ANNUAL REPORT : DEPARTMENT OF COMMERCE GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Department of Commerce
   b. Year of establishment : 1948
2. Head of the Department : Prof. Aparajeeta Borkakoty
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/ OBC /DA	Citation index
1	Prof. P. L. Hazarika	M.Sc., M.A., M.Phil, Ph.D.	Male	Male	General	
2	Prof. Nayan Barua	M.Com., LL.B., Ph.D.	Male	Male	General	
3	Prof. H.C. Gautam	M.Com., M.A., Ph.D.	Male	Male	General	
4	Prof. Bhaskarjyoti Bora	M.Com., LL.B., Ph.D., PGDHRM	Male	Male	General	
5	Prof. Aparajeeta Borkakoty	M.Com. Ph.D.	Female	Female	General	
6	Prof. A.P. Singh	M.Com., LL.B., Ph.D.	Male	Male	General	
7	Dr. S.K. Mahapatra	M.Com., M. Phil, DBF, Ph.D	Male	Male	General	
8	Dr. Prashanta Sharma	M.Com., Ph.D.	Male	Male	General	
9	Dr. Angana Bora	M.Com	Female	Female	OBC	
1	Dr. Tilak Ch. Das	M.Com, Ph.D.	Male	Male	SC	
1	Ms. Saptadweepa Shandilya	M.Com	Female	Female	General	
1	Dr. Saurabhi Barthakur	M.Com	Female	Female	General	
1	Ms. Upasana Borpujari	M.Com	Female	Female	General	
1	Dr. Bonosree Bhuyan	M.Com	Female	Female	General	
1	Dr. Suparna Ghosh	M.Com, Ph.D.	Female	Female	General	
1	Ms. Mahuya Deb	M.Sc., MBA	Female	Female	General	
1	Mr. Siddharth Nayan Sharma	M.Com	Male	Male	General	

4. Course(s)/Programme offered :M.Com, Five Year Integrated M.Com & Ph.D.
5. Special Branches in the Department/Centre : Five Year Integrated M.Com
6. New Academic Programme initiated during the period under report : NA
7. Innovation in Curricular design : Teaching through ICT, Interactive sessions & CBCS
8. Inter disciplinary Programme started: NA
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: **NA**
10. Total number of Research Scholar working at present :

a) Full Time:	b) Part time:

Chapter-B

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st	66	32	35	67	5	3	8	2	5	7	2	3	5	12	7	19			
	2nd	66	32	38	70	6	1	7	2	3	5	2	2	4	9	13	20			
	7th	55	23	18	41	2	1	3	1	1	2	-	-	-	3	3	6			
	9th	55	20	18	38	1	1	2	1	2	3	0	1	1	4	1	5	0	1	1
M.Phil.																				
Ph.D.		18	13	5	18	-	1	1	3	1	4	-	-	-	4	-	4	-	-	-
Others																				

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
11 (M.Com) 06 (Integrated M.Com)	132 (M.Com) 275 (Integrated M.Com)	4 4

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:12 (M.Com) **1:45 (Integrated M.Com)**	4:1 (M.Com) 2:1 (Integrated M.Com)

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Ms. Chayanika Sarma	*Development of Commercial Banking in North East India: A Critical Review of Post-Reform Period*	Dr. Prashanta Sharma
Ms. Jaya Choudhury	*A Study on Commercial Viability of Traditional Assamese Jewellery Units*	Dr. Amal Kumar Agarwala
Ms. Karabi Goswami	*A study on Consumer Behaviour towards Life Insurance Products*	Prof. Sujit Sikidar
Mr. Phatik Chandra Kalita	*Performance of Training Agencies in Rural Entrepreneurship Development: A study in Bongaigaon District of Assam*	Prof. Bhaskarjyoti Bora
Mr. Manoj Kumar Hazarika	*A study on Home Based Enterprises (HBEs) in Assam with special reference to Sonitpur District*	Dr. Balin Hazarika
Ms. Saurabhi Borthakur	*A Study on Government Accounting in India with Special Reference to Receipts and Disbursements of the Union Government*	Prof. Sujit Sikidar

Mr. Kishore Krishna Das	*Bank Lending on Priority Sector – A case study of Nagaon District*	Prof. Sujit Sikidar
Mr. Navaraj Lamshal	*Farm Accounting Practices: A study on Small Tea Gardens in Assam*	Prof. H.C. Gautam
Ms. Nabasmita Bordoloi	*Corporate Social Responsibility of Select Commercial Banks of India*	Dr. Kalyan Mukherjee
Ms. Jinti Sharma	*Role of Human Resource Development Agencies in Capacity Building of Micro Enterprises: A Study on Select Agencies of Assam*	Dr. Amal Kumar Agarwala
Mr. Nilanjan Bhattacharjee	*Financial Inclusion of Urban Poor. A Study of Select Urban Slum Areas in Assam*	Dr. Kalyan Mukherjee
Ms. Chanadana Kashyap	*Quality of Work Life of Bank Employees: A Study on Nalbari District of Assam*	Dr. Ashima Sharma Borah
Ms. Mallika Das	*A Study on Operational Performance of Assam Industrial Development Corporation (AIDC) and Assam Financial Corporation (AFC)*	Dr. Prashanta Sharma
Ms. Bonosree Bhuyan	*A Study on the Sustainability of Micro, Small and Medium Enterprises (MSMEs) in Kamrup and Kamrup Metro Districts of Assam*	Prof. H.C. Gautam
Ms. Tanima Tarafdar	*A study on Corporate Social Responsibility of Select Business Enterprises*	Dr. Kalyan Mukherjee
Ms. Parinita Saikia	*Role of Micro Enterprises in Economic Development of Assam with special reference to Kamrup District*	Dr. Balin Hazarika
Mr. Joyjit Sanyal	*Labour Welfare and Social Security Measures- A study over selected Central Public Sector Enterprises (CPSEs) in Assam*	Prof. Sujit Sikidar
Ms. Bidhi Kashyap	*Distribution Strategies for Select Consumer Goods in Rural Assam*	Dr. Ashima Sharma Borah
Ms. Pranami Sharma	*Impact of Branding on the Buying Behaviour of Adolescents in Assam*	Prof. Amrit Pal Singh

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
2	4	5	-	-

16. Important students' activities and achievements and awards during the period (Please state briefly)

17.Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1.	Dr. Prashanta Sharma	Rural Development: opportunities and Challenges	09.10.2018	NABARD
2.	Dr. Prashanta Sharma	FDP	02nd – 08th January, 2019	Dept. of Commerce, GU.

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
Prof. Bhaskarjyoti Bora	Uniglobe College of Management,(Pokhra Uni versity),Kathmandu	Attendance of Conference as Resource Person and Guest Lecturer	March 2019

Chapter-B

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguished visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Avik Gupta	Manager, National Stock Exchange of India Ltd., Kolkata	Official
Diganta Biswa Sharma	Kahilipara, Spiritual Worker and Motivational Speaker	Resource Person
Dr. Mario B. Curotols	CEO, MBC Management Business Consultant, Switzerland	Meeting with colleagues from Commerce Department
Soumi Das	Program Leader, Piramal Foundation for Educational Leadership, Mumbai	For Gandhi Fellowship Program.
K. Sukumaram	Dean, NISM, Nvi Mumbai	Visitor to the Department
N. Hariharan	CGM, SEBI, Mumbai	Visitor to the Department
Jahnavi Phukon	National Vice President, FICCI-FLO, Director JT Group, Guwahati	Delivered Talk in the Department

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19: NA

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: Computer and Internet access is provided to teaching as well as non-teaching staff.

25.Technology up gradation in the Department/Centre during the period 2018-19: NA

26.Linkages developed with National/International/Academic/Research Bodies : NA

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops/FDP
Prof. H.C. Gautam	One (01)	
Prof. Bhaskarjyoti Bora	Four (04)	
Prof. Aparajeeta Borkakoty	One (01)	
Dr. S.K. Mahapatra	One (01)	-
Dr. Prashanta Sharma	Two (2), Organized: Two (02)	
Dr. Tilak Ch. Das	Two (2)	-
Dr. Angana Borah	Three (3)	Two (2)
Saptadweepa Shandilya	Three (3)	One (1)

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Name of the faculty	No. of Seminar	
Prof. H.C. Gautam	(i) 01, (ii) UGC Meeting attended 03 as member of LOCF Committee for Commerce (iii) Visit as Member NAAC PEER Team: 2	
Dr. Prashanta Sharma	05	
Dr. S.K. Mahapatra	03	

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course/Short Term Course Participated	Orientation Course
Dr. S.K. Mahapatra	04	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Prof. Nayan Barua	Role of SHG in the Development of Women Entrepreneurship in Baksa District of BTAD, Assam	International Journal of Management Studies, Vol.–V, Issue –3(6), July 2018 [106] , ISSN(Print) 2249-0302 ISSN (Online)2231-2528
Prof. Bhaskarjyoti Bora	Ind AS 16: Its Impact on Valuation of Tangible Assets	Indian Journal of Accounting, Vol-50, No.02 Dec, 2018
Prof. Bhaskarjyoti Bora	International Journal of Management, IT & Engineering	EVA as a Performance measurement tool in comparison to traditional measures in select Central Public Sector Undertakings in India. Vol.9 Issue 4(2), April, 2019, ISSN: 2249-0558
Dr. Angana Borah	Maritime Trade and Economic Development of North East- A new approach to analyzing the impact.	International Journal of Advance and Innovative Research, Vol-05, Issue-4 (X): Oct-Dec, 2018
Dr. Tilak Ch. Das	Royalty Payment and its Tax Implications	International Journal of Research in Management & Socio Science, Vol-6 Issue (1) April 2018, ISSN 23220899,

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications
Prof. A.P. Singh	Recent Trends in Sustainable Development	October, 2018 Himalaya Publishing House, ISBN: 978-93-5299-478-6
Dr. Angana Borah	In Analysis of the Basic Service Package of Tourism Products Offered by the River Cruise Vessels on the Brahmaputra (Nw-21)(Book Chapter)	Global Publishing House,Vishakapatnam, ISBN:978-93-81563-96-0

28 Placement record during the period (Please state briefly):

29 Placement services provided to students by the Department/Centre, if any:

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	3793
b)	New Books procured during the period	92
c)	No. of Journals as on 31.03.2019	8 Nos.
d)	New Journals procured during the period	2
e)	No. of users during the period :	475

32 Departmental publications :

33 Activities and support from the Alumni Association of the Department/Centre : NA

34.Activities and support from the Parent-Teacher Associations if any :Parent Teacher Meet

35.Involvement in Community services :Prof A.P.Singh is elected the President of Rotary Club of Gauhati South ,an International NGO who has been in community service since then.

36.Provision for financial aid to students in the Department/Centre, if any: NA

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is Obtained and action taken on this feedback may please be stated.
Student feedback of teachers is generated at the end of M.Com 4th Semester .

38.Information on up to five Good Practices followed by the Department/Centre:

i).Outreach and Village Awareness Program organized in peripheral villages,
ii)Talks by eminent personalities organized by the department
iii)Annual Commerce Festival based on business plan and quiz is organized for participation by graduate and post graduate Commerce students amongst the affiliated colleges in the university.
iv)Parents Teachers Meet takes place every Semester
v)Visitors to the department are encouraged to interact with the students.

39.Detail the plans of the Department/Centre/Institute for the next year :International Conference to be organized in the year 2020.

