nov, 2011
4	N. B. Singh	National seminar on North East India's Trade and Investment with Myanmar: Opportunities & Constraints	Department of Economics, Thoubal College	25-26 Nov, 2011
5	Gurudas Das	International seminar on "Perspectives on History, Culture and Ethnicity"	The Asiatic Society of Bangladesh, Dhaka	Nov, 29-30, 2011
6	Gurudas Das	The Second International Conference of the International Journal of Arts and Sciences.	International Journal of Arts and Sciences, held at Harvard University	May 29-June 2, 2011

3.1.10.4 Research Publications

A. Published in National Journals			
1	Samsur Jaman, N. Bhupendro Singh and K. Gyanendra Singh	Decomposition of Real Net State Domestic Product (NSDP) of Manipur and Its Implication on Fiscal Deficit	Vol. 57. No. 1, March, 2012 Print ISSN No : 0424-2513 Online ISSN No: 0976-4666 ECONOMIC AFFAIRS
2	Dr. Reena Sanasam	Immigrant Dilemma and Feminist Sensibilities in Chitra Divakaruni's Arranged Marriage	Feminism and Recent Literature Prestige 2011 page 29-45
3	Dr. Reena Sanasam	Transculturalism ;Rejuvenating Globalisation	Social Scanner AKANSA, 2011

3.1.10.5 Visits Abroad by Faculty Member

SI No	Faculty Name	Details
1	Gurudas Das	Harvard University, USA, May 29-June 2, 2011
2	Gurudas Das	Asiatic Society of Bangladesh, Dhaka, November 29-30, 2011

4. TEACHING PROGRAMMES

4.1 Courses Offered

- i) A four year BTech Programme in the following branches of engineering and technology was offered during period.
 - Civil Engineering
 - Mechanical Engineering
 - Electrical Engineering
 - Computer Science & Engineering
 - Electronics & Communication Engineering
 - Electronics & Instrumentation Engineering
- (ii) A two- years MTech & MSc programmes in the following branches of engineering and technolog was offered during period.
 - Water Resources Engineering (under Civil Engineering Department)
 - Geo-Technical Engg. Under Civil Engineering)
 - Transportation Engg. (Under Civil Engineering)
 - Earthquake Engineering (under Civil Engineering Department)

- Power and Energy system Engineering (Under Electrical Engineering Department)
 - Control & Industrial Automation (Under Electrical Engineering Department)
 - Thermal Engineering (Under Mechanical Engineering Department)
 - Design & Manufacturing Engineering (Under Mechanical Engineering Department)
 - Microelectronics & VLSI Design (Under Electronics & Com. Engineering Department)
 - MSc in Applied Chemistry (Chemistry Department)
- (iii)Enrolment for PhD programme took place in the following departments during reporting year July 2011 & January 2012.
- Civil Engineering
 - Electrical Engineering
 - Mechanical Engineering
 - Computer Sc. & Engg.
 - Physics
 - Chemistry
 - Humanities and Social Science
 - Electronics & Communication Engineering.
 - Mathematics

4.2 BTech Enrolments

The following table shows the semester-wise, course wise enrolment with sex and caste breakup for the period 2011-12.

The excess intake (over and above the intake capacity) was carried out as seat distribution programme made by MHRD.

Sem	Branch	Open (Breakup)		OBC (Break up)		SC (Break up)		ST (Breakup)		PH		Total Enrolment
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
1st & 2nd	Civil	49	02	23	01	13	NIL	05	02	OPP H-01 OBP H-01	-	97
	Mech	49	02	25	NIL	11	03	07	NIL	OPP H-02	-	99
	Elect.	41	07	23	01	11	01	06	02	SCPH -01 OPP H-01	-	94
	ECE	44	06	24	01	11	03	07	NIL	OPP H-01	-	97
	EIE	10	02	09	NIL	04	NIL	02	NIL	OPP H-01	-	28
	CSE	43	06	22	02	10	04	06	NIL	OPP H-01 OBPH -02	-	96
			236	25	126	05	60	11	33	04	11	-
3rd & 4th	Civil	48	03	26	01	13	01	06	01	NIL	01OB	100
	Mech	50	02	24	01	13	NIL	07	NIL	NIL	01-OB	100

										02-OP		
	Elect.	35	08	24	NIL	10	03	05	01	NIL	NIL	86
	ECE	37	02	26	01	12	02	05	03	1OP	NIL	89
	EIE	07	01	05	02	02	02	02	NIL	NIL	01OP	22
	CSE	29	07	21	04	09	03	03	02	01OP	NIL	79
		206	23	126	09	59	11	28	07	02	05	476
5th & 6th	Civil	34	05	29	01	12	NIL	06	01	01	NIL	89
	Mech	37	04	31	NIL	15	NIL	06	01	04	NIL	98
	Elect.	37	05	25	02	10	02	05	NIL	01	NIL	87
	ECE	34	07	31	04	09	03	03	03	NIL	NIL	94
	EIE	04	NIL	05	01	02	01	03	NIL	NIL	NIL	16
	CSE	25	01	18	03	04	02	03	01	01	NIL	58
		171	22	139	11	52	08	26	06	07	NIL	442
7th & 8th	Civil	29	02	18	05	10	02	05	NIL	01	NIL	72
	Mech	44	NIL	27	NIL	15	NIL	09	NIL	02	01	98
	Elect.	44	04	21	04	11	01	09	NIL	01	NIL	95
	ECE	46	04	25	NIL	13	01	05	02	01	01	98
	CSE	36	03	21	04	11	01	04	01	01	01	83
		199	13	112	13	60	05	32	03	06	03	446
	Grand Total	812	83	503	38	231	35	11	20	26	08	1875

Note: Reservation of OBC started from 2008 batch of students.

CE= Civil Engineering, ME=Mechanical Engineering, EE= Electrical Engineering, ECE=Electronics & Communication Engineering, CSE= Computer Science Engineering, EIE= Electronics & Instrumentation Engineering.

The following is a summary table of the number, BTech students on the roll of NIT Silchar during 2011-12.

Year	CE	ME	EE	ECE	CSE	EIE	TOTAL
2 ND	97	99	94	97	96	28	511
4 TH	100	100	86	89	79	22	476
6 TH	89	98	87	94	58	16	442
8 TH	72	98	95	98	83	-	446
TOTAL- 1875							

4.3 Admission Statistics

(a) Indian Students Admitted

The following table shows the state-wise and course-wise admission statistics with category breakup for the year -2010-11

States	Category	CE	ME	EE	ECE	CSE	EIE	Total
Assam	Open	28	25	21	22	29	8	133
	OBC	12	17	14	13	15	6	77
	SC	7	12	7	9	7	3	45
	ST	4	6	3	5	4	1	23
	OPPH		2	1	1		1	5
	OBPH	1	1			1		3
Rajasthan	OBC	1		1	5	1		8
	Open	2	2	5	4	1	1	15
	SC	1		3		1	1	6
	ST	1	2	4	1			8
Bihar	OBC	9	3	6	2	3	1	24
	OBPH					1		1
	Open	2	2	2	1			7
	OPPH					1		1

	SC	2	1	1	2		1	7
Uttar Pradesh	OBC	1	5	2	4	4	2	18
	Open	7	7	8	9	10		41
	OPPH	1						1
	SC	2		1	1	3	1	8
	SCPH			1				1
Andhra Pradesh	OBC	1				1		2
	Open	1	1		3	1	1	7
	SC				1	3		4
	ST	1			1			2
Jharkhand	OBC			1				1
	Open			1	1			2
	Open	3		2	3	2		0
Manipur	SC					1	1	
Nagaland	ST	1						1
Meghalaya	SC	1			1			2
Orissa	ST					1		1
J & K	Open	1						1
Madhya Pradesh	Open		3	3	2	1		9
Uttarakhand	Open		1	1			1	3
	OBC		1					1
	SC			1				1
Mahashetra	Open	1	1	1		1		4
	OBC			1				1
35 foreign students : 21 from Afghanistan, 04 from Bhutan , 01 from Maldives, 02 from Srilanka, 01 from Palestine, 01 from Fiji Island, 03 from Bangladesh, 01 from Kenya & 01 from Mongolia	Open	7	9	7	6	4	2	35
	Total	98	101	98	97	96	30	520

(b) Foreign Students Admitted

The following table shows the admission statistics of foreign students for the year 2011-12.

Sl No	Courses	Admitted
1.	Civil Engineering	07
2.	Mechanical Engineering	09
3.	Electrical Engineering	07
4.	Electronics & Coomunication Engg.	06
5.	Computer Sc. & Engg.	04
6.	Electronicsw & Instrumentation Engg.	02
	Total	35

35 (thirtyfive) nos. foreign students : 21 from Afghanistan, 04 from Bhutan , 01 from Maldives, 02 from Srilanka,01 from Palestine, 01 from Fiji Island, 03 from Bangladesh,01 from Kenya & 01 from Mongolia

(c) Course-Wise Admission statistics (BTech)-2011-12

Sl No	Courses	Intake Capacity	Admitted	Remarks
1.	Civil Engineering	92	98	The excess intake (over & above the intake capacity) was carried out as distribution foreign students
2.	Mechanical Engineering	92	101	
3.	Electrical Engineering	92	98	
4.	Electronics & Communication Engg.	92	97	
5.	Computer Sc. & Engineering	92	96	

6.	Electronics & Instrumentation Engg.	30	30	
Total		490	520	

4.4 MTech, MSc & PhD Entroment

The following table shows course admission statistics of PG programmes (MTech MSc and PhD) for the year 2011-12

Deptt.	Sanctioned strength	MTech. & MSc Specialization	MTech/MSc/PhD
CE	20	MTech in water Resource Engg.	03
	20	MTech in Earthquake Engg. Engg.	02
	10	MTech in Transportation Engg.	04
	10	MTech in Geo-Technical Engg.	03
	-	PhD	09
ME	20	MTech in Thermal Engg.	16
	20	MTech in Design & Manufacturing	13
		PhD	05
EE	20	MTech in Power & Energy system Engg.	09
	10	Control & Industrial Automation	05
		PhD	04
ECE	20	MTech in Micro-Electronics & VLSI Design	09
	-	PhD	04
CSE	-	PhD only	03
PHY	-	PhD only	03
CHEM	18	MSc in Applied Chemistry	07
	-	PhD	08
MATH	-	PhD only	05
HSS	-	PhD only	07
Grand Total (MTech + MSc + PhD) i.e. (64+7+48)			119

CE= Civil Engineering, ME= Mechanical Engineering, EE= Electrical Engineering, ECE= Electronics & Communication Engineering, CSE= Computer Science & Engineering, PHY= Physics, CHEM= Chemistry, MATH= Mathematics, HSS= Humanities & Social Sciences.

The following is a summary table of the number of PG students on the roll of NIT Silchar during 2011-12

Courses	CE	ME	EE	ECE	CSE	PHY	CHE	MATHS	HSS	TOTAL
MTech	34	49	28	14	-	-	-	-	-	125
MSc	-	-	-	-	-	-	14	-	-	14
PhD	17	12	10	11	08(MoU-05)	10	15	11	33	127
Total	51	61	38	25	08	10	29	11	33	266

CE= Civil Engineering, ME= Mechanical Engineering, EE= Electrical Engineering, ECE= Electronics & Communication Engineering, CSE= Computer Science & Engineering, PHY= Physics, CHE= Chemistry, MATH= Mathematics, HSS= Humanities & Social Sciences.

4.5 Students Strength

The following table shows the total student strength on the roll (course wise) of the year 2011-12 at NIT Silchar.

Courses	Branches	Total students strength (course-wise)
UG (BTech)	Civil Engineering	358
	Mechanical Engineering	395
	Electrical Engineering	362
	Electronics & Communication Engg.	378
	Computer Sc. & Engineering	316

		Electronics & Instrumentation Engg.	66
PG	MTech	Postgraduate Course (all engineering department)	125
		MSc	Applied Chemistry
	PhD	All departments (Regular & Part-Time)	127
Total (BTech + MTech + PhD)=			2141



(View of Hostels)

4.6 The Hostels

The Institute is essentially a residential one and provides hostel accommodation for students. Separate hostel accommodation is available for girl students. It is mandatory for all the students to stay in the hostels. However, under special and extraordinary cases a student may be permitted live with his/her parents or local guardian at Silchar. Students permitted to stay outside hostels are exempted from payment of mess charges, electricity and water charges under hostels fees but they will have to pay the hostel establishment charges. The name, full address, office and residence telephone number, designation and willingness of local guardian have to be furnished at the time of admission. Room allotment in the hostels is done in such way that students from different regions of the country freely stay with each other, depicting national integration. There are facilities for sports and students are involved in NCC/NSS and various other co-curricular activities.

4.7 Scholarship/Assistantship Awarded to the students during 2011-12:

The students, of this Institute, are awarded various types of scholarships. Institutional Merit and Merit-cum-Means scholarships are awarded by this Institute to 25 per cent of the students admitted in NIT Silchar per year or 25 per cent of intake capacity, whichever is less. Two-third of this 25 per cent receives Merit-cum-means scholarship and the rest one-third receives Merit scholarship. Other than this, also students receive various scholarships offered by various State Governments, PSUs, Charitable Trusts/ Organizations. During the period under review 346 students received scholarship/stipend from various sources.

