

SECTION – 1

DIRECTOR'S SUMMARY

It is a privilege to write a foreword to this 31st Annual Report 2017-2018 of NERIST which gives a glimpse of various activities of this Institute during the last one year. In this period, we have worked together to develop and improve the infrastructure and strived hard to give a responsive and transparent administration.

In this endeavour, the Institute shall always remain indebted to the outgoing Presidents of the Society for NERIST, Shri Padmanabha Acharya, His Excellency the Ex. Governor of Arunachal Pradesh and Brigadier (Dr.) B.D. Mishra (Retd), His Excellency the Governor of Arunachal Pradesh for their guidance and support during the period of 2017-18. The Institute is also indebted to its Chairman of Board of Management, Prof. Umesh Chandra Ray, who has been a constant source of inspiration and guidance since 18th May, 2017. In this connection, the Institute shall also like to thank the Technical Bureau, IFD and other offices of MHRD for their support and cooperation from time to time.

During the period of the year 2017-18, a number of academic initiatives and infrastructure developmental activities have been taken up with support from all concerned. TEQIP activities with World Bank funding are going on in full swing and the administration is ever alert to offer transparency and support growth. However, there is no room for complacency and the Institute shall work even harder to achieve a still higher standard and try to meet targets for more than what has been expected of it so far.

The Institute has a highly qualified, motivated, and relatively young faculty and a devoted group of non-teaching employees. NERIST students are disciplined, motivated and sincere and have successfully competed with the students from some of the best institutions of the country in different competitive examinations in their respective fields. They have also earned laurels for themselves and for the Institute in India and abroad. The Institute has successfully carried out many prestigious sponsored research projects from reputed external funding agencies.

The placement record of the Institute has been satisfactory but more needs to be done. The present team of Training & Placement Cell has been doing their best to invite Govt./Semi Govt./Public Enterprises to the Institute to conduct placement interviews for our students.

Director

SECTION-2

INTRODUCTION

2.1 The Institute

Perched in the untrammelled beauty of the “land of the rising sun”, the North Eastern Regional Institute of Science and Technology (NERIST) was set up by the Government of India, initially as a pilot project of the North Eastern Council, Shillong under the Ministry of Home Affairs, Govt. of India to create a base of technical manpower, aimed at meeting the challenges at various level of development in the region. The campus of the Institute is located at Nirjuli, Itanagar, the capital city of Arunachal Pradesh, and is well connected to Guwahati by road, air and rail.

The Institute came under the direct control of Ministry of Human Resource Development (MHRD), Government of India, from 1st April, 1994. It has been conferred with the “Deemed to be University” status since May 31st, 2005, by the MHRD under Section-3 of UGC Act, 1956.

The Institute follows a modular pattern of education, having multiple entries and exits system and is producing skilled manpower at different levels, i.e., Certificate, Diploma and Degree, through its innovative educational program. The system of education adopted at NERIST is aimed to bridge the technological gap of the eight north eastern states that comprise of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura and rest of the country. This subsequently will increase the pace of socio-economic development in this region.

The Institute has demonstrated successful implementation of modular pattern of education. This has been able to create skilled manpower in nine Certificate courses, six Diploma courses and seven Degree courses that are being offered by the different departments, namely, Agricultural Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics & Communication Engineering, Mechanical Engineering and Forestry. Chemistry, Physics, Mathematics and Humanities & Social Sciences also have a pivotal role as supporting departments. Although, the Institute admits students at a tender age (after Class-X) with heterogeneous academic standards but its academic and administrative set up has been quite effective to ensure appreciable academic growth of the students including the development of different traits of their personality.

The Post-Graduate academic programmes were started in 1996-97 in two subjects viz., Information and Technology and Environmental Science & Engineering with due approval of AICTE and MHRD. After acquiring ‘Deemed to be University’ status in 2005 in subsequent years PG and Ph.D. programmes (part-time and full-time) in all Engineering and Science departments were started. Since 2006 MBA program is also running. NERIST has the distinction of being the first institute in the state of Arunachal Pradesh to start M. Tech. and MBA programmes.

VISION OF THE INSTITUTE

To produce professionals with competency for pursuing excellence in science & technology education, research, and entrepreneurship with ethical values and social sensitivity for offering specialized services to the society meeting the global requirements and standards in a multicultural environment.

MISSION OF THE INSTITUTE

1. To create a niche in the field of science & technology education and research through an innovative modular system.
2. To produce globally competitive technical and scientific manpower in different disciplines with high ethical values and with particular reference to the North Eastern Region.
3. To impart in engineers/technologists and trainees a mindset full of creativity to pursue excellence with a focus on stakeholders, accountability, environment, and people.
4. To develop collaborations with world-class R&D organizations, industries, and educational institutions in India and abroad for attaining excellence in teaching, research and consultancy practices.

2.2 Administrative set up

The Institute is registered as a Society under Societies Registration Act of 1860. At present, the Hon'ble Governor of Arunachal Pradesh is the ex officio President of NERIST Society and Prof. Umesh Chandra Ray is the present Chairman, Board of Management (BoM) of the Institute.

2.3 Salient Features

- Modular Technical Education System;
- Multi-point entry and exit system;
- Unconventional and innovative academic programme to create technical manpower at various levels for the development of the NE Region;
- Development of knowledge, skills and value-based education system;
- Highly qualified faculty and dedicated staff;
- P.G. and Ph.D. programmes;
- Well-equipped laboratories and workshops;
- Fully residential campus;
- Dedicated service for the development of NE Region.

SECTION – 3

ACADEMIC PROGRAMMES

3.1 A Brief Profile of the Section

Academic Section is the backbone of any Academic Institute/University. Present Academic Branch is divided into three cells, viz., Undergraduate, Postgraduate and Ph.D. for better functioning. The Undergraduate cell deals with the admission process, scholarships/other academic affairs of Base, Diploma & Degree Modules. The Postgraduate Cell deals with admission and other related affairs of M. Tech., MBA, M.Sc. including scholarships of UG & PG students and the Ph.D. Cell deals with all activities like an admission of Ph.D. scholars, conducting DPGC, BPGS, and other activities related to Ph.D. Scholars including scholarships of Ph.D. students. Matters relating to Convocation, Academic Council meeting, RTI, Correspondences with AICTE, UGC etc. and other miscellaneous academic matters are being dealt with by the one Senior Stenographer. Besides this, Academic Section also deals with all other matters related to academic affairs of the Institute with MHRD/UGC/AICTE and other miscellaneous academic matters. The branch is headed by Assistant Registrar (Academic). As on July-Dec. session 2017-18, the numbers of UG students were 1188, PG students were 289 and Ph.D. Scholars were 244. The total student strength was 1721.

All the undergraduate courses are accredited by the National Board of Accreditation (NBA). All the undergraduate Degree and Post-graduate Programmes in Engineering & Technology are approved by the AICTE.

3.2 Status Report regarding activities

The structure of the curriculum at NERIST consists of three independent modules in Engineering and Technology Streams and one independent module in Forestry. Apart from these programs, all Engineering and Science departments also offer PG programs in the form of M. Tech. and M. Sc. An MBA program is offered by CMS. All the departments of the Institute offer Ph.D. program. These are as follows:

(a) Engineering & Technology

1. Base (Certificate) Module
2. Diploma Module
3. Degree Module
4. M. Tech. Program
5. Ph.D. Program

(b) Applied Science

1. Degree Module
2. M.Sc. Program
3. Ph.D. Program

(c) Science

1. M.Sc. Program
2. Ph.D. Program

(d) Management

1. MBA
2. Ph.D. Program

(e) Humanities & Social Science

1. Ph.D. Program

In the Engineering and Technology stream, the Institute runs three modules viz., Base (admitted after Class X), Diploma (admitted after Class 10+2 / NERIST Base Module Course) and Degree Module (admitted after Diploma with requisite CGPA/Polytechnic Diploma with 1st Class). Each module is of 2 years' duration, besides the duration of bridge courses of Degree Module admitted through NEE-III which takes three years to complete their degrees. In Applied Science stream, B.Sc. (Forestry) is offered which is of four years' duration and the students are admitted through NEE-II after 10+2.

Scholarship/Fellowship

Different kind of Scholarships, viz. Ishan Uday Scholarship, State Government Stipends, centrally sponsored scholarship schemes through National Scholarship Portal, etc. have been provided to the eligible Undergraduate students.

The GATE qualified candidates admitted to the AICTE approved courses are eligible for Scholarship/Stipend and book grants of the AICTE, subject to the availability of grant received from the AICTE. The Ph.D. Research Scholars are also provided the scholarships as per the norms of the Govt. of India and the Institute.

However, irrespective of the source of scholarship/stipend, a student must attend at least 75% of classes in each course in which s/he has registered, failing which the scholarship/stipend may be terminated.

3.3 Courses offered for Under Graduate Programme

During 2017-18, the Institute offered the following courses in each module:

Base (Certificate) Module

Sl. No.	Base (Certificate) Module	Trades
1	Agricultural Engineering	i. Tractor Mechanic

		ii. Food Processing Technician
2	Construction Technology	i. Draftsman ii. Surveyor
3	Maintenance Engineering (Electrical)	Electrician
4	Maintenance Engineering (Electronics)	Electronic Technician
5	Maintenance Engineering (Mechanical)	i. Mechanical Craftsmanship ii. Refrigeration & Air Conditioning

Diploma Module (E&T Stream)

- a) Agricultural Engineering
- b) Civil Engineering
- c) Computer Science and Engineering
- d) Electrical Engineering
- e) Electronics & Communication Engineering
- f) Mechanical Engineering

Degree Module (E&T Stream)

- a) Agricultural Engineering
- b) Civil Engineering
- c) Computer Science and Engineering
- d) Electrical Engineering
- e) Electronics & Communication Engineering
- f) Mechanical Engineering

Degree Module (4-year programme in Forestry)

3.4 Courses Offered in Post Graduate Programme

The following Post Graduate Courses Programmes were running during 2017-18.

M.Tech. (Full Time)

Sl. No.	Department	Program
1	Agricultural Engineering	i. Farm Machinery & Power ii. Soil and Water Conservation Engineering
2	Civil Engineering	i. Environmental Science & Engineering ii. Geotechnical Engineering
3	Computer Science & Engineering	i. Information Technology ii. Computer Science & Engineering

4	Electrical Engineering	Power System Engineering
5	Electronics & Communication Engineering	Electronics & Communication Engineering(Specialization in VLSI/Communication Engineering)
6	Mechanical Engineering	i. Computer Integrated Manufacturing & Automation ii. Thermo-Fluid Engineering

M.Sc.

Department	Program
Forestry	M.Sc.
Chemistry	M.Sc.
Mathematics	M.Sc.
Physics	M.Sc.

MBA

Master of Business Administration under the Center for Management Studies.

Ph.D. (Full time) & Ph.D. (Part-time)

Engineering streams

- Agricultural Engineering
- Civil Engineering
- Computer Science & Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Mechanical Engineering

Science, Humanities and Management streams

- Forestry
- Physics
- Chemistry
- Mathematics
- Humanities & Social Sciences
- Management Studies

3.5 Any other relevant information/data

Number of Students enrolled in July-December Semester, for the session 2017-18 are summarized and furnished in the following tables.

(a) Under Graduate Programmes

Table 1: No. of Students enrolled in 1st Year (Module-wise)

Discipline	Base	Diploma	Degree
Agricultural Engineering (AE)	20	28	22
Civil Engineering (CE)	38	36	52
Computer Science & Engineering (CSE)	-*	16	16
Electrical Engineering (EE)	40	40	44
Electronics & Communication Engineering (ECE)	21	14	29
Mechanical Engineering (ME)	31	36	33
Total	150	170	196

Table 2: No. of Students enrolled in 2nd Year (Module-wise)

Discipline	Base	Diploma	Degree
Agricultural Engineering	22	20	26
Civil Engineering	29	39	41
Computer Science & Engineering	-*	10	17
Electrical Engineering	33	34	34
Electronics & Communication Engineering	16	19	37
Mechanical Engineering	24	34	35
Total	124	156	190

*Entry in CSE is after 10+2.

Table No.3: No. of Students enrolled in Degree (Forestry)

Year	No. of students
First	16
Second	17
Third	14
Fourth	13
Total	60

Table 4: No. of Students enrolled in Degree Bridge Year

Discipline	No. of students
Agricultural Engineering	01
Civil Engineering	13
Computer Science & Engineering	08
Electrical Engineering	13
Electronics & Communication Engineering	11
Mechanical Engineering	10
Total	56

Table 5: No. of Students enrolled as Repeaters

Discipline	Base	Diploma	Degree
Agricultural Engineering	07	03	01
Civil Engineering	12	02	07
Computer Science & Engineering	-*	03	05
Electrical Engineering	11	09	02
Electronics & Communication Engineering	03	06	04
Mechanical Engineering	03	07	01
Forestry	00	00	00
Total	36	30	20

Table 6: Gender-wise Detail of Students (Base Module)

Discipline	1 st Year		2 nd Year		Repeater		Total
	Male	Female	Male	Female	Male	Female	
Agricultural Engineering	12	08	15	07	05	02	49
Civil Engineering	30	08	21	08	09	03	79
Electrical Engineering	32	08	23	10	10	01	84
Electronics & Communication Engineering	16	05	12	04	03	00	40
Mechanical Engineering	26	05	21	03	03	00	58
Total	116	34	92	32	30	6	310

Table 7: Gender-wise Detail of Students (Diploma Module)

Discipline	1 st Year		2 nd Year		Repeater		Total
	Male	Female	Male	Female	Male	Female	
Agricultural Engineering	23	05	13	07	02	01	51
Civil Engineering	24	12	31	08	00	02	77
Computer Science & Engineering	12	04	10	00	03	00	29
Electrical Engineering	25	15	23	11	08	01	83
Electronics & Communication Engineering	09	05	14	05	06	00	39
Mechanical Engineering	33	03	30	04	07	00	77
Total	126	44	121	35	26	4	356

Table 8: Gender-wise Detail of Students in Engineering (Degree Module)

Discipline	1 st Year		2 nd Year		Bridge		Repeater		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
AE	07	15	17	09	01	00	01	00	50
CE	36	16	30	11	07	06	06	01	113

CSE	11	05	13	04	04	04	05	00	46
EE	37	07	28	06	09	04	02	00	93
ECE	20	09	25	12	08	03	04	00	81
ME	30	03	34	01	09	01	01	00	79
Total	141	55	147	43	38	18	19	1	462

Table 9: Gender-wise Detail of Students in Forestry (Degree Module)

Discipline	1 st Year		2 nd Year		3 rd Year		4 th Year & Repeater		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
FO	10	06	07	10	06	08	07	06	60

Table 10: Category-wise Detail of Students (Base Module)

Discipline	GE	OBC	SC	ST	Total
AE	10	03	02	34	49
CE	12	13	04	50	79
EE	25	05	05	49	84
ECE	17	03	05	15	40
ME	33	09	04	12	58
Total	97	33	20	160	310

Table 11: Category-wise Detail of Students (Diploma Module)

Discipline	GE	OBC	SC	ST	Total
AE	5	2	1	43	51
CE	21	10	4	42	77
CSE	13	5	1	10	29
EE	28	12	1	42	83
ECE	16	5	0	18	39
ME	39	12	5	21	77
Total	122	46	12	176	356

Table 12: Category-wise Detail of Students (Degree Module)

Discipline	GE	OBC	SC	ST	Total
AE	5	6	1	38	50
CE	28	11	6	68	113
CSE	6	13	4	23	46
EE	30	16	5	42	93
ECE	41	10	4	26	81
ME	37	15	6	21	79
FO	11	9	6	34	60

Total	158	80	32	252	522
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Table 13: State-wise Detail of Students (Base Module)

Discipline	AI	AL	AM	MG	MN	MZ	NL	SK	TR	TOTAL
AE	2	17	1	6	8	0	6	0	2	42
CE	3	21	7	7	10	5	7	2	5	67
EE	6	25	10	9	8	1	6	1	7	73
ECE	3	2	9	6	8	0	5	0	4	37
ME	7	7	13	4	7	2	2	3	10	55
Total	21	72	40	32	41	8	26	6	28	274

Table 14: State-wise Detail of Students (Diploma Module)

Discipline	AI	AL	AM	MG	MN	MZ	NL	SK	TR	TOTAL
AE	3	21	3	5	4	1	10	1	0	48
CE	7	23	9	6	5	4	8	7	6	75
CSE	3	2	3	5	6	0	3	3	1	26
EE	9	24	8	4	7	3	7	5	7	74
ECE	5	3	8	6	5	1	1	0	4	33
ME	3	20	16	7	7	1	5	1	10	70
Total	30	93	47	33	34	10	34	17	28	326

Table 15: State-wise Detail of Students (Degree Module)

Discipline	AI	AL	AM	MG	MN	MZ	NL	SK	TR	TOTAL
AE	4	20	4	3	4	3	6	3	2	49
CE	7	22	21	7	11	9	12	7	10	106
CSE	3	9	5	5	6	2	4	4	3	41
EE	9	16	15	9	12	3	8	5	14	91
ECE	14	13	16	2	7	3	7	4	11	77
ME	7	13	21	5	11	0	5	6	10	78
FO	4	6	9	6	6	7	7	9	6	60
Total	48	99	91	37	57	27	49	38	56	502

(b) Post-Graduate Programmes**Table 16: No. of Students enrolled in M.Tech. (Full Time)**

Sl. No.	Dept.	Name of the Programme	No. of students admitted				Total	
			1 st Year		2 nd Year			
			Male	Female	Male	Female	Male	Female
1.	AE	Soil & Water Conservation Engineering	4	2	2	2	6	4
		Farm Machinery & Power	4	1	2	0	6	1

2.	CE	Environmental Science & Engineering	7	3	5	5	12	8
		Geotechnical Engineering	8	0	9	2	17	2
3.	CSE	Computer Science & Engineering	3	5	2	2	5	7
		Information Technology	0	0	2	1	2	1
4.	EE	Power System Engineering	4	7	6	6	10	13
5.	ECE	Electronics & Comm. Engineering	3	11	9	5	12	16
		Very Large Scale Integration	0	0	0	0	0	0
6.	ME	Computer Integrated Manufacturing & Automation	9	0	6	1	15	1
		Thermo-Fluid Engineering	4	0	5	1	9	1
Total			46	29	48	25	94	54

Table 17: Category-wise No. of Students enrolled in M.Tech. (Full Time) 1st Year

Sl. No.	Dept.	Name of the Programme	GE	SC	OBC	ST	Total
1.	AE	Soil & Water Conservation Engineering	0	0	0	6	6
		Farm Machinery & Power	1	0	1	3	5
2.	CE	Environmental Science & Engineering	1	0	0	9	10
		Geotechnical Engineering	1	1	2	4	8
3.	CSE	Computer Science & Engineering	4	0	3	1	8
		Information Technology	0	0	0	0	0
4.	EE	Power System Engineering	1	2	3	5	11
5.	ECE	Electronics & Comm. Engineering	4	0	6	4	14
		Very Large Scale Integration	0	0	0	0	0
6.	ME	Computer Integrated Manufacturing & Automation	3	0	4	2	9
		Thermo-Fluid Engineering	1	0	1	2	4
Total			16	3	20	36	75

Table 18: Category-wise No. of Students enrolled in M.Tech. (Full Time) 2nd Year

Sl. No.	Dept.	Name of the Programme	GE	SC	OBC	ST	Total
1.	AE	Soil & Water Conservation Engineering	0	0	0	4	4
		Farm Machinery & Power	0	0	0	2	2

2.	CE	Environmental Science & Engineering	2	0	0	8	10
		Geotechnical Engineering	1	1	0	9	11
3.	CSE	Computer Science & Engineering	1	0	1	2	4
		Information Technology	0	1	1	1	3
4.	EE	Power System Engineering	4	2	4	2	12
5.	ECE	Electronics & Comm. Engineering	6	0	6	2	14
		Very Large Scale Integration	0	0	0	0	0
6.	ME	Computer Integrated Manufacturing & Automation	3	0	2	2	7
		Thermo-Fluid Engineering	2	0	3	1	6
Total			19	4	17	33	73

Table 19: No. of Students enrolled in M.Sc.

Sl. No.	Dept.	Name of the Programme	No. of students admitted				Total	
			1 st Year		2 nd Year			
			Male	Female	Male	Female	Male	Female
1.	PH	M.Sc. in Physics	8	4	5	6	13	10
2.	CH	M.Sc. in Chemistry	5	5	5	3	10	8
3.	MA	M.Sc.in Mathematics	3	10	2	3	5	13
4.	FO	M.Sc. in Forestry	5	12	8	3	13	15
Total			21	31	20	15	41	46

Table 20: Category-wise No. of Students enrolled in M.Sc. 1st Year

Sl. No.	Dept.	Name of the Programme	GE	SC	OBC	ST	Total
1.	Physics	M.Sc. in Physics	5	0	4	3	12
2.	Chemistry	M.Sc. in Chemistry	2	0	6	2	10
3.	Mathematics	M.Sc.in Mathematics	0	0	3	10	13
4.	Forestry	M.Sc. in Forestry	1	1	1	14	17
Total			8	1	14	29	52

Table 21: Category-wise No. of Students enrolled in M.Sc. 2nd Year

Sl. No.	Dept.	Name of the Programme	GE	SC	OBC	ST	Total
1.	Physics	M.Sc. in Physics	3	0	4	4	11
2.	Chemistry	M.Sc. in Chemistry	2	0	4	2	8
3.	Mathematics	M.Sc.in Mathematics	1	0	3	1	5
4.	Forestry	M.Sc. in Forestry	2	0	1	8	11
Total			8	0	12	15	35

Table 22: No. of Students enrolled in MBA

Sl. No.	Centre	Name of the Programme	No. of students admitted				Total	
			1 st Year		2 nd Year			
			Male	Female	Male	Female	Male	Female
1.	CMS	MBA	19	13	13	9	32	22

Table 23: Category-wise No. of Students enrolled in MBA 1st Year

Sl. No.	Centre	Name of the Programme	GE	SC	OBC	ST	Total
1.	Management Studies	MBA	6	3	2	21	32

Table 24: Category-wise No. of Students enrolled in MBA 2nd Year

Sl. No.	Centre	Name of the Programme	GE	SC	OBC	ST	Total
1.	Management Studies	MBA	3	3	4	12	22

Table 25: No. of Students enrolled in Ph.D. (Part Time & Full Time)

Engineering Disciplines (A)							
Sl. No.	Name of the Dept.	No. of Students admitted				Total	
		Part Time		Full Time			
		Male	Female	Male	Female	Male	Female
1.	Agricultural Engineering	1	0	12	7	13	7
2.	Civil Engineering	4	4	3	2	7	6
3.	Computer Science and Engineering	1	0	3	2	4	2
4.	Electrical Engineering	13	3	17	6	30	9
5.	Electronics and Communication Engineering	10	3	10	6	20	9
6.	Mechanical Engineering	11	0	19	5	30	5
Total (A)		40	10	64	28	104	38

Science, Humanities & Management Studies Disciplines (B)							
Sl. No.	Name of the Dept.	No. of Students admitted				Total	
		Part Time		Full Time			
		Male	Female	Male	Female	Male	Female
7.	Physics	4	1	10	5	14	6
8.	Chemistry	1	0	1	6	2	6
9.	Mathematics	7	1	3	5	10	6
10.	Forestry	4	4	13	10	17	14
11.	Humanities & Social Sciences	6	3	3	4	9	7
12.	Management Studies	4	3	1	3	5	6
Total (B)		26	12	31	33	57	45

Total (A) + (B)	Male	Female	Total
		161	83

Table 26: Category-wise No. of Students enrolled in Ph.D. (Part Time & Full Time)

Engineering Disciplines (A)						
Sl. No.	Name of the Dept.	GE	SC	OBC	ST	Total
1.	Agricultural Engineering	4	1	6	9	20
2.	Civil Engineering	1	0	0	12	13
3.	Computer Science and Engineering	3	0	2	1	6
4.	Electrical Engineering	14	3	14	8	39
5.	Electronics and Communication Engineering	18	0	10	1	29
6.	Mechanical Engineering	20	2	9	4	35
Total (A)		60	6	41	35	142

Science, Humanities & Management Studies Disciplines (B)						
Sl. No.	Name of the Dept.	GE	SC	OBC	ST	Total
7.	Physics	7	0	8	5	20
8.	Chemistry	4	1	2	1	8
9.	Mathematics	6	0	9	1	16
10.	Forestry	11	0	6	14	31
11.	Humanities & Social Sciences	6	2	1	7	16
12.	Management Studies	3	0	5	3	11
Total (B)		37	3	31	31	102

3.6 Miscellaneous

The Automation Process for Academic Section and Examination Cell activities of the Institute has become operational since July-December, 2016 session. All kind of fee related to Academic and Examination are being collected through online payment mode.

Institute has participated in the National Institutional Ranking Framework (NIRF).

All the Undergraduate and Postgraduate courses of the Engineering and Technology of the Institute are recognized by the All India Council for Technical Education, New Delhi.

The data of the Institute has been successfully uploaded in the All India Survey on Higher Education (AISHE) for the year 2017-18.

Online Anti-Ragging undertaking has been introduced from July, 2016. The students have to submit the Anti-Ragging (online) undertaking every year in the month of July during Semester Registration.

SECTION -4

4.1 DEPARTMENT OF FORESTRY

4.1.1 A Brief Profile of the Department

The Department of Forestry came into existence in 1986 along with the establishment of NERIST with an objective to impart forestry education. The department is equipped with the infrastructure designed to produce professionals with the managerial capacity and ability to take up future challenges in the field of forestry. Forestry courses in the institute are also an attempt to conform to National Forest Policy 1988, which emphasizes forestry education in India. Northeastern states of India are endowed with a large forest cover, which requires intellectual human resources for their conservation and sustainable management. Moreover, the region is considered as a megadiversity hot spot area rich not only in biodiversity but also having many rare, endangered, threatened and endemic species, some of which may become extinct soon without human intervention. With the vast learning experience, the outgoing students would be able to accomplish the mission of maintaining a balance between preservation of the genetic resources and sustainable utilization of forest resources on one hand and development of the region on the other. The students are given exposure and training in various forest-based aspects through field visits, project and dissertation work to gain practical knowledge and skills.

Apart from teaching, faculty members are actively involved in conducting research works in the different fields of forestry and allied subjects and guiding Ph. D. students in their respective field of specializations. The department has produced so far more than 55 Ph.D. degrees.

List of Faculty member with their designation and field of specialization

Sl. No.	Name	Designation	Area of specializations
1.	Dr. B. Singh	Professor	Horticulture & Agroforestry
2.	Dr. C. L. Sharma	Professor	Wood Science & Technology
3.	Dr. (Mrs.) M. Sharma	Professor	Wood Science & Forest Products
4.	Dr. (Mrs.) Karuna Shrivastava	Professor & Head	Plant Pathology, Fungal Diversity & Plant Biotechnology
5.	Dr. P. R. Gajurel	Associate Prof.	Taxonomy, Ethnobotany & Medicinal Plants
6.	Dr. S. Sureshkumar Singh	Associate Prof.	Biotechnology, Microbial Ecology & Bioinformatics
7.	Dr. A. Kumar	Associate Prof.	Wildlife Management

8.	Dr. O. P. Tripathi	Associate Prof.	Forest Ecology, Biodiversity Conservation & Remote sensing & GIS
9.	Dr. L. B. Singha	Associate Prof.	Forest Ecology, Biochemistry & Stress Physiology
10.	Mr. G. Pangging	Assistant Prof.	Forest Economics & Management
11.	Dr. Ashish Paul	Assistant Prof.	Ecology & Biodiversity Conservation
12.	Dr. Pradeep Kumar	Assistant Prof.	Biotechnology, Plant Pathology & Biocontrol
13.	Dr. Madhu Kamle	Assistant Prof.	Plant Biotechnology, Fungal-Plant Interaction

4.1.2 Academic activities

Education in Forestry Science and research in Forestry and its allied discipline are the major academic activities of the department. The various academic courses presently offered in Forestry sciences are:

Sl. No.	Name of Course	Duration
1	B. Sc. Forestry	4 Years
2	M. Sc. Forestry	2 years
3	Ph.D. Programme	-

All the important aspects of Forestry viz., Forest management, conservation, protection and utilization, Forest policy and planning, Forest Biology, Wildlife management, Silviculture, Wood Sciences & Technology, Application of GIS and Remote Sensing, Microbiology and Biotechnology, Soil biology and management etc. have been covered along with related interdisciplinary subjects like Biochemistry, Bio-statistics, Surveying, Marketing etc. particularly in B. Sc. Forestry. The department has the potential to do justice with the Forestry education in NERIST. Industrial training for 50 days is an integral component of B.Sc. Forestry course wherein students are attached with forest departments, zoological parks, research institution across the country and in non-government organizations such as M. S. Swaminathan Research Foundation, WWF, WIMCO, PRADAN, etc. The major topics undertaken in industrial training are natural resource management, wildlife management, tea cultivation and management, rural management, remote sensing, NWFP, Biodiversity conservation and forest ecology, etc.

The Department has in its credit more than 60 projects completed and 14 ongoing projects. The students working in the research projects have also got the opportunity to register for Ph.D. by which several young scientists are being produced by the Department. The department has already produced more than 55 Ph.D. The faculty members have contributed significantly to the overall knowledge dissemination through publications in scientific journals

of national and international repute. The department has a strong collaboration at national and international level with leading Institutes and Organizations.

4.1.3 Laboratories and Laboratory development:

The department has seven well-equipped laboratories for conducting practical classes and R & D activities inside the department besides three field labs (Nursery, Net house & Mist chamber). The Research Laboratory of the Department caters to the need of research activities of the department. It may be mentioned that the department has undertaken 74 research projects (completed/ongoing) sponsored by several funding agencies like MHRD, DST, CSIR, AICTE, MoEF, UNESCO, GBPIHED, ICAR, ICFRE, DBT, ISRO, DSIR, UNDP, NEC etc. The major instruments available in the department are: seed germinator, BOD incubator, portable leaf area meter (Licor), laminar air-flow chamber, rotary shaker, refrigerated centrifuge, refrigerator, deep freezer, hot air oven, muffle furnace, spectrophotometer, flame photometer, colony counter, autoclave, electronic balance, research microscopes (Leica), stereomicroscope (Zeiss), Phase-contrast microscope (Olympus), wood microtome, circular saw, automatic weather station, PCR systems, Gel documentation system, Gel electrophoresis, Gas Chromatograph, Socs Plus and Fibra Plus, Kelplus, UV-vis spectrophotometer, Flame photometer, GPS, GIS software etc. These instruments are used for conducting different experiments for student practices at various modules as well as research activities. A departmental computer center and Library provides the resources to the students and faculties to carry out their academic and research activities. The department has also LAN and printing facilities.

Existing Laboratories:

Lab No.	Name of lab and facilities	In-charge
Lab 1	Wood science & Forest products	Dr. M. Sharma
Lab 2	Plant-Microbe Interaction and Biotechnology	Dr. Karuna Shrivastava
Lab 3	Forest Systematic Ethnobotany & Horticulture	Dr. P. R. Gajurel
Lab 4	Environment, NRM and Restoration Ecology	Mr. G. Pangging
Lab 5	Silviculture, Forest Ecology and Biodiversity	Dr. O. P. Tripathi
Lab 6	Wildlife conservation	Dr. A. Kumar
Lab 7	Remote sensing and GIS lab	Dr. O. P. Tripathi
Facility 1	Computing Facility	Dr. A. Kumar
Facility 2	Department Library	Dr. A. Kumar
Facility 3	Forest Nursery	Dr. P. R. Gajurel
Facility 4	Forestry Herbarium	Dr. P. R. Gajurel
Facility 5	Bioinformatics Centre	Dr. S. S. Singh

4.1.4 Project/ Thesis completed by PG / Ph. D students

(i) Ph.D. thesis (awarded/submitted):

Name and Roll No.	Supervisor (s)	Status	Title of Ph.D. Thesis
W. Deepanita Devi	P. Rethy P R. Gajurel	Awarded	“Reproductive biology of two Piper species of North East India”.
Ms Malti Kumari Singh	M. B. Sharma C.L. Sharma	Awarded	“Evaluation of wood characteristics of some timber species of Assam, NE India with reference to wood quality and identification”.
Bibhuti R. Gogoi	M. B. Sharma C.L. Sharma	Awarded	“Studies on variations in wood properties of <i>Pinus kesiya</i> Royle ex Gordon from Meghalaya, India”
Ms Pallabi Bharali	C. L. Sharma B. Singh	Awarded	Ethnobotany and economic potential of spices and condiments used by selected communities of Arunachal Pr. and Assam.
Lakhyajit Bhuyan	C. L. Sharma B. Singh	Awarded	“Population structure, seed dispersal, germination and seedling fitness of two medicinally important tree species of <i>Garcinia</i> L. of North East India”.
Ms. Karabi Devi	Karuna Shrivastava	Awarded	“Studies on diversity of macrofungi in Kamrup district of Assam, India”.
Ms. Gyati Yam	O. P. Tripathi	Awarded	“Estimation of above ground biomass and carbon sequestration in temperate forest of Arunachal Pradesh.
Binita Medak	L. B. Singha	Awarded	“Nutritional and Ecological analysis of selected wild edible plants of Papum Pare district, Arunachal Pradesh, India”.
Parimal Chandra Ray	Awadhesh Kumar	Awarded	“Ecology of western hoolock gibbon (and regeneration status of their most preferred food plant species in Namdapha National Park, Arunachal Pradesh, India”.
H. Boboy Singh	S. S. Singh	Submitted	“Studies on occurrence and diversity of endomycorrhizal fungi associated with selected medicinal plants of Manipur”.
W. Robindro Singh	S. S. Singh Karuna Shrivastava	Submitted	“Genome characterization and phylogenetic analysis of wild and cultivated banana of Manipur”.

(ii) Project work completed by PG students:

Name of Student / Roll. No.	Dissertation title	Supervisor(s)
Rukjesh Marbom	Traditional agroforestry system in Eastern Himalaya: A case study of Tagin tribe in upper Subansiri district, Daporijo, Arunachal Pradesh.	Dr. B. Singh
Pakpi Niri	Taxonomic enumeration and ecological analysis of 'Tabum' (<i>Schizostachyum</i> sp.) - A bamboo with longest internode and endemic to Arunachal Pradesh.	Dr. L. B. Singha
Dimjaneng Haokip	Structural variation in some rattan species of Manipur.	Dr. M. B. Sharma Dr. C.L. Sharma
Mopin Ete	Marketing status and potential of non-timber forest produce in Itanagar area of Arunachal Pradesh.	Dr. P. R. Gajurel
Yakhari Kashung	Vegetation analysis and estimation of above ground biomass and carbon stock using Geospatial Technology in West Kameng district of Arunachal Pradesh.	Dr. O. P. Tripathi
Agumbe Nda	Comparative stem anatomy of some <i>Piper</i> species of Arunachal Pradesh.	Dr. C. L. Sharma Dr. M. B. Sharma
Mr. Niraj Rai	Documentation and valuation of culturally important trees of Monpa community in Eastern Himalaya, India.	Mr. G. Pangging
Hage Grayu	Studies on influence of different forest types on physico-chemical and biological properties of soil in Ziro Valley of Arunachal Pradesh.	Dr. S. S. Singh
Manipuspak Hazarika	Identification of pollution bio-indicators from industrial areas of Guwahati.	Dr. S. S. Singh

4.1.5 Short-term Courses/workshop organized:

	Title	Funding	Venue	Period
Dr. S. S. Singh	Online Lecture Series 1 (By Prof. Shannon Olsson; Topic: An introduction to Chemical Ecology) in collaboration with Chemical Ecology Group of NER (DBT), NCBS, Bangalore	DBT, Delhi NCBS (Bangalore)	Biotech Hub, Department of Forestry, NERIST	August 30 – 31, 2017.
	Online Lecture Series 2 (By Prof. Uma Shaankar; Topic: Mining metabolites from Nature- Microbes to plants) in collaboration with Chemical Ecology Group of NER (DBT)	DBT, Delhi NCBS (Bangalore)	Biotech Hub, Department of Forestry, NERIST	05/02/18.
	Online Lecture Series 3 (By Prof. Dr. Uma Krishnan; Topic: Biogeography: Study of species across space) in collaboration with Chemical Ecology Group of NER (DBT)	DBT, Delhi NCBS (Bangalore)	Biotech Hub, Department of Forestry, NERIST	09/03/18
Dr. Karuna Shrivastava	Member, organizing committee of “The 7th Review Meeting of the coordinators of DBT Sponsored Biotech Hubs in NER”	DBT, Delhi	Biotech Hub, Department of Forestry, NERIST	August 30 – 31, 2017.
	Online Lectures organised: Online Lecture Series 1 (By Prof. Shannon Olsson; Topic: An introduction to Chemical Ecology) in collaboration with Chemical Ecology Group of NER (DBT), NCBS, Bangalore on 14/11/17.	DBT, Delhi NCBS (Bangalore)	Biotech Hub, Department of Forestry, NERIST	14/11/17
	Organised online Lecture Series 2 by Prof. Uma	DBT, Delhi		05/02/18

	Shankar; Topic on “Mining metabolites from nature-Microbes to plants” in collaboration with Chemical Ecology Group of NER (DBT), NCBS, Bangalore on 05/02/18.	NCBS (Bangalore)	Biotech Hub, Department of Forestry, NERIST	
Dr. O. P. Tripathi	Climate change adaptation for Natural Resource Management	MoEF & CC, New Delhi through IIFM Bhopal	New Seminar Hall, ET Cell, NERIST	15-19 January 2018

4.1.6 Short-term Courses/workshop, etc. attended

Dr. Karuna Shrivastava	Attended project presentation meeting for new R&D project proposal titled ‘Distribution, population, ethnomycology and cultivation of high value wild edible macrofungi (WEM) from higher altitudes of Arunachal Pradesh: Exploration for conservation and biotechnological evaluation of their nutraceuticals/novel metabolites’ on 18 th December, 2017 at DBT, New Delhi.
Dr. P.R. Gajurel	Attended as a resource person in a national workshop at Golaghat College, Assam and delivered a talk on Farming techniques and sustainable use of medicinal plants on 11 th Sept 2017.
Dr. S. Suresh Kumar Singh	Attended 7 th Review Meeting of the Coordinators of DBT-Biotech-Hubs in the North-Eastern Region”, Manipur University Imphal, 30-31/8/17.
Dr. O. P. Tripathi	Attended one-day brainstorming programme on climate change at Cotton State University, Assam organized by NRSC, Hyderabad and NESAC, Shillong. Attended two days brainstorming programme on climate change at Gauhati University, Assam sponsored by DONER, NEC, Shillong. Attended HIMADRI Programme at Space Application Centre, Ahmedabad Interacted on climate change issues for Climate change programme organized by Forest Dept., Govt. of Arunachal Pradesh. Interacted on carbon sequestration aspects for an ongoing project with NEHU, Mizoram University, Manipur University, RFRI, AU Silchar at NEHU Shillong on 3 rd May, 2018.
Mr. G. Pangging	Presented a poster presentation on The ethnobotanical study of plants with special reference to magico-religious beliefs of the Mising tribe of Assam at 4 th International Symposium on Minor fruits, Medicinal & Aromatic Plants, organized by College of Horticulture and Forestry, Central Agricultural University, Pasighat, Arunachal on 5 th December 2017. Presented a poster presentation on Documentation of plants used in the magico-religious practices of Khampti tribe in Assam” at National Seminar on Himalayan

	<p>Plant diversity: Taxonomy conservation and sustainable utilization, Organized by BSI, Shillong, Meghalaya in collaboration with NEHU & EHSST on 8th & 9th March, 2018.</p>
Dr. A. Paul	<p>Participated in TEQIP-II (MHRD-World Bank Project) sponsored Short Term Training Programme (STTP) on Pedagogy Training for Outcome Based Education' on 16th – 17th March, 2017, organized by National Institute of Technical Teachers Training and Research (NITTTR), Bhopal, Madhya Pradesh and North Eastern Regional Institute of Science and Technology (NERIST), Nirjuli, Arunachal Pradesh.</p> <p>Participated in the Short-term In-house Training Programme on Leadership and Team Building in Academia on 30th October – 3rd November, 2017, organized by National Institute of Technical Teachers Training and Research (NITTTR), Kolkata, West Bengal and North Eastern Regional Institute of Science and Technology (NERIST), Nirjuli, Arunachal Pradesh.</p> <p>Participated in the Workshop on Massive Online Open Courses (MOOCs) on 29th April, 2017, conducted by Indian Institute of Technology, Kanpur at North Eastern Regional Institute of Science and Technology, Nirjuli, Arunachal Pradesh. Sponsored by MHRD in collaboration with National Programme on Technology Enhanced Learning (NPTEL).</p>
Dr. Pradeep Kumar	<p>National Programme on Technology Enhanced Learning (NPTEL) awareness workshop for Massive Online Open Courses (MOOCs) at NERIST, Organized by IIT Kanpur and sponsored by MHRD, GoI (29.04.2017).</p> <p>Participated in Training programme on Pedagogy Training for Outcome Based Education” Organised by NITTTR, Bhopal at NERIST, Nirjuli, AP, India (16.03.2017-17.03.2017).</p> <p>Short term course on Leadership and Team Building in Academia at NERIST organized by NITTTR, Kolkata (30.10.2017-03.11.2017).</p>
Dr. Madhu Kamle	<p>National Programme on Technology Enhanced Learning (NPTEL) awareness workshop for Massive Online Open Courses (MOOCs) at NERIST, Organized by IIT Kanpur and sponsored by MHRD, GoI (29.04.2017).</p> <p>Participated in Training programme on Pedagogy Training for Outcome Based Education” Organised by NITTTR, Bhopal at NERIST, Nirjuli, AP, India (16.03.2017-17.03.2017).</p> <p>Short term courses on Leadership and Team Building in Academia at NERIST organized by NITTTR, Kolkata (30.10.2017-03.11.2017).</p> <p>Two-week NER training program-2017 on Gene Cloning, Protein Biochemistry, Structure Biology & Bioinformatics sponsored by DBT, held at ACTREC-Mumbai (December 18th -29th, 2017).</p>

	National conference on diversity and utilization of tropical plants (NCDUTP-2018) 22-23 Feb 2018, Department of Botany, DDU Gorakhpur University.
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4.1.7 Achievements, awards, membership, etc. earned by the faculty

Prof C. L. Sharma	Life member of East Himalayan Society for Spermatophyte Taxonomy, University of North Bengal, P.O. North Bengal University, Siliguri 734013, India
Prof. M. Sharma	Membership of International Association of Wood Anatomists (IAWA, Netherland)
Dr. Karuna Shrivastava	Life Member, Association of Microbiologists of India
Dr. S. Suresh Kumar Singh	Life Member, Association of Microbiologists of India
Dr. A. Paul	National Environmental Science Academy (Life Member) Natural Areas Association (Member)
Dr. Madhu Kamle	Nano Molecular Society (Life Member)
Dr. Pradeep Kumar	Awarded Early Career Research Award-DST SERB-2017 Nano Molecular Society (Life Member)

4.1.8 Research project with amount date of sanction, agency, etc. (ongoing projects during the period)

Name of PI/CoPI	Title of project	Funding agency with order No.	Period	Amount (Lakhs)
Dr. B. Singh & Dr. P.R. Gajurel	Promotion of promising horticultural crops in degraded ecosystem and abandoned jhum land in Arunachal Pradesh for livelihood improvement.	GBPNIHESD, Govt. of India	2018-2020	11.0
Dr. S. S. Singh Dr. Karuna Shrivastava	Establishment of a culture collection centre in North East region of India Phase II.	DBT, New Delhi	2017-2020	27.104
Dr. Karuna Shrivastava	Collection, evaluation, documentation and conservation of banana genetic resources from north eastern region.	DBT, New Delhi	2018-2021	38.49
Dr. P.R. Gajurel Dr. B. Singh	Bioresources and sustainable livelihood in North East India.	DBT, New Delhi	2017-2020	73.0

Dr. A. Kumar	Exploring wildlife and nature-based tourism as potential livelihood option for local people inhabiting in and around the protected areas in Eastern Himalayas, Arunachal Pradesh: a sustainable approach for biodiversity conservation.	NMHS- GBPNIHESD	2018- 2020	45.002
Dr. Ksh. L. B. Singha, Prof. H.S. Yadav and Dr. O.P. Tripathi	Invasive Alien Plants in Himalayas: Status, Ecological Impact and Management.	MoEFCC	2017- 2020	64.17
Dr. Ashish Paul, OP Tripathi & LB Singha	Diversity, Population status, extraction intensity of rhododendron species and genetic diversity of <i>Rhododendron arboreum</i> in Eastern Himalayas and Western Ghats.	DBT, New Delhi	2018- 2021	53.107
Dr. Madhu Kamle & Dr. Pradeep Kumar	Micropropagation of <i>Litsea cubeba</i> (Lour.) Pers: an indigenous plant of North East India for genetic conservation.	GBPNIHESD	03 Year	8.0
Dr. Pradeep Kumar	Exploring the <i>Bacillus thuringiensis</i> genetic diversity with anti-coleopteran, anti-lepidopteron specific Cry genes to combat agriculturally important insect pest from North-East (Arunachal Pradesh) India.	DST-SERB	03 Year	42.93
Dr. Pradeep Kumar & Dr. Madhu Kamle	Screening of Phytochemical and Bioactive compounds against human pathogenic bacteria from some selected indigenous medicinal plants of Arunachal Pradesh, India.	DBT, New Delhi	03 Year	54.0
Dr. S. S. Singh	Diversity Assessment, Germplasm Conservation and Database Development on Banana Resources of North Eastern India	DBT, Govt. of India	03 years	84.95
	Consortium for managing Indian Banana Genetic Resources	DBT, Govt. of India	03 years	26.80
	Screening of Banana germplasm from the NE for <i>Fusarium</i> wilt resistance and molecular characterization in contrasting genotypes	DBT, Govt. of India	03 years	14.55

4.1.9 Publications

(a) Referred Research Journal:

1.	Bawri, A., Gajurel, P. R. and Khan, M. L. "Lecto typifications of five names of <i>Primula</i> species (Primulaceae)", Kew Bulletin, 73 (2018) DOI 10.1007/S12225-018-9750-9 pp 29.
2.	Devi, W. D., Gajurel, P. R. and Rethy, P., "Phenological behaviour of <i>Piper sylvaticum</i> Roxb. (Piperaceae) a medicinally important species occurring in north East India", Int. J. of Plant Reproductive Biology, 10(1) (2018), pp 84-89.
3.	Panda, P. C., Kumar, S. Singh, J. P and Gajurel, P., et al., "Improving macro propagation and seed germination techniques for conservation of threatened species", Current Science, 114(3) (2018), pp 562.
4.	Panmei, R., Gajurel, P. R. and Singh, B., "Ethnobotany wild edible plants used by <i>Zelegrong</i> tribe of Manipur northeast India", Pleione, 12(1) (2018), pp 1-5.
5.	Kashung, Y., Das B., Deka, S., Bordoloi, R. Paul, A. and Tripathi, O.P., "Geospatial technology based diversity and above ground biomass assessment of woody species of West Kameng district of Arunachal Pradesh", Forest Science and Technology 14(2) (2018), pp 84-90. ISSN: 2158-0103 (Print), 2158-0715 (Online).
6.	Das, B., Paul, A., Bordoloi, R., Tripathi, O.P. and Pandey P.K., "Soil erosion risk assessment of hilly terrain through integrated approach of RUSLE and geospatial technology: a case study of Tirap District, Arunachal Pradesh", Modeling Earth Systems and Environment 4(1) (2018), pp 373-381. ISSN: 2363-6203 (Print), 2363-6211 (Online).
7.	Bamin, Y., Gajurel, P.R. and Paul, A. (2017) Community structure, species composition and population status of NTFPs of Ziro Valley in Arunachal Pradesh, India. <i>Journal of Forest and Environmental Science</i> 33(3): 202-225. ISSN: 2288-9744 (Print), 2288-9752 (Online),
8.	Bhuyan, L., Sharma, C. L., Singh, B., Sharma, M. and Bharali, P. 2017. Regeneration of two medicinally important <i>Garcinia</i> species of Assam, NE India. <i>International Journal of Recent Scientific Research</i> Vol. 8 (8): 19372-19377.
9.	Sharma, M., Sharma C. L. and Laishram, D. 2017. Variation in anatomical and physical properties of some <i>Schizostachyum</i> species of Manipur, India. <i>Jour. Indian Acad. Wood Sci.</i> 14(1):79-90.
10.	Bhuyan, L., Sharma, C. L., B. Singh and Sharma, M. 2017. Vegetative propagation of two important <i>Garcinia</i> species of Assam, NE India. <i>Jour. Medicinal Plants Studies</i> 5(3): 273-277.
11.	Bharali, P., Sharma, M., Sharma, C. L. and Singh, B. 2017. Ethnobotanical survey of spices and condiments used by some tribes of Arunachal Pradesh. <i>Journal of Medicinal Plants Studies</i> 5(1): 101-109.