Head, Dept. of Commerce

ANNUAL REPORT : DEPARTMENT OF BUSINESS ADMINISTRATION GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Department of Business Administration
   b. Year of establishment : 1978
2. Head of the Department : Prof. Pradeep Kumar Jain
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/ Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. Pradeep Kumar Jain	Professor	Full Time	Male	Gen	
2.	Prof. M.K.Chowdhury	Professor	Full Time	Male	Gen	
3.	Prof. R.P.Kakati	Professor	Full Time	Female	Gen	85
4.	Dr. MonoshreeMahanta	Associate Professor	Full Time	Female	Gen	
5.	Dr. Samir Sarkar	Assistant Professor	Full Time	Male	SC	
6.	Dr. BanajitChangkakati	Assistant Professor	Full Time	Male	Gen	

4. Course(s)/Programme offered : MBA, MBA(Business Economics), MBA(DUAL)
5. Special Branches in the Department/Centre : No
6. New Academic Programme initiated during the period under report : No
7. Innovation in Curricular design :
8. Inter disciplinary Programme started : MBA(Business Economics) since 2009
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: SAP (Commodity market)
10. Total number of Research Scholar working at present :

a) Full Time: 1	b) Part time:17

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	MBA 1st	60	43	17	60	2	0	2	3	1	4	1	1	2	12	4	16	-	-	-
	MBA 3rd	60	31	24	55	4	2	6	4	0	4	1	0	1	6	2	8	1	0	1
	MBA (BE) 1st	30	20	10	30	3	0	3	0	2	2	0	1	1	7	1	8	-	-	-
	MBA (BE) 3rd	30	22	7	29	1	1	1	1	2	3	1	1	1	5	2	7	-	-	-
Ph.D.			3	5	8															

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
6	210	4

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:35	1:5

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MBA			44															
MBA(BE)			23															

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MBA	20	8	28															
MBA(BE)	5	6	11															

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Ms. Rashmi Rekha Mahanta	A Study of Inflation Dynamics of India	Prof. R.P.Kakati
Ms. Swati Baishya	Dynamic Pricing Strategy in relation to its determinants and Reference Price effect : A case study of automobiles & consumer electronics industry in India	Prof. M.Kakati
Ms. Karabi Goswami	Role of Emotional Intelligence in Employee Ethics, Performance and Organizational Commitment	Dr. Monoshree Mahanta
Sri Uday Kumar Khanikar	An Analytical Study of Training Practices for Employees in Selected Higher Educational Institutions of Assam and Assessment of Effectiveness of their Training Programmes	Prof. P.K.jain
Ms. Junumoni Das	Key Determinants of Job Satisfaction leading to Job Involvement of the Employees of the Private Sector Banks: A Case Study of Private Sector Banks in Guwahati	Prof. P.K.jain

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others

16. Important students' activities and achievements and awards during the period (Please state briefly)

Chapter-B

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Shri Surendra Kumar	IGI CID	Seminar on "Awarness on Women Safety"
Shri Pawan Tiwari	Senior Advocate, Gauhati High Court	Seminar on "Awarness on Women Safety
Dr. Akashitora Saikia	Actor, Producer, Director & Writer)	Seminar on "Awarness on Women Safety
Virendra Mittal	DC Kamrup(Metro)	Road Safety Awareness Campaign

23 Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:

a. All faculty rooms have access to computers & internet facility
b. 49 LAN connection for students, LAN connection 1 classroom and library
c. Wi-fi facility in the department

25.Technology up gradation in the Department/Centre during the period 2018-19:

d. Wifi facility in the department

26.Linkages developed with National/International/Academic/Research Bodies :

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Monoshree Mahanta	1	
Dr. Samir Sarkar	1	1
Dr. R.P.Kakati	1	

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Prof. R.P.Kakati	1	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No & Date
Prof. P.K.Jain & U.K.Khanikar	Study of Professional Skills of Non-teaching Staff & Assessment of Training Needs: A Case Study of Selected Higher Educational Intitutions from Assam	Gian Jyoti e-Journal Vol.8 No.1 ISSN No. 2250-348X, 2018

Prof. P.K.Jain & U.K.Khanikar	Evaluation of Effectiveness of Training to Employees of Few Selected Higher Educational Institutions of Assam	Abhinav ISSn Vol 7. No.2 No. 2277-1166, 2018
Prof. P.K.Jain & Junumoni Das	Job Involvement is dependent on Job Satisfaction: A Study of Private Sector Banks in Guwahati	International Journal for Research Application & Management(IJREAM),June 2018, Vol.4 No.3 ISSN No 2454-9150
Prof. P.K.Jain & Arnab Banerjee	Risk Perception & Entrepreneurial Career Choice: A comparative analysis of First Generation Entrepreneurs & Service Holders	IUP Journal of Entrepreneurship Development Vol.XV, No.1, ISSN No. 0973-2659, 2018
Dr. Monoshree Mahanta	Impact of Emotional Intelligence on Organizational Commitment in Service Organizations- An Empirical Study	*EPRA International Journal of Business and Economics, Vol.6 Issue 2(B), ISSN No.* 2349-0187, 2018
Dr M K Chowdhury & Vandana Minda Heda	A Study on Awarness, Prospects and Challenges of Microfinance in Urban Area of Kamrup(M) District of Assam	EPRA International Journal of Economic and Business Review, ISSN No. 2349-0187, 2019
Dr. Monoshree Mahanta	Employee Wellbeing- Are Organizations Addressing it the Correct Way?	*IRA- International Journal of Management and Social Sciences , Special Issue, ISSN NO.* 2455-2267
Dr Rinalini Pathak Kakati and Anubhuti Deorah	Unraveling the Brand Attractiveness Quotient In Processed Food Industry	International Journal of Advanced Scientific Research and Management (IJASRM) Vol3, Issue 10 , Oct 2018 ISSN 2455-6378

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of Chapter book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications
Dr. Banajit Changkakati	Issues and challenges in management.	2018
Dr. Banajit Changkakati	Development issues and concerns	2018

28.Placement record during the period (Please state briefly):

CAMPUS RECRUITMENT DETAILS/GU-MBA(2018-2019)

Sl. No	Name of Students	Company	Designation	CTC Offered
1	5	ITC	Sales Trainee	5LPA
2	10	HDFC Bank	Personal Banker(Sales)	4.23LPA
3	1	Amul(GCMMF)	Territory Sales In-charge	5LPA
4	1	Karvy stock Broking	Equity Advisor	2.75LPA
5	2	FA Fin Advisors Consulting Pvt. Ltd.	Junior Research Analyst	2.5LPA
6	8	Bandhan Bank	Customer Relationship Officer/Teller	3.5LPA
7	4	Kotak Life	Management Trainee	3.5LPA+ variable
8	2	Mahindra Finance	Management Trainee	6LPA(4L fixed+2L

				Variable)
9	6	Bandhan Bank	Management Trainee (Area Manager)	3.2LPA+ variable
10	3	Indusind Bank	Management Trainee (Service Delivery Manager)	4LPA(3L fixed+ 1L variable)
11	5	Arohan Microfinance	Management Trainee	4.96LPA(fixed + variable)
12	7	Apollo Munich	Assistant Agency Manager/Channel Sales Officer	3LPA+ Incentives
13	2	VKC Group	Sales Officer	3.6 LPA
14	14	ICICI Bank	E-Relationship Manager	3.2LPA
15	1	Mahindra and Mahindra	Area Sales Manager	8LPA

29.Placement services provided to students by the Department/Centre, if any: Yes, Details provided above

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	2417
b)	New Books procured during the period	No
c)	No. of Journals as on 31.03.2019	14
d)	New Journals procured during the period	No
e)	No. of users during the period :	All students, research scholars and faculty members

32.Departmental publications : Placement Brochure

33.Activities and support from the Alumni Association of the Department/Centre : Help in Campus Placement

34.Activities and support from the Parent-Teacher Associations if any :

35.Involvement in Community services :

- Free Medical Health Camp organized at Barpalaha, Baihata Chariali
- Self defense workshop in association with Bhetapara Karate Do-Academy
- Road Safety Awareness Campaign
- Diabetes and Diabetes Foot awareness Program organized in collaboration with Sun Vally Hospitals & introduction of project "Charan Sparsh"

36.Provision for financial aid to students in the Department/Centre, if any:

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

38.Information on up to five Good Practices followed by the Department/Centre:

1. Clean Department, Up- to-date Syllabus
2. Students wear Uniform, Participate in various social activities
3. Student Counseling for placement and carrier advancement
4. Mock GD & Interview for Campus Placement
5. Placement Cell & conducting campus placement every year.

39.Detail the plans of the Department/Centre/Institute for the next year : Department plan to be a centre of excellence in business education as being the pioneer in the field

Head, Dept. of Business Administration, G.U.

ANNUAL REPORT :DEPARTMENT OF LAW GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department :.....Department of Law.....
   b. Year of establishment :.....1976...
2. Head of the Department :.....Prof. Subhram Rajkhowa
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	R.C. Corpatragohain On Lien	Professor	Full Time (On Lien)	Male	Gen	
2.	Subhram Rajkhowa	Professor	Full Time	Male	Gen	
3.	Stuti Deka	Professor	Full Time	Female	Gen	
4.	Aparajita Baruah	**Asst. Professor**	Full Time	Female	Gen	
5.	Rupali Debbarma	**Asst. Professor**	Full Time	Female	ST	
6.	Depankar Das	**Asst. Professor**	Full Time	Male	OBC	
7.	Pallavi Devi	**Asst. Professor**	Full Time	Female	Gen	
8.	Tarini Pathak	**Asst. Professor**	Full Time	Male	Gen	
9.	Nisha Sarma	Guest Lecturer		Female	Gen	
10.	Bonashree Roy	Guest Lecturer		Female	OBC	
11.	Dolly Kumar	Guest Lecturer		Female	OBC	
12.	Pravek Medhi	Guest Lecturer		Male	MOBC	
13.	Sriparna Rajkhowa	Guest Lecturer		Female	Gen	
14.	Gaurav Goswami	Guest Lecturer		Male	Gen	
15.	Kuntala Roychoudhury	Guest Lecturer		Female	Gen	

4. Course(s)/Programme offered : LL.M, Ph.D
5. Special Branches in the Department/Centre : Constitutional Law, Criminal Law and Human Rights 1) Centre for Refugee Law S and Refresh, 2) Centre for Humanitarian law S and Refresh.
6. New Academic Programme initiated during the period under report : 1) Centre for Refugee Law S and Refresh 2. Centre for Humanitarian law S and Refresh.
7. Innovation in Curricular design : Under process
8. Inter disciplinary Programme started : No
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: No
10. Total number of Research Scholar working at present :

a) Full Time: 30	b) Part time: 6

Chapter-B

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	2nd sem	40	11	26	37	1	1	2	1	1	2	1	1	2	2	8	10			
	4th sem	40	13	25	38	2	-	2	3	4	7	1	1	2	2	6	8			
M.Phil.																				
Ph.D.			1	10	11	-	1	1	-	-	-	-	1	1	1	-	1			
Others																				

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
Full Time-7 & G/L- 7 Vacancy-4	2nd Sem-37 & 4th Sem 38	9

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1-6	1-1.2

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
LL.M	10	26	37	1	2	3	2	2	4	-	1	1	6	1	17	-	-	-

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
LL.M	11	24	35	1	1	2	2	2	4	-	1	1	6	1	17			

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
PRAHLAD KUMAR BRAHMA	An Analytical Study on Customary Laws of Bodos in Assam (July-2018)	Dr Aparajita Baruah
SMITA SARMA	Role of Geographical Indication in Securing the Rights of the Indigenous Peoples in Assam – An Analytical Study (July-2018)	Dr Aparajita Baruah
DHIRAJ BHUSAN SARMA	Provisions of Free Legal Aid Under Various Statutory Laws with Special Reference to the Constitution of India-A Brief Study (July-2018)	Dr Aparajita Baruah
TAZNARA KHAN	Child Trafficking : A Crime Against Humanity with Special Reference to the State of Assam (July-2018)	Dr Aparajita Baruah
JARNA KALITA	Constitutional Provisions Relating to Reservation for Women in the Context of Political Empowerment in India-A Legal Study (October-2018)	Dr Aparajita Baruah

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
----------	4	3	----------	----------

16,.Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1.	Subhram Rajkhowa	Human Rights and Constitution	November 2018	Gauhati University

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
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19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
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20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
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(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks
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21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held
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22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Justice Dr. A.K. Saikia	Chairman, Maghalaya, Human Rights Constitution	Chief Guest at Seminer
Prof. K.C. Ravul	Director, Gujarat Law School	Visiting Fellow
Prof. S.Subhramanium	Project, Anna University	Visiting Fellow

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19: No

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: No

25.Technology up gradation in the Department/Centre during the period 2018-19: No

26.Linkages developed with National/International/Academic/Research Bodies : Indian Legal Institute- No

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Prof. Subhram Rajkhowa	8	4
Prof. Stuti Deka	7	3
Dr. Aprajita Baruah	6	3
Rupali Debbarma	3	2
Dipankar Das	1	1
Pallabi Devi	1	1
Tarini Pathak	1	

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Pallabi Devi	1	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
----------	----------	----------

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Prof. S.Rajkhowa		Human Rights of Democracy
Prof. S.Deka		Indian Judicial of Law and
		Justice Human Rights Law Review

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications
----------	----------	----------

28.Placement record during the period (Please state briefly):
a) In Collages-6, b) Judicial Service-5, c) Civil Service-4

29.Placement services provided to students by the Department/Centre, if any: No

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report. No

31.Departmental Library :

a)	No. of Books as on 31.03.2018	2000
b)	New Books procured during the period	60
c)	No. of Journals as on 31.03.2018	2
d)	New Journals procured during the period	----------
e)	No. of users during the period :	300

32.Departmental publications :1) Gauhati University Journal Of Law, 2) Vidhijyoti

33.Activities and support from the Alumni Association of the Department/Centre :
Alumni Meeting held on 22/9/2018

34.Activities and support from the Parent-Teacher Associations if any : No

35.Involvement in Community services : Legal Aid, Outreach programmer

36.Provision for financial aid to students in the Department/Centre, if any: No

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated. No

38.Information on up to five Good Practices followed by the Department/Centre:
1) Regular Classes, 2) Student outreach, 3) Legal Advice
4) Teacher Community awareness programmer

39.Detail the plans of the Department/Centre/Institute for the next year :
1) Improve literacy, 2) Provide for Computer Lab, 3) Campus Development
4) Variation facility, 5) Strength alumni association

Prof. Subhram Rajkhowa.

