PROSPECTUS 2011

TEZPUR UNIVERSITY

(A Central University)
www.tezu.ernet.in
Napaam, Tezpur, Assam 784 028

CONTENTS

IMPORTANT POINTS

This prospectus contains common application form for applying to any of the academic programmes mentioned below :

- **B.Tech. Programme** in (i) Civil Engineering, (ii) Computer Science & Engineering (iii) Electronics & Communication Engineering, (iv) Mechanical Engineering and (v) Food Engineering & Technology. A single application is to be filled-in by the candidate for all these programmes with his/her priorities of disciplines. As selection will be based on AIEEE score, candidates appearing in **AIEEE 2011** are only eligible for the B.Tech. Programme at Tezpur University.

- **Integrated M.Sc. and Integrated B.Sc. B.Ed. Programmes** in Bioscience & Bioinformatics, Chemistry, Mathematics and Physics. The University also offers Integrated B.Sc.B.Ed. programme with Chemistry/ Mathematics/ Physics (major in B.Sc.). Candidates need to fill in a single application form ticking their priority for the Integrated M.Sc. or Integrated B.Sc.B.Ed. programme in item no. 2 "Choice of programme" in the application form. Selection for these programmes will be on the basis of the combined entrance examination.

- **Integrated M.A. and Integrated B.A. B.Ed. Programmes :** Candidates need to fill in a single form ticking their priority for the Integrated M.A. or Integrated B.A.B.Ed. programme in item no. 2 "Choice of programme" in the application form. Selection for these two programmes will be on the basis of the combined entrance examination.

- **M.Tech./Integrated M.Tech./MCA/M.Sc./ M.A./ P.G. Diploma/Certificate course**
  Candidates may apply for more than one programme separately. Selection will be based on the performance in TUEE-2011.
  For some programmes (M.Sc. in Molecular Biology and Biotechnology, Integrated M.Tech. in Food Engineering & Technology, M.Tech. in Computational Seismology, M.A. in Mass Communication and Journalism, M.A. in English, P.G. Diploma in Mobile & Multimedia Communication and P.G. Diploma in Tourism Management) personal interview/ GD are also conducted.
  Mathematics at 10+2 level is compulsory for candidates applying for Integrated M.Tech. and M.Tech. (lateral entry) in Food Engineering & Technology and MCA programmes.
  Integrated M.Tech. is a four-year course for B.Sc. and M.Tech. (lateral entry) is a two-year course for B.Tech./M.Sc. students in Food Engineering & Technology.

- **Ph.D. Programme**
  Selection is based on written test and personal interview, to be conducted at the respective departments as per schedule.

- **NE domicile / Permanent Residence Certificate (PRC)** is required for the candidates applying for NE quota in (i) M.Sc. in Molecular Biology and Biotechnology and (ii) B.Tech. programme.

- **GATE for M.Tech.**
  GATE qualifying applicants will be given preference for admission in M.Tech. Applicants with a certain cut off GATE score may seek admission directly without writing the TUEE entrance. In case adequate number of GATE qualified candidates apply for M.Tech., the admission of candidates through TUEE will be subject to availability of seats.

- **Eligibility**
  It is the responsibility of the candidate to ascertain the fulfilment of the Tezpur University admission eligibility criteria.

- All testimonials, in original, will be verified at the time of admission. In case of any discrepancy, admission of the candidate shall not be considered.

- One set of attested copies of marks sheets and certificates of all examinations will be required to be submitted at the time of admission. The other documents required at the time of admission are 1) Migration Certificate, 2) Sponsorship / No Objection Certificate from the employer (if applicable), 3) SC/ST/OBC (Non-creamy layer) Certificate (if applicable), 4) Person with Disability (PWD) Certificate issued by the Competent Authority, (if applicable), latest OBC-Non-Creamy layer (NCL) Certificate in the prescribed format given at Annexure-IX for candidates claiming seat against OBC (NCL) category 5) Permanent Residential Certificate (PRC) of North-Eastern States (applicable to candidate applying for admission into B.Tech. and M.Sc. in MBBT programmes under North-East Quota as per the format given in annexure –X). 6) Affidavits in Non-Judicial stamp paper signed by the candidate and parents/guardians and countersigned by the Oath Commissioner (Notary) as per the UGC's format given at Annexure-XI (a&b). 7) Gap Certificate from the District Police Authority or court affidavit, in case of a gap of one year or more in study after qualifying Examination. 8) AIEEE score card (for B.Tech. candidates only). 9) Character Certificate from the Head of the institution last attended. 10) Proof of taking the examination at the time of admission in case the result of the qualifying examination is awaited .

- **Provisional Admission**
  Candidates who have appeared/are appearing in the qualifying examination before the date of admission in the year 2011 may be admitted provisionally if otherwise found eligible at the entrance examination and/or interview

- **No separate call letter will be sent to the candidates selected / waitlisted for admission. Results of the entrance examinations along with instructions will be available in TU website : www.tezu.ernet.in**

- The University has a provision for admission under **Self Supported Scheme** (SSS).

TEZPUR UNIVERSITY

THE UNIVERSITY

Tezpur University was established on 21st January in 1994 by an Act of Parliament of India, *The Tezpur University Act, 1993 (Act No. 45),* as a non-affiliating and residential Central University. The University is located at Napaam, about 15 Km. east of Tezpur town in the Sonitpur District of Assam. It has a campus of 244 acres of land, in which required infrastructure is developed to provide an excellent atmosphere for quality education and research.

The University offers Doctor of Philosophy programme in 17 disciplines, Masters Degree programme in 20 disciplines, Post-Graduate Diploma in 3 disciplines, B. Tech. in 5 disciplines, Certificate programme in 3 disciplines and Integrated M.Sc. programme in 4 disciplines. The academic programmes have a distinct focus on science, technology and humanities, reflecting the objective of the University.

During the last fifteen years of its existence, the University has engaged itself in the process of capacity building, both in terms of infrastructure and human resource development. The University has mounted tremendous efforts in developing it into a modern university incorporating all elements from the contemporary scientific and socio-cultural milieu.

The University has already developed a few state-of-the-art laboratories, computing facilities, internet connectivity, a dedicated power supply system and a relatively small but rich library having connectivity to several digital libraries. While students' accommodation is provided in 8 well-designed hostels, several residential quarters have been built for accommodating teachers and non-teaching staff. Other basic amenities like central water supply, campus security, guest house, canteen, gymnasium, outdoor & indoor sports facilities, post office, banks, school, etc. are also available to cater to the various needs of the university community.

Being a Central University, the University is privileged to receive funds from the Ministry of Human Resource Development, Government of India, through the University Grants Commission. Assistance has also been received from the Non-Lapsable Central Pool of Resources of the Government of India. Faculty members of different academic departments have been able to earn a large number of research projects worth crores of rupees from different sources. The University promotes industry-academy alliance and the existence of a few prestigious industry sponsored projects in the university bear testimony to this.

FACILITIES AND SERVICES

The University has the following facilities and services for the students and research scholars.

University Library

The University has a Central Library with a rapidly increasing collection of books, periodicals and journals. The library has the INFLIBNET connectivity to access other libraries. Most of the necessary books are available. Besides, the individual departments also have their own libraries. Online catalogue of books and journals are available for users.

Computing Facilities

The University has elaborate computing facilities accessible to the students. There is a modern state-of-the-art Central Computer Centre for use by the students and research scholars of Tezpur University in addition to the Departmental computer laboratories. Apart from a large number of PCs and several servers, all connected to the campus LAN, the Centre also has a 4-processor SGI ALTIX-350 server, high quality laser printers, scanners, multimedia accessories, etc. Various software systems are available that run in environments such as UNIX/LINUX, MS-Windows-2000/NT/XP, and Novell Intra Netware. The campus LAN is connected to the Internet through its 512 kbps SCPC VSAT station of the ERNET.

Hostel Accommodation

The University has separate hostels for boys and girls to accommodate all students and research scholars.

Scholarships

A limited number of scholarships are offered to Tezpur University students by various Government/Semi-government organizations such as NEC, DBT, ITDP, MNES, DTE, AICTE, DST, UGC, etc. Free studentships are also provided to a limited number of meritorious students belonging to economically weaker families.

There is provision of UGC for single girl child of the family pursuing non professional PG courses for granting scholarship under "Indira Gandhi Post Graduate Scholarship for Single Girl Child Scheme". University provides institutional fellowship to eligible full time Ph.D students.

Health Services

The University has a Health Centre to provide basic medical services with its own medical and paramedical staff. Further, the students are provided with the benefit of health insurance scheme.

Games and Sports

The University provides opportunities for students to excel in various departments of sports. The University has basketball, volleyball and tennis courts, cricket and football grounds with playing facilities under flood light. Indoor facilities like multi gymnasium and badminton arena of international standard are also available.

Tezpur University Alumni Association (TUAA)

TUAA was formed in the year 2000 to create a network of the Alumni of the University. The website of the association provides full listing of events, news and other relevant information.

Instruction Methodology

The medium of instruction / examination in the University at all levels is English. In framing the courses, care has been taken to see that they are NOT burdened with formal lectures only. There is adequate provision for seminars, tutorials, case studies, guided field works, etc., whatever necessary, to promote the habit of independent thinking.

To relate theoretical knowledge to the practical field, proper measures are taken to conduct case studies and guided field works. Group discussion is an integral part of the pedagogy to help students in increasing their analytical capability and creativity.

Academic Calendar

The University strictly adheres to a well planned academic calendar specifying the schedule of academic activities. Detailed academic calendar is made available in the University Website as well as in the departments in due time.

CURRICULUM

Each academic programme is designed to provide enough flexibility in the choice of courses for the students. Besides core (compulsory) courses for each programme, the students also have the option to choose courses of their own interest from the elective courses.

In framing the courses, proper care is taken to avoid over-emphasis on formal lectures alone. There is adequate provision for laboratory works, seminars, tutorials, case studies, guided field work, etc., wherever appropriate, to inculcate the spirit of independent thinking and enrich hands-on experience. Group discussion is an integral part of the curriculum in some of the programmes.

Evaluation System

Continuous, comprehensive evaluation with internal relative grading is followed. Relative grading is awarded on the basis of continuous internal assessment through class tests, assignments, term-papers, seminars and term tests.

Grades signify the level of standard of qualitative/quantitative academic achievement, which the students attain in a particular course/ research work. Each of the letter grades represent a Grade Point as tabulated below. The letter grades A+ to D are considered as Pass grades and F is considered as Fail grade.

Letter Grade	Grade Point	Description
A+	10	Outstanding
A	9	Excellent
B+	8	Very good
B	7	Good
C+	6	Average
C	5	Below Average
D	4	Marginal
F	0	Poor

In addition, there are other grades as stated below:

Letter Grades	Status	Remarks/Context
I	Incomplete	Assigned in case any evaluation component remains to be completed due to an extraordinary situation faced by the student. This grade must be converted to any of the regular grades above within the first month of the beginning of the following semester by completing the remaining evaluation component(s).
X	Extended project	Assigned in case project work remains incomplete and the work is extended to the following semester.
S	Satisfactory	Assigned against satisfactory performance
U	Unsatisfactory	Assigned against unsatisfactory performance
W	Withdraw	Assigned if a student withdraws from a course after the last date for withdrawal of course.

Abridged Academic Calendar 2011

JANUARY 18	Commencement of classes for Spring Semester
MARCH 14-23	Mid-Term tests
MAY 16-25	Spring semester End-Term examinations
JULY 29	Counselling and course registration for new entrants
AUGUST 01	Commencement of classes for Autumn Semester
SEPTEMBER 21-30	Mid-term tests
DECEMBER 1-12	Autumn semester end term examinations

Detail academic calendar is available in the University website *(www.tezu.ernet.in)* as well as in the departments.

PLACEMENT

The Training and Placement Cell of the University is the nodal agency in arranging summer and final placement of the students of the University. Many reputed organizations are taking active interest on our students in offering placements.

The professional and intellectual excellence of the students has succeeded in creating an impact in the corporate, government and other employment sectors within and outside the country. Our *Alumni* are the brand ambassadors of teaching & research programme of the University.

List of Major Recruiters of Tezpur University Students

Private Sector Organizations

Aircel	ITC Limited
Accenture	Jungle Travels India
Aircel	Jenson & Nicholson
Airtel (Bharti Telecom)	Mahindra Finance
American Embassy, New Delhi	LG Soft
Apcotech Pvt. Ltd.	Look East Channel
Aricent	Nagaland Fruit & Veg. Prod. Unit
Asia Carbon Limited	NDTV
Asian Paints	Nestle India Ltd.
Axis Bank	NE Chronicle
Bajaj Alliance Life Insurance Co. Ltd.	NE TV
Bank of Maharashtra	Newslive
Channel Look-East	Nilon's, Jalgaon,
Chembioteek Life Science	Nokia
Cipla Ltd.	OCWEN
CNN-IBN	Oracle
Colgate-Palmolive	Philips
Delphi	Powergrid Corporation
Diamond Fabcare, New Delhi	PRADAN
Disha, New Delhi	Press Trust of India,
DSCL	Q-Tech Nano Systems
Dymanics Orbit	Reliance
Dyna Roof	RelLife
ETV-Ramoji Film City, Hyderabad	RIMS, Dibrugarh.
Genpact	Satyam
GE Health Care	SBI Life
GLAXO-Smithkline	Shalimar Paints
Godrej & Boyce Manuf. Co. Ltd.	SIEMENS Technology,
Hindustan Lever Ltd**.**	Smith Kline Beecham (Horlicks)
Housing Dev. Finance Co. (HDFC)	SRD Nutrients, Mangaldoi,
Huawei Technologies	Star Cement
IBM	Samsung
ICI Paints	Sunrise Biscuits (Britannia)
ICICI Bank	Symphony
ICICI Lombard	Tata Consultancy Service
Indian Express	TATA-ELEXI
Industrial Development Bank of India (IDBI)	Tech Mahindra
Infosys	The Press Trust of India
i-Process Services (I) Pvt. Ltd.	Wipro

Public Sector Units of the Govt. of India

Bharat Sansar Nigam Ltd.(BSNL)	Indian Oil Corporation Ltd. (IOCL)
Bongaigaon Refineries & Petrochemicals Ltd (BRPL)	NRHM, Govt. of Assam
Brahmaputra Cracker and Polymer Ltd. (BCPL)	National Thermal Power Corporation Limited
Centre for Sc. & Env., Delhi	Numaligarh Refinery Limited (NRL)
DRDO	Oil India Limited (OIL)
Gas Authority of India Limited (GAIL)	ONGC
ICAR	ISRO

Institutions of Higher Learning

Assam Don Bosco University	Institute of Genomics and Integrative Biology (IGIB)
Assam Engineering College, Guwahati	J. B College, Jorhat
Assam University, Silchar	JNU, New Delhi
Banaras Hindu University	Jorhat Engineering College
Jadavpur University,	Konkuk University, Korea
Bareilly Engineering College	M.S University of Baroda,
Bielefeld University, Germany	National Centre for Genome Research, New Delhi
Central Institute of Post Harvest Engg. & Tech.	National Institute of Cholera & Enteric Diseases, Kolkata,
Central IT College, Guwahati	NCL, Pune,
Dibrugarh Polytechnic	North Eastern Hill University, Shillong
Dibrugarh University	Royal Group of Institutions
Edinburgh University England,	Sikkim Manipal Institute of Technology
Epitome College, Diphu	Silchar Polytechnic
Galgotia Institute of Technology, Noida,	Sognag University, Korea
Gauhati Univeristy	Sona College of Technology, Salem, Tamil Nadu
Girijananda Choudhury Institute of Management & Technology	St. Anthony's College, Shillong
Hyderabad University,	University College of Cork, Ireland
IISC, Bangalore,	Rajiv Gandhi University
IIT, Delhi,	University of Pune
IMPRS, Halle, Germany	IIT Guwahati
Indian Academy of Science, Bangalore,	

STUDENTS' CODE OF CONDUCT

Students are to follow discipline as prescribed in the regulations on Maintenance of Discipline of the University. Violation of any clause by any student may lead to disciplinary action as per the regulations.

Ragging in any form is strictly prohibited inside or outside the University. Students found indulging in ragging shall be subjected to punishment as per rule. Candidates are advised to visit the website: www.ugc.ac.in or www.tezu.ernet.in for UGC Regulations on curbing the menace of ragging in Higher Educational institutions, 2009.

IMPORTANT ACADEMIC RULES

Course registration

The courses opted by the students in a particular semester are to be registered on some specific date(s). For newly admitted students, registration of courses will be done on 29th July.

Attendance requirement

All students must attend every lecture, tutorial and practical classes, of the course registered by him/her. However, to account for late registration, sickness or such other exigencies, the attendance requirement will be a minimum 75% of the classes. Students with deficiency in attendance in a course will not be allowed to appear in the end-term examination and will be assigned an F (fail) grade in the course.

Renewal of admission

Every student will renew his/her admission in the successive semesters on the notified dates. No student is allowed to get himself/herself admitted after the scheduled date.

Academic probation

A student shall be placed on academic probation under the following situations

a) The CGPA of the student falls below the critical limit of 4.5

b) The student scores F grade in not more than two core courses.

The student gets a chance to clear Academic Probation at the beginning of the following

semester.

Forced exit

A student is forced to discontinue the programme under the following conditions:

(i) the student secures F grade in 3 (three) or more courses in a semester,

(ii) the student continues to be under Academic probation for two consecutive

semesters,

(iii) the student is not able to complete the requirements of the programme within the

maximum specified duration.

[For detail rules please visit www.tezu.ernet.in]

SECTION TWO

B.TECH. PROGRAMME

B.TECH. PROGRAMME

Curriculum Structure

Duration: Minimum   : 08 Semesters
                                   Maximum   : 12 Semesters

Credit Requirements: Minimum Total : 176

Semester-wise Distribution of Courses for B. Tech Programme
First Year (Common to all disciplines)

Semester I

Course No.	Course Title	Credit Structure				Contact Hours
		L	T	P	Total	
MS 101	Mathematics I	3	1	0	4	4
PH 101	Physics I	2	1	1	4	5
CH 101	Chemistry	2	1	1	4	5
EL 101	Basic Electrical Engineering	2	1	1	4	5
ME 103	Workshop Practice	0	0	2	2	4
ME 101	Engineering Graphics	1	0	2	3	5
Humanities Elective EG101/ SO101/ BM 101	Communicative English/ Sociology/ Elementary Economics	3	0	0	3	3
Total -		13	4	7	24	31

Semester II

Course No.	Course Title	Credit Structure				Contact Hours
		L	T	P	Total	
MS 103	Mathematics II	3	1	0	4	4
PH 102	Physics II	2	1	1	4	5
ME 102	Engineering Mechanics	3	1	0	4	4
EL 102	Basic Electronics	3	1	1	5	6
CO 101	Introductory Computing	2	1	0	3	3
CO 102	Computing Laboratory	0	0	2	2	4
Science Elective BT 101/ ES 101/ CH 102	Elements of Modern Biology / Environmental Science / Introductory Material Science	3	0	0	3	3
Total -		16	5	4	25	29

SECOND TO FOURTH YEAR
CIVIL ENGINEERING

Semester III

Course No	Course title	Credit structure				Contact hours
		L	T	P	Total	
MS201	Mathematics-III	2	1	0	3	3
CE201	Fluid Mechanics	2	1	0	3	3
ME201	Solid Mechanics	3	1	0	4	4
CE202	Surveying	3	1	0	4	4
CE203	Building Materials & Technology	3	0	0	3	3
CE204	Engineering Geology	3	0	0	3	3
CE205	Surveying Practical	0	0	2	2	4
	Total	**16**	**4**	**2**	**22**	**26**

Semester IV

Course No	Course title	Credit structure				Contact hours
		L	T	P	Total	
MS203	Numerical Analysis	2	1	0	3	3
CE206	Elementary Civil Engineering Drawing	0	0	1	1	2
CE207	Hydraulics & Hydraulic Structures	3	1	0	4	4
CE208	Structural Analysis-I	3	1	0	4	4
CE209	Geotechnical Engineering-I	3	1	0	4	4
CE210	Transportation Engineering-I	3	0	0	3	3
CE211	Hydraulics Lab	0	0	2	2	4
CE212	Geotechnical Engineering Lab	0	0	2	2	4
	Total	**14**	**4**	**5**	**23**	**28**

Semester V

Course No	Course title	Credit structure				Contact hours
		L	T	P	Total	
BM321	Fundamentals of Management	3	0	0	3	3
CE301	Structural Design-I	3	1	0	4	4
CE302	Water Resources Engineering	3	0	0	3	3
CE303	Structural Analysis-II	3	1	0	4	4
CE304	Geotechnical Engineering-II	3	0	0	3	3
CE305	Environmental Engineering-I	3	0	0	3	3
CE306	Environmental Engineering Lab	0	0	2	2	4
CE311	Transportation Engineering Lab	0	0	1	1	2
	Total	**18**	**2**	**3**	**23**	**26**

Semester VI

Course No	Course title	Credit structure				Contact hours
		L	T	P	Total	
BM322	Social Responsibility & Professional Ethics in Engineering	3	0	0	3	3
CE307	Structural Design-II	3	1	0	4	4
CE308	Environmental Engineering-II	3	1	0	4	4
CE309	Construction Engineering & Management	3	0	0	3	3
	CE Elective-I	3	0	0	3	3
	Open Elective-I	3	0	0	3	3
CE310	Concrete & Structure Lab	0	0	2	2	4
	Total	**18**	**2**	**2**	**22**	**24**

* Open Elective: Any course of level 400 and above offered in the University and recommended by the department.

Semester VII

Course No	Course title	Credit structure				Contact hours
		L	T	P	Total	
CE401	Transportation Engineering-II	3	0	0	3	3
	Open Elective-II	3	0	0	3	3
	CE Elective-II	3	0	0	3	3
	CE Elective-III	3	0	0	3	3
CE471	Industrial Summer Training	0	0	2	2	
CE481	Project-I	0	0	6	6	12
	Total	**12**	**0**	**8**	**20**	**24**

Semester VIII

Course No	Course title	Credit structure				Contact hours
		L	T	P	Total	
	Open Elective-III	3	0	0	3	3
	CE Elective-IV	3	0	0	3	3
CE482	Project-II	0	0	12	12	24
	Total	**6**	**0**	**12**	**18**	**30**

CE Electives: (All are 3 credit courses with L:T:P::3:0:0)

CE421	Advanced Reinforced Concrete Design
CE422	Dynamics of Structures
CE423	Pre-stressed Concrete & Industrial Structures
CE424	Bridge Engineering
CE425	Soil Dynamics & Foundation Engineering
CE426	Ground Improvement methods
CE427	Earth Retaining Structures
CE428	Applied Geotechnical Engineering
CE429	Environmental Geo-techniques
CE430	Open Channel Flow
CE431	Hydraulic Structures
CE432	Hydraulic Machines
CE433	Groundwater Hydrology & Management
CE434	Air Pollution & Industrial Waste Management
CE435	Solid Waste Engineering
CE436	Environmental Impact Assessment
CE437	Remote Sensing & GIS
CE438	Pavement Design

Also any other course of level 400 and above offered by the department of Civil Engineering.

[#] Industrial Summer Training: Training shall be of 8 weeks duration carried out during the summer break after the 6th semester. The report will be submitted in the 7th semester.

COMPUTER SCIENCE & ENGINEERING

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	CO 205	Formal Language & Automata	3
CO 201	Discrete Structures	4	CO 206	Design and Analysis of Algorithms	4
CO 202	Digital Logic Design	4	CO 207	System Programming	3
CO 203	Data Structures	5	CO 208	Object Oriented Programming	4
CO 212	Computer Architecture and Organization	5	EL 221	Electronic Devices arid Circuits	4
EL 204	Signals and Systems	3	EL 206	Principles of Communication	4
Semester V			**Semester VI**		
CO 301	Operating Systems	4	CO 306	Embedded Systems	4
CO 302	Database Systems	5	CO 307	Software Engineering	4
CO 303	Computer Graphics	4	CO 308	Compiler Design	4
CO 304	Principles of Programming Languages	3	BM 322	Social Responsibility and Professional Ethics in Engineering	3
CO 305	Computer Networks	4		CS Elective I	3
BM 321	Fundamentals of Management	3		Open Elective I	3

Semester VII			Semester VIII		
CODE	Title	Credit	CODE	Title	Credit
CO 401	Artificial Intelligence	3	-	CS Elective IV	3
-	CS Elective II	3	-	Open Elective III	3
-	CS Elective III	3	CO 482	Project II	12
-	Open Elective II	3			
CO 471	Industrial Summer Training	2			
CO 481	Project I	6			
Electives					
CODE	Title	Credit	CODE	Title	Credit
CO 421	Graph Theory	3	CO 422	Theory of Computation	3
CO 423	Web Technology	5	CO 424	E-Commerce	5
CO 425	VLSI Design	5	CO 426	Advanced Computer Architecture	3
CO 427	Modeling & Simulation	5	CO 428	Computer Peripherals & Interfacing	5
CO 429	Computer Systems Performance Evaluation	3	CO 430	Management Information System	3
CO 431	System Analysis and Design	3	CO 432	Information Theory & Coding	3
CO 433	Digital Signal Processing	3	CO 434	Image Processing	3
CO 435	Mobile Computing	3	CO 436	Wireless Communication	3
CO501	Network Management and Security	3	CO 502	Data Compression	3
CO 503	Fuzzy Logic and Neural Networks	3	CO 504	Natural Language Processing	3
CO 505	Advanced Database Management System	3	CO 506	Advanced Software Engineering	3
CO 507	Advanced Embedded Systems	3	CO 508	Grid Computing	3
CO 509	Computer Vision	3	CO 510	Robotics	3
CO 511	Ubiquitous and Pervasive Computing	3			

ELECTRONICS AND COMMUNICATION ENGINEERING

	Semester III			Semester IV	
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	EL 205	Integrated Circuits	4
EL 201	Switching Circuits & Digital Logic	4	EL 206	Principles of Communication	4
EL 202	Electrical Technology	4	EL 207	Instrumentation	4
EL 203	Analog Electronic Devices and Circuits	4	EL 208	Engineering Electromagnetics	3
EL 204	Signals and Systems	3	CO 221	Data Structures and Object Oriented Programming	4
CO 205	Computer Architecture and Organization	5	CO 222	System Software & Operating systems	4

	Semester V			Semester VI	
EL 301	Digital Communication	4	EL 306	Communication Networks	4
EL 302	Microprocessors and Interfacing	4	EL 307	Device Modeling & Simulation	4
EL 303	Digital Signal Processing	4	EL 308	VLSI Design	4
EL 304	Control System Engineering	4	BM 302	Social Responsibility and Professional Ethics in Engineering	3
EL 305	Microwave Engineering	4		ECE Elective I	3
BM 301	Fundamentals of Management	3		Open Elective I	3

	Semester VII			Semester VIII	
CODE	Title	Credit	CODE	Title	Credit
EL 401	Digital Systems Design and VHDL	4		ECE Elective IV	3
	ECE Elective II	3		Open Elective III	3
	ECE Elective III	3	EL 482	Project II	12
	Open Elective II	3			
EL 471	Industrial Summer Training	2			
EL 481	Project I	6			

	Electives				
CODE	Title	Credit	CODE	Title	Credit
EL 421	Image Processing	3	EL 422	Electronic Design Automation	3
EL 423	Medical Electronics	3	EL 424	Fiber Optic Communication	3
EL 425	Mobile Communication	3	EL 426	Fuzzy Logic and Neural Networks	3
EL 427	Satellite Communication Systems	3	EL 428	Information and Coding Theory	3
EL 429	Graph Theory	3	EL 430	Computer Vision	3
EL 431	MEMS and Microsystems Technology	3	EL 432	Advance Semiconductor Devices	3
EL 433	Biomedical Signal Processing	3	EL 434	Bioneuro Engineering	3
EL 435	Nanoelectronics	3	EL 436	Intelligent Instrumentation	3
EL 437	Wireless Communication	3	EL 438	Digital Signal Processor	3

FOOD ENGINEERING & TECHNOLOGY

Semester III			Semester IV		
MS 201	Mathematics III	3	FT 205	Food Biochemistry and Nutrition	4
FT 201	Food Chemistry	4	FT 206	Principles of Food Processing and Preservation	3
FT 202	Basic and Food Microbiology	3	FT 207	Transfer Processes in Food Engineering	4
FT 203	Fluid Mechanics	5	FT208	Mechanical Operations in Food Processing	4
FT 204	Computations in Food Processing	4	FT209	Fruits and Vegetables Process Technology	3
ME 205	Thermodynamics	4	EL 321	Instrumentation and Process Control	4
Semester V			Semester VI		
FT 301	Instrumental Methods of Food Analysis	2	FT 307	Food Quality and Safety	3
FT 302	Thermal Operations in Food Processing	4	FT 308	Food Plant Utilities	3
FT 303	Mass Transfer Operations in Food Processing	4	FT 309	Dairy Products Technology	3
FT 304	Cereals, Pulses and Oilseeds Processing Technology	4	FT 310	Food Process Equipment Design	3
FT 305	Biochemical Engineering	3	BM 322	Social Responsibility and Professional Ethics in Engineering	3
FT 306	Recent Advances in Food Research	1	-	FT Elective I	3
BM 321	Fundamentals of Management	3	-	Open Elective I	3

Semester VII			Semester VIII		
FT 401	Food Packaging, Transportation and Storage	3	-	FT Elective IV	3
FT 402	Plant Design and Process Economics	3	-	Open Elective III	3
-	FT Elective II	3	FT 482	Project II	12
-	FT Elective III	3			
-	Open Elective II	3			
FT 471	Industrial Summer Training	2			
FT 481	Project I	6			

List of FT Electives

Course No.	Course Title	Credit
FT 421	Bakery and Confectionary Technology	3
FT 422	Plantation Products and Spices Technology	3
FT 423	Oils and Fats Technology	3
FT 434	Processing Technology of Meat, Poultry and Fish	3
FT 425	Fermented and Non Fermented Beverages	3
FT 426	Food Product Development	3
FT 427	Flavors Technology	3
FT 428	Specialty Foods: Nutraceuticals and Functional Foods	3

FT 429	Traditional Indian Foods	3
FT 430	Industrial Microbiology and Enzyme Technology	3
FT 422	Plantation Products and Spices Technology	3
FT 423	Oils and Fats Technology	3
FT 434	Processing Technology of Meat, Poultry and Fish	3
FT 425	Fermented and Non Fermented Beverages	3
FT 426	Food Product Development	3
FT 427	Flavors Technology	3
FT 428	Specialty Foods: Nutraceuticals and Functional Foods	3
FT 429	Traditional Indian Foods	3
FT 430	Industrial Microbiology and Enzyme Technology	3
FT 431	Food Process Design and Analysis	3
FT 432	Food Process Automation	3
FT 433	Numerical Methods in Food Processing	3
FT 434	Energy Conservation in Food Processing	3
FT 435	Food Plant Hygiene and Sanitation	3
FT 436	Food Industry Waste Management	3
FT 437	Industrial Safety and Hazards	3
FT 438	Optimization Techniques	3
FT 439	Advanced Food Processing Methods	3
FT 440	Engineering Properties of Biological Materials	3