12.	Bharali, P., Sharma, C. L. Singh, B. and Sharma, M. 2017. Ethnobotanical studies of spice and condiment plants used by some communities of Assam. <i>International Journal of Advances in Scientific Research</i> . Vol. 3(01): 01-11.
13.	Ulman, Y., Kumar, A and Sharma, M. (2017). Traditional homegarden agroforestry systems: habitat for conservation of Baya Weaver <i>Ploceus philippinus</i> (Passeriformes: Ploceidae) in Assam, India. <i>Journal of Threatened Tax</i> , 9 (4): 10076-10083.
14.	Pramanik, B., Shrivastava, K., Singh, S.S., and Khan, M.L. (2017). Microorganisms in Arsenic Bioremediation with Special Reference to Filamentous Fungi: A Review, <i>Journal of Bioresources</i> 4(2): 1-12. ISSN 2394-4315
15.	Pangging, G., Ao, A., and Das, A.K. (2017). Population structure and regeneration status of <i>Dipterocarpus macrocarpus</i> , <i>Sapium baccatum</i> and <i>Stereospermum personatum</i> along three disturbance regime in Singphan wildlife sanctuary, Nagaland, India. <i>Environment & Ecology</i> , 35(2C) 1287-1290 (Paper accepted). ISSN 0970-0420. NAAS
16.	Pangging, G and Mandal, S. (2017). Assessment of shade trees and socio-economic condition of the tea workers: A case study of tea estate around Banderdewa forest range. <i>Bulletin of Arunachal Forest Research</i> . 32 (1&2): 62-65. ISSN 0970-9487.
17.	Dutta, J., Muang, O., Blasubramanian, Pangging, G and Arunachalam, A. (2017). Sacred groves of Ziro valley dominated by Apatani tribes in Arunachal Pradesh. <i>Indian Journal of Hill Farming</i> . 30(1) 1-7.
18.	Pangging, G., Sangma, S.J., Sharma, C.L. and Sharma, M. (2017). Documentation and valuation of tree species used in traditional agroforestry systems by Nyishi tribe of Arunachal Pradesh, eastern Himalaya. <i>International Journal for Research in Applied Science & Engineering Technology</i> . 5(9): 1489-1497.
19.	Medak, B and Singha, L.B. (2017). Nutritional Contribution by Wild Plants as Novel Food to the Ethnic Tribes of Arunachal Himalaya, India. <i>IOSR Journal of Pharmacy and Biological Sciences</i> , 12(3): 73-79.
20.	Das, A.K., Singha, L.B and Khan, L.M (2017). Community structure and species diversity of <i>Pinus merkusii</i> Jungh. & de Vriese forest along an altitudinal gradient in Eastern Himalaya, Arunachal Pradesh, India. <i>Tropical Ecology</i> , 58(2): 397-408.
21.	Saikia, P., Deka, J., Bharali, S., Kumar, A., Tripathi, O.P., Singha, L.B., Dayanandan, S and Khan, M.L. (2017). Plant diversity patterns and conservation status of eastern Himalayan forests in Arunachal Pradesh, Northeast India. <i>Forest Ecosystems</i> , 4:28 DOI 10.1186/s40663-017-0117-8.

22.	Das, B., Deka, S., Bordoloi, R., Pandey, P.K., Singha, L.B., and Tripathi, O.P. (2017). Rapid assessment of above ground biomass in forest of Papum Pare district of Arunachal Pradesh: A geospatial approach. <i>Malaya Journal of Biosciences</i> , 4(2): 48-55.
23.	Medak, B and Singha, L.B. (2018). Trace elements and antioxidant activity of six wild edible plants that are widely consumed by ethnic tribes of Arunachal Pradesh, India. <i>Indian Journal of Agricultural Research</i> , 52(1): 85-88.
24.	Bajpai, R., Shukla, V., Singh, C.P., Tripathi, O.P., Nayaka, S. and Upreti, D.K. (2018) Lichen community composition in Tawang district of Arunachal Pradesh, tool for long-term climate change monitoring. <i>Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.</i> 88(3): 915–922.
25.	Kashung, Y., Das B., Deka, S., Bordoloi, R. Paul, A. and Tripathi, O.P. (2018) Geospatial technologybased diversity and above ground biomass assessment of woody species of West Kameng district of Arunachal Pradesh. <i>Forest Science and Technology</i> 14(2):84-90. ISSN: 2158-0103 (Print), 2158-0715 (Online), Peer reviewed. Official Journal of the Korean Society of Forest Science. Taylor and Francis Group.
26.	Das, B., Paul, A., Bordoloi, R., Tripathi, O.P. and Pandey P.K. (2018) Soil erosion risk assessment of hilly terrain through integrated approach of RUSLE and geospatial technology: a case study of Tirap District, Arunachal Pradesh. <i>Modeling Earth Systems and Environment</i> 4(1):373-381. ISSN: 2363-6203 (Print), 2363-6211 (Online), Peer reviewed. Springer International Publishing AG. Part of Springer Nature.
27.	Shooner, S., Davies, T.J., Saikia, P., Deka, J., Bharali, S., Tripathi, O.P., Singha, L., Khan, M.L., and Dayanandan, S., (2018) Phylogenetic diversity patterns in Himalayan forests reveal evidence for environmental filtering of distinct lineages. <i>Ecosphere</i> 9(5): e02157.10.1002/ecs2.2157 ISSN:2150-8925, Peer reviewed. ESA publications.
28.	Saikia, P., Deka, J., Kumar, A., Tripathi, O.P., Singha, L.B., Dayanandan, S., Khan, M.L., (2017) Plant diversity patterns and conservation status of eastern Himalayan forests in Arunachal Pradesh, Northeast India. <i>Forest Ecosystems</i> 4:28 ISSN: 2197-5620 (Online)
29.	Mohapatra J., Singh C.P., Tripathi, O.P., Pandya, H.A. (2017) Alpine treeline ecotone dynamics and greening trend in Eastern Himalaya through remote sensing techniques. Proceedings of 38 th Asian conference on Remote sensing (ACRS), Oct. 2017
30.	Amonge, D.E., Kumar, A and Sharma, M. (2017). Reproductive Biology of Eastern Hoolock Gibbon <i>Hoolock leuconedys</i> in Conservation Breeding Centre at Biological Park, Itanagar, Arunachal Pradesh, India. <i>International Journal of Zoological Research</i> , 13 (3): 93-104.
31.	Ulman, Y., Kumar, A and Sharma, M. (2017) Traditional home garden agroforestry systems: habitat for conservation of Baya Weaver <i>Ploceus philippinus</i> (Passeriformes: Ploceidae) in Assam, India. <i>Journal of threatened taxa</i> , 9(4): 10076–10083.

32.	Devi, A., Sarma, J and Kumar, A. (2017). An appraisal of ethno-botanical approaches in north eastern states of India. In: <i>Compendium on Botanical research on eastern India</i> . (P Medhi and H Roy, Eds.) pp. 373-408. EBH Publishers, India.
33.	Krishna, M., Kumar, A., Ray, P.C and Kuladip (2017) Land of the Rising Sun. Hornbill, October-December, 38-40.
34.	Borah, M., Devi, A and Kumar, A (2017). Self-medication by western hoolock gibbon: food as medicine. <i>Proceeding of the National Seminar on Climate change and Society</i> . (Hoque, R.R. Ed.), Pp. 41-48. Ticol Style Track publisher, Kumar Gaon, Tezpur, Assam, India.
35.	Borah, M., Devi, A and Kumar, A (2018) Diet and Feeding Ecology of Western Hoolock Gibbon (<i>Hoolock hoolock</i>) in a Tropical Forest Fragment of Northeast India. <i>Primates</i> , 59:31-44, DOI 10.1007/s10329-017-0627-6
36.	Amonge, D.E and Kumar, A. (2018). Role of Fragmented Forests in Conservation of Biota: A Study in Balipara Reserve Forest, Sonitpur District, Assam (India). <i>Journal of Bioresources</i> , 5 (1):18-27.
37.	Bajpai, V.K., Kamle, M., Shukla, S., Mahato, D.K., Chandra, P., Hwang, S.K., Kumar, P*., Huh YS., Han YK (2018) Prospects of Using Nanotechnology for Food Preservation, Safety, and Security. <i>Journal of Food Drug Analysis</i> . https://doi.org/10.1016/j.jfda.2018.06.011
38.	Kamle, M., Bar, E., Lewinsohn, D., Shavit, E., Roth-Bejerano, N., Kagan-Zur, V., Guy, O., Zaadi, E., Lewinsohn, E and Sitrit, Y. (2017). Characterization of Morphology, Volatile Profiles and Molecular Markers in Edible Desert Truffles from the Negev Desert. <i>J. Agric. Food Chem.</i> , 65 (14): 2977–2983.
39.	Kamle, M and Baek, K.H. (2017). Somatic Embryogenesis in Guava (<i>Psidium guajava</i> L.): Current Status and Future Perspectives. 7(3): 203. 3Biotech, Springer
40.	Kamle, M., Kumar, P., Patra, J.K and Bajpai, V.K. (2017). Current perspectives in Genetically Modified Food Detection methods. 3Biotech, Springer
41.	Singh, T., Shukla, S., Kumar, P*., Wahla, V., Bajpai, V.K and Rather, I.A. (2017) Application of Nanotechnology in Food Science: Perception and Overview. <i>Front. Microbiol.</i> 8:1501. doi: 10.3389/fmicb.2017.01501
42.	Khan, I., Bahuguna. A., Kumar. P*., Bajpai. V.K., Kang, S.C. (2017) Antimicrobial Potential of Carvacrol against Uropathogenic <i>Escherichia coli</i> via Membrane Disruption, Depolarization, and Reactive Oxygen Species Generation. <i>Frontiers in Microbiology</i> . 8:2421. doi:10.3389/fmicb.2017.02421.
43.	Agarwal, M., Dheeman, S., Dubey, R.C., Kumar, P*., Maheshwari, D. K., Bajpai, V. K. (2017) Differential antagonistic responses of <i>Bacillus pumilus</i> MSUA3

	against <i>Rhizoctoniasolani</i> and <i>Fusarium oxysporum</i> causing fungal diseases in <i>Fagopyrum esculentum</i> Moench. <i>Microbial Research</i> . 205: 40-47
44.	Bajpai, VK., Shukla, S., Paek, W.K., Lim, J., Kumar, P*., Pankaj, K and Na M. (2017) Efficacy of (+)-Lariciresinol to Control Bacterial Growth of <i>Staphylococcus aureus</i> and <i>Escherichia coli</i> O157:H7. <i>Front. Microbiol.</i> 8:804.
45.	Bajpai, VK., Shukla, S., Paek WK, Lim J, Kumar P* and Na M (2017) Antibacterial Action of Jineol Isolated from <i>Scolopendrasubspinipesmutilans</i> against Selected Foodborne Pathogens. <i>Frontiers in Microbiology</i> .8: 552.
46.	Kumar, R and Kumar, P*. (2017) Future Microbial Applications for Bioenergy Production: A Perspective. <i>Frontiers in Microbiology</i> . 8:450. doi:10.3389/fmicb.2017.00450.
47.	Tiwari, A.K., Khan, M.S., Kumar, P*., Tiwari, A. (2017) Molecular characterization of phytoplasma of 16SrI-B group association with <i>Acalypha indica</i> in India. <i>3 Biotech</i> 7: 49.
48.	Kumar, P., Pagano, M and O'Donovan, A. (2017) Biotechnological advancement in beneficial fungi for plants. <i>Mycosphere-Journal of Fungal Biology</i> . 8(3) 445-455.
49.	Kumar, P., Tiwari, A. K., and Kang, S. G. (2017) Status of major fungal diseases of sugarcane in India: an overview. <i>Brazilian Archive of Biology and Technology</i> . Vol.60: e17160477. Doi:10.1590/1678-4324-2017160477.
50.	Kumar, P*., Mahato, D.K., Kamle, M., Mohanta, T.K and Kang, S.G. (2017) Aflatoxins: A Global Concern for Food Safety, Human Health and Their Management. <i>Front. Microbiol.</i> 7:2170. doi: 10.3389/fmicb.2016.02170.
51.	Pandey, AK., Kumar, P*., Singh, P., Tripathi, N. N., Bajpai, V. K. (2017) Essential Oils: Sources of Antimicrobials and Food Preservatives. <i>Front. Microbiol.</i> 7:2161. doi: 10.3389/fmicb.2016.02161
52.	Kumar, S., Das, G., Shin, H., Kumar, P*., and Patra, JK. (2017). Evaluation of Medicinal Values of <i>Gymnopetalum chinense</i> (Lour.) Merr., a Lesser Known Cucurbit from Eastern Ghats of India. <i>Brazilian Archives of Biology and Technology</i> , 60, e17160580. Doi:10.1590/1678-4324-2017160580
53.	Paria, D., Kundu, S., Singh, K.K., Singh, S.S. and Singh, K.S. (2018) Synthesis, Characterization and Antidiabetic Activity of Some Water-Soluble Zn (II) Complexes with (E)-N-(Thiophen-2-ylmethylene) anilines. (Page1115-1116), <i>Asian Journal of Chemistry</i> (March, 2018) ISSN: 0970-7077
54.	Arya, H., Syed, S.B., Singh, S.S., Ampasala, D.R., Coumar, M.S. (2017). In Silico Investigations of Chemical Constituents of <i>Clerodendrum colebrookianum</i> in the Anti-

	Hypertensive Drug Targets: ROCK, ACE, and PDE5, <i>Interdisciplinary Sciences: Computational Life Sciences</i> (July, 2017) ISSN: 1867-1462,
55.	Singh, H. B., Singh, S. S. and Singh, S. M. (2017). Spore population, occurrence and root colonization of AM fungi in five ethnomedicinal plants of Manipur, North Eastern India (Page 124-128). <i>International Journal of Scientific Research</i> (July, 2017) ISSN: 2277-8179,

(b) Research articles in Books, Conference Proceedings etc.

1.	Singh, S.S., Khanikar, C., Talukdar, N.C., Kaur, G.S and Shrivastava, K. (2017). Molecular identification of six pigment producing filamentous fungi by internal transcribed spacer (ITS) sequences, 7th Symposium of the DNA Society of India, 17-18th Nov, 2017.
2.	Ranibala, G., Singh, S. S and Khan, M. L. (2018). Evaluation of nuclear and chloroplast genome sequences for delineation of species identity in six ornamental species of <i>Musa</i> from North East India, 7th Symposium of the DNA Society of India, 17-18th Nov, 2017.
3.	Mittal, P., Kamle, M., Sharma, S., Choudhary, P., Rao, D. P., Kumar, P. (2017). <i>Plant Growth-Promoting Rhizobacteria (PGPR): Mechanism, Role in Crop Improvement and Sustainable Agriculture</i> In: <i>Advances in PGPR Research</i> (eds HB Singh, B. Kumar Sarma and C. Keswani), CAB International, 22: 386-399.
4.	Satish, L., Galit, Y., Kamle, M., Patil, C. D., Kushmaro, A., Kagan-Zur, V., Roth-Bejerano, N., Barak, Z., Sitrit, Y. (2018). <i>Agrobacterium tumefaciens mediated genetic transformation of the ectendomycorrhizal fungus Terfezia boudieri</i> . Israel Society of Microbiology 2018 annual meeting on 3-4 July 2018.
5.	Kamle, M., Bar, E., Lewinson, D., Shavit, E., Roth-Bejerano, N., Kagan-Zur, V., Lewinson, E and Sitrit, Y. (2017). <i>Development of Edible Desert Truffles as new crops: Characterization of morphology, molecular markers, volatile profiles, and agrotechnologies</i> . The 9th International Workshop on Edible Mycorrhizal Mushrooms on July-10-14, 2017, Texcoco, Mexico.
6.	Kumar, P*and Kamle, M. (2017) “ <i>Molecular characterization of Fusarium mangiferae as mango malformation pathogen</i> ” National conference on diversity and utilization of tropical plants" (NCDUTP-2018) 22-23 Feb 2018. At Department of Botany, DDU Gorakhpur University.
7.	Tiwari, A.K., Singh, A., Singh, S. P., Dagar, A., Kumari, K., Mahato, D.K., Pandey, N., Kumar, P., * (2017) An Overview of Major Fungal Diseases of Sugarcane in India: Detection and Management Strategies. In: <i>Molecular Markers in Mycology</i> , Fungal Biology, B.P. Singh, V.K. Gupta (eds.), Springer-Nature, Switzerland, 275-304.
8.	Krishna, M and Kumar, A. (2018). Small carnivore diversity and threats to the species in Eastern Arunachal Pradesh, India. In: <i>Biodiversity and Conservation- strategies and applications</i> .

	(Solanki, G.S., Ed). South-Eastern Book Agencies, Kuhiram Path, Ambikagiri Nagar, Zoo Road, Guwahati, Pp.95-105.
9.	Ray, P.C and Kumar, A. (2018). The role of potential fruiting trees in conserving associated frugivore species in Namdapha National Park, Arunachal Pradesh, India: A model based case study. In: <i>Biodiversity and Conservation- strategies and applications</i> . (Solanki, G.S., Ed). South-Eastern Book Agencies, Kuhiram Path, Ambikagiri Nagar, Zoo Road, Guwahati , Pp. 178-197.

4.1.10 Interaction of faculty/department with outside agency, membership in professional bodies/committees, etc.

The faculty members are actively interacting with the following outside organisation/ agencies for academic and developmental works

- Botanical Survey of India (BSI), Kolkata, Shillong and Itanagar
- Department of Biotechnology (DBT), Delhi
- Department of Science and Technology (DST), Delhi
- Research collaboration with Dept. of Chemistry, NIT, Agartala on biological activity screening of synthetic compounds
- Forest Research Institute (FRI), Dehradun
- Forest Survey of India (FSI), Dehradun
- Foundation for Revitalisation of Local Health Tradition (FRLHT), Bangalore
- Indian Institute of Remote Sensing (IIRS), Dehradun
- Indian Space Research Organisation (ISRO-SAC), Ahmedabad
- North Eastern Council (NEC), Shillong
- Multidisciplinary Research Unit, ICMR, Naharlagun, Govt. of Arunachal Pradesh
- Universities like NEHU, Gauhati University, Manipur University, Delhi University Tezpur University, Rajiv Gandhi University, etc.
- National Institute of Technology, Agartala
- External experts for recruitments of project positions, dissertations, practical examinations, etc. in various Institutions

4.1.11 Consultancy project undertaken: Nil

4.1.12 Achievements of the students:

1. **Mr. Biswajit Pramanik** (Ph.D.(FT)/13/FO/01) won “ISNM-DBT Award” to attend 2nd Annual Conference of Indian Society of Nanomedicine “NANOBIOTECK – 2017” held at Trivandrum from 6 - 8 December 2017 and received Rs. 16,000 with free registration, accommodation and other conference events.
2. **Dr. Gyati Yam** was awarded Kothari Post Doctoral Fellowship by UGC, New Delhi
3. **Mr. Hage Grayu**, M.Sc. Project Student got a job in AP State Govt.
4. **Mr. Manipuspak Hazarika**, M. Tech Project Student joined as faculty in a Technical College, Tezpur, Assam.

4.1.13 Any Others, if any:

- *Enhancement of laboratory facilities through external funded projects in different laboratories
- *Developmental activities through plantation and management in Forest Nursery.
- *Sharing of Technical Know How to various farmers interested in cultivation and plantation management.
- *Visits of students in different Forest areas, Institution etc.

4.2 DEPARTMENT OF AGRICULTURAL ENGINEERING

4.2.1 A brief profile of the Department

Agricultural Engineering is the application of engineering principles in agriculture. Agricultural Engineering deals with the use of engineering tools and practice to solve crop production, handling and processing problems for food and fiber along with the production to consumption chain. It includes the application of scientific knowledge in diverse and multidisciplinary activities for the overall development of the nation and farming community under a protective environment.

The Agricultural Engineering Department started its B. Tech. program in Agricultural Engineering in the year 1986. The department adopts a modular pattern of education leading to the degree of B.Tech. in Agricultural Engineering, in three modules viz., base (in two separate trades of (i) Food Processing and (ii) Tractor Mechanic), diploma and degree. At present students registered in M. Tech. (Farm Machinery and Power), M. Tech. (Soil & Water Conservation Engineering) and Ph. D. programmes are 07, 12 and 10, respectively.

Department has 15 faculty members of which 02 are on the lien. Five sponsored research projects (SAC ISRO, MoEF, CSIR) on emerging areas of Agricultural Engineering are running in the department besides one All India Coordinated Research Project (AICRP) on Human Engineering and Safety in Agriculture, funded by ICAR, New Delhi.

4.2.2 Academic Activities

Modification of existing courses : Nil

(a) Introduction of new elective : Nil

(b) Laboratory Works Sheets designed : Nil

(c) Modification in the course structures : Nil

4.2.3 Laboratories and Laboratory Development: Following equipments were purchased for laboratories:

(a) S Type Loadcell Capacity 200 kg (Brand - Sensotronic)

(b) Microcontroller

(c) NI USB-6001 Data Acquisition system with a connector

4.2.4 Project completed by the Ph.D., PG and UG students.

(i) Ph.D. thesis (awarded/submitted):

Name and Roll No.	Supervisor (s)	Status	Title of Ph.D. Thesis
Angom Ingocha Singh	K.N. Dewangan	Awarded	Design and performance evaluation of large cardamom de-tailing machine
Chitrasen Lairenjam	Arnab Bandyopadhyay & Aditi Bhadra	Awarded	GIS-based Trend Analysis of Meteorological Parameters for North East India
Sanayanbi Hodam	Arnab Bandyopadhyay & Aditi Bhadra	Awarded	Quantitative Assessment of Vulnerability to Floods for Changing Climate in North East India

(ii) Project work completed by PG students:

Name of Student / Roll. No.	Dissertation title	Supervisor(s)
Mulukhoto Khamo	Agricultural accident survey in Nagaland	Dr. K.N. Dewangan
H. Lalramnghaki	Soil erosion assessment in high altitude Mago basin of Arunachal Pradesh	Dr. Aditi Bhadra
NemtinkimHangsing	Comparison of various reanalysis gridded precipitation data with observed data from meteorological stations over India	Dr. Arnab Bandyopadhyay
Kabyasree Choudhury	Assessment of temporal and spatial variability of vulnerability to flood for north-east India	Dr. Arnab Bandyopadhyay
Sentichuba Pongener	Isometric Push/Pull Muscular Strength of Agricultural Workers-Implications for Ergonomic Design	Dr. T. Patel Mr. A. Pal
B. Surya Kumar Chhatry	Performance Evaluation of variable hitch height during haulage for 2WD tractor	Dr. P.K. Pranav
Issac Tabin	Modelling and forecasting of monthly rainfall and temperature to detect climate change for Umiam (Barapani), Meghalaya	Dr. P.P. Dabral Dr. P.K. Pandey

(iii) Project work completed by Degree students:

Name of the student	Title of the project	Name of the guide
Alname N. Sangma Thejangunno Livi	Study of change point and trend in rainfall of Doimukh (Itanagar), Arunachal Pradesh	Dr. P.P. Dabral and Dr. P.K. Pandey
Imlisunep Lusang and Bhashkar	Hand anthropometry of agricultural workers on north east India and design of hand tools	Dr. K.N. Dewangan
Albarin M. Sangma Goukhancin G.	Characteristics of daily extreme temperature over stations of North-east India	Dr. S.K. Shrivastava
Khyoda Mema, Tana Mathew	Development of k_c curves for major crops of Pare basin of Arunachal Pradesh	Dr. Arnab Bandyopadhyay

Lijum Nirin, Tarak Golom	Spatial variability analysis of soil physical properties in Pare basin of Arunachal Pradesh	Dr. Aditi Bhadra
Gogum Buchi Dolo Bengde	Ergonomic Design and Usability Evaluation of Manually Operated Weeder Handle	Dr. T Patel
Rajnish singh Kundan Tiwari	Drying characteristics and quality – attributes of pineapple powder by using foam mat drying	Mr. A.K. Choudhary
Nirbhay Singh Kumar Manglam	A case study of post- harvest losses and shelf life of oranges	Mr. A.K. Choudhary
Sarika Kumari Savita Kumari	Comparison of biomass based on heat content before and after gasification	Dr. P.K. Pranav
Sarju Thokchom Takhe Babing	Economic evaluation of gasification of weeds using downdraft gasifier	Dr. P.K. Pranav
Karthik P. Narayanan Robin N. Marak	Measurement of dynamic weight transfer of tractor in different height of bumps with different temperature	Mr. Anubhab Pal
Gotak Dubi Koz Mioneue	Evaluation and calibration of Valientzers Reference Evapotranspiration equation under humid region of North-east India	Dr. P.K. Pandey Dr. P.P. Dabral

(iv) Project work completed by Diploma students:

Name of the student	Title of the project	Name of the guide
Lekjum Yudik and Ngilyang Sumpi	Hand anthropometric data of female agricultural workers on north east India	Dr. K.N. Dewangan
Raju Tajo	Investigation of consistency in rainfall record of Arunachal Pradesh	Dr. S.K. Shrivastava

W. Bishwanath Singh Tarom Milling		
Roshna Khawas Takhe Munni	Low cast storage of orange and apple under evaporative cold condition	Mr. D.K. Syamal
Chubasunep Taudir Rakshit Debbarma	Fissuring characteristics of Paddy at different moisture content	Mr. D.K. Syamal
Rikuthakani Phawa, Yapuk Pordung	Determination of hydraulic conductivity of soil from grain size analysis	Dr. Aditi Bhadra
Pankaj Kumar Srijana Gurung	Comparison of Anthropometric Measurements using Direct and Digital Photogrammetry Methods	Dr. T Patel
T Macedonia Devi E PC Lalnunhlimi	Packaging of orange for extending shelf life	Mr. Arun Kumar Choudhary
Tolito Shohe and Lalenkawli	Development of Microcontroller Based Controlled Automatic Irrigation System	Mr. Tage Tapang
Kayinto Lego Vihulo Swu	Estimation of Infiltration rate from soil properties	Dr. P.K. Pandey
Jayantifull Hoojon Mriganka Sarma	Development of part load, part throttle curve for Mahindra B275 DI tractor	Mr. Anubhab Pal
L. Yaiphaba Meetei Hibu La Sambyo	Estimation of roof top rainwater harvesting potential in NERIST campus	Mrs. Vanita Pandey

4.2.5 Short-term course/seminars/workshops/conferences organized at NERIST:

Nil

4.2.6 Short-term courses/seminars/workshops/conferences attended by the faculty.

Dr. K.N. Dewangan	National Programme on Technology Enhanced Learning (NPTEL) awareness workshop for Massive Online Open Courses (MOOCs) at NERIST, Organized by IIT Kanpur and sponsored by MHRD, GoI (29.04.2017).
Dr.S.K. Shrivastava	Attended and presented the papers during the 5th International Conference on CAFES-17 held at Kyoto, Japan from April 18-19, 2017.
Dr. Aditi Bhadra	Presented papers and attended 3 rd International Conference on the “Status and Future of the World’s Large Rivers”, 18-21 April 2017, New Delhi, India Attended short Term Training Programme on “Leadership and Team Building in Academia” by NITTTR Kolkata at NERIST during 30 October – 03 November 2017. Presented papers and attended International Conference on “State of the Cryosphere in the Himalaya: with a focus on Sikkim and Eastern Himalaya”, 19-20 February 2018, Gangtok, Sikkim. Participated as Resource Person on training programme for Officers on “Drainage in Agriculture” Organized by NERIWALM Tezpur during 23-25 October 2017.
Dr. Arnab Bandyopadhyay	Presented papers and attended 3 rd International Conference on the “Status and Future of the World’s Large Rivers”, 18-21 April 2017, New Delhi, India. Participated as Resource Person on training course on “Basic Hydrology” Organized by NIH Roorkee at NERIWALM Tezpur during 05-09 February 2018.
Dr. P.K. Pranav	Attended and presented the papers during the 5th International Conference on CAFES-17 held at Kyoto, Japan from April 18-19, 2017.
Dr. T. Patel	Attended short Term Training Programme on “Leadership and Team Building in Academia” by NITTTR Kolkata at NERIST during 30 October – 03 November 2017. Attended Massive Open Online Course on Teaching Management at NAARM, Hyderabad during, November 1-30, 2017. Participated in IX workshop of AICRP on ESA at IIT, Kharagpur during November 28-29, 2017.

	<p>Attended 6th International Conference on Research into Design during January 9-11, 2017 at IIT Guwahati.</p> <p>Attended and presented the papers during the 5th International Conference on CAFES-17 held at Kyoto, Japan from April 18-19, 2017.</p>
Mr. A.K. Choudhary	<p>Attended short Term Training Programme on “Leadership and Team Building in Academia” by NITTTR Kolkata at NERIST during 30 October – 03 November 2017.</p> <p>Attended One-week faculty development programme on “Advances in food processing technologies” sponsored by the AICTE-NEQIP and organised at Tezpur University during Nov-20-24, 2017.</p>
Mr. A. Pal	<p>Attended and presented the papers during the 5th International Conference on CAFES-17 held at Kyoto, Japan from April 18-19, 2017.</p>

4.2.7 New Degrees/Professional Memberships obtained by the faculty.

Dr. T. Patel obtained the Membership for International Scientific Academy of Engineering & Technology

4.2.8 Achievements/awards/recognition earned by the faculty.

Prof. K. N. Dewangan	<p>Appointed as Associate Editorial Board Member of the Ergonomics Open Journal</p> <p>Selected for Visiting scientist at Concordia University, Montreal from 01.06.2017 to 29.07.2017.</p>
Dr. Arnab Bandyopadhyay	<p>Included as external expert in the Board of UG Studies, Dept. of Agril. Engg., Nagaland University</p>
Dr. T. Patel	<p>Obtained the Membership for International Scientific Academy of Engineering & Technology</p> <p>Board Member of Int. Conference on Applied Human Factors and Ergonomics (AHFE2017) - Los Angeles, USA.</p> <p>Board Member of Int. Conference on Human-Computer Interaction HCI 2017) - Vancouver, Canada.</p>

4.2.9 Projects sanctioned by outside agencies to the faculty of the department

Nil

4.2.10 Publications:

(a) Referred Research Journal:

1.	Dewangan K.N., Rakheja, S. and Marcotte, P. (2018). Gender and anthropometric effects of whole body vibration power absorption of the seated body. <i>Journal of Low Frequency Noise Vibration and Active Control</i> , 37(2): 167–190.
2.	Hamouda, K., Rakheja, S., Dewangan, K.N. and Marcotte, P. (2018). Fingers' vibration transmission and grip strength preservation performance of vibration reducing gloves. <i>Applied Ergonomics</i> , 66: 121–138.
3.	Khayer, S.M., Patel, T. and Dewangan, K.N. (2017). Ergonomic design improvement of pedal thresher: An approach combining digital human modeling and response surface analysis. <i>Journal of Ergonomics</i> , S6:1–9.
4.	Mishra P., Bandyopadhyay A., Bhadra A. 2017. Change in snow depletion pattern in a river basin of Arunachal Pradesh under projected climatic scenarios. <i>Global NEST Journal</i> , 19(2): 199-210.
5.	Chiphang, N., Mishra, P., Bandyopadhyay, A., Bhadra, A. 2017. Temporal Variations in Snow Albedo at Glaciated Upper Elevation Zone of an Eastern Himalayan River Basin. In: Pant, N.C., Ravindra, R., Srivastava, D., Thompson, L.G. (eds). <i>Himalayan Cryosphere: Past and Present</i> . Geological Society, London, Special Publications, 462: 139-154. DOI: 10.1144/SP462.8.
6.	Bhadra, A., Bandyopadhyay, A., Chakraborty, S., Roy, A., Kumar, T. 2017. Development and Testing of an ANN Model for Estimation of Runoff from a Snow Covered Catchment. <i>Journal of The Institution of Engineers (India): Series A (Civil, Architectural, Environmental and Agricultural Engineering)</i> , Springer, 98(1-2): 29-39. ISSN: 2250-2149. DOI: 10.1007/s40030-017-0203-5.
7.	Sanayanbi, H., Sarkar, S., Marak, A.G.R., Bandyopadhyay, A., Bhadra, A. 2017. Spatial interpolation of reference evapotranspiration: Comparison of IDW and Kriging. <i>Journal of The Institution of Engineers (India): Series A (Civil, Architectural, Environmental and Agricultural Engineering)</i> , Springer, 98(4): 511-524. DOI: 10.1007/s40030-017-0241-z.
8.	Lairenjam, C., Hodam, S., Bandyopadhyay A., Bhadra, A. 2017. Historical and temporal trends of climatic parameters in North East India. <i>Global NEST Journal</i> , 19(4): 547-561.
9.	Pranav, P. K., Patel, T., & Singh, K. P. (2017). Development of database and mathematical models for predicting engine performance parameters using biodiesel. <i>International Journal of Agricultural and Biological Engineering</i> , 10(3), 121-129.
10.	Pranav P K, Patel T, Singh K P., 2017. Development of database and mathematical models for predicting performance parameters of engine using biodiesel. <i>Int J Agric & Biol Eng</i> , 2017; 10(3): 121–129.
11.	Kumar Sonu and Pranav P.K., 2017. Gasification Potential of Garden Tea (<i>Camellia Sinensis</i>) Waste Using Downdraft Gasifier. <i>Research Journal of Biotechnology</i> . Vol. 12(11), pp-63-71.

12.	Kumar, S. and Pranav, P. K. 2017. Effect of Gasification Parameters on Predicted Composition of Producer Gas of Unfermented Tea Waste by Equilibrium Modelling and Validation. <i>Research Journal of Chemistry and Environment</i> , Vol. 21 (3), pp- 64-72.
13.	Patel, T., Pranav, P.K. and Biswas, M. 2018. Nonfatal agricultural work-related injuries: A case study from Northeast India. <i>WORK: A Journal of Prevention, Assessment, and Rehabilitation</i> , 59 (2018) 367–374.
14.	Kumar, S. and Pranav, P. K. 2018. Gasification Prospective of Compressed Industrial Tea (<i>Camellia sinensis</i>) Waste using Fixed Bed Downdraft Gasifier. <i>Journal of Agricultural Engineering</i> , Vol. 55 (1):25-35.
15.	Kumar, A., Pranav, P. K. and Kumar, S. 2018. Computer Simulation of Three-Point Linkage Parameters for Virtual Hitch Point and Optimum Depth of Operation (In Press). <i>Engineering in Agriculture, Environment and Food</i> .
16.	Patel, T. (2017). Importance of Human Factors and Ergonomic Principles in Agricultural Tools and Equipment Design. <i>J Ergonomics</i> 7: S6. e004. doi: 10.4172/2165-7556.1000.

(b) Conference papers:

1.	Marcotte, P., Dewangan, K.N. and Rakheja, S. (2017). Gender and anthropometric effects on whole-body vibration power absorption of the seated body. 6 th International Conference on Whole-Body Vibration Injuries, Gothenburg, Sweden, pp 73.
2.	Aphiya Tana and Salil K. Shrivastava (2017). Hydrological drought assessment of Satluj River Basin. Proceeding of 5th International Conference on Chemical, Agricultural, Biological and Environmental Sciences (CAFES-17), held at Kyoto, Japan.
3.	D. Jhajharia, P. K. Pandey, T. Tapang, S. Laji, K. Dahal, R. R. Choudhary, Rohitashw Kumar. Trends in Sunshine Duration in Humid Climate of Northeast India: A Case Study, <i>Urban Ecology, Water Quality and Climate Change</i> pp 181-191, 15 March 2018.
4.	Nengzouzam, G., Pordung, Y., Phawa, R., Bandyopadhyay, A., Bhadra, A. 2017. Determination of Hydraulic Conductivity of Soil from Grain Size Analysis. Proc., International Conference on Natural Resources Management for Sustainable Development and Rural Livelihoods, October 26-28, 2017, Mizoram University, Aizawl, India: 1299-1311.
5.	Kiba, L.G., Mondal, N.K., Khatso, V., Bandyopadhyay, A., Bhadra, A. 2017. Relation of Soil Bulk Density and Elevation with Some Soil Physico-Chemical Properties in Pare River Basin of Arunachal Pradesh. Proc., International Conference on Natural Resources Management for Sustainable Development and Rural Livelihoods, October 26-28, 2017, Mizoram University, Aizawl, India: 1389-1401.
6.	Rajkumari, S., Zaphu, V.V., Bandyopadhyay, A., Bhadra, A. 2018. Future changes in temperature using the Statistical DownScaling Model (SDSM) in an eastern Himalayan catchment of India. Proc., International Seminar on Land and Water Issues in South East Asia: Status, Challenges and Opportunities, NERIWALM, Tezpur, January 18-20, 2018: 25-37.
7.	Mishra, P., Grace, N., Dui, R., Arishinaro, Ete, L., Bandyopadhyay, A., Bhadra, A. 2018. Validation of developed stage-discharge rating curve using historical and projected future data. Proc., International Seminar on Land and Water Issues in South East Asia: Status, Challenges and Opportunities, NERIWALM, Tezpur, January 18-20, 2018: 38-46.