1. 19-01-18 Delivered talk at National Seminer on Legal Culture at Gauhati University.
2. 20-01-18 Chaired UGC National Seminer at Gujrat University, School of Law.
3. 19-03-18 Talk on Rresearch Methodology at BRM Law College.
4. 05-04-18 Talk on Rule of Law in India at Nalbari Law College.
5. 19-04-18 Made a presentation on Research Methodology at Panchanan Barma University, Coochbehar.
6. 20-04-18 Delivered a talk to Ph.D Scholar and LL.M. students on Human Right Education at Panchanan Barma University, Coochbehar.
7. 28-04-18 Made a presentation as speaker on Governance of Trans boundary waters Disputes in South Asia at SAARC Law conclave.
8. 29-04-2018 Child session in Hydel power genre tan in South Asian Rivers System and its effect in SAARC Law Conclave, Seliguri, West Bengal
9. Presented a panorama Rights of Women in 2 day national workshop of J.B. Law College, Guwahati.
10. 22-05-18 Delivered a talk on Mindful Advocate at Department of Law, Gauhati University.
11. 25-07-18 Delivered lecture on legal Aspects of Patient Safety in India at Dhubri.
12. 12-10-18 Talk on legal Research Methodology at Defult of Law, Cooch Behar Panchanan Barma University.

Prof. Stuti Deka

1. Resource Person in the Beltola College seminar on "Right to Education" on August 2017.
2. September 3/2017 Resource Person at Workshop on "Legal Awareness and Prison Reform"--- at Department of Law,
   Chaired session I organized in the Department of Law in collaboration with State Legal Services, Assam.
3. September 23/2017 Resource Person in a National Workshop on "Sixth Schedule of the Constitution of India".
4. October 22/2017, Resource Person in a National Seminar on "Customary Laws of North East India Practices and Prevalence's". Organized by University school of Law and Research, USTM. Sponsored by North Eastern Council, Shillong.

Name of the Faculty: Dr. Aparajita Baruah, Assistant Professor (Stage-III)

A. Resource Person

Sl. No.	Date	Venue	Programme	Topic
1	16.11.2018	UGC-HRDC, Gauhati University	Short Term Course on Human Rights 12th 18th November, 2018	Global Warming and Climate Change- An Overview
2	23.01.2019	Assam Administrative Staff College, Khanapara	Joint Induction Training Course For ACS and Allied Services 17-30 JANUARY,2019	Human Rights And Their Enforceability
3	16.02.2019	National Law University and Judicial Academy, Assam	Regional Consultation on Sexual Harassment of women at Workplace (Prevention, Prohibition and Redressal) Act, 2013	Sexual Harassment of Women at Workplace
4	07.04.2019	L.C.B. College, Guwahati	National Seminar on Women Empowerment &Gender Sensitization: Convergences, Divergences and Plurality	Women Empowerment- Its dimensions Also conducted two sessions in the Seminar
5	12.04.2019	Assam Administrative Staff College, Khanapara	7 Week Training Programme For Mizoram Civil Service Officers of 2018 Batch	Human Rights and Role of Public Servants
6	31.8.2019	NEF Law College, Guwahati	Seminar	Natural Justice As A Milestone Of Administrative Law & Role Of Judiciary in Present Context

B. Paper Presentation in Seminar

Sl. No.	Date	Venue	Programme National/ International	Topic
1	09.02.2019	Barpeta Law College, Barpeta	ICSSR-NERC sponsored National Seminar	Polluter Pays Principle and The Indian Judiciary: An Overview (though the paper was accepted for presentation and received the Certificate, the author could not present in the seminar)
2	19-20 March, 2019	Gauhati University Institute of Distance and Open Learning	National Conference on Issues in North East india& the Role of ODL and OER in Higher Education	Spreading of Human Rights Education Through Open Learning Mode among Adult Learners- An Overview
3	06.04.2019	L.C.B. College, Guwahati	National Seminar on Women Empowerment &Gender Sensitization: Convergences, Divergences and Plurality	Gender Mainstreaming as Inclusive Policy For The Growth of a nation: A Brief analysis
4	03-04 May, 2019	National Law University and Judicial Academy, Assam	National Seminar on Effective Protection of Traditional Knowledge And Cultural Expressions:	Traditional Knowledge of making Gamocha and Its G.I. Protection Under The Intellectual Property Rights- An Insight

			National And Community Experiences	
5	06-07 September, 2019	University of Science and Technology,	International	Judicial Approach To Sustainable Development and Environment in India: A Brief Overview

C. Participation in Seminar

Participated in the **Author Workshop** jointly organized by **Springer Nature and Gauhati University** on 05th April, 2019.

D. Participation in One-Week Faculty Development Programme

Sl. No.	Date	Venue	Programme conducted by	Topic
1	02-08 July, 2018	MahapurushaSrimantaSankaradeaViswavidyalaya(MSSV), Nagaon, at its Guwahati Campus	Electronics & ICT Academy, IIT Guwahati supported by Meity, Govt. of India	Behavioural Remodelling For Enhancing The Classroom Delivery of Teachers
2	03-08 June, 2019	The Assam Royal Global University, Guwahati	-Do-	Statistical Analysis, Pedagogy & Stress Management

E. Participation in Refresher Course

Participated in the **Refresher Course** on **ICT & MOOC(IDC) held during 04th to 17th July, 2019** which was conducted by **the UGC-Human Resource Development Centre, Gauhati University.**

F. Extension Services (curriculum development)

As a member of the Board of Studies, extended services in designing and finalising the LL.B. and LL.M syllabi of the School of Law, The Assam Royal Global University, Guwahati.

G. Research Supervision

Research Scholar Kasturi Gakul has submitted her thesis on the topic titled **'An Analytical Study on Adoption Of Children With Special reference To The Juvenile Justice Law In India- A Legal perspective'.**

Name of the Faculty: Mrs. Rupali Debbarmah

SL.NO.	TITLE OF THE RESEARCH PAPER	YEAR	EDITED BY	ISBN/ISSN NO	PAGE NOS.
1.	RIGHTS OF WOMEN PRISONERS IN INDIA	2018	DR. SAFIQUR RAHMAN	ISBN-978-81-935219-3-9	166-171
2.	MIGRATION, CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT	2019	GOVIND CHANDRA MISRA	ISSN-2394-1561	209-211
3.	VIOLENCE AND DISCRIMINATION BASED ON GENDER WITH SPECIAL REFERENCE TO THE GUWAHATI CITY-AN ANALYSIS	2019	GUIDOL	PAPER PRESENTED	
4.	IMMORAL TRAFFICKING OF WOMEN IN INDIA: A LEGAL ANALYSIS	2019	LCB COLLEGE	PAPER PRESENTED	
5.	CHILD LABOUR AND HUMAN RIGHTS EDUCATION IN INDIA: A STUDY	2019	BARPETA LAW COLLEGE		

Head, Dept. of Law, G.U.

ANNUAL REPORT : DEPARTMENT OF ANTHROPOLOGY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department :...Anthropology
   b. Year of establishment :.....1948
2. Head of the Department :..... Prof. Abdullah Ali Ashraf
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Dr. M. Bhattacharyya Thakur	Professor	Full Time	Female	Gen	
2.	Dr. A.A.Ashraf	Professor	Full Time	Male	Gen	
3.	Dr. Dwipen Bezbarua	Professor	Full Time	Male	Gen	
4.	Dr. G. Begum	Associate Professor	Full Time	Female	Gen	
5.	Dr. Chandana Sarma	Associate Professor	Full Time	Female	Gen	
6.	Dr. Arifur Zaman	Associate Professor	Full Time	Male	Gen	
7.	Dr. Robinson Senar	Assistant Professor	Full Time	Male	ST	
8.	Ms. Humi Thaosen	Assistant Professor	Full Time	Female	ST	
9.	Dr. Smita Devi Bora	Assistant Professor	Full Time	Female	OBC	
10.	Dr.. Dhanmani Medhi	Assistant Professor	Partl Time	Female	OBC	
11.	Mr. Jyotishman Taye	Assistant Professor	Part Time	Male	ST	

4. Course(S)/Programme offered:- M.A./M.Sc., Ph.D.
5. Special Branches in the Department/Centre : (1) Physical Anthropology (2) Social Anthropology (3) Prehistoric Anthropology
6. New Academic Programme initiated during the period under report :
7. Innovation in Curricular design :
8. Inter disciplinary Programme started:
9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST: SAP DRS-I (2016-21)
10. Total number of Research Scholar working at present :

a) Full Time:	b) Part time:
6	26

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st Sem	26	3	24	27	1	0	1	0	0	4	0	1	1	0	9	9	0	0	0
	2nd Sem	26	3	24	27	1	0	1	0	0	4	0	1	1	0	9	9	0	0	0
	3rd Sem	26	5	21	26	0	0	0	1	3	4	1	1	2	1	6	7	0	0	0
	4th	26	5	21	2	0	0	0	1	3	4	1	1	2	1	6	7	0	0	0

	Sem				6														
M.Phil.																			
Ph.D.	-	-	2	6	8	1	0	1	0	1	1	0	1	1	1	1	2	0	0	0
Others																			

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
11	53	10

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1 : 4.81	1 : 90

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Anthropology	6	18	24	1	3	4	1	4	5	0	1	1	2	4	6	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Anthropology	6	18	24	1	3	4	1	4	5	0	1	1	2	4	6	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Priyanka Gogoi	Occupational Pattern of Rural Youth in Lakhimpur and Dhemaji District of Assam.	Dr. Upala Baruah
Jintu Hazarika	Socio-Economic Life of the Garos Bordering Assam and Meghalaya	Dr. Chandana Sarma (Cotton)
Nilkamal Singha	Brick Structure in Brahmaputra Valley, Assam up to 1200 A. D. : An Archaeo-Ethnological Approach	Dr. A. A. Ashraf
Jitumani Baishya	Menstruation and Menstrual Hygiene: A Study on Knowledge, Attitude and Practices of Women in the Unorganised Sector of Guwahati City, Assam"	Dr. Mini Bhattacharyya
Ms. Sudeshna Choudhuiry	Heritage Culture of Majuli with Special Reference to Dakhinpat Sattra	Dr. Dilip K. Medhi
Ms. Smriti Rekha Sonowal	Title of the Thesis – "Bio-Social Aspects of Ageing in a Rural Context : A Study among the Sonowal Kacharis of Lakhimpur District, Assam".	Dr. Bapukan Choudhury
Sri Jyotishman Taye	Traditional Conflict Resolution Methods and Their Relevance Today : A Study Among the Boros of Kokrajhar Area of Assam	Dr. Sushil Sinha
Ms. Humi Thaosen	Universe of Religion among the Dimasas of Assam and Nagaland with Special Emphasis on the Daikho System of Worship".	Dr. Birinchi K. Medhi

Ms. Barnali Das	Ageing among the Tiwas of Morigaon District, Assam".	Dr. Chandana Sarmah
Ms. Kamali Deuri	Knowledge, Attitude and Practices Related to Family Planning among the Deoris and the Mishings of Narayanpur Block, Lakhimpur District, Assam".	Dr. Rekha Das
Ms. Namita Deka	Change in Dress of Assamese Female of Guwahati City, Assam.	Dr. Rekha Das
Ms. Lilu Rani Hasnu	Anthropological Significance of Bead : A Study Among the Dimasas.	Dr. Dwipen Bezbaruah
Ms. Chintu Ronghangpi	Society and Culture of the Karbis Living in the Hills and Plains of Assam.	Dr. Upala Baruah
Ms. Mami Ojah	Hiraware in Trade and Commerce in and Away from Barpeta.	Dr. Dilip K. Medhi
Ms. Chaya Rani Hazarika	Opium addiction, Fertility and Infant Mortality : A Study among the Singphos and Wanchos of Arunachal Pradesh".	Dr. Bapukan Choudhury

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
	3	3	-	-

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1.	Prof. Dwipen Bezbaruah	Converging Spectrum with Emphasis on Assam and Adjoining Areas.	14-15 March, 2019	UGC

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
Dr. Humi Thaosen	International Institute of Peace and Development of Studies, Bankok, Thailand	Workshop	1 July – 5 July , 2019

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Dr. Gulrukh Begum	Impact of consanguinity on health : A study in Barpeta District, Assam	ICSSR	2 years	8 lakhs
Prof. Dwipen Bezbaruah	Rock Art in N.E. India	IGNCA, New Delhi	2 years	2.39 lakhs

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

Chapter-B

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Prof. G. Paddaiah	Retired Professor, Andhra University	UGC SAP Advisory Committee Meeting
Prof. R. P. Srivastava	Director, Anthropological Survey of India	UGC SAP Advisory Committee Meeting
Dr. S. B. Ota	Retired Jt. Director General, Archaeological Survey of India	Visiting Faculty
Prof. A. R. Bandhopadhaya	Prof. & Head, Calcutta University	Visiting Fellow

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:
25.Technology up gradation in the Department/Centre during the period 2018-19:
26.Linkages developed with National/International/Academic/Research Bodies :
27.Academic activities of Faculty members during the period of report (2018-19):
28.Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Prof. Dwipen Bezbaruah	3	
Dr. Gulrukh Begum	3	
Dr. Chandana Sarmah	2	
Dr. Humi Thaosen		2
Dr. Smita Devi Bora	1	
Dr. Arifur Zaman	3	

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Prof. Dwipen Bezbaruah : (a) Invited and deliver four lectures in the department of Anthropology, North Bengal University, West Bengal on 27 & 28 Dec. 2018 as visiting Professor.