MECHANICAL ENGINEERING

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	MS 202	Mathematics IV	3
ME 201	Solid Mechanics	4	ME 207	Theory of Mechanisms & Machines	4
ME 202	Fluid Mechanics I	3	ME 208	Manufacturing Technology I	3
ME 203	Material Science	3	ME 209	Fluid Mechanics II	3
ME 204	Machine Drawing	2	ME 210	Mechanical Engineering Laboratory II	3
ME 205	Thermodynamics	4	CO 221	Data Structures & Object Oriented Programming	4
ME 206	Mechanical Engineering Laboratory I	3	EL 202	Electrical Technology	4
Semester V			Semester VI		
ME 301	Dynamics & Vibration of Machinery	3	ME 307	Applied Thermodynamics II	3
ME 302	Mechanical Measurements & Instrumentation	3	ME 308	Heat & Mass Transfer	4
ME 303	Manufacturing Technology II	3	ME 309	Systems & Control	3
ME 304	Applied Thermodynamics I	3	ME 310	Mechanical Engineering Laboratory III	3
ME 305	Mechanical Design	4	BM 322	Social Responsibility & Professional Ethics in Engineering	3
ME 306	Advanced Workshop Practice	3		ME Elective I	3
BM 321	Fundamentals of Management	3		Open Elective I	3

Semester VII			Semester VIII		
CODE	Title	Credit	CODE	Title	Credit
ME 401	Industrial Systems Engineering	3	-	ME Elective IV	3
-	ME Elective II	3	-	Open Elective III	3
-	ME Elective III	3	ME 482	Project II	12
-	Open Elective II	3			
ME 471	Industrial Summer Training	2			
ME 481	Project I	6			
Electives					
ME 421	Computer Graphics & Solid Modeling	3	ME 422	Optimization Methods in Engineering	3
ME 423	Mechanical Vibration	3	ME 424	Theory of Elasticity	3
ME 425	Machine Tools & Machining	3	ME 426	Reliability Engineering	3
ME 427	Productivity Improvement Techniques	3	ME 428	Finite Element Methods in Engineering	3
ME 429	Gas Turbine & Compressor	3	ME 430	Value Engineering	3
ME 431	Fracture and Fatigue	3	ME 432	Engineering Optimization	3
ME 433	Experimental Stress Analysis	3	ME 434	Composite Materials	3
ME 435	Machine Tool Design	3	ME 436	Combustion Engineering	3
ME 437	Tea Machineries	3	ME 438	Petroleum & Drilling Technology	3
ME 439	Refrigeration and Air Conditioning	3	ME 440	Advanced Solid Mechanics	3
ME 521	Robotics	3	ME 522	Quality Engineering	3
ME 523	Non-Conventional Energy	3	ME 524	Operations Management	3
ME 525	Tribology	3	ME 526	Modern Control System	3
ME 527	Computer Aided Design	3	ME 528	Computer Aided Process Planning	3
ME 529	Artificial Intelligence in Engineering	3	ME 531	Project Management	3
ME 532	Power Plant Engineering	3	ME 533	Energy Management	3
ME 534	Mechatronics	3			

SECTION THREE

DEGREE, DIPLOMA AND CERTIFICATE

Degree, Diploma and Certificate

Department	Programme	Eligibility	Duration (semesters)		Intake
			Min	Max	
Business Administration	Master of Business Administration (MBA)	Bachelor's degree in any discipline with a minimum of 50% marks in major/honours subject or in aggregate.	4	8	46
	P.G. Diploma in Tourism Management (PGDTM) (Modular)	Bachelor's degree in any subject with at least 45% marks in major/honours subject or in aggregate.	2	4	23
Chemical Sciences	M.Sc. in Chemical Sciences	Bachelor's degree with major/ honours in chemistry subject with a minimum of 45% marks and having Physics and Mathematics as subsidiary subjects.	4	8	20
	Integrated M.Sc.	Minimum 60% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	10	14	15
	M. Tech. in Polymer Science & Technology	B.Tech./B.E. in Polymer Sci. & Tech./ Fiber Sci. & Tech./ Rubber Tech. / Plastic Tech./ Chemical Engineering with 65% or equivalent grade; M.Sc. in Chemistry/ Polymer Science/Applied Chemistry from a recognized institution with 60% or equivalent grade. Candidates with valid GATE score will get preference.	4	8	10
	Integrated B.Sc.B.Ed.	First division in the Higher Secondary (Plus Two) School Final examinations. (Science stream)	8	12	10
Civil Engineering	B.Tech. in Civil Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	8	12	20
Computer Science & Engineering	B.Tech. in Computer Science & Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	8	12	52
	Master of Computer Application (MCA)	Bachelor's degree in any discipline with a minimum of 50% marks in major / honours subject or 55% marks in aggregate for those candidates having no major/ honours. Passed in Mathematics at 10+2 level.	6	10	60
	M.Tech. in Information Technology *	B.E. / B.Tech. degree in any discipline or MCA or its equivalent or M.Sc. in Computer Science / IT / Electronics / Mathematics / Statistics / Physics with a minimum of 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	30
Cultural Studies	M.A. in Cultural Studies (Modular)	Bachelor's degree in any discipline with a minimum of 45% marks in the major / honours subject. Candidates having no major / honours, must have a minimum of 50% marks in aggregate.	4	8	46
Electronics & Communication Engineering	B.Tech. in Electronics & Communication Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	8	12	52
	M.Tech. in Electronics Design & Technology *	B.E./B.Tech./AMIE/AMIETE in Electronics/ Electrical/ Instrumentation Engineering or M.Sc. in Electronics/ Instrumentation/Physics (Electronics as specialization)/ AMIETE with a minimum of 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	37

Department	Programme	Eligibility			
	M.Tech. in Bioelectronics **	B.E./B.Tech. in Electronics & Communication Engineering/ Instrumentation/Chemical Engineering/Computer Science &Engineering/Electrical Engineering/ Biomedical Engineering/ Bioengineering/Neuro-Engineering/Genetic-Engineering/ Biotechnology/MBBS or M.Sc. in Biotechnology/Biochemistry/ Chemistry/ Polymer Science/ Physics/Electronics/Nano Science & Technology/ Instrumentation or MBBS with at least 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	15
Energy	M.Tech. in Energy Technology*	B.E./ B.Tech. / AMIE in Mechanical /Electrical / Electronics / Instrumentation / Chemical /Agricultural Engineering / Energy Engineering or M.Sc. in Physics/ Chemistry with a minimum of 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	35
English and Foreign Languages	M.A. in English	Bachelor's degree with at least 45% marks in major/honours in English. Candidates not having major/honours must have at least 50% marks in aggregate as well as in English.	4	8	50
	Integrated M.A. in English	First division in the Higher Secondary (Plus Two) School Final examinations. (Arts stream)	10	14	10
	Integrated B.A.B.Ed.	First division in the Higher Secondary (Plus Two) School Final examinations. (Arts stream)	8	12	10
	Certificate course in Chinese	10+2 with 45% of marks in aggregate.	2	3	39
Environmental Science	M.Sc. in Environmental Science	B.Sc. (Agri.) with a minimum of 50% marks or Bachelor's degree in Chemistry/ Zoology/Botany/ Physics/ Environmental Science as major/ honours with a minimum of 50% marks. Candidates excluding B.Sc.(Agri) not having major/honours, must have at least 55% marks in aggregate	4	8	30
Food Engineering & Technology	4 year Integrated M.Tech. in Food Engineering & Technology	First Class graduates with qualifications of B.Sc. with Chemistry as one of the subjects/ B. Sc (Agriculture)/ B.Sc (Home Science) with elective in Food & Nutrition/ B.Sc Food Science/B.Sc (Fishery). Candidates must have passed Mathematics at 10+2 level.	8	12	12
	M.Tech. in Food Processing Technology (lateral entry)	B.E./B.Tech. degree in Food Processing Technology/ Food Technology/ Food Technology and Biochemical Engineering/ Food Processing Engineering/ M.Sc. Degree in Food Processing Technology/ Food Technology with at least 50% marks in aggregate or equivalent CGPA. GATE qualified candidates will get preference.	4	8	7
	B.Tech. in Food Engineering & Technology	Minimum 50% aggregate marks in PCM (Physics, Chemistry and Mathematics) at 10+2 and pass marks in English.	8	12	10
Hindi	P.G. Diploma in Translation (Hindi)	B.A. with Hindi major/honours or B.A. with Elective Hindi or B.A/B.Com/B.Sc. with Praveen/Sahityaratna. Candidates not having major/honours must have atleast 50% marks in aggregate.	2	4	25
Mass Communication and Journalism	M.A. in Mass Communication and Journalism	Bachelor's degree in any discipline with at least 45% marks in major/ honours subject. Candidates from Universities/ Institutes which do not offer major/honours must have at least minimum 50% marks in aggregate.	4	8	35
	P.G. Diploma in Mobile and Multimedia Communication	Bachelor's degree in any discipline with at least 45% marks in major/ honours subject or in aggregate. For sponsored candidates, Bachelor's degree in any discipline with a minimum of 2 years of service with sponsoring organizations.	2	4	15

Mathematical Sciences	M.A./M.Sc. in Mathematics	Bachelor's degree with a minimum of 45% marks in major/honours, either Mathematics or Statistics. Candidates with Statistics major/honours must have Mathematics as subsidiary course with a minimum of 50% marks. Candidates not having major/honours must have 50% marks in aggregate as well as in Mathematics.	4	8	60
	M.Tech. in Computational Seismology	Master's Degree in Mathematics/Statistics/Physics/ Computer Science/Earth Science (Mathematics at degree level) or Bachelor's degree in Engineering (except Chemical/ Metallurgical/Agricultural/ Bio/ Textile) with at least 50% marks in aggregate.	4	8	12
	Integrated M.Sc. in Mathematics	Minimum 60% aggregate marks in Mathematics, Physics, Chemistry/Statistics subjects at 10+2 and pass mark in English.	10	14	15
	Integrated B.Sc.B.Ed.	First division in the Higher Secondary (Plus Two) School Final examinations. (Science stream)	8	12	10
Mechanical Engineering	B.Tech. in Mechanical Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass mark in English.	8	12	52
Molecular Biology and Biotechnology	M.Sc. in Molecular Biology and Biotechnology ***	Bachelor's degree in Physical, Biological, Agricultural, Veterinary, Fishery Sciences, Pharmacy, Engineering/ Technology, four years B.S. programme (Physicain Assistant course) or Medicine, MBBS or BDS with a minimum 55% marks in major/honours or aggregate. Those who have passed the qualifying examination before 2 years from the date of announcement of admission are not eligible.	4	8	30
	Integrated M.Sc. in Bioscience and Bioinformatics	Minimum 60% aggregate marks with Biology, Chemistry, Physics and/or Mathematics subjects at 10+2 and pass mark in English.	10	12	15
Physics	M.Sc. in Physics	B.Sc. with a minimum of 45% marks in major/honours in Physics having Mathematics as one of the subsidiary subjects. Candidates not having major/honours must have 50% marks in aggregate as well as in Physics.	4	8	35
	M.Sc. in Nano Science & Technology	(i) Bachelor's degree with 45% marks in Physics as major/ honours subjects and Chemistry, Biology/Mathematics as allied subjects Or, (ii) Bachelor's with 45% marks in Chemistry as major/honours subject with Physics, Biology/ Mathematics as allied subjects or, (iii) Bachelor's with 45% marks in Biology as major/honours subject with Physics, Chemistry/ Mathematics as allied subjects. Candidates having no major/ honours must have minimum 50% marks in aggregate.	4	8	20
	Integrated M.Sc. in Physics	Minimum 60% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass mark in English.	10	14	15
	Integrated B.Sc.B.Ed.	First division in the Higher Secondary (Plus Two) School Final examinations. (Science stream)	8	12	10
Sociology	M.A. in Sociology	Bachelor's degree with at least 45% marks in Sociology major/honours or in any subject offered as major/honours. Candidates from universities/institutes which do not offer major/honours must have at least 50% marks in aggregate.	4	8	30

Relaxation: 5% relaxation in marks for candidates belonging to SC/ST categories.

* 5 seats are reserved for sponsored candidates (they have to qualify in the TUEE)
** 3 seats are reserved for sponsored candidates (they have to qualify in the TUEE)
*** Only ten seats will be filled up through TUEE. The application form attached with this prospectus is only for these ten seats. For rest of the seats, candidates are selected for admission through "All India Combined Entrance Test" conducted by the Jawaharlal Nehru University, New Delhi under the sponsorship of the Department of Biotechnology, Government of India, New Delhi (eligibility as decided by DBT, Government of India from time to time).

Course outlines for the entrance examinations

(I) B.Tech. Programme: As per AIEEE (visit: *www.aieee.nic.in*)

(II) P.G. Degree/Diploma/Certificate Programme

Candidates are to sit for Tezpur University Entrance Examinations (TUEE), 2011 to be held during May 27 - 29, 2011. Entrance Examinations for all programmes will be of two hours duration and will carry 100 marks.

M.Sc. in Chemical Sciences: The questions are on the basis of B.Sc. (Chemistry Major) syllabus along with 10+2 standard Mathematics, Physics, Biology and General Aptitude. The test comprises of both objective as well as descriptive type questions. The distribution of marks is as per the following - General Science (10), Physical Chemistry (30), Organic Chemistry (30) and Inorganic Chemistry (30).

M.Sc. in Molecular Biology and Biotechnology: The entrance examination is held for 10 seats (out of 30 seats) reserved for the domicile of North East India. Questions (objective type & short writing type) on higher secondary level Chemistry, Physics and Mathematics and graduate level Life Science subjects. The written test is followed by personal interview. The final selection is based on the written test and personal interview.

M.A./M.Sc. in Mathematics: Questions (both objective and descriptive) will be on Graduate level (Pass Course) Mathematics consisting of Algebra, Calculus, Co-ordinate Geometry, Differential Equations, Vectors, Mechanics, Fundamentals of Statistics etc.

M.Sc. in Physics: Upto B.Sc. Physics (Honours) syllabus. There are two papers in the entrance test. The first paper is of objective type and the second paper is of short descriptive type to examine the conceptual clarity of the candidate.

M.Sc. in Nano Science and Technology: Upto B.Sc. honours in Physics/Chemistry/Biology syllabus. The test will have two parts. Part A will consist of 50 objective type questions of one mark each. Part B consists of about 10 short descriptive type questions of 10 marks each of which any five have to be answered.

M.Sc. in Environmental Science: The test paper shall have both objective as well as short descriptive type of questions covering (a) 10+2 level science subjects (Biology, Chemistry and Physics) and (b) Basic concepts of environmental science, environmental pollution, current environmental issues, agro-ecosystems, Agro-ecology, agriculture including hill agriculture, weather and climate systems.

M.A. in Cultural Studies: The written test includes questions (descriptive as well as objective type) covering (a) General Information on North East India, particularly Assam, (b) Elementary Knowledge about the artistic and cultural heritage of India with particular reference to the North East India. The candidates may have to face an interview.

M.A. in English: The entrance examination assesses whether the candidate has the level of knowledge and skills expected of a student who has graduated/is going to graduate with major/honours in English.

M.A. in Mass Communication and Journalism: The written test shall comprise of both objective and subjective questions. The objective questions consist of current affairs, general knowledge, English language, general awareness on Northeast India and the basics of mass media. The subjective section is to test the candidate's writing skills, creative and analytical capabilities.

The final selection will be based on written test, group discussion and personal interview.

M.A. in Sociology: The written test includes questions (objective as well as subjective type) on (i) general awareness and (ii) understanding of various socio-economic issues.

MCA: The written test consists of three parts: (i) Logical Reasoning and Basic Mathematical Ability, (ii) Mathematics (10+2 level) or fundamentals of Computer Science and (iii) English composition.

M.Tech. in Information Technology: The written test will be based on Programming in C, Computer Organization, Data Structures, Operating Systems, System Software, Computer Network, DBMS and Theory of Computation. The candidates may have to face an interview.

M.Tech. in Electronics Design & Technology: B.E. or equivalent level courses on Electronics and Communication Engineering, Electrical Engineering, AMIE in Electronics, M.Sc. in Physics with Electronics as special paper, M.Sc. in Electronics Sciences.

M.Tech. in Bioelectronics: B.E/B.Tech. level courses in Electronics Engineering, Electrical Engineering, Instrumentation Engineering, Communication Engineering, Biomedical Engineering, Chemical Engineering, Bioengineering, Computer Science & Engineering, Biotechnology, MBBS level, M.Sc. level courses on Chemistry, Biophysics, Molecular Biology, Cell Biology, Molecular Biology & Biotechnology, Polymer Science and Electronics.

M.Tech. in Computational Seismology: There will be two types of questions. Objective/multiple choice (25 questions covering 50 marks) and Descriptive/long questions (10 questions covering 50 marks) covering topics from mathematics, Statistics, Physics, Earth Sciences and Engineering. From the descriptive type a total of 10 questions are to be answered out of 25 questions. The final selection will be done after personal interview.

Integrated M.Tech. (B.Tech. + M.Tech.) in Food Engineering &Technology: The test paper shall contain 100 objective type questions from 10+2 Mathematics (40 questions), Physics (30 questions) and Chemistry (30 questions). Selection will be based on Total Marks secured in TUEE and Personal Interview (PI).

M.Tech. in Food Engineering and Technology (lateral entry): The test paper shall contain 100 objective type questions covering unit operations in food engineering, heat and mass transfer in food processing, food packaging, food chemistry and biochemistry, food microbiology, post harvest technology, storage technologies, fruit and vegetable processing, cereals and legumes processing, dairy technology, meat and fish processing, food biotechnology, fermentation technology, etc. GATE qualified candidates will get preference, and selection of such candidates will be based on GATE score and Personal Interview (PI). For others, selection will be based on the Total Marks secured in TUEE and Personal Interview.

M.Tech. in Energy Technology: The test paper will include questions on the basic knowledge of Mathematics, Physics and Chemistry (Graduate level courses in Science and Engineering) and knowledge of different forms of energy. The final selection is based on written test. GATE qualified candidates will get preference.

M.Tech. in Polymer Science and Technology: The test paper shall have questions based on chemical science related subjects (Chemistry/ Polymer Science/Applied Chemistry) at Master's degree level and allied subjects (Polymer Sci. & Tech./ Fiber Sci. & Tech./ Rubber Tech. / Plastic Tech./ Chemical Engineering) at professional (B.Tech./B.E.) degree level. Candidates with valid GATE score will get preference.

Certificate in Chinese: The entrance examination will assess the candidate's knowledge of English grammar and usage, ability to write coherent paragraphs in English and general information about China

P.G. Diploma in Mobile and Multimedia Communication: The written test shall comprise of both objective and subjective type questions. The objective questions will consist of tests on English Language, General Knowledge, Computer Knowledge, Current Affairs, Culture and Traditions of North East India. The subjective questions are to test the candidates' sensitivity towards social issues and writing skills. The final selection will be based on the written test and personal interview.

P.G. Diploma in Tourism Management: The written test of objective type will consist of General Knowledge, Test of Reasoning and Test of English. Short listed candidates (based on the written test) will have to appear for a personal interview.

P.G. Diploma in Translation (Hindi): The written test shall have both objective and descriptive type of questions based on degree level syllabus of Hindi major, electives, praveen and sahitya ratna.

(III) Integrated M.Sc. in Bioscience & Bioinformatics/Chemistry/Mathematics/Physics and Integrated B.Sc.B.Ed.: Test comprising of 80 objective questions, 20 questions each from Physics, Chemistry, Mathematics and biology, of which candidates are to answer 50 questions. Each question carries 2 marks and for every incorrect answer 0.5 marks will be deducted.

(V) Integrated M.A. in English and Integrated B.A.B.Ed. in English: The entrance test has two components. The first aims to test the candidate's general knowledge and the second their ability to write grammatically correct and acceptable English

(VII) Ph.D. Programme: Candidates are selected based on the performance in the written test followed by personal interview. The syllabus for the examination will be as per respective P.G./U.G. courses.

SECTION FOUR

Ph.D. PROGRAMME

Ph.D. PROGRAMME

Categories of Candidates

The University shall admit Ph.D. students under the following categories:

a) **Full Time**: Students under this category shall work full time for the Ph.D. courses/research. They may apply for fellowship/assistantship available from different funding agencies.

b) **Sponsored**: Candidates may be sponsored by recognized R&D organisations, national institutions, other universities, government organizations or industries. They shall be admitted through the normal process, and they shall not be entitled to any fellowship/assistantship from the University. They shall work full time for the Ph.D. courses/research.

c) **Project Fellows**: Students working on different research projects at Tezpur University may be admitted to the Ph.D. programme provided they satisfy the eligibility criteria, subject to the consent of the Principal Investigator of the project.

d) **Part Time:** Candidates employed in academic institution /University (including Tezpur University)/ R&D organizations may be considered for admission into the Ph.D. programme of Tezpur University, following the normal admission procedure. They shall fulfill the stipulated requirements for Ph.D. admission.

(Categories b, c and d are to apply through proper channel)

Eligibility for Admission

Master's Degree in Humanities and Social Sciences/ Management Sciences/ Science/ Engineering/ Technology or Master degree in the allied subject with consistently good academic record and a minimum of 55% marks or an equivalent CGPA in the Master's Degree/ B.E./ B.Tech. with an aggregate of 80% marks or equivalent CGPA with valid GATE score.

A fellowship in Chartered Accountancy/ Company Secretaryship from a recognized Indian or foreign institution with not less than 60% of marks or equivalent CGPA having a minimum of Bachelor's Degree.

Relaxation in requisite qualifications for SC/ST candidates shall be followed as per Central Govt. rules.

Selection Procedure

Selection of the candidates will strictly be done on merit based on performance in the Entrance Test followed by personal interview.

Academic Session

Academic session of the University shall be from August to July and shall consist of two semester – Autumn (July to December) and Spring (January to June). For details please refer to the Academic Calendar in the website (www.tezu.ernet.in).

Requisite qualification for admission into various disciplines of Ph.D. programmes

School	Department	Qualification
Science & Technology	Chemical Sciences	M.Sc. in all branches of Chemical Science/ Physics, M.E./M. Tech. in related subject. NET/ GATE qualified candidates will be preferred.
	Environmental Science	M.Sc. in Environmental Science/ Botany/ Applied Botany / Chemistry/ Physics/ Zoology/ Earth Sciences/ Agro-forestry/ Life Science. M.Sc.(Agri) in Crop Physiology/ Biochemistry/ Horticulture / Agronomy/ Soil Science/ Meteorology. M.Sc. in Agricultural Science.
	Mathematical Sciences	M.A./M.Sc. degree in Mathematics/ Statistics/ Physics/ Computational Seismology/ Economics with requisite background in Mathematics.
	Molecular Biology & Biotechnology	M. Sc. in Biotechnology/Molecular Biology/Molecular Biology and Biotechnology/ Biochemistry/Microbiology /Genetics/Plant Breeding/Agriculture Biotechnology / Life Sciences/Botany /Zoology / Applied Botany/Biophysics/Bioinformatics.
	Physics	M.Sc. in Physics/ Electronics/ Geophysics/ Material Science/ Applied Mathematics/ Nano Science & Technology/ Biotechnology/ Environmental Science and Chemical Science. M. Phil., M. Tech in Solid State Material Science/ Electronics/ Energy/ Nanoscience and Technology/ Biotechnology/ Environmental Science and Chemical Science. B. Tech. in Engineering Physics with 80% marks in aggregate or equivalent CGPA.

Engineering	Civil Engineering	Masters degree in Engineering/Technology/Science. B.E./B.Tech with 80% marks in aggregate or equivalent CGPA with a valid GATE Score.
	Computer Science & Engineering	M. Tech. in Computer Science/ I.T./ Electronics MCA M. Sc. in Computer Science/ I.T. BE/B.Tech. with 80% marks in aggregate or equivalent CGPA with valid GATE score.
	Electronics & Communication Engineering	M.E./ M.Tech./ M.Sc./ Engg./MS in Electronics/ Communication/ Electronics Design/ Electrical/ Instrumentation / Control/ Microwave /Biomedical/ Bioelectronics/ Bio-Technology/ Computer Science/ Information Technology. M.Sc. in Electronics/ Physics/ Applied Mathematics. MCA with Physics, Chemistry and Mathematics in Bachelor degree, MBBS with MD/ MS degree. BE/ B.Tech. with 80% marks in aggregate or equivalent CGPA with valid GATE score.
	Energy	M.Sc./ ME/ M. Tech. degree in Energy Technology/ Energy Management/ Energy related Engineering & Technology/ Physics/ Chemistry/Agriculture/ Allied subjects.
	Food Engineering & Technology	M.Sc./M.Tech./M.E. in Food Engineering & Technology/ Food Science & Technology/ Food and Nutrition / Microbiology / Food Microbiology / Biochemistry / Chemistry / Biotechnology/ Food Engineering/ Applied Microbiology/ Dairy engineering/ Food Biotechnology Engineering.
	Mechanical Engineering	ME/M.Tech./M.Sc.(Engg.) in Mechanical Engg. or allied areas. B.E./B.Tech with 80% marks in aggregate or equivalent CGPA with a valid GATE Score.
Humanities & Social Science	Cultural Studies	MA in any of the disciplines in Humanities or Social Sciences with a uniformly good academic career. Candidates with UGC-JRF, UGC-NET or NE SET will be given preference.
	English & Foreign Language	M.A. in English (specialization may be in American Literature as well as in English Language Teaching, English Literature, Indian Writing in English, Linguistics, New Literatures in English and Women's Writing in English) M.A. in Linguistics
	Hindi	M.A. in Hindi
	Mass Communication & Journalism	M.A. in Mass Communication, Mass Communication & Journalism, Advertising, Advertising & Marketing, Public Relations, Visual Communication, Journalism, Media Studies, Communication, Science Communication, Media Studies and Culture, Film & Television Studies.
	Sociology	M.A. in Sociology / Cultural Studies / Anthropology (with specialization in Social Anthropology) / Economics / History / Political Science / Philosophy / Mass Communication / English / Law / Management/ Social Work.
Management Sciences	Business Administration	M.B.A./ PGDM M. Com. M.A./ M. Sc. in Economics M.A. in Psychology/ Sociology and Anthropology M.C.A M.T.M./ M.T.A. FCA/ FCS/ FICWA M.E. / M. Tech. in any discipline M.Sc. in Agriculture/ Home Science/ Fishery/ Statistics M.V.Sc. in (Veterinary Science) M.A. in Cultural Studies

Seats are reserved for SC/ST/ OBC (NCL), Kashmiri Migrant and Person with Disability (PWD) candidates as per central government rules. PWD candidates with at least 40% permanent disabilities will only be considered.

ADMISSION PROCEDURE

How to Apply

Candidates applying for more than one programme must apply separately for each programme. However, for Integrated M.Sc./Integrated B.Sc.B.Ed, candidate need to apply for all programmes/disciplines in a single application form. Similarly for Integrated M.A. (English) and Integrated B.A.B.Ed. (English major in B.A.), candidate needs to apply only a single application form.

Candidates who have appeared/are appearing in the qualifying examination before the date of admission may also apply. The application form should be filled in neatly using capital letters.

One side of the application form is for B.Tech. programme and the reverse side is for all other programmes. Fill-in the side relevant for you and tick the appropriate boxes. Data sheet is to be filled-in by all the candidates. Duly filled-in and signed application form must reach on or before the specified date as given below:
(i) **For B.Tech. programmes:** The Controller of Examinations, Tezpur University on or before **April 29, 2011**.
(ii) **For Integrated M.Sc./B.Sc.B.Ed. programmes:** The Controller of Examinations, Tezpur University on or before **April 5, 2011**.
(iii) **For all other programmes:** The Controller of Examinations on or before **April 5, 2011**.

It may be noted that Tezpur University is located outside the Tezpur city and some private courier services may not deliver the documents to the University in time. Applications received after the last date will not be considered in any circumstance.

Column 14 of the B.Tech application form: Choice of Discipline
Indicate three disciplines in order of your preference from the list below (only for B.Tech.)

Code	Programme
CE	Civil Engineering
CSE	Computer Science & Engineering
ECE	Electronics & Communication Engineering
FET	Food Engineering & Technology
ME	Mechanical Engineering

Admit cum Acknowledgement Cards (Programmes other than B.Tech.)
    Fill in the Acknowledgement cum Admit Card (in duplicate) attached to this prospectus and send them along with the Application Form.

Entrance Examination Centre (other than for B.Tech. & Ph.D.): To be filled in by the candidate in the Acknowledgement cum Admit card.

Centre	Code	Address
Agartala	01	Tripura University, Agartala, Tripura
Bangalore	02	Indian Institute of Science, Bangalore – 560012
Chennai	03	Presidency College, Chennai-600005, Tamilnadu
Bhubaneswar	04	B.J.B. College (Autonomous), Bhubaneswar, Orissa
Delhi	05	Kirori Mal College, University of Delhi, New Delhi
Dibrugarh	06	Dibrugarh University, Dibrugarh
Guwahati	07	Gauhati University, Gopinath Bordoloi Nagar, Guwahati, Assam
Hyderabad	08	Nizam College, Opposite L.B. stadium, Basheer Bag, Hyderabad, Andhra Pradesh
Imphal	09	D.M. College of Science, Imphal, Manipur
Itanagar	10	North Eastern Regional Institute of Science & Technology (NERIST), Nirjuli, Itanagar
Jorhat	11	J.B. College, Jorhat, Assam
Kokrajhar	12	Kokrajhar College, Kokrajhar, Assam
Kolkata	13	Presidency College, Kolkata, West Bengal
Lucknow	14	Babasaheb Bhimrao Ambedkar University, Lucknow, U.P.-226025
Mumbai	15	KPB Hinduja College of Commerce, Mumbai
North Lakhimpur	16	North Lakhimpur College, Khelmati, North Lakhimpur, Assam
Patna	17	Central University of Bihar, BIT Campus, P.O. B.V. College, Patna 800014
Pune	18	University of Pune, Ganeshkhind, Pune
Siliguri	19	North Bengal University, Raja Rammohanpur, Darjeeling, West Bengal
Shillong	20	St. Anthony's College, Shillong, Meghalaya
Silchar	21	G.C. College, College Road, Silchar
Tezpur	22	Tezpur University, Napaam, Tezpur, Assam

Enclosures

Photocopies of following documents are to be submitted along with the application.

Bank draft (if the form is downloaded)
Acknowledgement cum admit card (duly filled)
Self addressed envelope with postage stamp of Rs. 5/-
A copy of AIEEE admit card (for B.Tech. only)

The selected candidates shall be required to produce all relevant documents in original at the time of admission. They will also have to submit attested copies of all mark sheets and certificates at the time of admission.

Selection of eligible candidates

(a) B.Tech. programmes

(i) Candidates seeking admission to the B.Tech. programmes are required to appear in the AIEEE-2011 to be conducted by CBSE, New Delhi. All Admission shall be based on AIEEE score.

(ii) 50% seats are reserved for the NE States. For admission to these seats the candidates are also required to submit applications to Tezpur University in the prescribed form provided.

(iii) Admission to the remaining 50% open seats shall be made through the central counselling of AIEEE.

(b) Integrated M.Sc./Integrated B.Sc.B.Ed.

Candidates qualifying the entrance examination conducted by TUEE-2011 for Integrated M.Sc./Integrated B.Sc.B.Ed. programmes will be selected for admission according to his/her performance in the examination. There will be a combined entrance test for these programmes.

(c) Integrated M.A. (English)/Integrated B.A.B.Ed. (English major in B.A.): There will be a combined entrance examination for these programmes and selected candidates will be considered for admission according to his/her performance in the examination.