SI No	Name Of The Scholarship	Name of the State	Amount of Scholarship awarded in 2010-11	No. of students received the Scholarship
1	Govt. of Tripura	Tripura	1,05,800/-	9
2	DTE, Assam	Assam	58,575/-	7
3	Govt. of Nagaland	Nagaland	9400/-	1
4	Govt. of Bihar, Jharkhand	Bihar	22,37,635/-	77
5	Govt. of Uttar Pradesh	Uttar Pradesh	3,02,380/-	4
6	Govt. of Andhra Pradesh	Andhra Pradesh	234850/-	8
7	Govt. of Arunachal Pradesh	Arunachal Pradesh	13400/-	1
8	Govt. of Manipur	Manipur	19700/-	1
9	Govt. of Chhattisgarh	Chhattisgarh	20520/-	1
10	Assam Govt. SC/ST/OBC (ITDP)	Assam	22,45,488/-	10
11	Engineering India Ltd.	EIL	54000/-	3
12	Govt. of Kerela	Kerela	43,240/-	1
13	State Scholarship	Delhi/Punjab	15,800/-	1
14	ONGC, Indian Oil Scholarship	IOS	54,000/-	4
15	ICCR, Foreign Students	ICCR	57,34,064/-	99
16	Central Sector Scholarship	Central Sector	17,11,200/-	20
17	Central Sector Scholarship	New Delhi	13,90,730	19
18	N. E. C. (Assam)	Assam	744200/-	63
19	U. G. C. (New Delhi)	New Delhi	6,00,000/-	1
20	Minority, Assam	Assam	7,26,600/-	7
21	National Handicapped Finance & Dev. Corp.	MHRD	72000/-	1
22	National talent Scholarship	---	6000/-	1
23	FAEA	FAEA	50,000/-	1
24	Doctoral Fellowship ICSSR (New Delhi)	ICSSR	75,000/-	1
25	Junior Research Fellowship	Delhi	5,54,800/-	3
26	Govt. of Jammu & Kashmir	J&K	29,160/-	2

Apart from the aforesaid Scholarships, guardians of our students also avail reimbursement of educational expenditure from their employers like – BSNL, Railways, & other Govt. / PSUs on our recommendations.

Assistantships (MTech / PhD): Students admitted in the MTech & PhD programme in the institute are awarded Assistantship as per norms of this Institution. To be eligible for this Assistantship, a student must have cleared GATE/NET/UGC exams & must be a regular non-sponsored student.

In pursuit of excellence and giving life a meaningful direction, Students' Gymkhana of NIT Silchar works towards profound personality development of NIT students by infusing in them a spirit of constructive co-operation, leadership qualities and organizational capabilities. This is being achieved by involving them in a wide spectrum of Sports & Games as well as Social & Cultural and Technological activities throughout the year.

The year 2011-2012 was also full of activities and achievements and students have made the Institute proud by maintaining high standards of organizational and leadership qualities

4.8 Games and Sports

Apart from academic activities, NITians are very enthusiastic in games and sports. Students play football, volleyball, basketball, cricket and others games. It is an acknowledged fact that NIT Silchar along with its emphasis on academics gives no less priority to games and sports.

Throughout the year, there are a number of games and sports activities, which give ample opportunities to the students to prove their proficiency. Generally at weekends or during holidays internal competitions are held. Regular events like inter-hostel tournaments in various games took place during the year under review as well. Besides this, students participated in competitions organized on the occasions of Republic Day, etc. Our Institute took the initiative in forming Organization for Inter-NIT Student Activities (O-INSA) that coordinates extra-academic student activity of all NITs.



4.9. Awards

The Institute offered the following awards during the period under consideration:

(A)	Institute Gold Medal		
Sl No	Title of the Medal	Department	Awardees
1.	Best BTech Graduate	Mechanical Engineering	Shri Shuvabrata Chakraborty
(B)	Institute Silver Medals		
Sl No	Title of the Medal	Awardees	
1.	Best BTech Graduate in Civil Engineering	Smt. Erika Garg	
2.	Best BTech Graduate in Computer Sc. & Engineering	Smt. Afrin Ahmed	
3.	Best BTech Graduate in Electrical Engineering	Smt. Madhusmriti Dev Choudhury	
4.	Best BTech Graduate in Electronics & Communication Engineering	Smt. Monami Bagchi	

(C)	Kalikrishna Mrinalini Krori Gold Medal		
Sl No	Title of the Medal	Department	Awardees
1.	Best BTech Graduate on overall performance, sponsored by Institute of Engineers (India)	Mechanical Engineering	Shri Sourav Dhal

4.10 Examination Details

- (i) Even semester examinations were held in the month of May/June, 2011 (both BTech & MTech & PhD)
- (ii) Odd semester examinations were held in the month of December, 2011 (both BTech & MTech & PhD)

4.6.1 Statistics of the Results

a) End semester examinations Held in May-June, 2011

Programme	Branch & Course	Number Appeared	Number Passed	Percentage passed
MTech	Civil Engg. (Water Resources Engg.)	03	03	100%
	Civil Engg. (Earthquake Engg.)	08	06	75%
	Civil Engg.(Transportation)	03	03	100%
	Civil Engg.(Geo-technical)	03	03	100%
	Mech. Engg. (Thermal Engg.)	11	11	100%
	Mech. Engg.(Design & Manufacturing)	08	07	87.50%
	Electrical Engg. (Power & Energy system Engg.)	08	08	100%
	Electronics & Comm. Engg. (Microelectronics & VLDI Design)	06	06	100%
MSc	Chemistry (Applied Chemistry)	07	07	100%
BTech	Civil Engg.	48	45	93.75%
	Mechanical Engg.	53	47	88.68%
	Electrical Engg.	52	43	82.69%
	Electronics & Comm. Engg.	67	58	86.57%
	Computer Sc. & Engg.	57	52	91.23%

b) BTech (old Batches & New batch) passed prior to May, 2011 and Degree awarded in convocation - 2011

Branch	Appeared	Passed
Civil Engineering	06	06
Mechanical Engineering	06	06
Electrical Engineering	12	12
Electronics & Communication Engg.	06	06
Computer Science & Engg.	07	07

c) PhD during 2011-12

Sl No	Name of Scholar	Department
1.	Mrs. Ruma Nath Choudhury	HSS
2.	Mrs. Shelly Barbhuiya	HSS
3.	Shri Sanjoy Kumar Dey	Mech.
4.	Shri Kaushal Kumar Sharma	Mech.
5.	Shri Arup Bhattacharjee	Computer Sc. & Engg.
6.	Mrs. Suchismita Datta Sarkar	Physics

d) Summary of results

Programme	Branch & Course	Number Appeared	Number Passed	Percentage passed
MTech	Civil Engg. (Water Resources Engg.)	03	03	100%
	Civil Engg. (Earthquake Engg.)	08	07	87.50%
	Civil Engg. (Transportation)	03	03	100%
	Civil Engg. (Geo-technical)	03	03	100%
	Mech. Engg. (Thermal Engg.)	11	11	100%
	Mech. Engg.(Design & Manufacturing)	08	07	87.50%
	Electrical Engg. (Power & Energy system Engg.)	09	09	100%
	Electronics & Comm. Engg. (Microelectronics & VLDI Design)	06	06	100%

MSc	Chemistry (Applied Chemistry)	07	07	100%
PhD	Humanities & Social Sc.	02	02	100%
	Physics Department	01	01	100%
	Computer Sc. & Engg.	01	01	100%
	Mechanical Engineering	02	02	100%
BTech	Civil Engg.	54	51	94.44%
	Mechanical Engg.	59	53	89.83%
	Electrical Engg.	64	55	85.94%
	Electronics & Comm. Engg.	73	64	87.67%
	Computer Sc. & Engg.	64	59	92.19%

5. REASEACH AND DEVELOPMENT:

5.1 PhD Programmes Existing and Proposed

The Institution has produced 3 PhDs till date in various Engineering and Science Depts. Experienced and competent faculty are available in the various specializations. The areas in which PhD works are being pursued have been given below:

A. Engineering

SI No	Department	Specialization Areas
1	Civil Engineering	Water Resource Engineering, Geotechnical Engineering, Earthquake Engineering, Structural Engineering
2	Computer Science and Engineering	Soft Computing
3	Electrical Engineering	Electric Drives, Signal Processing in Electrical Engg, Wavelet Applications in Electrical Engg, Power System protection, Control system, System Automation, Automatic Generation and control, power Quality, Fault Detection, and Diagnosis of Dynamic System, Soft Computing Techniques, Power System optimization, deregulation, VLSI Design
4	Electronics and Communication Engineering	MOS modelling and simulation, VLSI, Signal Processing
5	Mechanical Engineering	Renewable Energy, Alternative fuels, Combustion, Computational Fluid Dynamics, Thermo-fluids, Energy, productivity & quality management

B. Basic Sciences & Humanities

SI No	Department	Specialization Areas
1	Chemistry	Energy and Environment, Green chemistry, Reaction mechanism and kinetics, Synthetic Organic Chemistry, Coal utilization
2	Physics	Experimental Condensed Matter Physics, Field of Liquid Crystals, Oxide Materials
3	Mathematics	Fuzzy Mathematics
4	Humanities and Social Sciences	Development Economics, International Trade, Economics of Education, Economic Sociology, Regional Economics, Agricultural and Rural Development, Small Scale industry, Industrial Management, Feminism

5.2 Details of PhDs Completed

SI No	Department	Completed	Continuing
1	Civil Engineering	03+01 (Thesis submitted)	09
2	Computer Science and Engineering	-	01
3	Electrical Engineering	-	05
4	Electronics and Communication Engineering	-	04
5	Electronics and Instrumentation Engineering	-	04

6	Mechanical Engineering	01	06
7	Chemistry	-	06
8	Physics	02	07
9	Mathematics	-	04
10	Humanities and Social Sciences	01 + 01 (Thesis submitted)	24

5.3 Proposed Plan for Research

Department	Name of Lab. / Workshop	Programme
1. CE	-	-
2. CSE	Speech Processing Lab., Network Lab.	-
3. EE	-	-
4. ECE	National MEMS Design Center	Device Simulation lab
5. EIE	-	-
6. ME	Petroleum Engg. Lab.	Alternative fuels research, IC Engine research
	Gas Dynamics Lab	Wind Tunnel, Air-flow bench, Fluid Mechanics Lab
	Advanced Manufacturing Lab	Research on non-traditional/advanced manufacturing processes and this is linked to Research Promotional Scheme (RPS) of AICTE titled: Experimental Investigation of Surface Integrity in Electrodischarge Machining (EDM)
7. Chemistry	-	Ph. D programmes will continue in the existing areas
8. Physics	Experimental Condensed Matter Physics lab	Up gradation of existing lab
9. Mathematics	One computer Lab having 20 PCs with internet connectivity	To start MSc programme in Mathematics & more PhD Programmes
10. HSS	Electronic Data Bank	-

5.4 Institute-Industry Collaboration:

The Institute-Industry collaboration has been executed in various modes, such as Testing, Consultancy Project, Joint Research Project etc. The institute being located in an industrially backward area, in spite of best efforts, it has not been possible to establish substantial interaction with industry during the year under review. However, a few consultancy and testing jobs have been carried out in this reporting year. The Institute has earned Rs.1, 93,882.00 as Institute Overhead from different consultancy projects in this reporting year. Department of Scientific & Industrial Research, Government of India has identified the Institute as TePP Outreach Centre (TUC) under Technopreneur Promotion Programme (TePP). Through TUC activities, interaction with industries will improve.