(b) Invited and delivered two lectures on "Empirical tradition in a digital Era" and on project Formulation in Social sciences in the Refresher Course on Women Studies and Empowerment organized by UGC-HRDC, G.U. on 10.8.2018 7 12.8.2018 respectively. August, 2018.

(c) Chaired the IInd technical session on 11th Sept. 2018 in the National Seminar on Affinities and Expansion of Prehistoric & Archaeological cultures in N.E. India with special emphasis on Rock Art organized by IGNCA, New Delhi in IGNTU, Imphal

Dr. Gulrukh Begum : Plenary Lecture on "Anthropological aspects of consanguinity" in a National Seminar On "Anthropology in the 21st century : Emerging areas of Research and its role in National Development" from 11th – 12th February, 2019 in Assam University, Diphu Campus.

Dr. Chandana Sarmah :

(a)Society's Responsibility towards Elderly at National CME on Geriatric Care and Social Responsibility on 27/01/2018 organized by IJHRMLP Academic Group, Gauhati Medical College

(b)Multiculturalism and North East India at National level Refresher course in Economics and Commerce on 28/11/2018 organized by UGC-Human Resource Development Centre, Gauhati University

(c)Women in Science: Achievements and Challenges at regional level World Intellectual Property Day Celebration, on 26/04/2018 organized by Gauhati University IPR Cell

(d)Ageing in a Tribal Context delivered an invited lecture at 106th Indian Science Congress Anthropological and Behavioral Science Section, 3- 7 January, 2019 organized by Lovely Professional University, Jalandhar

(e)Chaired Academic Session- Ageing Health Issues at National Seminar Converging Spectrum of Anthropology with Special Emphasis on Assam and Adjoining Areas, 14, 15 March, 2019 organized by Department of Anthropology, Gauhati University.

Dr. Arifur Zaman

(a) Invited as a resource person and speak on a topic entitled "Spectrum of a Pristine Craft in a Vaishnavite Monastery of Assam", in ICSSR- New Delhi sponsored two day National Seminar on Anthropology in the 21st Century: Emerging Areas of Research and its role in National Development, Organised by Department of Anthropology, Assam University (A Central University) Diphu Campus, Diphu, Karbi Anglong, Asssam-782462 in collaboration with Anthropological Survey of India, Kolkata.

(b) Invited to chair a technical session in Indian Anthropology Congress 2019 on the theme Anthropology for Developing India; Pathways to Policy Planning & Implementation, held on 21-23 February, 2019, at Sabitribai Phule Pune University, Pune Maharashtra.

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. Robin son Senar		1
Dr. Smita Devi Bora		1

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Dr. Gulrukh Begum	1.Association between Body Mass Index, Blood Pressure and age : A study among Ahoms of North Lakhimpur, Assam"	Anthropology in North East India (ed.)) Sarthak Sengupta, Gyan Publishing House. (ISBN 9788121214247 (HB)
	2.Age related changes in the Anthropometric and body composition characteristics of the Garo women of Kamrup district, Assam.	Growth and Nutritional studies : Perspective from North east India(ed.) Sarthak Sengupta and Dali dulton.
	3.Relationship between BMI and percent body fat among the adult Tai Ahoms of Lakhimpur district, Assam.	Human Biology Review, 8 (1) : 52-65
	4. Levels of Childhood nutritional status among the Muslims of char areas in Barpeta district, Assam	International journal of community medicine and public health, 6(2) : 682-689.
Dr. Smita Devi Bora ((jt.)	Past Present Continum the case of Megalithic Tradition in N.E. India.	Research journal of Humanities & Social sciences. Vol. 09. ISSN 0975-6795

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Dr. Gulrukh Begum	Nutritional status of adolescent Ahoms boys of Sivasagar district, Assam,	Bulletin of the Dept. of Anthropology, Gauhati University. Vol. XIX, 2017-18
Dr. Arifur Zaman	(i) "Spectrum of Vaishnavite Mask in the Majuli Island of Assam", (ii) "Food and Dietary Habits:	(i) *Anthropology in North East India*, Gyan Publishing House, New Delhi:137-145. (ii) Buddhadeb Chaudhuri,

	An Empirical Observation among the Deoris of Assam"(jt) (iii)"Village Council and Administration of Justice: A Study among the Dimasa Kacharis of Assam", (iv)"Women Empowerment among the Mishing Tribe in Lakhimpur District of Assam: Issues and Challenges"(jt),	Somenath Bhattacharjee and Subir Biswas (Eds.), *Role of Environment in Livelihood and Cultural Sustainability: Emerging Issues and Challenges*, Lap Lambert Academic Publishing, Mauritius. (iii) *Cultural and Religious Studies, Vol7, No.4*:202-212 (ISSN 2328-2177) (DOI: 10.17265/2328-2177), Libertyville, IL 60048, USA. (iv) *North Bengal Anthropologist annually (Journal of the Department of Anthropology, University of North Bengal)*, Volume 6: 99-107. (ISSN: 2320-8376).
Prof. Dwipen Bezbaruah (jt.)	Past Present Continuum : The case of Megalithic Tradition in NE India,	Research journal of Humanities & Social sciences. Vol. 09. ISSN 0975-6795

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications

28.Placement record during the period (Please state briefly):

29.Placement services provided to students by the Department/Centre, if any:

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	1665
b)	New Books procured during the period	114
c)	No. of Journals as on 31.03.2019	123
d)	New Journals procured during the period	
e)	No. of users during the period :	117

32.Departmental publications : Departmental Bulletin

33.Activities and support from the Alumni Association of the Department/Centre :

34.Activities and support from the Parent-Teacher Associations if any :

35.Involvement in Community services :

36.Provision for financial aid to students in the Department/Centre, if any:

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

: Students assessment was done for 2nd and 4th semester students

38.Information on up to five Good Practices followed by the Department/Centre:

39.Detail the plans of the Department/Centre/Institute for the next year :

Head, Dept. of Anthropology

ANNUAL REPORT : DEPARTMENT OF BOTANY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : **Botany**
   b. Year of establishment : **1948**
2. Head of the Department : **Dr. Nilakshee Devi**
3. Details of academic staff :

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index [Google Scholar]
1.	Dr. Nilakshee Devi	Professor	Full Time	Female	Gen	23
2.	Dr. Dhruva Kumar Jha	Professor	Full Time	Male	Gen	1807
3.	Dr. Partha Pratim Baruah	Professor	Full Time	Male	Gen	33
4.	Dr. Bhaben Tanti	Professor	Full Time	Male	OBC	310
5.	Dr. Kumananda Tayung	Professor	Full Time	Male	ST	474
6.	Dr. Namita Nath	Associate Professor	Full Time	Female	OBC	13
7.	Dr. Diganta Narzary	Associate Professor	Full Time	Male	ST	387
8.	Dr. Nabanita Bhattacharyya	Assistant Professor	Full Time	Female	Gen	49
9.	Dr. Hemen Deka	Assistant Professor	Full Time	Male	General	187
10.	Dr.NirajAgarwala	Asst. Professor	Full time	Male	Gen	124
11.	Dr. Souravjyoti Borah	Curator	Full Time	Male	OBC	278
12.	Dr. A. Ghosh	Assistant professor	Contractual	Male	General	157
13.	Dr. J. Rabaha	Assistant professor	Contractual	Male	ST	Nil
14.	Dr. Tridip Phukan	Assistant Professor	Contractual	Male	OBC	09

4. Course(s)/Programme offered : (i) M.Sc. in Botany;
   (ii) M.Sc. in Microbiology
   (iii) M.Phil.
   (iv) Ph.D.
5. Special Branches in the Department/Centre: i) Angiosperm Taxonomy
   ii) Cytology, Genetics and Plant breeding
   iii) Microbiology
   iv) Plant ecology
   v) Mycology and Plant Pathology
   vi) Plant Physiology and Biochemistry
6. New Academic Programme initiated during the period under report: Nil
7. Innovation in Curricular design: **The M.Sc. syllabus has been updated to comply with new CBCS system and to meet the requirements of students to appear in NET, GATE examinations.**
8. Inter disciplinary Programme started: Nil
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: **FIST (level-1)**
10. Total number of Research Scholar working at present:

a) Full Time: **35**	b) Part time: **Nil**

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate (M.Sc Botany)	1st	40	10	30	40	01	04	05	04	03	07	0	02	02	03	13	16	-	-	-
	2nd	40	11	29	40	03	03	06	01	04	05	0	01	01	04	09	13	-	-	-
	3rd	40	10	30	40	01	04	05	04	03	07	0	02	02	03	13	16	-	-	-
	4th	40	11	29	40	03	03	06	01	04	05	0	01	01	04	09	13	-	-	-
Post-Graduate (M.Sc. Microbiology)	1st	10	02	08	10	0	01	01	0	01	01	0	01	01	01	01	02	-	-	-
	2nd	10	01	09	10	0	01	01	01	0	01	0	0	0	0	02	02	-	-	-
	3rd	10	02	08	10	0	0	0	0	0	0	0	01	01	01	01	02	-	-	-
	4th	10	01	09	10	0	01	01	01	0	01	0	0	0	0	02	02	-	-	-
M.Phil.		20	05	05	10	00	00	00	00	00	00	00	00	00	04	02	06	00	00	00
Ph.D.		-	11	09	20	00	00	00	01	01	02	00	00	00	03	04	07	00	00	00
Others																				

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
10+3	100	12+07=19
Teacher/Student Ratio		**Teacher-Non-teaching Staff Ratio**
1 : 7.7 (0.13)		1 : 1.5 (0.67)

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
BOTANY AND MICROBIOLOGY	07	38	45	0	05	05	02	02	04	0	03	03	05	10	15	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
BOTANY AND MICROBIOLOGY	07	38	45	0	05	05	02	02	04	0	03	03	05	10	15	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Nibedita Das	Taxonomy and distribution of Clerodendrum L in Assam	Prof. S. K. Borthakur
Kiran Gupta	Studies on the effect of some pesticides on growth and physiological activities of Calothrix species	Prof. P.P. Baruah
Kishor Deka	Taxonomic studies *of Calamus nambariensis* Becc- an endemic and threatened cane of Assam	Prof. B. Tanti
Lipika Lahkar	Morphological, biochemical and molecular	Prof. B. Tanti

	characterization of traditional aromatic rice land races of Assam	
Debashree Kakati	Taxonomic studies of *Brucea mollis* Wall. ex Kurz an endemic species	Prof. S. K. Borthakur
Ratul Kumar Nath	Studies on wood decaying Basidiomycetes of Nagaon district, Assam	Dr. T.C. Sarma
Bharat Banti Buragohain	Studies on algal diversity in different aquatic habitats of Nagaon District, Assam	Dr. F. Yasmin

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
04	09	11	15	-

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. P. P. Baruah	Assam Botany Congress (ABC-01) and International Conference on Plant Science	4th t0 6th February, 2019	Botanical Society of Assam; Department of Botany, GU; Department of Botany, CSU; ASTEC
2	Dr. P. P. Baruah	National Seminar on Exploration and Utilization of Bioresources of NE India	28th to 29th October, 2018	Botanical Society of Assam; Department of Botany, Rangia College; ASTEC