(d) P.G. Programmes (other than MBA)

Candidates seeking admission shall have to appear in the TUEE-2011 as per the schedule given in **Annexure II**. ● For M.Tech. programmes in Information Technology, Electronics Design and Technology and

Bioelectronics, however, candidates with valid GATE score with certain cut off score in respective disciplines may seek direct admission. ● For some programmes candidates selected through TUEE-2011 shall be required to appear for Group Discussion and Personal Interview, the dates for which will be intimated in due course.

In case of non-receipt of admit card, a candidate may contact the TUEE official at the examination centre with proof of submission of application on the day of examination. Duplicate admit card may be issued on the spot. **The results of entrance examinations are likely to be declared in the fourth week of June 2011.**
Seats are reserved for SC/ST/OBC (NCL) and Persons with Disabilities (PWD) candidates as per central government rules. ● **PWD candidates with at least 40% permanent disabilities will only be considered**.
The list of selected candidates for admission, including a waiting list, will be displayed in the University Notice Board and the University Website.

● **No separate call letter will be sent to the candidates selected / waitlisted for admission.** No TA/DA will be paid to the candidates for appearing in the entrance examination and/or interview.

Admission

The Schedule of Course Registration and Admission is given in Annexure III. Selected candidates will be admitted to the concerned programme on payment of requisite fees. The candidate's presence at the time of verification of testimonials etc., course registration and hostel admission is essential.
In case of a gap of one year or more between completion of qualifying examination and the year of admission, the candidate must produce a 'Gap certificate' from the District Police Authorities or an affidavit specifying his/ her occupation during the Gap period.

Provisional Admission

Candidates who have appeared/are appearing in the qualifying examination before the date of admission in the year 2011 may be admitted provisionally if otherwise found eligible at the entrance examination and/or interview, provided that -
1. **They have passed all the earlier examinations held for the same degree without any carryover of subject satisfying the eligibility criteria;**
2. **All academic works including theory and practical of qualifying examinations should be completed before the admission.**
3. **They must produce the evidence of passing the qualifying examination with requisite qualification on or before 31 October, 2011 failing which they will be debarred from appearing the semester end examination.**
4. **Candidates must submit a proof of taking all the examinations at the time of admission.**

Application for Hostel Accommodation

Candidates requiring hostel accommodation need to indicate in column 4 of the application Form.

Commencement of Classes

Classes for all the programmes will commence on 01 August, 2011 as mentioned in Academic Calendar in Section one. Students admitted to any of the programmes shall have to report to the Head of the Department concerned within a week from the date of commencement of classes; otherwise his/her seat may be forfeited.

Refund of Caution Deposit

Refund of caution money shall be made to a student after his/her release from the University. The claim for refund of caution money shall not be entertained beyond a period of one year from the date of release of the student. The caution money shall not be refunded if a student leaves the programme without permission and/or does not join and attend any class after admission. Refund of caution money shall be made against application in prescribed form and production of Release Order.

The fees deposited by the candidate shall not be refunded if the seat is withdrawn after the last day of admission.
Self Supported Scheme (SSS): Eligible candidates under SSS will be admitted on payment of some additional amount (not exceeding 5 times the normal fee). Candidates in the waiting list only will be considered for admission under SSS. Number of seats under SSS will not exceed 7 for 2011-12. Exact no. of seats in each programme and the amount of fees will be notified on the website. Interested candidates may give their option for the SSS in column 1 of the application form.

CANVASSING IN ANY FORM LEADS TO DISQUALIFICATION

Recognized Supervisors of Tezpur University and their area of specialization	
Name and Designation	**Area of Specialization**

1. Department of Business Administration

Name and Designation	Area of Specialization
Dr. M. K. Sarma, Professor	Services Marketing
Dr. Chandana Goswami, Professor	Financial Management ,General Management
Dr. S. S. Sarkar, Professor	Accounting , Taxation, Social Development Issues
Dr. Debabrata Das, Professor	Financial Management, Financial Markets and Development Finance
Dr. C. Goswami, Associate Professor	Marketing and Promotional Strategies, Consumer Behaviour
Dr. P. Baruah, Associate Professor	Change Management and Human Resource Development
Dr. T. R. Sarma, Associate Professor	Systems Management, Operations, Project Management, Tourism

2. Department of Chemical Sciences

Name and Designation	Area of Specialization
Dr. S. K. Dolui, Professor	Fibre reinforced plastic, self reinforced plastic, water based coating and adhesive, diffusion of small molecule through plastic.
Dr. N. S. Islam, Professor	Synthetic Inorganic Chemistry and Biomimetic Chemistry of Transition Metals
Dr. T. K. Maji, Professor	Grafting on fibres, Rubber processing, Reaction engineering, Emulsion Polymer, Textile finishing.
Dr. N. Karak, Professor	Synthesis of Polymer, Blends and Nanocomposites
Dr. R. C. Deka, Professor	Theoretical Chemistry and Computer Modeling.
Dr. R. K. Dutta, Associate Professor	Surfactant and Drinking Water.
Dr. R. Bora, Associate Professor	Synthesis of bioactive molecule, Development of green methodologies for organic transformation
Dr. A. J. Thakur, Associate Professor	Heterocyclic chemistry, Organic synthesis and Molecular container chemistry
Dr. A. K. Phukan, Associate Professor	Theoretical Inorganic and Organometalic chemistry
Dr. P. Pujari, Assistant Professor	Physical chemistry

3. Department of Civil Engineering

Name and Designation	Area of Specialization
Dr. A. Dutta, Associate Professor	Soil-structure interaction, earthquake engineering, structural control, system identification.

4. Department of Computer Science & Engineering

Name and Designation	Area of Specialization
Dr. M. Dutta, Professor	Optimization, Computational Theory
Dr. D. K. Saikia, Professor	Networks, Mobile Computing
Dr. D. K. Bhattacharyya, Professor	Data Mining, Cryptography
Dr. S. K. Sinha, Professor	Workflow Automation, Web Theory
Dr. S. M. Hazarika, Professor	Spatial Reasoning, Cognitive Vision
Dr. U. Sharma, Associate Professor	Natural Language Processing
Dr. N. Sarma, Associate Professor	Wireless Network and Mobile Computing
Dr. B. Bora, Associate Professor	Data Mining

5. Department of Cultural Studies

Name and Designation	Area of Specialization
Dr. S. K. Dutta, Professor	Folklore and culture, Assamese language and culture
Dr. P. J. Mahanta, Professor	Cultural History, Comparative religion, Traditional visual and performing arts
Dr. P.M. Sharma, Associate Professor	Literary folklore, cultural theory & ethnicyty
Dr. D. P. Nath, Associate Professor	Gender Studies, Comparative Literature, Translation & Critical Theory

Name and Designation	Area of Specialization
Dr. P. Dutta, Assistant Professor	Heritage studies, New Museology
Dr. J. G. Konwar, Assistant Professor	Medical Anthropology, Anthropology of food & costume

6. Dept. of Electronics & Communication Engineering

Dr. M. Bhuyan, Professor	Sensor Design, Image Processing, Machine Vision.
Dr. P. P. Sahu, Professor	Optoelectronics
Dr. S. Bhattacharyya, Associate Professor	Microwave Antennas
Dr. J. C. Dutta, Associate Professor	Bio-electronics

7. Department of Energy

Dr. D. Konwer, Professor	Biomass Energy, Fossil Fuels, Energy & Environment, Waste Management.
Dr. S. K. Samadarshi, Professor	Solar Energy, Solar Photocatalysis, Energy Materials, Hydrogen Energy, Energy Education.
Dr. D. C. Baruah, Professor	Biomass Energy, Energy Management and Mathematical Modeling and Farm Mechanisation.
Dr. D. Deka, Associate Professor	Biofuels, Biomass Assessment, Bioenergy & Environment.
Dr. R. Kataki, Associate Professor	Energy and Environment, Biomass energy

8. Department of English & Foreign Languages

Dr M. M. Sarma, Professor	Applied Linguistics, Literature in English, ELT
Dr B. K. Danta, Professor	American Literature, Critical Theory, Fiction Studies
Dr Farheena Danta, Professor	American Literature, Cultural Studies, Modernist Poetics
Dr P. K. Das, Professor	American Literature, Indian Writing in English
Dr M. Borbora, Professor	Linguistics (Syntax, Psycholinguistics)
Dr G. K. Borah, Associate Professor	Linguistics, Cognitive Semantics, Philosophy of Language.

9. Department of Environmental Science

Dr. K.K. Baruah, Professor	Environmental Plant Physiology and Biochemistry
Dr. K.P. Sarma Professor	Water Pollution & Remediation of Toxic substances
Dr. R.R. Hoque Associate Professor	Air pollution and Environmental Monitoring and Assessment
Dr. A.K. Das Assistant Professor	Geomorphology, Regional Climate
Dr.(Mrs.) A. Devi Assistant Professor	Plant Ecology and Biodiversity conservation
Dr.(Mrs.) Nirmali Gogoi Assistant Professor	Stress Physiology & Biochemistry

10. Department of Food Engineering & Technology

Dr. S. C. Deka, Associate Professor	Food Biochemistry & Food Quality
Dr. (Mrs.) C. L. Mahanta, Professor	Rice Science & Technology, Product Development & Food Quality.

11. Department of Hindi

Dr. A. K. Nath, Professor	Medieval Poetry, Folkloristics and Comparative Studies
Dr. B. C. Pathak, Associate Professor	Medieval Poetry, Folkloristics and Comparative Studies

Name and Designation	Area of Specialization

12. Department of Mass Communication and Journalism

Name and Designation	Area of Specialization
Dr Abhijit Bora, Associate Professor	Journalism, Print Media, Development Communication, Radio / Community Radio, Community Media,
Dr CSHN Murthy, Associate professor	Film and TV Studies, Ad-film Making, Advertising and PR, Media Research, Political Communication and International Communication. Research in Communication and Media Studies (Mediatization), Print, Film & Electronic, Development Communication, Communication / Cultural Studies.

13. Department of Mechanical Engineering

Name and Designation	Area of Specialization
Dr. S.M. Hazarika, Professor	Robotics
Dr. R. Das, Assistant professor	Heat Transfer Involving Thermal Radiation

14. Department of Mathematical Sciences

Name and Designation	Area of Specialization
Dr. M. Borah, Professor	Discrete Distribution, Combinational Optimization, Genetic Algorithms, Numerical Analysis.
Dr. N. Deka Baruah, Professor	Number Theory, Ramanujan's Mathematics.
Dr. D. Hazarika, Professor	General Topology, Fuzzy Sets and Applications.
Dr. M. Hazarika, Associate Professor	Functional Analysis, Operator Theory.
Dr. M. Nath, Associate Professor	Ordinary Graph Spectra, Inverse Eigen Value Problem
Dr. R. Barman, Associate Professor	Algebraic Number Theory, Iwasawa Theory
Dr. B. Deka, Associate Professor	Numerical Analysis, Finite Element Method

15. Department of Molecular Biology & Biotechnology

Name and Designation	Area of Specialization
Prof. B. K. Konwar, Professor	Plant biotechnology, Microbial genetics, Petroleum biotechnology
Prof. A. K. Mukherjee, Professor	Biochemistry of venom toxins, Enzyme technology, Microbial biotechnology, Nanobiotechnology
Prof. A. K. Buragohain, Professor	Plant biotechnology, Evolutionary genomics
Dr. (Mrs.) S. Baruah, Associate Professor	Molecular immunology and Immunogenetics
Dr. S. K. Ray, Associate Professor	Virulence functions bacteria, Molecular evolution
Dr. M. Mandal, Associate Professor	Industrial Microbiology
Dr. A. Ramteke, Assistant Professor	Radiation & Cancer Biology, Computational Biophysics
Dr. R. Doley, Assistant Professor	Molecular Toxicology

16. Department of Physics

Name and Designation	Area of Specialization
Dr. A. Choudhury, Professor	Condensed Matter Physics, Quantum Electronics, Nano Science
Dr. A. Kumar, Professor	Condensed Matter Physics/Materials Science, GPS
Dr. J. K. Sarma, Professor & Head	Theoretical High Energy Physics, Particle Physics
Dr. N. S. Bhattacharyya, Associate Professor	Microwaves
Dr. N. Das, Associate Professor	Plasma Physics
Dr. P. Deb, Associate Professor	Nano Science and Nano Technology, Physics of Materials
Dr. G. A. Ahmed, Associate Professor	Laser Physics, Optoelectronics
Dr. D. Mohanta, Associate Professor	Condensed Matter Physics and Nanoscience
Dr. P. K. Karmakar, Assistant Professor	Plasma Physics, Astrophysics & Nonlinear Dynamics

17. Department of Sociology

Name and Designation	Area of Specialization
Dr. C. K. Sarma, Professor	Social Development, Culture & Media Studies, Environmental Sociology, Nationalism.

Integrated B.Sc./B.A.B.Ed. and Integrated M.A. Programmes

Integrated B.Sc./B.A.B.Ed. and Integrated M.A. programmes

Tezpur University is going to start Integrated B.Sc.B.Ed., Integrated B.A.B.Ed. and Integrated M.A. programmes from the academic session beginning from the Autumn semester-2011. Integrated B.Sc.B.Ed. programme will be offered with major in B.Sc. in three disciplines of Chemistry, Mathematics and Physics. Integrated M.A. will be offered in English and Integrated B.A.B.Ed. with English major in B.A.

Course Structure of Integrated B.Sc./B.A.B.Ed. programme

Semester I: B.Sc.B.Ed. Credit 18

B.Sc.B.Ed	L T P Cr
Communicative English	2-0-0 2
Basics in Computer Applications	2-0-1 3
Physics I	2-0-1 3
Chemistry I	2-0-2 4
Mathematics I	2-1-0 3
Biology I	2-0-1 3

Semester I: B.A. B.Ed. Credit 17

B.A.B.Ed.	L T P Cr
General English I/Eng. Major I (C)	2-1-0 3
Comp. Applications (C)	2-0-1 3
MIL/Alt. Eng. I (C)	3-0-0 3
Sociology I	3-0-0 3
MCJ I	3-0-0 3
Cultural Studies I/Economics I	3-0-0 3
Philosophy of Science (C)	2-0-0 2

Semester II: B.Sc.B.Ed. Credit 19

Course	L T P Cr
Physics II	2-0-1 3
Chemistry II	2-0-2 4
Mathematics II	2-1-0 3
Biology II	2-0-1 3
Elementary Environmental Science	2-0-0 2
NSS/NCC	0-0-2 2
Basic Sociology	2-0-0 2

Semester II: B.A.B.Ed. Credit 17

Course	L T P Cr
General English II/Eng. Major II (C)	2-1-0 3
MIL/Alt. Eng. II (C)	3-0-0 3
Sociology II	3-0-0 3
MCJ II	3-0-0 3
Cultural Studies II/Eco I1	3-0-0 3
Environmental Studies (C)	2-0-0 3
NSS/NCC (C)	0-0-2 2

Semester III : B.Sc.B.Ed. Credit 17

B.Sc. with practical	LTP Cr	B.Sc. without practical	LTPCr
Pass subject I	2-1-0 3	2. Pass subject I	2-1-0 3
Pass subject II	2-1-0 3	3. Pass subject I (Practical)	0-0-2 2
Pass subject II (practical)	0-0-2 2	3.Major 1	2-1-0 3
Major 1	2-1-0 3	4. Major II	2-1-0 3
Major II	2-1-0 3	5. Major III	2-1-0 3
Major III (Practical)	0-0-3 3	6. Major IV	2-1-0 3

Semester III : B.A.B.Ed. Credit 17

Course	LTP Cr
Gen Eng III/Eng maj III (C)	3-0-0 3
MIL/Alt Eng III (C)	2-1-0 3
Sociology III	2-1-0 3
M.CJ III	3-0-0 3
Cult.St III/Eco III	3-0-0 3
Major IV (C)	3-0-0 3

Semester IV: B.Sc.B.Ed. Credit 17

B.Sc. with practical	LTP Cr	B.Sc. without practical	LTPCr
Pass subject I	2-1-0 3	2. Pass subject I	2-1-0 3
Pass subject II	2-1-0 3	3. Pass subject I (Practical)	0-0-2 2
Pass subject II (practical)	0-0-2 2	4.Major V	3-1-0 4
Major IV	2-1-0 3	5. Major VI	3-1-0 4
Major V	2-1-0 3	6. Major VII	3-1-0 4
Major VI (Practical)	0-0-3 3		

Semester IV: B.A.B.Ed. Credit 17

B.A.	LTPCr
Gen Eng IV/Eng maj V(C)	3-0-0 3
MIL/Alt Eng IV(C)	3-0-0 3
Soc IV	3-0-0 3
MCJ IV	3-0-0 3
Cult St/Eco IV	3-1 0 4
Major VI (C)	3-0-0 3

Semester V : B.Sc.B.Ed. Credit 17

B.Sc. with practical	LTPCr	B.Sc. without practical	LTP Cr
Education and Development I(C)	2-0-0 2	Education and Development I(C)	2-0-0 2
Major VII	2-1-0 3	Major VIII	3-1-0 4
Major VIII	2-1-0 3	Major IX	3-1-0 4
Major IX	2-1-0 3	Major X	3-1-0 4
Major X (Practical)	2-1-0 3	Major (Project)	0-0-3 3 (to be continued through the next semester)
Major Project	0-0-3 3 (to be continued through the next semester)		

Semester V: B.A.B.Ed. Credit 17

Course	Credit
Education and Development I(C)	2-0-0 2
Major VII	3-0-0 3
Major VIII	3-0-0 3
Major IX	3-0-0 3
Major X	3-0-0 3
Major (Project Dissertation)	0-0-3 3 (to be continued through the next semester)

Semester VI: B.Sc.B.Ed. Credit 19

B.Sc. with practical	Credit	B.Sc. without practical	Credit
Education and Development II	2-0-0 2	1.Education:An Evolutionary Perspective II	2-0-0 2
Major X	2-1-0 3	2.Major XI	3-1-0 4
Major XI	2-1-0 3	3. Major XII	3-1-0 4
Major XII	2-1-0 3	4. Major XIII	3-1-0 4
Major XIII (Practical)	2-1-0 3	5. Major Project (Cont. from previous semester)	0-0-5 5
Major Project (Cont. from previous semester)	0-0-5 5		

Semester VI: B.A.B.Ed. 16

B.A.	Credit
Education and Development II	2-0-0 2
Major XI	3-0-0 3
Major XII	3-0-0 3
Major XIII	3-0-0 3
Major (Project Dissertation)	0-0-5 5

Semester VII : (B.Ed. Sem I): 18 credits

B.Ed courses	Credit
Education: An evolutionary prospective	3-0-0 3
Contemporary Issues and Concerns in Secondary Education	3-0-0 3
Learner, Learning and Teaching: Approaches and Strategies	2-1-0 3
Teaching: Approaches and Strategies	2-1-0 3
Teaching Specialization I (Course A)	(Arts)2-1-0 3 (Sc) 2-0-1 3
Teaching Specialization II (Course A)	(Arts) 2-1-0 3 (Sc) 2-0-1 3

Semester VIII:(B.Ed. sem II):19 credits

B.Ed courses	Credit
Learning Resources	3-0-0 3
Assessment for Learning	3 -0-0 3
Classroom Organisation and Management	2-0-0 2
Teaching Specialization I (Course B)	(Arts) 1-1-0 2 (Sc) 1-0-1 2
Teaching Specialization II (Course B)	(Arts)1-1-0 2 (Sc) 1-0-1 2
Practical: Initiatory School Experiences 1day a week	0-0-0 3
Practical : Internship in Teaching 4 weeks	0-0-0 4

Note: Those who study English as the Major subject are not required to study the courses on General English. They will be required to study two pass course subjects while those who offer any other subject as Major will study one pass course subject in the first four semesters.

Course Structure of Integrated M.A. Programme

Semester I: Credit 17

Course	L T P Cr
General English I/Eng. Major I (C)	2-1-0 3
Comp. Applications (C)	2-0-1 3
MIL/Alt. Eng. I (C)	3-0-0 3
Sociology I (E)	3-0-0 3
MCJ I (E)	3-0-0 3
Cultural Studies I/Economics I (E)	3-0-0 3
Philosophy of Science (C)	2-0-0 2

Semester II: Credit 17

Course	L T P Cr
General English II/Eng. Major II (C)	2-1-0 3
MIL/Alt. Eng. II (C)	3-0-0 3
Sociology II (E)	3-0-0 3
MCJ II (E)	3-0-0 3
Cultural Studies II/Eco I1(E)	3-0-0 3
Environmental Studies (C)	2-1-0 3
NSS/NCC (C)	0-0-2 2

Semester III: Credit 19

Course	Credit
Development Studies I (C)	2-0-0 2
Gen Eng III/Eng maj III (C)	3-0-0 3
MIL/Alt Eng III (C)	2-1-0 3
Sociology III (E)	3-1-0 4
M.CJ III (E)	3-1-0 4
Cult.St III/Eco III (E)	3-1-0 4
Major IV	3-0-0 3

Semester IV: Credit 19

B.A.	Credit
Dev. Studies II (C)	2-0-0 2
Gen Eng IV/Eng maj V (C)	3-0-0 3
MIL/Alt Eng IV (C)	3-0-0 3
Soc IV (E)	3-1-0 4
MCJ IV (E)	3-1-0 4
Cult St/Eco IV (E)	3-1-0 4
Major VI	3-0-0 3

Semester V: Credit 15

Course	Credit
Major VII	3-0-0 3
Major VIII	3-0-0 3
Major IX	3-0-0 3
Major X	3-0-0 3
Major Project (Dissertation)	0-0-3 3 (to be continued through the next semester)

Semester VI: Credit 14

B.A.	Credit
Major XI	3-0-0 3
Major XII	3-0-0 3
Major XIII	3-0-0 3
Major Project (Dissertation)	0-0-5 5

Note: The courses are under review. The course contents and course codes will be notified later on.

SECTION SIX

DEPARTMENTS

BUSINESS ADMINISTRATION
(Year of Establishment: 1995)

The Department of Business Administration came into existence in 1995 with the objective of producing quality management professionals and carrying out research in the areas of Finance, Human Resources, Marketing, Production and Systems Management. The Department also offers a Programme on Tourism Management.

Programmes offered
1. PG Diploma in Tourism Management
   (This is a Modular programme. A student can opt for a certificate after successful completion of the first semester; likely to be upgraded to MTM]
2. Master of Business Administration (MBA) (Full Time) (2 Years, 4 Semesters)
3. Master of Business Administration (MB A) (Part time) (3 years , 6 semesters)
4. Ph.D.

Faculty
Professor
      Sarma, M. K., Ph.D. (Tezpur University), Dean, School of Management Sciences
      Goswami, Chandana, Ph.D. (Gauhati University)
      Sarkar, S. S., Ph.D. (Tezpur University), Head of the Department
      Das, D., Ph.D. (Rajiv Gandhi University, Itanagar)
Associate Professor
      Goswami C., Ph.D. (Tezpur University)
      Baruah, P., Ph.D. (Tezpur University)
      Sarma, T. R., Ph.D. (Tezpur University)
      Bhuyan, A., Ph.D. (Tezpur University)
Assistant Professor
      Barpujary, H., M.CA (Tezpur University)
      Roy, A., M.B.A. (Tezpur University)
      Prakash, G., M.M.S. (Allahabad University) (on lien)
      Mahanta, K., M.B.A. (Assam University)
      Das, R., Ph.D. (Gauhati University)
      Dutta, M., M.B.A. (TU)

Facilities
The Department is well equipped with modern educational facilities like state of the art computer laboratory and instructional audio-visual aids including LCD Projector etc. The Department has an air conditioned board room for facilitating case study, group discussion etc.

Research Activity
Nos. of papers published in the year 2010 (upto September): 03
Nos. of ongoing research project/consultancy: 7

Select publications
1. Bora, M., Baruah, P. Paradigm shift in health sector: A case study of National Rural Health Mission in Sonitpur District of Assam, *J. of Interacademicia*. **14**, 94-101 (2010).
2. Das, D., Tiwari, R.K., Financial Inclusion-broadening the access to finance: Perspectives from India, *Asian Profile*, **38**, 141-161 (2010).
3. Dey, B., Sarma, M.K., Information source usage among motive-based segments of travelers to newly emerging tourist destinations. *Tourism Management,* **31**, 341-344 (2010).

Courses offered in P.G. Diploma (Tourism Management)

CODE	Title	Credit	CODE	Title	Credit
**Core Courses**						
TM 411	Fundamentals of Tourism	4	TM 412	Destination Geography, History and Heritage	4
TM 413	Leisure Delivery System	4	TM 414	Interpersonal Skills	4
TM 415	Information Based Management	4	TM 424	Tourism Practices	4
TM 421	Management Fundamentals	2	TM 422	Finance and Accounting for Tourism	4
TM 423	Tourism Entrepreneurship	4	TM 416	Term Paper	4
TM 425	Resort Management	4	TM 426	Project	6

CHEMICAL SCIENCES
(Year of Establishment: 1997)

The Department was established in the year 1997 with the objectives of providing students with broad based training in various disciplines related to Chemical Sciences and reach out to the society. The Department is offering M.Sc. programme in Chemical Sciences, Integrated M.Sc. in Chemistry, M.Tech in Polymer Science & Technology and Ph.D. programme. The faculty member are involved in advanced research programmes in the areas of synthesis, characterization and processing of polymers, nanocomposites, bioinorganic chemistry, surfactant systems, synthetic organic chemistry, theoretical chemistry and environmental chemistry.

Programmes offered
1. Integrated M.Sc. in Chemistry
2. Integrated B.Sc.B.Ed.
3. M.Sc. in Chemical Sciences.
4. M.Tech. in Polymer Science & Technology
5. Ph.D.

Faculty
Professor
   Dolui, S. K., Ph.D. (IIT, Kharagpur)
   Islam, N. S., Ph.D. (NEHU, Shillong), Dean Research & Development
   Maji, T. K., Ph.D. (Calcutta University, Kolkata)
   Karak, N., Ph.D. (IIT, Kharagpur), Head of the Department
   Deka, R.C., Ph.D. (NCL, Pune)

 Associate Professor
      Dutta, R. K., Ph.D. (NEHU, Shillong)
      Borah, R., Ph.D. (Gauhati University)
      Thakur, A.J., Ph.D. (RRL, Jorhat)
      Phukan, A.K., Ph.D. (Hyderabad University)

Assistant Professor
      Puzari, P., Ph.D. (IIT, Gauhati)
      Bania, K.K., M.Sc. (Gauhati University)
      Karunakar, G.V., Ph.D. (Hyderabad University)

Facilities
   In addition to the laboratory facilities required for post graduate level studies in Chemical Sciences, the Department is equipped with sophisticated instrumentation facilities, like FTIR, CHN Analyzer, Thermal Analyzer, UV-Visible Spectrophotometer, Universal Testing Machine (UTM), Atomic Absorption Spectrophotometer, Polarizing Microscope, Computational facilities etc. Besides these, the University has central instrumentation facilities of Scanning Electron Microscope and 400 MHz Nuclear Magnetic Resonance, GC-MS and ICPAES. The Department also has GPC, HPLC, GC etc. (to be installed).

Award
   The highest scorer among the students of Applied Chemistry programme is awarded with the Applied Chemistry Education Award.

Research Activity
   Nos. of papers published in the year 2010 (upto October) :   59
   Nos. of ongoing research projects   :   15

Select publications
 Deka, H., Karak, N., Kalita, R. D., Buragohain, A. K., Biocompatible hyperbranched polyurethane/multi-walled carbon nanotube composites as shape memory materials, *Carbon*, **48,** 2013-2022 (2010).
 Phukan, A. K., Guha, A.K., Nature of Transannular Intramolecular Interactions in Group 4 and 6 Metallatranes: A combined DFT and AIM study, *Inorg. Chem.* 2010 (Online)
 Karak, N., Roy, B., Voit, B., s-Triazine based hyperbranched polyethers: Synthesis, Characterization, and Properties, *J. Polymer Science Part A: Polymer chemistry*, **48**, 3994-4004 (2010).

Other relevant information
   The Department has received financial assistance under UGC-SAP and DST-FIST special grants for strengthening teaching, research and training.