8.	Pranav, P.K., Patel, T., and Rao, Y. (2017). A comparative study of biomass materials using downdraft gasifier. Engineering Practices for Agricultural Production and Water Conservation: An Interdisciplinary Approach, (pp. 263-275.). Apple Academic Press.
9.	Patel, T., Sanjog, J., Chatterjee, A., Shroff, A., Prusty, S. S., Mohapatra, S., & Karmakar, S. (2017). Virtual Ergonomics Evaluation of a Design Concept of Manual Powered Portable Paddy Thresher Suitable for Hilly Region Agriculture. In International Conference on Research into Design (pp. 503-512). Springer, Singapore.
10.	Patel, T., Sanjog, J. and Karmakar, S. (2017) Development of a Device for Measurement of Isometric Vertical Leg Strength in proceeding of 5th International Conference on Chemical, Agricultural, Biological and Environmental Sciences (CAFES-17).
11.	Patel, T. and Ningthoujam, Bishorjit (2017) Solid Waste Management and Handling in India. In book: Progress of Biotechnology in India, Editors: S. C. Santra, A. Mallick, Publisher: ENVIS Centre on Environmental Biotechnology, West Bengal, India.
12.	Pal, A. (2017) Development of a plant model for MIL simulation of power shuttle transmission controller of agricultural tractor in proceeding of 5th International Conference on Chemical, Agricultural, Biological and Environmental Sciences (CAFES-17).
13.	Patel, T. and Murthy, G.R. (2017) Precision Fertilizer Applicator: Localized and Subsurface Placement. In Engineering Practices for Agricultural Production and Water Conservation (pp. 139-152). Apple Academic Press.

(c) Chapters in Books:

1.	D. Jhajharia, P. K. Pandey, T. Tapang, S. Laji, K. Dahal, R. R. Choudhary, Rohitashw Kumar. Trends in Sunshine Duration in Humid Climate of Northeast India: A Case Study, Urban Ecology, Water Quality and Climate Change pp 181-191, 15 March 2018.
2.	Pranav, P. K., Patel, T., and Rao, Y. (2017). A comparative study of biomass materials using downdraft gasifier. Engineering Practices for Agricultural Production and Water Conservation: An Interdisciplinary Approach, (pp. 263-275.). Apple Academic Press.
3.	T. Patel, and G. R. Murthy (2017) Precision Fertilizer Applicator: Localized and Subsurface Placement. In Engineering Practices for Agricultural Production and Water Conservation (pp. 139-152). Apple Academic Press.
4.	T. Patel and Bishorjit Ningthoujam (2017) Solid Waste Management and Handling in India. In book: Progress of Biotechnology in India, Editors: S. C. Santra, A. Mallick, Publisher: ENVIS Centre on Environmental Biotechnology, West Bengal, India.

(d) Books: Nil

4.2.11 Interaction of faculty/department with outside agencies:

Dr. K.N. Dewangan	Visited CONCAVE Research Centre in Concordia University, Montreal and worked there as visiting scientist from 01.06.2017 to 29.07.2017 with Prof. S. Rakheja. Conducted M.Tech. Comprehensive Seminar at College of Agricultural Engineering and Post-Harvest Technology, Ranipool, Sikkim.
Dr. Arnab Bandyopadhyay	Appointed as the Joint Supervisor of Ms. Srishti Gaur (Roll No. 17AE90J02), a Research Scholar of IIT Kharagpur

4.2.12 Consultancy projects undertaken:

Nil

4.2.13 Achievements of students:

06 (Six) students have cleared GATE, 2017.

4.2.14 Any other relevant information

Nil

4.3 DEPARTMENT OF CIVIL ENGINEERING

4.3.1 A brief profile of the Department

The Department of Civil Engineering came into existence as a part of the Institute since its inception in 1985. Over the years the Department has developed and is recognized as one of the major engineering departments in the north-eastern region of the country. The main objectives of the Department are to develop high-quality technical manpower at Certificate, Diploma, Degree, and Post Graduate levels catering to the needs of the North Eastern Region in particular and the nation in general. The Department has the capability of imparting quality education to the students through well-qualified faculty and staff.

Presently, the Department has 16 well-qualified faculty members with specialization in different areas of Civil Engineering.

There are two technical officers, three senior instructors, one senior technician, one technician, and five laboratory attendants. The staff members are well trained and one senior instructor, Dr. P Sivakumar, obtained his Ph. D. from NERIST.

The laboratories of the Department are well equipped to meet the requirements of undergraduate as well as postgraduate courses. The Department has the competency of carrying out challenging consultancy works and sponsored research projects. The Department organizes workshops, short-term training programmes and conferences to disseminate the knowledge to the teaching community, government officials particularly of Arunachal Pradesh, NGO's as well as village level community of the state.

At present there 67 students in Base Module, 86 in Diploma Module, 125 in Degree Module, with total of 278 students registered in UG programmes. There are 18 students in M. Tech. in ESE, and 19 in M Tech in GTE, and there are 17 Research Scholars registered for Ph.D.

The vision, mission, programme education objectives (PEOs) and programme outcomes (POs) have been formulated to meet the academic objectives of the Department and are as follows:

Vision:

To become one of the best civil engineering departments in the country and produce professionals meeting the global standards with an innovative modular system of education and contribute to the socio-economic development of the nation.

Mission:

The mission of the department is:

To produce professionals with sound technical knowledge and skills with competence in planning, analysis, design and implementation of infrastructural schemes in various areas of Civil Engineering.

To inculcate leadership qualities and communicative skills among the students along with moral and professional ethics to make them confident in providing innovative ideas in the fields of civil engineering and to cope up with the present and future needs of the private and public sectors.

To produce professionals having commitment and responsibility towards the sustainable growth of the society.

To provide an opportunity for co-curricular and extra-curricular activities for the overall development of the individuals and motivation for lifelong learning.

Programme Education Objectives (PEOs)

The civil engineering programme will produce graduates that within a few years of graduation, will

1. Have successful technical or professional careers in civil engineering, higher studies, research and in other fields they choose to pursue values, adaptability, and innovations.
2. Make ethical decisions and have a commitment to service to the profession, society and nation.
3. Pursue lifelong learning, and become leaders both in their chosen profession and in other activities.

Programme Outcomes (POs)

After undergoing the undergraduate programmes of the Department of Civil Engineering, the student should be able to:

1. Apply knowledge of mathematics, science and engineering fundamentals to solve civil engineering problems.
2. Design and conduct experiments / simulations as well as analyze and interpret data.
3. Design a system, components or process to meet the desired needs within the realistic constraints such as economic, environmental, social, safety and sustainability.
4. Identify, formulate, model and solve civil engineering problems.
5. Use the techniques, skills and modern engineering tools necessary for engineering practices.

6. Understand engineering and management aspects effectively and to be able to function on diverse and multidisciplinary teams.
7. Understand professional ethics and responsibility to extend the benefit of the civil engineering projects to the society.
8. Understand the impact of engineering solutions in a global, economic, and multicultural societal context in light of contemporary and environmental issues.
9. Communicate effectively both verbally and in writing within the engineering community and with people in the society.
10. Recognize the need for, and an ability to engage in lifelong learning to incorporate technological innovations.

Under graduate programme of the department was NBA accredited.

4.3.2 Academic activities

After obtaining the Deemed-to-be-University status, two M. Tech. programmes, one in Environmental Science and Engineering (ESE) and the other in Geo-Technical Engineering (GTE), are also offered by the Department.

Some of the courses offered by the Department are: Structural Engineering, Geotechnical Engineering, Structural Dynamics, Earthquake Engineering, Computational Methods in Civil Engineering, Advance Mechanics of Solids, Hydraulics and Water Resources Engineering, Fluid Mechanics, Environmental Engineering, Transportation Engineering, Geodetic Surveying, Engineering Graphics and Drafting, Building Science, Town Planning, Planning Estimation and Valuation, etc. Projects to the Diploma, and Degree students and dissertations to Post Graduate final year students are offered keeping in view the academic advances, requirements of the industry as well as the local needs.

The total number of publications by the faculty in the year under review is 27, with 12 in refereed journals and 15 in National and International Conferences.

Modification of existing courses/ Course Structure

The courses of the Department have been designed to meet the objectives as stated in its vision, mission, programme education objectives (PEOs), and programme outcomes (POs). In addition it considers the requirements of the Industry and Organizations, employability, and overall development of the candidates. The courses are periodically revised based on the feedback from the stakeholders and to reflect the recent development in different areas.

4.3.3 Laboratories and Laboratory Development

The Department has the following laboratories:

1. Computer Lab
2. Drawing and Drafting Section
3. Engineering Geology Lab
4. Environmental Engineering Lab - I
5. Environmental Engineering Lab - II
6. Field Engineering Lab
7. Geotechnical Engineering Lab -I
8. Geotechnical Engineering Lab -II
9. Highway Engineering Lab
10. Material Testing Lab
11. Structures Lab
12. Surveying Lab
13. Water Resources Engineering Lab

In addition, it has a Seminar Hall equipped with audio-visual teaching and presentation facilities. All the laboratories are equipped with modern equipment required for teaching, research and consultancy services.

4.3.4 Projects completed by the UG/PG/Ph.D. students (Please specify the title of the project and name of the guide.)

(i) Ph.D. thesis (awarded/submitted):

Name and Roll No.	Supervisor (s)	Status	Title of Ph.D. Thesis
Ms Neelu Das	Prof S.K. Singh	Awarded	A Study on Locally Available Brown Waste Materials for Civil Engineering Applications
Ms. Nabum Rich	Dr. Ajay Bhartiand Dr. Sunil Kumar	Awarded	Nitrogen & Carbon Transformation Process in In-Vessel Composting of Municipal Solid Waste.
Mr. Agnivesh Uday Roy	Dr. A. Bharti and Dr. R. K. Prasad	Submitted	Environmental Impact Assessment of Hydro Power Projects in Siyom River Basin.

Mr. Takum Nalo	Dr. A. Bharti and Dr. Sunil Kumar	Submitted	Performance Studies for Anaerobic Digestion of Municipal Solid Waste.
Mr. Kirki Ori	Dr. A. Bharti and Dr. Sunil Kumar	Submitted	Study on Vermicomposting of Wet Organic Waste from High-Rise Apartment.

(ii) Project work completed by PG students:

Name of Student	Title of the Dissertation	Name of the Supervisor
Toko Jiri	Some Studies on the Strength and Permeability Characteristics of Bamboo reinforced soil	Dr. Dipika Devi
Miloko Nobeng	Study of geotechnical properties of bottom ash-soil-bentonite mixtures for MSW Landfill liner	Mudo Puming
Tassar Pana	Some Studies on the Strength and Permeability Characteristics of Reinforced Soil	Prof S K Singh
Talkeshwar Ray	Study on use of Rayleigh Damping for Modeling Frequency Independent Hysteretic Damping in Soils (in Progress)	Dr. S. Baishya
Netung Tayeng	Experimental Study on Soil Mixed with Fly Ash and Glass Fibre	Dr. Ajanta Kalita
Boa Kapa	Study of Shape Effect of Waste Plastic on Strength Behavior of Soil	Prof S. K. Singh
Bhim Siga	Study on improvement of Strength Characteristics of Soil Prevailing in Doimukh Area by Using Fly Ash and Lime	Dr. Ajanta Kalita
Ms.Tori Padu	Effect of inorganic salt on flyash and bentonite as landfill liner	Mudo Puming

Mr.Pakken Boje	Utilization of rice husk as an liner material for landfill liners of msw landfill site.	Mudo Puming
Mr. Manipushpak Hazarika	Identification of Pollution Bio-Indicators from Industrial Areas of Guwahati	Dr. Ajay Bharti & Dr. S.S.K. Singh
Mr. Abdul Khalid	Rainfall – Runoff Modeling using HEC-HMS	Dr. R. K. Prasad
Mr. Sang Khandu Thongdok	Evaluation of Soil organic carbon in western region of West Kameng by GIS approach	Mr. K. James Singh
Mr. Koje Zango Modi	Analysis of physico-chemical parameters of wastewater collected from dairy farm, Lakhimpur and its percentage reduction by different treatment methods	Ms. Y. B. Devi
Mr. Sono Taku	Effect of Inorganic Salt on Rice Husk Ash (Rha) and Bentonite as a Liner Material	Dr. Ajay Bharti and Ms. M. Puming
Mr. Rakesh Tekseng	Groundwater Modeling of Different Recharge Basins Using GMS	Dr. R. K. Prasad

(iii) Project work completed by Degree students:

Name of Students	Project Title	Project Guide
S. Tamang, B. Basnet, M.N. Dorjee, P. Bhutia, and C. Keyho	Flood Frequency Analysis and Flood Mapping of Pare River, Hoj, Arunachal Pradesh	Prof. R.K. Prasad
H. Narayan, P. Kalita, S. Das and T. Passo	The Study on the Qualitative and Quantitative Aspects of Water Supply in NERIST	Dr. Ajay Bharti
M.A. Laskar, B. Das, S. Kumar, K. Muniya,	Analysis of Linear and Non-Linear Structures using Ansys	Dr. Dipika Devi

A. Singha and R. Islam		
Ngangbam Akash Singh N. Robert Meetei Akumtong Longkumer N. Jimson Singh JotishThoidingjam	Quantification of congestion at Mid-Block Section of No-Lane-Disciplined Traffic Stream	Dr.Dibyendu Pal
Ankita Chakraborty Sraboni Roy Arpan Anshu Bishal Debnath Jh. Pauminsiam Lalchawipuii	Design of Flexible and Rigid Pavement at Sela Pass, Tawang	Mrs.Yamem Tamut
Tsutshowe Kapfo Tapi Rimu Adani Neli Gishon Seb Abir Mahanta Techi Puru	Effect of Stone Crusher Dust as a Substitute of Fine Aggregate in Self-Compacting Concrete (SCC)	Dr. Sudisht Mishra
Birsurang Daimary S. Singha Choudhury Biwhwajoty Paul Abhishek Kumar Kumar Rajnish	Design of Reinforced Concrete T-Beam Bridge	Prof. S.K. Singh
Bashanbor Kharjana Kitkumar Khyriem Bapu Tabing Shivan Dakpe Kago Tada Tali Hali	The effects of Leachate on Surface and Sub-Surface Water	Mrs. Mudo Puming
Debanjali Chakraborty Jayanta Kalai Preetam Saha Inam Tripura Agni Bhattacharjee	Development of Pre-Processing Interfaces for Opensees Using SCILAB	Dr. Sukumar Baishya

(iv) Project work completed by Diploma students:

Name of Students	Project Title	Project Guide
Mashi Longdo Kojeen Gyati Kevihoukho Lhousa Ramesh Kumar Vikash Pandey Shah Jahan Kalai	A Building Plan for a Student Activity Centre	Mr. S.K. Sahu
Ijom Ninu Lishi Talin Tenodraji Tamin KekkapYomcha Devid Kakati Mhabe Tsopoe	Computation of Reservoir Capacity of Subansiri Lower Dam Using Geographical Information System	Mr. K. James Singh
Linda Lalmuanpuii Triple Grace awlein David C. alawmpuia GaganPradhan SakimiShylla C. Zonunsiamama	Improvement of soil by using fly ash and lime as stabilizers	Dr. Ajanta Kalita
Tasso Tarun PranabJyoti Bora Atom Uttamkumar Singh CheerfreeKeitang OyintoMengu Samdup Lachungpa	To Study the Feasibility of Toll Road and Characteristics of Road Users for the Stretch of Road from Banderdewa to Itanagar	Mrs.YamemTamut
Sandipon Garg Thejasieetuo Yhoshu Bhagyashri Deuri Leejum Subba Prakas Chaudhary Animesh Deb	Study on Headway Distribution of Different Vehicles Moving on No Lane Disciplined Traffic Stream	Dr.Dibyendu Pal

Rajiv Ranjan Ray Madhurima Das ViviKiso Jayalaxmi Ngasepam Sreyasee Dutta B. D. Nongrum	Study of the Strength and Thermal Damping of Chipped Rubber Tyers Mixed M25 Grade Concrete	Dr. S. Mishra
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4.3.5 Short-term Courses/Seminars/Workshops Organized at NERIST

Title	Coordinator	Duration	Funding Agency/ Sponsors	No. of Participants
Advances in Design of Reinforced Concrete Structures	Dr. Dibyendu Pal and Ms. Yamem Tamut	26/08/2017 to 30/08/2017	Self-sponsored	23
National Conference on Civil, Geotech and Transport Research (CGTR-2017)	Dr. Dibyendu Pal and Dr. Dipika Devi	14/10/2017 to 15/10/2017	Self-financing and sponsored by	40

4.3.6 Short-term Courses/workshop, etc. attended

N. G. Sorum	Participated in Five days Short-term course on “Advances in Design of Reinforced Concrete Structures” held at Department of Civil engineering, NERIST, Itanagar during 26/08/2017 to 30/08/2017. Attended a short-term course on "Advances in design of Reinforced Concrete Structures", held at NERIST during August 26-30, 2017.
Dr. D. Pal	Attended one day Workshop on the Role of Local Chapters of NPTEL, organized by IIT Kanpur, on April 29, 2017, held at NERIST.
Dr. R. K. Prasad	attended one day workshop on "Role of Local chapters on NPTEL" at NERIST, Nirjuli on April 24, 2017.
Mr. K. J. Singh	attended two weeks' STTP on “Basic course on Remote Sensing and Geographical Information System Technology and Applications”, NESAC, Umiam, Meghalaya, April 17-28, 2017.

Y. Bidyalaxmi Devi	attended a short-term course on "Advances in design of Reinforced Concrete Structures", held at NERIST during August 26-30, 2017.
Mudo Puming	Attended a short-term course on "Advances in design of Reinforced Concrete Structures", held at NERIST during August 26-30, 2017.

Dr. Dibyendu Pal	Obtained membership of ASCE as Associate Member.
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4.3.7 Achievements / awards / recognition earned by faculty

Nil

4.3.8 Projects sanctioned by outside agencies to the faculty of the department

Name of PI/CoPI	Title of project	Funding Agency	Period	Amount (Lakhs)
Dr. Ajay Bharti, Mr. K. James Singh and Mr. N.G. Singh	Spatial Distribution of Uranium and associated Water Quality Parameters in Western Arunachal Pradesh (eight districts namely Tawang, West Kameng, East Kameng, Papumpare, Kurung Kumey, West Siang, Upper Subansiri and Lower Subansiri	DAE, New Delhi	6.1.2017 to 6.1.2019	35.66

4.3.9 Publications

(a) Referred Journals:

<i>Journal Articles</i>	
1.	Das, Neelu, and Shashi Kant Singh. "Geotechnical Behaviour of Lateritic Soil Reinforced with Brown Waste and Synthetic Fiber." International Journal of Geotechnical Engineering, 2017, https://doi.org/10.1080/19386362.2017.1344002 .
2.	Kangujam Monika, S K Singh, and Th Kiranbala Devi. A case Study on Untreated and Treated Soil, International Journal of Engineering Technology Science and Research, IJETSR, Vol 4, No 3, 2017, pp 225-234.
3.	Pal, D., and Chunchu, M. Smoothing of Vehicular Trajectories under Heterogeneous Traffic Conditions to Extract Microscopic Data. <i>Canadian Journal of Civil Engineering</i> , 45(6): 435-

	445. 2017.DOI: 10.1139/cjce-2017-0452 . (SCI)
4.	Pal, D., and Chunchu, M., Modeling of lateral Gap Maintaining Behavior of Vehicles in Heterogeneous Traffic Stream. <i>Transportation Letters</i> , DOI: 10.1080/19427867.2017.1369633. (SCI), 2017.
5.	Kiran Bhagate, Rohan Hawre and Dipika Devi, “Design Optimisation of Ship Hull Using CFD Analysis”, <i>International Journal of Advanced in Management, Technology and Engineering Sciences</i> , Vol 7, Issue 11, 2017, pp 57-65, ISSN NO : 2249-7455, DOI:16.10089.IJAMTES.2017.V7I11.15.1909.
6.	T. Jiri, D.Bagang and D. Devi, “On the Shear Strength Behaviour of Bamboo Reinforced Soil”, <i>International Journal of Advanced in Management, Technology and Engineering Sciences</i> , Vol 7, Issue 11, 2017, ISSN NO : 2249-7455, pp 88-94, DOI:16.10089.IJAMTES.2017.V7I11.15.1913.
7.	K. Ori, Kilu Ori and A. Bharti, “The Physical Behaviors of the Organic Solid Waste Inside the Static Water Tank” <i>International Journal of Advanced in Management, Technology and Engineering Sciences</i> , Vol 7, Issue 11, 2017, pp 104-110, ISSN NO : 2249-7455, DOI:16.10089.IJAMTES.2017.V7I11.15.1909.
8.	Puming M, Bharti A, Hussain M, "Characterization of Leachate from Municipal Solid Waste Landfill Site of Itanagar, Arunachal Pradesh" <i>IJAMTES Vol. 7, Issue 11 2017</i> , pp 111-114, ISSN No.: 2249-7455.
9.	C. Zonunsiana and A. Kalita, “Strength Improvement of Soil Using Fly Ash and Lime” <i>IJAMTES Vol. 7, Issue 11 2017</i> , pp 122-144, ISSN No.: 2249-7455.
10.	A. Hage, Tamut Y. and Y. B. Devi, “A Study on Water Quality and Pollution Status of Dikrong River Flowing from Senkiview to Doimukh., <i>IJAMTES Journal, Volume 7, Issue 11, November-2017</i> , pp 57-65.
11.	K. Modi, Y. B. Devi and Tamut Y., “Comparative Analysis of Dairy Wastewater Treatment by Two Different Methods” <i>IJAMTES Journal, Volume 7, Issue 11, November-2017</i> , pp 129-135, ISSN No.: 2249-7455.
12.	Omo,Y. and Kalita, A. (2017). “Improvement in CBR Value of Soil-Fly Ash Mix Reinforced With Glass Fibres”, <i>International Journal of Exploring Emerging Trends in Engineering</i> , Vol. 04, Issue 01, Pg. 40 – 45.

(b) Conference Papers:

	<i>Das, Neelu, and Shashikant Singh.</i> “Effect of Waste and Synthetic Fiber Reinforcement on Lateritic Soil.” <i>International Conference on Frontiers in Engineering, Applied Sciences and Technology, FEAST 17, NIT Trichy. Paper No 00397 March 31, 2017-April 01, 2017.</i>
2.	M. Puming "Characterization of Leachate from municipal solid wastes landfill site of Itanagar, Arunachal Pradesh" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).

3.	M. Puming "Assessment of Municipal Solid Waste Generation in the Itanagar Capital Complex of Arunachal Pradesh" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
4.	C. Zonunsiana and Ajanta Kalita, presented a research paper on title, "Strength Improvement of Soil Using Fly Ash and Lime" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
5.	K. Z. Modi, Y. B. Devi and Y. Tamut, presented a research paper on title, "Comparative Analysis of Dairy Wastewater Treatment by Two Different Methods" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
6.	Talkeshwar Ray and Sukumar Baishya, "Rational Use of Rayleigh Damping For Ground Response Analysis – An Evaluation" Proceeding Indian Geotechnical Conference 2017, held at IITG Dec.16-16, 2017.
7.	Tahir Ahmed Laskar, Anant Gautam, Arbin Thakur, Hemant Lakra, Lokesh Kr. Singh and Dipika Devi, "Effect of Gravel Fraction on Compaction Characteristics of Soil" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
8.	Riba Gyadi, Tasso Duri, ShefaliHeblikar, TejasviChetty, G.C.Bellad, "Dairy Wastewater Treatment By Vermifiltration" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
9.	Bidyalaxmi Devi Yumnam, YamemTamut and Takum Nalo "Analysis Of Physico-Chemical Characteristics Of Spring Water Collected From Different Locations of North East India" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
10.	Dibyendu Pal' "Review On Time Headway Distribution of Bidirectional Traffic" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
11.	Tahir Ahmed Laskar, AnantGautam, Arbin Thakur, Hemant Lakra, Lokesh Kr. Singh and Dipika Devi, "Effect Of Gravel Fraction On Compaction Characteristics Of Soil" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
12.	Rajiv Ranjan Ray, JayalaxmiNgasepam, Vivi Kiso, Baniengskhem D Nongrum and S. Mishra, "Study Of The Strength And Thermal Damping Of Chipped Rubber Tyres Mixed M25 Grade Concrete" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
13.	Omem Paron and Ajay Bharti' "Municipal Solid Waste Management at Nerist Campus Through In-Vessel Composting: A Case Study" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
14.	N.G Sorum, KissanuModak, K Lalmangaihzuali and C Vangokhipathai' "Review On Human Hair as an Alternate and Innovative Additive" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).
15.	Mrs Mudo Puming, Ajay Bharti and Dr.Monowar Hussain, " Assessment Of Municipal Solid Waste Generation In Itanagar Capital Complex Of Arunachal Pradesh" in National conference on CGTR during October 14-15, 2017 at NERIST (A.P).

(C) Books/Book Chapters:

1.	Devi, Dipika (2018)Object Oriented Finite Element Programming: A Framework.Modelling and Simulation in Computational Mechanics, (Eds) S. K. Panigrahi,Publisher: Lambert Academic Publishing Company, Germany
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2.	Prasad, R.K. (2017) Modeling of Environmental and Water Resources Systems. Allied Publisher Pvt. Ltd., New Delhi (2017)
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4.3.10 Interaction of faculty/department with outside agencies/ institute (Give details regarding membership of outside committee, executive committees of professional bodies etc.)

Name of Faculty	Interaction
Prof. S. K. Singh	<p>Acted as a Member on AIB-UGET of AICTE, New Delhi</p> <p>Acted as a Member on Board of Studies, School of Engineering and Technology, Mizoram University</p> <p>Acted as a Member on Board of PG Studies, Department of Civil Engineering, Tezpur University.</p> <p>Acted as a Member on State Higher Education Council, Government of Arunachal Pradesh.</p>
Dr. Ajay Bharti	<p>Nodal Officer, STA (State Technical Agency), Public Health Engineering and Water Supply Department, Arunachal Pradesh.</p> <p>Member of SEIAA (State Level Environment Impact Assessment Authority), Arunachal Pradesh.</p> <p>Member, State Pollution Control Board, Arunachal Pradesh</p>

4.3.11 Consultancy Projects undertaken

Sl No	Agencies	Title of consultancy project	Amount (Rs)	Faculty & technical staff associated
1.	Project Manager Sigar, C/o 99APO	Concrete Mix Design	72450/-	Prof. S. Mishra. Mr. ASR Prasad Mr. Mohan Bora
2.	Manager, Sub Station, Tata Project, Naharlagun	Field, Density and Moisture Content test	20,900/-	Dipika Devi and Rameswar Bora
3.	Manager, Sub Station Tata Project, Naharlagun	Field Density and Moisture test	20900/-	Ajanta Kalita and Rameswar Bora
4.	Department of Power, Arunachal	Grain Size analysis test	5779/-	S K Sahu and Rameswar Bora

5.	Department. of Hydropower Dev. Gov. of Arunachal Pradesh	Stone Aggregate Testing	13110/-	Mr. S K Sahu Mr A. S. R. Prasad and Mr. Mohan Bora
6.	M/s M. M. Enterprise, NH 52, Bansokta, East Siang, Pashighat, (AP)	Concrete Cube Testing	8280/-	Mr. S K Sahu Mr A. S. R. Prasad and Mr. Mohan Bora

4.3.12 Achievement of students

Sr No	Name	Regn.	Roll No	Company
1.	Tadar Depi	112/158	DE/16/CE/006	Power Grid
2.	Nur Mahammad Mussa Kalimullah	214/001	DE/16/CE/005	EPHNU Consulting Pvt ltd Baglore
3.	Tadar Depi	112/158	DE/16/CE/006	
4.	Poonam Kumari	112/005	DE/16/CE/009	
5.	Anant Gautam	112/008	DE/16/CE/010	
6.	Tilak Jamatia	112/118	DE/16/CE/011	
7.	Geli Basar	112/131	DE/16/CE/028	

Students qualified GATE 2018

Sl. No	Name	Category	Gate Score
1.	Anand Gautam	Gen.	34.59
2.	N. M. Mussa Kalimullah	Gen.	32.14
3.	Momi Deb	Gen.	28.69
4.	Mukesh K Prasad	OBC	37.22

5.	Tahir Ahmed Laskar	OBC	28.76
6.	Tadar Depi	ST	31.81
7.	LamtarNasi	ST	31
8.	Charakho N Chah	ST	30.65
9.	Anil Sangno	ST	23.68
10.	K Lalmangaizuali	ST	20.19

4.3.13 Any other relevant Information

- a. Dr. Dibyendu Pal acted as a reviewer for Journal 'Transportation Letters' Taylor and Francis
- b. Dr. Dibyendu Pal acted as a reviewer for Journal 'Journal of Advanced Transportation, Wiley.
- c. Prof. S.K. Singh, Prof. R.K. Prasad, Prof. S. Bhaishya, Prof. S. Mishra, M. S.K. Sahu, Dr. Dipika Devi, Ms. Y.B. Devi and Dr. Dibyendu Pal delivered lectures in self-financed short-term training course on "Design of Reinforced Concrete Structures" held at NERIST, Nirjuli, during Aug 26-30, 2017.
- d. Prof. R. K. Prasad acted as a subject expert for selection of Asst. Professor (CE) of CA&PHT Ranipool, nominate by VC, CAU Manipur on 26 Oct. 2017.

4.4 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

4.4.1 A Brief Profile of the Department

The Department of Computer Science and Engineering is running since 1986. It offers a unique combination of courses and projects that help the students to cope with the recent advancements in the computer industry and information technology. The department offers diploma and degree in computer science and engineering using a modular pattern.

M.Tech. in Computer Science and Engineering started in 2006-07.

M.Tech. in Information Technology started in 2011-12.

The Ph.D. programme started in 2007-2008.

The department offers regular courses like Computer Organization, Application Software, Operating System, Discrete Mathematics, Digital Electronics, Microprocessors, Database Management Systems, Compiler Design, Data Communications, Computer Networks, Design and Analysis of Algorithm to name a few of them. Apart from the regular courses a few of the important courses offered are Artificial Intelligence, VLSI Design, Image Processing, Fault-Tolerant Computing, Information Theory, etc.

The faculty members of the department are involved in various interdisciplinary research projects funded by agencies like CISR, MHRD, NEC, DoE etc.

The department has well equipped LAN connected laboratories System Lab, PC Lab, Microprocessor Lab, Hardware Lab, Networking Lab and Embedded Systems Lab with state-of-the-art machines.

The department has 2Mbps leased line internet connectivity.

Our graduates are well placed in organizations like, Infosys, C-Dot, SIEMENS, Tata Telecom, British Mahindra Telecom, DRDO, NICNET, ISRO, OIL, CSIR, Telecom, CMC, PCL, HCL, IDPL, IOC, SAIL, TELCO, TISCO, ESCORTS, Mindtree, State Departments of Electronics, Power & PHED.

4.4.2 Academic Activities

The department offers Diploma, Degree and M.Tech and Ph.D. programme. Besides undergoing the regular courses, the students of each module carry out the project in the second year. The degree first-year students also undergo industrial training for 50 days. The department student counselor guides these students in allotment of training seats. The students also give a seminar presentation after completion of their summer training.

4.4.3 Laboratories and Laboratory Development

Nil

4.4.4 Projects Completed by the UG/PG/Ph. D. Students

(i) Ph.D. thesis (awarded/submitted):

Name	Supervisor (s)	Status	Title of Ph.D. Thesis
Mrs. Suchismita Bhattacharjee	Dr. (Mrs.) N. Marchang	Awarded	Securing Spectrum Sensing in Infrastructure-based Cognitive Radio Network

(ii) Project work completed by PG students:

M.TECH CSE

Title of Project	Name of Student	Name of guide
Detection of SSDF attack in cognitive radio networks using one class classification	Parthana Saikia	Dr.(Mrs.)N. Marchang
Closest pair connectivity predicted key pre-distribution scheme for wireless sensor network	Supriya Bhuya	Mr. Monjul Saikia
Text Mining using genetic algorithm	Tage Nadu	Dr. M. Marjit Singh
Exploring gene expression - a Bayesian Perspective	Partha chattopadhyaya	Mr. A. K. Patra

M.TECH IT

Title of Project	Name of Student	Name of guide
Towards Improved spectrum sensing in cognitive radio networks.	Aduri Vidyulata	Mr. A. K. Patra
Secure and Energy aware multipath routing in wireless sensor networks.	Udipta Kaishyap Das	Mr. Monjul Saikia

Comparative study of life time maximization techniques in wireless sensor networks	Habila Basumatary	Dr.M.Marjit Singh
Study of primary user channel utilization for cognitive radio networks	Khoda Yasina	Mr. Amar Taggu

(iii) Project work completed by Degree students:

Title	Name of the students	Guide
Sesurity in CRN	Rubu Tupe, Tati Marde, Ramanand Rai	Dr.(Mrs.)N. Marchang
Implementation of Identity based cryptography for WSN	Th. AnandKumar Singh, Salam Herosun, Solomon Panmei	Mr. Monjul Saikia
Machine learning model for biological data	Wantei Kubar Warjri, Avinash Prajapati, Emmanuel	Mr. A. K. Patra
Mitigation of PUEA detection in CRN	Manmi Nath, Poulami Banik, Claren J Rynjah, Khumjila	Mr. Amar Taggu

(iv) Project work completed by Diploma students:

Title	Name of Student	Guide
Android chat Application	Malemnganba Soubam, Irom Purnima	Mr. Yogendra Mohan
Online E Book Store	Thanghaukhup zou, Anurag Koch, Madhuriya Hazarika	Mr. K. Legoh

News Reading Desktop Application	C Brandon K Gangte, Viphrenou Kiso, Kipa Tachak	Mr. A. K. Yadav
Micro kernel	Anirban Sarkar, Rachna Raj, Abhishek Kumar	Mr. Pradeep Kamboj

4.4.5 Short Term Courses/ Seminars/Workshops Conferences Organized at NERIST

Nil

4.4.6 Short Term Courses/ Seminars/Workshops Conferences Attended by the Faculty:

Dr. (Mrs.) N. Marchang	Workshop on “The Role of Local Chapters”, NERIST conducted by IIT Bombay during April 29, 2017. 2 nd International Workshop on Pattern Analysis and Applications (IWPA-2018), ISI Kolkata conducted by ISI, Kolkata during January 29-31, 2018.
Mrs. M. Kathing	STTP on “Leadership & Team Building in Academia” Organized by NERIST in Collaboration with NITTR, Kolkata (MHRD) from 30.10.17 to 03.11.2017.
Dr. M. M. Singh	11th International Conference on Advanced Computing and Communication Technologies 2018(11thICACCT 2018), 17-18 February, 2018, Asia Pacific Institute of Information Technology, Panipat, India
Mr. A. K. Patra	“Biology for Engineers”. 4th June, 2017 to 9th June 2017 (6 days), IIT Bombay. “Gene expression and Functional Analysis”, 16th Jan, 2018 to 20th Jan, 2018 (5 days), IIT Guwahati. “Computer Aided Drug Design for Human Pathogens”, 12th Feb, 2018 to 17th Feb, 2018 (6 days), Tezpur University, Assam.
Mr. Amar Taggu	1-week FDP on Machine Intelligence and IoT at Tezpur University from 19th February to 23rd February 2018.

Mr. Pradeep Kamboj	A one-day workshop on the role of local chapters, conducted by IIT Kanpur at NERIST on April 29, 2017.
Mr. Yogendra Mohan	A one-day workshop on the role of local chapters, conducted by IIT Kanpur at NERIST on April 29, 2017.

4.4.7 New Degrees/Professional Memberships Obtained by the Faculty:

Shri MoirangthemMarjit Singh	Awarded Ph.D (Engg.) degree in Computer Science and Engineering from the University of Kalyani, West Bengal.
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4.4.8 Achievements/Awards/Recognition Earned by the Faculty

Dr. MoirangthemMarjit Singh	Received the best paper award in 10 th ICACCT International Conference. Elected as Fellow of IETE New Delhi.
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4.4.9. Projects Sanctioned by Outside Agencies to the Faculty of the Department

Nil

4.4.10 Publications: -

(a) Referred Journal

Journal Articles	
1.	Rina K, Nath S., Marchang N. and Taggu A., Can Clustering be Used to Detect Intrusion During Spectrum Sensing in Cognitive Radio Networks?, IEEE Systems journal, Vol. no. 12, no. 1, 2018, pp. 938-947, DOI: 10.1109/JSYST.2016.2584098
2.	Rajkumari R. and Marchang N., Secure Non-consensus Based Spectrum Sensing in Non-Centralized Cognitive Radio Networks, IEEE Sensors Journal, vol. 18, no. 9, pp. 3883 – 3890, 2018, DOI: 10.1109/JSEN.2018.2816595
3.	Rajkumari R. and Marchang N., Modelling and Mitigating Spectrum Sensing Non-cooperation Attack in Cognitive Radio Network, Int. J. of Ad Hoc and Ubiquitous Computing (Inderscience), Vol. 28, No. 3, 2018.

4.	W. Singh N. and Marchang N., A Review On Spectrum Allocation In Cognitive Radio Network, International Journal of Communication Networks and Distributed Systems (Inderscience), 2018 (in Print).
5.	Bhattacharjee S. and Marchang N., Malicious User Detection with Local Outlier Factor during Spectrum Sensing in Cognitive Radio Network, Int. J. of Ad Hoc and Ubiquitous Computing (Inderscience), 2018 (In Print).
6.	Singh, M.M. and Basumatary, H.,(2018) ‘MERAM-R: Multi-clustered energy efficient routing algorithm with randomly moving sink node’, Journal of Scientific & Industrial Research, Vol. 77(01)2018,pp.15-17, ISSN: 0022-4456.
7.	Singh, M.M. and Dutta, N.(2017), “Security issues in wireless sensor networks”, International Journal of Distributed and Cloud Computing, Vol.5, Issue 2, December 2017, pp.07-16, ISSN: 2321-6840.
8.	Singh, M.M. and Basumatary, H. (2017), “Lifetime analysis of wireless sensor network considering stay time and stay location of the sink node”, CSI Journal of Computing, Vol.3, No.2, July 2017, pp 01-08, e-ISSN: 2277-7091.
9.	Singh, M.M. and Mandal, J.K.(2017), “Reliability of MANET under the influence of black hole attack in ad hoc on demand distance vector routing”, Journal of Scientific & Industrial Research, Vol 76(07)2017,pp 423-426,ISSN: 0022-4456.
10.	Singh, M.M. and Mandal, J.K.(2018), “Impact of black hole attack on reliability of mobile ad hoc network under DSDV routing protocol”, International Journal of Systems, Control and communications, Vol.9,No.1,pp.20-30, ISSN: 1755-9340.(2018)
11.	Dhurandher S. K., Borah S. J., Woungang Issac., Tibarewal. Suryansh and Barolli.Leonard. DEEP: Distance and Encounter based Energy-efficient Protocol for Opportunistic networks 2018, IOS Press, Scopus : DOI 10.3233/JHS-180585.
12.	Borah S. J., Dhurandher S. K., Woungang I., Kumar V. (2017). A game theoretic context-based routing protocol for opportunistic networks in an IoT scenario. Computer Networks, 129, 572-584, Elsevier. /doi.org/10.1016/j.comnet.2017.07.005.
13.	Dhurandher S. K., Borah S. J., Woungang I., Bansal A., Gupta A. (2017). A location Prediction-based routing scheme for opportunistic networks in an IoT scenario. Journal of Parallel and Distributed Computing, Elsevier.//doi.org/10.1016/j.jpdc.2017.08.008.
14.	Borah S. J., Dhurandher S. K., Woungang, I., Kumar V., Barolli L. (2017). A multi-objectives based technique for optimized routing in opportunistic networks. Journal of Ambient Intelligence and Humanized Computing, 1-12. Springer: //doi.org/10.1007/s12652-017-0462-z.
15.	Kuchhal P., Dhurandher, S.K., Borah S.J., Woungang I., Jain S., Gupta S.: A* search based next hop selection for routing in opportunistic networks. IJSSC 7(3): 177-186 (2017)//doi.org/10.1504/IJSSC.2017.089011 .
16.	Saikia Monjul, and Hussain Md Anwar. Location Dependent Key Predistribution Scheme for Square Grid and Hexagonal Grid." Indian Journal of Science and Technology 10.9 (2017) pp 1-6 ISSN:0974-6846, e-ISSN: 0974-5645.

17.	Saikia Monjul, Irani Acharjamayum and Anwar Hussain. Key Predistribution for Heterogeneous Group of Sensor Nodes using Combinatorial Design. Indian Journal of Science and Technology 10, no. 22 (2017) pp 1-6, ISSN:0974-6846, e-ISSN: 0974-5645.
18.	Saikia Monjul and Hussain Md. A . An Analysis of Location Independent Key Pre distribution Schemes for Wireless Sensor Network. International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 p-ISSN: 2395-0072 Volume: 04 Issue: 07 July -2017 Page 1958-1962.
19.	Rina K, Nath S., Marchang N. and Taggu A., Can Clustering be Used to Detect Intrusion During Spectrum Sensing in Cognitive Radio Networks?, IEEE Systems Journal (Vol:12, Issue:1, March 2018), DOI: 10.1109/JSYST.2016.2584098.
20.	Pradeep Kamboj, R S Raw, A K Gautam, "A Comparative study of Position-based Routing methods in VANET", International Journal of Advanced Research in Computer Science Vol. 9 Issue 1, January-February 2018.

(b) Conference papers:

1.	W. Singh N. and Marchang N., "Security Vulnerability in Spectrum Allocation in CognitiveRadio Network", International Conference on Advanced Computing, Networking and Informatics, ICANI, Feb. 22-24, 2018, Indore, India
2.	Taggu A., Nath M., Banik P., and Marchang N., "A jammer-resilient cognitive radio network using evolutionary game theory", IEEE WPMC 2017, Dec. 17-20, 2017. DOI: 10.1109/WPMC.2017.8301890
3.	Taggu A., Rina k., Yasina K. and Marchang, K., "A Study on Spectral Occupancy in the North Eastern India for Rural Broadband Access", 2017 International Conference on Advances in Computing, Communications and Informatics (ICACCI), Sept. 13-16, 2017, Pages: 350-353, DOI: 10.1109/ICACCI.2017.8125865.
4.	
5.	Satya J. Borah, Sanjay K. Dhurandher and Pragya Kuchhal, "EPR: Encounter and probability-based Routing in Opportunistic Networks", IN WIDECOM 2018, Springer(In Print), Sonapat, New Delhi, India(Feb, 2018).
6.	Borah, S. J., Dhurandher, S. K., Tibarewala, S., Woungang, I., Obaidat, M. S., "Energy-Efficient Prophet-PRoWait-EDR Protocols for Opportunistic Networks", GLOBECOM 2017-2017 IEEE Global Communications Conference (pp. 1-6). IEEE, Singapore(2017, December).
7.	Margaret Kathing, Hanif Zafar, "Image Encryption Using Multiple- Parameter discrete Fractional Hartley Transform and Its Comparison with Multiple- Parameter discrete Fractional Fourier Transform", 2 days National Conference on Science, Technology & Environment: Prospects and Limitations in the 21 st century (NCSTEPL-2017). IJIACS, Volume 6, Issue 10, October 30-31, 2017, ISSN 2347-8616, BBEC, Kokrajhar, Assam(India)(October 2017).