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Dr. Dhruva Kumar Jha	Fellow of Indian Phytopathological Society	Indian Phytopathological Society
Dr. Niraj Agarwala	Focus Area Science Technology Summer Fellowship(FAST-SF) at IISER, Pune	Three National Science Academies of India i.e IASc-INSA-NASI
	INSA visiting Scientist at Delhi University	INSA(Indian National Science Academy), New Delhi, India

19. Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
Dr. Diganta Narzary	Yokohama Institute for Earth Sciences (JAMSTEC), Yokohama Phone 045-778-5459	Post doctorate research	September, 2018-September, 2019

20. Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Dr. Nilakshee Devi	Screening, Biochemical Evaluation and Toxicity Study of Some Wild Edible Mushrooms of Assam"	Assam Science Technology and Environment Council	2 years	Rs. 8.3 lakh
Dr. Partha Pratim Baruah	Assessing phytoplankton diversity in different fresh	MoEF&CC	3 years	22,73,000/-

	water habitats Of Assam, Tripura & Arunachal Pradesh			
Dr. Bhaben Tanti	Whitefly (Bemisia tabaci) in North Eastern India: Diversity, Factors of virus transmission and natural inhibitor	DBT, GOVT. OF INDIA	3 years	42.0 LAKH
Dr. Kumananda Tayung	Exploration of endophytic microorganisms from selected indigenous rice landraces of North-East India and their applications for improvement of growth and yield of traditional rice varieties	DBT, Govt. of India	3 years	74 lakhs
Dr. Namita Nath	Inventorization of wild edible fruits of Assam with special reference to their sustainable utilization for livelihood generation.	ASTEC	3 years	5 Lakhs
Dr. Nabanita Bhattacharyya	Investigation on air pollution tolerance index of some plants growing along NH 37, Guwahati	Gauhati University [under the "Scheme for promoting research among young faculty", in 2018]	3 years	1.5 Lakhs
Dr Hemen Deka	Plant-microbe consortia for remediation of Polycyclic Aromatic Hydrocarbons (PAHs) contaminated soils of Assam and influence of biogenic nanomaterials on PAHs fate and accumulation	UGC, Govt. of India	2 years	10 Lakh
Dr. NirajAgarwala	Deciphering mRNA-miRNA modules associated with Darjeeling tea quality	SERB, DST, Govt. of India	3 years	4323763.00
	Assessment of culturableendophytes from indigenous capsicum varieties of Assam for their utilization for effective control of bacterial wilt pathogen Ralstoniasolanacearum	UGC, Govt. of India	2 years	1000000.00

(b) Patent Generated: Nil

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Dr Chrskl Van Der Uyve	Professor Skllebesh University	Academic
Prof. J P Tamang	VC (Retired)	Academic

	Sikkim (Central) University	
Chika sa Samara	Kyoto University Japan	Academic
Anne Danowshi	Adalberstler, Berlin	Academic
Dr A A Mao	Director Botanical Survey of India kolkota	Botanical Garden Inspection

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:

(i) Atomic Absorption Spectrophotometer (AAS) was installed under RUSA;

(ii) Cubical was constructed to keep the instrument in CIF.

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: **10 computers with internet access and uninterrupted power supply was added to the existing facilities in the Department**

25.Technology up gradation in the Department/Centre during the period 2018-19: Nil

26.Linkages developed with National/International/Academic/Research Bodies :

Name of the faculty	Linkages
Dr. D. K. Jha	University of Naples, Italy; Sherubtse College, Royal University of Bhutan
Dr. Bhaben Tanti	• National Research Centre in Banana, Trichi • National Rice Research Institute, Cuttack
Dr. Kumananda Tayung	• University of Naples, Italy; Sherubtse College, Royal University of Bhutan
Dr. Diganta Narzary	• Yokohama Institute for Earth Sciences (JAMSTEC), Yokohama; Phone 045-778-5459 • Kagoshima University, Japan

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Nilakshee Devi	01	Nil
Dr. Dhruva Kumar Jha	Nil	Nil
Dr. Partha Pratim Baruah	03	Nil
Dr. Bhaben Tanti	02	01
Dr. Kumananda Tayung	03	Nil
Dr. Namita Nath	01	Nil
Dr. Diganta Narzary	01	Nil
Dr. Nabanita Bhattacharyya	04	02
Dr. Hemen Deka	03	01
Dr.NirajAgarwala	02	Nil
Dr. Souravjyoti Borah	01	Nil

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Name of the teacher	Details (Act as Resource Person in)
Dr. Nilakshee Devi	(i) Climate Change & Sustainable Management of Natural Resources on 25th September, 2018, organized by HRDC, Gauhati University (ii) Winter school on Bio-Resource of N E India(30th Jan, 2019 -19th Jan, 2019), organized by HRDC, Gauhati University
Dr. Partha Pratim Baruah	Acted as Resource Person in 4 Refresher Courses organized by HRDC, GU
Dr. Bhaben Tanti	(i) Coordinator, Refresher Course on "Climate change and sustainable utilization of natural resources", September, 2018 at HRDC, Gauhati University (ii) Invited talk to the Star College Scheme, J. N. College, Boko and B.P. Chaliha College, Nagarbera
Dr. Kumananda Tayung	Acted as resource Person at Academic Staff College, GU in Refresher Course for Biodiversity & Environment

Dr. Namita Nath	(i) Ashoka Trust for ecology and the Environment(Recognized by department of Scientific & Industrial Research, Govt. Of India) on Collection and preparation of herbarium for identification on 06-12-20181. (ii) Ashoka Trust for ecology and the Environment(Recognized by department of Scientific & Industrial Research, Govt. Of India) Plant identification techniques on 05-12-2018
Dr. Nabanita Bhattacharyya	Acted as invited speaker / resource person in a National workshop cum training on "Soil Health Management", on the topic "Plants as the soil savior: a novel approach", organized by Central Muga Eri Research and Training Institute (CMER&TI), Lahdoigarh, Jorhat, Assam, on 4th April, 2018.
Dr Hemen Deka	Delivered an Invited Talk on "Plants and microbial resources: Application potential for bioremediation of crude oil polluted ecosystems NE India (Assam)" in the National Seminar on "Bioresources for Sustaining Life and Livelihood in North East India" organized by Department of Zoology, Nowgong College, Nagaon, Assam on 4-5 October, 2018.
Dr. Niraj Agarwala	Acted as resource person in a Workshop conducted by Advanced level Institutional Biotech Hub, Department of Biotechnology, Gauhati University dated 19.11.2019 . The topic of the workshop was "Workshop on Advance Molecular Biotechnology " and it was held from 19th to 25th Nov,2018.
Dr. Souravjyoti Borah	Acted as a resource person in the training programme entitle "3-days Hands on Training on Angiosperm Taxonomy with special reference to banana" from 28-30th March, 2019 sponsored by DBT, Govt. of India in The Department of Forestry NERIST, Itanagar, Arunachal Pradesh.

c) Refresher Course/ Orientation Course attended by the teachers during the period: Nil

Name of the faculty	Refresher Course	Orientation Course

d)Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Dr. Nilakshee Devi	Compositional Variability in Leaves and Inflorescence Essential Oils of Cymbopogon khasianus (Hack.) Stapf ex Bor Collected fromMeghalaya: A Biodiversity Hotspot	Journal of Essential Oil Bearing Plants Published online: 31 Jul 2018. TEOP 21 (3) 2018 pp 640 – 657
Dr. Dhruva Kumar Jha	Antimicrobial Activity of Endophytic Fungi from Leaves and Barks of Litseacubeba Pers., a Traditionally Important Medicinal Plant of North East India	Jordan Journal of Biological Sciences11(1):73-79
	Investigation of pH-sensitive Swelling and Curcumin Release Behaviour of Chitglc Hydrogel	Journal of Polymers and the Environment 26(10): 4034-4045.
	Optimization of culture parameters for improved production of bioactive metabolite by endophytic Geosmithia pallida (KU693285) isolated from Bruceamollis Wall ex. Kurz, an endangered medicinal plant	Journal of Pure and Applied Microbiology12(3): 1205-1213.
	Tea root brown rot fungus disease reduction and yield recovery with rhizobacteria inoculation in both nursery and field trials	Rhizosphere6: 89-97
	Optimization of culture conditions	African Journal of Clinical and

	for antimetabolite production by a rare tea garden actinobacterial isolate, Amycolatopsis sp. ST-28	Experimental Microbiology20(3): 209-220
	Antimicrobial potential of Actinobacteria from a lime stone mining site in Meghalaya.	Journal of Pure and Applied Microbiology13 (2): doi 10.22207/JPAM.13.2.
Dr. Bhaben Tanti	Screening of drought tolerant rice through morpho-physiological and biochemical approaches.	Biocatalysis and Agricultural Biotechnology (Elsevier), 15, 150-159. 2018
	Antioxidant Protection mechanisms reveal significant response in drought-induced oxidative stress in some traditional rice of Assam, India.	Rice Science (Elsevier), 25 (4), 185-196. 2018
	Arsenic stress responses and tolerance in rice: physiological, cellular and molecular approaches.	Rice Science (Elsevier), 25 (5), 235–249. 2018
	Morpho-physicochemical and cooking characteristics of traditional aromatic Joha rice (Oryza sativa L.) of Assam, India.	Biocatalysis and Agricultural Biotechnology (Elsevier), 16, 644-654. 2018
	Habitat distribution modeling for reintroduction and conservation of Aristolochia indica L. - a threatened medicinal plant in Assam, India	Journal of Threatened Taxa10 (11), 12531-12537. 2018
	Lectotypification of Calamus nambariensis (Arecaceae).	Nordic Journal of Botany (Wiley), 36 (10), e01953. 2018
	Habitat distribution modelling for improving conservation status of Brucea mollis Wall. ex Kurz.–An endangered potential medicinal plant of Northeast India.	Journal for Nature Conservation (Elsevier), 43, 104-110. 2018
	Habitat mapping, population size and preventing extinction through improving the conservation status of Calamus nambariensis Becc.-an endemic and threatened cane of Assam, India.	Acta Ecologica Sinica (Elsevier), doi.org/10.1016/j. chnaes.2018.03. 2018
Dr. Kumananda Tayung	Antimicrobial secondary metabolites of an endolichenic *Aspergillus niger* isolated from lichen thallus of Parmotremaravum	Natural Product Research: 2018 DOI:10.1080/14786419.2018.1544982
	Funiculosone, a substituted dihydroxanthene-1,9-dione with two of its analogues produced by an endolichenic fungus Talaromycesfuniculosus and their antimicrobial activity	Phytochemistry: 2019, 157: 175–183
Dr. Namita Nath	Phlogacanthus parviflorus T. Anders (Acanthaceae) A new addition to the Flora of Assam.	Journal of Emerging Technologies and Innovative Research May 2019 vol.-6(5):85-87ISSN:2349-5162
	Effect of various acid concentrations on seed germination of Sapindus mukorossi Gaertn.	Research Journal of Social and Life Sciences. June, 2019 Vol.8:176-183ISSN: 0973-3914
	Ethnobotany of Nogin and Poro Rice Beer of missing Tribe of Dibrugarh District,Assam	Ajanta Vol.8(2):143-151.ISSN: 2277-5730
	Phyto-assisted rapid biosynthesis of silver nanoparticles using leaf extract of Croton caudatus Geisel and assessment of their dye degradation and antibacterial activity.	International Journal of Scientific Research and Reviews. 8(2): 2791-2808. ISSN: 2279-2808

	Palynotaxonamic survey of some species of Lythraceae from Jalukbari Area, Assam	Ajanta . Vol.8(2):168-174.ISSN: 2277-5730
	Epidermal and palynological study of some species of Rutaceae under the Tribe Clausenaceae.	Journal of Emerging Technologies and Innovative Research 6 (5): 636-645. ISSN: 2349-5162
	Foliar epidermal characters and petiole anatomy of two species of PhlogacanthusNees(Acanthaceae) from Assam.	Research Journal of Social and Life Sciences. June, 2019 Vol.8:173-180. ISSN: 0973-3914
Dr. Nabanita Bhattacharyya	An aspartate-specific solute-binding protein regulates protein kinase G activity to control glutamate metabolism in mycobacteria.	mBio (American Society for Microbiology) 9:e00931-18. https://doi.org/10.1128/mBio.00931-18. 31st July, 2018
Dr Hemen Deka	Current understanding on industrial organic waste management by employing Eisenia fetida	International Journal of Ecological Bioscience and Biotechnology Article in Press (Accepted for Publication in January,2019
Dr. Souravjyoti Borah	Impatiens kamrupana (Balsaminaceae): a new species from Assam, India.	Phytotaxa. 395 (1): 035–040
	Monolophuscoenobialis (Zingiberaceae), a new addition to the flora of India from Arunachal Pradesh.	The Journal of Japanese Botany. 94(4): 259-262.
	Lectotypification and amended description of twospecies of Impatiens (Balsaminaceae) fromNortheast India.	Nelumbo. 60(2): 103-109.