Courses offered in M. Sc. in Chemical Sciences

Semester I

| Sl. No. | Course Name | Credit | | Class |
		L-T-P	Total CR	Hours
CH-401	Principles of Inorganic Chemistry	3-0-0	3	3
CH-402	Principles of Organic Chemistry	3-0-0	3	3
CH-403	Chemical and Statistical Thermodynamics	3-0-0	3	3
CH-404	Quantum Chemistry and Chemical Bonding	3-0-0	3	3
CH-405	Computers in Chemistry	2-0-2	3	4
CH-406	Laboratory Course in Organic Chemistry	0-0-6	6	12
			21	28

Semester II

| Sl. No. | Course Name | Credit | | Class |
		L-T-P	Total CR	Hours
CH-407	Chemistry of Transition Elements	3-0-0	3	3
CH-408	Organic Reactions and Mechanism	3-0-0	3	3
CH-409	Chemical Dynamics and Electrochemistry	3-0-0	3	3
CH-410	Analytical Techniques	3-0-0	3	3
CH-411	Spectroscopic Principles	3-0-0	3	3
CH-412	Seminar	0-0-2	1	2
CH-413	Laboratory Course in Inorganic Chemistry	0-0-6	6	12
			22	29

Semester III

| Sl. No. | Course Name | Credit | | Class |
		L-T-P	Total CR	Hours
CH-501	Chemical Applications of Spectroscopy	2-2-0	3	4
CH-502	Special Topics in Organic Chemistry	3-0-0	3	3
CH-503	Physical Chemistry of Surface and Condensed Systems	3-0-0	3	3
CH-504	Special Topics in Inorganic Chemistry	3-0-0	3	3
CH-505/506/507	Elective I	3-0-0	3	3
CH-508	Laboratory Course in Physical Chemistry	0-0-6	6	12
			21	28

Semester IV

| Sl. No. | Course Name | Credit | | Class |
		L-T-P	Total CR	Hours
CH-509	Environmental and Green Chemistry	3-0-0	3	3
CH-510/511/512/513/514	Elective – II	3-0-0	3	3
CH-515/516/517/518	Elective – III	3-0-0	3	3
CH-519	Project Work	0-0-9	9	18
			18	29

Elective I: Any one from the following group:
CH-505 Catalysis
CH-506 Bio-inorganic Chemistry
CH-507 Newer Methods in Organic Synthesis

Elective – II & III: Any two from the following group:
CH-510 Polymer Chemistry
CH-511 Chemistry of Materials
CH-512 Medicinal Chemistry
CH-513 Surfactants and Interfacial Phenomena
CH-514 Organometallic Chemistry
CH-515 Molecular Modeling of Organic and Inorganic Compounds
CH-516 Special topics in Analytical Chemistry
CH-517 Industrial Chemistry
CH-518 Biomolecular Chemistry

Courses offered in M.Tech. in Polymer Science and Technology

FIRST SEMESTER

Sl. No.	Course Code	Course name	L-T-P	CH	Credit
1	PT-501	Introduction to Polymer Science	3-0-0	3	3
2	PT -502	Industrial Polymers	3-0-0	3	3
3	PT -503	Polymer Characterization and Analysis	3-0-0	3	3
4	PT -504	Polymer Reaction Engineering and Reactor Design	3-0-0	3	3
5	PT -505	Fundamentals of Chemical Engineering	3-0-0	3	3
6		Elective I	3-0-0	3	3
7	PT -509	Polymer Synthesis and Analysis Laboratory	0-0-3	6	3
			Total credit		**21**

SECOND SEMESTER

Sl. No.	Course Code	Course name	L-T-P	CH	Credit
1	PT -510	Processing & Fabrication of Polymers	3-0-0	3	3
2	PT -511	Polymer Rheology & Morphology	3-0-0	3	3
3	PT -512	Rubber Science & Technology	3-0-0	3	3
4		Elective-II	3-0-0	3	3
5		Elective – III	3-0-0	3	3
6	PT -517	Polymer Processing and Testing Laboratory	0-0-3	6	3
			Total Credit		**18**

THIRD SEMESTER

Sl. No.	Course Code	Course name	L-T-P	CH	Credit
1		Elective – IV	3-0-0	3	3
2	PT -605	Project - I	0-0-9	18	9
			Total Credit		12

FOURTH SEMESTER

Sl. No.	Course Code	Course name	L-T-P	CH	Credit
1	PT -606	Project - II	0-0-12	24	12
			Total Credit		12

Total credit for the Program = 63

Electives – I : Any one from the following
PT – 506   Paints & Surface Coating Technology
PT – 507   Fiber Science & Technology
PT- 508   Production of Polymer Raw Materials

Electives – II : Any one from the following
PT – 513   Polymer Composites & Blends
PT – 514   Conducting Polymers

Electives – III : Any one from the following
PT – 515   Polymeric Biomaterials
PT – 516   Chemical Computation

Electives – IV : Any one from the following
PT – 601   Environmental Engineering & Polymer Waste Management
PT – 602   High Performance Polymers
PT – 603   Computer Aided Design
PT - 604   Nanomaterials and Nanocomposites

Courses offered in Integrated M.Sc. in Chemistry

FIRST SEMESTER

Course Code	Course Name	Credit		Class
		L-T-P	Total CR	
PI 101	Physics-I	2-0-1	3	4
CI 101	Chemistry-I	2-0-2	4	6
BI 101	Biology-I	2-0-1	3	4
MI 101	Mathematics-I	2-1-0	3	3
CS 101	Basics in Computer Applications	2-0-1	3	4
EG 101	Communicative English	2-0-0	2	2

Total credit = 18

SECOND SEMESTER

Course Code	Course Name	Credit		Class
		L-T-P	Total CR	
PI 102	Physics-II	2-0-1	3	4
CI 102	Chemistry-II	2-0-2	4	6
BI 102	Biology-II	2-0-1	3	4
MI 102	Mathematics-II	2-1-0	3	3
ES 102	Elementary Environmental Science	2-0-0	2	2
SC 102	Basic Sociology	2-0-0	2	2
NS 102	NSS	0-0-1	1	1

Total credit = 18

THIRD SEMESTER

Course Code	Course Name	Credit		Class
		L-T-P	Total CR	
CI 201	Chemistry-III (For non - Chemistry Majors)	2-1-0	3	3
CI 203	Physical Chemistry-I	2-1-0	3	3
CI 205	Organic Chemistry-I	2-1-0	3	3
CI 207	Inorganic Chemistry-I	2-1-0	3	3
CI 209	Chemistry Laboratory-I	0-0-3	3	6
CI 211	Chemistry Laboratory-II (For non - Chemistry Majors)	0-0-2	2	4
MI 201	Introductory Statistics (Common Paper)	2-1-0	3	3
PI 201	Electronics-I	2-1-0	3	3
PI 209	Physics Laboratory-II	0-0-2	2	4

Total credit for Major Students = 20

FOURTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 202	Chemistry -IV (For non - Chemistry Majors)	2-1-0	3	3
CI 204	Physical Chemistry-II	2-1-0	3	3
CI 206	Organic Chemistry-II	2-1-0	3	3
CI 208	Inorganic Chemistry-II	2-1-0	3	3
CI 210	Chemistry Laboratory-III	0-0-3	3	6
CI 212	Chemistry Laboratory-IV (For non - Chemistry Majors)	0-0-2	2	4
MI 204	Mathematical Methods & PDE	2-1-0	3	3
BI 202 OR	Ecology and Environmental Biology	2-1-0	3	3
PI 202	Introductory Quantum Mechanics	2-1-0	3	3
BI 210 OR	Bio-computing Lab	0-0-2	2	4
PI 210	Physics Laboratory-IV	0-0-2	2	4

Total credit for Major Students= 20

FIFTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 301	Physical Chemistry – III	3-0-0	3	3
CI 303	Organic Chemistry-III	3-0-0	3	3
CI 305	Inorganic Chemistry-III	3-0-0	3	3
CI 307	Quantum Chemistry	3-0-0	3	3
CI 309	Analytical Chemistry	3-0-0	3	3
CI 311	Chemistry Laboratory-III	0-0-4	3	8

Total credit for Major Students   =   18

SIXTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 302	Physical Chemistry-IV	3-0-0	3	3
CI 304	Organic Chemistry-IV	3-0-0	3	3
CI 306	Inorganic Chemistry-IV	3-0-0	3	3
CI 308	Basic Spectroscopy	3-0-0	3	3
CI 310	Chemistry Laboratory IV	0-0-4	3	8

Total credit for Major Students= 15

SEVENTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 401	Principles of Inorganic Chemistry	3-0-0	3	3
CI 403	Principles of Organic Chemistry	3-0-0	3	3
CI 405	Chemical and Statistical Thermodynamics	3-0-0	3	3
CI 407	Quantum Chemistry and Chemical Bonding	3-0-0	3	3
CI 409	Computers in Chemistry	3-0-0	3	3
CI 411	Laboratory Course in Organic Chemistry	0-0-12	6	12

Total credit   =   21

EIGHTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 402	Chemistry of Transition Elements	3-0-0	3	3
CI 404	Organic Reactions and Mechanism	3-0-0	3	3
CI 406	Chemical Dynamics and Electrochemistry	3-0-0	3	3
CI 408	Analytical Techniques	3-0-0	3	3
CI 410	Spectroscopic Principles	3-0-0	3	3
CI 412	Laboratory Course in Inorganic Chemistry	0-0-12	6	12

Total credit = 21

NINTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 501	Chemical Application of Spectroscopy	3-0-0	3	3
CI 503	Special Topics in Organic Chemistry	3-0-0	3	3
CI 505	Phys. Chem. of Surf. and Condensed Systems	3-0-0	3	3
CI 507	Special Topics in Inorganic Chemistry	3-0-0	3	3
CI 509	Elective I	3-0-0	3	3
CI 511	Laboratory Course in Physical Chemistry	0-0-12	6	12

Total credit   =   21

TENTH SEMESTER

Course Code	Course Name	Credit		Class Hours
		L-T-P	Total CR	
CI 502	Environmental and Green Chemistry	3-0-0	3	3
CI 504	Elective II	3-0-0	3	3
CI 506	Elective III	3-0-0	3	3
CI 522	Project work	0-0-20	9	20

CIVIL ENGINEERING
(Year of Establishment: 2009)

The department of Civil Engineering of the Tezpur University was established in the year 2009 under the school of engineering for offering B.Tech. degree with 16 students. The department aims of providing quality education, research and professional experiences that enable our graduates to become leaders in their professional careers, to pursue excellence in research, aim to serve the profession, community and nation, and be competitive in the international scene.

The vision of the department is to establish an outstanding programme of regional and international reputation for providing a quality engineering education, excellent research and services to the profession and the community; to produce the quality engineers; and to employ principles of continual quality improvement to enhance its programme. The department has started the Ph.D. programme and planning to start the M.Tech. programme along with research in various fields of civil engineering in near future.

Programmes offered

1. B.Tech. in Civil Engineering.

2. Ph.D.

Faculty

Associate Professor

Dutta, A.K., Ph.D. (IIT, Guwahati)

Assistant Professor

Saikia, A., M.Tech. (IIT Kharagpur)

Ahmed, K.U., M.Tech. (IIT Guwahati)

Sil, B.S., Ph.D. (NIT Silchar)

Karmakar, T., M.Tech. (IIT Guwahati)

COMPUTER SCIENCE & ENGINEERING
(Year of Establishment: 1994)

The Department of Computer Science and Engineering is one of the oldest departments of the University. The Department has the support of the UGC under **SAP** (DRS- Phase-I) since 2009. During 2005-2009 the Department received support from the Department of Science and Technology (DST), Govt. of India under its **FIST** programme. In addition to the academic programmes at the UG as well as the PG levels, the Department has been carrying out active research in the fields of computational theory, computer networks, network security, mobile computing, soft computing & data mining, natural language processing, workflow management, qualitative spatial reasoning, web services, robotics, and pattern recognition. Currently, the department has nine sponsored research projects worth nearly Rs. 157 lakhs.

Programmes offered

1. B. Tech. in Computer Science & Engineering

2. M. Tech. in Information Technology

3. Master of Computer Application (MCA)

4. Ph.D.

Faculty

Professor

Dutta, M., Ph. D. (IIT, Kanpur)

Saikia, D. K., Ph. D. (IIT, Kharagpur)

Bhattacharyya, D. K., Ph. D. (Tezpur University)

Sinha, S. K., Ph. D. (Tezpur University)

Hazarika, S.M., Ph.D. (Leeds, England) (Professor of Mechanical Engineering)

Associate Professor

Sharma, U., Ph.D. (Tezpur University) Head of the Department

Saharia, S., Ph.D. (Tezpur University)

Sarma, N., Ph.D. (IIT, Guwahati)
Borah, B., Ph.D. (Tezpur University)
Assistant Professor
Singh, S. I., MCA (Manipur University)
Nath, B., Ph.D. (Tezpur University)
Satapathy, S. S., M.Tech (Tezpur University)
Singh, B. L., M.Tech (Tezpur University)
Das, R., MCA (Dibrugarh University)
Deka, S.K, M.Tech. (Tezpur University)
Boro, D., M.Tech (Tezpur University)
Patra, B.K., M.Tech (Calcutta University)

Facilities

The Department has several state-of-the-art computer laboratories, viz.,
- two basic programming laboratories,
- a software engineering laboratory,
- two network security laboratories,
- a hardware laboratory
- a natural language processing laboratory
- robotics laboratory
- a network laboratory.

These laboratories house a host of servers, workstations and a large number of PC terminals connected to the campus-wide LAN with access to the Internet. The network laboratory is equipped with wireless and wireline network equipment, wireless sensor network accessories, LAN trainers, internet security trainers etc. The hardware laboratory is equipped with various training kits, experimental setup, logic analyzer, embedded system kits, etc. The systems run on wide variety of operating systems including Linux, Windows NT/XP/ vista 2003, Sun Solaris, etc. The laboratories are equipped with up-to-date DBMS packages, graphics and animation packages, multimedia authoring packages, GIS packages, Web servers & browsers, Matlab, NS2 Qualnet, Mathematica, Matrox, in addition to the various state-of-the art compilers and programming environments, and office automation software, .

Departmental Library

The Department has a library with a collection of more than 1400 book volumes in the field of computer science and information technology. The library also receives 8 international and 3 national journals in the field of computer science in addition to those at the central library. The digital libraries of ACM, IEEE, are accessible to the Department.

Scholarship

M. Tech. students with GATE qualification are eligible for scholarship of Rs. 5000/- per month from AICTE. Other M. Tech., B. Tech. and MCA students have also been receiving scholarships from other sources such as NEC.

Research Activity

Nos. of papers published in the year 2010 (upto September): 16

Select publications

1. Rosy Das, D K Bhattacharyya and J K Kalita. A Pattern Matching Approach for Clustering Gene Expression Data. International Journal of Computational Bioscience (Special Issue), Vol.1, no 1, March, 2010, pp 55-68.

2. N Sarma, S Nandi. Service differentiation using priority-based MAC protocol in MANET. International Journal on Internet Protocol Technology. Vol. 5, No. 3., 2010, pp 115-131.

3. S.S.Satapathy, M. Dutta and S.K.Ray. Variable correlation of genome GC% with transfer RNA number as well as with transfer RNA diversity among bacterial groups: α-Proteobacteria and Tenericutes exhibit strong positive correlation. Microbiol Res, Vol 165 (3), 2010, pp 232-242

Courses offered in the M.Tech. (Information Technology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
CS 531	Objective Oriented Programming & Design	5	IT 610	Advanced Database System	4
CS 601	Design and Analysis of Algorithms	3	CS 634	Selected Topics in Computer Networks	4
IT 611	Distributed Systems	3	IT 604	Term Project- I	8
			IT 605	Term Project- II	16
Electives					
CS 502	System Software	3	CS 528	Digital Signal Processing	4
CS 505	Software Engineering	4	CS 529	Embedded Systems	4
CS 507	Computer Networks	4	CS 531	Object Oriented Programming & Design	5
CS 508	Database Management	5	CS 532	Compiler Design	4
CS 509	Data Communication	4	CS 602	Image Processing	3
IT 503	Multimedia Systems	4	CS 607	Optimization Technique	3
IT 504	E-Commerce	3	CS 606	Computer Architecture & Parallel Processing	3
IT 506	Logic Programming	3	CS 610	Bioinformatics	3
IT 521	Programming and Data Structure	4	IT 509	Data Mining & Data Warehousing	4
IT 522	Computer Architecture	4	IT 510	Advanced Operating Systems	4
IT 523	Discrete Mathematics	3	CS 621	Mobile Computing	4
CS 424	Formal Language and Automata	3			
IT 518	Graph Theory	4	CS 623	Randomized Algorithms	3
CS 522	Computer Graphics	4	CS 624	Web Technology	4
CS 523	Enterprise Resource Planning	3	CS 625	Intelligent Assistive Systems	3
CS 524	Theory of Computation	3	CS 725	Knowledge Representation & Reasoning	4
CS 525	Artificial Intelligence	3	CS 727	Formal Verification	4
IT 507	Computer Security & Cryptography	3	CS 731	Data Mining in Security	4
CO 504	Natural Language Processing	3			

Courses offered in MCA

CODE	Title	Credit	CODE	Title	Credit
Core Courses					
CS 404	Programming & Problem Solving	5	CS 502	System Software	3
CS 405	Discrete Mathematics	3	CS 504	Operating System	4
CS 406	Digital Logic	4	CS 505	Software Engineering	4
CS 407	Information and Communication Technology	4	CS 507	Computer Networks	4
CS 403	File Structures	2	CS 508	Database Management	5
CS 408	Data Structures	5	CS 509	Data Communication	4
CS 409	Comp. Organization & Architecture	5	CS 514	Minor Project	8
			CS 515	Major Project	16
Electives					
CS 421	Graph Theory	3	CS 601	Design & Analysis of Algorithms	3
CS 422	Numerical Methods	4	CS 602	Image Processing	3
CS 423	Graphical User Interface Programming	3	CS 604	Optimization Techniques	3
CS 424	Formal Language & Automata	3	CS 605	Simulation & Modeling	4
CS 522	Computer Graphics	4	CS 606	Computer Architecture & Parallel Processing	3
CS 523	Enterprise Resource Planning	3	CS 609	Geographic Information Systems	3
CS 524	Theory of Computation	3	CS 610	Bioinformatics	3
CS 525	Artificial Intelligence	3	IT 611	Distributed Systems	3
CS 526	Management Information Systems	3	CS 621	Mobile Computing	4
CS 528	Digital Signal Processing	3	CS 622	Software Testing Quality Assurance and Maintenance	4
CS 529	Embedded Systems	4	CS 623	Randomized Algorithms	3
CS 530	Social & Professional Issues in Computing	3	CS 624	Web Technology	4
CS 531	Object Oriented Programming & Design	5	CS 625	Intelligent Assistive Systems	3
CS 532	Compiler Design	4	BM 421	Accounting & Financial Management	3
IT 503	Multimedia Systems	4	MS 405	Probability & Statistics	4
IT 504	E-Commerce	3	BM 504	Managerial Economics	4
IT 509	Data Mining & Data Warehousing	4	BM 501	Foundation of Management	3
IT 507	Computer Security & Cryptography	3			

CULTURAL STUDIES
(Year of Establishment: 1996)

The department was started in 1996 as the Department of Traditional Culture and Art forms, and was re-named in 2002 as the Department of Cultural Studies. It is one of the few departments in the country devoted exclusively to the academic pursuit of Cultural Studies. A truly twentieth century discipline, Cultural Studies initially emerged in Great Britain and later on in conjunction with developments in the United States , evolved into a vibrant interdisciplinary approach in the understanding of society, culture and expressive forms associated with human behaviour across a wide range of disciplinary engagements. Asia is fast emerging as an important location where methods evolved in Cultural Studies is used to interrogate disciplinary approaches in an attempt to promote a discursive understanding of various issues like ethnicity, migration, national and nationalistic assertion, gender and society, media generated cultural forms, environment and development, and emerging lifestyle patterns. The Department of Cultural Studies at Tezpur University mediates global concerns and theoretical approaches of the discipline with issues that is of local importance and promotes an understanding of the rich cultural heritage and the ingrained plural nature of the region, the folk and oral inheritance and ethnic and cultural assertions amongst others. PhD scholars in the department are drawn from an array of disciplines and include a number UGC, JRFs and NET qualified candidates. The University awards institutional fellowships to deserving non JRF candidates to pursue their research.

Programmes offered

1. M. A. in Cultural Studies (Modular)
2. Ph.D.

Faculty

Professor

Dutta, S.K., Ph.D. (Visva Bharati, Santiniketan), Dean School of Humanities & Social

Mahanta, P.J., Ph.D. (Gauhati University), Head of the Department

Associate Professor

Sarma, P.M., Ph.D. (Gauhati University)

Nath, D.P., Ph.D. (Rajiv Gandhi University, Itanagar)

Assistant Professor

Goswami, M., M.Phil. (JNU, New Delhi)

Dutta, P., Ph.D. (Tezpur University)

Gogoi Konwar, J., Ph.D. (Dibrugarh University)

Das, J.V., M.A. (Tezpur University)

Dutta, K., M.A. (Tezpur University)

Baruah, M., M.A. (Tezpur University)

Facilities

The Department has a well equipped seminar cum conference hall with projection facilities and audio-visual teaching aids and an archival centre cum studio. The student support infrastructure also includes the Pratibha Kath Hazarika Memorial Library and a cultural museum.

Select Publications:

Sarma, P. M. 'Liminal Identities and the Delineating Flux: Negotiating Selfhood in Northeast India' in *Humanities in the Present Context* (ed) Mohan Ramanan et al. Hyderabad Allied Publishers, 2009.

Nath, D.P. 'The Politics of Nation Building in Yeshe Dorjee Thongchi's *Mouna Ounth Mukhar Hriday*' In *Tribal Literature of North East India* (ed.) Badaplin War, Published by Department of Khasi, Nehu, Shillong, 2009.

Das, J.V. 'Social Habits in the Virtual World', *Post Globalization and the Emerging World Order* (ed.) International Congress of Social Philosophy, Annamalainagar, 2010

Dutta, Kailash. "The Ethnic Identity of the Setu Community of Estonia and the Thengal Kachari Community of Assam, India: Some Points of Comparison, *Journal of Folklore Research*, Vol 10, 2010

Courses offered in the M.A. in Cultural Studies Programme

CORE COURSES		
Code	Course Name	CR
CT409	Introduction to Cultural Studies	4
CT410	Introduction to North East Studies	4
CT411	Cultural Studies and Allied Disciplines	4
CT412	Methods in Cultural Studies	4
CT413	Introduction to Cultural Theory	4
CT414	Folklore and Culture I	4
CT415	Media and Culture	4
CT416	Performance and Culture	4
CT511	Folklore and Culture II	4
CT512	Ethnicity and Nationalism	4
CT513	Heritage Studies	4
CT514	Gender and Culture	4
CT515	Dissertation	6
ELECTIVE COURSES (One paper each from CT516-CT517, CT518-CT519 and CT520-CT521)		
CT516	Cultural Documentation	4
CT517	Cultural Tourism	4
CT518	Cross-Cultural Studies: North East India and South East Asia	4
CT519	Cross-Cultural Studies: Canada and India	4
CT520	Introduction to Film and Television Studies	4
CT521	Culture and Environment	4
AUDIT COURSE		
CS323	Computer Application (to be offered by the Department of Computer science)	3

ELECTRONICS & COMMUNICATION ENGINEERING
(Year of Establishment: 1997)

The Department started functioning with the first batch of students admitted in 1997 into the M. Tech. in Electronics Design & Technology course. This course has been designed with an aim to .meet the industry requirements in the field of Electronics Design with emphasis on latest technological developments. From August, 2004 the Department has started a new programme "M. Tech. in Bioelectronics" approved by the UGC under its innovative Programmes - Teaching and Research in interdisciplinary and emerging areas. The courses, designed with interdisciplinary relevance, aims at producing professionals in the fields of medical, food safety, agriculture, defense, biotech and biosensor industries. Both courses have been recognized by AICTE. The Department has also started B. Tech. programme in Electronics and Communica-tion Engineering from August 2006.

Programmes offered
1. B.Tech. in Electronics & Communication Engineering
2. M.Tech. in Electronics Design & Technology
3. M.Tech. in Bioelectronics
4. Ph.D.

Faculty
Professor

Bhuyan M., Ph.D. (Gauhati University), Dean, School of Engineering

Sahu, P. P., Ph.D. (Jadavpur University), Head of the Department

Associate Professor

Bhattacharyya, S., Ph.D. (Delhi University)

Dutta, J. C., Ph.D. (Jadavpur University)

Sharma, S., Ph.D. (Tezpur University)

Assistant Professor

Ray, S., M.Tech. (Tezpur University).

Chutia, R., M.Tech. (Tezpur University)

Deka, B., M.Tech. (Tezpur University)

Hazarika, D., M. Tech. (IIT, Guwahati)

Kakoty, N.M., M.Tech. (Tezpur University)

Nath, V.K., M.Tech. (Tezpur University)

Barua, R.K., M.Tech. (Tezpur University)

Mondal, B., M.Tech. (Tezpur University)

Sonowal, D. M.Tech. (Tezpur University)

Facilities
Digital Laboratory: There are a good number of analog and digital ICs and their application facilities, logic analysers, microprocessors, microcontrollers, data acquisition cards, stepper motor controller cards, relay & opto -coupler interfacing cards etc.

Instrumentation Laboratory: It is equipped with temperature transducers - thermocouple, IC sensors, Multi-channel temperature indicators, Load cell indicator, humidity sensor, sensor interfacing to PC, Indus-trial type of remote transmitter, PC based stepper motor, Servo motor driver etc.

PCB Fabrication Facilities: It is equipped with Art work table, magnifier, photo resist U. V. exposure unit, photo resist coating whirler, sprayer, oven etching machine, guillotine shearing machine, high speed drill, roller tining machine and all necessary chemicals.

Computer Laboratory: Computer hardware consists of Pentium based PCs attached to a LAN server by powerful Pentium Based Novel Netware consisting of about 25 terminals all connected to Internal Server.

Software: There are up-to-date office automation software, ORACLE, Web Server & browser, MATLAB, Circuit Simulator like MICROSIM, PCB layout, CPLD-FPGA Electronic Design Automation (EDA) software, High

Performance Data Acquisition - Control- Manipulation Software – GENIE, Lab View, XILINX, ORCAD.

Mechanical Workshop: It is equipped with the following machines: Lathe, High Speed Drilling, Milling, Turning, Wood Working Grinding, Shearing, Cutting, Bending, Electric Welding Plastic Welding etc.

Bioelectronics' Engineering Laboratory: Robotics, vision development with Lab view, E-nose, Insectronics, Device Simulator.

Biomedical Laboratory: ECG, EEG etc.

Departmental Library:

The Departmental Library has a good number of volumes relevant to the curriculum.

Courses offered in the M.Tech. (Electronics Design & Technology)

\	Core Courses				
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
EL516	Design of Fine Mechanics and Power Devices	4	EL 521	Design & Technology of Electronic devices	4
EL 517	Physical and Industrial Design of Electronic Systems	4	EL 522	Intelligent Instrumentation	5
EL518	VLSI Design	5	EL 523	Advanced Programming Language	5
EL 519	Design of Digital Systems	5	EL528	Seminar-I	1
EL520	Quality and Reliability Engineering	4	EL 529	Seminar -II	1
			EL 601	M. Tech. Project (2 semesters) dissertation	24
Elective Courses					
EL 525	Data Communication	5	EL 524	Modeling and Simulation	5
EL 527	Information Systems	5	EL 526	Application Software	5

Courses offered in M.Tech. (Bioelectronics)

\	Core Courses				
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
BE 501	Basic Bioelectronics	4	BE 509	Biomathematics	3
BE 502	Advanced Bioelectronic Devices	4	BE 510	Bioelectronic Systems & Controls	3
BE 503	Biomedical Signal Processing	5	BE 511	Basic Bioelectronics lab	4
BE 505	Bioinspired Systems & Engineering	4	BE 512	Advanced Bioelectronics Lab	4
BE 506	Biomedical Image Processing	4	BE 514	Seminar	1
BE 504	Neuroengineering	3	BE 601	M.Tech Dissertation (2 semesters)	24
Electives					
BE 507	Bioinformatics	4	BE 513	Biomedical Electronics	4
BE 508	BioMEMS & Nanotechnology	4			

ENERGY
(Year of Establishment: 1996)

Initially, a centre for Non-conventional Energy was established in the University in 1995, which offered a One -Year Diploma Programme in Non-conventional Energy Tech. The centre was converted to a depart-ment of Energy in 1996 with an aim of producing skilled pool of manpower in the field of energy, developing new and efficient energy technologies, conducting quality research & development activities and extending outreach services in diverse areas of energy. The Department's curriculum has a right balance of theory and experiment - covering courses on renewable and traditional sources of energy. Besides theory lecturers by faculty members having diversified fields of expertise, students are also trained in a range of specialized laboratory equipments and energy conversion gadgets available in the Department. Academic tours to relevant energy establishments including power plants are common features for the students of Energy Department. Department has also meaningful collaborations with national and international institutions. The thrust areas of research are Biomass Energy, Solar Energy, Wind Energy, Hydro Energy and Energy Management.

Programmes offered

> 1. M. Tech. in Energy Technology
> 2. Ph. D.

Faculty

Professor

> Konwer, D., Ph.D. (Punjab University)
>
> Samdarshi, S.K., Ph.D. (IIT, Delhi),
>
> Baruah, D.C., Ph.D. (Punjab Agricultural University), Head of the Department

Associate Professor

> Deka, D., Ph.D. (Tezpur University)
>
> Kataki, R., Ph.D. (Tezpur University)

Assistant Professor

> Mahapatra, S., M.Tech. (Jadavpur University)

Facilities

Laboratory

The Department is equipped with various specialized equipments and energy conversion gadgets such as a biodiesel production pilot plant, 1 kW PV power plant, three different systems of biomass gasifier, a laboratory scale hydro-electricity power plant, wind electric generator, solar thermal collector test set-up, solar dryer, two units of IC engine (one computerized) test rigs for engine performance testing, devices for measurement of solar and wind data (including automatic weather station), digital power analyser, auto Bomb calorimeter, fibertech apparatus, exhaust gas analyzer, air quality monitor, UV-visible spectrophotometer, TOC analyser, hydrocarbon type analyser, pyrolyser, vacuum distillation apparatus, ultrasonicator, programmable muffle furnace,.

Departmental Library and Computational facility

A good number of books, video cassettes and CDs on diversified areas of energy are available in the department. A number of national and international journals related to energy are also subscribed. Department also houses one of the computer Clusters with 31 numbers of personnel computers with LAN connectivity and adequate scanning and printing facilities for students.

Scholarship

Ministry of New and Renewable Energy Sources (MNRE), Government of India offers fellowship to some selected students of M. Tech. and Ph.D. programmes up to Rs. 12,000/- and Rs. 15,000/- per month, respectively under its National Renewable Energy Fellowship Schemes on the basis of GATE score. MHRD

fellowships are also available for GATE qualified candidates. NEC fellowships are available for the students from North East regions. URFSMS fellowships are available for the students registered in Ph.D. programme.

Research Activity

Faculty members of the Department are actively involved in research in emerging areas of energy viz., solar, biomass, biodiesel and energy conservation, management & planning. Besides five ongoing funded projects, research activities are also carried out through students' degree projects. Eleven research papers have been published by the research scholars and faculty members of the Department in the current year up till now.

Select publications:

1. Kusre, B.C., Baruah, D.C., Bordoloi, P.K., Patra, S.C., Assessment of Hydropower Potential Using GIS and Hydrological Modeling Technique in Kopili River Basin in Assam (India), *Applied Energy*, **87,** 298-309 (2010).
2. Lahkar, P.J , Samdarshi, S.K., A Review of the Thermal Performance Parameters of Box type Solar cookers and Identification of their correlations, *Renewable and Sustainable Energy Reviews*, **14**, 1615 –1621 (2010).
3. Gogoi, T.K., Baruah, D.C., A cycle simulation model for predicting the performance of a diesel engine fuelled by diesel and biodiesel blends, *Energy*, **35**, 1317-1323 (2010).
4. Singh, M.K., Mahapatra, S., Atreya, S. K., Givoni, B., Thermal monitoring and indoor temperature modeling in vernacular buildings of North-East India, *Energy and Buildings*, **42**, 1610-1618 (2010).
5. Tripathi, A. M,. Nair, R.G., Samdarshi, S.K., Visible active silver sensitized vanadium titanium mixed metal oxide photocatalyst nanoparticles through sol gel technique, *Solar Energy Materials and Solar Cells*, (DOI 10.1016/j.solmat.2010.08.022), 2010
6. Saikia, J.P, Paul, S., Konwar, B.K., Samdarshi, S .K, Nickel oxide nanoparticles: A novel antioxidant, *Colloids and Surfaces B: Biointerfaces*, **78**, 146–148 (2010).
7. Saikia, J.P, Paul, S., Konwar, B.K., Samdarshi, S .K, Ultrasonication: enhances the antioxidant activity of metal oxide nanoparticles, *Colloids and Surfaces B: Biointerfaces*, **79**, 521-523 (2010).
8. Paul, S., Samdarshi, S.K., Carbon Microtubes from cocos nucifera oil, *New Carbon materials*, **25** (2010).
9. Singh M.K., Mahapatra S., Atreya S. K., Thermal performance study and evaluation of comfort temperatures in vernacular buildings of North-East India, *Building & environment*, **45**, 320-329 (2010).
10. Hatibaruah D., Baruah D.C.,Modeling desorption isotherms and thermodynamic properties of Assam CTC manufactured from tea cultivar T_3E_3, *J. Food Processing and Preservation*, 2010 (to appear)

Courses offered in the M.Tech. (Energy Technology)

CODE	Title	Credit	CODE	Title	Credit
Core Courses					
EN 566	Fuel Technology	3	EN 567	Power Plant Engineering	3
EN 568	Biomass Energy	3	EN 569	Solar Energy Utilization	3
EN 570	Heat Transfer	3	EN 571	Other Non-conventional Energy Sources	3
EN 572	Energy, Ecology & Environment	3	EN 573	Energy Management and Auditing	3
EN 574	Energy, Economics & Planning	3	EN 575	Numerical Methods & Computational Techniques	3
EN 576	Energy Lab - I	2	EN 577	Energy Lab - II	2
	Elective – I	3		Elective - II	3
EN 578	Major Project (Part - I)	10	EN 579	Major Project (Part - II)	20
Electives					
EN 584	Advanced Bio-energy	3	EN 585	Advanced Solar Thermal Energy	3
EN 586	Solar Photovoltaic Energy	3	EN 587	Petroleum Refining	3
EN 588	Petroleum Exploration, Drilling & Production	3	EN 589	Wind Energy Utilization	3
EN 590	Hydrogen Energy & Fuel Cell	3	EN 592	Energy, Climate Change and Carbon Trades	3

ENGLISH AND FOREIGN LANGUAGES
(Year of Establishment: 1994)

The Department, which was established in 1994, aims to provide instruction and carry out research in English Literature, New Literatures in English, American Literature, Indian Writing in English, Women's Writing in English, English Language Teaching and Linguistics.