6. THE COUNCIL, BOG AND SENATE

6.1 NIT Council

The Composition of the Council is as under:

1	Minister in charge, Ministry of Human Resource Development, Govt. of India	Chairman (ex-officio)
2	Secretary to the Govt. of India, Deptt. of Higher Education, Ministry of Human Resource Development	Vice-Chairman (ex-officio)
3	The Chairperson of National Institutes of Technology located at – Agartala (Tripura), Allahabad (UP), Bhopal (Madhya Pradesh) Calicut (Kerala), Durgapur (West Bengal), Hamirpur (Himachal	Member (ex-officio)

	Pradesh), Jaipur (Rajasthan), Jalandhar (Punjab), Jamshedpur (Jharkhand) Kurukshetra (Haryana), Nagpur (Maharashtra), Patna (Bihar), Raipur (Chattisgarh), Raourkela (Orissa), Silchar (Assam), Srinagar (J&K), Surat (Gujarat), Surathkal (Karnataka), Tiruchirapalli (Tamil Nadu) and Warangal (Andhra Pradesh)	
4	Director of every National Institute of Technology	Member (ex-officio)
5	The Chairman, University Grant Commission	Member (ex-officio)
6	The Director General, Council for Scientific & Industrial Research	Member(ex-officio)
7	Secretary, Department of Bio-Technology, Govt. of India	Member (ex-officio)
8	Secretary, Department of Atomic Energy, Govt. of India	Member (ex-officio)
9	Secretary, Department of Information Technology, Govt. of India	Member (ex-officio)
10	Secretary, Department of Space, Govt. of India	Member (ex-officio)
11	The Chairman, All India Council for Technical Education	Member (ex-officio)
12	Not less than three, but not more than five persons to be nominated by the Visitor, at least one of whom shall be a women, having special knowledge or practical experience in respect of education, industry, science or technology	Member
13	Three Members of parliament, of whom two shall be chosen by the House of People and one by the Council of States	Member
14	Two Secretaries to the State Govt. of Maharashtra, from amongst the Ministries or departments of that government dealing with technical education	Member (ex-officio)
15	The Financial Advisor, Ministry of Human Resource Development, Govt. of India	Member-Secretary (ex-officio)
16	Joint Secretary to the Govt. of India (Technical)/Additional Secretary (Technical)/Department of Higher Education, Ministry of Human Resource Development	Member (ex-officio)

6.2 Board of Governors

Sl. No.	Name and Address	Position
1	Prof. Gautam Barua, Director, IIT Guwahati (upto 7 th February'12) Prof. Asis Datta, Professor of Eminence, NIPGR, Delhi (w.e.f. 8 th February'12)	Chairperson
2	Prof. P. K. Bose, Director, NIT Silchar (Ex-officio) (upto 7 th Sept'11) Prof. N. V. Deshpande, Director, NIT Silchar (Ex-officio) (w.e.f. 8 th Sept'11)	Member
3	Joint Secretary (Technical), MHRD, Deptt. of Higher Education, Govt. of India, Shastri Bhavan, C-Wing, New Delhi	Member
4	Financial Adviser & Jt. Secretary, Deptt. of Higher Education, MHRD, Govt. of India, New Delhi	Member
5	Principal Secretary, Govt. of Assam, Higher Education (Tech.) deptt., Guwahati	Member
6	Director of Technical Education, Govt. of Assam, Guwahati	Member
7	Prof. S.Dhar, Head of Electronics Sciences, University of Calcutta, Kolkata	Member

8	Prof. Uma Bhattacharya, Deptt. of CSE, B.E.S.U., Sibpur, Howrah	Member
9	Dr. K. M. Pandey, Prof. Deptt of ME, NIT Silchar (upto 17 th July'11) Prof. A. K. Roy, Professor Deptt. of EE, NIT Silchar (w.e.f. 18 th July'11)	Ex-officio Member
10	Dr. (Mrs.) Basana Choudhury, Assoc. Prof. Deptt of Physics, NIT Silchar (upto 17 th July'11) Mr. P. L. Choudhury, Asst. Professor, Deptt. of ME, NIT Silchar (w.e.f. 18 th July'11)	Ex-officio Member
11	Sri Sushil Kumar, Registrar, NIT Silchar (upto 4 th July'11) Sri S. K. Srivastava, Registrar(i/c), NIT Silchar (w.e.f. 5 th July'11 to 28 th Aug'11) Sri P. K. Paul, Assoc. Professor Deptt. of CSE, NIT Silchar (w.e.f. 29 th Aug'11)	Ex-officio Secy

6.3 Finance Committee

S.N.	Name and Address	Position
1	Prof. Gautam Barua, Director, IIT Guwahati (upto 7 th February'12) Prof. Asis Datta, Professor of Eminence, NIPGR, Delhi (w.e.f. 8 th February'12)	Chairperson
2	Prof. P. K. Bose, Director, NIT Silchar (Ex-officio) (upto 7 th Sept'11) Prof. N. V. Deshpande, Director, NIT Silchar (Ex-officio) (w.e.f. 8 th Sept'11)	Member
3	Director (NITs), Deptt. of Higher Education, MHRD, Shastri Bhavan, C-Wing, New Delhi	Member
4	Director (Finance), MHRD, Govt. of India, New Delhi	Member
5	Dr.(Mrs.) B. Choudhury, Assoc. Professor Deptt. of Physics, NIT Silchar (upto 17 th July'11) Prof. A. K. Dey, Deptt. of EE (w.e.f. 18 th Sept'11)	Ex-officio Member
6	Sri Sushil Kumar, Registrar, NIT Silchar (upto 4 th July'11) Sri S. K. Srivastava, Registrar(i/c), NIT Silchar (w.e.f. 5 th July'11 to 28 th Aug'11) Sri P. K. Paul, Assoc. Professor Deptt. of CSE, NIT Silchar (w.e.f. 29 th Aug'11)	Ex-officio Member-Secy

6.4 Building and Works Committee

S.N.	Name and Address	Position
1	Prof. P. K. Bose, Director, NIT Silchar (Ex-officio) (upto 7 th Sept'11) Prof. N.V. Deshpande, Director, NIT Silchar (Ex-officio) (w.e.f. 8 th Sept'11)	Chairperson
2	Director (NITs), Deptt. of Higher Education, MHRD, Shastri Bhavan, C-Wing, New Delhi	Member
3	Supdt. Engineer (Civil) , CPWD, Silchar	Member
4	Executive Engineer (Elect), CPWD, Silchar	Member
5	Prof. Satyabrata Choudhury, Dean(P&D), NIT Silchar	Member
6	Prof. D. N. Bhattacharjee, HOD, Civil Engg., NIT Silchar	Member (Nominee)
7	Sri Sushil Kumar, Registrar, NIT Silchar (upto 4 th July'11) Sri S.K. Srivastava, Registrar(i/c), NIT Silchar w.e.f. 5 th July'11 to 28 th Aug'11) Sri P.K. Paul, Assoc. Professor Deptt. of CSE, NIT Silchar	Member-Secy

	(w.e.f. 29 th Aug'11)	
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6.5 The Senate

S.N.	Name and Address	Position
1	Prof. P. K. Bose, Director, NIT Silchar (Ex-officio) (upto 7 th Sept'11) Prof. N.V. Deshpande, Director, NIT Silchar (Ex-officio) (w.e.f. 8 th Sept'11)	Chairperson
2	Dy. Director, NIT Silchar	Member (vacant)
3	Prof. A. K. Roy, Deptt. of EE, NIT Silchar	Member
4	Prof. A. K. Sil, Deptt. of Chemistry, NIT Silchar	Member
5	Prof. D.N. Bhattacharjee, Deptt. of CE, NIT Silchar (upto 29 th Feb'12)	Member
6	Prof. Rajat Gupta, Deptt. of ME, NIT Silchar (upto 15 th Oct'11)	Member
7	Prof. A. K. Sinha, Deptt. of EE, NIT Silchar	Member
8	Prof. K. M. Pandey, Deptt. of ME, NIT Silchar	Member
9	Prof. Fazal A. Talukdar, Deptt. of EE, NIT Silchar	Member
10	Prof. Nidul Sinha, Deptt. of EE, NIT Silchar	Member
11	Prof. A. K. Dey, Deptt. of CE, NIT Silchar	Member
12	Prof. Satyabrata Choudhury, Deptt. of CE, NIT Silchar	Member
13	Prof. S. Baishya, Deptt. of ECE, NIT Silchar (upto 8 th Nov'11) Ms. Madhumita Paul, Deptt. of ECE, NIT Silchar (w.e.f. 9 th Nov'11)	Member
14	Prof. P. S. Choudhury, Deptt. of CE, NIT Silchar	Member
15	Prof. A. C. Paul, Deptt. of ME, NIT Silchar	Member
16	Prof. R. D. Misra, Deptt. of ME, NIT Silchar	Member
17	Dr. (Mrs.) Basana Choudhury, Deptt. of Physics, NIT Silchar (upto 5 th June'11) Dr. Asim Roy, Asst. Prof. & HOD, Deptt. of Physics, NIT Silchar (w.e.f. 6 th June'11)	Member
18	Mr. P. K. Paul, Deptt. of C. S. E., NIT Silchar	Member
19	Dr. Ashim Kr. Das, Deptt. of HSS, NIT Silchar (upto 16 th Feb'12) Dr. Reena Sanasam, Deptt. of HSS, NIT Silchar (w.e.f. 17 th Feb'12)	Member
20	Mr. Santanu Roy, Deptt. of Maths, NIT Silchar (upto 23 rd Feb'12) Dr. P. K. De, HOD, Deptt. of Maths., NIT Silchar (w.e.f. 24 th Feb'12)	Member
21	Dr. S. S. Dhar, Deptt. of Chemistry, NIT Silchar (upto 23 rd Feb'12) Dr. M. A. Zaman, Deptt. of Chemistry, NIT Silchar (w.e.f. 24 th Feb'12)	Member
22	Prof. Purusottam Bhattacharjee, Deptt. of International Relation, Faculty of Arts, Jadavpur University, Kolkata	Member
23	Prof. Mita Nasipuri, Deptt. of CSE, Faculty of Engineering & Technology, Jadavpur University, Kolkata	Member
24	Prof. N.V. S. Rao, Deptt. of Chemistry, Assam University, Silchar	Member
25	Sri Sushil Kumar, Registrar, NIT Silchar (upto 4 th July'11) Sri S. K. Srivastava, Registrar(i/c), NIT Silchar (w.e.f. 5 th July'11 to 28 th Aug'11) Sri P. K. Paul, Assoc. Professor, Deptt. of CSE, NIT Silchar (w.e.f. 29 th Aug'11)	Member- Secretary

7. CONCESSION FOR SC, ST AND HANDICAPPED STUDENTS

7.1 Concession Provided for Students

The admission to 1st year of BTech course is made through the All India Engineering Entrance Examination (AIEEE) conducted by CBSE and reservation of seats for SC, ST and

OBC, Handicapped category of candidates is followed as per the guidelines framed by Ministry of Human Resource Development, Govt. of India, Department of Secondary and Higher Education.

Concessions Provided in Admission of Students

Course	Types of concessions	Category of students	Magnitude
BTech	Reservation at admission stage	ST	7.5%
		SC	15%
		PH	3%
		OBC	27%
	Foreign and other category of students	24 seats (over and above sanctioned intake)	
7 (seven) seats are reserved for physically handicapped candidates against Assam quota within the overall seat allotment of Assam			
MTech	Reservation at admission stage	ST	7.5%
		SC	15%
		PH	3%
		OBC	27%

BTech: There is no concession provided to the SC, ST and PH students for their payments towards Institution and Hostel fees.

MTech & PhD: For ST & SC students tuition fees are waived. All fees for institutional faculty who enrol for doing PhD are waived except their caution money and registration fees.

7.2 Concession Provided for Staff

Statutory reservation policy and concession is followed by the institute for teaching and non-teaching posts. All fees for institute faculty who enrol for PhD are waived except their caution money and registration fees.

8. FINANCIAL STATUS

8.1 Analysis of Plan, Non-Plan and OSC Grants (Rupees in Lacs)

INCOME	Schedule	Current Year
Income from Consultancy Services	7	572,148
Grants-in-Aid	8	280,000,000
Academic Receipts (Fees/Subscriptions)/Other Income	9	84,276,747
Interest Earned	10	2,752,984
TOTAL (A)		367,601,879
EXPENDITURE :		
Establishment Expenses	11	207,262,722
Other Administrative expenses etc.	12	79,408,513
Depreciation (During the year)	5	46,411,540
TOTAL (B)		333,082,775
Balance being Excess of Income over Expenditure (A-B)		34,519,104
BALANCE CARRIED OVER TO CAPITAL FUND		34,519,104

8.2 Sources of Funds

Plan:	Grant-in-Aid sanctioned by the Govt. of India (MHRD) including OSC Grants on 3/4 installments in a financial year
Non-Plan:	(I). Grant-in-Aid sanctioned by the Govt. of India (MHRD) and (II). Revenue from Institute

OSC:	For implementation of the recommendations of the Oversight Committee on 54% capacity expansion and 27% OBC reservation in NITS, Grant-in-Aid sanctioned by the Govt. of India (MHRD)
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8.3 Expenditure Position for Staff

SCHEDULE - 11. ESTABLISHMENT EXPENSES	Current Year
Pay & Allowances	154,942,272
Pay of Adhoc/Visiting Teachers	41,234
Pay of Muster Roll	8,259,715
Contribution to CPF	8,674,730
Medical Expenses	208,955
Medical reimbursement	1,700,657
Leave Salary to Staff	3,800,062
Training & Placement expenditure	360,996
Bonus	902,556
Contribution to Gratuity fund	8,800,000
L.T.C. Expenditure	713,005
H.T.C. Expenditure	908,321
Security Services	9,795,744
Professional Development Allowance	7,654,475
Exgratia compensation	500,000
TOTAL	207,262,722