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Dr. Dhruva Kumar Jha	Metabolic Diversity of Penicillium	In: New and Future Developments in Microbial Biotechnology and Bioengineering, (Edited by Vijai Kumar Gupta and Susana Rodriguez-Couto) Elsevier, Amsterdam, pp 217-234, (https://doi.org/10.1016/B978-0-444-63501-3.00012-0.)
Dr. Partha Pratim Baruah	Phytoplankton diversity and seasonality in a crude oil contaminated wetland of upper Assam, India	Algae Bioprospecting. Editors M.N. Noor S.K. Bhatnagar Shashi K. Sinha. Published by Society For Plant Research India: 258-273
Dr. Bhaben Tanti	Phytochemical analysis and antioxidant activities of Homalomena aromatica Schott.	Journal of Pharmacognosy and Phytochemistry, 8 (1), 1379-1385. 2019
	Morphological investigations of the fine structure of freshwater diatom frustules.	Journal of Advanced Microscopy Research (APS), 13, 417-421. 2018
	In vitro callus induction and indirect organogenesis of Brucea mollis Wall.ex Kurz – A potential medicinal plant of Northeast India.	South African Journal of Botany (Elsevier) 119, 203-211. 2018
	Habitat distribution modelling and reinforcement of Elaeocarpus serratus L. - A threatened tree species of	Acta Ecologica Sinica (Elsevier), doi.org/10.1016/j. chnaes.2018.06. 2018

	Assam, India for improvement of its conservation status.	
	Regeneration of Plantlets from Rhizome Bud Explants of Lasia spinosa (Lour.) Thwaites- A Medicinal Plants of Assam.	Int. J. Life. Sci. Scienti. Res, 4 (3), 1736-1743. 2018
	Cytotoxic effect of acridine orange and ethidium bromide on Allium cepa L. and Oryza sativa L.,	Bioscience Discovery, 9 (2), 251-259. 2018
	Phytochemical screening and antioxidant activity of leaf extract of Phlogacanthus thyrsiflorus Nees. – a medicinal plant of Assam, India.	Bioscience Discovery. 9 (2), 237-243. 2018
Dr. Namita Nath	Ethnobotanical knowledge to cure piles band fistula as practiced in Kamrup(Rural) district of Assam	World Journal of Pharmaceutical Research. Vol.7. Issue 19, 717-725 [ISSN:2277-7105] 2019

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications
Dr. Partha Pratim Baruah (Ed)	Recent trends in Life Sciences	July, 2018
Dr. Bhaben Tanti	Comparative metabolomics approach towards understanding chemical variation in rice under abiotic stress. In: Advances in Rice Research for Abiotic Stress Tolerance;	Woodhead Publishing, (Elsevier), pp. 537-550. 2019
Dr. Namita Nath	20)CBCS New Syllabus(GU) Botany Text Book for B. Sc. 1st Semester (REGULAR & GENERIC COURSE) .Ashok Publication,Assam	2019(Main Author)
	Udvidjata Khadya Samagri.2018(2nd Edition)..(On Economic uses of plants)ISBN: 978-93-84096-29-8. Ashok Publication,Assam	2018(Sole Author)
	Amar Pacholibor Aru Gunagun.2018(2nd Edition).ISBN: 978-93-84095-87-1 Ashok Publication,Assam	2018(Sole Author)
	Bichitraguni Pholbur. .ISBN: 978-93-84095-85-7(2nd Edition) Ashok Publication,Assam	2018(Sole Author)
	A Text Book for B. Sc. 1stSemester..ISBN 978-93-84846-23-7.2018.Ashok .Publication,Assam	2018(Main Author)
	Sundar phulbur. (2nd Edition)ISBN: 978-93-84095-86-4 Ashok Publication,Assam	2018(Sole Author)
	A Text Book for B. Sc. 6thSemester.N.Nath&D.Barmon.ISBN 978-93-84846-95-4.2018.Ashok Publication,Assam	2018(Main Author)

Chapter-B

28.Placement record during the period (Please state briefly):

Placement detail	No. of students got placement
CSIR UGC NET-JRF, June 2018	
SLET 2018 (Result date: 24th July, 2018)	10
SLET 2019 (Result date: 3rd March, 2019)	16
Assistant Professor	05
TET qualified	02
Private Sector employment	08
Civil Services qualified	01

29.Placement services provided to students by the Department/Centre, if any: **Counseling programmes are arranged by the Department to inform / persuade the students about new employment opportunities and competitive examinations.**

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report: Nil

31. Departmental Library :

a)	No. of Books as on 31.03.2019	969
b)	New Books procured during the period	53
c)	No. of Journals as on 31.03.2019	Nil
d)	New Journals procured during the period	Nil
e)	No. of users during the period :	180

32. Departmental publications : Nil

33. Activities and support from the Alumni Association of the Department/Centre: **Members of Alumni Association actively participated and provided financial aid towards organizing one national and one International seminar.**

34. Activities and support from the Parent-Teacher Associations if any : Nil

35. Involvement in Community services: Nil

36. Provision for financial aid to students in the Department/Centre, if any: Nil

37. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated: **Feedback forms are supplied to the students appearing final semester examinations.**

38. Information on up to five Good Practices followed by the Department/Centre:

i) Exposure trips are arranged for students, during which they visit Experimental Gardens, reserve forests, national Parks, reputed educational and research institutes within India.

ii) The Department organizes academic interactions with reputed scientist/professors

iii) Remedial Classes are taken

iv) Vermicomposting is practiced for management of leaf litters and other biowaste

39. Detail the plans of the Department/Centre/Institute for the next year:

- **Renovation and up gradation of Departmental Conference Room**
- **Renovation and up gradation of Departmental Museum**
- **Renovation of M Sc Class Rooms**
- **Addition of new equipments to the CIF**

Head, Dept. of Botany

ANNUAL REPORT : DEPARTMENT OF CHEMISTRY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1.a. Name of the Department : CHEMISTRY
b. Year of establishment : 1955
2. Head of the Department : Prof. Dilip Kumar Kakati
3. Details of academic staff :

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ST/ OBC/PH	Citation index
1.	Prof. D. C. Deka	Professor	Full time	M	Gen	745
2.	Prof. B. K. Das	Professor	Full time	M	Gen	933
3.	Prof. D. K. Kakati	Professor	Full time	M	Gen	289
4.	Prof. C. Medhi	Professor	Full time	F	Gen	529
5.	Prof. A. K. Talukdar	Professor	Full time	M	Gen	388
6.	Prof. P. Phukan	Professor	Full time	M	Gen	2491
7.	Prof. D. K. Das	Professor	Full time	M	Gen	517
8.	Dr. R. J. Sarma	Associate Professor	Full time	M	Gen	1019
9.	Dr. S. K. Gogoi	Assistant Professor	Full time	M	OBC	781
10.	Dr. D. Mahanta	Assistant Professor	Full time	M	Gen	790
11.	Dr. S. Brahma	Assistant Professor	Full time	M	ST(P)	269
12.	Dr. R. Thakuria	Assistant Professor	Full time	M	Gen	1040
13.	Dr. D.J. Kalita	Assistant Professor	Full time	M	Gen	55
14.	Dr. T. K.Goswami	Assistant Professor	Full time	M	Gen	470
15.	Dr. N. Nath	Assistant Professor	Full time	M	OBC	197
16.	Dr. S.Ghosh	UGC-Assistant Professor	Full time	M	Gen	656
17.	Dr Bhabatosh Banik	DST-ISPIRE FELLOW	Full time	M	SC	415

4. Course(s)/Programme offered : M.Sc., PGDAC, Ph.D.
5. Special Branches in the Department/Centre : Organic Chemistry, Inorganic Chemistry, Physical Chemistry
6. New Academic Programme initiated during the period under report : NIL
7. Innovation in Curricular design : Choice Base Credit System (CBCS) adopted
8. Inter disciplinary Programme started : NIL
9. Department/Centre under : SAP/ COSIST (ASSIST)/ DST/ FIST: SAP: DSA-II & DST-FIST Level II
10. Total number of Research Scholar working at present :

a) Full Time: 106	b) Part time: NIL

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	II	46	22	24	46	0	4	4	1	4	5	0	1	1	6	4	10	0	0	0

	IV	46	26	20	46	1	3	4	2	3	5	1	0	1	8	5	13	0	0	0
M.Phil.																				
Ph.D.	2018 batch	29	8	19	27	0	0	0	1	1	2	0	0	0	4	9	13	0	0	0
Others PGDAC	II	20	8	8	16	0	1	1	1	0	1	0	0	0	3	1	4	0	0	0

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
15	108	16

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
0.138	0.937

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
CHEMISTRY	16	30	46	0	3	3	2	3	5	0	1	1	5	6	11	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
CHEMISTRY	12	29	41	0	3	3	2	3	5	0	0	0	2	6	8	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Dr. Moon Moon Das	Isolation, purification and identification of bioactive compounds in leaf extracts of the plant *Glycosmis pentaphylla*	Prof. D. C. Deka
Dr. Anamika Kalita	Rice Beer used by *Bodos* with special reference to Kokrajhar District in Assam: Methodology and Physico-chemical Characterization	Prof. D. C. Deka
Dr. Anjumoni Talukdar	A novel heterogeneous catalyst from water hyacinth (*Eichhornia Crassipes*): Its preparation, characterization and application in organic reaction	Prof. D. C. Deka
Dr. Monsumi Gogoi	Studies on the synthetic use and catalytic applications of transition metal complexes	Prof. B. K. Das
Dr. Doli Rani Das	Synthesis, Characterization and Catalytic Study of Transition and Inner Transition Metal Loaded MCM-48 and Sapo	Prof. A. K. Talukdar
Dr. Depanjali Pathak (March 2018)	A study on organocatalytic C–C and C–O bond forming reactions using density functional theory methods	Prof. P. Phukan
Dr. Mridusmita Goswami (May 2018)	Surface modification of activated carbon prepared from tea leaf and their applications for adsorption and catalysis	Prof. P. Phukan

Subrat Jyoti Borah 2018	Synthesis of Supported Metal Nanoparticles and Their Electrochemical and Catalytic applications.	Prof. D. K. Das
Sangita Haloi 2018	Modifying electrode surface to obtain new voltametric sensor for Dopamine.	Prof. D. K. Das
Dr. Kakali Devi	Studies on the Synthesis and Characterization of Urea-derived Supramolecular Receptors for Fluoride Anion	Dr. R. J. Sarma
Dr. Barnali Deka	Examining the potential of a few 1,3-dinitrobenzene based chromogenic receptors for halides	Dr. R. J. Sarma

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
5	12	06	15	

16. Important students' activities and achievements and awards during the period (Please state briefly):

Sl. No.	Details
1.	Dr. Subarna Jyoti Kalita, PhD student of Prof. D. C. Deka, selected for PDF with Prof. Dr. Yi-Yong Huang, Department of Chemistry School of Chemistry, Chemical Engineering and Life Science Wuhan University of Technology, Wuhan 430070, China.
2.	Atrayee Banaspati, PhD student of Dr. T. K. Goswami, achieved 'Best Oral Presentation' at Regional Seminar on Science for Sustainable Development held on 9th Jan, 2019
3.	Best poster award by Mrs. Sukanya Gogoi, PhD student of Dr. N. Nath, at NMRS conference held at AIIMS, New Delhi, February 2019
4.	Sibani Majumder, PhD student of Dr. D Mahanta has received Best Orel Presentation award in International Conference on Recent Advances at Interfaces of Physical and Life Sciences (RAIPLS-2019) Jan 28-Jan 30, 2019
5.	Gayatri Konwar, PhD student of Dr. D Mahanta has received Best Poster Presentation award in International Conference on Recent Advances at Interfaces of Physical and Life Sciences (RAIPLS-2019) Jan 28-Jan 30, 2019

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1.	Dr. Tridib Kumar Goswami	Science Academies' Lecture Workshop on "Emgering Trends in Chemical Sciences"	Nov 8-10, 2018	Science Education Programme, Science Academies', India

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Dr. R. Thakuria	Guest editor for virtual special issue on "π–π Stacking in Crystal Engineering: Fundamentals and Applications" of Crystal Growth & Design, ACS, **2019**.	ACS
Dr. R. Thakuria	Emerging Investigators in Crystal Growth & Design	ACS
Dr. D. Mahanta	JNCASR Visiting Fellowship Award	JNCASR