8.	MonjulSaikia and Md Anwar Hussain, “Combinatorial Group Based Approach for Key Predistribution Scheme in Wireless Sensor Network”, International Conference on Computing, Communication and Automation (ICCCA2017) 5-6 May 2017 Galgotias University Noida, India, page 502-506.
9.	Amar Taggu, Manmi Nath, PoulamiBanik and NingrinlaMarchang, “A Jammer-Resilient Cognitive Radio Network using Evolutionary Game Theory”, The 20th International Symposium on Wireless Personal Multimedia Applications (WPMC 2017), Dec 17-20, 2017, Yogyakarta, Indonesia.
10.	Amar Taggu, Kennong Rina, KhodaYasina, NingrinlaMarchang, “A Study on Spectral Occupancy in the North Eastern India for Rural Broadband Access”, 6th International Conference on Advances in Computing, Communications and Informatics (ICACCI), Sept. 13-16, 2017, Manipal University, Karnataka, India.

(c) Book Chapters:

1.	Basumatary, H and Singh, M.M. (2018): Multi clustered energy efficient routing algorithm with mobile sink node moving in clockwise direction, In: B. Tiwari et al.(eds.), Proceedings of International Conference on Recent Advancement in Computer and Communication, Lecture Notes in Networks and Systems 34, pp 645-654. Springer Nature Singapore Pte. Ltd, (2018) DOI: https://doi.org/10.1007/978-981-10-8198-9_67 .
2.	Singh, M.M. and Mandal, J.K. (2018): Effect of black hole attack on MANET reliability in DSR routing protocol, In: R.K. Chaudhary et al. (eds.), Advanced Computing and Communication Technologies, Advances in Intelligent Systems and Computing 562, pp 275-283. Springer Nature Singapore Pte. Ltd, (2018) DOI: https://doi.org/10.1007/978-981-10-4603-2_26 .
3.	Rakesh Tripathi, Saikat Majumdar and Ningrinla Marchang, “An Introduction to IoT Cognitive Radios”, (LAP LAMBERT Academic Publishing, 2017), ISBN: 978-620-2-07244-1.
4.	MonjulSaikia, Md Anwar Hussain, “A Novel Key Predistribution Scheme for Minimum Angle Routing in Wireless Sensor Network” in Second International Conference on Integrated Intelligent Computing, Communication & Security (ICIIC-2018) 24th and 25th of January 2018. Bengaluru, Karnataka, India.
5.	Saikia M, Hussain MA, “Location-Independent Key Distribution for Sensor Network Using Regular Graph. In Progress in Computing, Analytics and Networking”, December 2017 (pp. 1-8). Springer, Singapore.

4.3.10 Interaction of faculty/department with outside agencies/ institute (Give details regarding membership of outside committee, executive committees of professional bodies etc.)

Nil

4.3.11 Consultancy Projects undertaken

Nil

4.3.12 Achievement of students

Nil

4.3.13 Any other relevant Information

4.5 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

4.5.1 A Brief Profile of the Department

The Department of ECE was established in the year 1985. The first batch of intake was taken in the year 1986. The Department of Electronics and Communication Engineering runs courses for three modules, namely Base, Diploma and Degree, giving B.Tech. degree to the students who pass out degree module successfully and M.Tech. in Electronics and Communication Engineering with two specialization communication and VLSI. The courses are designed by taking into consideration of present trends in technology, basic knowledge to pursue technological steps in the fields of Electronics and Communication Engineering and to meet the demand of manpower in the technology development and support to the country. The department of Electronics and Communication Engineering also runs Ph.D. (part time and full time) in the fields of Optical Fiber Communication, DSP & Embedded systems, Microelectronics, Instrumentation, VLSI, Computer Networking, Information Security, Wireless Communication, Microwave Engineering and VLSI. There are 14 regular faculty members in the department of which two are on QIP leave and pursuing Ph.D. at IIT, Kharagpur and IIT, Guwahati. Two faculty members are on lien and working at MMMEC Gorakhpur and Tripura University.

4.5.2 Academic Activities

The department conducts academic activities based on the modular pattern of NERIST-certificate in Maintenance Engineering, Diploma and Degree in Electronics and Communication Engineering. The students of M.Tech. and Ph.D. students are encouraged to attend and present their research publications in international and national conferences. All the research scholars are motivated to publish their research work in esteemed journals worldwide. A departmental society named as NERIST Electronics Society (NES) is a pioneering body for professional activities of students. The department has organized workshops, seminars with technical collaboration by the faculty members /experts of other universities.

4.5.3. Laboratories and Laboratory development

The department has 14 numbers of laboratories to conduct practical classes for various courses. The department has modernized research laboratory with funds from MHRD under Visvesvaraya Ph.D. Scheme. The department is further developing the existing VLSI and Computer Networking laboratories. The department has taken up steps to develop PG labs for M.Tech. courses for which Silvaco, Xilinx ISE series along with VHDL based kits, TI 6713 series DSP kits, etc. have been procured along with ORCAD and Microwind Design Software and cadence.

4.5.4 Projects completed by the UG/PG/PhD students

(i) Project work completed by PG students:

Name	Title	Name of Guide
Sharali Jun Gogoi	Study And Performance Analysis of Memory Cell Using D-FF In Hybrid SET-MOS Architecture	Mr. Pranab Kishore Dutta
Sarita Singh	Design And Analysis of FinFET Based Four-Bit Ripple Carry Adder Using MCML And MCML-FB Logic	Dr. J. Bora
Debika Das	Subthreshold, Bulk Driven Complementary Folded Cascode OTA And Its Implementation In G_m -C Filter Design	Dr. Tripurari Sharan
Shubhrata Sharma	Multicast Routing For 3D Network On Chip (NoC)	Dr. Md. Anwar Hussain
Shyamosree Goswami	FinFET Based Dram Sense Amplifier and Its Performance	Mr. Akho John Richa
Tsering Edroi Dirkipa	Low Power Hybrid Domino Logic Based 4-BIT ALU	Mr. Anil Kumar Gautam
Sanghamitra Debnath	FPGA Implementation of LSB-Based Steganography	Dr. Swanirbhar Majumder
Kaushik Das	FIR Filter Design Using Approximate Computing and Distributed Arithmetic	Mr. R. K. Mangang
Trishna Barman	Design of Subthreshold, Bulk-Driven OTA Based $CCII_{\pm}$ And Its Implementation In Current Mode Filter	Dr. Tripurari Sharan
Chelsea Leiphrakpam	All Optical AND Gate Using Defect in Photonic Crystals	Mr. Moirangthem Edison Singh
Binindita Sutradhar	Design And Analysis Of Mux Based Encoder Using Partially Adiabatic Logic	Dr. A. Dinamani Singh

(ii) Project work completed by Degree students:

Name	Title	Name of Guide
Prakhar Kumar Angkush Kr. Sharma Manish Kumar Sah Amit Kumar Sah	E-Braille Reader: A Portable, Economical and Smart EBook Reader for the Visually Impaired.	Mr. Moirangthem Edison Singh
Rajarshi Sen Biplob Nath Abhishek Kr. Gupta Ankita Choudhury	3D Sensor Networking and It's Application in Cognitive Radio Network	Dr. Md. Anwar Hussain
Karam Bharat Singh Susmita Rai Boitulla Hoque Pynskhemborlang Khongphan	Design of Carry Adder Based on Approximate Computing	Mr. R. K. Mangang
Arati Kumari Shah Sanjib Kumar Roy Roshni Porthal Nikita Paul	High Security Transportation	Mr. Anil Kumar Gautam
Vinay Kumar Pandey Himangshu Barman Mukesh Kumar Giri Tana Bapu	GSM Based Home Automation System	Mr. Akho John Richa
Shuvam Chhetry Abhishek Kumar	Classification of Normal/Abnormal Heart Sound Recordings	Dr. Swanirbhar Majumder
Muskan Kumari Pragya Jaffer Khan Nevil Kshetrimayum	Realization and Verification of Biquadratic Filter Using OTA	Dr. Tripurari Sharan
Maidanon Langthasa Rupesh Kumar Kanth	Real Time Speech Processing of North Eastern Languages of India	Dr. Swanirbhar Majumder
Subhom Choudhury Ashem Chingkhei Meitei Abinash Thapa Paolenmang Hmar	“Study and Performance Analysis of Hybrid SET-MOS Circuits at Room Temperature”	Mr. Pranab Kishore Dutta

Wahida Malik Laskar Nabojwal Acharjee Techi Nikam	An Analysis of Correlation and Co-Channel Interference In Cellular Network	Dr. Joyatri Bora
Bhabatosh Das Amir Hussain N. Umakanta Singh Sh. Romesh Singh	Design of Earthquake Alarm System	Dr. A. Dinamani Singh

4.5.5. Courses/Seminars/Workshops/Conferences Organized at the department

NIL

4.5.6. Short term courses/Seminars/Workshops/Conferences attended by the faculty

Faculty Name	Programmes, date, Institute
Dr. R. Kumar	Short Term course on fundamentals of computer networks and security, 24/5/2017 to 2/6/2017, Two weeks IIT, Guwahati. Presented a paper titled "A Low Profile Super Wide band Antenna with Circularly Polarized Band" 9-10 th Feb 2018, Fourth IEEE International conference CICT-2018 held at ABES Engineering College, Ghaziabad, UP, INDIA.
Dr. T. Sharan	short Term Course: Titled, "Advances in Nanotechnology and its Application in Future Electronics (ANFE-2017), GIAN (ANFE-2017), MHRD6 th to 10 th November 2017. ECE, D., MNNIT, Allahabad, UP.
Dr.S. Majumder	Presented paper "Abnormality analysis of PCG signal using VMD and MLP Neural Network", 18-20 December '17, Seventh International Symposium on Embedded computing and System Design (ISED-2017), held at NIT, Durgapur.
Mr.R.K. Mangang	Android Application Development, 21 – 27 August 2017, One week E&ICT Academy, IIT Guwahati with IIIT Manipur. A Five Days workshop on Deep learning and Application, 12 – 16 March 2018 One week, NIT Manipur. IOT: Gateway to smart future, 12 – 17 April 2018, One week, E&ICT Academy, IIT Guwahati with NIT Manipur.

Mr. A. K. Gautam	<p>A short-term course on Advances in nanotechnology and its application in future electronics (ANFE-2017), 6th to 10th November 2017, One week, MNNIT Allahabad.</p> <p>Workshop on Recent trends in VLSI design (VLSID-2018), 8th to 12th January 2018, One week, NIT-Yupia, Arunachal Pradesh.</p>
Mr. M. Edison Singh	<p>Android Application Development, 21-27th Aug.2017, One week, Electronics &ICT, IITG &MeitY.</p> <p>Leadership and Team Building in Academia, 30th Oct-3rd Nov,2017,One week, NITTR and NERIST.</p> <p>IoT: Gateway to Smart Future, 12th to 17th April'18,One week, Electronics &ICT ,IITG &MeitY and NIT Manipur.</p>

4.5.7. New Degree/Professional membership obtained by the faculty:

- i. Dr. A. Dinamani Singh becomes life Member of ACM.
- ii. Dr. Rajesh Kumar becomes life fellow of IETE.

4.5.8. Achievements/Awards/recognition by the faculty:

1. Mr. Tripurari Sharan, Assistant Prof. has received Ph.D. Degree from MNNIT Allahabad, UP on 19th March 2018.

4.5.9. Projects Sanctioned by outside agencies to the faculty of the department

Nil

4.5.10. Publications

Refereed Journal

1.	<p>Saikia, M. and Md. A. Hussain "An Analysis of Location Independent Key Pre distribution Schemes for Wireless Sensor Network", International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 p-ISSN: 2395-0072. Volume: 04 Issue: 07 July - 2017 Page 1958-1962.</p>
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2.	Majumder, S.Anwar Hussain,"Black Hole Attack, in P2P based VoDService, and its Effects on Swarm Sizes and Seeders",InternationalJournal on Recent and Innovation Trends in Computing and Communication,ISSN: 2321-8169 ,Volume: 6 Issue: 1 ,January 2018,
3.	Majumder, S., Hussain, A. "Effects of Grey-Hole Attack onP2P Based Video on Demand (VoD) Services",International Journal of Computer Trends and Technology (IJCTT),ISSN: 2231-2803, Volume 55 Number 1 January 2018.
4.	SuparnaGoswami and Aheibam Dinamani Singh, "Performance of SC Receiver Over OWDP Fading Channels." Springer:Advances in Communication, Devices and Networking(https://doi.org/10.1007/978-981-10-7901-6_44)Vol 462 (2018) pp 399-408.
5.	Goswami S., Singh A.D.,“Performance of Digital Communication System Over OWDP Fading Channels”,Springer: Optical and Wireless Technologies, https://doi.org/10.1007/978-981-10-7395-3_10 vol 472 (2018), pp. 95-103.
6.	Kishorjit Nongmeikapam, Wahengbam Kanan Kumar and Aheibam Dinamani Singh,” A Fast and Automatically Adjustable GRBF Kernel based Fuzzy C-Means for Cluster - wise Coloured feature extraction and Segmentation of MR Images.”, IET Image Process., 2018, Vol. 12 Iss. 4, pp. 513-524
7.	Suparna Goswami,Shanjit Heisnam Singh and Aheibam Dinamani Singh, “ABEP Upper and Lower Bound of BPSK System over OWDP Fading Channels”, (AWMC), Advances in Wireless and Mobile Communications, ISSN 0973-6972, Volume 10, Number 2 (2017), pp. 307-313
8.	Kurmendra, Rajesh Kumar, “Design analysis, modeling and simulation of novel rectangular cantilever beam for MEMS sensors and energy harvesting applications” in International Journal of Information Technology, DOI 10.1007/s41870-017-0035-6, Vol:9, issue:3,Page: 295-302, August 2017,Springer Singapore Print ISSN 2511-2104.
9.	A Chamuah, Kurmendra, Rajesh Kumar, “Piezoelectric energy harvesters using MEMS Structures: A Review” in International Journal for science and Advance Research in Technology (IJSART) Vol: 4, issue: 2, page: 610-614, Feb 2018, ISSN: 2395 – 1052.
10.	T. Sharan, V. Bhadauria, “Fully Differential Operational Transconductance Amplifier with Enhanced Phase Margin and Gain for Ultra-Low-Power,” Journal of low power Electronics (JOLPE), vol. 13, No. 3, pp. 1-16, 2017, DOI: https://doi.org/10.1166/jolpe.2017.1504
11.	T. Sharan, P. Chetri, V. Bhadauria, “Ultra-low-power bulk-driven fully differential subthreshold OTAs with partial positive feedback for Gm-C filters,” Journal of Analog Integrated Circuit and Signal Processing, vol. 94, No. 3, pp. 427-447, 2018, https://doi.org/10.1007/s10470-017-1065-5
12.	T. Sharan, P. Chetri, V. Bhadauria, “Correction to: Ultra-low-power bulk-driven fully differential subthreshold OTAs with partial positive feedback for Gm-C filters,” Journal of

	Analog Integrated Circuit and Signal Processing, vol. 94, No. 3, p. 449, 2018, https://doi.org/10.1007/s10470-018-1121-9
13.	K. Johnson Singh, T. Sharan, H. Tarunkumar “High Speed and Low Power Basic Digital Logic Gates, Half-Adder and Full-adder Using Modified Gate Diffusion Input Technology,” Journal of VLSI Design Tool and Technology, Vol. 8, Issue 1, pp. 34-42, 2018.
14.	M. Mishra, S. Banerjee, D. C. Thomas, S. Dutta and A. Mukherjee, "Detection of Third Heart Sound Using Variational Mode Decomposition," in IEEE Transactions on Instrumentation and Measurements 2018.
15.	Amit Jain, Arpita Ghosh, Pranab Kishore Dutta, N. Basanta Singh, Subir Kumar Sarkar, " Error probability independent delay analysis of single electronics circuits", International Journal of Circuit Theory and Applications, Vol 46, Issue 2, Pg.No 290-298, 2017.
16.	Janmoni Borah and Joyatri Bora, “Traditional Macro-tower to Heterogenous Cellular Network: A Survey," International Journal of Advanced Science and Technology, Vol.109 (2017), pp.13-22. (SCOPUS DOI: 10.14257/ijast.2017.109.02
17.	S. Majumder "Multiresolution SVD Based Image Watermarking Scheme Using Noise Visibility Function", International Journal of Applied Evolutionary Computation (IJAEC) Volume 8, Issue 1,pg 38-48, ISSN: 1942-3594 DOI: 10.4018/ijaec.2017010103 IGI Global publishers.
18.	Shubham Jha, Anil Kumar Gautam, " Design of Full Adder using GDI Techniques", International journal for Science and Advance Research in Technology, Volume 4, Issue 3, pp1727-1732, March 2018

Conference Papers:

1.	Maibam Sanju Meetei, Anil Chamuah, Yabom Yuto, and Aheibam Dinamani Singh, "A Systematic Approach for Designing a Neural Network Using Existing Algorithms to Detect H ₂ , CH ₄ , and CO Gases." International Conference on Innovations in Electrical, Electronics, Power, Smart Grids & Advanced Computing Technologies (IEEPS-18), International Conference on Innovations in Electrical, Electronics, Power, Smart Grids & Advanced Computing Technologies (IEEPS-18), ISBN : 978-93-8759-301-5, 8th& 9th March 2018, VNR VJIET, Hyderabad.
2.	Rajesh Kumar, Devvrat Tyagi, S K Gupta, “A Low Profile Super Wide band Antenna with Circularly Polarized Band” in fourth IEEE International conference on computational Intelligence and Communication Technology (CICT-2018) held on 9-10th Feb 2018 at ABES Engineering College, Ghaziabad, UP, INDIA.
3.	Sarfray Hussain, Rajesh Kumar, G Trivedi, “Comparison and design of dynamic comparator in 180nm SCL technology for low power and high speed Flash ADC” in 3rd IEEE International

	Symposium on Nanoelectronic and Information Systems (IEEE-iNIS), December 2017 at Bhopal, India.,978-1-5386-1356-6/17 \$31.00 © 2017 IEEE DOI 10.1109/iNIS.2017.37
4.	Sarfraz Hussain, Rajesh Kumar, G Trivedi, “A novel low power high speed BEC for 2GHz sampling rate Flash ADC in 45nm technology” in 3rd IEEE International Symposium on Nanoelectronic and Information Systems (IEEE-iNIS), December 2017 at Bhopal, India., 978-1-5386-1356-6/17 \$31.00 © 2017 IEEE DOI 10.1109/iNIS.2017.36
5.	Joyanta Basu, Tulika Basu, Soma Khan, Madhab Pal, Rajib Roy, Milton S. Bepari, Sushmita Nandi, Tapan Kumar Basu, Swanirbhar Majumder, Saibal Chatterjee, "ACOUSTIC ANALYSIS OF VOWELS IN FIVE LOW RESOURCE NORTH-INDIAN LANGUAGES OF NAGALAND", 20th Oriental COCODA Conference held on Nov. 1-3, in Seoul, Korea hosted by the The Korean Society of Speech Sciences (KSSS) November 1-3, 2017, DOI: 10.1109/ICSDA.2017.8384460
6.	B. Z. Laskar, and S. Majumder, "Gene Expression Programming", pg 269 to 292 of Book "Bio-Inspired Computing for Information Retrieval Applications" by D. P. Acharya and Anirban Mitra ISBN13: 9781522523758 ISBN10: 1522523758 EISBN13: 9781522523765 DOI: 10.4018/978-1-5225-2375-8; DOI: 10.4018/978-1-5225-2375-8.ch010
7.	Manashee Kalita, Swanirbhar Majumder, "Steganography using Biometrics", in Encyclopedia of Information Science and Technology, DOI: 10.4018/978-1-5225-2255-3 Fourth Edition (10 Volumes) by Mehdi Khosrow-Pour, ISBN13: 9781522522553, ISBN10: 1522522557, EISBN13: 9781522522560, DOI: 10.4018/978-1-5225-2255-3.ch432
8.	S Md S Askari and Anwar Hussain. Intuitionistic fuzzy id3: An approach to e-transactional fraud detection. In <i>2017 Ninth International Conference on Advanced Computing (ICoAC)</i> , pages 253-260. IEEE, 2017.
9.	S Md S Askari and Md Anwar Hussain. Credit card fraud detection using fuzzy id3. In <i>Computing, Communication and Automation (ICCCA), 2017 International Conference on</i> , pages 446-452. IEEE, 2017.
10.	Afruz Begum, Md Anwar Hussain, Joyatri Bora, and S Md S Askari. A simple three-dimensional joint routing and scheduling protocol for multi-hop wireless networks. In <i>2018 4th International Conference on Recent Advances in Information Technology (RAIT)</i> , pages 1-7. IEEE, 2018.
11.	Monjul Saikia and Md Anwar Hussain. "Combinatorial Group Based Approach for Key Predistribution Scheme in Wireless Sensor Network" International Conference on Computing, Communication and Automation (ICCCA2017) 5-6 May 2017 Galgotias University Noida, India, page 502-506.
12.	Md. Anwar Hussain, Popi Bora, Joyatri Bora, “A Novel And Robust Image Encryption Algorithm Using Logistic Map And Hyper Chaotic System”, 2 nd International Conference for Convergence in Technology (I2CT), 7-9 April, 2017, Pune (INDIA).
13.	T. Sharan, V. Bhadauria, P. Chetri, “Bulk-driven feed-forward compensated sub-threshold low-voltage OTA to drive high capacitive load,” International Conference on Innovations in

	Electronics, Signal Processing and Communication (IESC), 6-7th April-2017), pp. 121-126, April 2017, DOI: 10.1109/IESPC.2017.8071877 .
14.	T. Sharan, Nipu Kumar Nath, "Low-power and Folded Cascode Near Rail-to-Rail OTA for moderate Frequency Signal Processing," International Conference on Innovations in Electronics, Signal Processing and Communication (IESC), 6-7th April-2017, pp. 5-10, April 2017, DOI: 10.1109/IESPC.2017.8071855 .
15.	K. Johnson Singh, T. Sharan, "Enhanced CMRR and PSRR, CMOS Instrumentation amplifier using Class AB Push-pull CMOS Operational Amplifier," International Conference on Electrical, Electronics, Computer, Communication, Mechanical and Computing (EECCMC)), 28-29th Jan-2018, pp. 108-113, Jan 2018.
16.	K. Johnson Singh, T. Sharan, "Design and Analysis of a Very High CMRR and PSRR, CMOS Instrumentation amplifier for Bio-Medical Applications," International Conference on Electrical, Electronics, Computer, Communication, Mechanical and Computing (EECCMC)), 28-29th Jan-2018, pp. 284-289, Jan 2018.
17.	M. Mishra, S. Pratiher, S. Banerjee and A. Mukherjee, "Grading heart sounds through variational mode decomposition and higher order spectral features," 2018 IEEE International Instrumentation and Measurement Technology Conference (I2MTC), Houston, TX, 2018.
18.	Sapna Rani Ghimiray, Preetisudha Meher, Pranab Kishore Dutta, "Energy efficient, noise immune 4× 4 Vedic multiplier using semi-domino logic style" IEEE Region 10 Conference, TENCON 2017, 5-8 Nov 2017, Penang, Malaysia.
19.	Tasher Ali Sheikh, Md. Anwar Hussain, Joyatri Bora , "A survey of antenna and user scheduling techniques for Massive MIMO-5G wireless System," <i>Proc. IEEE Int. Conf. on Current Trends in Computer, Electrical and Electronics and Communication (ICCTCEEC 2017)</i> , pp. 287-294, Sep.2017
20.	Sinam Ajitkumar Singh, Abhishek Verma, Shuvam Chhetry and S. Majumder, "Abnormality analysis of PCG signal using VMD and MLP Neural Network", in proceedings of Seventh International Symposium on Embedded computing and system Design (ISED-2017), held at National Institute of Technology Durgapur, 18-20 December '17.

Book Chapters:

1.	Saikia M and Hussain MA. Location-Independent Key Distribution for Sensor Network Using Regular Graph. InProgress in Computing, Analytics and Networking, December 2017 (pp. 1-8). Springer, Singapore.
2.	Monjul Saikia and Md. Anwar Hussain "Location Independent Key Distribution for Sensor Network using Regular Graph" International Conference on Computing Analytics &

	Networking (ICCAN-2017) Organized by School of Computer Engineering, KIIT University, Bhubaneswar, Odisha 15th & 16th December 2017.
3.	Monjul Saikia and Md Anwar Hussain "A Novel Key Predistribution Scheme for Minimum Angle Routing in Wireless Sensor Network" in Second International Conference on Integrated Intelligent Computing, Communication & Security (ICIIC-2018) 24th and 25th of January 2018. Bengaluru, Karnataka, India.

4.5.11. Interaction of faculty/department with outside agencies

1. Dr. Rajesh Kumar was invited as an external examiner to conduct practical examination in the department of Electronics & Communication Engineering, Rajiv Gandhi University, Arunachal Pradesh.
2. Dr. Rajesh Kumar had interaction with IIT Guwahati and APJ Abdul Kalam University, Lucknow, UP as Joint Research Publication.
3. Dr. A. Dinamani Singh was also invited as an external examiner to conduct practical examination in the department of Electronics & Communication Engineering, Rajiv Gandhi University, Arunachal Pradesh.
4. Dr. A D Singh had interaction with IIIT, Manipur (Joint Research Project) and RGU, Rono Hills (Joint Research Publication)
5. Mr. P. K Dutta was invited as a guest faculty in the department of Electronics (PG Section), North Lakhimpur College, North Lakhimpur, Assam. He was also invited as an external examiner to conduct practical examination in the department of Electronics & Communication Engineering, Rajiv Gandhi University, Arunachal Pradesh.
6. Dr. S Majumder has interaction with following professional outside agencies.
 - a) Member State Level Technical Team of Cold Chain Development with the Arunachal Pradesh Horticulture Produce Marketing and Processing Board
 - b) TPC member of International Conference on Innovations in Electronics, Signal Processing and Communication (IESC-2017) held on 6-7th April 2017 at NIT Meghalaya, EEE Conference Record Number:40615
 - c) Technical Committee member (TPC) of national conference entitled "National Conference on Innovations in Science and Technology 2017 (NCIST-17)". The

conference will be held at the Takyelpat campus of Manipur Institute of Technology, Imphal during 20-21 March 2017.

- d) TPC member of by the Department of Electronics and Communication Engg, Sikkim Manipal Institute of Technology, Sikkim for organising an IEEE conference on Communication, Devices and Networking (ICCDN-2017) during 3-4 June 2017.
- e) TPC member, First International Conference on Advanced Computational and Communication Paradigms (ICACCP) held at Sikkim Manipal Institute of Technology (SMIT), Sikkim during 08-10 September 2017. It is organized by The Dept. of CSE, SMIT, Sikkim, and technically collaborated with Computer Society of India (CSI), Kolkata Region.

Our faculty members have a very good relationship with other organisations. Department of ECE have organised short term courses in collaboration with Jadavpur University and Calcutta University in past. Resource persons from different IITs have helped to organise the short term programmes at NERIST. Also, our faculty members have attended short term courses, conferences and training program organised by IITs, IISc and other reputed institutes.

4.5.12. Consultancy projects undertaken

Nil

4.5.13. Achievements of Students

Our passed out students have been recruited by reputed companies. Moreover, few students have scored in GATE and pursuing higher studies in the reputed Institutes.

4.5.14 Any other information

The department has revised its Syllabus for all modules including M.Tech. (ECE) syllabi. DR. A. D. Singh delivered series of invited lectures on Techno-Entrepreneurship /Entrepreneurship and Technology at RGU on 31st August and 24th October 2017.

4.6 DEPARTMENT OF ELECTRICAL ENGINEERING

4.6.1 A Brief Profile of the Department

The Department of Electrical Engineering has been playing a vital role in producing highly competent engineers and scientists ever since the inception of the institute in 1984. The first batch of students was graduated in the year 1992. The Department offers undergraduate and postgraduate (M.Tech.) programme with specialization in Power System Engineering and Ph.D. programme in all fields of Electrical Engineering. The Department has distinguished and well qualified faculty members having Ph.D./M.Tech. Degree from renowned institutions of India. The infrastructure and laboratory facilities are upgraded from time to time and provide adequate opportunities to students and researchers to learn and innovate. Many faculty members are handling research projects sponsored both by the government and the industry.

The broad objectives of the undergraduate/postgraduate programmes in the Department are:

- Train the base module students in the art of troubleshooting, servicing and maintenance of electrical instruments, machines, circuits and systems etc.
- Impart enough supervisory and guiding skills to the diploma module students.
- Provide sound knowledge to the degree module students so as to make them able to analyze, design and capable to lead with innovative ideas in the field of Electrical Engineering suitable for the current need of modern industries and public sectors.
- Train students at post graduate level for carrying out researches relevant to industrial needs.
- Research and development in Electrical Engineering.

Programs

The Department offers the following programmes:

- a) Undergraduate Programmes
 - Certificate courses
 - Diploma in Electrical Engineering
 - B.Tech. in Electrical Engineering
- b) Post Graduate Programs
 - M.Tech. in Power System Engineering
- c) Ph.D. programmes
 - In all fields of Electrical Engineering

Facilities

There are 13 well equipped laboratories offering facilities to work in all areas of Electrical Engineering. They are provided with number of high configuration PCs, servers and workstations hosting several software packages and linked through a local area network. Uninterrupted internet services are available for both students and faculty members. A departmental library houses books and journals for ready reference.

Research

The Department of Electrical Engineering works under three main research groups namely, (1) Electrical Power and Energy Systems, (ii) Control and Instrumentation, and (iii) Electrical Machine, Drives and Power Electronics. In addition to carrying out research in the above areas, the members of the groups are also involved in

- Review of undergraduate and postgraduate curricula.
- Organizing seminars/workshops/conferences.
- Supervising B.Tech./M.Tech. /Ph.D. Projects/Dissertations/Theses.
- Providing consultancy services.
- Facilitating Institute-Industry interaction.
- Publication in national and international journals/conferences.

List of faculty members of the Department with Qualification and area (s) of specialization

Sl. No.	Name	Designation	Areas of Specialization
1.	Dr. S. Chatterjee Ph. D. (Jadavpur University)	Professor	High Voltage, Power System
2.	Dr. S. K. Bhagat Ph. D. (IIT (BHU), Varanasi)	Professor	Control Systems
3.	Dr. R. K. Mehta Ph. D. (Jadavpur University)	Professor	Control Systems
4.	Dr. O. P. Roy Ph. D. (IIT, Dhanbad)	Professor	Microprocessor based Control & Instrumentation, Power System Reliability
5.	Dr. Sarsing Gao Ph. D. (IIT, Delhi)	Professor	Electrical Machines, Energy, Distributed Power Generations & Power Quality

6.	Dr. A. K. Singh Ph. D. (Tezpur University)	Professor	Power System, Electrical Machines & Drives
7.	Mr. Radak Blange M. Tech. (NERIST, Nirjuli)	Associate Professor	Control Systems, Energy, Electrical Machines & Drives
8.	Mr. T. V. P. Singh M. Tech. (MNNIT, Allahabad)	Associate Professor	Control Systems, VLSI Design
9.	Mr. M. D. Singh M. Tech. (Tezpur University)	Assistant Professor	Power Electronics, Digital Systems
10.	Dr. A. K. Parida Ph.D (Jadavpur University)	Assistant Professor	Industrial Drives, Power Electronics & Energy Audit
11.	Dr. A. K. Das Ph.D. (NERIST)	Assistant Professor	Power System Stability, FACTS & Renewable Energy
12.	Mr. N. L. Meitei M. Tech. (Tezpur University)	Assistant Professor	Energy Management
13.	Ms. Somila Hashunao M. Tech. (Jamia Milia Islamia, Delhi)	Assistant Professor	Electrical Power System Management
14.	Mr. Akhilesh Sharma M. Tech. (MMMEC, Gorakhpur)	Assistant Professor	Power Electronics and Drives
15.	Ms. Piyali Das M. E. (Jadavpur University)	Assistant Professor	Illumination Engineering, Control System
16.	Mr. P. Devachandra Singh M. Tech. (NERIST, Nirjuli)	Assistant Professor	Power System Engineering

4.6.2. Academic Activities

In addition to regular academic activities, consultancy and other forms of collaborative ventures with various organizations are being carried out. A number of sponsored research projects have been completed and others are ongoing as a part of the Department's continuing institute-industry interactive approach of education. Many workshops, seminars and symposia in various specialized

fields have been organized with participations of persons from industry and academia from all over the country.

4.6.3. Laboratories and Laboratory Development

Nil

4.6.4 Project completed by the Ph.D., PG and UG students.

(a) Ph.D. Completed/ theses Submitted

Name	Supervisor (s)	Status	Title of Ph.D. Thesis
Mr. Anu Kumar Das	Prof. S. Chatterjee	Awarded	Electrical performance of transformer oil based Nano fluid under impulse voltage for application in power equipment.
Mr. Santanu Chatterjee	Prof. S. Chatterjee	Submitted	Study of distributed grid connected PV integration.

(ii) Project work completed by PG students:

Name of Student / Roll. No.	Dissertation title	Supervisor(s)
MT/16/PSE/01	A comparative study of selective harmonic elimination based on genetic algorithm and Newton-Raphson method.	Mr. Akhelesh Sharma
MT/16/PSE/02	Fuzzy logic based efficiency optimization of induction motor.	Prof.A. K. Singh
MT/16/PSE/03	Study of effects of measurement surge on insulation.	Prof.S. Chatterjee
MT/16/PSE/4	Analysis of power theft in deregulated electricity market in India	Dr. A.K.Parida
MT/16/PSE/06	High voltage modelling of single core and three core cables.	Prof.S. Chatterjee
MT/16/PSE/07	Modelling of smart grid	Prof.S. Chatterjee

MT/16/PSE/08	Study of inverter dominated grid system	Prof. S. Gao
MT/16/PSE/09	Reliability modelling and evaluation of bulk power system.	Prof. O. P. Roy
MT/16/PSE/10	PLL based control of solar energy system under variable solar intensity.	Prof. S. K. Bhagat.
MT/16/PSE/01	Area supply system reliability evaluation.	Prof. O. P. Roy
MT/16/PSE/13	Development of voltage source converter based unified power quality conditioner for voltage sag mitigation.	Mr. M. D. Singh

(iii) Project work completed by UGstudents:

Name of Student / Roll. No.	Dissertation title	Supervisor(s)
D/16/EE/3,14,16	Design of ATmega328 microcontroller based lighting controller for visual comfort	Mr. N. L. Meitei
D/16/EE/15,19	Observer based Control using intelligent algorithms for various MIMO Systems	Ms. Piyali Das
DE/15/EE/201,203, 204	Study and Development of Micro-controller based FACTS Device	Mr. M. D. Singh
D/16/EE/4,21, DE/15/EE/208	Modeling and control of grid connected hybrid system using wind driven DFIG and hydro driven SCIG	Mr. P. D. Singh
DE/15/EE/211,209, 207	Voltage protection of load with remote switching facility	Prof. O.P.Roy
D/16/EE/6,8,7	Simulink model of Closed loop operation of a single phase inverter	Mr. A. Sharma
D/16/EE/5,20	Study of inverter dominated grid system	Prof. S. Chatterjee
D/16/EE/10,9	Investigation on Electric Field for Complex Configurations of Transmission Lines.	Dr. A.K. Das Prof. S. Chatterjee

DE/15/EE/202,210, D/16/EE/13	Load Frequency Control for Power Systems with Wind Turbines	Prof. S. K. Bhagat.
DE/15/EE/11,12, D/16/EE/205	FPGA Realization of Integer Transform	Mr. TVP Singh
D/16/EE/23,22	Design of Satellite's Altitude Control	Prof. R. K. Mehta
D/16/EE/1,18,17	Smart Home Control using Arduino	Mis. S. Hushnao
DE/15/EE/20 DE/15/EE/22	Feedback control of dc motor	Prof. R. K. Mehta
D/16/EE/2,24	Analog Modelling of Recurrent Surge Generator	Prof. S. Chatterjee

4.6.5 Short term courses/seminars/workshops/conferences organised at NERIST

Nil

4.6.6 Short term courses/seminars/workshops/conference attended by faculty members

Dr. A.K. Sigh, Professor	Leadership and team building in academia on Oct. 30-Nov. 7, 2017, NITTR, Kolkata.
Dr. A.K. Sigh, Professor	Certificates and participation workshop on the role of local chapter participated on April.29, 2017, IIT, Kanpur.
Dr. O. P. Roy, Professor	NITTTTR sponsored Short Term Training programme on "Control Systems - Analysis and Design using MATLAB" organized by NITTTTR Kolkata at NITTTTR Kolkata Extension Centre, Girls' Polytechnic, BamuniMaidan on Dec. 19-23, 2017, Guwahati.
Dr. O. P. Roy, Professor	TEQIP-III (MHRD- World Bank Project) sponsored Short Term Course on "Mechatronics and Robotics", organised by Department of Electrical Engineering, PEC on July 16–20, 2018, Chandigarh
Mr. P. D. Singh, Assistant Professor	Workshop on role of local chapters (BPTTEL) at NERIST by IIT Kanpur, on 29th April 2017, NERIST.
Mr. P. D. Singh, Assistant Professor	ISTE STTP on Electric Power System at NERIST by IIT Kharagpur on June. 12-15, 2017, NERIST.
Ms. Piyali Das, Assistant Professor	Advances in Renewable Energy Technologies and Systems" during February 19-24, 2018 at Department of Energy, on Feb. 19-24, 2018, Tezpur University.

Ms. Piyali Das, Assistant Professor	ISTE STTP on Electric Power System.2017, on June. 12-15, 2017, NERIST.
Ms. Piyali Das, Assistant Professor	Leadership& Team Building in Academia, on Oct. 30- Nov. 3, 2017, NERIST.
Ms. Piyali Das, Assistant Professor	Renewable Energy Technology: Issues and Prospects(RETIP-2017, on Sep. 25,2017, NIT Silchar.
Ms. Somila Hushnaao, Assistant Professor	AICTE(NEQIP) sponsored Recent Advancements in Electrical Engineering, on Feb 19-24, 2018, Tezpur University.
Ms. Somila Hushnaao, Assistant Professor	Advances in Renewable Energy Technologies and Systems, on Jan 29 th - 2 nd Feb, 2018, Tezpur University.
Ms. Somila Hushnaao, Assistant Professor	Climate Change Adaptation for Natural Resource Management, on Jan 15-19, 2018, NERIST.
Ms. Somila Hushnaao, Assistant Professor	Leadership and Team Building in Academia supported by NITTTTR, Kolkata, on Oct 30 – Nov 3 rd , 2017, NERIST
Ms. Somila Hushnaao, Assistant Professor	Regional Seminar on Renewable Energy Technology: Issues and Prospects(RETIP-2017), on Oct 14 th - 15 th , 2017, NERIST

4.6.7 New Degrees/Professional Memberships obtained by Faculty members

Prof. S. Chatterjee, is elevated to Fellow, IE (I).

Mr. P. Devachandra Singh is Member of International Association of Engineers (Membership no.170360)

Ms. Piyali Das- IEEE Membership for 2017-2018

4.6.8 Achievements/awards/recognition earned by faculty member

Prof. S. Chatterjee is a Chartered Engineer, IE (I).