8.4 Technical Education Quality Improvement Programme - Phase-II [TEQIP-II]

Schedules Forming Part of Balance Sheet as at 31st March 2012				
			<i>Amount in Rs</i>	
Schedule-I : GRANTS-IN-AID :			Current Year	Previous year
Received from MHRD, GOI			20,000,000	0
Total			20,000,000	0
Schedule-II : Excess of Expenditure Over Income :			Current Year	Previous year
Transferred from Income & Expenditure Account			2,275,699	0
Total			2,275,699	0
Schedule-III : Fixed Assets :	Gross Balance as on 01/04/2011	Addition during the year	Deletion during the year	Gross Balance as on 31/03/2012
Equipment	0	0	0	0
Furniture	0	0	0	0
Books & LRs & Software	0	0	0	0
Minor Works	0	0	0	0
Total	0	0	0	0
SCHEDULE-IV : Current Assets, Loans and Advances:			Current Year	Previous year
1. Cash in Hand			218	
2. Cash at Bank (SBI, NIT Branch)			17,724,083	
3. Loan and Advances			0	0
Total			17,724,301	0

8.5 Statement of the on-going Project Accounts:

Sl No	Title of the Project	Sponsor(s)	Duration	Name of the P. I.	Sanction No. & date	Amount
1.	Utility of Para-transit Modes in Regional	Research Promotion	2 years	Dr. Mokaddes Ali Ahmed	8023/RID/RPS/29/11/1/2/2093	Rs.17,50,000/-

	Passenger Transportation.	Scheme (RPS)		CE Dept.	dtd. 23 Mar. 2012	
2.	Design & Implementation of Pure Sine Wave Inverter for Residential Solar Power System in India.	(RPS)	2 years	Dr. A. K. Goswami, EE Dept.	8023/RID/RPS/31/11/12/2095 dtd. 23 Mar. 2012	Rs.15,00,000/-
3.	Synthesis & Characterization of BST-BFO Composites for Devices	(RPS)	2 years	Dr.Subrat Kr. Barik & Dr.Basana Choudhury, Physics Dept.	8023/RID/RPS/32/11/12/2096 dtd. 23 Mar. 2012	Rs.16,00,000/-
4.	Design Simulation and Implementation of Carbon Nanotube Based Fet Logics for VLSI Applications.	(RPS)	2 years	Dr. Saurabh Chaudhury, EE Dept.	8023/RID/RPS/30/11/12/2094 dtd. 23 Mar. 2012	Rs.8,00,000/-
5.	Automatic Generation Control of Autonomous Hybrid Generation System.	(RPS)	2 years	Mr. Dulal Chandra Das, EE. Dept.	8023/RID/RPS/28/11/12/2092 dtd. 23 Mar. 2012	Rs.15,00,000/-
6.	Development of an EnzymaticBio Diesel.	(RPS)	2 years	Mr. S. Chatterjee, ME Dept.	8023/RID/RPS/27/11/12/2091 dtd. 23 Mar. 2012	Rs.10,40,000/-
7.	Modernization of Thin Film Lab	AICTE (MODROBS)	1 Yr.	Dr. Asim Roy, Physics Dept.	8024/MOD/23/11/12/2154 dtd. 26 Mar. 2012	Rs.10,00,000/-
8.	Upgradation of Highway Engg. Lab	(MODROBS)	1 Yr.	Dr. D. N. Bhattacharjee, CE Dept.	8024/MOD/25/11/12/2156 dtd. 26 Mar. 2012	Rs.13,50,000/-
9.	Refrigeration & AC Lab.	(MODROBS)	1 Yr.	Dr. R. D. Misra, ME Dept.	8024/MOD/22/11/12/2153 dtd. 26 Mar. 2012	Rs.15,00,000/-
10.	Heat Transfer Lab.	(MODROBS)	1 Yr.	Dr. R. D Misra, ME Dept.	8024/MOD/24/11/12/2155 dtd. 26 Mar. 2012	Rs.8,00,000/-
11.	Development of Carbon Nanotube Reinforced Polymer Composites for Naval Application.	DRDO: Naval Research Board (NRB)	3 Years.	Dr. Smuritisikha Bal, Physics Dept.	DNRD/05/4003/NRB/209 dt. 25 July 2011	Rs.10,20,000/-
12.	Development of Speech Based Multilevel Person Authentication System	Research, Design & Development (R,R&D)	3 Years	Mr.R. H. Laskar, ECE & Mrs.U.Baruah, CSE Dept.	Approval No. 12(6)/2012-ESD dtd. 28 Mar. 2012	Rs.27,92,000/-

9. CENTRAL FACILITIES AND SERVICES

9.1 Central Computer Centre

HEAD		
Name	Qualification	Specialization Area(s)
Mr. S. K. Biswas	MTech	Software Engineering

9.1.1 Facilities:

a) Internet Facility

For Internet access and email access, Internet Bandwidth services of 16 Mbps leased line along with 1 Gbps NKN Link as well as 64Kbps ERNET link are available for the users to serve the heavy bandwidth demand at NIT Silchar.

b) Network Facility

NIT Silchar has a gigabit network with gigabit backbone. The institute network is built with modern, sophisticated, state of the art fiber optic cable & network switches. The Central Computer centre of the institute acts as the centre of the institute network. The CCC administers and maintains this network. All the departments/offices are connected to this network by edge switches and are configured as separate VLAN's. All the Hostels are also connected to the institute via. dedicated distribution switch and every room is provided with a data outlet.

9.2 Central Workshop

Head		
Name	Qualification	Remarks
Prof. R. D. Misra	PhD	Head, Mech. Engg.
Workshop Superintendent		
Mr. S. K. Pattanayak	MTech	Faculty-in-charge
Foreman		
Mr. B. K. Nath	Diploma	

9.2.1 Facilities:

The workshop of the Mechanical Engineering Dept. acts as a Central Workshop of the Institute. It is one of the major service sections of the Institute having following units:

a) Machine Shop

- Lathe (GD lathe, Capstan lathe, Turret lathe, Speed lathe)
- Milling machine (Horizontal and vertical)
- Surface Grinder
- Shapper
- Double Housing Planner
- Slotter
- Radial Drilling machine

b) Fitting Shop

- Bench Drilling machine
- Power Hacksaw
- Fitting Tables with vices
- Wall mounted Grinding machine
- Pedestal Grinder

c) Carpentry Shop

- Carpentry Tables with vices
- Wood Turning lathe
- Surface planner
- Thickness planner

d) Welding Shop

- Oxy-Acetylene Gas Welding
- Arc Welding
- TIG
- MIG

- Submerged Arc Welding
- e) **Smithy Shop**
 - Hearth Furnace
 - Blower
- f) **Foundry Shop**
 - Furnace
 - Mould making
 - Core making
 - Pattern making
 - Sieve analyzer
 - Permeability tester
- g) **Sheet Metal Shop**
 - Bending machine
 - Shearing machine

All the shops are equipped with necessary tools. Common workshop classes are held in the workshop along with workshop classes for higher semesters of Mechanical Engineering branch. Different project works for the undergraduate students are also carried out in the workshop. The workshop is well equipped for the project works of the PG students of the Department. However, continuous efforts are being taken to augment the facilities of the workshop commensurate with the change in technology. The workshop is also used for fabrication work for the Institute.

9.3 Central Library

In 2011-12, Central Library continued to be the hub of all research and academic activities of NIT Silchar and played significant role in facilitating creation and dissemination of knowledge during the year. It offered a range of services including references, consultation, membership, circulation, resource sharing, information alert services, book bank for needy students, user awareness programmes and ICT-enabled web based services to support the institute's learning, teaching and research activities throughout the year.

The Library has developed its collection by acquiring latest information resources during the year. The Central Library is one of the biggest technical libraries in North-East India and its web site address is: <http://www.nits.ac.in/library/library.html#page=default>

The central library currently serves about 2500 members including students, faculty, staff and officers of NIT, Silchar. Central Library plays a pivotal role in the academic and research activities of NIT, Silchar by providing facilitates for creation and dissemination of knowledge. The range of services offered by the library is comparable to the best libraries in the eastern zone of India. Library is holding an excellent print collection of over 85,000 volumes of books, journals, thesis, reports, and standards; in addition to that it also provides access to over 5000 electronic books, journals and databases in sciences, engineering, technology, humanities, social sciences and management. The library continued to offer its services to professionals, educational institutes in addition to 2500 members from NIT Silchar. The library made a significant progress during the year 2011-12 in the aspect of procuring e-journals and databases. Recently, our new Director has taken special interest for the development of library and he has taken keen initiative for extension of the new library building.

The key officers of the Central Library are:

Chairman

Dr. A. K. Dey	MTech, PhD	
Librarian		
Dr. Kishor Chandra Satpathy	MA(Edu), MLISc, PGDLAN, PhD	Information Management, IT Application in LIS
Astt. Librarian		
Krishnamati Singha	BSc, MLISc, MBA (HRM)	Library Management

9.3.1 Collection Development and Management:

Collection building is one of the important functions of the library, which supports academic and research activities of the students, faculty, staff and other users. Library collections of central library consist of books, CDs, journals, e-resources, theses, reports, standards, and other reading materials in areas of science, engineering, technology, humanities, social sciences and management.

The total collection of library as on 31st March 2012 stands as follows:

Sl. No.	Name of Resources	Total Number available as on 31 March 09	Total Number available as on 31 st March 10	Total Number available as on 31 st March 11	Total Number available as on 31 st March 12	No of Documents added during the year
1.	Books	71,668	74,525	78068	81274	3207
2.	Print Journals	61	40	141	131	-
3.	Bound Volumes	4321	4321	4321	4771	-
4.	CD-ROMs	2374	3074	3074	3287	214
5.	Databases	20	20	20	20	-
6.	Videos	909	909	909	909	-
7.	ISI Code (Printed)	8621	8627	8627	8627	-
8.	Reports	340	340	340	3	-
9.	Book Bank (General)	8836	8836	8836	8836	-
10.	Book Bank (SC/ST)	6758	SC/ST = 7060	SC/ST=7743	SC/ST= 7810	68
11.	IRC Codes		152	152	152	-
12.	Thesis			16	18	2
13.	Project Report		43	64	67	3
14.	Annual Reports		113	213	193	-

New arrivals of books, journals, thesis and reports etc can be accessed on the library home page. An email alert is also sent to the requesting faculty member(s) about the arrival of publications requested by them. Library has taken special care to keep the library stacks neat and clean and also provides facilitate to users to locate the desired document quickly. Central Library has organized book exhibition from 13-16 March 2012 to facilitate students, faculty members and staffs to browse and select latest publications in their subjects.

9.3.2 Circulation

The books circulation activities have been automated and serve the users. The books circulation service is kept open for 40 hours a week. On the average, the monthly circulation transactions are about 4000.

9.3.3 Book Bank Facility

The library maintains a book bank to help students belonging to Scheduled Castes, Scheduled Tribes and economically weaker sections of the society. The book bank mainly consists of the prescribed text books for undergraduate courses and loans up to 5 books each to these

students for full semester and sometimes more depending on availability. During the year, 350 students availed this facility and borrowed 2850 books from this collection.

9.3.4 Library Services

Reference, Consultation & Circulation

Reference service helps users to make full use of library resources and services. It provides necessary assistance to users in locating information or document of their choice.

The Library loaned 48,750 books and other documents to its members during the year. In addition to members, 2500 visitors including students, research scholars, engineers and faculty members from several academic and R&D institutions used the library. It is open from 0900 to 1800 hrs on all working days. “Ask the Librarian” link provided from the library home page encourages users to avail the reference service virtually.

Sharing of Resource and Scan service

The library maintains excellent relations with libraries of Assam University, and other local college libraries in Sothern Assam and also with DELNET for exchange of books, journals, photocopies etc. for the mutual benefit of the users.