19 Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
NIL	NA	NA	NA

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Prof. P. Phukan	Activation and functionalization of organic molecules using sulphonamide based reagents	DST	2017-20	49.8 lakhs
Prof D K Das	Fluorescent self assembled monolayers on quartz glass substrates: Sensing metal ions and small biomolecules.	DST	2017-2020	36,40000.00
Prof. D K Das	Developing paper strip sensor for necked eye detection of fluoride in drinking water	ASTEC	2018-2020	2,40000.00
Dr. R. J. Sarma	Design and Syntheses of Tryptophan based Ligands for the Recognition of Halide Anions	UGC	2014-2018	9.964 lakhs
Dr. D. Mahanta	Design and Synthesis of Hierarchically Porous Carbon- Metal Oxide-Conducting Polymer Composites for Electrochemical Supercapacitors	SERB-DST	2018-2021	37,95,000/-
Dr. T. K. Goswami	Targeted Organometallic Compounds for Photodynamic Destruction of Cancer	DST-INSPIRE	5 years	35 lakhs
Dr. T. K. Goswami	Photo-induced Anticancer Activities of Targeted Ferrocene-conjugated 3d Metal Complexes	UGC	2 years	10 lakhs
Dr. S.Ghosh	"Synthesis of Polycarbonates from the Greenhouse Gas CO2 by Supramolecular Catalysts Designed via Co-Ordination Driven Self-assembly	DST SERB	3 years	31 lakh
Dr. N. Nath	Development of residual chemical shift anisotropy based NMR methods for determination of small molecule constitutions and configurations	DST-SERB (Early Career Research Award)	2018-2021	32.12 lakhs
Dr. B. Banik	Stimuli responsive nanoconstructs for targeted delivery, site-selective release and activation of combination drugs	DST, India	5 years	35 lakhs

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks
1.	NIL	NIL	NIL

21. Academic distinction earned by the **students** during (2018-19): NIL

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguished visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Prof. Uday Mitra	Department of Organic Chemistry, IISc Bangalore.	Delivered lecture in the department
Prof. Patrick Lam	Distinguished professor; Blumberg Institute, USA	Delivered lecture in the department
Prof. Naoki Toshima	Tokyo University of Science Yamaguchi, Japan	Delivered lecture in the department
Prof. T. K. Chandrasekhar	Senior Professor, NISER Bhubneswar	Delivered lecture in the department
Dr. Bidyut Bikash Sarma	Weismann Institute of Science, Israel	Delivered lecture in the department
Prof. A. R. Chakravarty	IPC, IISc Bangalore	Deliverd lecture in Science Academies' Lecture Workshop on "Emerging Trends in Chemical Sciences"
Prof. M. Palaniandavar	Bharatidasan University	do
Dr. Mayilmurugan	Madurai Kamaraj University, Tamil Nadu	do
Prof. A. Chattopadhya	IIT Guwahati, Assam	do
Prof. T. Punnyamurthy	IIT Guwahati, Assam	do
Prof. T. Chakravarty	IACS Kolkata	do

23. Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:

During this period, the department acquired advanced research facilities including High resolution mass spectrometer (GU, Waters, 160 lakh), Differential scanning calorimetry (GU, Mettler-Toledo, Rs. 22.5 lakh), BOD incubator (RUSA, Rs. 1.52 lakhs), Vacuum Pump (Rs. 97,950/-) Refrigerated Circulating Bath (Rs. 72,450/-), High performance computing (RUSA, Rs. 26 lakhs Approx.) and fume hoods in two research laboratories (Rs. 5.27 lakhs). The department also upgraded the crystallography databases, viz. CCDC and ICDD, which are being used extensively by the research students and faculty.

The CIF acquired new along with AFM (Rs. 35 lakhs Approx.) and DLS (Rs. 20 lakhs Approx.) instruments during this period from the grants provided under RUSA.

Second floor of the chemistry department building is being constructed.

24. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:

(i) Department has provided computer and internet facility (& wifi) to all teachers and office staff. The PG students have been provided a computer laboratory with twenty computers for their computational and course related activities.

(ii) The research students now have access to High performance computing facility, with 'Quantum Espresso' software packages.

25. Technology up gradation in the Department/Centre during the period 2018-19:

(i) The department has set up a Computation facility for the students which can be used by students for their research requirements.

(ii) The classrooms are made ICT compatible.

26. Linkages developed with National/International/Academic/Research Bodies :

Name of the Faculty	Collaboration with
Prof. P. Phukan	Dr. P. J. Saikia, CSIR-NEIST, Jorhat
Dr. R. J. Sarma	Dr. R. L. Goswami (CSIR-NEIST Jorhat), Dr. M. R. Das (CSIR-NEIST Jorhat)
Dr. R. Thakuria	Dr. A. Basak (BHU) and Dr. P. Baruah (GU-IST)
Dr. S. Ghosh	Dr. K. Suntharalingam (King's College London)
Dr. S. Ghosh	Gobinda Chandra De, Coochbehar Panchanan Barma University
Dr. D. Mahanta	Prof. Sebastian C Peter, JNCASR, India
Dr. D. Mahanta	Dr. Kalyan Raidangia, IIT Guwahati
Dr. B. Banik	Dr. V. G. M. Naidu, NIPER Guwahati

27. Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Prof. D. C. Deka	One (International)	Nil
Prof. B. K. Das	Recent Advances in Inorganic Chemistry, IISc Bangalore, July 2018 (Invited Lecture)	1. STC on Green Technology for Sustainable Development, Assam Engineering College, December 2018
Prof. B. K. Das	46th National Seminar on Crystallography, NIMHANS Bangalore, June 2018 (Invited Lecture)	2. Workshop on X-ray Crystallography, Tripura University, October 2018
Prof. B. K. Das	International Conference on Frontiers in Chemical Sciences, IIT Guwahati, December 2018 (Chaired a Session)	NIL
Prof. B. K. Das	International Seminar and Annual Convention of Chemists, Naugachia, Bihar, December, 2019 (Invited	NIL
Prof. P. Phukan	05	NIL
Dr. R. J. Sarma	Science for Sustainable Development (SSD-2019) organized by Department of Chemistry, B. Borooah College, held on 09-01-2019	NIL
Dr. R. J. Sarma	Science Academies' Lecture Workshop on "Emerging Trends in Chemical Sciences", held in the Department of Chemistry, Gauhati University during November 08-10, 2018	NIL
Dr. R. Thakuria	03	01
Dr. T. K. Goswami	02	01
Dr. N. Nath	Attended one international held at AIIMS, New Delhi in Feb, 2019 and delivered a talk.	NIL
Dr. B. Banik	01	01

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Name of the faculty	Details
Prof. A. K. Talukdar	Workshop on Laboratory Safety, D. K. College, Mirza (Resource Person) on In September 2018
Prof. A. K. Talukdar	Annual Lecture as resource person on "Why we should study Chemistry and others" at Nalbari College, 9th September 2019
Prof. P. Phukan	Invited Speaker: International Symposium in Chemistry (OrganiX-2018), 20-21 Dec 2018, Tezpur University, Assam
Prof. P. Phukan	Invited Speaker: National Seminar on contemporary challenges in chemistry, NEHU, Shillong, Meghalaya, 20-21 November, 2018
Prof. P. Phukan	Invited Speaker: National conference on *"The Frontiers in Chemical Biology"* CSIR-NEIST, Jorhat, 26-28 June, 2018
Prof. P. Phukan	Invited Speaker and Session Chair: National Seminar on "Co-production of science & social order: a social science perspective on gifts of science to society

	for overall development" Nowgong College, Nagaon, Assam, August 17-18, 2018
Prof. P. Phukan	Chairman of a Session of 23rd CRSI-National Symposium in Chemistry, IISER, Bhopal during 13-15 July, 2018
Dr. R. Thakuria	Organizing Committee member and Invited talk in a Workshop on X-ray Crystallography organized by SAIF, Gauhati University, 27th July to 1st August 2018.
Dr. R. Thakuria	Invited talk in an International Conference FCASI-2018 organized by University of Rajasthan, 21st and 22nd December, 2018.
Dr. R. Thakuria	Invited talk in a Lecture Series on Materials Science organized by Department of Applied Sciences, GU-IST on 29th March 2019.

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. N. Nath	NIL	Attended one orientation course held in August 2018 at HRDC, Gauhati University
Dr. S. Ghosh	NIL	Orientation OP118 in Gauhati University

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Prof. D. C. Deka	Chemical analysis of traditional food additive dokhora khar derived from water hyacinth (Eichhornia crassipes)	*Current Nutrition & Food Science* **2019**, *15*, 1-5.
Prof. D. C. Deka	A molecular hybridization approach for simple and expeditious synthesis of novel spiro[oxindoline-3,4'-isoxazolo[5,4-*b*]pyrazolo[4,3-*e*]pyridines] in water	*ChemistrySelect* **2018**, *3*, 7862-7866.
Prof. D. C. Deka	Occurrence of estrogenic heavy metals in three major fresh water bodies of Guwahati city, Assam, India	*International journal of basic and applied research* **2018**, *8(7)*, 839-49.
Prof. D. C. Deka	Antioxidant-activity and physico-chemical indices of the rice beer used by the *Bodo* community in North-East India	*Journal of the ASBC* **2018**, 76(2), 112-116.
Prof. D. C. Deka	A quick micelle catalyzed one-pot synthesis of spiro[indoline-3,4'-pyrano[2,3-*c*]pyrazoles] in water at room temperature	*ChemistrySelect* **2018**, 3(5), 1512-1516.
Prof. D. C. Deka	6. 2-Phenyl-2,3-dihydrobenzo[*d*]thiazole: A Mild, Efficient, and Highly Active in situ Generated Chemoselective Reducing Agent for the One-Pot Synthesis of 5-Monoalkylbarbiturates in Water	*Synlett* **2018**, *29*, 477-482.
Prof. B. K. Das	Study of distorted octahedral structure in 3d transition metal complexes using XAFS	*Chemical Physics Letters* **2018**, *692*, 382-387.

Prof. B. K. Das	Oxidation of diphenylmethane catalysed by complexes of the type $Cu_2(\mu\text{-}O_2CR)_4(4\text{-}CNpy)_2$	*Journal of the Indian Chemical Society* **2018**, *95*, 707-712.
Prof. B. K. Das	Synthesis and Crystal Structure of a Triply-bridged Binuclear Cobalt(II) Dichloroacetate	*Chemical Science Transactions* **2018**, 7, 112-118.
Prof. B. K. Das	Dimeric Copper(II) Tetracarboxylates as Catalysts in the Selective Epoxidation of Styrene	*Polyhedron* **2018**, *155*, 351-358.
Prof. A. K. Talukdar	Removal of Cu(II) and Pb(II) from Aqueous Solutions Using Nanoporous Materials	*Russian Journal of Physical Chemistry, A* **2018**, *92*, 974–981.
Prof. A. K. Talukdar	Highly effective methylated Ti MCM-41 catalyst for cyclohexene oxidation	*Materials Research Bulletin* **2018**, 103, 38-46.
Prof. A. K. Talukdar	Phenol hydroxylation over Fe and Co-loaded mesoporous MCM-48	*Journal of Porous Materials* **2019**, *26*, 1185-1196
Prof. A. K. Talukdar	Facile Synthesis of Titanium-Loaded MCM-48 as an Efficient Heterogeneous Catalyst for Selective Oxidation of Aniline to Azoxybenzene	*ChemistrySelect* DOI: https://doi.org/10.1002/slct.201701581
Prof. P. Phukan	Cu-doped $CoFe_2O_4$ nanoparticles as magnetically recoverable catalyst for C-N cross-coupling reaction.	*Catal. Commun.* **2018**, *109*, 38-42.
Prof. P. Phukan	$TsNBr_2$ promoted decarboxylative bromination of α,β-unsaturated carboxylic acids	*Tetrahedron Lett.* **2018**, *59*, 4593-4596
Prof. P. Phukan	Copper-Catalyzed Stereoselective Domino Synthesis of (*Z*)-3-Methyleneisoindolin-1-one	*ChemistrySelect* **2018**, *3*, 2474– 2478
Prof. P. Phukan	Condensation product of 2-hydroxy-1-napthaldehyde and 2-aminophenol: Selective fluorescent sensor for Al3+ ion and fabrication of paper strip sensor for Al3+ ion	*Inorg. Chim. Acta* **2018**, *469*, 202–208
Prof. P. Phukan	Sulfonic Acid Functionalized Activated Carbon Made from Tea Leaves as Green Catalyst for Synthesis of 2-Substituted Benzimidazole and Benzothiazole	*Res. Chem. Intermediat.* **2018**, 44, 1597-1615
Prof. P. Phukan	Metal-free synthesis of secondary amines by the reaction of tosyl triazene and aryl boronic acid	*Synth. Commun.* **2018**, *48*, 656–662
Prof. P. Phukan	Copolymer with long chain alkyl group as stabilizer in the preparation of biodegradable polyesters particle	*Polymer. Adv. Technol.* **2018**, *29*, 1086-1093
Prof. P. Phukan	Formation of esters and amides via metal-free $C_{sp}{}^2$-$C_{sp}{}^3$ bond cleavage of α-nitro ketone: Mechanistic insight to the reaction pathway	*Indian J. Chem.* **2018**, *57B*, 523-533
Prof. P. Phukan	Facile, catalyst free cascade synthesis of sulfonyl guanidines via carbodiimide coupling with amines	*Chem. Commun.* **2019**, *55*, 1418-1421
Prof. D K Das	Condensation product of 4-methoxybenzaldehyde and ethylenediamine: "off-on" fluorescent sensor for cerium(III).	*J Fluorescence* **2018**, *28*, 1357-1361
Prof. D K Das	Efficient Baeyer-Villiger Oxidation Catalysed by Silver Nanoparticles Stabilised on Modified Montmorillonite.	*Catalysys Letter* **2018**, 148, 3669-3677
Prof. D K Das	Silver nanoparticle modified Pt	*Indian J Chem.* **2018**, *57A*, 485-489