4.6.9 Projects Sanctioned by Outside Agencies to the Faculty of the Department

Name of PI/CoPI	Title of project	Funding agency	Period	Amount (Lakhs)
Prof. Saibal Chatterjee	FIST (Fund for Improvement of S&T) project to strengthen the PG Teaching and	DST, New Delhi	-	Rs.75.6 lakh

	Research in Electrical Engineering Department.			
Prof. Saibal Chatterjee (PI) and Dr. A.K. Parida (Co-PI)	Large Cardamom and other Multilayer Innovative Farming in Mengio Circle of Arunachal Pradesh and its Impact on Sustainable Rural Livelihood.	NMHS, New Delhi	28-03-2018- 27-03.2021	Rs. 40.6 lakhs

4.6.10 Publications

(a) Referred Research Journal:

1.	A. K. Das, Saibal Chatterjee, "Finite element method-based modelling of flow rate and temperature distribution in an oil-filled disc-type winding transformer using COMSOL multiphysics" IET Electric Power Applications, 2017, 11(4), pp.664-673.
2.	A. Parida, S. Choudhury D. Chatterjee: 'Microgrid based hybrid energy co-operative for grid-isolated remote rural village power supply for east cost zone of India', IEEE Transactions on sustainable Energy, 2017.
3.	A. Parida, D. Chatterjee: 'Stand-alone AC-DC microgrid based wind-solar hybrid generation scheme with autonomous energy exchange topologies suitable for remote rural area power supply', International Transactions on Electrical Energy Systems (Willey), 2017.
4.	A. Parida, D. Chatterjee: 'Integrated DFIG-SCIG-based wind energy conversion system equipped with improved power generation capability', IET Generation Transmission and Distribution, 2017.
5.	Saibal Chatterjee: " A novel speed sensor-less vector control of Dual Stator Induction machine with space vector based advanced 9-zone hybrid PWM for grid connected wind energy generation system, Electric Power Systems Research, 2018, DOI: 10.1016/j.epr.2018.02.021
6.	Saibal Chatterjee: "A Review on the Techno-Commercial Aspects of Wind Energy Conversion System", IET Renewable Power Generation, 2018, DOI: 10.1049/iet-rpg.2018.5197
7.	Saibal Chatterjee: "Analysis of thermophoresis and Brownian motion effect in heat transfer for nanofluid immersed distribution transformer", Electrical Engineering, 2018, DOI: 10.1007/s00202-017-0676-2
8.	Saibal Chatterjee: "On comparison of tuning method of FOPID controller for controlling field controlled DC servo motor". Cogent Engineering, 2017, DOI: 10.1080/23311916.2017.1357875

9.	Saibal Chatterjee: "A techno-commercial review on grid connected photovoltaic system", Renewable and Sustainable Energy Reviews, 2017, DOI: 10.1016/j.rser.2017.06.045.
10.	Saibal Chatterjee: "Interval type-II fuzzy multiple group decision making based ranking for customer purchase frequency determinants in online brand community", Advances in Intelligent Systems and Computing, 2018, DOI: 10.1007/978-981-10-3322-3_26
11.	M.D. Sigh, R.K.Mehta, A.K.Singh: Modelling and simulation of CSC based DVR for voltage regulation cum harmonics mitigation, International journal on advanced science, engineering and IT, 7(5), 2017, pp-1811-1817.
12.	Miky, Chaantrea and Singh, A K, "Minimization of transmission loss using distributed generation approach", Published EDP Science, 2017 [https://doi.org/10.1051/smdo/2017008]

(b) Conference Proceedings

1.	Saibal Chatterjee: Acoustic analysis of vowels in five low resource north East Indian languages of Nagaland 2017 20th Conference of the Oriental Chapter of the International Coordinating Committee on Speech Databases and Speech I/O Systems and Assessment (O-COCOSDA) 2017-11 conference-paper DOI: 10.1109/icsda.2017.8384460, ISBN: 9781538633335
2.	Saibal Chatterjee: Experimental investigation of transformer oil based nanofluids for applications in distribution transformers 2017 3rd International Conference on Condition Assessment Techniques in Electrical Systems (CATCON), 2017-11, DOI: 10.1109/catcon.2017.8280246, ISBN: 9781538631386.
3.	Saibal Chatterjee: Modelling of hybrid electric field for parallel operation of HVDC and HVAC transmission lines using COMSOL multiphysics 2017 3rd International Conference on Condition Assessment Techniques in Electrical Systems (CATCON), 2017, DOI: 10.1109/catcon.2017.8280217, ISBN: 9781538631386
4.	Saibal Chatterjee: Renewable Energy Capacity Estimation for Indian Energy Sector Using Energy Demand Forecasting Through Fuzzy Time Series, Advances in Smart Grid and Renewable Energy, 2017, DOI: 10.1007/978-981-10-4286-7_54, ISBN: 9789811042850, ISSN: 1876-1100.
5.	Saibal Chatterjee: Study of output characters of pulse transformer with closed magnetic circuit 2017 IEEE 21st International Conference on Pulsed Power (PPC), 2017, DOI: 10.1109/ppc.2017.8291308, ISBN: 9781509057481.
6.	Saibal Chatterjee: Study of transformer and motor winding under pulsed power application 2017 IEEE 21st International Conference on Pulsed Power (PPC), 2017, DOI: 10.1109/ppc.2017.8291298, ISBN: 9781509057481.
7.	Piyali Das, R. K. Meheta, O. P. Roy: Disturbance rejection using Extended State Observer for a MIMO system" Published in proceedings of IEEE International WIE Conference on Electrical and Computer Engineering (WIECON-ECE), 18-19 December 2017, WIT, Dehradun, India.
8.	N. Hemarjit Singh, O.P Roy: A Systematic approach on design of Automation system for Tea farming based on Embedded Wireless Sensor Network ", Published in the proceedings of

	International Conference on Materials, Applied Physics and Engineering (ICMAE), 2018, Effotel Hotel Indore, Sector C, Indore, Madhya Pradesh, India, 3-4 June, 2018.
9.	Piyali Das, Somila Hashunao, Saswati Mazumder, Ram Krishna Mehta, and Om Prakash Roy: Improved Lighting System for Emergency Lighting Driven by Renewable Energy, RETIP 2017, NIT Silchar, AIP Conference Proceedings, Vol 1998, 020006 (2018); https://doi.org/10.1063/1.5049102 .
10.	Piyali Das: Anthocyanins compound as natural sensitizers dye-sensitized solar cells, IJMTE, Page NO : 76-79, DOI:16.10089.IJAMTES.2017.V7I11.15.1911.
11.	Rinchin W. Mosobi and Sarsing Gao: Performance Analysis of Hybrid Solar-Wind-Micro hydro System in Islanded mode”, IEEE TENSYP 2018, IEEE Region 10 Symposium, Sydney, New South Wales, Australia, 4th-6th July, 2018.
12.	Rinchin W. Mosobi and Sarsing Gao: Distributed Generator based DVR Application to a LV Distribution Grid” – IEEE 2 nd International. Conference on “Energy Power and Environment, Shillong, India, 1st -2 nd June, 2018.
13.	M.D. Sigh, R.K.Mehta, A.K.Singh: Power quality enhancement in CSC and DVR, National exhibition and conference on new and renewable energy, October, 2017.
14.	Panchita Saikia, Rinchin W. Mosobi, Sarsing Gao: Power quality improvement of renewable energy based low voltage distribution system”, IEEE International Conference on Electrical, Electronics, Computers, Communication, Mechanical and Computing (EECCMC), Vellore, Tamil Nadu, 28-29 th January, 2018.
15.	A.K.Singh: Power quality enhancement in wind power generation Integrated distribution using Fuzzy logic controller CSC based DVR, in National Exhibition & conference and renewable Energy in NECONRE, 2017.
16.	A.K.Singh: Presented/participated a session/paper at international Conferences on computational & mathematical methods in engineering and technology(iComet’17) held on 18 th – 20 th December, 2017 at RMIT, university, Melbourne, Australia.
17.	Singh, A K, “Analysis and optimization of 3-phase Induction Motor”, presented & participated in International conference on computation and mathematical methods in engineering & Tech (icomet’2017) by RMIT, Australia, Dec.,2017.
18.	Singh, Renu, Bhattacharjee, Utpal and Singh, A K “ A Comparative Study of Cepstral based Speech Features for their Relative Noise Robustness” EECCMC-2018,IEEE conference

(c) Books:

Nil

4.6.11 Interaction of faculty/department with outside agencies

Prof. S. Gao	Reviewer, IEEE and IET Journals, IE (I) Member, National Advisory Committee, National Conf. on New Horizons in Technology for Sustainable Energy and Environment (NHTSEE 2017), Mar. 9-10, 2017, Faridabad, Haryana, India.
Prof. S. Chatterjee	Executive Member of IEEE DEIS Kolkata Chapter 2017 Technical Program Committee Member of IEEE CATCON 2017

	(IIT Ropar) Reviewer, IET journals, Elsevier journals, Emerald journals
Dr. A. K. Das	Coordinator, Remote Centre, NMEICT, MHRD
Dr. A. K. Parida	Reviewer, IET Journals. Reviewer, IEEE Transactions. Reviewer, Elsevier Journals. Reviewer, T & F Journals.

4.6.12. Consultancy projects undertaken

The faculty members of the Department are actively considering improved institute-industry interaction as well as consultancy services with PGCIL, NEEPCO and nodal agencies of the Govt. of Arunachal Pradesh.

4.6.13 Achievements of the Students Graduated from the Electrical Engg. Department

Sl.No	Name	Roll No.	Company
1	Guru Prasad Singh	DE/15/EE/25	Tech Mahindra
2	Khruzo	DE/15/EE/11	Powergrid Corpn. of (I) Ltd
3	PunyoByai	DE/15/EE/24	
4	TomnyaGeyi	DE/15/EE/20	
5	Ashwini Kumar	DE/15/EE/08	
6	Rahul Sarma	DE/16/EE/03	
7	MudangYabyang	DE/16/EE/07	Grifeo Tech.
8	JitulsoNgadong	DE/16/EE/10	
9	Md. Saddam Hussain	DE/16/EE/11	
10	AkhilDeo	DE/16/EE/24	
11	Manish Kumar	DE/16/EE/13	
12	Rahul Sharma	DE/16/EE/03	
13	Rajarshi Sharma	DE/16/EE/21	
14	Rahul Sharma	DE/16/EE/03	
15	BadaNaso	DE/15/EE/211	
16	WangjamHemjit Singh	DE/16/EE/018	Powergrid Corpn. of (I) Ltd
17	Liza Dey	DE/16/EE/004	
18	Debarshi Biswas	DE/16/EE/022	
19	KedokhoMotonyii	DE/16/EE/006	

4.6.14 Any other relevant information

The faculty members of the Department are also rendering additional responsibilities in the institute.

Prof. R. K. Mehta is looking after Electrical Maintenance Cell, NERIST.

Prof. A. K. Singh is Chairman, Central Time Table Committee, NERIST.

Mr. M. D. Singh is working as Programme Officer, NSS CELL, NERIST.

Mr. P. D. Singh is working as Programme Officer, NSS CELL, NERIST.

Mr. A. Sharma is working as Warden, Boys Hostel Block E, NERIST.

Ms. P. Das is working as Programme Officer, NSS CELL, NERIST.

Ms. P. Das is working as Warden, Girls Hostel, NERIST.

Prof. S. Gao is working as Controller of Examination, NERIST.

Dr. A. K. Parida has jointly supervised Ph.D. thesis with Dr. Shibabrata Choudhury, Centre for Management Studies, NERIST.

4.7 DEPARTMENT OF MECHANICAL ENGINEERING

4.7.1 A Brief Profile of the Department

Department of Mechanical Engineering came into existence as one of the core branch of engineering and started since the inception of the institute in 1986. The department offers Base, Diploma, Degree in Mechanical engineering. M.Tech. programme and Ph.D. programmes were started from 2006 onwards. The department is run by a mix of experienced as well as young motivated well-qualified faculty members (17) and experienced supporting staff (22) to generate human resources to cater the fast-growing industrial and academic need of the country. There are about 260 students including 34 research scholars, 24 M.Tech. students currently pursuing their studies at various levels. At present the department offers about 125 courses and 30 student projects every year for all the modules combined. The departmental vision and mission is as follows:

Vision

- To create a niche in the field of Mechanical Engineering through education and research to develop a sound human resource by nurturing the young talents especially from North Eastern States and also from other states of India matching the global standards and demands.

Mission

- To create an environment for providing balanced education in Mechanical Engineering through teaching, learning and practice rendering equal weightage in all.
- To create a Centre of excellence in research that will provide the students necessary impetus for future development and life-long learning.
- To create technical manpower in different levels for the North Eastern states in particular and for the country in general.

4.7.2. Academic activities

Apart from B.Tech. programme, the department runs two PG programmes (i) M. Tech in Computer Integrated Manufacturing (CIM) and (ii) M. Tech. in Thermal and Fluid Engineering as well as Ph.D. Besides conventional teaching methodology, the department provides facility of audio-visual sessions on selected areas conducted in the departmental seminar hall through e-learning CDs. Several proposals have been processed to streamline the course contents or credit distribution of a course. New and emerging elective courses are offered to the students.

Curriculum review process for all the modules has been completed and new revised syllabus is implemented since the academic session July- Dec 2017-18. Vocational Training is included as a part of the curriculum for certificate and degree modules.

Mechanical Association of NERIST (MAN), jointly officiated by faculty, staff and students of the department, provides a platform to resolve academic issues solely related to the departments. MAN also organizes lecture series, mock interviews, technical competitions etc. for the students of NERIST in general and students of mechanical engineering department in particular. In the academic session 2017- 18, Mechanical Association of NERIST (MAN) published the 1st edition of Students' annual magazine. It was released in a function in the presence of Prof. H. S. Yadav, Director, NERIST, Prof. U.S. Dixit, Senior Professor, IIT Guwahati, Prof.M. Chandrasekaran, HOD (ME) and Prof.P. Lingfa, M.E. Deptt. Besides, the articles given in this magazine has drawn upon a diverse range of skills and experiences from authors. It covered the activities and contributions of students of mechanical engineering department, NERIST at UG, PG/PhD levels.

Students of the department take active role in organizing and participating in various academic, cultural and sports activities at the Institute level such as RACAF, SHRISTI etc. Students are also encouraged to participate in technical events organized by various other Institutions of India.

4.7.3. Laboratories and Lab development

Nil

4.7.4 Project completed by UG/PG/PhD Students.

(a) Ph.D. awarded / theses submitted

Name and Roll No.	Supervisor (s)	Status	Title
N. K. Rana	Dr. S. S. Gautam	Awarded	Study of hydrostatic / hybrid conical journal bearing with micropolar lubricant
Santosh Kumar	Prof. M. Muralidhar	Submitted	Studies on ergonomic aspects of manufacturing assembly systems in Indian Industries
K. K. Pathak	Prof. P. Lingfa and Prof. Asis Giri	Submitted	Laminar convective heat transfer from shrouded vertical variable height fin array
Dipanka Bhuyan	Prof. P. Lingfa and Prof. Asis Giri	Submitted	Study of film wise condensation from moist air inside a parallel plate channel

(b) M. Tech.

Name of Student	Dissertation title	Supervisor(s)
Nyargo Yirang	Experimental investigation on performance and emission analysis of CI engine fuelled with Tung and Levistona Jenkinsiana biodiesel blends	Prof. P. Lingfa
Pujam Buchi	Production of biodiesel from Levistona Jenkinsiana griff of taak hekjay or Toko gutti found in Arunachal Pradesh and optimization and evaluation of engine performance emission characteristics of the driven biodiesel oil and its blend with conventional diesel	Prof. P. Lingfa
Sanasam Santosh	Optimization of biodiesel production from Tung oil and experimental investigation of engine performance and exhaust gas emission	Prof. P. Lingfa
Punyo Mali	Multi parametric optimization in drilling of Jute/Glass fiber reinforced hybrid composite	Dr. S. Samanta
Suman Kumar	Fabrication and characterization of rice husk filled pineapple leaf fiber reinforced polymer composites	Dr. S. Samanta
Pallab Sarmah	Experimental investigation and multi optimization of Al 6063/Zrsio4 metal matrix composites during WEDM process	Prof. M. Chandrasekaran
Dhrubajit Sarma	Sustainable modelling for machining inconel 718 and parametric optimization using GA	Prof. M. Chandrasekaran
Rupshree Ozah	Experimental investigation and numerical modeling of submerged and plasma arc welding process	Dr. N. Yadaiah and Prof. M. Muralidhar
Benjamin Das	Influence of process parameters on weld bead dimensions during fusion welding: experimental investigation and numerical modeling	Dr. N. Yadaiah

(c) B. Tech.

Name of Student	Dissertation title	Supervisor(s)
K. Anand, A. Gogoi, K. K. Lynrah, S. Sutradhar	Optimization of the Production of Biodiesel from Coconut and Mahua Oil and Blending with Diesel along with its Characterization	Prof. P. Lingfa
H. Thangsuankhup, T. Hauzel, S. Lhungdim	Study of Performance and Emission Characteristics of CI Engine Fuelled with Ethyl Ester of Coconut Oil	Prof. P. Lingfa
M. Gami, S. Prasad, A. Ansari	Production, Performance and Emission Analysis of Biofuel derived from <i>Mesua ferrei</i> in CI Engine	Prof. P. Lingfa
A. Kashyap, B. Chakraborty, S. S. Thakur, S. Mukherjee	Image generation of impacted composite panel by using ultrasonic C-Scan technique	Dr. S. Samanta
Biplab Deka, Chukhu Pekhi, Pakmi Kamki	Analysis of experimental results of ring compression based on an asperity-based friction model	Dr. Vinod Yadav and Prof. S. Mahto
A. Chakraborty, P. K. Mahto, Bappa Das, S. Islam	Peltier Solar Air Cooler	Dr. N. K. Rana
Kundan Prasad , S. Lyndem	Comparative study on cutting force simulation using DEFORM 3D software during high speed machining of Ti-6Al-4V	Prof. M. Chandrasekaran
S. Choudhury, R. Kumar, K. Pandey	Prediction of Laser Beam Machining Responses Using Artificial Neural Network	Mr. K. K. Mandal
P. M. Konyak, L. S. Khuman, W. W. Angomcha	Design and Fabrication of Power Generation System using Footsteps (mechanical method)	Mr. N. Teyi

4.7.5. Short term courses/ seminars/ workshops/ conferences organized at NERIST. (Please specify the areas, title, coordinator, duration, and funding agencies/ sponsors, no. of participants)

Faculty	Title	Venue	Period
Prof. P. Lingfa	World Bio-Fuel/Bio-Diesel Day	NERIST Auditorium	12 th Aug. 2017
	Workshop on Fuel Conservation	Mechanical Engineering Department (NERIST)	8 th Feb. 2018

4.7.6 Short term courses/ seminars/ workshops/ conferences attended by the faculty.

Prof. P. Lingfa	Attended Workshop on the Role of Local Chapter, 29 th Apr. 2017, NERIST (By IIT Kanpur).
Prof. M. Chandrasekaran	Attended workshop "Leadership and team building in academia," 30th Oct.- 3rd Nov. 2017, NERIST (By NITTTR Kolkata).
Dr. S. Samanta	Attended "Polymer composite and nano composites," 12th -16th June. 2017, NITTTR Kolkata. Attended workshop "Leadership and team building in academia," 30th Oct.- 3rd Nov. 2017, NERIST (By NITTTR Kolkata). Attended the Refresher course in Engineering Mechanics and Strength of Materials," 5 th -16 th Feb. 2018, NITTTR Kolkata.
Dr. S. S. Gautam	Attended the "Electron microscopy and microanalysis of materials," 12th -17th Feb. 2018, IIT, BHU. Attended the "Computation and optimization in Engineering with MATLAB," 18 th Dec.- 29 th Dec. 2017, NITTTR Kolkata. Attended workshop "Leadership and team building in academia," 30th Oct.- 3rd Nov. 2017, NERIST (By NITTTR Kolkata).
Mr. S. Tamang	Attended workshop "Leadership and team building in academia," 30th Oct.- 3rd Nov. 2017, NERIST (By NITTTR Kolkata).
Dr. Vinod Yadav	Attended the Gian course "Crystal plasticity modelling of micro-machining processes," 11 th -15 th Dec. 2017, IIT Guwahati.
Md. S. Mujahed Khan	Attended the "CFD Analysis of Heat Transfer and Fluid Flow Problems using FEM and FVM," 3rd -7th July 2017, IIT (ISM) Dhanbad. FDP on "Advances in Renewable Energy Technologies and Systems," 19 - 24 th Feb., 2018, Tezpur University, Assam.
Mr. K. K. Mandal	Attended the workshop "Solid Waste and Wastewater Treatment," 30th Oct. - 10th Nov. 2017, NITTTR Kolkata.

Mr. N. Teyi	Attended workshop “Leadership and team building in academia,” 30th Oct.- 3rd Nov. 2017, NERIST (By NITTTR Kolkata).
Dr. N. Yadaiah	Attended workshop “Leadership and team building in academia,” 30th Oct.- 3rd Nov. 2017, NERIST (By NITTTR Kolkata).

4.7.7 New Degrees/ Professional Memberships obtained by the faculty.

Prof. P. Lingfa	Member of Internal Project Screening Committee for State Council for Science & Technology (Department of Science & Technology), Government of Arunachal Pradesh, India, w.e.f. 23 rd Aug. 2017.
Dr. S. S. Gautam	acquired ASME Membership for 1 year 2017-18, Membership Number: 102116665
Md. S. Mujaheed Khan	acquired ISRD Membership: M4150902448
Dr. N. Yadaiah	acquired International Association of Engineers (IAENG) membership: 213549

4.7.8. Achievements/ awards/ recognition earned by the faculty:

Nil

4.7.9 Projects sanctioned by outside agencies to the faculty of the department (April 2015 to March 2016) (Name of PI and co-investigator, if any, title of the project, funding agency, date of sanction, total amount, fund received during the year under review)

Nil

4.7.10 Publications

1.	Mahanta, S., Chandrasekaran, M., Samanta, S., and Arunachalam R. M. “EDM investigation of Al 7075 alloy reinforced with B4C and fly ash nanoparticles and parametric optimization for sustainable production”, J Braz. Soc. Mech. Sci. Eng., 40 (2018) DOI: org/10.1007/s40430-018-1191-8 pp 263.
2.	Kumar, K. M. S., Thirumalai, R., Kumaar, J. S. S., and Chandrasekaran, M. “Experimental investigation of process parameters during environmental friendly turning process”, Eco. Env. & Cons., 24 (2018) pp 431.

3.	Tamang, S. K., and Chandrasekaran, M. "Integrated optimization methodology for intelligent machining of inconel 825 and its shop floor application", J Braz. Soc. Mech. Sci. Eng., 39 (2017) DOI: org/10.1007/s40430-016-0570-2 pp 865.
4.	Chandrasekaran, M. and Tamang, S. K. "ANN-PSO Integrated optimization methodology for intelligent control of MMC machining", J. Inst. Eng. India Ser. C, 98 (2017), DOI: org/10.1007/s40032-016-0276-3 pp 395.
5.	Chandrasekaran, M., George, J., Arunachalam, R. M. and Teyi, N. "Multi-objective parametric optimization for non-conventional machining of Inconel 825 – for an industrial application", Journal of Scientific & Industrial Research, 76 (2017) pp 324.
6.	Tamang, S. K., Natarajan, N. and Chandrasekaran, M. "Optimization of EDM process in machining micro holes for improvement of hole quality", J Braz. Soc. Mech. Sci. Eng., 39 (2017) DOI: org/10.1007/s40430-016-0630-7 .
7.	Lalmuana, S. K., Das, S., Chandrasekaran, M. and Tamang, S. K. "Machining investigation on hybrid metal matrix composites – A review", Materials Today: Proceedings, 4(2017) DOI: org/10.1016/j.matpr.2017.07.158 pp 8167.
8.	Choudhury, B. and Chandrasekaran, M. "Investigation on welding characteristics of aerospace materials – A review," Materials Today: Proceedings (ELSEVIER),4(2017) DOI: org/10.1016/j.matpr.2017.07.083 pp 7519.
9.	Choudhury, B. and Chandrasekaran, M. "Study on gas tungsten arc welding characteristics of nickel based aerospace alloys," Materials Today: Proceedings (ELSEVIER),5 (2017) DOI: org/10.1016/j.matpr.2017.11.403 pp 7337.
10.	Das, S., Vaiphei, S. K. L., Chandrasekaran, M. and Samanta, S. "Wire cut EDM of Al6061 hybrid nano composites: Experimental investigations and RSM modeling of surface roughness" Materials Today: Proceedings (ELSEVIER),5 DOI: org/10.1016/j.matpr.2017.11.510 pp 8206.
11.	Mahanta, S. Chandrasekaran, M. and Samanta, S. "GA based optimization for the production of quality jobs with minimum power consumption in EDM of hybrid MMCs," Materials Today: Proceedings, 5 (2017) DOI: org/10/1016/j.matpr.2017.11.457 pp7788.
12.	Devarasiddappa, D., Chandrasekaran, M., and Sambandam, M.T. "Multi performance optimization in wire cut EDM of inconel 825 using desirability function coupled with analytical hierarchy process," Materials Today: Proceedings (ELSEVIER), 5 (2018) DOI: org/10/1016/j.matpr.2018.02.121 pp 11531.
13.	Badgayan, N. D., Samanta, S., Sahu, S. K, Siva, S. B. V., Sadasivuni, K. K., Sahu, D. Sreekanth, P. S. R. "Tribological behavior of 1D and 2D nanofiller based high density poly- ethylene hybrid nanocomposites: A run-in and steady state phase analysis," Wear (ELSEVIER), (2017) DOI: org/10.1016/j.wear.2016.12.037 pp 376.

14.	Sahu, S. K., Badgayan, N. D., Samanta, S. and Sreekanth, P. S. R. "Quasistatic and dynamic nanomechanical properties of HDPE reinforced with 0/1/2 dimensional carbon nano fillers based hybrid nanocomposite using nanoindentation," Materials Chemistry and Physics (ELSEVIER), 203 (2018)DOI: org/ 10.1016/j.matchemphys.2017.09.063 pp173.
15.	Tapadar, J., Thakur, R. K., Chetia, P., Tamang, S., and Samanta, S. "Modeling of WEDM Parameters while Machining Mg-SiC Metal Matrix Composite," International Journal of Technology (SCOPUS), 8(2017) pp 878.
16.	Mahanta, S., Samanta, S., and Chandrasekaran, M. "Processing and investigation of Tribological properties of Basalt Epoxy Composites," Materials today: Proceedings (ELSEVIER), 4(2017) DOI: org/ 10.1016/j.matpr.2017.07.160 pp 8185.
17.	Dash, S. K., Lingfa, P. and Chavan, S. B "An experimental investigation of the application potential of nahar biodiesel and its diesel blends as diesel engine fuels", Energy Sources, Part A: Recovery, Utilization and Environmental Effects (Taylor & Francis), (2018) DOI: 10.1080/15567036.2018.1514433 .
18.	Dash, S. K. and Lingfa, P. "Performance evaluation of nahar oil diesel blends in a single cylinder direct injection diesel engine", International Journal of Green Energy 15 (2018) DOI: org/10.1080/15435075, 1464926 pp 400.
19.	Bhuyan, D., Giri, A. and Lingfa, P. "Entropy analysis of mixed convection condensation by evaluating fan velocity with a new approach", Journal of Thermal Science and Engineering Applications (ASME), 10(2018)DOI: 10.115/14039355).
20.	Singh, S., Lingfa, P., Sinha, A., Devi, S., Singh, S. and Anand, U. "Tribological characterisation of some oils used in fabrication of biodiesel", International Journal of Research in Engineering, Technology and Science, 2 (2017) pp 1.
21.	Pathak, K. K., Giri, A. and Lingfa, P. "A numerical study of natural convective heat transfer from a shrouded vertical variable height non-isothermal fin array", Applied Thermal Engineering, 130 (2017) DOI: org/ 10.1016/j.applthermaleng.2017.11.120 pp1310.
22.	Dash, S. K., Das, S., and Lingfa, P. "Comparative assessment of performance and emission analysis of a diesel engine fuelled with biodiesel prepared from different sources", Journal of Industrial Pollution Control, 33 (2017) pp1114.
23.	Pathak, K. K., Giri, A., and Lingfa, P. "Computational study on heat transfer from a shrouded upright rectangular fin array: A typical case study", Journal of Chemical and Pharmaceutical Science, 12(2017) pp 46.
24.	Pathak, K. K., Giri, A. and Lingfa, P. "Evaluation of heat transfer coefficient of a shrouded vertical array of heat sinks (fins): A computational approach", International Journal of Mechanical Engineering and Technology, 8 (2017) pp 319.

25.	Badgayan, N. D., Sahu, S. K., Samanta, S. and Sreekanth, P. S. R “Assessment of bulk mechanical properties of HDPE Hybrid composite filled with 1D/2D nanofiller system”, Materials Science Forum, Trans Tech Publications, 917 (2018) DOI: 10.4028/www.scientific.net/MSF.917.12 pp12.
26.	Sahu, S. K., Badgayan, N. D., Samanta, S., and Sreekanth, P. S. R “Dynamic mechanical thermal analysis of high density polyethylene reinforced with nanodiamond, carbon nanotube and graphite nanoplatelet”, Materials Science Forum, Trans Tech Publications, 917(2018) DOI: 10.4028/www.scientific.net/MSF.917.27 pp 27
27.	Badgayan, N. D., Sahu, S. K., Samanta, S. and Sreekanth, P. S. R. “Assessment of nanoscopic dynamic mechanical properties and B-C-N triad effect of MWCNT/h-BNNP nanofillers reinforced HDPE hybrid composite using oscillatory nano-indentation: An insight into medical applications”, Journal of the Mechanical Behavior of Biomedical materials, 80(2018) DOI: org/10.1016/j.jmbbm.2018.01.027 pp180.
28.	Das, S., Gautam, S. S., Gautam, C. R., Madheshiya, A. and Dixit, U. S. “Parametric optimization of dry sliding wear and friction of germanium doped lead calcium titanate borosilicate glass ceramic”, Ceramics International, 44 (2018) DOI: org/10.1016/j.ceramint.2018.01.056 pp 654.
29.	Gautam, C. R., Das, S., Gautam, S. S., Madheshiya, A. and Singh, A. K. “Processing and optical characterizations of lead calcium titanate borosilicate glass doped with germanium”, Journal of Physics and Chemistry of Solids, 115 (2018) DOI: org/10.1016/j.jpccs.2017.12.038 pp180.
30.	Das, S., Madheshiya, A., Gautam, S. S., Gautam, C. R. “Fabrication and optical characterizations of lead calcium titanate borosilicate glasses doped with ferric oxide”, Journal of Non-Crystalline Solids, 478(2017) DOI: org/10.1016/j.jnoncrysol.2017.10.004 pp16.
31.	Doley, H., Tamang, S. K., and Samanta, S. "Experimental study and development of an empirical model for SR and MRR in CNC WEDM of AZ31B magnesium alloy based MMNC", Journal of Production Engineering, 20 (2017) DOI: org/10.24867/JPE-2017-02-025 pp 25.
32.	Dixit, U. S., Yadav, V., Sharma, V., Pandey, P. M., Roy, A. and Silberschmidt, V. V “Estimation of cutting forces in conventional and ultrasonic-vibration assisted turning using inverse modelling”, International Journal of Additive and Subtractive Materials Manufacturing, 1(2017) DOI: org/10.1504/IJASMM.2017.089923 pp 265.
33.	Dixit, U. S., Yadav, V., Narayanan, R. G. and Bharadwaj, N. “Friction in micro manufacturing”, Journal of Micromanufacturing, 1 (2018) DOI: org/10.1177/2516598418766918) pp 79.

34.	Bisht, A., Yadav, V., Suwas, S., Dixit, U.S. “Deformation behavior of AM30 magnesium alloy”, Journal of Materials Engineering and Performance, (2018)DOI: org/10.1007/s11663-018-3567-4.
35.	Chowdhury, S., Yadaiah, N., Khan, S. M., Ozah, R., Das, B., and Muralidhar, M. “A perspective review on experimental investigation and numerical modeling of electron beam welding process”, Materials Today: Proceedings, 5(2018) pp 4811.
36.	Ozah, R., Muralidhar, M. and Kushari, S. “Application of intelligent systems for manufacturing industries: A study”, International Journal of Research in Management and Social Science, 5 (2017) pp 9.
37.	Chowdhury, S., Yadaiah, N. and Muralidhar, M. “Investigation of keyhole mode fiber laser welding of austenitic stainless steel in a controlled atmosphere”, Indian Welding Journal, India (2018).
38.	Das, B., Yadaiah, N., Ozah, R., Chowdhury, S., Mandal, A. K. and Muralidhar, M. “A perspective review on estimation of keyhole profile during plasma arc welding process”, Materials Today: Proceedings, 5(2018) pp 6345.
39.	Mandal, K. K., Kuar and A. S., Mitra, S. “Experimental investigation on laser micro-machining of Al 7075 Alloy”, Optics and Laser Technology, 107 (2018) DOI: org/10.1016/j.optlastec.2018.05.017 pp 260.

(b) Conference Papers

1.	Hina, N. P., and Lingfa, P. "Isolation, biomass estimation and characterization of the biofuel potential of diatom navicula sphaerophora," AIP Conference Proceedings (2018) DOI: org/10.1063/1.5032022
2.	Dash, S. K and Lingfa, P. "An overview of biodiesel production and its utilization in diesel engines," IOP Conference Series: Materials Science and Engineering, Vol. 377, 012006, (2018) DOI: 10.1088/1757-899X/377/1/012006
3.	Dash, S. K and Lingfa, P. 'A review on production of biodiesel using catalyzed trans-esterification,' AIP Conference Proceedings 2018 DOI: 10.1063/1.4990253
4.	Lingfa, P. “A Review on Production of Biodiesel Using Catalyzed Trans-esterification,” International Conference on Functional Materials, Characterization, Solid State Physics, Power, Thermal & Combustion Energy (FCSOTC), Ramachandra College of Engineering, Eluru, Andhra Pradesh, India, 7 th – 8 th April, 2017.

5.	Devarasiddappa, D. and Chandrasekaran, M. “Artificial neural network approach for modelling and prediction of performance measures in a machining process – a case study”, National Conference on Recent Trends in Engineering Science, Technology and Management (NCRTESTM), 8-9 th Nov., 2017.
6.	Mahanta, S., Chandrasekaran, M., Samanta, S. and Devarasiddappa, D. “ANN modelling of tribological properties for Al-7075 hybrid nano MMC,” National Conference on Recent Trends in Engineering Science, Technology and Management (NCRTESTM), Rajiv Gandhi Govt. Polytechnic, Arunachal Pradesh, 8 th -9 th Nov., 2017.
7.	Mahanta, S., Chandrasekaran, M. and Samanta, S. "EDM of Al7075-B4C-flyash metal matrix nano composites and optimization of sustainable measures using genetic algorithm", National exhibition and conference on new and renewable energy, School of Tech., Assam Don Bosco University, 2017.
8.	Mahanta, S., Chandrasekaran, M., and Samanta, S. “ANN modelling of tribological properties for Al-7075 hybrid nano MMC,” National Conference on Recent Trends in Engineering Science, Technology and Management (NCRTESTM), at Rajiv Gandhi Govt. Polytechnic, Arunachal Pradesh, 8 th -9 th Nov., 2017.
9.	Das, S., Chandrasekaran, M. and Samanta, S. “Comparison of Mechanical properties of AA6061 reinforced with (SiC/B ₄ C) micro/nano ceramic particle reinforcements,” 8 th International Conference on Materials Processing and Characterization (ICMPC-2018), Hyderabad, India, 16 th -18 th Mar.2018.
10.	Das, S., Chandrasekaran, M. and Samanta, S. “Tribological investigation of Al6061/SiC/B ₄ C hybrid nano metal matrix composites and its predictive model using fuzzy logic,” 4 th International Conference on Industrial Engineering, SVNIT, Surat, India, December 21-23, 2017.
11.	Sarma, D., Chandrasekaran, M. and Sambandam, M. T “Sustainable modelling for machining Inconel 718 and parametric optimization,” Proceedings of ICMTS, 260-264, IIT Madras, 2017.
12.	Sarmah, P., Chandrasekaran, M., Ramesh, R. “Experimental investigation and multiple performance characteristics of WEDM process on Al 6063/ZrSiO ₄ metal matrix composites”, Proceedings of ICMTS, IIT Madras, 275-279.
13.	Das, S., Gautam, S. S., Gautam, C. R. “Mechanical and tribological characterization of lead calcium titanate borosilicate glass ceramic doped with ferric oxide”, 8 th International Conference on Materials Processing and Characterization (ICMPC-2018), Hyderabad, India, 16 th -18 th March, 2018.
14.	Das, S., Manpoong, C. W., Gautam, S. S., Madheshiya, A. and Gautam, C. R. “Tribological study of strontium bismuth titanate borosilicate glass ceramics”, 8 th

	International Conference on Materials Processing and Characterization (ICMPC-2018), Hyderabad, India, 16 th -18 th March. 2018.
15.	Singotia, P. and Yadav, V. “Effect of Cutting Forces on Machining Process Parameters in Ultrasonic Vibration-assisted Turning,” International Conference on Computational and Experimental Methods in Mechanical Engineering, ICCEMME-17, G.L. Bajaj Institute of Technology and Management, Geater Noida, 8 th -9 th Dec., 2017.
16.	Kumar, S. and Muralidhar, M. “CTS identification and design of smart ergonomic subsystem for shocker assembly line workforce”, PLMSS 2017, DIAT, Pune, India.
17.	Kumar, S. and Muralidhar, M. “CTS estimation in shock absorber assembly workforce in Indian automobile industry: a study, 15 th Int. conf. on Humanizing work and work environment, AMU, Aligarh, India, 2017.
18.	Chowdhury, S., Yadaiah, N. and Muralidhar, M “Finite element based heat transfer analysis of Ti2AlNb electron beam welds using hybrid volumetric heat source,” International Congress IC-2017, Chennai, India.
19.	Mandal, K. K., Kuar, A. S. and Mitra, S. "Investigation on Kerf Width, Heat Affected Zone and Angular Deviation in Laser Micro-machining of Al 7075 Alloy," AMPT'2017, V.I.T. University, Chennai, Tamilnadu.
20.	Gautam, S. S. “Conical multirecess hydrostatic / hybrid journal bearing under micropolar lubrication for different load arrangements,” IDETC 2017 (ASME Conference), Cleveland, OHIO, USA, 6 th – 9 th Aug., 2017.

(c) Book/ Book Chapters

1.	Dash, S. K. and Lingfa, P. “Production of biodiesel from high FFA non-edible nahar oil and optimization of yield,” Lecture notes on Multidisciplinary Industrial Engineering (SCOPUS), Springer International Publishing, (2018) (DOI: org/10.1007/978-3-319-76276-0-47).
2.	Sarkar, A., Dabi, M. and Saha, U. K. “Supplementing the energy need of diesel engines in Indian transport and power sectors,” Sustainable Energy and Transportation: Technologies and Policy (SPRINGER), 2017.

(d) Publications in Magazines

1.	Prof. P. Lingfa (2018) published an article on “Research and Development in pursuits in the area of Biodiesel at NERIST” in Mechanical Association of NERIST magazine.
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2.	Prof. P. Lingfa (2017) published an article on “Importance of Education in a society,” in “Souvenir,” Govt. Higher Secondary, School, Pampoli, East Kameng, Seppa Arunachal Pradesh, India (2 nd Nov. 2017).
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4.7.11 Interaction of faculty members/department with outside agencies (Give details regarding membership of outside committees, executive committees of professional bodies etc.)

Faculty members are engaged in joint research with faculty members from IIT Delhi (P. Lingfa), Jadavpur University (A. Giri), IIT Guwahati (M. Chandrasekaran, S. Mahto, S. Singh, M. Dabi, N. Yadaiah), Jadavpur University (K.K. Mandal), Bengal Engineering and Science University, NIST, Orissa, NIT AP (S. Samanta), IITBHU (S.S. Gautam), Raja Ramanna Centre for Advanced Technology, Indore (N. Yadaiah) and Hindustan Aeronautics Limited, Koraput, Odisha (N. Yadaiah).

4.7.12. Consultancy projects undertaken (Agencies, title of the consultancy project, amount, faculty and staff associated)

Nil

4.7.13. Achievements of students

Two of UG students, Saikat Majumdar and Pinku Kakati of B.Tech Final year qualified in GATE 2018.

Placement Record

Sl.No.	Name	Roll No.	Company
1	Clint T C	MT/16/CIMA/04	Cummins
2	Priyam Dutta	DE/16/ME/03	Zolacode, Ethnus Consultancy
3	Aditya Sinha	DE/16/ME/17	Zolacode, Ethnus Consultancy
4	Rahul Kumar	DE/16/ME/08	Zolacode, Ethnus Consultancy, Grifeo Tech.
5	Hrishikesh Barman	DE/16/ME/05	Zolacode

6	Angshuman Gogoi	DE/16/ME/14	Zolacode, Ethnus Consultancy, Grifeo Tech.
7	Siddhartha De	DE/16/ME/10	Vedanta
8	Saikat Das	DE/16/ME/12	Grifeo Tech.
9	Pura Rissang	DE/16/ME/26	Grifeo Tech.
10	Kanhaya Pandey	DE/16/ME/16	Grifeo Tech.
11	Madhurjya Paul	DE/16/ME/09	Grifeo Tech.
12	Ksan Kupa Lynrah	DE/16/ME/27	Grifeo Tech.
13	Md Zaid	DE/16/ME/19	Grifeo Tech.
14	Saikat Majumder	DE/16/ME/04	Grifeo Tech.
15	Thokchom Sidartha Singh	DE/16/ME/18	Oil India Ltd.
16	Pinku Kakati	DE/16/ME/11	Oil India Ltd.
17	Kumar Anand	DE/16/ME/06	Ethnus Consultancy
18	Manish Pal	DE/16/ME/24	Ethnus Consultancy

4.7.14. Any other relevant information

Prof. P. Lingfa	<p>delivered an invited talk on "Biodiesel as a future sustainable fuel," at NEHU Shillong.</p> <p>delivered an invited talk on "Bio-fuel and its potential toward greener future fuel," at NIT Meghalaya.</p> <p>delivered an invited talk on "Sustainable development for rural bharat," at NIT Arunachal Pradesh.</p>
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	<p>delivered an invited talk on “Career guidance and counselling,” at Naharlagun, Itanagar, Arunachal Pradesh, India.</p> <p>invited as Speaker in Renewable energy technologies: Issues and Perspectives (RETIP-2017 – Regional Seminar),” held at NIT Silchar on 25th Sept. 2017.</p> <p>invited as Resource Person to deliver a talk on “Production of biodiesel from various non-edible oils available in the north-eastern region,” at NIT Meghalaya during Nov. – Dec. 2017 in a STC on <i>Recent Advancements in Automotive Engine and Fuel Technology</i>.</p> <p>invited as external examiner for M. Tech dissertation evaluation on “Design and development of solar-biomass hybrid dryer for large cardamon drying,” at CAEPHT (CAU), Ranipool, Gangtok, Sikkim.</p>
Prof. M. Muralidhar	invited as an external examiner for B. Tech. projects evaluation for dept. of Mechanical Engineering, NIT Arunachal Pradesh.
Dr. S. Samanta	delivered an invited talk on “ Advances in production and material science engineering,” at NIT Nagaland in a National Workshop during 24-28 th March.

4.8 DEPARTMENT OF CHEMISTRY

4.8.1 A Brief Profile of the Department

The Department offers courses for Under-Graduate levels (Base/ Diploma/ Degree module) of Engineering & Technology streams. The Department also offers courses for Degree module of Forestry stream. The department has started M.Sc. programme since the academic session, 2009-10. Initially the department was offering only Organic Chemistry specialization in M.Sc. It started offering Inorganic Chemistry specialization also since the academic session, 2015-16. Consequently, the 2015-16 Batch of M.Sc. students were able to take Inorganic chemistry specialization also since Jul-Dec, 2016 semester. Admission process for 9th batch in M.Sc. (Chemistry) was completed in July, 2017 through the Written Test conducted by the Department. Admission Test for Ph.D. programme was also conducted in July, 2017. 10 M.Sc. and 02 Ph.D. students were admitted for 2017-18.

4.8.2. Academic activities:

The revised courses of UG, PG and Ph.D. courses (approved by the fourth Board of Studies held on 23.03.2017) have been implemented from academic session, 2017-18.