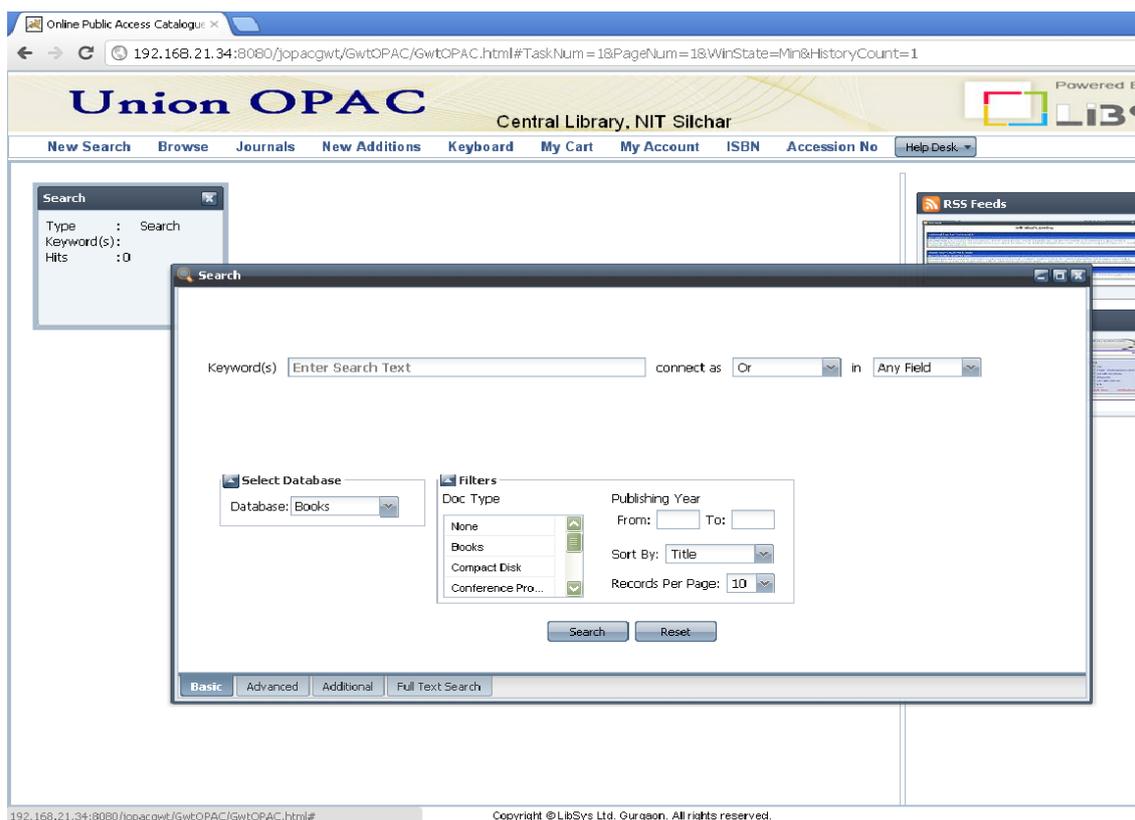
Library provides scan services for books, back-volumes, journals etc to students and research scholars with free of cost.

Information Seeking Services

The library continues to provide the users about the latest information of their interest by:

- List of Additions, new arrivals
- News items display
- Display of Forthcoming conferences, other national and international events, employment opportunities, and prospectus of foreign universities.

Web OPAC (Search Library Catalogue): The entire Library collection including books, journals, etc. can be searched through the web enabled Online Public Access Catalogue (OPAC). Users can access the OPAC to find out the real-time availability of library materials from their own computer terminals. Faculty and students can reserve items, which are on loan.



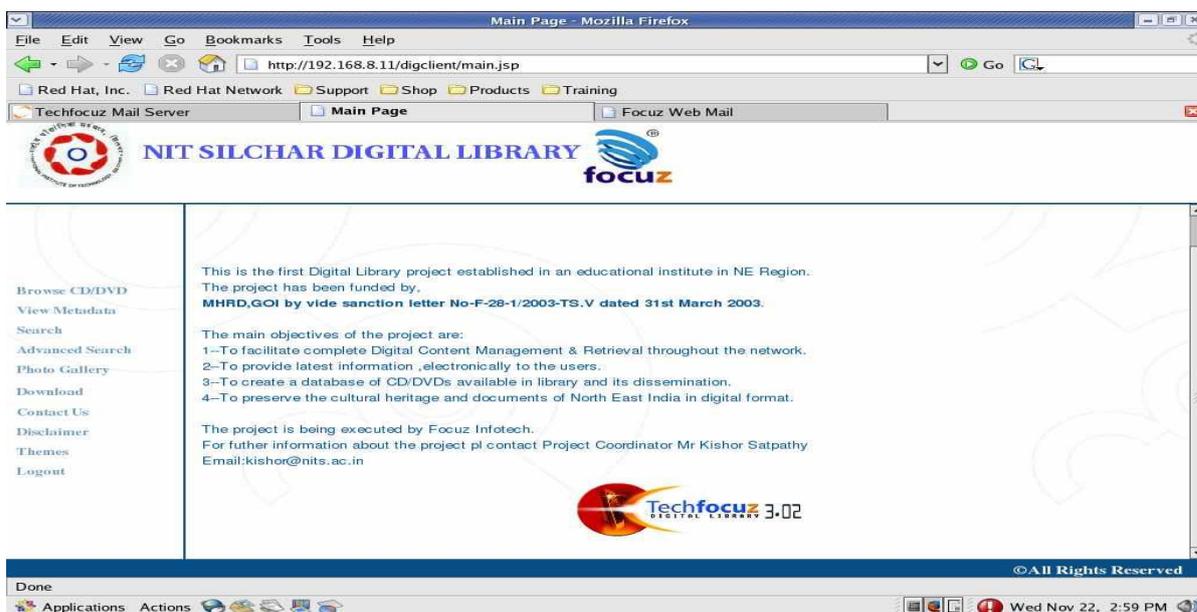
<http://192.168.21.34:8080/jopacgw>

9.3.5 Digital Library

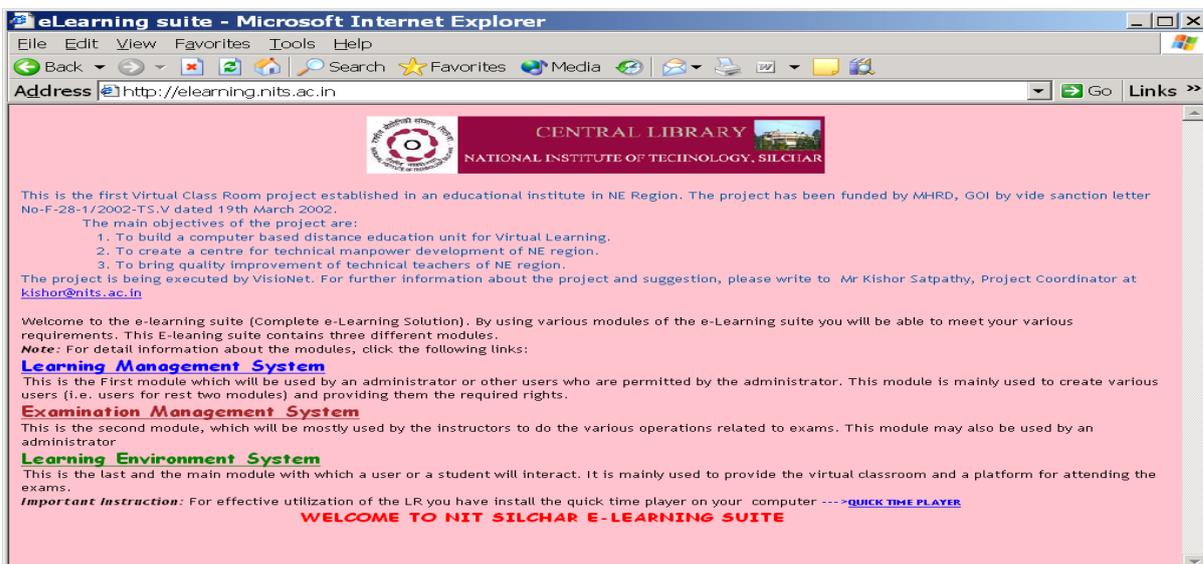
Central Library has created a web portal for e-resource management (<http://122.160.76.157:8081/nitsilchar/>), which provides web-based access to its electronics journals, e-books and databases. It has set up a digital library & e-learning portal for the NIT, Silchar community. The library is a part of the institute-wide network and has adequate computing infrastructure to cater to the needs of the users.

National Institute of Technology, Silchar has successfully completed the digital library & virtual classroom project sponsored by MHRD, Government of India. Under the Digital Library project, the library will digitalize old rare & books, manuscripts and documents. 300 E-books have already been put in the digital library server for the access of the student in the campus LAN. Under this project, library has scanned the photographs of the institute and its programs and has created a digital photo gallery.

URL: <http://192.168.21.50/digclient/main.jsp>



Dr. Kishor Chandra Satpathy, Librarian & Coordinator of Continuing Education Cell, coordinated this project & he has also implemented the e-learning solution in the Institute. The resources are available in the Campus LAN for users.



9.3.6 E- Resources @ NITS

The Central Library subscribes professional journals of Wiley, Elsevier, T&F, ACTA PRESS, APS, ACS, RSC etc. during the year. The library renewed subscription to 4 databases that were subscribed during the previous year & added 2 new databases. Library subscribed 51 professional e-journals of Wiley, Elsevier, Acta Press, Inderscience & T&F etc. during the year. The following e-resources (e-books, e-journals and e-databases) have been procured for Digital library section of the Central Library. The details available at <http://122.160.76.157:8081/nit/index.jsp>.



The Library subscribed to the following databases during the reporting year.

Institutional Database @ 2012 NIT Silchar	
Database Name	Links
India stat.com	http://www.indiastat.com/default.aspx
Economic & Political Weekly	http://epw.in/epw/user/userindexHome.jsp
SAE Digital Library	http://digitallibrary.sae.org/quicksearch/
ASTM : Standards and Engineering Digital Library	http://enterprise.astm.org
Science Direct	http://www.sciencedirect.com/
ACS Web Edition	http://pubs.acs.org/
MathSciNet	http://www.ams.org/mathscinet/
SIAM (LOCUS) (1952-1996 Backfiles)	http://locus.siam.org/
DELNET	www.delnet.nic.in
American Library	http://amlibindia.state.gov

E-Books	
Knovel ME Books	http://www.knovel.com/web/portal/browse/subject/70/to pic/
LNCS (shared with ECE)	http://www.springerlink.com/engineering/books/

INDEST Consortium	
Database Name	Links
JCCC@INDEST – AICTE	http://indest.jccc.in
ACM Digital Library	http://portal.acm.org/portal.cfm
ASCE Journals	http://www.asce.org/
ASME Journals	http://www.asmedl.org/
IEEE/IEE Electronic Library (IEL) Online	http://ieeexplore.ieee.org/xpl/periodicals.jsp
Nature	http://www.nature.com/siteindex/index.html
SpringerLink	http://www.springerlink.com/
Project Muse	http://muse.jhu.edu/
Annual Review	http://www.annualreviews.org/
Knimbus	http://knimbus.com/knimbus/user/auth/do

NIT's E-resource Subscription Details

Title of Journals	Web Address / Link
Civil Engineering	
Earthquake Engineering And Structural Dynamics	http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1096-9845
Journal of The American Water Resources Association	http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1752-1688
Ground Water	http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1745-6584
Hydrological Processes	http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1085/issues
Journal of Earth System Science	http://www.springerlink.com/content/0253-4126/
International Journal of Pavement Engineering	http://www.tandfonline.com/loi/gpav20
Journal of Earthquake Engineering	http://www.tandfonline.com/loi/ueqe20
Urban Water Journal	http://www.tandfonline.com/loi/nurw20
Transportation Research Record	http://trb.metapress.com/content/0361-1981/
International journal of Environment & Waste Management	http://www.ingentaconnect.com/content/ind/ijewm
The Indian Concrete Journal	http://www.icjonline.com/
Information Digest on Energy and Environment	http://bookstore.teriin.org/e_periodicals.php
Computer Science Engineering	
Applied Ontology	http://iospress.metapress.com/content/119850/
Informatica	http://iospress.metapress.com/content/113362/
International Journal of Hybrid Intelligent Systems	http://iospress.metapress.com/content/112107/
Journal Of Computer Security	http://iospress.metapress.com/content/103167/
Journal of high Speed Network	http://iospress.metapress.com/content/103170/
IEI Computer Engineering	http://www.editorialmanager.com/ieib/
Electrical Engineering	
Electric Power Components and Systems	http://www.tandfonline.com/loi/uemp20
Control and Intelligent Systems	http://www.actapress.com/Content_of_Journal.aspx?journalID=141
International Journal of Modelling and Simulation	http://www.actapress.com/Content_of_Journal.aspx?journalID=129
International Journal of Power and Energy Systems	http://www.actapress.com/Content_of_Journal.aspx?journalID=145
International Journal of Robotics and Automation	http://www.actapress.com/Content_of_Journal.aspx?journalID=147
International Journal of Modelling, Identification and Control	http://www.ingentaconnect.com/content/ind/ijmic
International Journal of Renewable Energy Technology	http://www.ingentaconnect.com/content/ind/ijret
International Journal of Power and Energy Conversion	http://www.ingentaconnect.com/content/ind/ijpec
Integration: The VLSI Journal	http://www.sciencedirect.com/science/journal/01679260/45
Wind Energy	http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1824/issues
IEI Electrical Engineering	http://www.editorialmanager.com/ieib/
Electronic Telecommunication Engineering	
Analog Integrated Circuits and Signal Processing An International Journal	http://www.springerlink.com/content/0925-1030/
Journal of Low Power Electronics	http://www.ingentaconnect.com/content/asp/jolpe
IEI Electronic & Telecommunication Engineering	http://www.editorialmanager.com/ieib/
Humanities & Social Science	
American Economic Review (AER)	http://www.aeaweb.org/aer/contents/index.php
Journal of Economic Literature (JEL)	http://www.aeaweb.org/journal/contents/index.php
Journal of Economic Perspectives (JEP)	http://www.aeaweb.org/jep/contents/index.php