The Department receives assistance under the SAP-DRS project of the UGC (awarded in April 2009) for carrying out research in three identified thrust areas: Travel Writing, Life Writing and Language Neighborhoods.

Programmes offered
1. M.A. in English
2. Integrated M.A. in English
3. Integrated B.A.B.Ed.
4. Certificate Course in Chinese (One Year Full Time)
5. Basic and Advanced French (Part Time)
6. Ph.D.

Faculty

Professors
    Sarma, M. M., Ph.D. (Dibrugarh University)
    Danta, B. K., Ph.D.(Utkal University)
    Danta, F., Ph.D. (Dibrugarh University), Head of the Department
    Das, P.K., Ph.D. (Gauhati University)
    Barbora, M., Ph.D. (Tezpur University)
Associate Professors
    Borah, G.K., Ph.D. (NTNU, Trondheim, Norway)
Assistant Professors
    Mohapatra, D., M.Phil. (CIEFL, Hyderabad), Ph.D. (EFL University, Hyderabad)
    Medhi, H., M.Phil. (Delhi University)
    Chakraborty, R., M.Phil. (Chinese) (JNU, New Delhi)
    Narzari, R., M.A. (NEHU, Shillong)
    Mondal, S. (Ad-hoc)

Facilities
Digital Language Laboratory
The department has a digital multimedia, multipurpose language laboratory with fifteen booths. Students can improve their pronunciation of English and foreign languages (Chinese and French) at the moment and develop interactive language skills by utilizing the software and other facilities available in the Laboratory.

Departmental Library
Selected books and photocopied materials relating to literature, linguistics and ELT are available in the Departmental Library. The department also has a collection of audio cassette of English Pronunciation and spoken English and number of Video CDs on literary texts. The department has a small Computer Laboratory for use of students and research scholars.

Research Activity
SAP-DRS project on Travel Writing, Life Writing, and Assamese Language
Number of papers published in the year 2010 (upto September): 05
Number of ongoing research projects: 03
1. Number of papers published in the year 2009-2010 (including published and accepted for 2. Publication: Book: 2, book chapter:3, journal:5

3. Number of running Projects: Two (2) individual, one(1) SAP

- Thrust Area-1: Life writing in Assam: History, Theory, Practice
- Thrust Area-2: Narrative of Migration, Travels, Explorations, etc., in Assam: History, Theory, Practice.
- Thrust Area-3: the Shaping of Modern Assamese: Indegenous and Southeast Asian Influences (A synchronic and Diachronic Study)

Courses structure of M.A. (English)

| Core Courses | | | | | |
CODE	Title	Credit	CODE	Title	Credit
EG 421	Medieval & Renaissance Literature	3	EG 429	Theory of Criticism II	4
EG 422	Literature of Renaissance and restoration	3	EG 430	Literature and Culture: 1780 - 1830	4
EG 423	Renaissance to Enlightenment: Literature and Thought	3	EG 431	Literature and Culture: 1830 - 1900	4
EG 424	Theory of Criticism	3	EG 548	20th Century Literature: Poetry and Drama Fiction and Drama	4
EG 425	Structure of English and English Phonetics	3	EG 549	20th Century Literature: Prose and Fiction	4
EG 426	Introductory Linguistics I	2	EG 550	Post Colonial Literature in English	4
EG 427	Introductory Linguistics II	3	EG 551	American and Canadian Literature in English	4
EG 428	ELT	3	EG 552	Communication and Media	3
Elective Courses					
EG 561	Genre Study: Fiction I	3	EG 575	Linguistics I	3
EG 562	Genre Study: Fiction II	3	EG 576	Linguistics II	3
EG 563	Gender and Literature I	3	EG 577	Cognitive Grammar I	3
EG 564	Gender and Literature II	3	EG 578	Cognitive Grammar II	3
EG 565	Indian Writing in English I	3	EG 580	ELT – I	3
EG 566	Indian Writing in English II	3	EG 581	ELT – II	3
EG 567	Literature of the USA I	3	EG 585	Dissertation	6
EG 568	Literature of the USA II	3			

Courses offered in One Year Certificate in Chinese (Full Time) programme

CODE	Title	Credit	CODE	Title	Credit
CL 401	Reading Chinese Text -I	3	CL 402	Reading Chinese Text-II	3
CL 403	Comprehension and Translation	3	CL 404	Composition and Translation	3
CL 405	Introduction to China-I	3	CL 406	Introduction -to China -II	3
CL 407	Chinese Oral Skills -I	3	CL 408	Chinese Oral Skills-II	3

ENVIRONMENTAL SCIENCE
(Year of Establishment: 2004)

Initially established as a centre for Environmental Science in 2003, the centre was converted to the Department of Environmental Science in 2004 with the objective of imparting education on regional and global environmental issues. The curriculum for the M.Sc. programme focuses on all important aspects of Environmental Science, covering contemporary problems of natural resource conservation and environmental quality. Thrust areas of research include Environmental Pollution, Green house gas emission and Riverine Hazards.

Programmes offered
1. M. Sc. in Environmental Science
2. Ph.D.

Faculty:
Professor
Baruah K. K., Ph. D. (PAU, Ludhiana)
Sarma K. P., Ph. D. (NEHU, Shillong), Head of the Department

Associate Professor
Hoque R. R., Ph. D. (JNU, New Delhi)

Assistant Professor
Das A. K., Ph. D (JNU, New Delhi)
Devi. A, Ph. D. (NEHU, Shillong)
Gogoi. N, Ph.D (DU, Dibrugarh)
Bhattacharya S Sundar, Ph.D.(Visva Bharati University)
Handique Sumi, M.Sc. (JNU, New Delhi)
Kumar Manish, Ph.D. (The University of Tokyo, Japan; JSPS Research Fellow)

Courses offered in the M. Sc (Environmental Science)					
Core Courses					
Code	Title	Credit	Code	Title	Credit
ES 501	Fundamentals of Environmental Science	3	ES 514	Waste Management	3
ES 502	Elements of Ecology	3	ES 516	Global Climate Change and its Impacts	3
ES 503	Environmental Chemistry	3	ES 518	Environmental Laws and Policies	2
ES 505	Natural hazards	2	ES 519	Seminar in Environmental Science	1
ES 506	Basics of Computer Science	3	ES 529	Principles of Instrumental Methods and Analysis	3
ES 507	Environmental Biology	3	ES 530	Environmental Geo-Science	3
ES 508	Environmental Physics	3	ES 531	Climatology and Meteorology	3
ES 510	Energy and Environment	3	ES 532	Agriculture and Environmental Sustainability	3
ES 511	Environmental Pollution	4	ES 533	Fundamentals of Statistics	3
ES 512	Environmental Plant Physiology and Biochemistry	4	ES 500	Project / Dissertation	10
ES 513	Environmental Impact and Assessment	3			

Elective Courses					
ES 520	Cell Biology	2	ES 535	Statistical Methods	2
ES 521	Photosynthesis and Respiration	2	ES 536	Environmental Biotechnology	2
ES 523	Human population, Social Issues and Environment	2	ES 537	Agro-forestry and Forest Management	2
ES 526	Pesticides in relation to Environment	2	ES 538	Biodiversity and Biodiversity Conservation	2
ES 534	Soil Science and Soil Ecology	2	ES 539	Remote Sensing and GIS	2

Facilities

The Department has a sophisticated instrumentation laboratory to facilitate research and other academic activities. The laboratory has the following equipments: ICP based Optical Emission Spectrophotometer, Laser Leaf Area Meter with Root Measurement Attachment, Light Meter, Portable Photosynthesis Systems, Gas Chromatographs, High Precision Electronic Balance, UV-Visible Spectrophotometer, Ion meter, Ultra centrifuge, Repairable dust sampler and Flame Photometer. A GIS laboratory, a meteorological observatory and a plant culture house is under construction.

Research Activity

Number of papers published in the year 2010 : 16

Number of ongoing research projects : 02

Select Publications

1. Baruah, K.K., Gogoi Boby and Gogoi, P. (2010): Plant physiological and soil characteristics associated with methane and nitrous oxide emission from rice paddy. Plant Physiology & Mol. Biol., (Springer) 16:79-91

2. Hoque R.R., Goswami K.G., Kurse B.C., Sarma K.P.: Distribution and solid phase distribution speciation of toxic heavy metals of bed sediments of Bharali tributary of the Brahmaputra river. Environ. Monit. Assess (DOI 10.1007 / s 10661-010-1647-5), 2010.

3. Goswami R., Deb P., Sarma K. P., Thakur R. Basumallick A. (2010). Removal of Arsenic by surface functional ultrafine nanoparticles. J. Separation Science (*In Press*)

4. Devi. A., Kumar A: Status and conservation of slow Loris *Nycticebus bengalensis* in North East India. 2010. Ecetone 2(1):18-20

5. Baruah K.K, Gogoi Boby, Gogoi P, Gupta P.K (2010) N_2O emission in relation to plant and soil properties and yield of rice varieties. Agronomy Sustain Dev. DOI : EDPSC 10.1051/Agro/2010021

FOOD ENGINEERING AND TECHNOLOGY

(Year of Establishment: 2006)

The Department of Food Engineering & Technology (now proposed to be called Department of Food Engineering and Technology), Tezpur University was established in 2006. The Department is currently offering B. Tech in Food Engineering and Technology; M. Tech. in Food Engineering & Technology, as well as Ph.D. in areas related to food. The syllabuses for the courses are structured to fulfill two main objectives: firstly, to generate manpower that is trained and educated in all spheres of food engineering and technologies relevant to the rapidly growing food industries and secondly, to equip the graduates with skills and knowledge to succeed as entrepreneurs. Besides laying stresses in the core areas like processing, engineering, chemistry, microbiology, analysis and packaging of foods, emphasis is given on the learning detail processing technologies of various foods. Adequate emphasis is given on laboratory work. Industrial training and visits to food industries are included in the programme to further reinforce practical experiences of the students.

A new programme, Post B.Sc. 4 years Integrated M. Tech. (B. Tech. + M. Tech.) in Food Engineering and Technology will start from the academic session of 2011.

Programmes:

1. Post B. Sc. Integrated M. Tech. (B. Tech. + M. Tech.) in Food Engineering and Technology
2. M. Tech. in Food Engineering and Technology (Through lateral entry in the pre-final year of M. Tech. in Food Engineering & Technology)
3. B. Tech. in Food Engineering and Technology

Faculty:

Professor

Mahanta, C. L., Ph. D. (CFTRI, Mysore)

Deka, S. C., Ph. D. (Haryana Agricultural University), Head of the Department.

Associate Professor

Hazarika, M. K., M.Tech. (IIT Kharagpur)

Assistant Professor

Sit, N., M. Tech. (G. B. Pant University of Agriculture & Technology)

Mishra, P., M. Tech. (Harcourt Buttler Technological Institute, Kanpur)

Badwaik, L. S., M. Tech. (Sant Longowal Institute of Engineering & Technology, Longowal)

Seth, D., M. Tech. (IIT Kharagpur)

Duary, R. K., Ph. D. (National Dairy Research Institute, Karnal)

Facilities

The Department is adequately equipped with food processing equipments, process engineering set ups and sophisticated analytical instruments. The university library is well stocked with text and reference books. Electronic journals and print journals on food and allied areas are available.

Scholarship

M.Tech. students with GATE qualification are eligible for receiving GATE scholarship. Other M.Tech. Integrated M.Tech and B.Tech. students may avail scholarships from other sources such as NEC.

Research Activities:

Number of papers published in referred journals in 2010: 05
Number of ongoing research projects: 5

List of subjects offered:
A) M. Tech. (Food Technology), for lateral entrants.

Core courses

Code	Course Name	L	T	P	CH	CR
FP 514	Quality Control in Food Processing Industries	2	0	2	6	4
FP 515	Unit Operations in Food Engineering - II	4	0	1	6	5
FP 516	Packaging Plants Design and Product Development	2	0	1	4	3
FP 517	Food Plant Design and Product Development	3	0	1	5	4
FP 518	Emerging Technologies in Food processing	2	0	0	2	2
FP 519	Design of Food Processing Equipment	2	0	1	4	3
FP 600	Simulation and Modeling	3	0	1	5	4
FP 615	Seminar	0	0	1	2	1
FP 616	Mini Project	0	0	6	12	6
FP 617	Major Project	0	0	18	36	18

Electives

Code	Course Name	L	T	P	CH	CR
FP 407	Technology of Cereals and Legumes	2	0	1	4	3
FP 408	Technology of Milk and Milk Products	2	0	1	4	3
FP 409	Technology of Fruits and Vegetables	2	0	1	4	3
FP 410	Technology of Plantation Products	2	0	1	4	3
FP 503	Technology of Fish, Meat and Poultry	2	0	1	4	3
FP 504	Technology of Oilseeds and Fats	2	0	1	4	3
FP 520	Waste Management & Byproduct Utilization in Food Industries	2	0	1	3	3
FP 521	Food Supply Chain Management	2	0	1	4	3
FP 522	Novel Separation Technology	2	0	1	4	3
FP 601	Computational Methods in Engineering	2	0	1	4	3
FP 602	Bioprocess Engineering	2	0	1	4	3
FP 603	Optimization Techniques	2	0	1	4	3
FP 604	Food Rheology	2	0	1	4	3
FP 605	Drying & Dehydration	2	0	1	4	3
FP 606	Heat and Mass Transfer	2	0	1	4	3
FP 412	Fermentation and Process Control	3	0	1	5	4
FP 417	Food Biotechnology	3	0	1	5	4

B) Curses offered in Post B. Sc. Integrated M. Tech. (B. Tech. + M. Tech.) (Food Engineering and Technology)

Code	Course Name	Credit	Code	Course Name	Credit
	Core Courses				
MS 400	Applied Mathematics and Statistics	4	FT 471	Industrial Training	2
FT 201	Food Chemistry	4	FT 416	Food quality & safety	3
FT 202	Basic & Food Microbiology	3	FT 417	Plantation Products and Spices Technology	3
FT 203	Fluid mechanics	4	FT 418	Dairy Products Technology	3
ME 101	Engineering Graphics	2	FT 419	Food Process Equipment Design	3
ME 103	Workshop Practice	2	FT 420	Mechanical operations in Food Processing	4
EL 475	Basic Electrical Engineering and Electronics	3	EL 476	Instrumentation and Control in Food Processing	4
FT 205	Food Biochemistry & Nutrition	4	FT 511	Research Methodology	3
FT 206	Principles of Food Processing & Preservation	3	FT 512	Advanced food engineering	4

Code	Course Name	Credit	Code	Course Name	Credit
FT 211	Thermodynamics & Refrigeration	3	FT513	Engineering properties of biological materials	3
FT 212	Heat Transfer operations in Food Engineering	4	FT514	Food Packaging, Materials Handling & storage	4
BM 322	Social responsibility & professional ethics in engineering	3	FT 515	Operations Research	4
CS 451	Computer fundamentals & programming	3	FT 516	Emerging Trends in Food Processing	3
FT 411	Instrumental methods of food analysis	2	FT 517	Food Plant Design and Layout	3
FT 412	Fruits & vegetable process technology	3	FT 518	Seminar	1
FT 413	Mass transfer operations in food processing	4	FT 601	Food Product Development	3
FT 414	Cereals, Pulses & Oilseeds Processing Technology	4	FT 602	Simulation & Modeling	4
FT 415	Biochemical engineering	3	FT681	Project Seminar	3
FP 513	Business management	3	FT682	Project Report	12
Elective Courses					
FT 521	Bakery and Confectionary Technology	3	FT 531	Food Process Automation	3
FT 522	Oils and Fats Technology	3	FT 532	Numerical Methods in Food Processing	3
FT 523	Processing Technology of Meat, Poultry and Fish	3	FT 533	Energy Conservation in Food Processing	3
FT 524	Novel Separation techniques	3	FT 534	Drying and Dehydration	3
FT 525	Bioprocess Engineering	3	FT 535	Specialty Foods: Nutraceuticals and Functional Foods	3
FT 526	Fermentation and Process Control	3	FT 536	Food Plant Hygiene and Sanitation	3
FT 527	Food Biotechnology	2	FT 537	Waste Management and by product utilization in food industries	3
FT 528	Industrial Microbiology and Enzyme Technology	3	FT 538	Industrial Safety and Hazards	3
FT 529	Fermented and Non Fermented Beverages	3	FT 539	Food Rheology	3
FT 530	Food Process Design and Analysis	3			

HINDI
(Year of Establishment: 2010)

The Department of Hindi, established in January 2010, offers a Certificate Course in Official Hindi to develop the skill of official language in Hindi among the employees of the Tezpur University. The Department is set to offer One Year PG Diploma in Translation (Hindi) from autumn semester 2011 and Ph.D. programme from spring semester, 2011. The Department also plans to start PG programme in near future.

Programmes offered

1. P.G. Diploma in Translation (Hindi)
2. Certificate Course in Official Hindi
3. Ph.D.

Faculty

Professor

Nath, A.K., Ph.D. (Manipur University), Head of the Department.

Associate Professor

Pathak, B.C., Ph.D. (Gauhati University)

Assistant Professor

Lata, A., M.Phil. (J.N.U.)

Facilities

The Department can use the digital multimedia, multipurpose Language Laboratory of English and foreign languages Department.

Departmental Library

Selected books and photocopies materials relating to literatures, linguistics and functional Hindi are available in the Departmental Libraries.

Research Activities

The Department is set to offer Ph.D. programme from spring semester, 2011.

Courses offered in PG Diploma in Translation (Hindi)

CODE	Title	Credit	CODE	Title	Credit
HN 411	Prayojanmulak Hindi, Bhasha Prayukti Aur Anuvad	4	HN 421	Anuvad Ka Vyavaharik Paksh	4
HN 412	Hindi Bhasha Ki Sanvaidhanik Sthiti Aur Anuvad	4	HN 422	Janasansar Madhyam Aur Anuvad	4
HN 413	Anuvad Vigyan Aur Uska Sidhanta	4	HN 423	Paribhashik Sabdavalee, Kosh Vigyan Aur Anuvad	4
HN414	Karyalayee Hindi Aur Anuvad	4	HN 424	Pariyojana Karya	4

MASS COMMUNICATION AND JOURNALISM
(Year of Establishment: 2001)

The Department was started in 2001 to provide training in Journalism and Mass Communication and undertake research in tune with changing needs of the society. The thrust areas of the Department are Mass Communication and Community Media, laying emphasis on theories and practice of communication and media by imparting skills in Radio, Television, Newspaper, News Media, Advertising and Public Relation productions.

Programme offered

1. M. A. in Mass Communication and Journalism
2. Post Graduate Diploma in Mobile and Multimedia Communication
3. Ph.D.

Faculty

Associate Professor

      Bora, A., Ph.D. (Gauhati University), Head of the Department

      Anbarasan, P., M.Phil. (JNU, New Delhi)

      Murthy, C.S.H.N., Ph.D. (Andhra University)

Assistant Professor

      Chakraborty, J., MMC (Assam University)

      Pegu, U. K., MMC (Assam University)

      Kabi, Kh., M.A. (Madras University)

      Nagaraju, A., M.A. (University of Hyderabad)

      Borah, A., M.A. (Tezpur University)

      Daimari, P.J., M.A. (Tezpur University)

      Malakar, K., M.A. (Jamia Millia University)

      Lakhendra, B., M.A. (BHU)

Facilities

The Department is endowed with specialized high quality equipment for print, TV, Radio and web journalism. These include industry grade digital video cameras, linear and non-linear editing suites, all in broadcast quality. Students get hands-on experience in multi camera production in the well-equipped studio. An exclusive multimedia lab with latest software enables students to gather expertise in the nuances of different media productions. A well-equipped screening room with a 100 seat capacity for the screening and discussion of short films. The department has shifted to a spacious exclusive three-story building from August, 2010 academic session.

Departmental Library

The Central Library has a collection of more than 3000 books related to all core and allied areas of mass communication. The University also subscribes to 20 national and international research journals for the Department.

Productions

Students as part of their academic curriculum produced lab journals, audio programmes, web designs, brochures, TV news bulletin, documentary films and traditional communication programmes like puppet shows and street plays.

Courses offered in M.A. (Mass Communication and Journalism)

	Core Courses				
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
MC 451	Introduction to Communication	3	MC 458	Media Law and Ethics	3
MC 452	Reporting and Writing	4	MC 459	Communication Research Methods	3
MC 453	Advertising and Public Relations	3	MC 460	Elective G A	4
MC 454	Evolution of Indian Media	3	MC 461	Elective G A	4
MC 455	Understanding New Media	3	MC 462	Broadcast Media Production	3
MC 456	Visual Communication	3	MC 463	Online Journalism I	3
MC 457	Foundations of Journalism I	1	MC 464	Foundations of Journalism II	1
MC 465	Political and Cultural Communication	3	MC 476	International Communication	3
MC 466	Development Communication	3	MC 477	Film Studies	3
MC 467	Elective G A	4	MC 478	Elective G A	4
MC 468	Elective G A	4	MC 479	Elective G A	4
MC 469	Elective G B	3	MC 480	Elective G B	3
MC 470	Elective G B	3	MC 481	Elective G B	3
MC 471	Elective G B	3	MC 482	Elective G B	3
MC 472	Elective G B	3	MC 483	Elective G B	3
MC 473	Foundations of Journalism III	1	MC 484	Foundations of Journalism IV	1
MC 474	Internship I	3	MC 485	Internship II	3
MC 475	Communication Research Project	4			
	Electives				
MC 460	Reporting and Editing	4	MC 478	Analytical and Opinion Writing	4
MC 461	Advanced Advertising and Public Relations	4	MC 479	Media Management	4
MC 467	Specialized Reporting	4	MC 480	Post Production – Editing	3
MC 468	Marketing Communication	4	MC 481	Multimedia Journalism	3
MC 469	Multi Camera Production & Documentary	3	MC 482	Advanced Communication Research Methods	3
MC 470	Online Journalism II	3	MC 483	Radio Production II	3
MC 471	Communication Theories	3			
MC 472	Radio Production I	3			

Courses offered in PG Diploma (Mobile and Multimedia Communication)

CODE	Title	Credit
MM 401	Introduction to Communication and Media	3
MM 402	Broadcast Media Production	4
MM 403	Basics of Convergence Technologies	4
MM 404	Communications for Social Change	4
MM 405	Persuasive Communication in Practice	6
MM 406	Perspectives of North East India	3
MM 407	Internship	6

MATHEMATICAL SCIENCES
(Year of Establishment: 1994)

The Department was started in July 1994 with the objective of producing trained manpower for undertaking research and teaching in mathematics and allied branches of basic or applied sciences. The Department carries out research in the areas of Discrete Probability Distributions, Optimizations, Number Theory, Operator theory, Fuzzy Topology, Finite Element Method, Algebraic Graph Theory, etc.

Programmes
>   1. Integrated M.Sc. in Mathematics
>   2. Integrated B.Sc.B.Ed.
>   3. M.A./M.Sc. in Mathematics
>   4. M.Tech. in Computational Seismology
>   5. Ph.D.

Faculty

Professor
>   Borah, M., Ph.D. (Gauhati University)
>   Baruah, N. D., Ph.D. (Tezpur University), Head of the Department
>   Hazarika, D., Ph.D. (JMI, Delhi)

Associate Professor
>   Hazarika, M., Ph.D. (Tezpur University)
>   Nath, M., Ph.D. (IIT, Guwahati)
>   Barman, R., Ph.D. (IIT, Guwahati)
>   Deka, B., Ph.D. (IIT, Guwahati)

Assistant Professor
>   Sarmah, B. P., M.Sc. (Gauhati University)
>   Dutta, S., M.Sc. (Delhi University)
>   Sen, S., M.Sc. (Gauhati University)
>   Haloi, R., M.Sc. (Gauhati University) (on lien)

Facilities

The Department has a state-of-the-art computer laboratory established with financial assistance from the DST and UGC, which is equipped with 2 high performance servers, 2 workstations and 35 PCs. Mathematical software Mathematica, Matlab, Systat, TechPlot, SEISAN, SPSS, etc. are also available in the laboratory. The laboratory is fully networked and it is linked with the Central Computer Center via LAN with access to the INTERNET.

Departmental Library

The Departmental Library has a collection of books contributed by the National Board of Higher Mathematics (NBHM) and Inter University Centre for Astronomy and Astrophysics (IUCAA) besides other text books, departmental theses, and M. Tech. dissertations.

Research Activity

Number of papers published in referred journals in 2010: 23
Number of ongoing research projects: 06

Select Publications

1. N. D. Baruah and N. Nayak, New hypergeometric-like series for 1/pi^2 arising from Ramanujan's theory of elliptic functions to alternative base 3, *Trans. Amer. Math. Soc*., **363** (2011), 887-900.

2. M. Borah, B. R. Powdel, and S. K. Ray, Strand-specific mutation bias influences codon usage of weakly expressed genes in Escherchia coli, *Genes Cells*, **15** (2010), 773-782.

3. B. Deka, Finite element methods with numerical quadrature for elliptic problems with smooth interface, *J. Comput. Appl. Math*. **234** (2010), 605-612.

4. D. Hazarika and D. K. Mitra, Fuzzy locally uniform spaces, *J. Fuzzy Math*., **18** (2010), 31-38.

Courses offered in the M.A. / M.Sc. (Mathematics)

	Core Courses					
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
MS 401	Abstract Algebra	4	MS 408	Topology	4
MS 403	Linear Algebra	4	MS 410	Functional Analysis	4
MS 405	Real Analysis	4	MS 424	Computer Laboratory II	1
MS 409	Probability & Statistics	4	MS 501	Classical Mechanics	4
MS 411	Computer Programming+	4	MS 507	Partial Differential Equations	4
MS 421	Computer Laboratory I	2	MS 508	Mathematical Methods	4
MS 416	Numerical Analysis+	3	MS 503	Mathematical Programming	4
MS 414	Ordinary Differential Equations	4	MS 513	Project	6
MS 406	Complex Analysis	4			
+ Course for which there is a separate practical unit assigned as Computer Laboratory I/II					
	Electives				
MS 541	Fluid Mechanics	4	MS 572	Operations Theory –II	4
MS 542	Electrodynamics	4	MS 573	Number Theory – II	4
MS 543	Relativity	4	MS 574	Advanced Algebra – II	4
MS 544	Operation Research	4	MS 576	Quantum Mechanics –II	4
MS 545	Elliptic Curves	4	MS 576	Mathematical Modelling-I	4
MS 546	Algebraic Number Theory	4	MS 578	High Energy Astrophysics	4
MS 547	Numerical Linear Algebra	4	MS 579	Mag. Hydr. & Plasma Physics –II	4
MS 548	Mathematical Logic	4	MS 580	Sampling Techniques –II	4
MS 549	Graph Theory	4	MS 581	Stochastic Processes – II	4
MS 550	Discrete Mathematics		MS 582	Reliability Theory	
MS 552	Operator Theory	4	MS 583	Advance Analysis –II	4
MS 553	Number Theory I	4	MS 584	Multivariate Analysis -I	4
MS 554	Advanced Algebra - I	4	MS 585	Fuzzy Sets & Applications-II	4
MS 556	Quantum Mechanics -I	4	MS 586	Parallel Numerical Algorithms	4
MS 557	Mathematical Modelling-I	4	MS 587	Finite Element Method	4
MS 558	General Theory of Relativity	4	MS 588	Applied Matrix Theory	4
MS 559	Mag. Hydr. & Plasma Physics -I	4	MS 591	Computational Fluid Dynamics	4
MS 560	Sampling Techniques -I	4	MS 593	Wavelets and Applications	4
MS 561	Stochastic Processes - I	4	MS 594	Advanced Topology-I	4
MS 562	Statistical Quality Control	4	MS 595	Numerical Solutions of ODE	4
MS 563	Advance Analysis –I	4	MS 596	Advanced Topology-II	4
MS 564	Multivariate Analysis -I	4	MS 597	Numerical Solutions of PDE	4
MS 565	Fuzzy Sets & Applications-I	4	MS 598	Algebraic Geometry	4
MS 566	Fourier Analysis	4	MS 599	Probability Theory	4
MS 567	Continuum Mechanics	4			
MS 568	Theory of Distribution and Sobolev Spaces	4			

Courses offered in M.Tech. (Computational Seismology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
SM 611	Continuum Mechanics	4	SM 623	Computational Seismology	6
SM 612	Stochastic Processes & Time Series Analysis	4	SM 622	Inverse Theory and Statistical Inference	4
SM 613	Physics of the Earth and Geodynamics	4	SM 621	Mathematical Methods in Seismology	4
SM 614	Computational Techniques & Programming	4	SM 615	Finite Element Methods and Optimization Techniques	4
SM 610	Computational Laboratory-I	5	SM 620	Computational Laboratory -II	6
SM 640	M.Tech Dissertation- I	10	SM 650	M.Tech Dissertation- II	14
Elective Courses					
SM 631	Computer Graphics and Visualization	4	SM 637	Structural Dynamics & Earthquake Engineering	4
SM 632	Pattern Recognition in Geo-sciences	4	SM 638	Fuzzy Set Theory & Applications	4
SM 634	Digital Signal Processing	4	SM 639	Geo-informatics & Data Analysis	4
SM 635	Advanced in Seismology	4			

Course offered in Integrated M.Sc. in Mathematics

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
PI 101	Physics-I	3	PI 102	Physics-II	3
CI 101	Chemistry-I	4	CI 102	Chemistry-II	4
BI 101	Biology-I	3	BI 102	Biology-II	3
MI 101	Mathematics-I	3	MI 102	Mathematics-II	3
CS 101	Basics in Computer Applications	3	ES 102	Elementary Environmental Science	2
EG 101	Communicative English	2	SC 102	Basic Sociology	2
MI 201	Introductory Statistics (common Paper)	3	NS 102	NSS	1
MI 203	Linear Spaces and Complex Numbers	3	MI 202	Probability and Mathematical Statistics	3
MI 205	Algebra	3	MI 204	Mathematical Methods and Partial Differential Equations (Common Paper)	3
MI 207	Co-ordinate Geometry	3	MI 206	Integral Equations and Transforms	3
MI 209	Statics and Dynamics	3	MI 208	Linear Algebra	3
PI 201	Electronics- I (Common Paper)	3	MI 210	Set Theory and Mathematical Logic	3
PI 209	Physics Laboratory - II	2	BI 202	Ecology and Environmental Biology	3
			BI 210	Bio-computing Lab	2

MECHANICAL ENGINEERING
(Year of Establishment: 2006)

The department of Mechanical Engineering was started in July, 2006 under School of Engineering initially for offering B.Tech. degree in Mechanical Engineering. The aim of the Department is to produce well trained and motivated manpower in the field of Mechanical Engineering as per present industrial requirements. The department has the vision of starting research activities with introduction Ph.D. programme from January, 2011 and M.Tech. in the near future.