4.8.3 Laboratories and Laboratory Development:

Nil

4.8.4 Projects completed by the UG/PG/Ph D students:

(i) Project work completed by PG students:

Name of the Student	Title of Project	Supervisor
Nimisha Kashyap	Synthesis of zinc and magnesium isoporphyrins: promising photosensitizer for photodynamic therapy	Dr J. Bhuyan
Ligang Pampi	Characterisation of Manganese Peroxidase from <i>Vigna Unguiculata Subsp. Sesquipedalis</i> .	Dr Meera Yadav
Pragyan Jyoti Hazarika	Role of Mn(III) Porphyrins in Organic Synthesis: A Biomimetic Approach	Dr. S. Lata Bharati
Pompi Pokhrel	Synthesis of various ortho-allyl phenols via Claisen Rearrangement	Dr. N.N. Yadav
Pinakinee Phukan	A phenylisothiocyanate mediated fast and facile synthesis of 4-arylidene-1-phenyl-2-substituted styryl-2-imidazoline-5-ones	Prof. P.K. Tripathy
Saddam Iraqui	Highly stereoselective and regiospecific synthesis of few α,β -unsaturated esters and 2,4-pentadienoates from α -oxoketenedithioacetals	Prof. A.K. Gupta

Partha Pratim Nath	Synthesis of protected Glucose derivatives	Dr. N.N. Yadav
Dencil Basumatary	Peroxidase from <i>Luffa acutangula</i> as bio-catalyst	Prof. H.S. Yadav
Parag Kumar Nath	Application of oxides of Vanadium as co-catalyst in peoxidase catalysed reaction	Prof. H.S. Yadav
Pranjal Boruah	Preparation of 3β -chloro-6-aza-B-homo-5 α -cholestano[6,7-d]tetrazole	Prof. M. Husain

4.8.5 Short-term courses/seminars/workshops organized at NERIST: NIL

4.8.6 Short-term courses/seminars/workshops/conferences attended by the Faculty:

Dr. J. Bhuyan	<p>Attended and presented a research paper at “International Conference on Emerging Trends in Chemical Sciences” (ETCS-2018), on 26-28 February, 2018 at Department of Chemistry, Dibrugarh University, Assam. (Paper title - Metallo-isoporphyrin: synthesis, biological relevance and prospective applications)</p> <p>Participated the short term training programme on “Leadership and Team Building in Academia” from 30.10.2017 to 03.11.2017 (one week) organized by National Institute of Technical Teachers Training and Research Kolkata at NERIST, Nirjuli, Itanagar</p> <p>Attended the workshop on role of local chapters conducted by IIT Kanpur at NERIST on April 29, 2017</p>
Dr. M. Yadav	<p>Attended the short term course on “Biology for Engineers”. IIT Bombay, June 5-9, 2017</p> <p>Attended the short term course on “Leadership and Team Building in Academia”. NERIST, Oct 30 to Nov 03, 2017</p> <p>Attended the workshop on role of local chapters conducted by IIT Kanpur at NERIST on April 29, 2017</p>
Mr N G Singh	<p>Attended the workshop on role of local chapters conducted by IIT Kanpur at NERIST on April 29, 2017</p> <p>Attended the International Conference on “Sophisticated Instruments in Modern Research” held at IIT, Guwahati, on 30th June to 1st July, 2017</p>
Dr N N Yadav	<p>Attended the workshop on role of local chapters conducted by IIT Kanpur at NERIST on April 29, 2017</p>

	<p>Participated in Short term course on “Leadership and Team Building in Academia” at NERIST conducted by NITTTR – Kolkata from Oct 30 to Nov 03, 2017</p> <p>Delivered Lecture in international conference on topic “Principal of Green Chemistry: Atom Economical and Green Process for Structurally Complex and Biologically Active Molecules” conducted by Marwar Business School Gorakhpur on 26th September 2017</p>
Dr. A. Murugan	<p>Attended the workshop on Role of local chapters at NERIST on 29th April 2017</p> <p>Attended the short term course on “Leadership and Team Building in Academia”. At NERIST from 30.10.2017 to 03.11.2017</p>

4.8.7. New degrees/ Professional Memberships obtained by the faculty:

Dr. J. Bhuyan	Life member of Assam Science Society, Khanapara, Guwahati. Membership No. 5821 dated 08/04/2017
Mr N G Singh	<p>Life Member, Membership no. 1727, w.e.f. 2015, The Association of Chemistry Teachers, Homo Bhaba Centre for Science Education, TIFR, Mumbai</p> <p>Life Member, Membership No. LM 625, w.e.f. 2013 ISMC, Chemistry Division, BARC, Mumbai</p>

4.8.8. Achievements/awards/recognition earned by the faculty: NIL

4.8.9. Projects sanctioned by outside agencies to the faculty of the Department: NIL

4.8.10. Publications:

(a) In journals

1.	Borah, K. D. and Bhuyan, J. “Magnesium porphyrins with relevance to chlorophylls”, Dalton Transaction, 46 (2017) pp6497.
2.	Yadav, M. and Yadav, H. S. “The Role of Peroxidase in the Enzymatic Oxidation of Phenolic compounds to Quinones from <i>Luffa aegyptiaca</i> (gourd) fruit juice”, Green chemistry letters and reviews, 10 (2017) pp154.

3.	Yadav, M., Yadav, S., Yadav, D. and Yadav, K.D.S. “ <i>In-silico</i> analysis of Manganese Peroxidases from different fungal sources”, <i>Current Proteomics</i> , 14 (2017) DOI 10.2174/1570164614666170203165022 pp201.
4.	Rai, N., Yadav, M. and Yadav, H. S. “Manganese peroxidase from <i>Luffa acutangula</i> fruit juice”, <i>Current Biochemical Engineering</i> , 4(2017) DOI 10.2174/2212711904666170117143442
5.	Yadav, N. N., Jeong, H, Ha, H.-J., “Atom-Economical and Metal-Free Synthesis of Multisubstituted Furans from Intramolecular Aziridine Ring Opening”, <i>ACS Omega</i> , 2(2017) pp7525.
6.	Choi, J., Yadav, N. N., Ha, H.-J., “Preparation of a Stable Bicyclic Aziridinium Ion and Its Ring Expansion toward Piperidine and Azepane”, <i>Asian J. Org. Chem.</i> , 6(2017) pp1292.

(b) Conference papers

1.	Rai, N., and Yadav, M. “Enzymatic oxidation of phenolic compounds to quinones from <i>Luffa aegyptiaca</i> (gourd) fruit juice”, symposium on Recent Advancements in Environmental Research [RAER 2017], 5 th June, 2017 at IIT Guwahati.
2.	Rai, N., and Yadav, M. “Enzymatic oxidation of polyaromatic hydrocarbons compounds from citrus maxima leaf extract”, International conference on Emerging Trends in Chemical Sciences (ICETCS), Feb 24-25, 2018, DDU Gorakhpur University.
3.	Nene, T., Yadav, M. and Yadav, H. S. “Exploration of catalase enzyme activity from plant sources in North Eastern Region of India”, International conference on Emerging Trends in Chemical Sciences (ICETCS), Feb 24-25, 2018, DDU Gorakhpur University.
4.	Bhatt, A. S., Ranjitha, C. R., Ravikumar, C. R., Murugan, A., Santosh, M. S., Nagaswarupa, H. P., and Prashantha, S. C. “Electrochemical and Optical Properties of Li doped NiO nanostructures” National Conference on Advanced Materials and Its Applications (NCAMA-2K17), 6 & 7 th July, 2017, page no. 132-137 (ISBN: 8190778854).
5.	Murugan, A., Thandiayyakone, V. and Chakrabarty, M. “Cyclic voltammetry studies of copper and cadmium porphyrins”, Technologically Important Crystalline and Amorphous Solids (TICAS – 2018), 2- 3 March 2018, page no. 60-63, (ISBN: 9788190923736).
6.	Ravikumar, C.R. Kotteeswaran, P., Murugan, A., Raju, V. B., Santosh, M.S., Nagaswarupa, H. P., Nagabhushana, H., Prashantha, S. C., Kumar, A., and Gurushantha, K. “Electrochemical studies of nano metal oxide reinforced nickel hydroxide materials for energy storage applications”, <i>Materials Today: Proceedings</i> (Elsevier), 4, 2017, page no.12205-12214
7.	Yadav, M., “Enhanced production of lignin peroxidases from Indigenous fungi”, LAP LAMBERT Academic Publishing, Germany (May 17, 2017) ISBN-13: 978-3-330-08923-5 ISBN-10: 3330089237

(C) Books:

1.	Chaurasia, P.K. and Bharati, S.L. “Significance of Laccases in Food Chemistry and Related Bioremediation” (Chapter 11). Editors: Grumezescu AM, Holban AM. Multi Volume Handbook of Food Bioengineering (Vol. 3: Soft Chemistry and Food Fermentation). ELSEVIER, 2017, pages: 299-335
2.	Chaurasia, P.K., Bharati, S. L and Mani, A. “Enzymatic Treatment of Petroleum based Hydrocarbons” (Chapter 19).Editors: VM Pathak & Navneet. Book:Microbial Tools and Techniques for Environmental Waste Management. IGI Global Publisher, USA (2018)pages: 396-408
3.	Nagarajan, E.R. and Murugan, A. “Environmental Science”, Wiley India Pvt. Ltd, New Delhi (ISBN: 9788126569465), 2017

4.8.11. Interaction of faculty / department with outside agencies: Nil

4.8.12. Consultancy Projects undertaken: Nil

4.8.13. Achievements of students:

1. M. Sc. Student P. P. Nath selected for Ph.D. admission to IIT, Guwahati

4.8.14. Any other relevant information:

Prof. M. Husain	acted as Chairman / Member of a number of committees constituted by the Director, NERIST.
Prof. H. S. Yadav	joined as the Director, NERIST, Nirjuli, Arunachal Pradesh w.e.f 06 March, 2018.
Prof. P. K. Tripathy	Dean (Academic) up to 24 August 2017. He has acted as the Chairman/Member of various committees constituted by the Director. He has also been acting as the Nodal Officer, CPGRAMS (Centralized Public Grievance Redress and Monitoring System), NERIST. He was the Member of the Board of Management in this period.
Prof. M. F. Hussain	acted as Dean (Administration).
Dr. J. Bhuyan	Coordinator of Central Research Facility (CRF). in-charge of PG Lab-I & Instrumentation Lab.
Prof. N. Deb	acted as Director Nominee to the Board of Postgraduate Studies (BPGS) acted as HoD
Dr. Meera Yadav	in-charge of Chemistry Lab-II
Dr. A. K. Gupta	in-charge of PG Lab-II

Mr. N.G. Singh	In-charge PG Lab-III
Dr. S.L. Bharati	Library in-charge and acted as representative to the Central Library, NERIST

4.9 DEPARTMENT OF PHYSICS

4.9.1 A Brief Profile of the Department

In addition to teaching, the faculty members are actively involved in research activities and have been publishing research papers in both national and international journals. Also, some of the faculty members have acted as reviewers of DST and CSIR projects by other scientists for possible funding and Ph.D. thesis adjudicators.

Eleven sponsored research projects funded by DST/SERB, CSIR, MHRD and Third World Academy of Science (TWAS), Italy have been completed in the field of liquid crystals and solid state ionics. **One** in-House mini Research project has been completed. Currently, **One** research project funded by Science and Engineering Research Board (SERB), New Delhi is in progress. One project under **FIST** sponsored by DST is underway.

Two BOYSCAST fellowships of DST, New Delhi and **Three** bilateral exchange fellowships of INSA, New Delhi-RSL & INSA-JSPS have been awarded to the faculty members of the department to pursue their collaborative research with scientists abroad.

So far, **Ten Ph.D degrees** have been awarded to the research scholars of the department. Out of which three Ph.D. degrees were awarded by NEHU, one by Tezpur University, one by North Orissa University, Baripada and **Five** Ph.D. degrees have been awarded by NERIST. Currently **Twelve** more students are working for their Ph.D. degrees in the department.

Faculty members with Degree and area(s) of specialization

Sl. No.	Name & Designation	Qualification & University	Specialization
1.	Dr. P. R. Alapati Professor	Ph.D. (1988) Nagarjuna University	Condensed Matter Physics (Liquid Crystals)
2.	Dr. Tado Karlo, Professor & (HOD)	Ph.D. (1997) Delhi University	Mathematical Physics
3.	Dr. Manan Sengupta Associate Professor	Ph.D. (1986) Calcutta University	Theoretical Physics
4.	Dr. Arvind Pandey Associate Professor	Ph.D. (2000) Univ. of Rajasthan	Condensed Matter Superconductivity, Solid state Ionics
5	Dr. Th. Gomti Devi Associate Professor	Ph.D. (2005) NEHU, Shillong	Condensed matter Physics (Laser Physics)

6.	Dr. Mukesh Upadhyay, Associate Professor	Ph.D. (2005) Dr. R. M. L. Awadh University	Solid State Physics, Electronics
7.	Dr. Rajesh Kumar Yadav Associate Professor	D.Phil. (2007) Allahabad University	Condensed Matter Physics (Theory)
8.	Dr. Kamal Saharia Assistant Professor	Ph.D. (2009) Gauhati University	Theoretical Plasma Physics
9.	Dr. S. Dhiren Meetei Assistant Professor	Ph.D. (2014) Manipur University	Condensed Matter Physics
10.	Dr. Akbari Jahan Assistant Professor	Ph.D. (2014) Gauhati University	Theoretical Physics, High energy Physics Phenomenology
11.	Dr. Kunal Borah Assistant Professor	Ph.D. (2014) Tezpur University	Electronics, Microwave Electronics, Antenna

4.9.2 Academic activities

The Department of Physics offers **eight core courses** for the undergraduate students at different levels (Base, Diploma, and Degree modules) of Engineering and Applied Science Streams. Department of Physics also has started offering M.Sc. (Physics) program from July 2009.

4.9.3 Laboratories & Laboratory Development

Nil

4.9.4. Projects completed by the UG/PG/Ph.D. students. Please specify the title of the project and name of the guide.

(i) Project work completed by PG students:

Name of Student / Roll. No.	Dissertation title	Supervisor(s)
Riku Das	Theoretical Study of Structure and Electronic properties of Nanoclusters	Dr. R.K. Yadav
Pankaj Singh	Theoretical Study of Optical and Electrical Properties of Thin Films of Magnesium Fluoride Layer with Mixture of Layer of Different Material	Dr. M. Upadhyaya
Sara Um Lego	Study of Refractive Indices and Dielectric constant of different liquids	Dr. M. Upadhyaya
Ujjal Pratim Gogoi	Study of Flexible Substrate for Microstrip Antennas for Defence Applications	Dr. K. Borah

Nashiba Parbin	A study of Some Bose-Einstein Integral Functions	Dr. A. Jahan
Arandhu Dasgupta	Radiation of Gluon Jet	Dr. M. Sengupta
Parvind Kumar Sahu	Supersymmetry of Anticommuting Dirac Numbers	Dr. M. Sengupta
Neelam Chhetry	Development of substrate for SERS Measurements of Bio-molecules	Dr. Th. Gomti Devi
Raktim Jyoti Sarmah	Vibrational Study of liquid Mixtures	Dr. Th. Gomti Devi
Dipankar Sharma Bordoloi	Nanocrystalline Phosphor in Pixel for Enhanced Resolution of color display	Dr. S. Dhiren Meetei

4.9.5 Short-term courses/seminars/workshops/conferences organized at NERIST:

Nil

4.9.6 Short-term courses/seminars/workshops/conferences attended by the faculty:

Th. Gomti Devi	<p>Attended XIVth International Conference on Molecular Spectroscopy, Kraków – Białka Tatrzańska, Poland, 3 – 7th September 2017.</p> <p>Attended Condensed Matter Days- 2017 (CMDAYS17) Tezpur University, 29-31th August 2017.</p> <p>Attended the 105th Indian Science Congress, 16-20th March 2018, Manipur University, Molecular structure, vibrational frequencies and natural bond orbital analysis of L-Proline monomer and dimer by DFT approach, 16-20th March 2018.</p>
M. Upadhyaya,	<p>Attended the regional workshop on “Research based Pedagogical Tools” from 27th to 29th July, 2017 at North Eastern Hill University Shillong, Meghalaya.</p> <p>Attended the Short term course on “X-Ray Absorption Spectroscopy and its application to Nano- materials” from December 21 – 28, 2017 at MNNIT Allahabad.</p>

	<p>Attended the 2nd Meghnad Saha Memorial International Symposium – cum – Workshop on “Laser Induced Breakdown Spectroscopy” at Department of Physics, University of Allahabad, Allahabad from February 19 – 21, 2018.</p> <p>Attended and delivered a lecture on the topic “Divine Vision to Live Telecasting” in 13th T G Rinpoche Lecture series at Central Institute of Himalayan cultural Studies, Dahung, Arunachal Pradesh from March 08 – 10, 2018.</p>
A. Jahan	<p>Attended the short Term Course on "The Field Theory of Classical and Quantum Phase Transitions" organized by GIAN, NIT Goa during July 3 - 13, 2017.</p> <p>Attended the Short term Training Programme on "Leadership and Team Building in Academia" organized by NITTTR, Kolkata during October 30 - November 3, 2017.</p> <p>Attended and delivered an invited talk entitled "An analytical approach to Froissart bound in a proton structure function" in the 9th International Workshop on Multiple Partonic Interactions at the LHC held in Shimla during December 11 - 15, 2017 organized by Panjab University.</p> <p>Attended the Science Academies' Refresher Course in "Quantum Mechanics with a special emphasis on Nuclear and Particle Physics" organized by Dept. of Physics, St. Philomena's College, Mysore during December 17 - 31, 2017.</p>
Arvind Pandey	<p>Attended the 5th International conference on Chemical, Agricultural, Biological and Environmental Sciences (CAFES-17), Kyoto (Japan), April 18-19, 2017.</p>

4.9.7. New Degrees/Professional Memberships obtained by the faculty:

Prof. P. R. Alapati	<p>continuing as (i) Vice President of Physics Academy of North East and (ii) Member of American Chemical Society</p>
Dr A. Jahan	<p>continuing as Life Member of (i) PANE, (ii) Indian Science Congress Association and (iii) Indian Association of Physics Teachers</p>

4.9.8 Achievements/awards/recognition earned by the faculty: Nil

4.9.9 Projects sanctioned by outside agencies to the faculty of the department: Nil

4.9.10. Publications:

(a) Referred Research Journal:

1.	Dutta, P.N., Karlo, T., and Diamary, M. "Trend change analysis of surface air temperature over Assam, India", International Journal of Engineering Science Invention, 6 (2017) pp25.
2.	Dutta, P.N., Karlo, T., Diamary, M. and Dutta, P. "A harmonic analysis in seasonal oscillations of surface air temperature over Assam", International Journal of Engineering Science Inventions, 6 (2017) pp 33.
3.	Dutta, P.N., Karlo, T., Diamary, M. and Dutta, P. "Some features of surface air temperature: a statistical view point", Environment and Ecology Research, 5 (2017) pp367
4.	Borah, M.M. and Devi, T. G. "Vibrational studies of Thyroxine hormone: Comparative study with quantum chemical calculations", Journal of Molecular Structure, 1148(2017)pp 293.
5.	Singh, T. N., Devi, T. G. and Singh, S. D. "Synthesis, characterization and optical studies of gallium activated titania nanoparticles", Nano-Structures & Nano-Objects, 11 (2017)pp 65
6.	Singh, T. N., Devi, T. G. and Singh, S. D. "Synthesis, characterization and optical study of lanthanide activated TiO ₂ @SiO ₂ core-shell nanoparticle", Nano-Structures & Nano-Objects, 10 (2017)pp182.
7.	Borah, M.M. and Devi, T. G., "Vibrational study and Natural Bond Orbital analysis of serotonin in monomer and dimer states by density functional theory", Journal of Molecular Structure, 1161 (2018) pp 464

8.	Borah, M.M. and Devi, T. G., “Studies and molecular property analysis of Estradiol, Tamoxifen and their interaction by density functional theory”, Journal of Molecular Structure,1163 (2018)pp 205.
9.	Upadhyay, M. and Singh, P. “Electrical and optical properties of thin film of magnesium fluoride with other layers”, American International Journal of Research in Science, Technology, Engineering & Mathematics (AIJRSTEM) USA,20(2017)pp37.
10.	Upadhyay,M. and Lego, S. U.“Refractive Index of Acetone-Water mixture at different concentrations”, American International Journal of Research in Science, Technology, Engineering & Mathematics (AIJRSTEM) USA,20 (2017) pp77
11.	Upadhyay, M.“A Review on Piezoelectric Behavior of KI: OH ⁻ System, American International Journal of Research in Science, Technology, Engineering & Mathematics (AIJRSTEM) USA,21(2018) pp56.
12.	Bagbi, Y., Sarswat, A., Tiwari, S., Mohan, D., Pandey, A. and Solanki, P. R.“Synthesis of L-cysteine stabilized zero-valent iron (nZVI) nanoparticle for lead remediation from water”, Environmental Nanotechnology, Monitoring & Management,7 (2017)pp 34
13.	Bagbi, Y., Sarswat, A., Mohan, D., Pandey, A. and Solanki, P. R. “Lead and Chromium adsorption from water using L-Cysteine functionalized magnetite (Fe ₃ O ₄) nanoparticles”, Scientific Reports,7 (2017) pp7672 (1-15)
14.	Tripathy, D., and Pandey, A. “Structural and impedance studies of Ti ^{IV} and Nb ^V co-doped bismuth vanadate system”, Journal of Alloys and Compounds,737 (2018)pp 136.

(b) Conferences Proceedings/Journals:

1.	Bagbi, Y., Sarswat, A., Tiwari, S., Mohan, D., Pandey, A. and Solanki, P.R. “Nanoscale zero-valent iron for aqueous lead removal”, Advanced Materials Proceedings 2 (2017) pp235.
2.	Bagbi, Y., Pandey, A. and Solanki, P.R. “Mesoporous Spherical Shaped Silica Nanoparticles for Effective Adsorption of Aqueous Lead (Pb ²⁺)”, Advanced Science Letters 24 (2018)pp 922.

3.	Meetei, S. N., Hazarika, A., Borah, K., Chatterjee, S. "Hot Spot Detection in High Voltage Transformer by Thermal Sensor using COMSOL Multiphysics", Proceedings of IEEE International Conference for Energy, Power and Environment (ICEPE, 2018), NIT Meghalaya, June 1-2, 2018.
4.	Meetei, S. N., Hazarika, A., Borah, K., Chatterjee, S. "A Review on Partial Discharge Detection in High Voltage Transformer using Fiber Bragg Grating (FBG) Sensor", Proceedings of International Conference of Materials, Applied Physics and Engineering (ICMAE2018), Indore, 3-4 June, 2018. 978-1-5386-4769-1/18/\$31.00©2018IEEE

Book Chapters:

1.	Bagbi, Y., Pandey, A. and Solanki, P.R. "Role of nanostructured materials towards remediation of heavy metals/metalloids, Nanomaterials and Their Applications" (Springer Nature Singapore Pte Ltd.), Ed. Z.H. Khan, 84 (2018) DOI10.1007/978-981-10-6214-8_3pp73.
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4.9.11. Interaction of faculty/department with outside agencies: NIL

4.9.12. Consultancy projects undertaken: NIL

4.9.13. Achievements of students:

Sr No	Name	Achievements
1.	Ms. Nashiba Parbin	Qualified SLET
2.	Ms. Sara Um Lego	
3.	Mr. Parvind Kumar Sahu	
4.	Mr. Pankaj Singh	Qualified NET (JRF) examination

4.9.14. Any other Achievements/relevant information:

Prof. P. R. Alapati	<p>Member of American Chemical Society</p> <p>Life member of Indian Liquid Crystal Society and Indian Science Congress Association.</p> <p>appointed Director of GKCIET, Malda, West Bengal.</p>
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4.10 DEPARTMENT OF MATHEMATICS**4.10.1 A Brief Profile of the Department**

The department of Mathematics came into existence as a full-fledged department in 1993. Earlier, it was a part of the Physical Science Group since the inception of the Institute in 1986. The department has highly qualified faculty members with a wide variety of specializations with a mix of both Pure & Applied Mathematics. In addition to teaching, the faculty members are actively involved in research. Also, some of the faculty members have acted as reviewers of Defence Science journal, Mathematical Review and examined several Ph.D. theses of different Universities. The department is a member of NBHM, Department of Atomic Energy, Govt. of India, which provides new books and journals free of cost regularly. The department is running M.Sc. and Ph.D programmes successfully. Department has started Ph.D. programme since 2007. At present there are fifteen research scholars registered for Ph.D. degree under the supervision of faculty members of the department. Thirteen students have been awarded Ph.D. degree. At present, there are two Professors, one Associate Professor and four Assistant Professors.

4.10.2. Academic Activities:

UG and PG Syllabus revision completed. Ph.D. syllabus has been approved through BPGS.

4.10.3. Laboratories and Laboratory Development:

Lab work sheet have been designed for both UG & PG courses, Computation Laboratory has been established

4.10.4 Project/ Thesis completed by PG / Ph. D students**(i) Project work completed by PG students:**

Name of Student	Dissertation title	Supervisor(s)
Manjuri Dutta	A Survey on Semicommutative rings and Modules	Dr. Kh. Herachandra Singh
Jyoti Saikia	A Survey on Spectral Graph Theory	Dr. Kh. Herachandra Singh
Pratima Devi	A Survey On Noetherian and Artinian Rings and Modules	Dr. Kh. Herachandra Singh
Partha Pratim Gogoi	Application Of The Two Dimensional Wave Equation	Dr. M. Hassan
Moby Tallar	A Study On Legendre Wavelet Transform	Dr. C.P. Pandey

4.10.5 Short-term courses/seminars/ workshops/conferences organized at NERIST. (Please specify the areas, title, coordinator, duration, and funding agencies/sponsors, no. of participants)

Nil

4.10.6 Short-term Courses/workshop, etc. attended

Prof. B.K. Singh	Paper Presented at International conference “Exponential dual to ratio type compromised imputation for missing data in survey sampling” presented in International conference on computational and mathematical methods in engineering and technology (ICOMET 2017) during 18-20 th December, 2017 at Royal Melbourne Institute of Technology University, Melbourne, Australia.
Dr. C.P. Pandey	Attended Workshop on optimization and non-linear analysis at IIT (ISM) Dhanabad held on August 21-25, 2017 Participated in short term course on Algebra, Analysis and Applications at IIT BHU held on July 03-09, 2017
Dr. M.M. Dixit:	Attended workshop on optimization and non-linear analysis at IIT (ISM) Dhanabad held on August 21-25, 2017

	Attended the short term course on Algebra, Analysis and Applications at IIT BHU held on July 03-09,2017
Dr. K.H. Singh	Attended UGC SAP Sponsored Three-Day National Seminar On Topology & Algebra (26-28 March,2018) and delivered lectures on the topic “ON REDUCED RINGS & MODULES”.

4.10.7 Achievements, awards, membership, etc. earned by the faculty

L.K. Arora	The Indian Science Congress Association.
J.Borah	Member of Indian Mathematical Society

4.10.8 Achievements/awards/recognition earned by the faculty.

Nil

4.10.9 Research project with amount date of sanction, agency, etc. (ongoing projects during the period)

Name of PI/CoPI	Title of project	Funding Agency	Period	Amount (Lakhs)
Dr. M. Hassan	Analytical modeling for estimating wave loads on cylindrical structure	DST, New Delhi	Dec,2015 to Dec., 2018	5.52

4.10.10 Publications

(a) Referred Research Journal:

1.	Singh, B.K. and Nath, K. “Some Imputation Methods in Two-Phase Sampling Scheme for Estimation of Population Mean”, Research & Reviews: Journal of Statistics, 7 (2018) pp 01.
2.	Singh. B.K. and Gogoi, U. “Estimation of Population Mean Using Ratio cum Product Imputation Techniques in Sample Surveys”, Research & Reviews: Journal of Statistics, 7(2018) pp 38.
3.	Singh. B.K. and Gogoi, U “A Class of Dual to Ratio Estimator in some Imputation Methods under Single Sampling Scheme”, International Journal of Engineering Science and Technology (IJEST), 10 (2018) pp188.

4.	Singh. B.K. and Gogoi, U. "Estimation of Population mean using Exponential Dual to Ratio Type Compromised Imputation for Missing data in Survey Sampling", An International Journal of Statistics Applications & Probability, 6 (2017) pp 515. Tato, Y. and Singh, B.K. "Exponential Chain Dual to Ratio cum Dual to Product Estimator
5.	for Finite Population Mean in Double Sampling Scheme", Applications and Applied Mathematics: Intern. J., 12(2017) pp 46.
6.	Pathak, A., Yadav, P. and Dixit, M. M. "An Asymptotic Expansion of Continuous Wavelet Transform for Large Dilation Parameter", Bol. Soc. Paran. Mat., 363(2018) pp27.
7.	Borah, J. and Bora, S. "Existence of Mild Solution for Mixed Volterra-Fredholm Integro Fractional Differential Equation with Non-instantaneous Impulses", Differ Equ Dyn Syst, doi.org/10.1007/s12591-018-0410-1, Published online: 12 February-2018

4.10.11 Interaction of faculty/department with outside agencies (Give details regarding membership of out committees, executive committees of professional bodies etc.

Nil

4.10.12 Consultancy Projects undertaken, (Agencies, title of the consultancy project, amount, faculty and staff associated

Nil

4.10.13 Achievements of students.

Nil

4.10.14 Any other relevant information.

Nil

4.11 DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCE

4.11.1 A Brief Profile of the Department.

Engineering and technologies have become one of the predominant forces in shaping our vision of reality in the contemporary world. And the domain of humanistic learning enables a future technocrat to sustain the resilience of human spirit in all spheres of life. The department of Humanities and Social Sciences (HSS) of NERIST fulfills this vision of projecting a human content and consciousness required for the expansion of technological and scientific knowledge by synthesizing the sciences and technologies with social sciences and humanities. Coupled with Forestry, the Humanities and Social Sciences were initially tagged with the Applied Sciences group of NERIST. However, since 1993, it has been functioning as an independent department offering courses in English, Economics, Sociology, Psychology and Management. The department has earned a distinctive name for itself, primarily due to the wide-ranging experience of the members of its faculty and the application of innovative teaching methods, keeping in tune with the emerging developments in their respective fields of expertise. With the introduction of the research programme in the year 2006, leading to the degree of Ph. D., in various disciplines of Humanities and Social Sciences and Management, the department of HSS has taken a giant leap in fulfilling the institutional vision of **“nurturing talent and giving wings to imagination.”** The prescribed courses apart, the department is well set to provide consultancy services to various small and medium scale industries of the North Eastern region. This is coupled with a successful hosting of various short-term and need-based training programmes, seminars and special lecture series for executives, teachers and the students alike. Most of the faculty members of the department have the distinction of successfully completing research projects sponsored by such agencies as ICSSR, ICAR, McArthur Foundation, Ministry of Social Justice and Empowerment of the Government of India, AICTE, Ministry of Human Resource Development, etc. Further, the faculty members are engaged in supervising research scholars on such subjects as Economics, Human Resource Management, Marketing Management, Financial Management, and Organizational Behavior, etc. leading to Ph. D. degrees. A developing technical mind must also acquire sensitivity to socio-cultural needs of human beings. With the experience of the old and the energy of the youth, the department of HSS strives to ensure that the budding technocrats and entrepreneurs are armed with the quality of vision and personality which will enable them to use their skills in bridging the socio-technical gap and establish a strong interface between science, technology and society.

4.11.2. Academic Activities:

Normal Teaching and other academic related activities

4.11.3. Laboratories and Laboratory Development: Nil

4.11.4 Project/ Thesis completed by PG / Ph. D students**(i) Ph.D. thesis awarded/submitted:**

Name of Student	Dissertation title	Status	Supervisor(s)
Mrs. Kabita Upadhyai	Factors affecting socio economic development of rural communities in Upper Assam” in December, 2017.	Submitted	Prof. B. D. Nayak

4.11.5 Short-term courses/seminars/workshops/ conferences organized at NERIST. (Please specify the areas, title Co-ordinator, duration, and funding agencies/ sponsors, no. of participants)

Nil

4.11.6. Short-term courses/seminars/workshops/conferences attended by the faculty.

Nil

4.11.7.New Degrees/Professional Memberships obtained by the faculty.

Nil

4.11.8. Achievements/awards/recognition earned by the faculty.

Nil

4.11.9Project sanctioned by outside agencies to the faculty of the department (April,2010 to March, 2011) (Name(s) of PI and co-investigator, if any, title of the project, funding agency, date of sanction, total amount, fund received during the year under review.

Nil

Consultancy Project: Nil

4.11.10.Publications:(a) **Referred Journal:** Nil(b) **Conference papers:** Nil

(c) **Books:** Nil

4.11.11. Interaction of faculty/department with outside agencies (give details regarding Membership of outside committees, executive committees of Professional bodies etc.)

Nil

4.11.12. Consultancy Projects undertaken. (Agencies, title of the consultancy project, amount, faculty and staff associated):

Nil

4.11.13. Achievement of Students :

N.A.

4.11.14. Any other relevant information:

Prof. B. D. Nayak Delivered an invited talk

Additional responsibilities taken up by the Faculty Members of the Department:

Prof. B.D. Nayak	In-charge Seminar Hall Chairman's Nominee of KV NERIST.
Prof. P. Parida	Dean, Academic.
Mr. Ranendra Prasad	Head of the Department In-charge Computer Lab. In-charge Communication Skills Lab.
Mr. Raju Barthakur	In-charge, <i>Interface</i> The NERIST News Letter Member of Library Advisory Committee.

4.12 DEPARTMENT OF CENTRE FOR MANAGEMENT STUDIES

4.12.1 A Brief Profile of the Department

Centre for Management Studies (CMS) came on 4th November, 2009 as an independent Centre to offer Management Programs. Soon after acquiring Deemed to be University status in the year 2005, one of the cherished dreams of starting MBA program came closer to reality. Finally, in the year July, 2006, NERIST earned the distinction of being the first institute in Arunachal Pradesh to start MBA program under the department of Humanities and Social Sciences. The Objectives of the Centre for Management Studies is to impart management education to the future managers and policy makers of the region. CMS aims to pursue global vision without losing local priorities and train future managers to develop a synergy between global and local value systems.

Centre for Management Studies became an independent Centre to meet the growing aspirations of the region to develop quality managerial talents. Centre offers MBA program in various specialization areas i.e. Human Resource Management, Marketing Management, System Management and Financial Management. Besides a full time MBA program, other activities of the Centre are as follows:

- Ph.D. program in Management
- Management Development Program (MDPs) for Executive, government officers
- Personality Development Programs (PDPs) for different target groups.
- Motivational workshops
- Consultancy in diverse areas of Management.

To promote intellectual and professional activities in Centre, the Management Forum of NERIST (MaFoN), a body comprising of student and teachers, has been very actively organizing professional activities like conducting expert talks by eminent speakers, seminars, GDs and outdoor Management Development Activities.

4.12.2 Academic activities

Center for Management Studies offers MBA and Ph.D. programmes. Apart from it, electives are offered at the UG level.

4.12.3 Laboratory Development: Nil

4.12.4 Projects completed by the PG students.

Name	Title of thesis	Supervisor (s)
M. Donik Reepi	Comparative resource utilization analysis of independent and chain hotel at Itanagar, Arunachal Pradesh	Dr. S. Choudhury
Navdeep Tyagi	A study of after sales service and customer satisfaction in automobile industry	Dr. S. Choudhury

Sanjay Biswas	Assessment of advertising strategy through mobile apps on capital complex of Arunachal Pradesh	Dr. S. Choudhury
Chungni Sono	Implementation analysis of 'agricultural technology management agency' scheme in Papumpare district of Arunachal Pradesh	Dr. S. Choudhury
John Kayi	Assessment of scope and opportunities for micro-entrepreneurial venture with the help of bakery enterprise a case study on 'pretty cakes' of Arunachal Pradesh	Dr. S. Choudhury
Hillang Barot	Analyzing customer satisfaction of co-operative bank in the frontier region of India: a case study on the apex bank of sangram locality in Arunachal Pradesh	Dr. S. Choudhury
Mr. Pill Biman	Organic value chain development for north eastern region: a case study on Subansiri farmers producing company	Dr. S. Choudhury
Miss Anjali Roy	A study on technology acceptance readiness among the Hotel employees in and around the capital complex of Arunachal Pradesh.	Dr. B.L. Sarmah
Miss Durisma Borah	A details study of reward system and its impact on employee motivation of State Bank of India in Papumpare District.	Dr. B.L. Sarmah
Miss Tilling Seema	Consumer motivations towards buying local rice in Ziro, Arunachal Pradesh	Dr. B.L. Sarmah
Kristi Menjo	Ecotourism and community development of lower Dibang valley district Arunachal Pradesh	Dr. B.L. Sarmah
Bikram Tamang	Brand image and their impact on consumer buying behavior (a case study on smartphone) at Nirjuli, Arunachal Pradesh	Dr. M. Mall
GR Saritha	Employee perceptions on corporate social responsibility in banks	Dr. M. Mall
Mr. Hussan Yun	A study on attitude of consumer towards green products in Itanagar and Pasighat, Arunachal Pradesh	Dr. M. Mall
Kongkonjit Hazarika	Impact of GST in automobile sector in Arunachal Pradesh	Dr. M. Mall
Banta Natung	A study of motivational factors among the college going students of Arunachal Pradesh	Dr. M. Mall
Miss Nani Kunya	Study on online consumer purchasing behavior in small towns of Arunachal Pradesh	Dr. M. Mall
Gollo Hania	Smoking habits among the students of Arunachal Pradesh	Dr. M. Mall

Namita chutia	Impact of employee turnover on organizational profitability	Dr. M. Mall
Taro Nomo	Financial planning of individuals- a case of capital complex Arunachal Pradesh	Dr. M. Mall
Saurav Kumar	A Study of Financial Statements Analysis of Profitable Organization	Dr. M. Mall

4.12.5 Short-term courses/seminars/workshops/conferences organized by faculty members.

Nil

4.12.6 Short term courses/Seminars/Workshops/Conferences attended by the faculty.

Nil

4.12.7 New Degrees/Professional Memberships obtained by the faculty.

Dr. (Mrs.) B.L.Sarmah	Ph.D. on Modelling and measuring of customer participative service innovation behavior.
Dr. M. Mall	Founder Member North East India Commerce and Management Teachers Association. Expert Member Socio-economic State wetland authority, Arunachal Pradesh.

4.12.8 Achievements/awards/recognition earned by the faculty : Nil

4.12.9 Projects sanctioned by outside agencies to the faculty of the department

Name of PI/CoPI	Title of project	Funding agency with order No.	Period	Amount (Lakhs)
Dr. S. Choudhury	Meng Circle of Arunachal Pradesh and Its Impact on Sustainable Rural Livelihood	MoEF&CC, New Delhi	03	₹ 40.70

4.12.10 Research articles in Books, Conference Proceedings etc.

(a) Journal Articles:

1.	Parida, A., Choudhury, S., Chatterjee, D. (2018). Microgrid Based Hybrid Energy Co-Operative for Grid-Isolated Remote Rural Village Power Supply for East. IEEE Transactions on Sustainable Energy. Vol 9 (3), 2018, Page no- 1375-1383
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2.	Choudhury, S., Patra, A.K., Parida, A., Chatterjee, S. (2018). Coast zone of India renewable energy capacity estimation for Indian energy sector using energy demand forecasting through fuzzy time series. <i>Advances in Smart Grid and Renewable Energy</i> . Page no- 551-558.
3.	Choudhury, S., Patra, A.K., Parida, A.K., Chatterjee, S. (2017) Interval Type-II Fuzzy Multiple Group Decision Making Based Ranking for Customer Purchase Frequency Determinants in Online Brand Community. <i>Proceedings of sixth International Conference on soft Computing for problem.</i>
4.	Kamboj, S., Sarmah, B., Gupta, S. and Dwivedi, Y. (2018). Examining branding co-creation in brand communities on social media: Applying the paradigm of Stimulus-Organism-Response. <i>International Journal of Information Management</i> . 39, 2018, SSCI 3.872, Elsevier Publications, pp.169-185
5.	Sarmah, B., Rahman. Z., Kamboj, S. (2017). Customer co-creation and adoption intention towards newly developed services: An empirical study. <i>International Journal of Culture, Hospitality and Tourism Management, (Scopus)</i>
6.	Sarmah, B., Sharma, S and Gupta, S. (2017) "An Empirical Assessment of the Antecedents of e-Business Adoption Intention among MSMEs using the Theory of Planned Behavior". <i>International Journal of Innovation Science, (Scopus)</i> . Emerald Publication
7.	Sarmah, B., and Rahman. Z. Customer co-creation in hotel service innovation: An interpretive structural modeling and MICMAC analysis approach. <i>Benchmarking: An International Journal, Emerald Publication</i>
8.	Sarmah, B., Kamboj, S., and Rahman. Z. (2017). "Co-creation in hotel service innovation using smart phone apps: An empirical study". <i>International Journal of Contemporary Hospitality Management</i> . 29 (10) 2017, SSCI Impact factor 3.17, Emerald Publication.
9.	Kamboj, S and Sarmah, B. Construction and Validation of the Customer Social Participation in Brand Communities Scale. <i>Internet Research</i> . SSCI 2.931, Emerald Publications (Accepted)
10.	Sarmah, B., and Rahman. Z. Antecedents of co-creation intention and their role in developing technology based new services via customer involvement: A conceptual analysis. <i>International Journal of Business Excellence, (Scopus)</i> . Inderscience Publications
11.	Mishra, P.K., Mall, M., Pradhan, B.B. (2017). Economic growth, structural change and intersectoral linkages in Saarc economics. <i>Regional and Sectoral Economic Studies</i> . Vol 17 (2), 2017, 75-88.
12.	Mishra, P.C., Mohanty, M.K., Mall, M. (2018). Operational attributes influencing productivity in Indian opencast mines. <i>International Journal of Productivity and Quality Management</i> . Vol 24(2), 2018, pp-177-195
13.	Mondal, S., Mall, M., Mishra, U.S., Sahoo, K. (2017). Investigating the factors affecting customer purchase activity in retail stores. <i>Revista ESPACIOS</i> . Vol 38(57) 2017.

4.12.11 Interaction of faculty/department with outside agencies (Give details regarding membership of outside committees, executive committees of professional bodies etc.)

Dr. Manmohan Mall	Founder Member North East India Commerce and Management Teachers Association Expert Member Socio-economic State wetland authority, Arunachal Pradesh
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4.12.12 Consultancy projects undertaken.

Nil

4.12.13 Achievements of students.

1. Mr. Koustav Goswami MBA student has been nominated as best 40 startups by a talent hunt of IIM, Calcutta sponsored DST in the year 2017.
2. Ms. Nilakshi Konwar has been recruited as management trainee through national level test in Indian Oil Corporation in the year 2018.

4.12.14 Any other relevant information.

MBA Students have undergone Summer Internship Project (SIP) for 45 days in various organizations situated in various parts of north eastern region as well as in different cities of India such as: Ayana, Axom Urja, Department of Planning-Govt. of Arunachal Pradesh, India Post Payments Bank (IPPB), NEEPCO, Nestle, Odisha Coffee Growers Association, Poct Services Private Limited, Pratishtha NGO, UCO Bank.

SECTION – 5

CENTRAL FACILITIES, SERVICES AND ACTIVITIES

5.1 CENTRAL LIBRARY

5.1.1 A Brief Profile of the Library

Central library situated in the heart of the institute in a 3 story building of plinth area 1296 square meter. Library has a collection of over 63419 number of text and reference books of engineering, science and humanities. Library is subscribing 88 National journals, 10 Magazines and 10 National & regional dailies to provide a base for enhanced learning.

The Institute is a core member of E-Sodha Sindhu (ESS) Consortium, MHRD, Govt. of India which provides access to 3 International e-resources i.e. ACM digital library- 1139 titles, ASCE: Journals online -35 titles, ASME: journals online- 28 titles. Besides this, it also subscribes e-resources of JSTOR, ASTM standards, Nature, Economic and political weekly for the user of the Institute. It possesses IS Codes on CD-ROM and other educational DVDs. Being an institutional member of Indian Liquid Crystal Society, Bangalore and Kaziranga Wild Life Society of Assam, it receives literature and information services from them. Users can also access their required information about books through OPAC (Online Public Access Catalogue).

Library provides reference service to the users with sitting capacity of 80 persons with more than 3000 books of text & reference. Reading facility is provided separately with a sitting capacity of 120 seats. The reference section and reading room remains open from 9.00 AM to 8.00 PM on Monday to Friday and 9.00 AM to 5.30 PM on Saturday.

1.1.2 Circulation Service:

Library provides its core service of circulation from stack with brown's charging systems. Every user gets issued a book against a library card issued in the beginning of the session. Students and faculties are issued library cards as stated below.

1. Base module Students: 3cards
2. Diploma module Students: 4 cards
3. Degree Module Students: 5 cards
4. All PG & PhD. Students: 6 cards
5. All faculties: 15 Cards
6. All technical Staff: 5 Cards

5.1.3. Book Bank

There is separate Book Bank of 37638 vols. for UG students. The students get a set of text books for the semester covering all courses of the semester

5.2 TRAINING AND PLACEMENT CELL

5.2.1 Focus

To counsel the students on job prospects in tune with their skills, coordinate with the companies for on-campus and pool placement interviews, exploring and aiding on training and short-term internships at different levels.