American Economic Journal: Applied economics	http://www.aeaweb.org/aej-applied/contents/
American Economic Journal: Economic Policy	http://www.aeaweb.org/aej-policy/index.php
American Economic Journal: Macroeconomics	http://www.aeaweb.org/aej-macro/index.php
American Economic Journal: Microeconomics	http://www.aeaweb.org/aej-micro/index.php
The Review of English Studies	http://res.oxfordjournals.org/
Victorian Studies	http://www.jstor.org/action/showPublication?journalCode=victorianstudies
International Journal of Regulation and Governance	http://bookstore.teriin.org/e_periodicals.php
Mechanical Engineering	
Int. Jnl. of Manufacturing Technology and Management	http://www.ingentaconnect.com/content/ind/ijmtm
Int. Jnl. of Machining And Machinability of Materials	http://www.ingentaconnect.com/content/ind/ijmmm
International Journal of Manufacturing Research	http://www.ingentaconnect.com/content/ind/ijmr
International Journal of Surface Science & Engineering	http://www.ingentaconnect.com/content/ind/ijsurfse
Materials and Manufacturing Processes	http://www.tandfonline.com/loi/lmmp20
Machining Science & Technology: An International Journal	http://www.tandfonline.com/loi/lmst20
Mechanics of Advanced Materials and Structures	http://www.tandfonline.com/loi/umcm20
International Journal of Production Research	http://www.tandfonline.com/loi/tprs20
International Journal of Computer Integrated Manufacturing	http://www.tandfonline.com/loi/tcim20
Journal of Resources Energy and Development	http://bookstore.teriin.org/e_periodicals.php
Physics	
Physical Review E	http://pre.aps.org/browse
Applied Physics Letter	http://apl.aip.org/resource/1/applab
Journal of Applied Physics	http://jap.aip.org/resource/1/japiau
Pramana Journal of Physics	http://www.springerlink.com/content/0304-4289/
Indian Journal of Physics	http://www.springerlink.com/content/0973-1458/
Mathematics	
Indian Journal of Pure & Applied Mathematics	http://www.springerlink.com/content/0019-5588/
Opsearch	http://www.springerlink.com/content/0030-3887/

E- Resource under JCCC@ INDEST-AICTE

JCCC is J-Gate Custom Content Consortia for a group of homogeneous consortia members, and JCCC-INDEST is J-Gate Custom Content for the Indian National Digital Library in Science and Technology (INDEST), a consortium set up by the Ministry of Human Resource Development, Government of India, on the recommendation made by the Expert Group appointed by it under the chairmanship of Prof N Balakrishnan. For details pl. visit: <http://jccc-indest.informindia.co.in>

E- Resource under DELNET

Being a member of DELNET, users have got the opportunity to access the resources available in other member institute or can borrow or exchange documents through inter library loan (ILL). In addition to that Library Network (DELNET) initiatives, DELNET's activities and services can be viewed at DELNET's Home Page and its databases can be accessed through a web-based interface. For details pl. visit: www.delnet.nic.in

E- Resource under Open Access

Open access is a publication model wherein neither a reader nor the reader's institutions are charged for access to articles or other resources. Users are free to read, download, copy, distribute, print, search, or link to the full texts of these articles. The INDEST - AICTE

Consortium encourages open access through institutional repositories in its member institutions. The E- Resources incorporates the following:

- Databases
- E-journals

9.3.7 Lib 2.0 SERVICES

Library users can get the latest updates/happenings in the library through our library blog at <http://library-nitsilchar.blogspot.com/> and get connected through our Facebook group at <http://www.facebook.com/groups/369833813038102/>. Further, the Central library makes good use of various mailing lists, and news groups to interact and communicate with the user community, to inform them about the new activities and services, and to obtain their comments and suggestions.

9.3.8 Infrastructure Facilities

Library has a HP server for hosting Libsys database and a Techfocuz library server, which can host more than 2500 CDs to host the Digital Library. There are three computers kept inside the library to facilitate information accessing by users. Library is having VCP, Scanner and HP LaserJet Printer. Library is using Libsys-integrated library management software for automating various functions in the Library like book procurement, circulation. Library is using RFID technology for book security purpose.

During the reporting year, for better and comfortable reading facility, customized reading tables along with 60 cushioned reading chairs have been procured and placed for the users of the library.

9.3.9. Staff

The library has a good team of talented and dedicated staff to perform their duties and responsibilities with dignity and honestly. In addition to their regular jobs, most of them are involved in various academic activities like attending workshop, presenting papers in seminars and conferences, delivering lectures in various training programmes, serving on various expert committees, guiding research etc. Some of the major contributions /achievements are listed below:

1. Dr. Kishor Chandra Satpathy delivered a invited lecture in the national workshop on “E-resource Management “jointly organized by the Rabindra Library, Assam University and Indian Statistical Institute, Kolkata from 28th Nov – 2nd Dec 2011.
2. Dr. Kishor Chandra Satpathy presented a paper on “Best Practices in Libraries & Information Centers: A Case Study of NIT Silchar” in the 13th annual Convention of MALIBNET on “Repositioning Libraries for User Empowerment: Policy, Planning & technology” held at University of Delhi, New Delhi during 13-15 Oct. 2011.
3. Dr. Kishor Chandra Satpathy delivered a keynote paper on “Role of Library in Disaster Management: A case Study of North East India” in the national seminar on "Preservation of Information Resources in 21st Century" in Mizoram University, Aizawl from 21-23 March 2012.
4. Mrs. Krishnamati Singha, Assistant Librarian attended the the national workshop on “E-resource Management” jointly organized by the Rabindra Library , Assam University and Indian Statistical Institute, Kolkata from 28th Nov – 2nd Dec 2011.
5. Mrs. Krishnamati Singha, Assistant Librarian attended the national workshop on “Use of e-Books and it’s future” from 13-14 January 2012 at NIT, Rourkela.

6. Mrs. Krishnamati Singha, Assistant Librarian attended the workshop on “e-Books: Issues & Challenges ” on 15th March 2012 at NIT, Silchar.

9.3.10 Additional Information

Programme Organized



Satpathy, K. C., organized the workshop on “e-Books: Issues & Challenges” on 15th March 2012 at Central Library, NIT Silchar



Satpathy, K. C., organized the book exhibition from 13-16 March 2012 at CET Hall , NIT Silchar

9.3.11 Other Activities

Publication by Library Staff

Book:

Satpathy, K C, "ICT Application in Library & Information Centres: Issues & Challenges" published by National Library, Kolkata & S.K.Jain and Sons, Jaipur, 2012 (ISBN 978-81-923520-1-5).

Publications (Conference Papers): National

Satpathy, K C & Sinha, M. K. "Role of Library in Disaster Management: A case Study of North East India" in the Proc. "Preservation of Information Resources in 21st Century", ed. Rath, Pravakar et al. (New Delhi: Today & Tomorrow's Printers and Publishers), 2012.

Satpathy, K C, Sarma, Rahul & Srama, R. D. "E-Resources Management in Technical Institute Library: A Case Study on NIT Silchar" in the Proc. "Building Participatory Library Services in Digital Era", ed. Arora, Jagdish et al. (Ahmedabad: INFLIBNET Centre), 2012.

9.3.12 Support to NIT Nagaland

Central library extended services to NIT Nagaland community and provided all support and help to setup the library of NIT Nagaland. It procured & processed books for NIT Nagaland. The library also helped in selecting and training of the staff of NIT Nagaland.

9.4 Laboratories

Deptts.	Name of the Laboratories	Main equipments available/experiments conducted
Civil Engg.	<ul style="list-style-type: none"> • Strength of Materials • Fluid Mechanics • Environmental Engineering • Transportation Engineering • Concrete • Survey • Soil Mechanics • Computation 	Universal Testing Machine (100 T), Compression, Impact Testing Machines, Hardness Testing Machines, Spring Testing Machines, Torsion Testing Machines Wind Tunnel (Sub sonic), Cascade Tunnel, Centrifugal Pump Test Rig, Reciprocating Pump Test Rig, Gear-Oil Pump Test Rig, Kaplan Turbine Test Rig, Francis Turbine Test Rig, Pelton Wheel Gas Analyser, Digital pH/Turbidity Meter, Spectrophotometer, Universal Titrator Automatic Penetrometer, Centrifuge Extractor, Deval Attrition Machine, Ductility Testing Machine, Marshal Stability Apparatus, Benkelman Beam Apparatus, Aggregate Impact Value Apparatus Compaction Factor apparatus, Mortar Mixer, Rock-Tiaxial Machine, Los-Angles Abrasion Machine, Vee-Bee Apparatus, Rock Cutter Machine Total Station, Wild T-2 Theodolite, etc Triaxial Testing apparatus, CBR Testing Machine, Direct Shear Apparatus, Consolidation Apparatus, and Motorised Vane shear Apparatus, Proctor Compaction Apparatus, etc. SUN Ultra-10 High end Computation System, ANSYS Software, Pentium-4 PCs, etc Cyclic Triaxial Test set up Computerized direct shear test set up B & K Pulse analyzer Advanced computational laboratory with computers of latest configuration
Mechanical Engg.	<ul style="list-style-type: none"> • Computational • Machine Dynamic & Vibration • Instrumentation • Energy 	Different types of transducers, data logger and script chart recorder; Torsional vibration system of single rotor with viscous damping, Longitudinal vibration system of Spring, Universal Governor, Motorised Gyroscope, Whirling of shaft, Cam Analysis Machine, Vibration of rotor system, Journal

	<ul style="list-style-type: none"> • I.C. Engine & Automobile • Heat Transfer • CNC lab • Material Science • Metrology • Steam Power • Refrigeration and Air conditioning • Advanced Manufacturing Research 	<p>Bearing apparatus; Digital pressure indicator, Various torque sensor, Various Load Cell, Radiation Pyrometer, Strain gauge, temperature indicator, Strain Measurement tutor, Temperature Measurement tutor using RTD sensor, Temperature Measurement tutor CTC Sensor, Speed Measurement tutor, Load measurement tutor using load cell, Pressure measurement tutor using pressure transducer, Water level measurement using water level transducer, Long range linear measurement tutor using potentiometric transducer, Inductive measurement tutor, Light measurement tutor, Pressure Cells, Inductor Measurement Tutor, Rotary Measurement Tutor, Height Measurement Tutor, Pressure meter train kit, Thermocouple Measurement Kit, Various thermocouples, Educational Software data logging package, Robot Stimulation Software, Mechatronic Training Package; 2 and 4 Stroke Petrol engine, 4-Stroke single cylinder Diesel engine, Petrol Jeep vehicle, TATA engine 312M, Air compressor, Hydraulic machine, Nozzle tester; Thermal conductivity measurement, Emissivity measurement, Parallel flow/Counter flow Heat Exchanger, Cross-flow heat exchanger, Forced convection, Condensation apparatus; NISA 3D Fluid Flow Package, Projection Manometer; Starturn CNC Bench turning center with accessories; Kaplan Turbine, Airflow Bench complete with accessories as Drag Force Apparatus, Memo meter with tube and Boundary Layer Apparatus; Different types of Microscopes, Field Microscope, Polishing facilities, Hardness testing machine, Impact testing machine, Spectrometers; AVL Fire CFD Software; The infrastructure facilities for different study of microstructure & mechanical properties; Oil fires Boiler; Computerised Refrigeration and Air-conditioning test rig, Ice Plant, Refrigeration Lab Unit (R 714) with Data acquisition upgrade (RC 714), 4-Channel, 100 MHz, Digital Oscilloscope with current probe, Agilent DSOX 2014A, Agilent 1146A, 4-S Computerised Diesel Engine Test Rig, AVL-5 Gas Analyser, AVL Smoke-meter, Carbon Residue Apparatus, Cloud point and Pour point apparatus, Copper strip corrosion Apparatus, Precision Weigh Balance, Viscosity and Density meter, Heating Mantle, Die Sinking EDM with accessories of Sparkonix, Optical Metallurgical Microscope with camera and measurement software, Leica DM2500M, Precision Electronic Balance, Ishida DXR 220, Surface Profilometer, Zeiss TSK, Handsurf E-35, Powder Compaction hydraulic press Machine, Kimaya 25 ton, Table top CNC Lathe etc</p>
<p>Electrical Engg.</p>	<ul style="list-style-type: none"> • Basic Machines • Basic Electrical Sc • Measurement & Instrumentation • Control System • Microprocessor • Power Electronics & Electric Drives • Computer • Non-conventional Energy • Analog-Digital Electronics 	<p>Different kinds of general purpose Synchronous, Induction, DC machines; Transformers, Schrage Motors, Study of different electrical and magnetic circuits, measurement of various parameters, and electrical quantities; Servo motors kits , Analog Computers, Instrumentation tutor, Control System trainer, Different types of Microprocessors with different head-on cards, Different types of power converters kits, Characteristics of different power devices. Solar photo voltaic cells, Solar radiation Detector, Wind Turbine with on-line data logging. Analog and Digital IC components, Trainers, Oscilloscopes, IC Test benches, Oscilloscopes of 100MHz. Characteristics of semiconductor devices, Registers, Counters, Digital Clocks etc. Efforts are made to upgrade/modernize the laboratories</p>
<p>Electronics & Communicati</p>	<ul style="list-style-type: none"> • Basic Electronics Lab • Digital Electronics Lab 	<p>The laboratories are equipped with 350 MHz Synchroscope, 100 MHz Storage scope, 16 channel Logic Analyzer, 8510B</p>