Programme offered
1. B. Tech in Mechanical Engineering
2. Ph.D. in Mechanical Engineering

Faculty

Professor

Hazarika, S.M., Ph.D. (Leeds, England), Head of the Department

Associate Professor

Gogoi, T.K., M.Tech. (IIT Kharagpur)

Assistant Professor

Dutta P.P., M. Tech. (Tezpur University)

Kalita, P, M. Tech. (Institute of Technology, BHU)

Dutta P.P., M.E. (Birla Institute of Technology, Mesra)

Kirtania S., M. Tech (IIT Guwahati)

Das, R., Ph.D. (IIT Guwahati)

Haloi, P., M.E. (AEC Guwahati)

Singh, S., M.Tech. (IIT Guwahati)

Banarjee, S. M.E. (BESU Shibpur)

Facilities:

CAD Laboratory:
This laboratory is equipped with computers having server based installed software such as ANSYS 12.0 version, FLUENT 6.3 teaching version and Pro-E Wildfire 3.0 version.

Fluid Mechanics Laboratory:
This Laboratory is equipped with Hydraulic Bench, Discharge through Orifice Apparatus, Bernoulli's Apparatus, Flow meter demonstration Apparatus, Impact of jet Apparatus, Discharge over weir and notches attachments, Reynolds Apparatus and Apparatus to find the major and minor Energy Losses in fluid flow.

Theory of Machine Laboratory:
This laboratory is equipped with Universal Governor Apparatus, Static and Dynamic Balancing Equipment, Whirling of Shaft Apparatus, Influence of Inertia upon velocity and acceleration Apparatus, Gyroscope Apparatus.

Strength of Materials Laboratory:
This laboratory is equipped with Rockwell Hardness Testing Machine, Brinell Hardness Tester, Vickers Hardness Tester, Impact Testing Machine and Universal Testing Machine of 1000 kN capacity with computer interface.

Automobile Laboratory:
This laboratory is equipped with internal combustion engine cut section model, Gear box cut section model, Differential gear cut section model, various types of steam engine models, One Esteem car and pneumatic cylinder model. One computerized variable compression ratio single cylinder 4 stroke diesel engine set up and a diesel smoke meter have also been installed in this laboratory.

Kinematics laboratory:
In this laboratory, there are various types of models for demonstration to the students such as models of different mechanisms, shaper model, clutch model, Oldham coupling model, gear drive, belt drive, chain drive etc.

Turbo machinery laboratory:
In this laboratory the following equipments are available.
One computerized centrifugal pump unit.
One computerized plunger pump unit
One computerized Pelton wheel with Turbine service unit.
One computerized propeller turbine

Vibration laboratory:
One Universal Vibration Apparatus which can perform thirteen numbers of experiments has been installed in this laboratory.

Metrology laboratory:
Sophisticated Measuring Instruments such as Plunger type dial indicator, lever type dial indicator, Magnetic Stand, Digital External micrometer, Universal bevel protractor, Dial Vernier Caliper, Sine Bar, Slip Gauges, Depth Micrometer, Digital Depth Gauge, Tubular Inside Micrometer, Straight Edge, Indicating Micrometer, Portable Surface Roughness Tester etc. are presently available in the Laboratory.

Central Workshop:
This is a central facility under Mechanical Engineering department. The Central Workshop is well equipped with CNC Lathe Machine (Make: MTAB), CNC Milling Machine(Make: MTAB), High Speed Precision Lathe Machine (Make: HMT), Conventional Lathe Machines, Shaping Machine, Vertical Milling Machine(Make: BFW), Horizontal Milling Machine(Make: BFW), Universal Milling Machine(Make: HMT), High Precision Surface Grinding Machine (Make: Praga Tools), Universal Tool and Cutter Grinder(Make: HMT), Radial Drilling Machine, Pillar Drilling Machine, Double ended Pedestal Grinding Machine, Slotting Machine, Arc welding Machine, Oxy Acetylene Gas Welding Setup, TIG Welding and MIG Welding Machine. Up-gradation of sheet metal shop and fitting shops are under the process and good many numbers of machines are arriving very soon.

Select publications
1. Debnath, B.K., Das, R., Prediction of performance coefficients of a three bucket Savonius rotor using artificial neural network, *Journal of Renewable and Sustainable Energy,* **02**, 043107-1-10 (2010).
2. Gogoi T.K., Baruah, D.C., A Cycle Simulation Model for Predicting Performance of a Diesel Engine Fuelled by Diesel and Bio-diesel Blends, *Energy*, **35**,1317–1323 (2010).

MOLECULAR BIOLOGY AND BIOTECHNOLOGY
(Year of Establishment: 1997)

The Department of Molecular Biology and Biotechnology was established in July 1997 with the objectives to train and create quality human resources and persuasion of quality research work in the challenging and frontier areas of modern biotechnology. The department has a close linkage with the industry and academic institutes of the country.

The current research activities in the department includes microbial biotechnology, petroleum biotechnology, snake venom biochemistry, enzymology, and enzyme technology, plant biotechnology, medicinal plants, immunology and immunogenetics, and evolutionary genomics.

Programmes offered
1. Integrated M. Sc. in Bioscience and Bioinformatics
2. M. Sc. in Molecular Biology and Biotechnology
3. Ph.D.

Faculty
Professor
> Konwar, B. K., Ph.D., (Imperial college, London), Dean, School of Sci. & Tech.
> Buragohain, A.K., Ph.D., (Imperial college, London) (On lien, as Registrar, TU)
> Mukherjee, A.K., Ph.D., (Burdwan University); Head of the Department

Associate Professor
> Baruah, S., Ph.D., (Punjab University, Punjab)
> Ray, S. K., Ph.D., (CCMB, Hyderabad; degree awarded by JNU)
> Mandal, M., M. Phil., Ph.D., (IGIB, Delhi; degree awarded by DU)

Assistant Professor
> Ramteke, A., Ph.D. (Jawaharlal Nehru University)
> Medhi,T., Ph.D. (IIT Kharagpur)
> Kalita, E., M.Sc. (Tezpur University)
> Doley, Robin, Ph.D. (Tezpur University)
> Ponnam, S., M.Sc., (Hyderabad University)

Facilities
The Department houses a range of sophisticated equipment such as Gel Documentation System, High Pressure Liquid Chromatography, Protein Purification System, Fraction Collector, Electrophoresis system, Millipore Water Purification System, PCR Machine, Fermentor, CO_2 incubator, Ultra Sonicator, Incubated Shaker, Deep Freeze, Tensiometer, Inverted Microscope, Tissue Culture Facility, Gas Chromatography -MS, UV-VIS Spectrophotometer, Deep freezer, Cold room, Pulse field Gel Electrophoresis Apparatus, 2-D gel electrophoresis apparatus, High Speed Centrifuge, ELISA Associate Professor.

Departmental Library
Apart from basic and advanced text books in the Departmental library, additional books, collection of latest references books, number of foreign and national journals as well as Electronic journals in the University library.

Fellowship
The students admitted to the M. Sc. programme are eligible for a DBT sponsored monthly studentship of Rupees one thousand two hundred only.

Courses offered in M.Sc. (Molecular Biology and Biotechnology)

				Core Courses	
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
BT 401	Genetics & Cytogenetics	3	BT 402	Cell Biology	3
BT 403	Biochemistry	4	BT 404	Microbiology	4
BT 405	Remedial Mathematics		BT 406	Biophysics	2
BT 407	Techniques and instrumentation	3	BT 408	Enzymes and Enzyme Technology	3
BT 409	Immunology	4	BT 410	Molecular Biology	4
BT 411	Cell and Tissue Culture	4	BT 412	Fermentation and Process Control	4
BT 413	Genetic Engineering I	4	BT 414	Application of Computer in Biotechnology	3
BT 418	Credit Seminar	2	BT 419	Genetic Engineering II	4
BT 421	Project	14	BT 420	Management & Legal Issues in Biotechnology	2
			Elective Courses		
BT 415	Animal Biotechnology	4	BT 416	Plant Biotechnology	4
BT 417	Food Biotechnology	4			

Courses Offered in Integrated M.Sc. in Bioscience and Bioinformatics

				Core Courses	
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
BI 101	Biology-I	3	BI 102	Biology-II	3
PI 101	Physics-I	3	PI 102	Physics-II	4
CI 101	Chemistry-I	4	CI 102	Chemistry-II	3
MI 101	Mathematics-I	3	MI 102	Mathematics-II	3
CS 101	Basics in Computer Applications	3	ES 102	Elementary Environmental Science	2
EG 101	Communicative English	2	SC 102	Basic Sociology	2
BI 201	Cell Biology	3	NS 102	NSS	1
BI 203	Molecular Genetics	3	BI 202	Ecology and Environmental Biology	3
BI 205	Animal and Plant Physiology	3	BI 204	Microbiology	3
BI 207	Bioscience Laboratory-I	3	BI 206	Basics in Bio-computing & IT	3
MI 201	Introductory Statistics (Common Paper)	3	BI 208	Bioscience Laboratory IIA (Biology students)	3
CI 201	Chemistry-III	3	BI 210	Bioscience Lab IIB (For non-Bioscience Majors)	2
CI 209	Chemistry Laboratory-II	2	MI 204	Mathematical Methods & PDE	3
BI-301	Biochemistry	3	CI 202	Chemistry-IV	3
BI-303	Molecular Biology	3	CI 210	Chemistry Laboratory-IV	2
BI-305	Cell and Tissue Culture	3	BI-302	Applied Bioscience	3
BI-307	Bioprogramming	3	BI-304	Biophysics	3
BI-309	Developmental Biology	3	BI-306	Computational Biology	3
BI-311	Laboratory – V	4	BI-308	Biological Database Management System	3
BI-401	Genomics and Proteomics	3	BI-310	Applied Microbiology & Bioprocess Engineering	3
BI-403	Genetic Engineering	3	BI-312	Laboratory – VI	4
BI-405	Immunology	3	BI-402	Animal Biotechnology	3
BI-407	Credit Seminar	3	BI-404	Plant Biotechnology	3
BI-409	Laboratory - VII	4	BI-406	Nano Biotechnology	3
BI-501	Project	16	BI-408	Environmental Biotechnology	3
BI-502	Project	16	BI-410	Bioinformatics software and Algorithms	3
BI-414	Structural Bioinformatics	3	BI-412	Bioethics, Biosafety & Intellectual Property Rights	3
BI-416	Laboratory - VIII	4			

PHYSICS
(Year of Establishment: 1998)

Eleven years since its commencement on January 21, 1998, the Department of Physics has been offering Post -Graduate teaching and research programmes in new frontiers of Physics. To keep pace with the advancement in science and technology, new specializations have been included while adapting to new developments in the domain. In tune with this spirit, the Department has started a two-year PG programme in Nanoscience and Technology in July, 2005. A new M.Sc. programme (Integrated M.Sc. in Physics) is also started from August, 2009. The areas of specialization for post-graduation are Condensed Matter Physics, Photonics & Electronics, High Energy Physics, Plasma Physics and Nanoscience and Technology.

1. Programmes Offered:
- ❖ M.Sc. in Physics
- ❖ M.Sc. in Nanoscience and Technology
- ❖ Integrated M.Sc. in Physics
- ❖ Integrated B.Sc.B.Ed.
- ❖ Ph. D.

2. Major Equipments:
Scanning Electron Microscope (SEM), UV-Visible Spectro-Photometer, Photo-luminescence Setup, Hind High Vacuum Thin Film Coating Unit, Microwave set-up, Electrochemical Workstation, LCR High Tester Bridge, Miniflex Table Top XRD, Semi Conductor Setup, Polarization Microscope etc.

3. Specializations:
- ❖ Condensed Matter Physics
- ❖ Electronics and Photonics
- ❖ High Energy Physics
- ❖ Astrophysics and Cosmology
- ❖ Nanoscience and Technology

4. Thrust Area: Nanoscience and Material Science

5. Research Areas:
- ❖ Nanomaterials
- ❖ Solid State Ionics
- ❖ Microwaves
- ❖ High Energy Physics
- ❖ Plasma Physics
- ❖ Optoelectronics
- ❖ Astrophysics

6. Faculty
Professor
> Choudhury, A. J., Ph.D. (Oxford University)
> Kumar, A., Ph.D. (IIT Kanpur)
> Sarma, J. K., Ph.D. (Gauhati University), Head of the Department

Associate Professor
> Bhattacharyya , N. S., Ph.D. (Delhi University)
> Das N., Ph.D. (Gauhati University)
> Deb, P, Ph.D. (Jadavpur University)
> Ahmed, G. A., Ph.D. (Gauhati University)
> Mohanta, D., Ph.D. (Tezpur University)

Assistant Professor
> Francis, N.K., M.Sc. (Delhi University)
> Karmakar, P. K., Ph.D. (Gauhati University)
> Das, M.K., Ph.D. (Gauhati University)

Biswas, R., M.Sc., (Dibrugarh University)
Nath, P., Ph.D. (Gauhati University)

7. Research Activity

Total nos. of papers published in the year 2010 (upto September) : 44
Total nos. of ongoing research projects : 13

8. Select publications

1. Gogoi, A., Buragohain, A., Choudhury, A., Ahmed, G.A., Laboratory measurements of light scattering by tropical fresh water diatoms, *J. Quant. Spectrosc. Rad. Transfer*, **110**, 1566-1578 (2009).
2. Deka,R., Deka,A., Choudhury, A., Adsorption of CO on gas phase and zeolite supported gold monomers: a computational study, *Chemical Physics Letters*, **490**, 184-188 (2010).
3. Kumar, A., Banerjee, S., Saikia, J.P., Konwar, B.K., Swift heavy ion irradiation induced enhancement in the antioxidant activity and biocompatibility of polyaniline nanofibers, *Nanotechnology* **21**,175102 (2010).
4. Banerjee, S., Saikia, J.P., Kumar, A., Konwar, B.K., Antioxidant activity and haemolysis prevention efficiency of polyaniline nanofibers, *Nanotechnology* **21**, 045101 (2010).
5. Bayan, S., Mohanta, D., Directed growth characteristics and optoelectronic property of Eu-doped ZnO nanorods and urchins, *J. Appl. Phys.* **108**, 023512 (2010)

Courses offered in M.Sc. (Physics)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
PH 400	Physics Lab - I	5	PH 411	Statistical Physics	3
PH 402	Quantum Mechanics - I	3	PH 413	Computational Techniques	3
PH 403	Mathematical Methods of Physics - I	3	PH 415	Nuclear Theory & Particle Physics	3
PH 404	Electromagnetic Theory - I	3	PH 499	Physics Lab - II	5
PH 405	Semiconductor Devices	3	PH 500	Project Work - I	5
PH 407	Quantum Mechanics - II	3	PH 501	Condensed Matter Physics & Material Science - I	3
PH 409	Mathematical Methods of Physics-II	3	PH 503	Atomic & Molecular Physics	3
PH 410	Analog & Digital Electronics	4	PH 599	Project Work - II	5
Electives					
PH 401	Classical Mechanics	3	PH 521	Introduction to Parton Models	3
PH 504	Laser Physics	3	PH 522	Communication Systems	3
PH 505	Coherent Optical System	3	PH 523	Microwaves	3
PH 506	Physics of thin Film	3	PH 524	Digital Signal Processing	3
PH 507	Physics of Low Temperature	3	PH 525	Microprocessor & Digital Signal Processing Based System	3
PH 509	Condensed Matter Physics & Material Science - II	3	PH 526	Plasma Physics-I	3
PH 510	Fibre Optics & Optoelectronics	3	PH 527	Plasma Physic - II	3
PH 511	Image Processing	3	PH 528	Solid State Ionics	3
PH 512	Physics of Remote Sensing	3	PH 529	Advanced Material Science	3
PH 513	Photonics Devices	3	PH 530	Nano Structures - I	3
PH 514	Super Conductivity & Critical Phenomena	3	PH 531	Nano Structures- II	3
PH 515	Physics of Integrated Circuits	3	PH 532	Quantum Electrodynamics	3
PH 516	Probes of Solid State Physics	3	PH 533	General Theory of Relativity	3
PH 517	Physics of Solid State Devices	3	PH 534	Astrophysics and Cosmology	3
PH 519	Quantum Field Theory	3	PH 535	Electromagnetic Theory - II	3
PH 520	Modern Particle Physics	3			

Courses offered in M.Sc. (Nano Science and Technology)

CODE	Title	Credit	CODE	Title	Credit
NS 401	Quantum Mechanics	3	NS 413	Measurement & Analysis Lab - I	5
NS 402	Electronics	3	NS 414	Instrumental Methods of Analysis	4
NS 403	Computational Techniques	3	NS 415	Measurement & Analysis Lab -II	5
NS 404	Basic Polymer Science	3	NS 501	Surface Science	3
NS 405	Cell & Molecular Architecture of Cells	3	NS 502	Optical Properties of Nanostructures	3
NS 407	Statistical Physics	3	NS 503	Electrical & Magnetic Properties of Nanostructures	3
NS 408	Condensed Matter Physics	3	NS 504	Biosynthesis of Nanoparticles & Applications	3
NS 410	Nanostructures	3	NS 505	Minor Project	5
NS 411	Fundamentals of Molecular Biology & Elements of Immunology	3	NS 506	Major Project	12

Courses offered in Integrated M.Sc. in Physics

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
BI-101	Biology-I	3	BI-102	Biology-II	3
I-101	Physics-I	3	PI-102	Physics-II	3
CI-101	Chemistry-I	3	CI-102	Chemistry-II	3
MI-101	Mathematics-I	3	MI-102	Mathematics-II	3
EG-101	Communicative English	2	SC-102	Sociology / NSS	1
CS-101	Basics in Computer Applications	3	ES-102	Elementary Environmental Science	2
PI 201	Electronics-I (Common Paper)	3	PI 202	Introductory Quantum Mechanics (Common Paper)	3
PI-203	Classical Mechanics-I	3	PI-204	Atomic and Molecular Spectroscopy	3
PI 205	Electromagnetism-I	3	PI 206	Electronics-II	3
PI 207	Physics Laboratory-I	3	PI 208	Physics Laboratory-III	3
PI 209	Physics Laboratory-II	2	PI 210	Physics Laboratory-IV	2

Apart from the faculty members of the Department of Physics, classes are also taken by faculty members of the department of Chemical Sciences and Molecular Biology and Biotechnology for M.Sc. in Nano Science and Technology course.

SOCIOLOGY
(Year of Establishment: 2006)

The major objective of the programme is to disseminate knowledge in sociological theory and method with a view to creating a pool of trained manpower that is sensitive to the regional specificities with a national -global perspective.

Programmes offered
M. A. in Sociology
Ph.D.

Faculty
Professor
Bhatt, C., Ph.D. (Delhi)
Sharma, C. K., Ph.D. (Delhi)

Associate Professor
Deka, R., Ph.D. (Dibrugarh University), Head of the Department

Assistant Professor
Das, A.K., M.Phil. (Delhi)
Sumesh, S.S., Ph.D. (University of Kerala)
Goswami, N., M.A. (BHU)
Das, Sarmistha, M.A. (JNU)

Courses offered

Core Courses					
CODE	**Title**	**Credit**	**CODE**	**Title**	**Credit**
SC 401	Sociological Theories - I	5	SC 407	Political Sociology	5
SC 402	Sociological Theories - II	5	SC 408	Research Methodology	5
SC 403	Sociology of Kinship	3	SC 501	Industrial Sociology	4
SC 404	Social Stratification	5	SC 502	Social Demography	4
SC 405	Sociology of India	5	SC 503	Social Movements in India	4
SC 406	Economic Sociology	4	SC 504	Sociology of Northeast India	4
			SC 505	Project	6
Electives					
Students will choose *any four* from the- following:					
SC 521	Sociology of Medicine	4	SC 525	Environmental Sociology	4
SC 522	Quantitative Sociology	4	SC 526	Sociology of Development	4
SC 523	Sociology of Culture and Mass Media	4	SC 527	Gender and Society	4
SC 524	Criminology	4			

SECTION SEVEN

MODEL QUESTIONS

Integrated M.Sc./Integrated B.Sc.Ed.

Test comprises of 80 objective questions, 20 questions each from Physics, Chemistry, Mathematics and biology, of which candidates are to answer 50 questions. Each question carries 2 marks and for every incorrect answer 0.5 mark will be deducted.

Chemistry

1. Predict the shapes of the following molecules with the help of Valence Shell Electron Pair Repulsion Theory:

    i) NH_3 ii) SF_4 iii) CH_4

2. Write down the bond order of the following species:

    i) O_2 ii) N_2 iii) He_2

Physics

1. A cylinder with a height of 28.5cm and an inside diameter of 10.4cm is filled with pure water which is at normal temperature and pressure. What is mass of the water in kilograms?

    (a) 0.242kg   (b) 2.420Kg   (c) 24.20Kg   (d) 242.0Kg

2. A ball is dropped out of a window near the top of a building. If it accelerates towards the ground at a rate of 9.80 m/s2,

what is the velocity when it has fallen 4.00 m?

    (a) -7.32m/s   (b) 6.95 m/s   (c) 6.25 m/s   (d) -8.85 m/s

Mathematics

Choose the correct alternative.

1. The number of ways one can invite 3 or more of his/her 6 friends is

    (a) 24   (b) 42   (c) 18   (d) 12

2. If c is a negative real number and then the value of $| F (c)-F (-c)|$ is

    (a) 0   (b) c   (c) 2   (d) 2c

Biology

1. Sarcoplasm is the cytoplasm of
    a. Nerve fibres
    b. Muscle fibres
    c. Both a and b
    d. None of these

2. The cruciform loops of DNA contains
    a. Satellite DNA
    b. Palindromic DNA
    c. Single stranded DNA
    d. Z-DNA

The Written Test consists of the following : No negative marks for wrong answers

1.Test of GK : 40 marks; 2. Test of reasoning : 30 marks; 3. Test of English : 30 marks.

Total marks : 100   Time : 2 hours

General Knowledge :
1. Which is the largest sugercane producing state in India ?
(a) Bihar   (b) Andhra Pradesh   (c) Uttar Pradesh   (d) Assam

2. Which particular city is known as the "Garden City" of India?
(a) Mysore   (b) Bangalore   (c) Agra   (d) Varanasi

3. Mother Teresa arrived in India from Europe in the year
(a) 1910   (b) 1921   (c) 1929   (d) 1939

4. What is the name of the currency of Russia ?
(a) Mark   (b) Yen   (c) Ruble   (d) Peso

English : Which of the Phases marked (1), (2) and (3) given below should replace the phrase given in bold in the following sentences.

1. She cooks, washes dishes, does her homework and take relaxing.
   i) relaxing then
   ii) then relaxes
   iii) then relaxing
   iv) take relaxes
   v) no correction required

2. Fill in the blanks with the help of the alternatives given below
Charles Darwin was .... (6) .... to his studies to a point of madness. However, his findings .... (7) .... fruits when he got sucess in propagating the evoltionary principles. According to this theory, there is always .... (8) .... for existence or the .... (9) .... of the fittest. this theory taught man to .... (10) .... Himself to his prevailing environment.

Q. 6. (a) Addicted (b) Devoted (c) Given (d) Recommended
Q. 7. (a) Bore (b) Gave (c) Carried (d) Indicated
Q. 8. (a) Efforts (b) Striving (c) Struggle (d) Fight
Q. 9. (a) Life (b) Survival (c) Dominance (d) Destruction
Q. 10. (a) Adapt (b) Adopt (c) Adept (d) Adhere

Reasoning :
1. the age of a man is three times the sum of the ages of his two sons. Five years after, his age will be double the sum of the ages of his sons. The father's present age is
(a) 40 years   (b) 45 years   (c) 50 years   (d) 55 years

2. A town 'P' is located in a particular district. The town 'A' is West of P. Town 'T' is East of 'P'. Town 'K' is East of 'B' but West of 'T' and 'A'. They are all in the same district. Which town is the farther West ?
(a) P   (b) K   (c) B   (d) A

Non-Verbal Reasoning :
1. 1 2 3 4
2. I II III IV V
In above set of figures (I) to (IV), some parts are shown to change their positions in a regular direction. Following the same sequence, which one of the following will appear at the fifth stage ?
(a) (b) (c) (d)

Answers :
General Knowledge : 1(b), 2(c), 3(a), 4(c), 5(c)
English : 1(2), 6(b), 7 (a), 8(c), 9(b), 10(a)
Reasoning : 1(b), 2(c)
Non-Verbal Reasoning : 1(1), 2(c)

Department of Chemical Sciences
M. Tech. in Polymer Science & Technology

Full Marks-100   **Time- : 2 hours**

Section A: Objective type questions
Section B : Subjective type questions

Section A (objective)

1.   What is the chemical structure of repealing unit of natural rubber?

2.   Which method would you use to determine the weight average molecular weight of a polymer?

3.   Which polymer is used in non-sticky utensils?

4.   Why is it necessary to control the heat during polymerization?

5.   What is the role of boiling point diagram during designing of distillation column?

Section B (subjective)

1.   Outline the chemical transformation of phenol to biophenol-A?

2.   How do you control the molecular weight of a polymer?

3.   How does the purity of Monomer influence the molecular weight of the polymer?

4.   Comment on 'Recycling is preferred technique than biodegradable polymers related to environmental issues.

5.   Show the mechanisms for the transformation of caprolactum from cyclohexanone.

6.   Determine the co-monomer ratio of styrene-butadiene copolymer, when the percentage of carbon is 85%.

7.   What are the losses occur in centrifugal pump during transportation of fluid?

8.   Water is flowing through at the rate of 0.001 m/s through a pipe of 3 cm diameter. What is the specific kinetic energy of water?

9.   Derive the relation between kinetic energy and he

10. at capacity at constant volume?

Department of Chemical Sciences
M. Sc. In Chemical Sciences

General Science: 10 marks ; Physical Chemistry 30 marks; Organic Chemistry 30 marks; Inorganic Chemistry 30 marks

General Science:

Write the correct answer in the box. Each question carries 1 mark. There is no genitive mark for incorrect answer

1. One closed bottle with water at 300C is taken to moon. If on the surface of moon cork of the bottle is opened, then
   a. Water will freeze
   b. Water will boil
   c. Water will be dissociated into H2 and O2
   d. There will not be any effect

2. The temperature at the bottom of waterfall will be more than that at the top because.
   a. Large area of falling water heat up due to sun rays
   b. Falling water takes heat from the sun
   c. At the bottom potential energy of water is large
   d. The potential energy of falling water is converted into heat.

3. The upper and lower fixed points of a faulty thermometer are 50C and 1050C. If the thermometer reads 250C, what is the actual temperature?
   a. 15° C
   b. 20° C
   c. 30° C
   d. 35° C

Physical Chemistry (each question carries two marks)

4. Write the Hamiltonian operator of a free particle moving in one direction under the influence of zero potential energy.

5. Write the electronic configuration for N2, N2- and N2.

6. Derive the relation:

7. Show that entropy change in a binary mixture for isothermal process is maximum when $x1=x2=$

Organic Chemistry (each question carries two marks)

8. How many stereoisomers are possible for bromochloroiodomethane? Draw their three dimensional structures and label as S and R?

9. Predict the product of the following Michael addition reaction:
   Methyl vinyl ketone + malonic ester

10. What is Hammett constant σ?

11. On hydrolysis of DNA, it is found that although the ratio of bases vary from one DNA to another, the ratios of C:G and A:T are always 1:1.

(a) How are these ratios consistent with the double helix concept?
(b) How do the complementary bases interact with one another?

Inorganic Chemistry (each question carries two marks)

12. Dipole moment of NH3 molecule is larger than that of NF3. Explain.

13. Write the d-orbital splitting diagram for a square pyramidal and a trigonal bipyramidal complex.

14. The electronic spectrum of KMnO4 shows a broad band at 18000 cm-1, while in K2CrO4 the band is observed at a higher frequency 26000 cm-1. Assign the bands and explain the trend.

15. Which among the following electronic transitions will have the lowest energy?
(a) $n \rightarrow \sigma^*$ (b) $n \rightarrow \pi^*$ (c) $\sigma \rightarrow \sigma^*$ (d) $\pi \rightarrow \pi^*$

Department of Computer Science & Engineering
Master of Computer Application (MCA)

Full Marks: 100   Time: 2 hours

Candidates needs to score minimum qualifying marks in each section.
The entrance examination question paper will contain three sections:
    1. Section I (Logical Reasoning)   : 40 marks
    2. Section II (Mathematics or Computer Basics)   : 30 marks
    3. Section III (English Composition & Comprehension) : 30 marks
To qualify for selection a candidate must secure at least 20% marks in each of the sections

Section I
In this section every correct answer will fetch 2 (two) marks and for every wrong answer 1 (one)   mark
will be deducted.

1. What is the next number in the series - 121, 169, 289, 361, 526, _ ?
   (A) 841   (B) 625   (C) 784   (D) 729   (E) none of these

2. A cube with all sides painted is divided into small cubes of equal sizes. The edge of a small cube is exactly one-fourth as
   that of the original cube. Therefore, the number of small cubes with only one side painted is -
   (A) 4   (B) 6   (C) 12   (D) 24   (E) 36

Section II
In this Section answer questions in either Group A or Group B

Group A
Each correct answer will fetch 2½ (two and half) marks and for every wrong answer 1 (one) mark will be deducted.
1. The number of two digit numbers that can be written by using the digits 2 and 3 is
   (A) $^{10}C_2 + {}^9C_2$ (B) 2^{10} (C) $2^{10} - 2$ (D) 10!   (E) None of these

2. The term independent of x in the expansion of $(x^2 - 1/x)^4$ is

   (A) 1   (B) -1   (C) 48   (D) 0   (E) None

Group B
   Each correct answer will fetch 2 (two) marks and for every wrong answer 1 (one) mark will be deducted.
1. The 8bit 's complement binary representation of -35 is
   (A) - 00100011   (B)   11100011
   •   110111101   (D)   10110001

2. An EPROM with 16-bit address bus and 4-bit data bus contains -
   (A) 32 KB   (B)   64 KB (C) 256 KB   (D) 128 KB

Section III

1. Write a precise in about 50 words for a given passage.   10 marks
2. Comprehension: Read the given passage and answer the set of questions based on it.   10 marks
3. Vocabulary test.   10 marks

Department of Computer Science & Engineering
M. Tech. in Information Technology

The question paper consists of three Sections A, B and C.
- Section A consists of 40 multiple choice questions of 1 mark each, Section B consists of 15 short questions of 2 marks each and Section C consists of conventional questions on Programming in C of total 30 marks.
- There will be no negative marks but no partial credit will be given for questions in Section A.

SECTION - A

Q1. In which one of the following page replacement policies, Belady's anomaly may occur?
    A. FIFO   B. Optimal   C. LRU   D. MRU
    E. None of them   Ans _____

Q2. The Address Resolution Protocol (ARP) is used for -
    A. finding the IP address from the DNS
    B. finding the IP address of the default gateway
    C. finding the IP address that corresponds to a MAC address
    D. finding the MAC address that corresponds to an IP address   Ans _____

SECTION - B

Q1. Consider a relation scheme R= (A, B, C, D) on which the following functional dependencies hold: {AB → D, CB → D, A → C, C → A}. What is the highest normal form satisfied in this relation scheme R?

Q2. Routing table of a router is shown below:

Destination	Subnet Mask	Interface
128.75.43.0	255.255.255.0	Eth0
128.75.43.0	255.255.255.192	Eth1
192.12.17.5	255.255.255.255	Eth2
default		Eth3

On which interface will the router forward packets addressed to destinations 128.75.43.16 and 192.12.17.6 respectively?