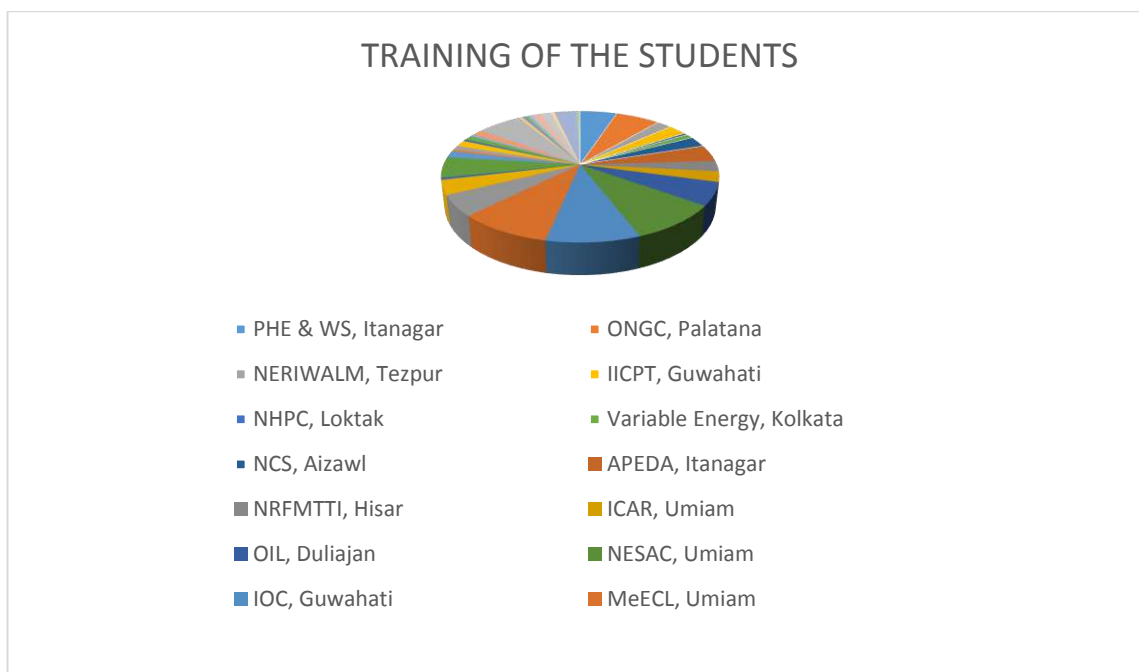
5.2.2 THRUST AREAS

- To make the students world ready
- To create a pool of competitive and trained human resource ready to be absorbed
- To build bridges between the potential employers and the prospective employees
- To make the students aware of the changing skill sets and providing platforms for acquiring the same.
- To facilitate periodic interactions with alumni mentors and startup enthusiasts with an aim to provide alternate avenues to market innovative ideas.

5.2.3 THE YEAR THAT WAS (2017-18)

ORGANIZATIONS THAT PROVIDED TRAINING

**IITs,
ONGC, Variable Energy NESAC, CETPA, Meghalaya Energy Corporation Ltd.,
NEEPCO, IOC, Oil India Ltd., NHPC, NTPC, IISc., BARC, ICAR, SPARK
Internship (Roorkee), C-DAC, NERFMTTI, NERIWALM, IICPT, NRFMTTI**



5.2.4 PLACEMENT INFORMATION

In the year that is reported upon, graduate and post-graduate students appeared in both on-campus and pool drives organized at different places of the north east India and got absorbed in the following companies:

- Wipro
- Tech Mahindra
- Asahi India Glass
- Cummins India
- Power Grid Corporation of India Limited
- Axis Bank
- Oil India Limited
- Vedanta
- Grifeo Technologies
- DataZen
- Indian Navy
- Ethnus Consultancy
- Zolacode Inc.

5.2.5 TARGET-BASED ACCOMPLISHMENTS

In the preceding year, a number of initiatives were targeted to be accomplished during the year that is being reported upon. The major accomplishments include:

- Conducted stream and skill-based industry standard online tests for the students in association with Co-cubes, a major RPO Agency of India.
- Automated the entire Placement and Training process of the institute which provides a common platform for the prospective employers and training providers and the students.
- Organized Competency Development lectures by invited speakers Shri Srinivas Chamorthy, a prominent career consultant of India, and Commodore T. Ramesh from the Indian Navy.

5.3 SPONSORED RESEARCH AND INDUSTRIAL CONSULTANCY (SRIC)

5.3.1 A Brief Profile of the Section

The NERIST Board of Management in its 51st meeting held on 28.08.2001 had approved the Sponsored Research and Industrial Consultancy (SRIC) Cell in NERIST to look after the smooth running of various sponsored research projects in the Institute. Presently the Cell is headed by a Professor as Coordinator. One PA and one Peon are attached with this Cell to help the day to day works of the Coordinator SRIC. The financial matters & other relevant records of all the projects of various departments like Forestry, Agriculture Engineering, Civil Engineering, Mechanical Engineering etc. are being dealt by the Finance Section.

4.3.2 Status Report regarding activities.

Presently about 31 Nos. of projects in various departments of NERIST is going on. Each project is being run by a P.I and other office functionaries as per guidelines of the sponsoring agency.

5.4 CONTINUING EDUCATION PROGRAMME

5.4.1 A Brief Profile of the Section

- a. To provide information to the bright meritorious students about Early Faculty Induction Programme (EEIP) sponsored by AICTE and other agencies
- b. To provide information to faculty members regarding financial assistance from Government/Sponsoring agencies so that faculty members can get grant from these agencies for book writing/material preparation etc.
- c. To provide timely information and proforma to faculty members for applying AICTE or other sponsored Short Term Training Programme etc.
- d. To encourage and coordinate faculty members/departments for specially formulated self financing/sponsored short term courses for Industry, R&D personal.

5.4.2 Status report regarding activities:

- a. A number of faculty members have attended Seminar/Workshops/Short Term courses/Conferences during this period
- b. Various departments of NERIST have also organized some short term programme in NERIST during this period.

5.5. KENDRIYA VIDYALAYA

5.5.1 Kendriya Vidyalaya NERIST is a prestigious educational institute in Nirjuli. It is a single section school with the highest class being class XII. At present there are around 470 students studying in this Vidyalaya.

5.5.2 KV NERIST follows CBSE curriculum which aims at all round development of the students. The Vidyalaya not only provides quality education but also organizes many co-curricular activities to make students fit for the global competitive job market.

- (a) Social Science exhibition: 60 students of the Vidyalaya have participated in Cluster Level Social Science Exhibition that held at KV No.1 Itanagar. It is a matter of great pride that our Vidyalaya stood first in the Cluster Level Social Science Exhibition.

- (b) Science exhibition: Vidyalaya has participated at regional level science exhibition in 2013 and one model has been selected for national level science exhibition.
- (c) Scout & Guide: Our school plays an important role in Scout & Guide field. Many students have participated in different Scout Guide activities like Dwitiya Sopan testing camp, Tiritiya sopan testing camp, Pre Rajya Puruskar testing camp. The Vidyalaya also organized different activities at Vidyalaya level.
- (d) CCA: Vidyalaya organized CCA activities for all round development of students in the Vidyalaya premises and distribute prizes for the same.
- (e) Sports: Vidyalaya orginsed many sports activities in order to inculcate sportsmanship and leadership qualities.
- (f) Olympiad: Students of this Vidyalaya participated in different Olympiads time to time. 3 students of the Vidyalaya have been selected for TECHNOTHOLON being conducted by IIT Guwahati.

5.5.3 KV NERIST is one of the best schools in this region. Many teachers of this Vidyalaya got trainings and in-service courses.

5.5.4 Result of this Vidyalaya: The Vidyalaya has produced 91.30% in class XII and 88.63% in class X for the academic session 2017-18.

5.5.6 Many students of this Vidyalaya have been selected in different prestigious Institutions of Medical and engineering and national level entrance examination.

5.6 NERIST KG SCHOOL

5.6.1 A Brief Profile of the School

NERIST KG School was established in the year 1992. It has been started with a mission to provide pre-school education and to promote healthy peer group activity among children of the institution's employees. The school is self-financed for its recurring expenditure and is running on no profit no loss basis. Presently, the school is running three classes: Play class, Lower Kindergarten (LKG) and Upper Kindergarten (UKG).

Class	Strength	Min. Age of Admission
Play	16	2.5 Years
LKG	45	3 Years
UKG	45	4 Years

Organization structure:

- | | |
|-------------------------|-------------------------|
| 1. Mrs. Meenaxi Arora | - Principal–cum-Teacher |
| 2. Mrs. Mithu Sarkar | - Assistant Teacher |
| 3. Mrs. Jyoti Doimari | - Assistant Teacher |
| 4. Mrs. Adam Bage | - Assistant Teacher |
| 5. Mrs. Rupa Khargharia | - Assistant Teacher |
| 6. Ms. Mamoni Chettri | - Assistant Teacher |
| 7. Mrs. Radhe Jailyang | - Non-Teaching Staff |
| 8. Mrs. Geeta Mili | - Non-Teaching Staff |
| 9. Mrs. Renu Swargairy | - Non-Teaching Staff |

5.6.2 Status report regarding activities

During the academic session (April 2017 - March 2018), various activities, competitions and celebrations were organized in addition to Kindergarten level teaching for all round development of the children. National festivals were celebrated to grow patriotic feelings inside the children right from early age. Various other activities were conducted to develop competitive skill in the wards of school which includes:

- Drawing competition,
- Handwriting completion,
- Fancy dress competition,
- Rhyme reciting competition,
- Story telling competition etc.

The School celebrated its Children’s day on 14th of November, 2017. The School organized sports on Republic day (26th January 2017) for physical development of the children. A school picnic was also organized for entertainment. At times, parent’s-teacher’s meetings were organized for free interactions and conversations between parents/guardians and the teachers. The closing ceremony of Silver Jubilee celebration of the school cum annual function was held on 17/08/2017.

5.6.3 Highlights

The basic infrastructure like space & building for school have been provided and maintained by the NERIST authority. The school is equipped with all kinds of teaching & learning aids, outdoor & indoor games and facilities to develop extracurricular abilities in small children. It includes a big play ground and children's park within the school premises with the facilities such as two safe plastic plane slides, a tunnel slide, Swings, Marry-go-round, See-saw etc. For class room learning, toys, tricycles, slide, charts, audio-video systems, computer, indoor play items etc. are available.

5.6.4 List of Committee Members, if any

The school management committee is responsible for running the school. The committee is headed by the chairperson/chairman, who is nominated by the Director, NERIST and has one representative member each from NFA, NTSU & the principal-cum-teacher of the school as member secretary.

Present Structure of School Management Committee

1. Dr. Dipika Devi	–	Chairperson
2. Dr. S. Choudhury	–	NFA representative
2. Mr. T. Debnath	–	NTSU representative
3. Mr. Nabam Hari	–	NTSU representative
4. Mrs. Meenaxi Arora	–	Principal, KG School

5.6.5 Any other relevant information/data

Nil

5.7 TRANSPORT SECTION

5.7.1 A Brief Profile of the Section:

Transport section of NERIST was establish in 1987 under the administrative control to fulfil the need of in-campus and off-campus transport requirements of the institute. The transport section was developed and initially it was kept under the control of Chairman (TPT) and Transport Officer as a supervisor. The Transport Section is providing good services round the clock for Institute's activities wherever necessary for students, departmental works and other official works of NERIST including medical emergency for NERIST Students,

employees, and their family members. To meet the transport facility requirements of the institution, vehicle servicing and its maintenance is a matter of concern throughout the year along with addition of new vehicles time to time.

5.7.2 The Various service offered by the transport section are presented as below:

- a) Providing the vehicle(s) for in-campus and off-campus official duties as and when required including odd hours.
- b) Providing the Bus service to NERIST students for their attending classes to degree block during working days (Monday to Saturday, 7.05am to 5.05pm).
- c) Providing School Bus service to the word of NERIST employees for Kendriya Vidyalaya, NERIST from T/I Campus and VKV School at Bage Tinali, Nirjuli from NERIST main campus.
- d) Providing the vehicle(s) to the employees and students under staff welfare and students scheme for religious and social functions on payment basis as and when vehicles are available.
- e) Providing the vehicle(s) for student's placement interviews (campus/Guwahati) as well as during seminars, conferences, short term courses, short term training programs, student's study tour and workshops organized by the faculty members of the various department of NERIST.
- f) Providing the vehicle(s) to various departments for conducting practical training to different module students for field/industrial visits for their academic enhancement.
- g) Providing the vehicle(s) to NCC/NSS of NERIST for in-campus related activities as well as for attending outside awareness campaigning etc.
- h) Providing the ambulance service for students and employees of NERIST as and when required in capital complex and up to Guwahati and also during emergency medical treatment (24x7).
- i) Providing vehicles to physically handicap student's duty for their attending classes and other purpose like practical classes etc.

5.7.3 Status report regarding activities:

The Transport Section is one of the most important supporting section of the institute. This section runs number of vehicles for official purposes which are directly/indirectly for the interest of this institution.

- This section has 3nos of heavy motors vehicles (Buses, 1no is condemned), 2 nos of buses are normally engaged for various activities such as departmental purchase (local and outside), NERIST student duty for attending classes, School duty for NERIST employee

wards, NERIST Student's Educational tours, Student's industrial visits, Practical classes duty and departmental/official duties.

- It has one Winger (13+1 seater) vehicle which is used for physically handicap student's duty and other official duty when required by the department and office.
- The department has 10nos of light vehicles and they are detailed under various duties.
 - Two light vehicles (Innova and Optra-LT) earmarked for Director, NERIST Chairman BOM and other official dignitaries visiting as the institute's guest etc.
 - One vehicle (AVEO-LT) used by Registrar, NERIST for official duties.
 - One vehicle (AVEO-LT) used by all Deans for their official duties.
 - One vehicle (Maurti Versa) is detailed for Security Night patrolling duty and other official duties as per the requirement.
 - One vehicle (Scorpio) is used by the departmental seminar, Director's cell, Registrar's Cell, Finance Section, S&P Section, T&P Cell for campus interview, Academic Section Exam Cell, HMC Gymkhana Library and other official/departmental works like meeting, seminar etc.,
 - One vehicle (Maruti Gypsy) is detailed to EE (Civil), AE (Civil), AE (EE), Horticulture in-charge, sanitary in-charge for their official duties etc.
 - One vehicle (Tata mobile) is used for Transportation of material for Departmental works /laboratory works, EE (Civil) office, AE (Civil) office, E.O office, store & purchase section, Hostel HMC, Library, EMC Gymkhana and as per departmental/official requirement etc.
 - One vehicle (Tavera Ambulance) ambulance service for students and employees and their family members of NERIST as and when require in-campus and off-campus (like Tamo Riba Institute of Health and Medical Sciences, Naharlagun, RKM Hospital, Niva Hospital, Papu Nala, and up to Guwahati Hospital/Airport) for emergency medical treatment round the clock (24x7).
 - One vehicle (Tata Sumo Ambulance) have been purchased recently (dated:24 /04/2018), as the Tavera ambulance is old enough and there is frequently breakdown due to non-availability of parts in Itanagar Capital.

The institute is going to condemn/auction the following old vehicles as mentioned below-

- The Institute Vehicle No. AR01 3980 (Bus) is proposed for auction.
- The Institute Vehicle No. AR01C-7523 (Maruti Gypsy) is proposed for auction.
- The Institute Vehicle No. AR01A-5286 (Omni Van) is proposed for auction
- The Institute Vehicle No. AR01 4600 (Maruti Gypsy) already condemned and is proposed for auction.
- The Institute Vehicle No AR01A 4887 (Ambassador) already condemned is proposed for auction
- One Motors Cycle Bearing Registration No. AR01 B 7520 is proposed for auction, earlier it was auctioned but there was no any bidder.
- The Transport Section has water servicing/washing equipment for vehicle servicing and maintenance of institute vehicle time to time.

The Transport Section has 12nos. of running institute vehicles and there are 09 nos of Drivers; hence transportation section requires additional 2 nos of Drivers for smooth functioning of this section urgently.

5.7.4 Highlights:

Transport Section has great role in the Institute to speed up the administrative activities by providing timely the required institute vehicles. There is provision for (24X7) ambulance service for NERIST students and employees and their family members. There is provision of vehicles to NERIST Students for attending their classes to degree block (7.45am to 5:30pm), and during departmental seminars, study tours, practical classes. Transport section also provides vehicles for employees of NERIST at subsidized rates to visit nearby capital complex/railway station/etc. on payment basis.

5.8 NERIST HEALTH UNIT

5.8.1 NERIST Health Unit is functioning with the following number of staff and Officers as under: -

- | | |
|------------------------|---------------------|
| 1.Dr.Popi Camdir Tok | 4.Hareendran PM |
| 2.Dr.Sushimita P Taggu | 5.Mrs.Mary Biswas |
| 3.Dr.Gyamar Inja | 6.Mr.Dhiren Kr Nath |

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7.Mrs.O.barman

8.Mr.Minyo Blange

9.Mr.E Deomari

10. Miss.Poornima Deb

11. Mrs.Koj Yallo

12. Mrs.Tana Parbati

13. Mr.Surendra Prasad

14. Mr.Mahesh Mallick

Chief Medical Officer In
Charge.

Medical Officer

Medical Officer

Pharmacist

Nursing Sister

Dresser

Xerox operator

Lab Assistant

Lab Attendant

Attendant

Helper

Peon

LDC

Sweeper

- 5.8.2 During the above period an approximate 1000 students and 7000 patients (including staff and relatives) were examined from the OPD. An approximate 300 patients were referred to nearby Hospitals for further treatment from Nerist Health Unit.
- 5.8.3 The unit is providing OPD facility for all the staff and their relatives and also for the nearby public those who approach for treatment without any consultation cost. The medicine counter is providing free medicines to the authorized staff through out the year. And also 24x7 emergency service is provided to the resident of the campus through out the year.
- 5.8.4 NHU actively participated in Pulse Immunization programme conducted by Govt of India twice in this year. Apart from the above the combined measles and Rubella vaccination campaign was run thorough out February month of this year as per the Govt. Schedule.
- 5.8.5 NHI-J conducted public awareness programme to control diarrhea and NIPAH Virus infection to the campus community as well as in the neighboring areas.

5.9 CENTRE FOR APPROPRIATE TECHNOLOGY & RURAL DEVELOPMNT (CATRD)

5.9.1 A Brief Profile of the Department

The Board of Management of NERIST in its 62nd meeting held on August 11, 2007 had resolved to establish the Centre for Appropriate Technology & Rural Development (CATRD) at NERIST. It is a multifunctional and multi disciplinary Centre to meet the needs of NE Region. Centre for Appropriate Technology and Rural Development started its activities from August 2007 at NERIST. It is an independent Centre of NERIST with the under mentioned objectives:

- To cater to the technical needs of the people living in Arunachal Pradesh and neighboring states of the North Eastern Region.
- To support in Technical and Vocational Educational activities of the people of the NE Region.
- To assist the development of social welfare and economic growth of the people in NE Region.
- To establish a consortium of scientific and technical talents to undertake activities that will help to promote and provide Technical Manpower base to cater to Non-formal Sector for Technical and Vocational Education and Training (TVET) for Rural Stakeholders
- To encourage Appropriate Technology adaptation and transfer through conducting pilot studies on specific projects.
- To develop documentary films on the lives of the people of the region by use and application of science and technology in socio-economic growth and development.
- To preserve rural and indigenous technologies of the NE Region and assist in technical documentation and dissemination of knowledge.

- To conduct Certificate, Diploma, Degree, Post Graduate Diploma/Degree and Research Degrees in Appropriate Technology and Rural Development for regular or sponsored candidates for State/Central Govt., UN sponsored organizations, SAARC Countries through Multilateral & bilateral agreements under UNDP, UNEP, UNRSCO, WHO, UNIDO, NEC, ADB etc.
- To organize and support Research, Colloquium, Seminar, Workshops, Conference on various Scientific and Technological advancements leading to the social and economic growth and progress of the region.
- To use the concept of Remote Sensing (RS) to Sector Professionals and academic community for forecasting Disaster and ensure remedial measures.
- To solicit, receive and accept grant from Central and State Govt. and other recognized agencies and also materials in the shape of equipments, technical knowledge, documents etc. and also from recognized international funding agencies.
- To develop necessary infrastructure to conduct various programmes in future.

5.9.2 List of Committee Members

Dr. S.K. Shrivastava	Head of the Centre
Dr. P.R. Gajurel	Assoc. Prof. (Forestry)
Ms. B.L. Sarmah	A.P. (CMS) on QIP Leave
Ms. Mudo Punning	A.P. (Civil Engg.)

SECTION – 6
MANPOWER AS ON 31.03.2018

I. Teaching (Faculty)

1	Forestry	13
2	Agriculture Engineering	15
3	Civil Engineering	16
4	Computer Science & Engineering	11
5	Electrical Engineering	16
6	Electronics & Communication Engineering	14
7	Mechanical Engineering	17
8	Physics	11
9	Chemistry	13
10	Mathematics	08
11	Humanities & Social Sciences	05
12	Centre for Management Studies	04

Total (I) - 143

II. Non-Teaching (Officers and Staff)

The break-up of Officers, Technical, Ministerial and Group – C staff in position on 31.03.2018 is given below:

(i) Officers

a	Group – A	18
b	Group – B	25
Total		43

(ii) Technical/vocation Staff (Non-teaching)

a	Group – A	-
b	Group – B	06
C	Group – C	42
Total		48

(iii) Ministerial Staff:

a	Group – B	13
B	Group – C	57
Total		70

(iv) Non Ministerial staff Group – C

a	Laboratory Attendants/Helpers/Pump Attendants	37
b	Security Guard	08
c	Malis, Labourers & Sweepers	27
d	Peons	34
e	Cook & Cook Helpers	69
Total		175

Total (II) - 336

GRAND Total (I + II) = 479

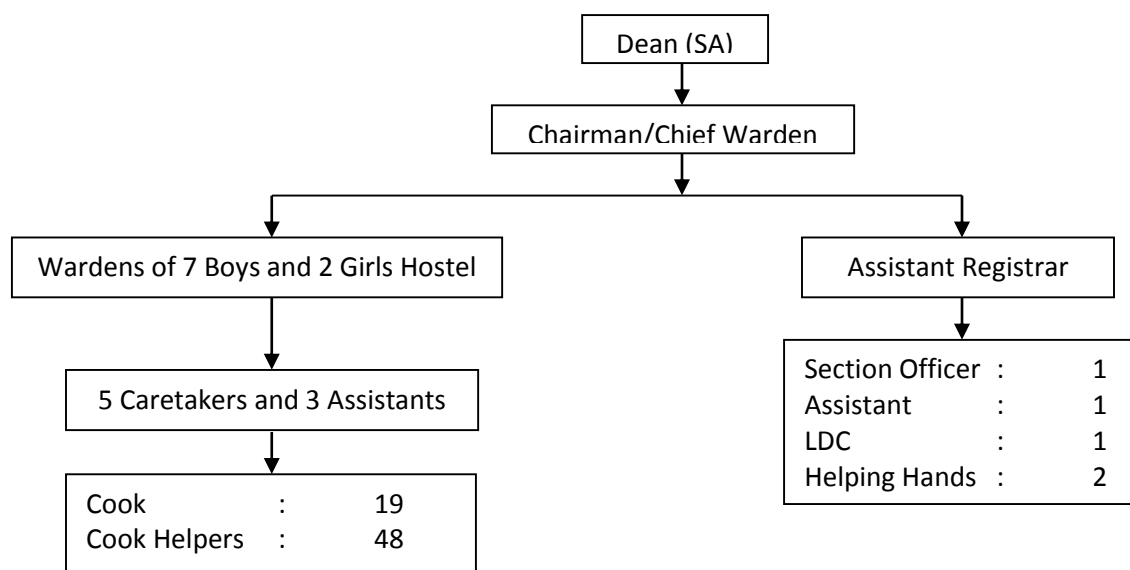
SECTION – 7

CAMPUS LIFE AND EXTRA CULLRICULAR ACTIVITIES

7.1 HOSTEL MANAGEMENT COUNCIL

7.1.1 A brief profile of the Section:

NERIST is a residential technical institute and declared as Deemed to be University by Ministry of Human Resource Development, Govt. of India in the year 2005. Students (both boys and girls) are required to stay in the hostels situated in the campus. This helps in the development of an integrated personality and enables the students to receive training in corporate living and continuous communication with fellow students and teachers. The Hostel Management Council (HMC) is an autonomous body for the management of hostel accommodation and mess facilities of seven boys' hostel and two girls' hostel. Intake capacity of 408 students in new boy's hostel is ready for accommodation in the next academic session. This hostel is spread in 54.5 acres area and situated opposite to PG Boys Hostel.

Organizational structure of Office of HMC

7.1.2 Status Report

Dr. Sandeep Singh, Associate Professor, Department of Mechanical Engineering is continuing as the Chairman/Chief Warden, HMC. There are nine Wardens, four Mess-Manager-Cum-Caretakers and three Assistants are posted in different Hostels. A brief detail of the Hostels is given below:

Sl. No.	Hostel Block	Hostel Capacity	Mess Manager-cum-Caretakers/Assistants	Wardens
1	A	124	Mr. P. Barman	Dr. Kh. Hera Ch. Singh
2	B	124	Mr. Dorjee Shongmu	Dr. M. Hassan
3	C	124	Mr. B. Patir	Mr. A. K. Chowdhury
4	D	124		Mr. S. Tamang
5	E	250	Mr. A. Gogoi	Mr. A. K. Gautam and Dr. K. Borah
6	F	250	Mr. E. N. V. Nair	Mr. Akhilesh Sharma
7	G	250	Mrs. M. Roy Choudhury	Mrs. Piyali Das
8	H	250	Mr. T. Mathew	Dr. M. M. Mal
9	Subansiri	250	Mrs. N. Siyum	Dr. (Mrs.) S. L. Bharati

7.1.3 Highlights

In order to add confidence among new entrants, a Hostel Level Anti-Ragging Squad was constituted to visit hostels between 8 p.m. and 12 a.m. for three weeks after admission of new students. The squad consisted of faculty members including the Hostel Wardens. The Institute constituted an Anti-Ragging Committee as per the guidelines of UGC.

The Independence and Republic Days were celebrated in all the Hostels by hoisting the National Flag by the respective Wardens/Chief Warden/Dean (SA) in the front of the respective Hostel Blocks.

The Boarders of Hostels have celebrated Block Day separately in each Hostel Block. The Director, Deans, Registrar, Chief Warden, Hostel Wardens and other Faculty members were invited in the said function.

MEMBERS OF HOSTEL MANAGEMENT COUNCIL AS ON 31/03/2018

Dean (SA)

Dr. Saibal Chatterjee, Prof. Department of Electrical Engineering

Chairman/Chief Warden

Dr. Sandeep Singh, Associate Professor, Department of Mechanical Engineering.

Assistant Registrar

Mr. Animesh Basu

Section Officer

Mrs. Pratibha Saikia

Office Staff

1. Mrs. A. Adhikari, Assistant
2. Mr. Thomas Mathew, Assistant, Hostel Block H (Part time in Office of HMC)
3. Mr. B. Patir, LDC

7.2 NATIONAL CADET CORPS (NCC)

7.2.1 A Brief Profile of the Section

NERIST is having two NCC wings. First wing is SD (Boys), which is fully funded by NERIST. Second wing is SW (Girls), which is funded by Tezpur NCC unit directly. Total students enrolled in the academic year 2017-18 are given below:

Cadets Enrolled	SD (Boys)
1 st Year	50
2 nd year	59
3 rd Year	48
Extension	3
Total	160

i) Manpower status

	Present	Requirement	Deficiency
ANO/CTO	02	02	NIL
Supporting staff	02	04	02

ii) Infrastructure

	Present	Requirement	Deficiency
Office	01	01	NIL
Store room (Big)	01(Small)	02	01

iii) Budget allocation

Sl. No.	Particular	Expenditure (₹)
1	Washing allowance and refreshment	93,845.00
2	CATC Camp	51,840.00
	Total	1,45,685.00

7.2.2 STATUS REPORT REGARDING ACTIVITIES**i) Parades Conducted**

Total 37 parades

ii) Ceremonial Drill participated

- a) Independence Day (15-08-2017) : 48 SD & 24 SW Cadets
- b) Republic Day (26-01-2018) : 54 SD & 24 SW Cadets

iii) Camps Attended by the NCC cadets

Total 4 camps

- a) CATC Camp at RGGP, ITANAGAR, AR
W.E.F. 10/06/2017 to 19/06/2017
- b) AAC at Tezpur, Assam
W.E.F. 21/07/2017 to 05/08/2017
- c) CATC Camp at RGGP, ITANAGAR, AR
W.E.F. 01/01/2018 to 10/01/2018

7.2.3 HIGHLIGHTS

- i) 'B' Certificate Exam Passed - 28 SD Cadets
- ii) 'C' Certificate Exam Passed - 4 SD Cadets

The following SD CADETS passed 'B' Certificate Exam.

SL.	NAME	FATHER'S NAME	REGIM. NO.
1	RANJIT RAI	TALONG RAI	AR 16 SDA 100307
2	ABHISHEK DUTTA	BABUL DUTTA	AR 16 SDA 100306
3	DEBASISH BORAH	BUDHINN BORAH	AR 16 SDA 100320

4	ABINASH SAIKIA	GOLAP SAIKIA	AR 16 SDA 100319
5	PRABHAT KUMAR PRASAD	SHANKAR PRASAD	AR 16 SDA 100317
6	NOVJEET RAJ SAH	MUNGA LAL SAH	AR 16 SDA 100309
7	NIRO DARANG	OPANG DARANG	AR 16 SDA 100327
8	CHANDAN KUMAR	HARIHAR SINGH	AR 16 SDA 100339
9	DHARAM RAJ CHETRY	GYAN BAHADUR CHETRY	APSD/15/120433
10	SUVAMKAR BISWAS	SHANTIRAM BISWAS	APSD/15/120425
11	DUL DEKA	BABUL CH. DEKA	APSD/15/120424
12	S SAMANANDA SINGH	S IBOHAL SINGH	AR 16 SDA 100301
13	NAKO KOMO	NAKO TATU	AR 16 SDA 100336
14	PANKAJ KUMAR	SAMBHUNATH THAKUR	APSD/13/120160
15	HRISHIKESH BARMAN	MAHENDRA BARMAN	APSD/15/120394
16	MAIBAM THAMESWOR SINGH	M DEWAN SINGH	APSD/15/120428
17	SORAM SAMANANDA SINGH	S IBOHAL SINGH	AR 16 SDA 100301
18	NOSATO NEIKHA	SALZU NEIKHA	APSD/15/120412
19	VIKAS KUMAR GUPTA	AJAY KUMAR GUPTA	AR 16 SDA 100345
20	SUJEET SINGH	BRAJ KISHORE SINGH	AR 16 SDA 100304

21	SATYAM RAJ	ASHOK KUMAR SINGH	APSD/15/120422
22	SAURAV JHA	BHARAT LAL JHA	AR 16 SDA 100303
23	PARTHA DUTTA	PRABIR DUTTA	AR 16 SDA 100321
24	GAURAV KUMAR SINGH	GANESH PRASAD SINGH	AR 16 SDA 100341
25	NAMAN DEV SHARMA	SUBHASH CH. SHARMA	AR 16 SDA 100344
26	TONKU SONAR	L B SONAR	AR 16 SDA 100353
27	BIKKI KUMAR	SURENDRA PRASAD	AR 16 SDA 100352
28	SATYAM KUMAR	LALAN SAH	AR 16 SDA 100316

The following SD CADETS passed 'C' Certificate Exam.

SL.	NAME	FATHER'S NAME	REGIM. NO.
1	SATYA NARAYAN BHUYAN	HARINARAYAN BHUYAN	APSD/15/120417
2	ABHISHEK KUMAR	GANESH RAY	APSD/15/120442
3	SANJEEV KUMAR SONI	SUDHIR KUMAR SONI	APSD/15/120429
4	RAHUL KUMAR	S P SHAH	APSD/15/120410

7.3 NATIONAL SERVICE SCHEME (NSS)

7.3.1 A Brief Profile of the Section

Dr.A. Dinamani Singh, Coordinator, NSS Unit NERIST, participated actively in various NSS programmes to guide and motivate NSS volunteers. Other Programme Officers and Group Leaders also extended very good support and cooperation leading to the success of the NSS

programmes. One Group 'C' and One Group 'D' employees are in the NSS Cell to look after the office works and also to assist the Coordinator, Programme Officers and Group Leaders for smooth conducting of the NSS programmes.

1. Total No. of Volunteers enrolled : 940 Nos.
2. Male : 730 Nos.
3. Female : 210 Nos.
4. No. of Male Volunteers (APST) : 163 Nos.
5. No. of Female Volunteer (APST) : 40 Nos
6. Name of NSS Programme
Co-Ordinator : Dr.A.Dinamani Singh
7. No. of trees planted during
year 2017-18 : 200 Nos.

7.3.2 Status Regarding Activities

NSS activities for the Academic Session 2017-18 commenced with an orientation programme with the newly joined volunteers on 16.9.2017. Prof.H.S. Yadav, Director, NERIST participated in the orientation programme, who highlighted in his address about the importance of NSS and its role played for the development of a person. Dr.A. Dinamani Singh, Coordinator, NSS also addressed the newly joined volunteers and enlightened about the aims and objectives of NSS, significance of its motto, badge, about the role expected from an NSS volunteers etc.

The National Service Scheme Cell of NERIST observed the NSS day on 24.09.2017. The occasion was marked by a function followed by plantation of tree and awareness campaign on Environment. The ceremony was attended by Program Officers and Volunteers. Speaking on the occasion, the Co-ordinator of the NSS Cell, NERIST emphasized the role of the NSS for the welfare of the society. He also stated that keeping the all-round developments and changes taking place around us the horizon of NSS needs to be enlarged.

Regular activity was organized from 16th September 2017 to 21st September 2017 (Swatcha Bharat Abhiyan) and on 31st March 2018 at NERIST main campus and Degree block. Approximately 650 number of volunteers participated in it. The campus cleaning along with plantation of 200 saplings were carried out at PG Hostel & Degree block). A Massive Blood donation camp was organized by NSS cell in coordination with Naharlagun General Hospital and Medical Health Unit, NERIST on 7th October 2017. A total of 110 NSS Volunteers and Programme Officers donated blood including 40 girl volunteers.

7.3.3 Special Camp Report

Special camp was organized on 30th January 2018 at the Nirjuli Village -II (Riyo). The camp was attended by around 220 student volunteers and Program officers of NERIST along with Villagers. *Gaon Burha* also participated in the camp. Around 200 saplings of amla (*Emblicaindica*) and jack fruit (*Artocarpushetrophylus*) were planted. The plantation and the maintenance of Eco System of Modern village will be taken care of by the NSS Cell, NERIST in

future. A community lunch was also organized. This was followed by the interaction of the student volunteers with the villagers.

List of NSS Committee

1. Mr. M. Deben Singh	Asstt. Prof. (EE)
2. Dr. Awadhesh Kumar	Assoc. Prof. (FO)
3. Dr. Ajanta Kalita	Asstt. Prof. (CE)
4. Dr. K. Herachandra Singh	Asstt. Prof. (MA)
5. Dr. S. Dhiren Meitei	Asstt. Prof. (PH)
6. Dr. Akbari Jahan	Asstt. Prof. (PH)
7. Dr. Kamal Saharia	Asstt. Prof. (PH)
8. Dr. Mohammad Hassan	Asstt. Prof. (MA)
9. Ms. Piyali Das	Asstt. Prof. (EE)
10. Mr. Govind Panging	Asstt. Prof. (FO)
11. Mr. Arun Kr. Choudhury,	Asstt. Prof. (AE)
12. Mr. M. Edison Singh	Asstt. Prof. (ECE)
13. Dr. Kunal Borah	Asstt. Prof. (PH)
14. Mr. Santosh Tamang	Asstt. Prof. (ME)
15. Mr. P. Devchandra Singh	Asstt. Prof. (EE)

7.4 ESTATE OFFICE

7.4.1 A Brief Profile of the Section

The Estate Office has been established to look after day to day estate matter of the Institute, dealing with matters like land encroachment, legal matters related to land encroachments, illegal construction, liaoning with the external agencies like Deputy Commissioner Papum Pare, Deputy Commissioner, Capital Complex, Land & Revenue/Records Officers of the State, Additional Magistrate, Itanagar, EAC, Naharlagun etc. and others. The work of Estate Office also includes field visits extended to entire campus and day to day record keeping works, like house allotment and issue of furniture to quarters etc.

7.4.2 Strength of existing staff.

1. UDC	: 1 No.
2. Peon	: 1 No.
3. TS Employee	: 1 No.
4. Hand Receipt Employee	: 1 No.

7.4.3 Existing Institute quarters at present:

Sl. No.	Type of Qtrs./Accommodation	Total Nos. of Qtrs./ Accommodation	Remarks
01	Type -I	132 numbers	Double Storey
02	Type -II	124	Double Storey
03	Type -III	122	Single/Double Storey
04	Type -IV	98	Single/Double Storey
05	Type -V	20	Single/Double Storey
06	BTA	09	Single Storey
07	Type -VI	01	Director`s Banglow

7.5 EDUCATIONAL TECHNOLOGY CELL

7.5.1. A Brief Profile of the Section

The ET cell has been established as a project sponsored by the MHRD, Govt. of India with an objective to increase the effectiveness of teaching-learning process with the help of modern audio-visual equipment and Information and Communication Technology(ICT). Presently, the cell mainly manages and maintains the internet connectivity to the Institute, Local Area Network(LAN), Wi-Fi LAN, and Server Firm, and different Services. The Cell consists of processing laboratory, seminar room, and board room that are well equipped with the state of art audio-visual equipment. These are used for seminars, conferences, workshops and special lectures by faculty members and professionals from institutions and industries. ET Cell conducts different online interviews for students' recruitments as well as computerised recruitments for different organizations.

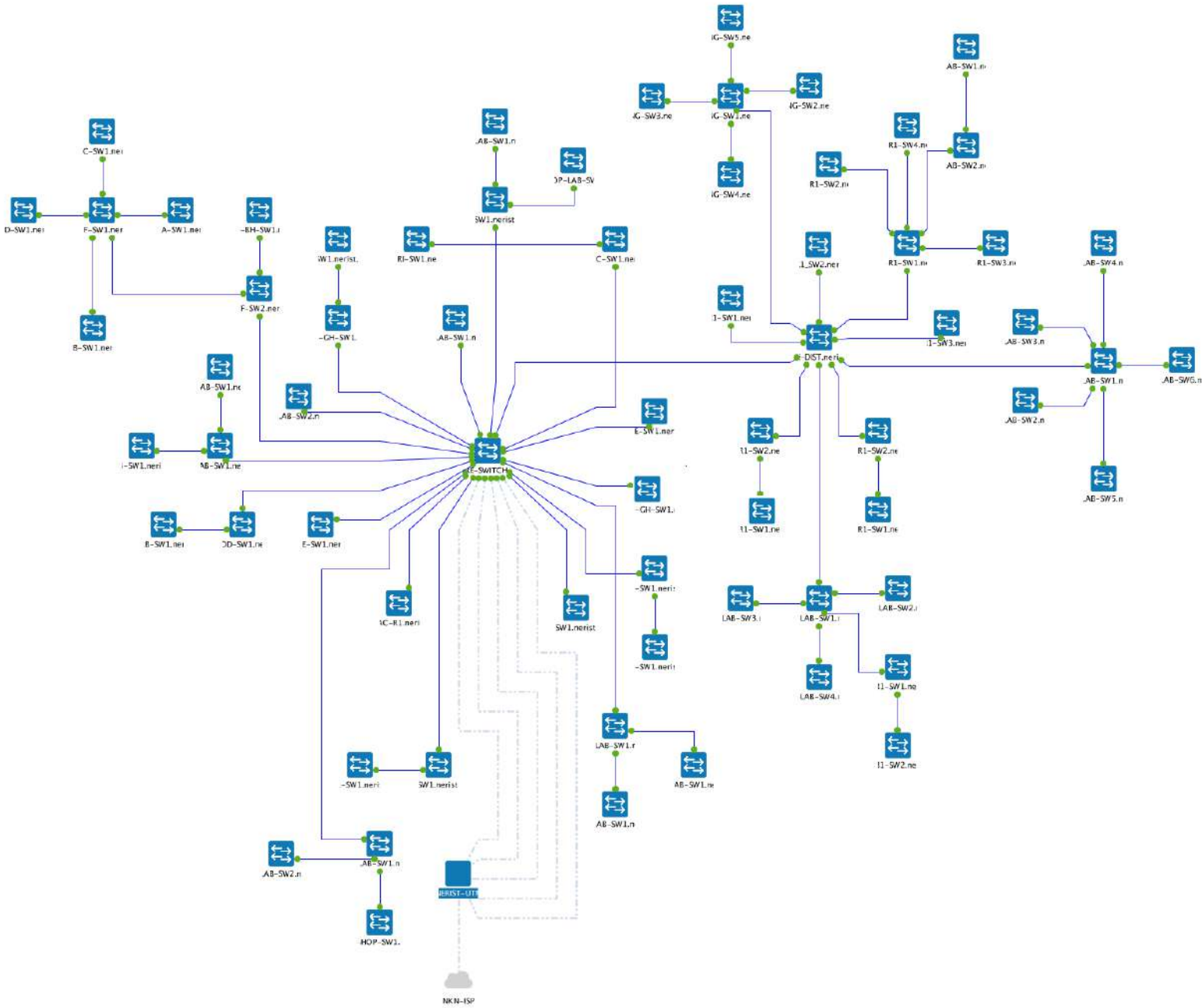
7.5.2 ICT Services

The major ICT Services are facilitating by ET Cell are as follows:

1. Managing/maintaining the 1Gbps Internet Connectivity to the Institute provided by NKN ISP(Internet Service Provider). Also a 100 Mbps Internet Link from PGCIL is established to provide failover of NKN Link.

2. Provides LAN connectivity to all the 12 academic departments/centers, 9 hostels, offices, and the schools in the campus.
3. Wi-fi LAN connectivity to hostels and residential areas.
4. E-mail services to students, research scholars, faculty members and staff.
5. Locally hosting and maintaining the Institute web server.
6. ET Cell also houses a number high end Servers that facilitates number of services such as Hyper-V Virtual Platform, DNS, DHCP, Active Directory, RADIOUS, Microsoft SCCM, etc.
7. ET Cell provides IT Infrastructure Services for Online Registration and Admission process.