ons Engg. Computer Science and Engg.	<ul style="list-style-type: none"> • Communication Engg Lab • CAD of VLSI Lab • Advanced Communication Lab • Data Structure & OOP Lab • Microprocessor & Microcontroller Lab • System Programming & Operating System • DBMS Lab • UNIX/NT Lab • DSP & Embedded System Lab • Computer Graphics & Multi Media Laboratory • ICP Lab • Project Lab 	<p>Network Analyzer, Microwave Frequency Counter, RF Spectrum Analyzer, NT Server, Workstations (P-III), ORCAD, MATLAB, SIMULINK, Electronic Work-bench, ISDN Emulator, Fibre Optic training kits, UNIX Servers, NT Server besides other standard software</p> <p>COMMSIM Trident Lab software (25 users license), ELANIX System view software (10 users license), LAN Trainer from BENCHMARK (04 Kits), DSKTMS320C 6713 & 6416 board from Crans s/w international (05 each set), DSP TMS320DM64X based communication interface (One set), DSK 6713 video/image interface or captured board with camera from EDUTECH (three), Micro-controller development board for 8051(08), PCB Fabrication tools (One set), Oscilloscope (20), Workstations, Embedded system Board 1.8540 2.ARM Processor 3.IMX21 (Software) (05 number of 8540+02 number of ARM processor), Itanium server (03), MT-9000 microwave Test Bench (2), IBM Rational Rose university relation program (Software) (2 nos each of total 20 license users), Man and Tel Blue-tooth Trainer Model BT 2001 (01), Man and Tel Mobile communication (01), VHDL ACTIVE HDL Simulation software (0001 set)</p>
Physics	<ul style="list-style-type: none"> • Physics Laboratory (BTech programme) • Condensed Matter Physics Research Laboratory • Computer Room 	<p>Laboratory has the facilities for undergraduate Programmes. Laboratory is well-equipped with advanced facilities for carrying out research in the emerging areas of science and technology. Major facilities available are High Vacuum Coating Unit (HHV make), 6514 Electrometer (Keithley make), LCR Hitester (Hioki Model No. 3522-50), PerkinElmer Lambda 35 UV/VIS Spectrophotometer, Hall Measurement set-up, Polarising Microscope, Impedance Analyser (Solartron Model No. 1260 A), XRD System etc. PC-Pentium with internet connectivity and other relevant software available</p>
Chemistry	UG Chemistry Lab Instrument Laboratory	Polarimeter, TG-DTAFTIR, UV-VISIBLE, GC, PH-METER, DO-METER

9.5 Hospital, Post Office, Shopping Centre

9.5.1 Hospital

The Institute has a dispensary having staff, as on 31-3-2011, given below:

SI No	Staff Positions	Numbers
1.	Senior Medical Officer	0
2.	Lady Medical Officer	1
3.	Pharmacist	1
4.	Nurse-cum-midwife	0
5.	Medical Attendant	3

All the staff and students of the Institute avail medical aid from the dispensary. The Institute also has an ambulance for carrying patients to Silchar Medical College Hospital for emergency treatment.

9.5.2 Post Office

The Institute has a sub Post Office within the campus. The sub Post Office has facilities like registration, money order, and speed post. The post office functions from 9.30 AM to 2.30 PM. Students and staff and people from the surrounding villages take advantage of the facilities of this Post Office.

9.5.3 Bank

A fully computerized full-fledged core-banking branch of State bank of India with ATM facility operates in this campus. The students, staff and people of the villages surrounding the campus avail the facilities of the Bank.

9.5.4 Shopping Centre

A portion of the old LTD building houses the Institute Stores Section and the remaining portion is being used for sopping & other purposes with Post Office, Bank, PCOs, Fax Centres, DTP Centres and Bookshops etc. One Nescafe Corner, located adjacent to this building, operated by Nestle India Ltd. (under agreement with NITS) has opened during the year of reporting and is in operation.

9.5.5 Staff Canteen

A full-fledged Canteen, named NITS Café, is in operation catering quality foods to students, staff and visitors.



9.6 EPABX

FACULTY-IN-CHARGE	
Name	Qualification
Mr. L. C. Saikia	MTech

The Institute has an EPABX system which provides telephone connections to all faculty, officers, department offices, section offices, and laboratories. The controlling and maintenance of the telephone connections are carried out through a centralised exchange. This office is working under the Dean (P&D).

9.7 Students Gymkhana

DEAN (SW)	
Name	Qualification
Prof. A. K. Sil	PhD

ASSOCIATE Deans (SW)			
Name		Qualification	
Dr. P. Rajbongshi		PhD	
Dr. N. B. D Choudhury		PhD	
BOARD OF HOSTEL MANAGEMENT			
Name		Designation	Qualification
Dr. A. K. Sil		Chairman	PhD
Dr. P. Rajbongshi		Vice Chairman	PhD
Dr. P. Barman (2 months) Dr. J.P. Mishra (4 months) Dr. S. Choudhury (6 months)		Secretary	PhD
WARDENS			
Hostel No.	Name	Designation	Department
1.	Dr. J. P. Mishra	PhD	EE
2.	Dr. A. Goswami	PhD	EE
3.	Dr. A. Zaman	PhD	Chemistry
4.	Dr. Ayon Bhattacharjee	PhD	Physics
5.	Dr. Sourav Choudhury	PhD	Mech.
6.	Dr. P. Barman	PhD	Chemistry
7.	Dr. Asim Roy	PhD	Physics
8.	Dr. N. B. D. Choudhury	PD	CE
GH 1	Dr. Mousumi Sen	PhD	Mathematics
GH 2	Dr. Mousumi Sen Mrs. N. Barthakur	PhD PhD	Mathematics CE

GYMKHANA OFFICE BEARS			
Name	Port-Folios	Semester	Tenure
Mr. Shivendra Singh	Vice President	7 th	1 Year
Mr. Udishman Mudiari	General Secretary	-do-	-do-
Mr. Shivendra Singh	G.S, Cultural (i/c)	-do-	-do-
Mr. Udishman Mudiari	GS, Sports (i/c)	-do-	-do-
Mr. Samujjal Das	Secretary, Music Club	5 th	-do-
Mr. M. Kinard Koch	Secretary, Foot ball	-do-	-do-
Mr. Bhaskar Jyoti Sarma	Secretary, Dramatic Club	-do-	-do-
Mr. Nayan Das	Secretary, Basket ball	-do-	-do-
Mr. Vikash Yadav	Secretary, Cricket	5 th	-do-
Mr. Rohit Thakwani	Secretary, Photography	5 th	-do-
Mr. Amit Sarma	Secretary, Lit. & Publication	-do-	-do-
Mr. Pawan Patidar	Secretary, Hockey	-do-	-do-
Mr. Chinmoy Deka	Secretary, Tennis	-do-	-do-
Mr. Rituraj Shukla	Secretary, Indoor Games	-do-	-do-
Mr. Seemon Dutta	Secretary, Athletics & Gym.	-do-	-do-
Mr. Abhijan Lahiri	Secretary, Trekking & Mount.	-do-	-do-

FACULTY ADVISORS OF GYMKHANA			
Port-Folios	Name	Designation	Department
Vice President (VP)	Dr. M. A. Ahmed	Assoc. Professor	CE
General Secretary (Gymkhana)	Dr. N. B. Singh	Asst. Professor	HSS
G. S. (Cultural Activities) (i/c)	Dr. Ayon Bhattacharjee	Assoc. Professor	Phy.
Music Club Secretary			
Photographic Club Secretary			
Dramatic Club Secretary	Mr. P. S. Neog	Asst. Professor	CSE
Literary & Publication Secretary	Dr. A. M. Choudhury	Assoc. Professor	EE
G. S. (Sports) (i/c)	Mr. Wasim Arif	Asst. Professor	ETE
Football Secretary			
Cricket Secretary			
Hockey Secretary			

Tennis Secretary	Dr. Asim Roy	H.O.D	Phy.
Basketball Secretary			
Indoor Games Secretary	Mr. Dulal das	Asst. Professor	EE
Athletics and Gymnastics Secretary	Mr. Jishan Medhi	Asst. Professor	ETE
Trekking and Mount. Secretary			

In pursuit of excellence and giving life a meaningful direction, Students' Gymkhana of NIT Silchar works towards profound personality development of NIT students by infusing in them a spirit of constructive co-operation, leadership qualities and organizational capabilities. This is being achieved by involving them in a wide spectrum of Sports & Games as well as Social & Cultural and Technological activities throughout the year.

The year 2011-2012 was also full of activities and achievements and students have made the Institute proud by maintaining high standards of organizational and leadership qualities.

9.7.1 Information regarding the students' activities under Office of the Dean (SW)

General Programmes:

- Orientation program was conducted for 1st Sem. 2011 students.
- Ekta Daur was held on 14th August, 2011.
- Independence Day was celebrated on 15th August, 2011.
- Freshers Social: official welcome to all the students of the academic batch 2011 was extended.
- Lncandescence - The Annual Techno- Cultural Fest of NIT Silchar was successfully organized.
- Republic Day was celebrated on 26th Jan., 2012.
- Institutes' Election to Gymkhana 2012-13 was conducted on 22nd April, 2012 successfully like previous years.



(Ekta Daur)

A. Appointment of Counselor/Officers etc. during the period

- Students' Counseling was appointed.
- Sports officer was appointed
- Karate Coach was appointed.
- Physical Trainer was appointed.
- Hostel manager and Asst. Manager were appointed.

B. The following Cultural activities/ functions and extra-curricular activities were performed/ organized by the students of NIT Silchar under Gymkhana

- Hindi Divas was organized on 14th Sept., 2011.
- Prometheus, a creative writing module was launched. "
- Kabi – Pranam: An event on the 150th birth of Kabiguru Rabindranath Tagore was organised.
- In collaboration with SPICMACAY a Musical Night with Grammy Award winner Pt. Vishwa Mohan Bhatt and eminent Tablist Subhajyoti Guha was organized.
- Sahaja Yoga Meditation programme has been conducted.
- IGNITE – 11, an Institute Magazine was published.
- A Blood Donation Camp was organized in association with Silchar Medical College (SMCH). A good number of 150 blood donors participated in the camp.
- Gymkhana Prize Distribution Ceremony was arranged.
- POSUA: An event to make everyone familiar of the culture of N.E was organized.
- A new mediclaim policy, initiated by the Director, has been implemented for all the students of NIT Silchar.
- Spark: A musical night on the eve of Diwali was conducted.
- A tribute to the Bard of Brahmaputra Late Dr. Bhupendra Hazarika was offered.
- AIDS awareness programme was conducted.
- Sahaja Yoga Meditation was conducted on Stress Management.



C. Sports/ Tournaments organized by Students under Gymkhana Union Body and Awards received thereby.

- Gymkhana Quiz.
- Gymkhana Football Tournament.
- Gymkhana Kabaddi Tournament
- Gymkhana Volleyball Tournament
- Gymkhana Basketball Tournament
- Gymkhana Athletics Meet.
- Gymkhana Lawn Tennis Tournament
- Gymkhana Cricket Tournament
- Gymkhana Indoor Games (Badminton, TI, Carom, Chess) Tournament
- Gymkhana Drama Competition.
- Band Wagon: Inter Hostel Band competition.
- Photography: Expression. iClick, Snapthrillz.

D. Participation of the students of NIT Silchar for various Sports/ Tournaments/ Events/ competition, etc and their success.

- A two member (Girls) team of NITS participated in the NORTH-EASTERN REGIONAL INTER-COLLEGE INVITATION DEBATE, organized by JYOTI at Silchar. One of them bagged the award of best debater while the other student won the 3rd prize for individual performance. But the Girl's team had bagged the first position amongst different north-eastern Institutes.
- Another team (Boys) of NITS had got the 3rd team prize in the same event.
- Students of NIT Silchar participated in all India Tournament at VNIT Nagpur for Table Tennis and WON Runners up.
- Participated in Inter NIT Sports Meet and secured second position in Table Tennis.
- Three special training programmes on KARATE were held with Experts, from Guwahati and Bangalore. Three numbers of gradation exams were held.
- Numbers of Black Belt produced – 5 no. (Five).
- No. of Medals won at State level are 7 (ONE Silver and SIX Bronze).
- Eight (8) candidates have been selected for National Level Training cum Competition at Chennai in Aug. 2012.

9.7.2 Sports and Games

- ✚ Intra College, Football
- ✚ Intra College, Cricket
- ✚ Intra College, Night Cricket
- ✚ Intra College, Volley Ball
- ✚ Intra College, Basket Ball
- ✚ Intra College, Gymkhana
- ✚ All India (Inter NIT) Table Tennis Tournaments
- ✚ Incandence 2011

9.7.3 Social and Cultural

- ✚ Debate Competition
- ✚ Quiz Competition
- ✚ Best Blood Donation Camp award for last four years in Barak Valley

Apart from the above, many steps were taken for improving various activities of gymkhana.