Q3. If one uses quick sort algorithm to sort the following numbers in ascending order
        20, 47, 15, 8, 9, 18, 4, 40, 30, 12
  what would be the order of these numbers after 2nd pass of the algorithm? (Assume that the 1st element is taken as the pivot element)

SECTION - C

Q1. Write a program in C which takes an integer as input and prints the 2's complement representation of the integer using 32 bits.

Q2. Suppose an integer list is represented by the structure
        struct inode { int val ;
                struct inode *next ;};
        typedef struct inode *intlist;
Write a function intlist reverse (intlist p) which returns the reversed list of the supplied list **p**.

Department of Cultural Studies
MA in Cultural Studies

Type 1:
Show your acquaintance with the following in 50 words   5x4=20

Satras of Assam; Loktak lake; Nongkrem dance; Baul Songs; Kathakali;

Type 2:
Tick the correct option in the following: 1x10=10

    i. Ali-aye-ligang is a festival of the Bodos/Misings/Karbis/none of the above.
    ii. Dhokla is a Gujrati/ Marathi/ Assamese/Bengali food item.
    iii. Kimono is worn by a Kenyan/ Sudanese/ Japanese/ Mexican woman.
    iv. The Golden Bough is a famousgarden/movie/book/painting.

Type 3:
Give the full forms of the following: 2x5=10

      ISRO, ABILAC, NEZCC, IGNCA

Type 4:
Mark the odd item out with reason: 2x5=10

    i. Mughlai Chicken/Biryani/Kebab/Chowmein
    ii. Prakash Padukone/Syde Modi/ Dipankar Bhattacharjee/ Leander Paes
    iii. Baghdad/Bangkok/Bangalore/Bejing.

Type 5:
Match the followings   1X5=5

    i. Dokhna Mising
    ii. Ribigaseng Literature
    iii. Jhumpa Lahiri Bodo

Type 6:
Write notes on any two of the following: 10X2=20

    i. Brahmaputra
    ii. Women in TV Serials
    iii. Shopping Mall
    iv. Multiplex and Cinema

Type 7:
Comprehension Test.

Department of Electronics & Communication Engineering
M. Tech in Electronics Design & Technology

There will be negative marking. For every wrong answer 1/4 th of the marks will be deducted.

1. Which of the following meters has the highest accuracy ?
   (a) moving iron meter   (b) moving coil meter
   (c) rectifier type meter   (d) thermocouple meter

2. The internal resistance of an ammeter should be very low in order to have
   (a) high accuracy   (b) high sensitivity
   (c) maximum voltage drop (d) minimum effect on the
   across the meter   current in the circuit

3. The characteristic equation of a closed loop control system is given as
   The resonant frequency in radians/sec of the system is
   (a) 2   (b)
   (c) 4   (d)

4. For the root locus plot of the system having the loop transfer function given by
   (a) no breakaway point   (b) three real breakaway point
   (c) only one breakaway point   (d) one real and two complex breakaway points

5. A Class-A transformer coupled, transistor power amplifier is required to deliver
   a power output of 10 W. The maximum power rating of the transistor should not be less than
   (a) 5 W   (b) 10 W
   (c) 20 W   (d) 40 W

6. The early effect in a bipolar junction transistor is caused by
   (a) fast turn on   (b) fast turn off
   (c) large collector base reverse bias   (d) large emitter base forward bias

7. In an 8085 microprocessor system with memory mapped I/O
   (a) I/O devices have 16 – bit address   (b) I/O devices are accessed using IN and OUT instruction
   (c) there can be a maximum of 256 input   (d) arithmetic and logic and 256 output devices
   operations can be directly performed with the I/O data.

8. The minimum number of NAND gates required to implement the Boolean function is equal to
   (a) 3   (b) 1
   (c) 4   (d) 7

9. An amplitude modulated voltage has modulation index of 100%. If the carrier is suppressed, the percentage power saving
   is
   (a) 50 %   (b) 66.6%
   (c) 75 %   (d) 25 %

10. The drawback of FM relative to AM is that
    (a) noise is very high for high   (b) larger bandwidth is required modulation frequencies
    (c) higher modulating power is required   (d) higher output power is required.

Department of Electronics & Communication Engineering
M.Tech. in Bioelectronics

Full Marks 100   Time 2 Hours

Answer either Part A or Part B (Write the answer in the block provided in CAPITAL letter)
Instructions There will be total 50 questions in each part. Each Question will carry equal marks. There will be negative marking. For every wrong answer 1/4th of the marks will be deducted.

PART A

1) Electro- Encephelograph is
   A) Diagnostic tool for heart ailment
   B) Diagnostic tool for Brain ailment
   C) Instrument used for measuring blood pressure
   D) Instrument used to hear pulse/heart beat

2) In modern electronic multimeters a FET or MOSFET is preferred over BJT because
   A) Its input resistance is high
   B) Its input resistance is high and does not vary with change of range
   C) Its input resistance is low

3) A dc electronic voltmeter using chopper stabilization is free from errors due to
   A) Low CMRR
   B) Amplifier drift
   C) Source output impedence
   D) Interference

4) Feedback is an amplifier
   (A) Reduces sensitivity and increase gain
   (B) Reduces sensitivity as well as gain
   (C) Increases sensitivity as well as gain
   (D) Increases sensitivity and reduces gain

5) The ECG is used to detect
   (A) Heart attack
   (B) Heart block
   (C) Coronary of thrombosis
   (D) All the above

PART B

1) The best definition for resolution is:
   A. The minimum distance between two objects that can be distinguished
   B. The magnification of a microscope
   C. The observed size divided by the actual size
   D. None of the above

2) In ionic bonds,
   A) electrons are shared unequally between atoms
   B) neutrons are transferred between atoms
   C) protons are shared equally between atoms
   D) electrons are transferred between atoms

3) The chemical properties of an atom are primarily determined by the number of
   A) neutrons it has in its nucleus
   B) isotopes it forms
   C) protons it has in its nucleus
   D) electrons it has in its outermost energy level

4) Ions involved in the conduction of nerve impulse is
   (A) Na+, K+   (B) Na+, Ca2+
   (C) Ca2+, Mg2+   (D) K+, Mg2+

5) Which is mismatched?
   (A) Cerebrum – memory
   (B) Medulla oblongata – temperature regulation
   (C) Cerebellum – equilibrium
   (D) Olfactory lobes – smell

Department of Energy
M. Tech. in Energy Technology

Maximum Marks 100   Time 2 hours

The written test consists of the following four sections
A. General Aptitude in Energy: 50 marks   B. Mathematics: 20 marks
C. Physics: 15 marks   D. Chemistry: 15 marks

SECTION-A: (General Aptitude in Energy)
This section contains 50 (fifty) multiple-choice questions carrying one mark each.
Choose the correct answer and write the alphabet of appropriate choice in the box provided in the right margin.
(Sample questions)

1. Which of the following is not associated with heat engine?
a) Carnot cycle   b) Rankine cycle
c) Otto cycle   d) Calvin cycle

2. Global warming is related t energy use because
a) fossil fuel burning releases CO_2 b) renewable energy sources causes harmful emission
c) fossil fuel sources are costly   d) renewable sources of energy are not available

SECTION-B (Mathematics)
This section contains 5 (five) questions carrying equal marks. Use space provided along with the question to answer.
(Sample questions)

1. If $\tan^{-1} \dfrac{\sqrt{1+x^2} - \sqrt{1-x^2}}{\sqrt{1+x^2} + \sqrt{1-x^2}} = \theta$

Prove that x2 = Sin 2θ

2. Find the inverse of the matrix A, if

$$A = \begin{pmatrix} 3 & -2 & 3 \\ 2 & 1 & -1 \\ 4 & -3 & 2 \end{pmatrix}$$

SECTION-C (Physics)
This section contains 5 (five) questions carrying equal marks. Use space provided along with the question to answer.
(Sample questions)

1. Water is escaping from a cistern (an artificial water reservoir) by way of a horizontal capillary tube, 10cm long and 0.4 cm in diameter, at a distance of 50cm below the free surface of water in the cistern. Calculate the rate at which the water is escaping.

2. A copper slug whose mass mc is 75 g is heated in a laboratory oven to a temperature T of 3120C. The slug is then dropped into a glass beaker containing a mass mw = 220 g of water. The heat capacity Cb of the beaker is 45 cal/g. K. The initial temperature Ti of the water and the beaker is 120C. Assuming that the slug, beaker and water are an isolated system and the water does not vaporize, find the final temperature Tf of the system at thermal equilibrium (Specific heat of copper and water at room temperature are 0.0923 cal/g. K and 1.00 cal/g. K respectively).

SECTION-D (Chemistry)
This section contains 5 (five) questions containing equal marks. Use space provided along with the question to answer.
(Sample questions)

1. The specific conductance of an N/50 solution of KCl at 25^0C is 0.002765 mho. If the resistance of a cell containing this solution is 400 ohms, what is the cell constant?

2. Define heat of formation and heat of combustion with examples. What is their importance?

Department of English & Foreign Language English
MA in English

[Important: The questions given here are indicative, not exhaustive.]

SECTION A

1. Explain the following terms in not more than 150 words each. Give examples wherever necessary: 5x5=25
   A. metaphor;   b. iambic pentameter;   c. ode; d. irony;   e. ballad

2. Write a paragraph in not more than 200 words on any one of the following: 12
       a. a memorable journey; b. a funny incident; c. an autumn morning

3. Write an essay in not more than 300 words on any one of the following: 15
   Nature and literature; b. A modern novel; c. Fiction and life

4. Read the following poem and answer the questions that follow: 18

 I know why the caged bird sings

A free bird leaps on the back
Of the wind and floats downstream
Till the current ends and dips his wing
In the orange suns rays
And dares to claim the sky.

But a BIRD that stalks down his narrow cage
Can seldom see through his bars of rage
His wings are clipped and his feet are tied
So he opens his throat to sing.

The caged bird sings with a fearful trill
Of things unknown but longed for still
And his tune is heard on the distant hill for
The caged bird sings of freedom.

The free bird thinks of another breeze
And the trade winds soft through
The sighing trees
And the fat worms waiting on a dawn-bright
Lawn and he names the sky his own.

But a caged BIRD stands on the grave of dreams
His shadow shouts on a nightmare scream
His wings are clipped and his feet are tied
So he opens his throat to sing.

The caged bird sings with
A fearful trill of things unknown
But longed for still and his
Tune is heard on the distant hill
For the caged bird sings of freedom.

   1.   What is the theme of the poem?   2
   2.   How does the poet bring out the contrast between a free bird and a caged bird?   4
   3.   What does the sentence "And dares to claim the sky" mean in the poem?   2
   4.   Explain the meanings of the following expressions: 2x4=8
       Bar of rage; fearful trill; sighing trees; grave of dreams
   5.   Why, in your opinion, has the poet repeated the third stanza?   2

---

5. Correct the following sentences: 1x5=5
a. One of the worker has broken the windowpane.
b. This is a comfortable house to live.
c. You should not spend money for luxuries.
d. Though he is fat yet he runs fast.
e. He wanted to know as to why he had been detained.

6. Give the meanings of the italicized words: 10

      As Gregor Samsa awoke one morning from uneasy dreams he found himself transformed in his bed into a gigantic insect. He was lying on his hard, as it were armor-plated, back and when he lifted his head a little he could see his dome-like brown belly divided into stiff arched segments on top of which the bed quilt could hardly keep in position and was about to slide off completely.

7. Construct sentences to illustrate the meanings of the following pairs of words: 10
    a. current; currant;   b. weak; wick;   c. alter; altar;   d. difference; deference; e. illusive; elusive

8. Supply the antonyms of the following words: 5
    persuade; reveal, wild, ancient, empty

Department of English & Foreign Language English
Integrated M.A./Integrated B.A.B.Ed.

Model Structure for Question paper for Integrated MA and B.A.B.Ed. Entrance Examination 2011

(Note: The questions are only indicative not exhaustive)

1. Answer the following questions: 1x10= 10
Who is the longest serving monarch in the world?

Which country is known as the emerald isle?

In which country is the Angkor Vat located?

Who was the chairman of the drafting committee for the Indian Constitution?

Name two European nations which have not adopted the Euro.

Between whom was the first battle of Panipat fought?

2. What do the following abbreviations stand for?   1x 5=5
      CAG
      TRAI
      NAFTA
      PAC
      MARCOS

3. What do the following terms mean?   1x10=10
 Oncology
 Carcinoma
 Entomology
 Ophthalmology
 Claustrophobia
 Tachophobia
 Toxicology
 Antivenin

4. Construct a paragraph from the following leads: 6

Football match in town---people turn up to enjoy game--- eminent guest arrives--- crowds settle with snacks---game begins --- fierce competition on field--- sky looks gloomy----rains heavily---- not enough shelter---people run helter skelter---match abandoned

5. Precis writing   8

6. Make sentences from any seven of the given idioms: 2x7=14
   To bell the cat; at a loss ; on the brain; to eat humble pie; at sixes and sevens; like a bad penny, etc.,

7. Give the synonyms of the following words: 1x8=8
   Beautiful, hateful, demented, incarcerated , estranged

8. Give the antonyms of the following words: 1x8=8
   Enmity, undulating, reckless, fanciful, establish

9. Fill up the gaps with appropriate prepositions :   1x 8 =8
   a) It is nine o'clock ____ my watch.
   b) We went for a boat trip ____ the river.

10. Fill the blank spaces with either the indefinite or the continuous form of the verbs given at the end of each sentence: 1x6 =6
   a) The man ____down as he____ the street. (cross, knock)
   b) I____ to him as he ____the room (speak, leave)

11. Change the sentences as given in the brackets: 1.5x6=9
   a) My pocket has been picked (change to active)
   b) He can be irritating at times (change to interrogative)
   c) The fishing nets are all the wealth I own (change to interrogative)

12. Write a letter of complaint to the town Authorities about the garbage in the market areas.   8

Department of Environmental Science
M.Sc. in Environmental Science

The question paper consists of three sections viz., section-A and section-B and section C. Section-A will cover the basic concepts of environmental science, Section-B will cover the syllabus of Physics and Chemistry and Section-C will cover the syllabus of Biological Sciences.

Section-A: 20 marks: section-B : 40 marks, section C : 40 marks

The test paper shall have both objectives as well as of short descriptive type questions covering 10 + 2 level science subjects (Biology, Chemistry, and Physics) and Basic concepts of environmental science, environmental pollution, current environmental issues, agro-ecosystems, agro-ecology, agriculture including hill agriculture, weather and climate system.

(No negative marking for wrong answer)

Marks: 100   Time: 2 hours

1. I. Fill up the gaps –
(a) Bowman's capluse is the organ found in human ----------------
(b) Shade tolerant plants are known as …………………
(c) Bacteria and fungi which live on dead organic matter are called……….
(d) The causal organism of sheath blight of rice is ……………
(e) The enzyme for converting glucose to glucose 6-phosphate in glycolysis is ……

2. Write short notes on—
(a) Centromere (b) nucleoid (c) hydrogen bonding (d) n-type and p-type semiconductor(e) greenhouse gas

3. Choose the correct answer:
(a) Root cap is absent in—
(i) hydrophytes   (ii) lithophytes   (iii) xerphytes   (iv) mesophytes

(b) Bacteria differ from viruses in –
(i) Pathogenic nature   (ii) genetic material
(iii) having well defined cytoplasm   (iv) lacking proper nucleus

(c) Which of the following has net dipole moment –
(i) CCl_2 (ii) C_2H_2 (iii) H_2O (iv) CO_2

(d) *Itai itai* disease is caused due to –
(i) As poisoning (ii) As deficiency (iii) Cd deficiency (iv) Cd poisoning

(e) Identify the vector quantity
(i) time (ii) work (iii) heat (iv) electric field

(f) The standard value of atmospheric pressure
(i) 1013.25 mb (ii) 1013.30 mb (iii) 1013.40 mb (iv) 1013.45 mb

(g) Loess is an outcome of –
(i) Aeolian erosion landform
(ii) Aeolian deposition landform
(iii) fluvial deposition landform
(iv) fluvial erosion landform

(h) Which of the following is the correct sequence in terms of abundance in the atmosphere
(i) N_2, O_2, H_2, Ar (ii) N_2, H_2, O_2, Ar (iii) O_2, N_2, H_2, Ar (iv) H_2, O_2, N_2, Ar

(i) which of the following is an example of sedimentary rock:
   (i) granite (ii) Basalt (iii) Limestone (iv) Slate

(j) Transition of inner electron in heavy metals results in emission of
(i)X-ray Photons (ii) Visible light (iii) Infra red (iv) Microwave photons

4. Short answer type:
(a) What is integrated pest management?
(b) How will you distinguish between N and Mg deficiency symptoms of plants in field?
(c) Explain the heating process of earth's atmosphere.
(d) H_2O molecule is V-shaped. Why?

Department of Food Engineering and Technology
Post B. Sc. Integrated M. Tech. (B. Tech. + M. Tech.) in Food Engineering and Technology

Full Marks: 100   Time: 2 hours

The question Paper shall contain 100 objective type questions from 10+2 Mathematics (40 questions), Physics (30 questions) and Chemistry (30 questions). There will be no negative marking for wrong answers.

Section A
Choose the correct answer:
1. The term independent of x in the expansion of $(x^2+1/x)^{12}$ is
    i) 120   (ii) 285   (iii) 495   (iv) 595
2. General form of equation of a line is
    i) ax+by+c=0   (ii) ax+by-c=0   (iii) ax-by+c=0   (iv) ax+by-c=0
3. A variable whose values depend on the outcomes of random experiment is called
    i) Constant   (ii) parameter   (iii) statistic   (iv) random variable

Section B
1. One kilowatt hour is equal to
    i) $36x10^{-5}$ J   (ii) $36x10^{-3}$ J   (iii) $36x10^{3}$ J   (iv) $36x10^{5}$ J
2. The amount of heat required to melt one kg of ice at 0^0C is called
    i)   Heat of vaporization   (ii) heat capacity
    (iii)   Latent heat of fusion   (iv) none of these
3. Moment of inertia is measured in
    i) Kgm^{-3} (ii) Kgm^{-2} (iii) N.S   (iv) red/sec

Section C
1. Which salt dissolved in water forms a solution with a pH greater than 7
    i) NaCl   (ii) $CuSo_3$ (iii) Na_2CO_3 (iv) NH_4Cl
2. The reaction between fat and NaOH is called
    i) esterification (ii) saponification (iii) hydrogenolysis   (iv) fermentation
3. Changing the number of neutrons of an atom changes its:
        (i) isotope   (ii) element   (iii) ion   (iv) charge

Department of Food Engineering and Technology
M. Tech. in Food Processing Technology (Lateral Entry

Full Marks: 100   Time: 2
Hours

The question paper shall contain 100 objective type questions covering unit operations in food engineering, heat and mass transfer in food processing, food packaging, food chemistry and biochemistry, food microbiology, post harvest technology, storage technologies, fruit and vegetable processing, cereals and legumes processing, dairy technology, meat and fish processing, food biotechnology, fermentation technology, etc. There will be no negative marking for wrong answer.

Choose the correct answer:
1. Degree of unsaturation in oils is measured by
    Iodine value b) saponification value   c) acid value   d) all the above

2. Which one is called the milk sugar
    Maltose   b) lactose   c) sucrose   d) galactose

3. The Reynold's number for a vegetable oil of viscosity 0.03 Pa s and density 850kg/m^3 flowing in a 50 mm bore pipe at a mean velocity of 0.75 m/s is
    1023   b) 1063 c) 1077 d) 1087

4. Glycolysis takes place in
    Mitochondria c) chloroplast   c) cytoplasm   d) endoplasmic reticulum

5. The dry basis moisture content for a food having 20 percent moisture content on wet basis is
    20%   b) 25%   c) 30%   d) 40%

Department of Hindi
हिंदी विभाग
अनुवाद का स्नातकोत्तर डिप्लोमा पाठ्यक्रम

प्रश्न-पत्र के नमूने:

नमूना-1.   1x10=10

पूर्ण वाक्य में उत्तर दीजिए:

क)   रस के अवयव या तत्व कितने हैं ?

ख)   हिंदी के उपन्यास सम्राट कौन हैं ?

ग)   क्या भाषा का परिवर्त्तन ही भाषा का विकास है ?

घ)   'मैथिल कोकिल' के नाम से कौन प्रख्यात हैं ?

नमूना-2.   5x4= 20

संक्षेप में उत्तर दीजिए :

क)   पूर्वी हिंदी की बोलियों का नामोल्लेख कीजिए ।

ख)   अनुवाद की परिभाषा दीजिए ।

ग)   राजभाषा से आप क्या समझते हैं ?

घ)   लक्षणा शब्द-शक्ति के बारे में लिखिए ।

नमूना-3.

क)   हिंदी भाषा के उदभव-विकास के बारे में लिखिए ।   10

               अथवा,

ख)   हिंदी भाषा की संवैधानिक स्थिति के बारे में लिखिए ।

        अनुवाद के विविध प्रकारों पर प्रकाश डालिए ।   10

        अथवा,

काव्य विषयक भारतीय एवं पाश्चात्य विद्वानों के मतों की

समीक्षा कीजिए ।

नमूना-4.

   अंग्रेजी से हिंदी में अनुवाद कीजिए ।   25

   हिंदी से अंग्रेजी में अनुवाद कीजिए ।   25

Department of Mass Communication & Journalism
MA in Mass Communication & Journalism

Total Marks : 100   Time : 2 hours
0.25 negative mark for every wrong answer

• The Admission Test Booklet has been designed to test your knowledge in the English language, general knowledge, current affairs, media, culture and tradition of North East India, etc.
• There will be passages and questions following them. You will have to read the passages thoroughly and then answer the questions.
• There will be some questions on synonyms and antonyms.
• There will be some questions with jumbled sentences. You will have to rearrange the jumbled parts into a meaningful sentence.

Example:
Women
(P) are more likely to give birth prematurely
(Q) and their babies are at increased risk
(R) who are poorly nourished or sick
(S) of death and disability

(A) RQSP   (B) RPQS   (C) QSPR   (D) QSRP
Ans: (B)

• Some idioms or phrases might also be given and you will have to choose the right option for the correct meaning of the phrase.
• Questions on general knowledge, current affairs and media might be on the following lines :

1. 'Folio' is the supplement of which newspaper:
(A) The Hindu   (B) The Statesman   (C) Assam Tribune (D) The Telegraph

2. Which news channel of North-East recently launched the entertainment channel 'Rang'?
(A) DY365   (B) Newslive   (C) NETV   D) Doordarshan

3. Who is the Chief Minister of Sikkim ?
(A) Pawan Chamling (B) Mukut Mithi (C) Tarun Gogoi (D) None of these

4. In which year did AR Rahman win the Oscar for best music direction?
(A) 2009   (B) 2008   (C) 2007   (D) 2006

5. Life ho to Aisi is the advertising slogan of which of the following
(A) Coca-Cola (B) Pepsi (C) Thums Up (C) LIMCA

6. For many years, Neighbour's Envy, Owner's Pride was the advertising catchline of which of the following ?
(A) PHILIPS TV   (B) ONIDA TV   (C) BPL TV   (D) LG TV
• There will also be short answer type questions

7. 'Young India' was edited by _____

8. Nogkrem is a folk dance form in the state of _____
Besides the above, you will be asked to write Essays / Features on a contemporary issue or a theme OR a feature by taking clues from a photograph. This is to test your perception, vocabulary, expression, style of writing, presentation, creativity and analytical skills etc.

9. Violence in the society is becoming more and more crude and gory. Are media acting as 'fueler' or spoiler of violence ? Discuss.

Department of Mass Communication & Journalism
PG Diploma in Mobile and Multimedia Communication

Total Marks: 70   Time 2 Hours

<center>0.25 negative marks for every wrong answer</center>

• The Admission Test Booklet has been designed to test your knowledge on English language, general knowledge, computer knowledge, current affairs, media, culture and tradition of North East India etc.
• There will be passages, and questions following them. You will have to read the passages thoroughly and then answer the questions.
• There will be some questions on synonyms and antonyms.
• Some idioms or phrases might also be given and you will have to choose the right option for the correct meaning of the phrase.
• Questions on general knowledge, computer, current affairs and media might be on the following lines:

A. Find the suitable answer from among the choices

1. IPCC means
    a. Indian Penal for Climate Change
    b. Intergovernmental Panel on Climate change
    c. International public and Climate change on any two
    d. Indian People and Climate change

2. Name of the union minister for Information and Broadcasting
    a. Mr. Jay Ram Ramesh
    b. Ms. Renuka Chaudhery
    c. Ms. Ambika Soni
    d. Mr. N.D.Tiwari

• There will be short answer type questions
    A. "Rangmilir Hanhi' was written by……………………………………..

    B. Oja Pali is a folk dance form in the state of ………………………………..
• Besides the above, you will be asked to write essays. This is to test your perceptions, vocabulary, expression, style of writing, presentation, creativity and analytical skills etc.

Write an essay not exceeding 500 words on any one of the following topics.
    a. National Rural Employment Guarantee Scheme.
    b. Role of Media in Youth Empowerment
    c. Effects of Global Warming.

Department of Mathematical Sciences
M.A. / M.Sc. in Mathematics

• The question paper consists of two sections: **Section A** of **60** marks and **Section B** of **40** marks.

• The duration of the test will be of **2 hours**.

• **Section A** will consist of 30 multiple-choice questions (all compulsory) of 2 marks each. In this section, 1 mark will be deducted for each wrong answer.

• **Section B** will consist of about 10/12 descriptive type questions of 5 marks each. Any 8 (eight) questions are to be
answered from this section in the space provided in the answer paper.

SECTION A
Choose the correct alternative

1. G be a finite group of order 15. Then G has an element of order

  (a) 2   (b) 4   (c) 3   (d) 6

2.   Let α, β, γ be the roots of the equation $x^3 + 5x + 13 = 0$ Then the value of

  $$\frac{1}{\alpha\beta} + \frac{1}{\beta\gamma} + \frac{1}{\gamma\alpha}$$ is

  (a) 5/13   (b) 1   (c) 0   (d) –5/13

3.   Let G be an abelian group of order 16. Let Z (G) be the center of G. Then the possible
        orders for Z(G) are

  (a) 1, 4, 8, 16   (b) 4, 8   (c) 1, 2, 4, 8, 16   (d) 4. 12

4.   Differential equation of all circles passing through the origin and having their centers on the Y-axis is

  $(y^2 - x^2)\frac{dy}{dx} = 2xy$ (b) $(y^2 + x^2)\frac{dy}{dx} = 2xy$

  (c)) $(y^2 - x^2)2\frac{dy}{dx}$ (d) $(y^2 - x^2) - 2\frac{dy}{dx}$

SECTION B

1.   Solve the following system of equations using by matrix theory:

  x+2y+z =1

  x+y+2z =9

  2x+y-z =2

2.   If $x = \frac{2}{1!} - \frac{4}{3!} + \frac{6}{5!} -$ ..... and $y = 1 + \frac{2}{1!} - \frac{2^3}{3!} + \frac{2^5}{5!}$ then show that $x^2 = y.$
.

3. Let $\beta = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ 1 & 3 & 8 & 7 & 6 & 5 & 2 & 4 \end{bmatrix} \epsilon S_8$. Find the following

   (i) β^{101}

   (ii) β^{99}

   (iii) the smallest positive integer n for which . $\beta^n = \beta^{-3}$.

4. Let $f : R \to R$ be a continuous function $x_0 \epsilon R$ and $f(x_0) > 0$ such that prove that there exists $\delta > 0$ such that $f(x) > 0$ for every $x \epsilon (x_0 - \delta, x_0 + \delta)$

5. Find the directional derivative of $\emptyset = 4xz^3 - 3x^2y^2z$ at (2, -1, 2) in the direction of $2\hat{i} - 3\hat{j} + 6\hat{k}$

6. Evaluate $\iint_S (\overline{F} \cdot \hat{n}) ds$, where $\overrightarrow{F} = 2y\hat{i} - z\hat{j} + x^2\hat{k}$ and S is the surface of the parabolic cylinder $y^2 = 8x$ included in the first octant and bounded by y=4 and z=6 .

Department of Mathematical Sciences
M.Tech. in Computational Seismology

Full Marks: 100   Time: 2 hours

• The question paper shall consist of Two Sections: **Section A** and **Section B**.
• **Section A** shall consist of 40 multiple choice questions (all compulsory) of 2 marks each.
   Section B shall consist of descriptive type questions
   Both sections cover the topics from

1.   **MATHEMATICS 2. STATISTICS 3. PHYSICS 4. EARTH SCIENCES 5. ENGINEERING**

        In **Section B**, there will be questions from each subsection **(1 to 5)**. In this section candidates can attempt a maximum of 2 subsections and answer any 2 questions of 10 marks each from these 2 subsections only.
•.   One mark will be deducted for each wrong answer in section A
•   Partial credit will be given for answers in S**ection B**. Answers to the questions should appear in the space provided and nowhere else.

Section A
(Choose the correct answer using √ mark)

1.   Let S be the solution space of a set of m homogeneous linear equations with real coefficients in n unknowns. If A is the matrix of this system of equations. Then

        (A)   dimension of S = n-rank A   (B) dimension of S is always n
        (C)   dimension of S is infinite (D) dimension of S = n+rank A

2.   The $\frac{}{\sin(z)}$ function has a

        (A)   pole of order 2 at the origin with residue 1 (B) pole of order 1 at the origin with residue1
        (C)   pole of order 1 at the origin with residue 2 (D) Pole of order 2 at the origin with residue 2

3.   Given any two events A and B, which of the following statements is not necessarily true?
        (A) $P(A) \geq P(A \cap B)$ (B) $P(B) \leq P(A \cup B)$ (C) $P(A \cap B) \leq P(A \cup B)$ (D) $P(A)+P(B) \leq P(A \cup B)$

4.   A cricket ball bowled at 140km/hr is straight driven with heavy bat. At the instance of collision, the bat is moving towards the ball with a speed of 10km/hr. If the bat is much heavier than the ball, the speed with which the ball will travel is

        (A) 140km/hr   (B)160km/hr   (C) 130km/hr   (D)150km/hr

5.   In an 8bit computer, which of the following number can not be represented

        (A) 264   (B) 132   (C) 0   (D) -132

Section B
Subsection: Mathematics
1.   Let X and Y be two Banach spaces. Let <Tn> be a sequence of bounded linear operators from X to Y. Let T be another linear operator define from X to Y such that

        Prove that T is also bounded. $T(x) = \sum^{n}{}^{-} T_n(X)$
Subsection: Statistics
2.   A random sample of size n is available from a bivariate normal population with mean vector (μ1, μ2). Develop a testprocedure to test the hypothesis H0: μ1=2μ2 against H1: μ1 ≠2μ2.

Subsection: Physics
3.   In order to increase the efficiency of a Carnot engine most effectively, would you increase source temperature (T1)keeping sink temperature (T2) constant ?. Or would you decrease T2 keeping T1 constant. Explain analytically?
Subsection: Earth Sciences
4.   Give a brief account on Global Warming with special reference to Northeast India.

Subsection: Engineering
5.   Find the conversion time of a successive approximation A/D conversion which uses a 2 MHz clock and a 5 bit binary ladder containing 8V reference. What is the conversion rate?