7.5.3 Network Connectivity Skeleton of NERIST Campus



7.5.4 Network Devices/Servers

Network Devices			
Sl. No	Item	Quantity	Objective
1	UTM/Firewall(Cyberoam 2500iNG)	1	To provide userbase Internet access, traffic filtering and restricting.
2	Core Swicth (Cisco 6509)	1	All NERIST Campus Network Segments are Interconnected through Core Switch.
3	Distribution switch (Cisco 4503)	1	All LANs of Degree Blocks are connected to Distribution Switch.
4	Access Switch	69	All Departments/Sections/Hostels users are connected through Access Switches.
5	Wireless Controller (Ruckus ZD3000)	2	Manage policies, rules and configurations of all Access Points.
6	Access Points (Ruckus ZF 7782)	30	To provide Wireless connectivity to Residential Area.
7	SAN Switch(Brocad)	1	To provide connectivity between storage and Servers over fiber channel.
Servers and Storage:			
8	Dell PowerVault R430 Rack Server	6	Using for Automation (App Server1, App Server2, DB Server, Load Balance Server) and Hyper-V node.
9	Storage Power Vault MD 3000	1	Using for Automation
10	IBM SystemX Rack Server	3	Using for Hyper-V node, Microsoft SCCM, and AD Sever.
11	IBM and HCL Tower Server	3	Using for Public DNS, Web Server, and Mail Server.

7.5.5 Status Report Regarding Activities

1. Renewed the Microsoft Campus Agreement Licences for 300 FTE users for One Year.
2. Established a 100 Mbps ISP link from PGCIL, which facilitates backup of primary NKN ISP Link.
3. Conducted different online campus interviews for students.
4. Conducted different computerised recruitment process for different govt. organisations using infrastructure of ACCF.
5. Provided IT infrastructure support during online registration, counselling, and student admission process for NEE, PG and Ph.D.

7.6 GYMKHANA

7.6.1 Activities of Gymkhana, NERIST:

International Yoga Day 2017 was organized on 21st June 2017 in the NERIST Auditorium. More than 450 personnel including faculty, officers, non-teaching staff and students of NERIST and nearby schools actively participated in the programme. Apart from Yoga Session, quiz and essay competition on yoga was also organized.

RACAF 2017 was organized during 30th October to 4th November 2017 with due participation by more than 1200 students of NERIST and students from nearby institutions including Rajiv Gandhi University, National Institute of Technology, Arunachal Pradesh etc.

Sports week under SYNERGY 2018 was organized from 27th January 2018 to 30th January 2018, where students of NERIST actively participated in all sports activities.

SECTION - 8**FUND AND AUDIT**

The Institute is a Central Scheme of the Ministry of Human Resource Development and is fully funded by the Government of India through the MHRD.

At the beginning of the financial year 2017-18, the institute had an negative balance of (-) 345.30 lakhs. During the year, the Institute received 13001.61 lakhs as grant and 349.88 as IRG. The unspent balance as on 31.03.2018 is 328.93 lakhs which will be adjusted towards the grant in aid payable during the next financial year 2018-19. Brief breakup of fund received and expenditure incurred is given as under: -

` in lakhs

Details of Account	HEAD			Grand Total (2+3+4)
	OH-31 (General)	OH-35 (Capital)	OH-36 (Salary)	
1	2	3	4	5
Previous Balance	96.87	17.00	(-) 459.17	(-) 345.30
Fund received during 2017-18	893.00	5826.61	6282.00	13001.61
IRG 2017-18	349.88	0.00	0.00	349.88
Expenditure incurred during 2017-18	1306.96	5847.28	5523.02	12677.26
Unspent Balance as on 31.03.2018	32.79	(-) 3.67	299.81	328.93

The details information related to the accounts of the Institute for the year 2017-18 and the audited accounts of the Institute.

ANNEXURE – I

MEMBERS OF THE NERIST SOCIETY AS ON 31ST MARCH 2018

- 1 The His Excellency, - President
The Governor of Arunachal Pradesh
Raj Bhawan, Itanagar
Arunachal Pradesh
- 2 Shri Madhu Ranjan - Member
Joint Secretary (TEL), MHRD, Govt. of India,
Deptt. of Higher Education,
Shastri Bhawan, 'C' Wing ,
New Delhi – 110 115
- 3 Smt. Darshana M. Dabral - Member
Joint Secretary & FA,
IFD, MHRD, Govt. of India,
Shastri Bhawan, 'C' Wing,
New Delhi–110 001
- 4 The Hon'ble Minister, - Member
(Higher & Technical Education)
Assam Sachibalaya,
Govt. of Assam,
Dispur, Guwahati – 781006
- 5 The Hon'ble Minister, - Member
(Higher & Technical Education),
Govt. of Mizoram,
Aizawl – 796 001
- 6 The Hon'ble Minister, - Member
(Higher & Technical Education),
Govt. of Nagaland,
Kohima – 797 001
- 7 The Hon'ble Minister, - Member
(Higher & Technical Education),
Govt. of Tripura,
Agartala – 799 001
- 8 The Hon'ble Minister, - Member
(Higher & Technical Education),
Govt. of Manipur,
Imphal – 795 001

- | | | |
|----|---|------------------------|
| 9 | The Hon'ble Minister,
(Higher & Technical Education),
Govt. of Meghalaya,
Shillong - 793 001 | - Member |
| 10 | The Hon'ble Minister,
(Higher & Technical Education, HRDD)
Govt. of Sikkim,
Gangtok - 737103 | - Member |
| 11 | The Hon'ble Minister,
(Higher & Technical Education),
Govt. of Arunachal Pradesh,
Secretariat Building
Itanagar – 791 111 | - Member |
| 12 | Dr. Neeraj Sharma,
Head (TDT),
Ministry of Science & Technology,
Department of Science & Technology,
Technology Bhawan, New Mehrauli Road,
New Delhi - 110 016 | - Member |
| 13 | Prof Anoop K Das,
Dept. of Mechanical Engineering,
IIT,Guwahati,
Guwahati-781039 | - Member |
| 14 | Shri Tarh Nachung,
P-Sector, P.O.Nirjuli
Dist.- Papum Pare
Arunachal Pradesh | - Member |
| 15 | Prof. Umesh Chandra Ray,
Chairman, BoM, NERIST,
W/2, Ashiana Nagar, Phase-I
Patna-800025, Bihar. | - Member |
| 16 | Prof. H.S. Yadav,
Director, NERIST | - Member |
| 17 | Dr. R.P. Bhattacharjee
Registrar, NERIST | - Non-Member Secretary |

ANNEXURE – II

MEMBERS OF THE NERIST BOARD OF MANAGEMENT AS ON 31ST MARCH, 2018

- 1 Prof. Umesh Chandra Ray - Chairman
Chairman, BoM, NERIST,
W/2 Ashiana Nagar, Phase-I,
Patna – 800 025, Bihar
- 2 The Joint Secretary & FA, - Member
IFD, MHRD (Govt. of India),
Shastri Bhawan, `C` Wing,
New Delhi-110 115
- 3 The Joint Secretary (DL & Admin), - Member
MHRD, Govt. of India,
Deptt. of Higher Education,
Shastri Bhawan, `C` Wing ,
New Delhi – 110 115
- 4 The Commissioner & Secretary, - Member
Higher & Technical Education,
New Secretariat Complex, Room No. 402,
Govt. of Mizoram,
Khatla, Aizawl.-796 001
- 5 The Secretary, - Member
Higher & Technical Education,
Govt. of Sikkim,
Gangtok (Sikkim)-737103
- 6 The Commissioner & Secretary, - Member
Higher & Technical. Education,
Govt. of Meghalaya,
Shillong-793001, Meghalaya
- 7 The Commissioner / Secretary, - Member
(Technical Education),
Govt. of Nagaland,
Kohima-797 001, Nagaland
- 8 The Commissioner & Secretary, - Member
(Higher & Technical Education),
Govt. of Manipur,
Imphal-795 001, Manipur

- 9 The Secretary,
Technical Higher Education,
Govt. of Tripura,
Agartala-799 001, Tripura - Member
- 10 Prof. Tamo Mibang,
Vice Chancellor,
Rajiv Gandhi University,
Rono Hills, Doimukh 791112 - Member
- 11 The Commissioner and Secretary,
Govt. of Assam,
Higher & Technical Education,
CM Block, 1st Floor, Dispur,
Guwahati – 781 005, Assam - Member
- 12 The Commissioner & Secretary,
Technical & Higher Education,
Govt. of Arunachal Pradesh,
ITANAGAR: 791 111,
Arunachal Pradesh - Member
- 13 Shri Lambert V. Hynniewta,
Sr. Manager (Consumer Sales)
India Oil-AOD,
Guwahati - 781020 - Member
- 14 Prof. Samarendra Dandapat,
Department of EEE,
Indian Institute of Technology,
Guwahati - 781 039 - Member
- 15 Prof. R.K. Prasad,
Dean (P&D),
NERIST, Nirjuli - Member
- 16 Prof. P. Parida,
Dean (Acad),
NERIST, Nirjuli. - Member
- 17 Prof. K.N. Dewangan,
Dean (Admin),
NERIST, Nirjuli - Member
- 18 Prof. H.S. Yadav,
Professor, Deptt of Chemistry, - Member

NERIST, Nirjuli

- | | | |
|----|---|------------------------|
| 19 | Shri S.K. Sahu,
Associate Professor,
Department of Civil Engineering,
NERIST, Nirjuli – 791 109,
Arunachal Pradesh | - Member |
| 20 | Shri M. Deben Singh,
Assistant Professor,
Department of Electrical Engineering,
NERIST, Nirjuli – 791109.
Arunachal Pradesh | - Member |
| 21 | Prof. H.S. Yadav,
Director, NERIST | - Member |
| 22 | Dr.R.P.Bhattacharjee,
Registrar, NERIST | - Non-member Secretary |

ANNEXURE – III

MEMBERS OF NERIST FINANCE COMMITTEE AS ON 31ST MARCH, 2018

- | | | | |
|---|--|---|-------------------------------------|
| 1 | Prof. Umesh Chandra Ray,
Chairman, BoM, NERIST | - | Chairman |
| 2 | Secretary to H.E. the Governor of Arunachal Pradesh,
Itanagar | - | Member |
| 3 | The Vice Chancellor,
Rajiv Gandhi University,
Doimukh, Arunachal Pradesh | - | Member |
| 4 | The Commissioner (Education),
Govt. of AP., Itanagar. | - | Member |
| 5 | Additional Secretary & FA,
MHRD, Govt. of India,
New Delhi | - | Member |
| 6 | Joint Secretary (TEL),
MHRD, Govt. of India,
New Delhi | - | Member |
| 7 | Prof. H.S. Yadav,
Director, NERIST | - | Member |
| 8 | Dr. R.P. Bhattacharjee,
Registrar, NERIST | - | Member |
| 9 | Dy. Registrar (Fin),
NERIST | - | Ex-officio Non-
Member Secretary |

ANNEXURE – IV

MEMBERS OF ACADEMIC COUNCIL AS ON 31ST MARCH, 2018

1	Prof. H.S. Yadav, Director, NERIST	- Chairman
2	Prof. P. Parida, Dean (Academic)	- Member
3	Prof. R.K. Prasad, Dean (Planning & Development)	- Member
4	Prof. Saibal Chatterjee, Dean (Students Affairs)	- Member
5	Prof. K.N. Dewangan, Dean (Administration)	- Member
6	Prof. N.S. Raghuwanshi, Deptt. of Agril. and Food Engg., IIT, Kharagpur	- Member
7	Prof. Sankar Chandra Deka, Deptt. of Food Engg & Tech., Tezpur University, Tezpur	- Member
8	Prof. D.N. Das, Dean, Faculty of Life Science, Rajiv Gandhi University, Doimukh (Itanagar)	- Member
9	Prof. Dilip Kumar Saikia, Deptt. of Computer Science, Tezpur University, Tezpur	- Member
10	Prof. B.P. Mishra, Department of Environment Science, Mizoram University, Aizwal, Mizoram	- Member
11	Prof. Arbind Kumar Singh, Deptt. of Civil Engg, IIT, Guwahati	- Member
12	Mr. Talo Potom, ADM cum CEO, Govt. of A.P., Itanagar	- Member

13	Prof. P.P. Dabral, Deptt. of Agri. Engg. (on lien)	- Member
14	Prof. K.N. Dewangan, Deptt. of Agri. Engg.	- Member
15	Prof. S.K. Shrivastava, Deptt. of Agri. Engg.	- Member
16	Prof. S.K. Singh, Deptt. of Civil Engg.	- Member
17	Prof. R.K. Prasad, Deptt. of Civil Engg.	- Member
18	Prof. S. Mishra, Deptt. of Civil Engg.	- Member
19	Prof. S. Baishya, Deptt. of Civil Engg.	- Member
20	Prof. Md. A. Hussain, Deptt. of Electronics & Comm. Engg.	- Member
21	Prof. Saibal Chatterjee, Deptt. of Electrical Engg.	- Member
22	Prof. O.P. Roy, Deptt. of Electrical Engg.	- Member
23	Prof. Sarsing Gao, Deptt.of Electrical Engg.	- Member
24	Prof. R.K. Mehta, Deptt. of Electrical Engg.	- Member
25	Prof. S.K. Bhagat, Deptt. of Electrical Engg.	- Member
26	Prof. A.K. Singh, Deptt. of Electrical Engg.	- Member
27	Prof. M. Muralidhar, Deptt. of Mechanical Engg.	- Member
28	Prof. P. Lingfa,	- Member

	Deptt. of Mechanical Engg.	
29	Prof. M. Chandrasekaran, Deptt. of Mechanical Engg.	- Member
30	Prof. A. Giri, Deptt. of Mechanical Engg.	- Member
31	Prof. S. Mahto, Deptt. of Mechanical Engg.	- Member
32	Prof. P.K. Tripathy, Deptt. of Chemistry	- Member
33	Prof. M.F. Hussain, Deptt. of Chemistry	- Member
34	Prof. N. Deb, Deptt. of Chemistry	- Member
35	Prof. A.K. Gupta, Deptt. of Chemistry	- Member
36	Prof. T. Karlo, Deptt. of Physics	- Member
37	Prof. L.K. Arora, Deptt. of Mathematics	- Member
38	Prof. B.K. Singh, Deptt. of Mathematics	- Member
39	Prof. R.M.Pant, (On lien) Dept. of Humanities & Social Science	- Member
40	Prof. B.D. Nayak, Deptt. of Humanities & Social Science	- Member
41	Prof. P. Parida, Deptt. of Humanities & Social Science	- Member
42	Prof. Binay Singh, Deptt. of Forestry	- Member
43	Prof. C.L. Sharma, Deptt. of Forestry	- Member

44	Prof. (Mrs.) M. Sharma, Deptt. of Forestry	-	Member
45	Prof. (Mrs.) K. Shrivastava, Deptt. of Forestry	-	Member
46	Prof. S.K. Shrivastava, HoD (Agricultural. Engg.)	-	Member
47	Prof. S. Mishra, HoD (Civil Engg.)	-	Member
48	Dr. M. Kathing, HoD (Computer Science and Engg.)	-	Member
49	Dr. A.D. Singh, HoD(Electronics and Communication Engg.)	-	Member
50	Prof. S. Gao, HoD (Electrical Engg.)	-	Member
51	Prof. M. Chandrasekarn HoD (Mechanical Engg.)	-	Member
52	Prof. T. Karlo, HoD (Physics)	-	Member
53	Prof. A.K. Gupta, HoD (Chemistry)	-	Member
54	Prof. L.K. Arora, HoD (Mathematics)	-	Member
55	Prof. (Mrs.) M.B. Sharma, HoD (Forestry)	-	Member
56	Mr. Ranendra Prasad, HoD (Humanities and Social Sciences)	-	Member
57	Dr. M. Mall, HoC (Management Studies)	-	Member
58	Prof. S.K. Shrivastava, HoC (CATARD)	-	Member
59	Dr. (Ms.) S. Sinha,	-	Member

	Associate Prof., Deptt. of HSS	
60	Mr. Ranendra Prasad, Associate Prof., Deptt. of HSS	- Member
61	Dr. S. Samanta, Associate Prof., Deptt. of ME	- Member
62	Ms. Y.B. Devi, Assistant Prof., Deptt. of CE	- Member
63	Mr. M.D. Singh, Assistant Prof., Deptt. of EE	- Member
64	Dr. J. Bora, Assistant Prof., Deptt. of ECE	- Member
65	Controller of Examinations	- Invitee
66	Dr. R.P. Bhattacharjee, Registrar	- Non Member Secretary

ANNEXURE – V

MEMBERS OF BUILDING AND WORKS COMMITTEE AS ON 31ST MARCH, 2018

1	Director, NERIST	-	Chairman
2	Secretary, Education, Govt. of A.P	-	Member
3	Chief Engineer (WZ), APPWD, Govt. of A.P	-	Member
4	Dean (P&D), NERIST	-	Member
5	HoD (Civil Engg.), NERIST	-	Member
6	Sr.Architect, PWD, Govt. of A.P	-	Member
7	HoD (EE), NERIST	-	Member
8	Deputy Registrar (Fin), NERIST	-	Member
9	Registrar, NERIST	-	Member
10	Executive Engineer (Civil), NERIST	-	Non Member Secretary

ANNEXURE – VI

INSTITUTE ADMINISTRATION AS ON 31ST MARCH, 2018

INSTITUTE ADMINISTRATION

1	Director	-	Prof. H.S. Yadav
2	Deans:		
	Administration	-	Prof. K.N. Dewangan
	Academic	-	Prof. P.R. Parida
	Student's Affairs	-	Prof. Saibal Chatterjee
	Planning & Development	-	Prof. P.K. Prasad
3	Group-A Officers:		
	Registrar	-	Dr. R.P. Bhattacharjee
	Deputy Registrars:		
	Administration	-	Shri M.K. Camder
	Finance	-	Shri M.K. Camder
	Assistant Registrars:		
	Academic	-	Dr. K.K. Rajesh
	Examination Cell	-	Shri Gautam Kumar Roy
	Store & Purchase	-	Shri Toko Shama
	Hostel Management Council	-	Shri Animesh Basu
	Medical Officers:	-	Dr. P. Camdir Tok
		-	Dr. Sushmita P. Taggu
		-	Dr. Gyamar Inja
	Assistant Librarian	-	Shri D.M. Sahu
	Assistant Workshop Superintendent	-	Shri Harshendra Misra
	Network Administrator	-	Shri Dewan Rashidul Alam
	Executive Engineer	-	Shri Toko Lento (in-charge)
4	Group-B Officers:		
	Sports Officer	-	Shri B.S. Raja
	Security Officer	-	Shri Toko Shama (in-charge)
	Section Officers		
	Establishment	-	Shri Doge Kamduk
	Store & Purchase	-	Shri Rabindra Deb
	Finance	-	Shri P. Goswami
	Examination Cell	-	Shri Srijit Chattopadhyay
	Academic	-	Shri Radhe Tadu
	Hostel Management Council	-	Smti. Pratibha Saikia
5	Chief Vigilance Officer	-	Prof. B.K. Singh
6	Estate Officer	-	Shri Toko Shama
7	Liaison Officer (SC/ST)	-	Shri Gabinda Pangging

8	Hindi Officer	-	Shri Ratan Singh
9	Head of the Departments:		
	Agricultural Engineering	-	Prof. S.K. Shrivastava
	Civil Engineering	-	Prof. S. Misra
	Computer Science & Engineering	-	Mrs. M. Kathing
	Electrical Engineering	-	Prof. S.K. Bhagat
	Electronics & Communication Engineering	-	Dr. A. Dinamani Singh
	Mechanical Engineering	-	Prof. M. Chandrasekharan
	Forestry	-	Prof.(Mrs.) M.B. Sharma
	Physics	-	Prof. Tado Karlo
	Chemistry	-	Prof. Nidhuban Deb
	Mathematics	-	Prof.L.K Arora
	Humanities & Social Sciences	-	Shri R. Prasad
	Centre for Management Studies	-	Dr. M. Mall
10	Head of Centre (CATRD)	-	Dr.S.K. Shrivastava
11	Chairman:		
	NEE Committee	-	Dr. O.P. Tripathi
	Hostel Management Council	-	Dr. Sandip Singh
	Centre for Time Table Committee	-	Prof. A.K. Singh
	Gymkhana	-	Dr. Sandip Singh
	Telecom	-	Dr. Rajesh Kumar
	Transport	-	Prof. S. Mahto
	Library	-	Prof. K.N. Dewangan
	House Allotment Committee	-	Prof. C.L. Sharma
	Security	-	Prof. P. Lingfa
12	Training & Placement in-charge	-	Dr. Arnab Bandopadhyay
13	ET Cell in-charge	-	Shri Amar Taggu
14	Co-ordinators:		
	NEQIP	-	Prof. S. Mahto
	SRIC	-	Dr. Arvind Pandey
	NSS	-	Dr. A. Dinamani Singh
	CRF	-	Dr. Jagannath Bhuyan
	ACCF	-	Shri Amar Tagu
	CEP	-	Dr. Arvind Pandey
15	Controller of Examination	-	Prof. Sarsing Gao
16	Secretary NEE Committee	-	Dr. K.K. Rajesh
17	NCC Officer	-	Mr. Anubhab Pal

ANNEXURE - VII

MEMBERS OF THE LIBRARY COMMITTEE AS ON 31ST MARCH, 2018

1	Prof. K.N. Dewangn (AE)	-	Chairman
2	Prof. Mudu Puming (CE)	-	Member
3	Prof. S.L. Bharati (CY)	-	Member
4	Prof. K. Saharia (PH)	-	Member
5	Prof. S.K. Bhagat (EE)	-	Member
6	Prof. S.M. Khan (ME)	-	Member
7	Prof. K.H. Singh (MA)	-	Member
8	Prof. Raju Borthakur (HSS)	-	Member
9	Prof. S. Choudhury (CMS)	-	Member
10	Prof. P.K. Pandey (AE)	-	Member
11	Prof. Awadesh Kumar (FO)	-	Member
12	Prof. R.K. Mangang (ECE)	-	Member
13	Prof. M. Marjit Singh (CSE)	-	Member
14	Sri D.M. Sahu, Assistant Librarian	-	Member Secretary

ANNEXURE – VIII

MEMBERS OF NERIST ENTRANCE EXAMINATION COMMITTEE AS ON 31.03.2017

- | | | | |
|---|-----------------------|---|------------------|
| 1 | Dr.O.P.Tripathy (FO) | - | Chairman |
| 2 | Dr.S. Samanta (ME) | - | Member |
| 3 | Dr.M.M.Dixit (MA) | - | Member |
| 4 | Dr. Anil Gautam (ECE) | - | Member |
| 5 | Dr.K.K.Rajesh (Acad) | - | Member Secretary |

ANNEXURE – IX

MEMBERS OF HOSTEL MANAGEMENT COUNCIL AS ON 31ST MARCH, 2018**Dean (Students Affairs)**

Dr. Saibal Chatterjee

Chairman/Chief Warden

Dr. Sandeep Singh

Assistant Registrar

Mr. Animesh Basu

Section Officer

Mrs. Pratibha Saikia

Office Staff

1. Mrs. A. Adhikari, Assistant
2. Mr. Thomas Mathew, Assistant, Hostel Block H (Part time in Office of HMC)
3. Mr. B. Patir, LDC

Sl. No.	Hostel Block	Hostel Capacity	Mess Manager-cum-Caretakers/Assistants	Wardens
1	A	124	Mr. P. Barman	Dr. Kh. Hera Ch. Singh
2	B	124	Mr. Dorjee Shongmu	Dr. M. Hassan
3	C	124	Mr. B. Patir	Mr. A. K. Chowdhury
4	D	124		Mr. S. Tamang
5	E	250	Mr. A. Gogoi	Mr. A. K. Gautam and Dr. K. Borah
6	F	250	Mr. E. N. V. Nair	Mr. Akhilesh Sharma
7	G	250	Mrs. M. Roy Choudhury	Mrs. Piyali Das
8	H	250	Mr. T. Mathew	Dr. M. M. Mal
9	Subansiri	250	Mrs. N. Siyum	Dr. (Mrs.) S. L. Bharati

ANNEXURE – X

NERIST ENTRANCE EXAMINATION

REPORT ON ADMISSION DURING 2017-2018 SESSION THROUGH NERIST
ENTRANCE EXAMINATION (NEE-I, II & III)

1. Admission notice :

The admission notification was published in the following newspapers:

Sl.	Name of News Paper
1	Arunachal Times, Itanagar
2	Assam Tribune, Guwahati
3	All editions of Hindustan Times viz : (Education Horizon)
4	Arunachal Front
5	Shillong Times
6	Sikkim Express
7	Nagaland Post
8	Tripura Times
9	Mizoram Post
10	Sangai Express, Imphal

Date of Examination: 22. 04. 2017 - NEE – II & III
23. 04. 2017 - NEE - I

Candidates Appeared in NEE-2017 (State, Category & Module wise)

Name of state	Module						Total
	NEE-I		NEE-II		NEE-III		
	Male	Female	Male	Female	Male	Female	
Arunachal Pradesh	1617	1231	1055	1095	136	45	5179
Assam	404	183	470	224	128	72	1481
Manipur	159	66	244	213	10	5	697
Meghalaya	79	31	121	153	26	29	439
Mizoram	25	06	22	8	10	1	72
Nagaland	84	36	242	208	31	15	616
Sikkim	06	02	14	11	14	8	55
Tripura	245	118	63	27	63	33	549
All India	112	41	61	26	22	3	265
PD	3	1	7	1	2	0	14
Total	2734	1715	2299	1966	442	211	9367

STATE & BRANCH WISE DETAILS OF CANDIDATES APPEARED IN NEE-III, 2017

Name of State	AE		CE		ME		ECE		CSE		EE	
	M	F	M	F	M	F	M	F	M	F	M	F
Arunachal Pradesh	3	0	104	37	9	0	2	0	7	4	11	4
Assam	6	5	69	37	16	1	9	5	14	14	15	9
Manipur	0	0	7	0	7	4	0	3	2	2	1	0
Meghalaya	1	0	7	11	0	0	1	4	8	5	2	5
Mizoram	0	0	3	1	2	0	1	0	2	0	2	0
Nagaland	0	0	19	19	7	1	1	0	0	0	4	5
Sikkim	0	1	7	3	0	0	1	0	2	3	4	1
Tripura	1	0	20	9	16	0	10	4	3	13	13	7
All India	0	0	9	1	4	0	2	1	0	0	7	1
PD	0	0	2	0	0	0	0	0	0	0	0	0
Total	11	6	247	118	61	6	27	17	38	41	59	32

RESULT ANNOUNCEMENT

- 1) Result approved on : 08-05-2017
 2) Declaration on notice boards : 08-05-2017
 3) Result given in NERIST website : 08-05-2017

Candidates selected (state and module wise): 2017

Name of state & category	MODULE				Total
	NEE-I	NEE-II		NEE-III	
		Technology	Forestry		
PRC	20	8	3	7	38
PHYSICAL HANDICAPPED					
Arunachal Pradesh	20	8	3	7	38
Assam	20	8	3	6	37
Manipur	20	8	3	3	34
Meghalaya	20	8	3	6	37
Mizoram	12	8	3	6	29
Nagaland	20	8	3	6	37
Sikkim	4	8	3	6	21
Tripura	20	8	3	7	38
All India	20	8	3	7	38
Floating				2	02
Total	176	80	30	63	349

Candidates wait-listed (State & module-wise) 2017

Name of state & category	MODULE				
	NEE-I	NEE-II		NEE-III	Total
		Technology	Forestry		
PRC	20	8	3	5	36
PHYSICAL HANDICAPPED					
Arunachal Pradesh	20+20	8+8	3+3	7+7	76
Assam	20	8	3	6	37
Manipur	20	8	3	2	33
Meghalaya	20	8	3	5	36
Mizoram	3	3	2	2	10
Nagaland	20	8	3	5	36
Sikkim	1	4	2	3	10
Tripura	20	8	3	6	37
All India	20	8	3	5	36
Floating	0	0	0	2	02
Total	184	79	31	55	349

COUNSELLING SCHEDULE OF NEE-2017

1	10.07.2017	Selected List of NEE – I (Base)(Excluding Arunachal Pradesh)
2	11.07.2017	Waiting List of NEE – I (Excluding Arunachal Pradesh)
3	12.07.2017	Selected & Waiting List of NEE – I (for the candidates of Arunachal Pradesh state Quota for Base Module)
4	13.07.2017	Selected & Waiting List of NEE –II, (Excluding Arunachal Pradesh)
5	14.07.2017	Selected & Waiting List of NEE-III, (Excluding Arunachal Pradesh)
6	15.07.2017	Selected & Waiting List of NEE – II & III (for the candidates of Arunachal Pradesh state Quota)

Candidates admitted in the year 2017 (State and module wise):

Name of state & category	MODULE				
	NEE-I	NEE-II		NEE-III	Total
		Technology	Forestry		
PRC	09	4	0	8	21
PHYSICAL HANDICAPPED	3	0	1	1	05
Arunachal pradesh	15	5	0	6	26
Assam	17	4	3	5	29

Manipur	19	7	1	4	31
Meghalaya	20	8	1	5	34
Mizoram	10	4	2	3	19
Nagaland	16	5	3	6	30
Sikkim	09	4	3	5	21
Tripura	14	4	2	5	25
All India	20	7	1	5	33
Total	152	52	17	53	274

CANDIDATES ADMITTED IN BASE MODULE (NEE-I) AS PER COUNSELLING REPORT – 2017 (Branch wise):

DISCIPLINE	PD	PRC	AP	AS	MN	MG	MZ	NL	SK	TR	AI	TOTAL
AE	0	0	3	1	4	4	0	4	0	0	4	20
CE	1	3	4	4	4	4	4	4	4	4	4	40
EC	0	0	1	4	4	4	0	2	0	2	4	21
EE	1	3	4	4	4	4	4	4	4	4	4	40
ME	1	3	3	4	3	4	2	2	1	4	4	31
TOTAL	3	9	15	17	19	20	10	16	9	14	20	152

CANDIDATES ADMITTED IN DIPLOMA MODULE (NEE-II) AS PER COUNSELLING REPORT – 2017 (Branch wise):

DISCIPLINE	PD	PRC	AP	AS	MN	MG	MZ	NL	SK	TR	AI	TOTAL
AE	0	1	1	1	1	1	1	1	0	0	0	7
CE	0	1	1	1	1	1	1	1	1	1	1	10
CS	0	0	1	0	2	3	0	1	2	1	3	13
EC	0	0	0	0	1	1	0	0	0	0	1	3
EE	0	1	1	1	1	1	1	1	1	1	1	10
ME	0	1	1	1	1	1	1	1	0	1	1	9
FO	1	0	0	3	1	1	2	3	3	2	1	17
TOTAL	1	4	5	7	8	9	6	8	7	6	8	69

CANDIDATES ADMITTED IN DEGREE MODULE (NEE-III) AS PER COUNSELING REPORT – 2017 (Branch wise):

DISCIPLINE	PD	PRC	AP	AS	MN	MG	MZ	NL	SK	TR	AI	TOTAL
AE	0	1	0	0	0	0	0	0	0	0	0	1
CE	1	2	1	2	1	1	1	1	1	1	1	13
CS	0	1	1	0	0	1	0	1	2	0	1	7
EC	0	1	1	1	1	1	0	1	0	2	1	9
EE	0	1	1	1	1	1	1	2	1	2	1	12
ME	0	2	2	1	1	1	1	1	1	0	1	11

TOTAL	1	8	6	5	4	5	3	6	5	5	5	53
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In-service candidate - 04

SUMMARY OF NEE-2017

POSITION	NEE-I	NEE-II	NEE-III	Total
No. of candidates appeared	4449	4265	653	9367
No. of candidates selected (Technology)	176	80	63	319
No. of candidates selected (Forestry)	0	30	0	30
No. of candidates waitlisted (Technology)	184	79	55	318
No. of candidates waitlisted (Forestry)	0	31	0	31

HIGHLIGHTS OF NEE-2017

Sl.No.	Events	2016	2017	Remarks
1	No. of candidates appeared	10047	9367	Decreased by 680 Nos.
2	No. of candidates taken admission through counseling	NEE-I 161 NEE-II 70 NEE-III 57 288	NEE-I 152 NEE-II 69 NEE-III 53 274	Decreased by 14 Nos.
3	The most preferred branch	CE with 62	CE with 63	Increased by 01 No.
4	Less preferred branch	CS with 23	CS with 20	Decreased by 03 No.

Adoption of online registration neonline.ac.in and OMR answer sheets has helped the NEE Cell to publish the NEE result in time as per the schedule. The Challan were made available to the applicants by the Axis Bank Branches throughout the country at major places of choice. Payment mode for application was also available to the candidates via debit cards and credit cards. For up to date information, NERIST website was used for the sell being of the applicants and general public.

Thus the total process of NEE-2017 completed successfully.

ANNEXURE – XI

LIST OF FACULTY AS ON 31ST MARCH, 2018

FORESTRY			
Sl No	Deptt. Sl.No.	Name	Post Holding
1	1	Dr.Binay Singh	Professor (CAS)
2	2	Dr.C.L.Sharma	Professor (CAS)
3	3	Dr. M.Sharma	Professor (CAS)
4	4	Dr.K.Srivastava	Professor (CAS)
5	5	Dr.S.Suresh Kr. Singh	Associate Professor
6	6	Dr. Awadhesh Kumar	Associate Professor
7	7	Dr. P.R. Gajurel	Associate Professor
8	8	Dr. O.P. Tripathi	Associate Professor
9	9	Dr. L.B. Singha	Associate Professor
10	10	Shri Gobinda Pangging	Asstt. Professor
11	11	Dr. Ashish Paul	Asstt. Professor
12	12	Dr. Madhu Kamle	Asstt. Professor
13	13	Dr. Pradeep Kumar	Asstt. Professor
AGRICULTURAL ENGINEERING			
Sl No	Deptt. Sl.No.	Name	Post Holding
14	1	Dr.P.P.Dabral	Professor
15	2	Dr.K.N.Dewangan	Professor (CAS)
16	3	Dr. S.K.Srivastava	Professor (CAS)
17	4	Shri. D.K.Shyamal	Associate Professor
18	5	Dr. Deepak Jhajharia	Associate Professor
19	6	Dr. Aditi Bhadra	Associate Professor
20	7	Dr. Arnab Bandopadhyay	Associate Professor
21	8	Dr. P.K. Pranav	Asstt. Professor

22	9	Dr. Pankaj Kr. Pandey	Asstt. Professor
23	10	Dr. Thaneswar Patel	Asstt. Professor
24	11	Shri. Ukil Singh	Asstt. Professor
25	12	Shri Arun Kr. Choudhary	Asstt. Professor
26	13	Mr. Anubhab Pal	Asstt. Professor
27	14	Shri Tage Tapang	Asstt. Professor
28	15	Mrs. Vanita Pandey	Asstt. Professor
CIVIL ENGINEERING			
Sl No	Deptt. Sl.No.	Name	Post Holding
29	1	Dr.S.K.Singh	Professor
30	2	Dr. R.K.Prasad	Professor (CAS)
31	3	Dr.S.Baishya	Professor (CAS)
32	4	Dr. S.Mishra	Professor (CAS)
33	5	Sh.S.K.Sahu	Asso. Professor
34	6	Dr. Ajay Bharati	Asso. Professor
35	7	Dr. H.P.Singh	Associate Professor (CAS)
36	8	Dr. Dipika Devi	Asso. Professor
37	9	Ms. Y. Bidyalaxmi Devi	Asstt. Professor
38	10	Ms. Mudo Puming	Asstt. Professor
39	11	Dr. Monowar Hussain	Asstt. Professor
40	12	Ms. Yamen Tamut	Asstt. Professor
41	13	Mr. Neero Gumsar Sorum	Asstt. Professor
42	14	Shri K. James Singh	Asstt. Professor
43	15	Dr. Ajanta Kalita	Asstt. Professor
44	16	Dr. Dibyendu Pal	Asstt. Professor
COMPUTER SCIENCE & ENGINEERING			
Sl No	Deptt. Sl.No.	Name	Post Holding
45	1	Dr..N.Marchang.	Asso. Professor

46	2	Ms.M.Kathing	Associate Professor (CAS)
47	3	Shri. S.J.Borah	Associate Professor (CAS)
48	4	Shri. K. Leogh	Associate Professor (CAS)
49	5	Shri. Marjit Singh	Asstt. Professor
50	6	Shri. Aswini Kr. Patra	Asstt. Professor
51	7	Shri. Manjul Saikia	Asstt. Professor
52	8	Shri. Amar Taggu	Asstt. Professor
53	9	Shri Ajit Kumar Singh Yadav	Asstt. Professor
54	10	Shri Yogendra Mohan	Asstt. Professor
55	11	Shri Pradeep Kamboj	Asstt. Professor
ELECTRICAL ENGINEERING			
Sl No	Deptt. Sl.No.	Name	Post Holding
56	1	Dr.S.Chatterjee	Professor (CAS)
57	2	Dr.R.K.Mehta	Professor (CAS)
58	3	Dr.O.P.Roy	Professor (CAS)
59	4	Dr. Sarsing Gao	Professor (CAS)
60	5	Dr.S.K.Bhagat	Professor (CAS)
61	6	Dr.A.K.Singh	Associate Professor
62	7	Shri. R. Blange	Associate Professor (CAS)
63	8	Shri. T.V.P.Singh	Associate Professor (CAS)
64	9	Dr. Adikanda Parida	Asstt. Professor
65	10	Shri Deben Singh	Asstt. Professor
66	11	Dr. Anu Kr. Das	Asstt. Professor
67	12	Shri N.L.Meitei	Asstt. Professor
68	13	Ms. Somila Hashunao	Asstt. Professor
69	14	Shri. Akhilesh Sharma	Asstt. Professor
70	15	Ms. Piyali Das	Asstt. Professor
71	16	Mr. P. Devachandra Singh	Asstt. Professor
ELECTRONICS & COMMUNICATION ENGINEERING			
Sl No	Deptt. Sl.No.	Name	Post Holding

72	1	Dr.Anwar Hussain	Professor (CAS)
73	2	Dr. Aheibam Dinamani Singh	Associate Professor
74	3	Dr. Rajesh Kumar	Associate Professor
75	4	Dr.T. Sharan	Asstt. Professor
76	5	Shri Madhusudan Misra	Asstt. Professor
77	6	Dr. Pranab Kr. Dutta	Asstt. Professor
78	7	Dr. Joyatri Bora	Asstt. Professor
79	8	Dr. Swanirbhar Majumdar	Asstt. Professor
80	9	Shri Ashok Kr. Ray	Asstt. Professor
81	10	Dr. Manish Kumar	Asstt. Professor
82	11	Mr. Rusni Kima Mangang	Asstt. Professor
83	12	Shri. Akho John Richa	Asstt. Professor
84	13	Shri. Anil Kr. Gautam	Asstt. Professor
85	14	Mr. M. Edison Singh	Asstt. Professor
MECHANICAL ENGINEERING			
Sl No	Deptt. Sl.No.	Name	Post Holding
86	1	Dr. M.Muralidhar	Professor (CAS)
87	2	Dr. Asis Giri	Professor (CAS)
88	3	Dr. Pradip Lingfa	Professor (CAS)
89	4	Dr.M.Chandrasekhran	Professor (CAS)
90	5	Dr. S. Mahto	Professor (CAS)
91	6	Dr. S. Samanta	Associate Professor
92	7	Dr. Satyam Shivam Gautom	Associate Professor
93	8	Dr. Sandeep Singh	Associate Professor (CAS)
94	9	Shri. K.K. Mondal	Asstt. Professor
95	10	Dr. M.P. Thaddues	Asstt. Professor
96	11	Shri. Maryom Dabi	Asstt. Professor
97	12	Dr. Narendra Kumar Rana	Asstt. Professor
98	13	Shri. Nabam Teyi	Asstt. Professor
99	14	Shri Santosh Kumar Tamang	Asstt. Professor
100	15	Md. S. Mujaheed Khan	Asstt. Professor
101	16	Dr. Yadaiah Nirsanmetla	Asstt. Professor
102	17	Dr. Vinod Yadav	Asstt. Professor

CHEMISTRY			
Sl No	Deptt. Sl.No.	Name	Post Holding
103	1	Dr. Mubarak Hussain	Professor
104	2	Dr. H.S. Yadav	Professor (CAS)
105	3	Dr. P.K. Tripathy	Professor (CAS)
106	4	Dr. M.F. Hussain	Professor (CAS)
107	5	Dr. K.D. Ram	Professor (CAS)
108	6	Dr. N.Deb	Professor (CAS)
109	7	Dr. A.K. Gupta	Professor (CAS)
110	8	Shri. N. Ghanashyam Singh	Asstt. Professor
111	9	Dr. Shashi Lata Bharati	Asstt. Professor
112	10	Dr. Meera Yadav	Asstt. Professor
113	11	Dr. Jagannath Bhuyan	Asstt. Professor
114	12	Dr. A. Murugan	Asstt. Professor
115	13	Dr. Nagendra Nath Yadav	Asstt. Professor
HSS			
Sl No	Deptt. Sl.No.	Name	Post Holding
116	1	Dr. B.D.Nayak	Professor (CAS)
117	2	Dr. P.Parida	Professor (CAS)
118	3	Dr.(Ms) S. Sinha	Associate Professor (CAS)
119	4	Shri. R. Prasad	Associate Professor (CAS)
120	5	Shri. Raju Barthakur	Associate Professor (CAS)
MATHEMATICS			
Sl No	Deptt. Sl.No.	Name	Post Holding
121	1	Dr. L.K. Arora	Professor (CAS)
122	2	Dr. B.K. Singh	Professor (CAS)
123	3	Dr. M.M. Dixit	Associate Professor
124	4	Shri. Jayanta Bora	Asstt. Professor
125	5	Dr. Herachandra Singh	Asstt. Professor
126	6	Dr. Pradip Debnath	Asstt. Professor
127	7	Dr. Mohammad Hassan	Asstt. Professor

128	8	Dr. Chandra Prakash Pandey	Asstt. Professor
PHYSICS			
Sl No	Deptt. Sl.No.	Name	Post Holding
129	1	Dr. P.R. Alapati	Professor (CAS)
130	2	Dr. Tado Karlo	Professor (CAS)
131	3	Dr. M.Sengupta	Associate Professor (CAS)
132	4	Dr. Arvind Pandey	Associate Professor (CAS)
133	5	Dr. (Mrs.) Th Gombi Devi	Associate Professor
134	6	Dr. Mukesh Upadhyay	Associate Professor
135	7	Dr. Rajesh Kumar Yadav	Associate Professor
136	8	Dr. Kamal Saharia	Asstt. Professor
137	9	Dr. Sanoujam Dhiren Meetei	Asstt. Professor
138	10	Dr.(Ms.) Akbari Jahan	Asstt. Professor
139	11	Dr. Kunal Borah	Asstt. Professor
CMS			
Sl No	Deptt. Sl.No.	Name	Post Holding
140	1	Dr. R. M. Pant	Professor (CAS)
141	2	Shri. Shibabrata Choudhury	Asstt. Professor
142	3	Ms. Bijoylaxmi Sarmah	Asstt. Professor
143	4	Dr. Manmohan Mall	Assistant Professor

ANNEXURE – XII

IN SEPARATE FILES