9.8 Facilities for Games & Sports

The Institute has a playground measuring 150m x 90m with facility for playing football, Cricket, Hockey and other games. NIT Silchar also has a hard court for playing basketball and is provided with hard courts for playing Volleyball and Badminton. It has got a Lawn Tennis court within the campus. Glimpses of the various sports facilities are given below.

Football/Cricket ground	30,600.00 Sq m
Basket ball court	1 No.
Tennis court	3 Nos.
Badminton court	3 Nos.
Students' Activity Centre	1,145.00 Sq m
Amenities Building	1,739.00 Sq m

9.9 Training & Placement

Campus recruitment process conducted by the Institute is a very vital activity. A Training and Placement Committee (TPC) was formed during the period under consideration involving a few final year students. The TPC contacted various companies for campus recruitment. A College information brochure was prepared. T&P Cell received positive response from a number of companies and a number of students were selected in the companies that visited the Institute during the period under consideration. The T&P Cell conducted its functions through Faculty-in-Charge (T&P) under the Office of the Dean (SA). The T&P Cell consists of office, two examination rooms, interview room and a group discussion room. Besides this, the Cell also arranges summer training programmes for all 6th semester BTechstudents.

Sl No.	NAME OF THE ORGANISATION	CE	EE	ME	ECE	CSE	M TECH	TOTAL
1	Shapoorji Pallonji & Co. Ltd	6	-	-	-	-	-	6
2	Samsung India Software Centre	-	-	-	5	6	-	11
3	Atkins	3	-	3	-	-	-	6
4	Mahindra and Mahindra	-	1	5	2	-	1	9
5	Tata Motors	-	-	8	-	-	-	8
6	Airvana Networks	-	0	-	0	1	-	1
7	Flaktwoods	-	-	1	-	-	-	1
8	ACCENTURE	2	4	2	22	18	-	50
9	Mu-sigma	1	1	-	3	2	-	7
10	IOCL	1	3	4	-	-	-	8
11	TCS	6	4	-	29	42	-	81
12	Capegemini	2	9	-	7	5	2	25
13	Maruti Suzuki	-	-	10	-	-	-	10
14	Unisys	-	-	-	5	4	-	9
15	SISO	-	-	-	4	5	-	9
16	Hcentive	-	-	-	-	-	0	0
17	SEL	-	-	-	-	3	-	3
18	Alstom	-	4	10	-	-	-	14
19	Tech Mahindra	2	0	0	2	2	0	6
20	BOC	-	-	1	-	-	-	1
21	Tavant Technologies	0	1	0	5	1	3	10
22	HCL Technologies	-	11	-	15	19	-	45
23	Larsen & Toubro	1	1	0	-	-	-	2
24	TACO	-	0	7	-	-	-	7
25	Gammon India	10	-	-	-	-	-	10
26	Sony India	0	0	0	5	1	-	6
27	ITW Signode	-	2	1	-	-	-	3
28	SUBROS	-	1	4	-	-	-	5
29	Sharda university	-	-	-	-	-	13	13
30	Techno India- Kolkata	-	-	-	-	-	6	6
31	HSCC	2	1	-	-	-	-	3
32	LNJ Bhilwara	4	2	2	-	-	-	8

33	Patel Engg	5	-	2	-	-	-	7
34	Coastal Projects	3	2	-	-	-	-	5
35	IBM	3	4	3	1	5	4	20
36	Huawei					1		1
37	OIL India	1	-	-	-	-	-	1
38	L & T ramboll	4	-	-	-	-	-	4
39	ONGC	-	-	15	-	-		15
40	Microsoft							
41	ITD Cemeration	4	-	-	-	-	-	4
42	Royal Group	-	-	-	-	-	8	8
43	RANCORE				3	1		4
44	COAL India	-	5	17	-	-	-	22
45	Indigo Architect						0	0
46	Capital Iq						0	0
47	ERA Group	0	-	-	-	-	-	
48	Sap Labs							
49	MECON	2	1	2				5
50	Tally						RA	
51	SIEMENS		1					1
52	GREEN VALLEY	4	RA	RA				4
53	AR TECHNOLOGIES		6		4	9		19
54	PUNJ LLYOD		3	3				6
55	DENSO HARYANA			3	1			4
56	DENSO INTERNATIONAL					2		2
57	OTPC		3		1			4
58	EIL	1		1				2
59	REC		2					2
60	Simplex Infra	7						7
61	Bharat Electronics Ltd				3			3
62	Gadhia Solar	2					2	4
63	VKS Infra	3						3
64	GIMT						8	8
	TOTAL NO OF JOBS							548

9.10 Estate

Dean (P&D)		
Name	Qualification	
Prof. P. S. Choudhury	PhD	
Associate Deans		
Name	Qualification	
D. H. Das	MTech	
Other Officers		
Name	Position	Qualification
D. Dey	Asst Estate Engineer	Diploma (C)
S. Chauhan	Junior Engineer (E)	Diploma (E)

9.11 Physical Facilities

PART-A: Institute development authority (Construction)

In view of future expansion in student's intake, different infrastructure development works (construction) were undertaken through the Estate Engineering Branch of the Institute in the recent past and now continuing. Besides, Central Public Works Department also assigned with some projects.

The project completed and under progress during the reporting are as under.

9.11 1. Works completed:

1. Type-VI(EL) – 12 units
2. Type-V(E) – 21 units

3. Type-IV(E) – 30 units
4. Girls Hostel No. 2 (SF & TF)
5. Classroom Expansion Part-II
6. Chain link fencing at different locations
7. Renovation of various Department
8. Renovation of quarters

9.11 2. Project/ works are on-going:

1. Water Supply Distribution Network
2. Augmentation of water treatment plant
3. Production Engineering Laboratory
4. 33 KVA sub-station
5. Sports Complex with auditorium

The Institute is also planning for execution of different infrastructure development work for phase-wise implementation. The Building & Works Committee and Board of Governor have accorded technical sanction and approval in principle for phase-wise implementation of the project.

The projects are as under:

1. 1000 capacity Boys' Hostel No. 9
2. 400 capacity Girls' Hostel No. 3
3. New Library building
4. Market Complex with Bank & Post Office
5. New Administrative building
6. Renovation of internal road
7. Improvement of landscaping, Echo Park, Children Park

9.11 3. Project on pipeline:

The following projects are being processed for implementation:

- Kendriya Vidyalaya School & its campus
- Sewerage disposal system of the campus
- New Faculty qtrs.
- 100 capacity Security Barrack

9.11.4. The projects considered priority - I

- 1000 capacity Boys' Hostel No. 9
- New Library Building
- Faculty quarters

PART-B: INSTITUTE ELECTRICAL WORKS

Considering future increase in the student's intake as well as increase in faculty strength, the Electrical Works Unit under Estate Section of the Institute has taken up several new assignments as well as expansion works of existing systems. They are in different stages of progress.

9.11 5. Works completed:

The following constructions works have completed:

1. Construction of new car parking shed at Mechanical Engineering Department
2. Construction of septic tank and soak pit at different location
3. Modification of ICP Laboratory in old CSE building convert into Virtual class
4. Renovation of computer room at Department of Humanities

5. Chain link fencing for CSE & ETE building
6. Acoustic work and minor repairing work in connection with the 2011 Convocation at SAC building
7. Special civil repairing works at Girls Hostel No. 1
8. Supplying and installation of ceiling fan at old classroom
9. Installation of electrical wiring for power socket and computer switch board and installation of 1.5 HP submersible pump
10. Providing testing, supplying and fitting fixing of energy meter
11. Renovation of electrical wiring at Teachers' Flat
12. Installation of power socket wiring along with UPS connection
Location: ICP Lab in old CSE bldg.
13. Installation of electrical wiring for laboratory expansion at Mechanical Engg. Lab.

9.12 Vehicle Management

Sl No	Vehicle Registration No.	Type of Vehicle	Purpose
1.	AS 11-6913	Maruti Van Ambulance	Medical purpose for staff and students
2.	AS 11B-0930	Tata Bus	For staff and students
3.	AS 11B-2703	Tata Bus	For staff and students
4.	AS 11C-0043	Ambassador Car	Director
5.	AS 11D-7736 (Donated by NITS Alumni Association)	Tata Indigo Car	T & P Academic & Office purpose
6.	AS 11D-2701/ 2702	Tractor & Trailer	Estate Branch

9.13 Alumni Association and its activities

Need to create a platform for continuous interaction between the alumni and the Institute in every facets of development of the Institute has been felt and accordingly, REXIAN-NIT Silchar Alumni Association was established in the year 2006-07. Major objective of establishing the Alumni Association is tap their expertise in the overall development of teaching-learning, and research activities of the Institute. With the above objectives in mind, the Association, for the first time, organized the first alumni meet at Silchar during October 31-Nov 2, 2010. The response to the first alumni meet was stupendous. Participants from US, UK, Middle East and Singapore besides participants from various parts of the country joined the programme. First two batches (pass outs of 1983 and 1984 batches) were accorded felicitation on completion of 25 years of their graduation (silver jubilee of graduation)

The trend continued and during the year under reporting, the second alumni meet was organized at Silchar during 12-13 November 2011. A large number of participants from across the country joined the programme. Third and Fourth batches of graduates (1985 and 1986 passouts) were accorded a felicitation during the meet on completion of 25 years of their graduation. The second Annual General Body meeting of the Association was also organized during the meet. The Chairman, Board of Governors and Director of the Institute also attended the second Annual General Body meeting. Chairman, Board of Governors welcomed the alumni in their alma mater back and sought their all-round cooperation in making the Institute a top-class T-school in the field of engineering and technology. The Director exhorted the alumni to contribute generously in the overall development of the Institute and promised them with their active support, he would take the Institute to greater pinnacle of success. During the two day meet, cultural events were performed by the current students, alumni and the kids of alumni. Both the evening witnessed an unseen camaraderie between the current students and the alumni. The alumni promised to help the students in finding better placement and training for them. The Institute also made a token contribution of Rs. 1.00 lakh

to meet the expenses of the event. Association also organized an Induction Ceremony of 2011 graduates into the association in the month of May 2011.

The activities of the alumni association is managed by a 14 member Executive Committee with President, Vice-President, Secretary, Joint-Secretary-cum-Treasurer besides 10 members (five alumni and five student members). The association manages its finances through a bank out with the SBI, NIT Silchar branch. A one time Membership fee of Rs. 1000.00 is collected during admission in the Institute from every student and the membership fee is transferred to the alumni association account thereafter.

During the year under reporting, Dr. Ashim Kanti Dey (Second batch) was the President and Dt. Dibakar Chkraborty (Sixth batch) was the Secretary of the Association.



(Glimpses of Alumni Meet)

10. NOTABLE ACHIEVEMENTS

10.1 Past Achievements

Since inception in 1977, the Institute has produced more than 4300 undergraduate engineers in Civil Engineering, Electrical Engineering, Mechanical Engineering, Electronics & Telecommunication Engineering and Computer Science & Engineering streams. The Institute has produced more than 75 MTech recipients in various specializations. A number of scholars have been awarded PhD degree in Science & Engineering discipline. Besides this, a good number of PhD scholars from different Science & Engineering Deptt. are pursuing for PhD degree and some of them are on the verge of submission of their thesis. Many faculty members have publications in reputed International & National journals and a number of research projects have been granted to various faculty members of NIT Silchar.

10.2 Research Projects and Consultation Jobs Consultancy Earnings

NIT Silchar is encouraging consultancy works at various levels and NIT Silchar is earning revenue through consultancy works. Many Govt. of India, State Govt., PSUs, Pvt Organizations etc. are giving consultancy works to NIT Silchar.

Gross consultancy earning during the financial year 2011-12 was Rs. 73, 49,447.00 lakhs
Institute overhead charges including Share was = Rs. 15, 55,073.00 lakhs

Major clients for consultancy jobs were:

- (a) NCC Ltd.Hyderabad (Camp NIT, Silchar)
- (b) Govt. of Assam, Disaster Management Deptt.
- (c) Hindustan Paper Corporation Ltd
- (d) Central Public Works Department/PWD
- (e) Airport Authority, Kumbirgram
- (f) North East Frontier Railway
- (g) North Eastern Electric Power Corpn Ltd.
- (h) General Road Engineers Force
- (i) National Building Construction Corporation Ltd
- (j) Engineers India Limited
- (k) NPCC Ltd.
- (l) SMEC India Pvt. Ltd.
- (m) Rajshakhar Constn. Pvt. Ltd., Guwahati
- (n) Power Grid Corpn of India Ltd.
- (o) Assam University, Silchar
- (p) Brahmaputra Board
- (q) All India Radio
- (r) Indian Oil Corpn Ltd.
- (s) Meghalaya Cement Factory etc.

Achievements by Faculty Members

Mr. Shahedula Houque Laskar, Associate Professor, Department of Electronic Engineering, National Institute of Technology Silchar have joined the elited rank of IEEE as senior member.