Department of Molecular Biology and Biotechnology
M.Sc. Molecular Biology and Biotechnology

Note: Each question is compulsory. Two (02) marks will be awarded for correct answer and one (01) mark will be deducted for wrong answer. There will be no negative marking in Part B.

Sample Questions: MM: 80

PART A Multiple Choice Questions

1. The work done when one mole of an ideal gas expand freely into vacuum
    a. $-P\Delta V$
    b. $P\Delta V$
    c. ΔG
    d. Zero

2. Which of the following solid is a better conductor of electricity?
    a. Pure NaCl crystals
    b. Diamond
    c. Graphite
    d. Marble pieces

3. A man walks along a rectangle whose perimeter is six kms. If the area of the rectangle is two sq.kms, what is the difference between the length and breadth of the rectangle?
    a. ½ km
    b. 1 km
    c. 11/2 km
    d. 2 km

4. Insulin is secreted by
    a. β–cells of pancreas
    b. α–cells of pancreas
    c. δ–cells of pancreas
    d. liver cells

5. The deficiency of the following Vitamin causes reproduction failure in animals
    a. Vitamin A
    b. Vitamin B
    c. Vitamin D
    d. Vitamin E

PART B

Answer the followings   MM: 20

Q1. Describe in brief the TCA cycle?

Q2. What is the difference in the sugars of DNA and RNA?

Department of Physics
M.Sc. in Physics

Entrance test has two parts, Part A and Part B of 50 marks each and is of a total duration of 2 hours.

Part A consists of 50 objective type questions of one mark each and is of one-hour duration.

Part B consists of short descriptive type questions to examine the conceptual clarity and reasoning ability of the candidate.

The candidate is required to attempt any 5 questions of 10 marks each out of about 10 given questions.

PART - A

1. If the other parameters are same, the range of a projectile is maximum when its angle of projection is
a) 90^0 b) 60^0 c) 45^0 and d) 30^0

2. Hamiltonian formalism is easier to handle than Lagrangian formalism because Hamiltonian formalism involves
a) first order differential equations
b) generalized momentum instead of generalized co-ordinates
c) only cartesian co-ordinates
d) no time derivatives

3. An electric potential filed is produced by joint charges 1 mC and 4 mC located at (-2, 1, 5) and
(1, 3, -1) respectively. The energy stored in the field is
a) 2.57 mJ, b) 5.14 mJ, c) 0.28 mJ and d)20.56 mJ

4. Which of the following potentials does not satisfy the Laplace's equation ?
a) $V = 2x + 5$
b) $V = 10 xy$
c) $V = 2x2y + 5x + 2$
d) $V = 3y + 10$

5. The expression which explains the nonexistence of magnetic monopoles is
a) $\nabla \times \mathbf{E} = -\partial \mathbf{B}/\partial t$
b) $\nabla \cdot \mathbf{B} = 0$
c) $\nabla \times \mathbf{B} = \mu 0 J$
d) $\nabla \cdot \mathbf{J} + \partial \rho/\partial t = 0$

PART - B

1. Starting from the Langragian equation, prove that the equation of motion a simple pendulum is where θ, g and 1 are angular displacement, acceleration due to gravity and length of the string respectively.
2. Find the energy released, if two 1H2 nuclei can fuse together to form 2He4 nucleus where the binding energies per nucleon of 1H2 and 2He4 are 1.1 MeV and 7.0 MeV respectively.

3. The electrostatic potential due to a certain charge distribution is given by the expression :
   $V(x, y, z) = - (x2yz + xy2z + xyz2)$ volts
   Calculate the electric field and charge density and point (2, 1, 3)

4. A half wave rectifier uses load resistor RL = 8kΩ and shunt filter capacitor of 12μF. The sinusoidal input voltage is 20sin2π50t. The angle of conduction is 40^0. Assuming the rectifier to be ideal (R**f** = 0, R**p** = ∞) calculate :
   i) dc load current Idc
   ii) dc output voltage Vdc
   iii) ripple voltage VR
   iv) ripple factor y (cos 40^0 = 0.7660)

Department of Physics
M.Sc. in Nano Science and Technology

Full Marks: 100   Time: 2 hrs.

Entrance test has two parts, Part A and Part B of 50 marks each. Total duration is two hrs.

Part A consists of 50 objective type questions of one mark each. Duration is one hour.

Part B consists of short descriptive type questions to examine the conceptual clarity and reasoning ability of the candidate.

The candidate is required to attempt any five questions of 10 marks each out of about ten given questions.

Typical questions for Part A and Part B are given below:

PART – A

1. A field is irrotational if
   a) grade   b) div
   c) Curl   d) None of the above

2. The relation between two current amplification factors of a transistor is
   a) $\beta = \alpha/(1+\alpha)$ b) $\beta = (1-\alpha)/\alpha$
   c) $\beta = \alpha/(1-\alpha)$ d) $\beta = (1+\alpha)/\alpha$

PART – B

1. a) Show that a free particle cannot absorb a photon completely.
    b) Explain why is Compton effect experimentally not observed for visible light.

2. a) Using a d .c and a.c voltmeter to measure the output signal from a filter circuit, we obtain readings of 25 Vd.c and 1.5 Vrms. Calculate the ripple of the filter output voltage.
    b) A d .c voltage supply provides 60 v when the output is unloaded. When connected to a load, the output drops to 56 v.
    Calculate the values of voltage regulation.

3. a) Calculate the change in entropy when 50 gm of water at 150°C is mixed with 80 gm of water at 40°C. (Specific heat of water 1 cal/gm/°K)
    b) Calculate the change in the boiling point of water when the pressure is increased from 1.0 to 1.2 atmospheres.
    Given: Specific volume of steam 1677 cm³/gm, latent heat of steam = 540 cal/gm, boiling point of water at one atmospheric pressure = 373 °K, 1 atmospheric pressure = 1.0×10^5 N/m².

4. (a) The average velocity of an ideal gas molecule at 270C is 0.3 m/s. Calculate the average velocity at 9270 c.
    b) The threshold frequency for a surface is known to be 5×10^{14} Hz. What is the wavelength of light required to eject a photo electron having a kinetic energy of 5 cv.?

5. a) What are the basic differences between prokaryotes and eukaryotes ?
   b) What are the two principal chemical components of chromosomes? Explain how one of these chemical component, act as carriers of genetic information.

Department of Sociology
MA in Sociology

Full Marks : 100   Time : 2 hours

The written test consists of the following:

1. 30 Objective type questions on general knowledge

2. Two short essay type questions on issues of socio-economic relevance carrying 10 marks each.

3. Two-essay type questions on sociological themes carrying 25 marks each.

1. Deabbreviate the following:
   VAT, AIDS, BTAD

2. Match the following:
   i. The Incas i. Venezuela
   ii. Hugo Chavez ii. Peru

3. Answer the following:
   i. What is the Capital City of Mongolia?
   ii. What is the boundary line between India and Pakistan called?

4. Write shot notes (within 150 words) :
   i. Dowry system   ii. Sustainable Development

5. Write essays on the following (within 500 words):
   i. Caste System in India
   ii. Criminalization of Indian Politics

IMPORTANT DATES

DATE OF ISSUE OF PROSPECTUS & APPLICATION FORM AND SUBMISSION

Issue of Prospectus

(a) For PG Degree / Diploma / Certificate / Integrated M. Sc.	25th January – 25th March, 2011
(b) For Ph.D. Programme (i) Autumn semester, 2011 (ii) Spring semester, 2012	25th January – 25th March, 2011 20th October – 1st December, 2011 (tentative)
(c) B. Tech. programmes	25th January – 26th April, 2011
Last date of receiving filled in Applications	
(a) For P.G. Degree / Diploma / Certificate / Integrated M.Tech. / M. Sc.	5th April, 2011
(b) For Ph.D. Programme (i) Autumn semester, 2011 (ii) Spring semester, 2012	5th April, 2011 7th December, 2011 (tentative)
(c) B.Tech. programmes	29thApril, 2011

Date of display of the list of eligible candidates for appearing TUEE on www.tezu.ernet.in	
(a) Draft list	20th April, 2011
(b) Receiving complaints from non-listed ap-plicants *	29th April, 2011
(c) Final list	10th May, 2011

* No complaint shall be entertained after the specified date

ANNEXURE –II

SCHEDULE OF ENTRANCE EXAMINATIONS

All P.G. Degree / Diploma/Certificate Programmes/ Integrated M.Sc./M.A./B.Sc.B.Ed./B.A.B.Ed. Programme

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Tezpur University Entrance Examination

May 27, 2011 (10 AM to 12 Noon)	May 27, 2011 (2 PM to 4 PM)
M.A. in Cultural Studies M.Sc. in Chemical Sciences M.A./M.Sc. in Mathematics Integrated M.A. in English/Integrated B.A.B.Ed.	M.Tech. in Bioelectronics M.Sc. in Nanoscience & Technology Integrated M.Sc./Integrated B.Sc..B.Ed. P.G. Diploma in Tourism Management
May 28, 2011 (10 AM to 12 Noon)	**May 28, 2011 (2 PM to 4 PM)**
Master of Computer Application (MCA) M.Tech. in Energy Technology M.A. in Sociology M.Sc. in Environmental Science	M.Tech. in Electronics Design & Technology Integrated M.Tech. in Food Engineering & Technology M.A. in Mass Communication & Journalism M. Tech. in Polymer Science & Technology
May 29, 2011 (10 AM to 12 Noon)	**May 29, 2011 (2 PM to 4 PM)**
M.Tech. in Computational Seismology Certificate in Chinese M.Tech. in Food Engineering & Technology (Lateral entry) P.G. Diploma in Mobile & Multimedia Communication	M.Tech. in Information Technology M.Sc. in Physics M.A. in English M.Sc. in Molecular Biology & Biotechnology (for NE domicile) P.G. Diploma in Translation (Hindi)

B.Tech. Programme: AIEEE, conducted by CBSE, will be held on 1st May, 2011.
Ph.D. Programme: Written test will be held in the respective departments on 16th June, 2011 at 11.00 AM followed by personal interview (may be continued up to 17th June, 2011).

Note: Personal interview will be held for short listed candidates for the programmes of M.A. in Mass Communication and Journalism, M.A. in English, M. Sc. in MBBT, Integrated M.Tech. and M.Tech. (lateral entry) in Food Engineering and Technology, M. Tech. in Computational Seismology, and P.G. diploma in Tourism Management.

Schedule of Group Discussion / Personal Interview for P.G. Programmes

For programmes other than MBA full time (wherever applicable given above)	Starts on 15th June and may continue to 16th June, 2011

Declaration of TUEE Results: Fourth Week of June, 2011 on Tezpur University website www.tezu.ernet.in

Schedule of Admission – 2011		

Programmes	Main List	Waiting List
B.Tech. Programme	14 July 2011 (09:30 AM to 12 Noon)	14 July, 2011 (1 PM to 3PM) Waiting List I 15 July 2010 (09:30 AM to 12 Noon) Waiting List II
Integrated M. Sc. in Bioscience & Bioinformatics Integrated M.Sc. in Mathematics Integrated M.Sc. in Chemistry Integrated M.Sc. in Physics Integrated B.Sc..B.Ed. Integrated M.A. in English Integrated B.A.B.Ed. M.A./M.Sc. in Mathematics P.G. Diploma in Translation (Hindi)	19 July 2011 (09:30 AM to 1 PM)	19 July 2011 (2PM to 4 PM)
Master of Business Administration M.Sc. in Molecular Biology & Biotechnology M.A. in Mass Communication & Journalism M.A. in Cultural Studies M.A. in English M.A. in Sociology Certificate in Chinese M.Tech. in Information Technology	20 July 2011 (09:30 AM to 1 PM)	20 July 2011 (2PM to 4 PM)
M.Tech. in Electronics Design & Technology M.Tech. in Polymer Science & Technology M.Sc. in Chemical Sciences M.Sc. in Environmental Science M.Sc. in Nanoscience and Technology P.G. Diploma in Tourism Management P.G. Diploma Mobile & Multimedia Communication	21 July 2011 (09:30 AM to 1 PM)	21 July 2011 (2PM to 4 PM)
M.Tech. in Energy Technology M.Tech. in Bioelectronics M.Tech. in Computational Seismology Integrated M.Tech. and M.Tech. (lateral entry) in Food Engineering & Technology Master of Computer Applications M.Sc. in Physics	22 July 2011 (09:30 AM to 1 PM)	22 July 2011 (2PM to 4 PM)
Ph.D. (a) Autumn Semester, 2011	29 July 2011 (10 AM to 2 PM)	
(b) Spring Semester, 2012	18-19 January 2012 (10 AM to 3 PM) (tentative)	

No separate call letter will be sent to the candidates selected/waitlisted for admission.
* Reporting time for admission from main list is 09:00 AM and waiting list is 01:30PM.

FEE STRUCTURE FOR P.G. DEGREE /B.Tech/ DIPLOMA /CERTIFICATE PROGRAMME

Particulars	Mode	M.A.	MCA / M.Tech.	M.Sc.	M.A. in MCJ	PGDTM	B.Tech.	Certificate in Chinese
Admission	Once on admission	200/-	200/-	200/-	200/-	200/-	200/-	200/-
Registration	Once on admission	150/-	150/-	150/-	150/-	150/-	150/-	150/-
Enrolment (from 2nd semester onward)	Per semester	200/-	200/-	200/-	200/-	200/-	200/-	200/-
Tuition	Per semester	1000/-	2000/-	1200/-	5000/-	2000/-	7000/-	500/-
Library	Per semester	350/-	350/-	350/-	350/-	350/-	350/-	350/-
Students' activity	Per semester	300/-	300/-	300/-	300/-	300/-	300/-	300/-
Medical	Per semester	250/-	250/-	250/-	250/-	250/-	250/-	250/-
Convocation	Once on admission	500/-	500/-	500/-	500/-	500/-	500/-	--
Transport	Per semester	500/-	500/-	500/-	500/-	500/-	500/-	500/-
Training and Placement	Once on admission	500/-	500/-	500/-	500/-	500/-	500/-	500/-
Placement Brochure	Once on admission	--	--	--	1000/-	--	--	--
Identity card	Once on admission	50/-	50/-	50/-	50/-	50/-	50/-	50/-
Laboratory (including Computer usage)	Per semester	200/-	500/-	500/-	500/-	200/-	400/-	--
Caution deposit (Library & Laboratory)	Once on admission	1,000/-	1,000/-	1000/-	1,000/-	1,000/-	2,000/-	1,000/-
Hostel Caution deposit	Once on admission	1,000/-	1,000/-	1,000/-	1,000/-	1,000/-	1000/-	--
Provisional Certificate	Once on admission	100/-	100/-	100/-	100/-	100/-	100/-	100/-
Examination (Theoretical)	Per semester	300/-	300/-	300/-	300/-	300/-	300/-	300/-
Examination Practical / Dissertation	Per semester	200/-	200/-	200/-	200/-	200/-	200/-	--
Grade Card	Per semester	50/-	50/-	50/-	50/-	50/-	50/-	50/-
Outdoor activities	Per semester	-	-	-	-	3500/-	-	--
Tezpur University Alumni Association	Once on admission	500/-	500/-	500/-	500/-	500/-	500/-	500/-
Hostel Admission* / re-admission	Per semester (Hostel boarder)	1,800/-	1,800/-	1,800/-	1,800/-	1,800/-	1,800/-	--
Hostel Mess Advance (in case of Hostel boarder)	Once on admission	1,500/-	1,500/-	1500/--	1,500/-	1,500/-	1,500/-	--
Infrastructure & amenity	Per semester	600/-	600/-	600/-	600/-	600/-	600/-	600/-
Fan, Electricity & Water Charges	Per semester	300/-	300/-	300/-	300/-	300/-	300/-	300/-
Students' Welfare Fund	Per semester	150/-	150/-	150/-	150/-	150/-	150/-	150/-
Medical Insurance	Per semester	169/-	169/-	169/-	169/-	169/-	169/-	169/-
Development fund fee	Per Semester	750/-	750/-	750/-	1500/-	750/-	1500/-	750/-
Charges for Consumables	Per Semester	-	-	-	5000/-	-	-	-
Total	**(on admission)**	12,419/-	13,719/-	12,919/-	23,469/-	16,919/-	20,369/-	6,719/-

* SC/ST students are exempted from paying hostel seat rent of Rs.675/-

Note: Candidates of the following programmes will be required to pay an additional fee of Rs. 1200/- per semester on account of consumables:
- M.Sc. in Chemical Sciences, MBBT, Nanoscience and Technology, Environmental Science.
- M.Tech. in Food Engineering & Technology, Energy Technology, Polymer Science & Technology.
- B.Tech. in Food Engineering & Technology.

FEE STRUCTURE FOR Ph.D. PROGRAMME

Particulars	Mode	Ph.D. Full Time	Ph.D. (Part time/ Sponsored)
Admission	Once on admission	200/-	200/-
Registration	Once on admission	150/-	150/-
Enrolment	Per semester form second semester	200/-	200/-
Tuition	Per semester	1500/-	2000/-
Library	Per semester	350/-	350/-
Students' activity	Per semester	300/-	300/-
Medical	Per semester	250/-	250/-
Convocation	Once on admission	500/-	500/-
Transport	Per semester	500/-	500/-
Identity card	Once on admission	50/-	50/-
Laboratory (including Computer usage)	Per semester	500/-	500/-
Caution deposit (Library & Laboratory)	Once on admission	2,000/-	2000/-
Hostel Caution deposit	Once on admission	1,000/-	1,000/-
Provisional certificate	Once on admission	100/-	100/-
Examination Fee (Theoretical)	Per Semester	3000/-	4000/-
Alumni Association	Once on admission	500/-	500/-
Hostel Admission/re-admission*	Per semester in case of Hostel boarder	1,800/-	1,800/-
Hostel Mess Advance	Once on admission (in case of Hostel boarder)	1,500/-	1,500/-
Infrastructure & amenity	Once at the time of admission	600/-	600/-
Fan, Electricity & water Charges	Per semester	300/-	300/-
Students' Welfare Fund	Per semester	150/-	150/-
Development Fund Fee	Per semester	1500/-	1500/-
Total		16,750/-	18,250/-

 * SC/ST students are exempted from paying hostel seat rent of Rs.675/-

Note: Candidates of the following departments will be required to pay an additional fee of Rs. 2000/- per semester on account of consumables:
Department of Chemical Sciences, MBBT, Physics, Environmental Science and Food Engineering & Technology.

ANNEXURE –VI

FEE STRUCTURE FOR INTEGRATED M.Sc./INTEGRATED B.Sc.B.Ed. PROGRAMMES

Particulars	Mode	Integrated M.Sc./ B.Sc.B.Ed.
Admission	Once on admission	200/-
Enrolment	From Second Semester onwards	200/-
Tuition	Per semester	3500/-
Library	Per semester	350/-
Students' activity	Per semester	300/-
Medical	Per semester	250/-
Convocation	Once on admission	500/-
Transport	Per semester	500/-
Identity card	Once on admission	50/-
Registration	Once on admission	150/-
Training and placement	Once on admission	500/-
Laboratory (including computer usage)	Per semester	400/-
Caution deposit (Library & Laboratory)	Once on admission	2500/-
Hostel Caution deposit	Once on admission	1000/-
Provisional Certificate	Once on a admission	100/-
Examination (Theoretical)	Per semester	300/-
Examination (Practical/ dissertation)	Per semester	200/-
Grade Card	Per semester	50/-
Alumni Association	Once on admission	500/-
Hostel Admission/re-admission *	Per semester in case of Hostel boarder	1800/-
Hostel Mess Advance	Once on admission (in case of Hostel boarder)	1500/-
Infrastructure & amenity	Per Semester	600/-
Fan, Electricity, Water Charges	Per Semester	300/-
Student Welfare Fund	Per Semester	150/-
Medical Insurance	Per Semester	169/-
Development Fund Fee	Per Semester	750/-
Total	(on admission)	16,619/-

*SC/ST students are exempted from paying hostel seat rent of Rs.675/-

Note: Candidates of the following programmes will be required to pay an additional fee of Rs. 1200/- per semester on account of consumables:
1. Int.M.Sc./ Int B.Sc.B.Ed. in Chemistry and Bioscience & Bioinformatics programmes.

ANNEXURE –VII

FEE STRUCTURE FOR INTEGRATED M.A./B.A.B.Ed. PROGRAMMES

Particulars	Mode	Int. M.A./ Int. B.A.B.Ed.
Admission	Once on admission	200/-
Registration	Once on admission	150/-
Enrolment (from 2nd semester onward)	Per semester	200/-
Tuition	Per semester	1000/-
Library	Per semester	350/-
Students' activity	Per semester	300/-
Medical	Per semester	250/-
Convocation	Once on admission	500/-
Transport	Per semester	500/-
Training and Placement	Once on admission	500/-
Placement Brochure	Once on admission	--
Identity card	Once on admission	50/-
Laboratory (including Computer usage)	Per semester	200/-
Caution deposit (Library & Laboratory)	Once on admission	1,000/-
Hostel Caution deposit	Once on admission	1,000/-
Provisional Certificate	Once on admission	100/-
Examination (Theoretical)	Per semester	300/-
Examination Practical/ Dissertation	Per semester	200/-
Grade Card	Per semester	50/-
Outdoor activities	Per semester	-
Tezpur University Alumni Association	Once on admission	500/-
Hostel Admission /re-admission *	Per semester (Hostel boarder)	1,800/-
Hostel Mess Advance (in case of Hostel boarder)	Once on admission	1,500/-
Infrastructure & amenity	Per semester	600/-
Fan, Electricity & Water Charges	Per semester	300/-
Students' Welfare Fund	Per semester	150/-
Medical Insurance	Per semester	169/-
Development fund fee	Per Semester	750/-
Charges for Consumables	Per Semester	-
Total	**(on admission)**	12,419/-

* SC/ST students are exempted from paying hostel seat rent of Rs.675/-

FEE STRUCTURE FOR P.G. DIPLOMA IN MOBILE AND MULTI MEDIA COMMUNICATION

Particulars	Mode	PGDMMC
Admission	Once on admission	200/-
Enrollment (from second semester onward)	Per semester	200/-
Tuition	Per semester	2000/-
Library	Per semester	350/-
Students' activity	Per semester	300/-
Medical	Per semester	250/-
Convocation	Once on admission	500/-
Transport	Per semester	500/-
Training and placement	Once on admission	500/-
Placement brochure	Once on admission	500/-
Registration	Once on admission	150/-
Identity card	Once on admission	50/-
Laboratory (including computer usage)	Per semester	500/-
Caution Deposit (Library & Laboratory)	Once on admission	1000/-
Hostel Caution Deposit	Once on admission	1000/-
Provisional certificate	Once on admission	100/-
Examination (Theoretical)	Per semester	300/-
Examination Practical/Dissertation	Per semester	200/-
Grade card	Per semester	50/-
Charges for consumables	Per semester	2000/-
Outdoor activities	Per semester	500/-
Tezpur University Alumni Association	Once on admission	500/-
Hostel admission/re-admission*	Once on admission	1800/-
Hostel mess advance (in case of hostel boarder)	Once on admission	1500/-
Infrastructure and amenity	Per semester	600/-
Fan, electricity and water charges	Per semester	300/-
Students' welfare fund	Per semester	150/-
Medical insurance	Per semester	169/-
Development Fund Fee	Per Semester	750/-
Total	**(on admission)**	**16,719/-**

*SC/ST students are exempted from paying hostel seat rent of Rs.675/-

Prescribed Format of OBC NCL Certificate

FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR APPOINTMENT TO POSTS/ ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER THE GOVERNMENT OF INDIA

This is to certify that Shri / Smt. / Kum. ………………………………………………………………………………….

Son / Daughter of Shri / Smt. …………………………………………………………..…………………… of

Village / Town …………...............……………………………………………………….…..District / Division

……………………………………………….…..in the ………………………………………..................………

Community which is recognized as a backward class under:

i)   Resolution No.12011/68/93-BCC (C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No.186 dated 13/09/93.
(ii)   Resolution No.12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No.163 dated 20/10/94.
(iii)   Resolution No.12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No.88 dated 25/05/95.
(iv)   Resolution No.12011/96/94-BCC dated 9/03/96.
(v)   Resolution No.12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No.210 dated 11/12/96.
(vi)   Resolution No.12011/13/97-BCC dated 03/12/97.
(vii)   Resolution No.12011/99/94-BCC dated 11/12/97.
(viii) Resolution No.12011/68/98-BCC dated 27/10/99.
(ix)   Resolution No.12011/88/98-BCC dated 06/12/99 published in the Gazette of India Extraordinary Part I Section I No.270 dated 06/12/99.
(x)   Resolution No.12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No.71 dated 04/04/2000.
(xi)   Resolution No.12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No.210 dated 21/09/2000.
(xii)   Resolution No.12015/9/2000-BCC dated 06/09/2001.
(xiii) Resolution No.12011/1/2001-BCC dated 19/06/2003.
(xiv)   Resolution No.12011/4/2002-BCC dated 13/01/2004.
(xv)   Resolution No.12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No.210 dated 16/01/2006.

Shri / Smt. / Kum. ……………………………………………………………….…..…. and/or his family ordinarily

reside(s) in the ……….……………………….…… District / Division of …….…………………..….. state. This is

also to certify that he/she does not belong to the persons/section (Creamy Layer) mentioned in Column 3 of the Schedules of the Government of India. Department of Personnel & Training O.M. No. 36012/22/93- Estt. (SCT) dated 08/09/93 which is modified vide OM No.36033/3/2004 Estt.(Res.) dated 09/03/2004

Dated: ……….………….…………   District Magistrate/ Deputy Commissioner/ Competent Authority

Seal

NOTE :
 a) The term Ordinarily used here will have the same meaning as in Section 20 of the Representation of the People Act. 1950.
(b) The authorities compete to issue Caste Certificates are indicated below:
 (i)   District Magistrate/Additional Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/ Deputy Collector/ 1st Class Stipendiary Magistrate/Sub- Divisional Magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistrate)
 (ii) Chief Presidency Magistrate/ Additional Chief Presidency Magistrate/ Presidency Magistrate.
 (iii) Revenue Officer not below the rank of Tehsildar and
 (iv) Sub- Divisional Officer of the area where the candidate and/ or his family resides.

<div style="float:right; border:1px solid black; padding:20px;">Photo</div>

Seal of the issuing
office

GOVT. OF ASSAM
OFFICE OF THE DEPUTY COMMISSIONER

Ref Petition No. ……………..   Date:……………

PERMANENT RESIDENCE CERTIFICATE

Certified ………………………………………………….....................………...........son / daughter of
                              (Name of the Candidate)
…………………....………………….and …...........………………......……………of Village / Path / Street.
      (Father's name)   (Mother's name)
……..……under Mauza / Circle……...............…...........................……....,

under…………………………………...................….………………Police station is the permanent resident of

………………………….……………..district in the state of Assam (India).

Seal   **Deputy Commissioner**

(Format of the affidavit to be submitted by the parent/guardian in non-judicial stamp paper)
<u>AFFIDAVIT BY PARENT/GUARDIAN</u>

I, Mr./Mrs./Ms. ……………………………………………………………… (*full name of parent/guardian*) father/mother/

guardian of…………………………………………….. (*full name of student with admission/registration/enrolment number*),

having been admitted to ……………………..………(*name of the institution*), have received a copy of the UGC

Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (*hereinafter called the*

"Regulations"), carefully read and fully understood the provisions contained in the said Regulations.

2. I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3. I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and
    administrative action that is liable to be taken against my ward in case he/she is found guilty of or abetting ragging,
    actively or passively, or being part of a conspiracy to promote ragging.
4. I hereby solemnly aver and undertake that
    a) My ward will not indulge in any behaviour or act that may be constituted as ragging
       under clause 3 of the Regulations.
    b) My ward will not participate in or abet or propagate through any act of commission
       or omission that may be constituted as ragging under clause 3 of the Regulations.
5. I hereby affirm that, if found guilty of ragging, my ward is liable for punishment according to clause 9.1 of the
    Regulations, without prejudice to any other criminal action that may be taken against my ward under any penal law
    or any law for the time being in force.
6. I hereby declare that my ward has not been expelled or debarred from admission in any institution in the country on
    account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that,
    in case the declaration is found to be untrue, the admission of my ward is liable to be cancelled.

Declared this ___day of _____ month of _____year.

_____
Signature of deponent

Name:

Address:

Telephone/Mobile No.:

VERIFICATION
Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and
nothing has been concealed or misstated therein.

Verified at …………………..(place) on this the …..(day) of ….(month) , ………… (year) .

_____
Signature of deponent
Solemnly affirmed and signed in my presence on this the (day) of (month), (year) after reading the contents of this
affidavit.

OATH COMMISSIONER

(Format of the affidavit to be submitted by the student in non-judicial stamp paper)

AFFIDAVIT BY THE STUDENT

I, …………………………...............….…………… (*full name of student with admission/registration/enrolment number*) s/o d/o Mr./Mrs./Ms. …………………………………………………………….., having been admitted to ………………………………..(*name of the institution)*, have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (*hereinafter called the "Regulations"*) carefully read and fully understood the provisions contained in the said Regulations.

2. I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3. I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
4. I hereby solemnly aver and undertake that
   a) I will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
   b) I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
5. I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any law for the time being in force.
6. I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this ___day of _____ month of _____year.

_____
Signature of deponent

Name:

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein.

Verified at ……………(place) on this the …….(day) of ……..(month),……………. (year) .

_____
Signature of deponent

Solemnly affirmed and signed in my presence on this the (day) of (month), (year) after reading the contents of this affidavit.

OATH COMMISIONER

CONTACT ADDRESSES

All enquiries about academic programmes and entrance examination qualifications should be directed to concerned Department offices. Enquiries relating to receipt of applications, entrance examination centre and other matters relating to the entrance examinations should be directed to the Controller of Examinations at 03712-267114.

The EPBAX extension numbers of all the Departments and of the Controller of Examinations are given below. Please dial (03712) 267007,267008,267009 and then the respective extension number.

Department/Office	Extension number	Mobile number (Head)	e-mail
Business Administration	5000	9957191528	tumba@tezu.ernet.in
Chemical Sciences	5050	9954449466	chem@tezu.ernet.in
Civil Engineering	5952	9957209881	atanu@tezu.ernet.in
Computer Science & Engineering	5100	9957191527	cs@tezu.ernet.in
Controller of Examinations	3140	(03712) 267114	bhuban@tezu.ernet.in
Cultural Studies	5150	9954449460	culture@tezu.ernet.in
Electronics & Communication Engineering	5250	9954449462	electronics@tezu.ernet.in
Energy	5300	9957191529	energy@tezu.ernet.in
English and Foreign Languages	5200	9954449463	efl@tezu.ernet.in
Environmental Science	5600	9954449473	environment@tezu.ernet.in
Food Engineering & Technology	5700	9954449467	fpt@tezu.ernet.in
Hindi	5751	9435185346	ananta@tezu.ernet.in
Mass communication and Journalism	5450	9954449472	masscom@tezu.ernet.in
Mathematical Sciences	5500	9954449469	maths@tezu.ernet.in
Mechanical Engineering	5850	9957189386	mech@tezu.ernet.in
Molecular Biology and Biotechnology	5400	9957184351	mbbt@tezu.ernet.in
Physics	5550	9954449470	physics@tezu.ernet.in
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No separate call letter will be sent to the candidates selected / waitlisted for admission. Results of the entrance examinations along with instructions will be available in TU website : www.tezu.ernet.in