	electrode as voltammetric and electrochemical impedance sensor for hydrogen peroxide in live biological cells.	
Prof. D K Das	Nickelhexacyanoferrate modified Glassy Carbon electrode as voltammetric and electrochemical impedance spectroscopic sensor for thiocyanate ion.	*Chemistry Select* **2018**, *3*, 481-485
Prof. D K Das	Condensation product of 2-hydroxy-1-napthaldehyde and 2-aminophenol: Selective fluorescent sensor for Al^{3+} ion.	*Inorg. Chim. Acta*, ***2018***, *469*, 202-208
Dr. R. J. Sarma	Mechano-Luminescent Behavior of a Pyridine-Containing Anthracene Derivative: Role of Aromatic Stacking Interactions	*Crystal Growth and Design* **2018**, *18*, 4963-4970
Dr. R. J. Sarma	Cooperative Binding of Fluoride Anions to a Flexible Cystine-Based Receptor Containing Two 3,5-Dinitrobenzamide Motifs	*ChemistrySelect* **2018**, *3*, 5786-5791
Dr. R. J. Sarma	Synthesis of Cu–Cr diketo, sublimable, eutectic composite complex, rod crystals from LDH as suitable MOCVD precursor of $CuCr_2O_4$ catalysts upon ceramic preforms for N_2O decomposition	*Materials Today Chemistry* **2018**, *7*, 40-52
Dr. S. K. Gogoi	Nitrogen-doped carbon dots as fluorescence ON–OFF–ON sensor for parallel detection of copper(II) and mercury(II) ions in solutions as well as in filter paper-based microfluidic device	*Nanoscale Adv.* **2019**, *1*, 592-601.
Dr. D. Mahanta	Surface modified polypyrrole for the efficient removal of phenolic compounds from aqueous medium	*Journal of Environmental Chemical Engineering* **2018,** *6 (2),* 2588-2596.
Dr. D. Mahanta	Kinetic and Equilibrium Modeling of Anionic Dye Adsorption on Polyaniline Emeraldine Salt: Batch and Fixed Bed Column Studies	*Fibers and Polymers* **2019,** *20 (6),* 1226-1235.
Dr. R. Thakuria	Mechanochemical Synthesis of Olanzapine Salts and Their Hydration Stability Study Using Powder X-Ray Diffraction.	*Cryst. Growth Des.* **2018**, *18*, 2138–2150.
Dr. R. Thakuria	Preparation of Pyrazinamide Eutectics Vs. Cocrystals Based on Supramolecular Synthon Variations	*Cryst. Growth Des.* **2018**, *18*, 6640-6651.
Dr. R. Thakuria	The Nature and Applications of π-π Interactions- A Perspective.	*Cryst. Growth Des.* **2019**, *19*, 523–528.
Dr. R. Thakuria	Cocrystal dissociation under controlled humidity: A case study of caffeine-glutaric acid cocrystal polymorphs	*Org. Pros. Res. Dev.* **2019**, *23*, 845-851.
Dr. R. Thakuria	A revisit to the multi-component reaction of indole, aldehyde, and N-substituted aniline catalyzed by PMA–SiO_2	*Monatsh. fur. Chem.* **2018**, *149*, 2245-2252.
Dr. D. J. Kalita	*Strategical Designing of Diketopyrrolopyrrole-Thiophene Based Donor-Acceptor Type Organic Oligomers and Study Their Transport Properties: A DFT/TD-DFT Perspective*	*Chem. Phys. Lett. 730 &15 May 2019*

Dr. D. J. Kalita	*Experimental cum Theoretical study of Cryptand Derivative Having High Selectivity and Sensitivity Towards Zn Ion, Journal of Molecular Structure, 1194 (2019) 178-186*	*Journal of Molecular Structure, 1194* & 15 October **2019**
Dr. T K. Goswami	Photocytotoxic copper(II) complexes of N-salicylyl-L-tryptophan and phenanthroline bases	*J. Inorg. Biochem.* **2019**, *191*, 60-68.
Dr. T K. Goswami	Cell-Penetrating Protein/Corrole Nanoarticles	*Scientific Reports* **2019**, *9*, 1-11 (2294).
Dr. S. Ghosh	New Set of Multicomponent Crystals as Efficient Heterogeneous Catalysts for the Synthesis of Cyclic Carbonates of One-Dimensional Coordination Polymer Catalyst	*ACS Omega* **2019**, *4*, 5221-5232.
Dr. S. Ghosh	A Triangular Platinum(II) Multinuclear Complex with Cytotoxicity Towards Breast Cancer Stem Cells	*ACS Omega* **2019**, *4*, 14074-14084.
Dr. S. Ghosh	Green Synthesis of Novel Polyesterurethane Materials from Epoxides and Carbon Dioxide by New Set	*Angewandte Chemie, Int. Ed.* **2019**, *58*, 12059-12064.
Dr. N. Nath	Insight into old and new pure shift nuclear magnetic resonance methods for enantiodiscrimination.	*Magn. Reson. Chem.* **2018**, 876-892.
Dr. B. Banik	Nanotechnology-mediated crossing of two impermeable membranes to modulate the stars of the neurovascular unit for neuroprotection	*Proc. Natl. Acad. Sci. USA* **2018**, *115 (52)*, E12333 - E12342.

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Prof. D. C. Deka	Chemical analysis of traditional food additive dokhora khar derived from water hyacinth (Eichhornia crassipes)	*Current Nutrition & Food Science* **2019**, *15*, 1-5.
Prof. D. C. Deka	A molecular hybridization approach for simple and expeditious synthesis of novel spiro[oxindoline-3,4'-isoxazolo[5,4-*b*]pyrazolo[4,3-*e*]pyridines] in water	*ChemistrySelect* **2018**, *3*, 7862-7866.
Prof. D. C. Deka	Occurrence of estrogenic heavy metals in three major fresh water bodies of Guwahati city, Assam, India	*International journal of basic and applied research* **2018**, *8(7)*, 839-49.
Prof. D. C. Deka	Antioxidant-activity and physico-chemical indices of the rice beer used by the *Bodo* community in North-East India	*Journal of the ASBC* **2018**, 76(2), 112-116.
Prof. D. C. Deka	A quick micelle catalyzed one-pot synthesis of spiro[indoline-3,4'-pyrano[2,3-*c*]pyrazoles] in water at room temperature	*ChemistrySelect* **2018**, 3(5), 1512-1516.
Prof. D. C. Deka	6. 2-Phenyl-2,3-dihydrobenzo [*d*]thiazole: A Mild, Efficient, and Highly Active in situ Generated Chemoselective Reducing Agent for the One-Pot Synthesis of 5-Monoalkylbarbiturates in Water	*Synlett* **2018**, *29*, 477-482.

Prof. B. K. Das	Study of distorted octahedral structure in 3d transition metal complexes using XAFS	*Chemical Physics Letters* **2018**, *692*, 382-387.
Prof. B. K. Das	Oxidation of diphenylmethane catalysed by complexes of the type $Cu_2(\mu\text{-}O_2CR)_4(4\text{-}CNpy)_2$	*Journal of the Indian Chemical Society* **2018**, *95*, 707-712.
Prof. B. K. Das	Synthesis and Crystal Structure of a Triply-bridged Binuclear Cobalt(II) Dichloroacetate	*Chemical Science Transactions* **2018**, 7, 112-118.
Prof. B. K. Das	Dimeric Copper(II) Tetracarboxylates as Catalysts in the Selective Epoxidation of Styrene	*Polyhedron* **2018**, *155*, 351-358.
Prof. A. K. Talukdar	Removal of Cu(II) and Pb(II) from Aqueous Solutions Using Nanoporous Materials	*Russian Journal of Physical Chemistry, A* **2018**, *92*, 974–981.
Prof. A. K. Talukdar	Highly effective methylated Ti MCM-41 catalyst for cyclohexene oxidation	*Materials Research Bulletin* **2018**, 103, 38-46.
Prof. A. K. Talukdar	Phenol hydroxylation over Fe and Co-loaded mesoporous MCM-48	*Journal of Porous Materials* **2019**, *26*, 1185-1196
Prof. A. K. Talukdar	Facile Synthesis of Titanium-Loaded MCM-48 as an Efficient Heterogeneous Catalyst for Selective Oxidation of Aniline to Azoxybenzene	*ChemistrySelect* DOI: https://doi.org/10.1002/slct.201701581
Prof. P. Phukan	Cu-doped $CoFe_2O_4$ nanoparticles as magnetically recoverable catalyst for C-N cross-coupling reaction.	*Catal. Commun.* **2018**, *109*, 38-42.
Prof. P. Phukan	$TsNBr_2$ promoted decarboxylative bromination of α,β-unsaturated carboxylic acids	*Tetrahedron Lett.* **2018**, *59*, 4593-4596
Prof. P. Phukan	Copper-Catalyzed Stereoselective Domino Synthesis of (*Z*)-3-Methyleneisoindolin-1-one	*ChemistrySelect* **2018**, *3*, 2474– 2478
Prof. P. Phukan	Condensation product of 2-hydroxy-1-napthaldehyde and 2-aminophenol: Selective fluorescent sensor for Al3+ ion and fabrication of paper strip sensor for Al3+ ion	*Inorg. Chim. Acta* **2018**, *469*, 202–208
Prof. P. Phukan	Sulfonic Acid Functionalized Activated Carbon Made from Tea Leaves as Green Catalyst for Synthesis of 2-Substituted Benzimidazole and Benzothiazole	*Res. Chem. Intermediat.* **2018**, 44, 1597-1615
Prof. P. Phukan	Metal-free synthesis of secondary amines by the reaction of tosyl triazene and aryl boronic acid	*Synth. Commun.* **2018**, *48*, 656–662
Prof. P. Phukan	Copolymer with long chain alkyl group as stabilizer in the preparation of biodegradable polyesters particle	*Polymer. Adv. Technol.* **2018**, *29*, 1086-1093
Prof. P. Phukan	Formation of esters and amides via metal-free C_{sp^2}-C_{sp^3} bond cleavage of α-nitro ketone: Mechanistic insight to the reaction pathway	*Indian J. Chem.* **2018**, *57B*, 523-533
Prof. P. Phukan	Facile, catalyst free cascade synthesis of sulfonyl guanidines via carbodiimide coupling with amines	*Chem. Commun.* **2019**, *55*, 1418-1421
Prof. D K Das	Condensation product of 4-methoxybenzaldehyde and ethylenediamine: "off-on" fluorescent sensor for cerium(III).	*J Fluorescence* **2018**, *28*, 1357-1361
Prof. D K Das	Efficient Baeyer-Villiger Oxidation Catalysed by Silver Nanoparticles	*Catalysys Letter* **2018**, 148, 3669-3677

	Stabilised on Modified Montmorillonite.	
Prof. D K Das	Silver nanoparticle modified Pt electrode as voltammetric and electrochemical impedance sensor for hydrogen peroxide in live biological cells.	*Indian J Chem.* **2018**, *57A*, 485-489
Prof. D K Das	Nickelhexacyanoferrate modified Glassy Carbon electrode as voltammetric and electrochemical impedance spectroscopic sensor for thiocyanate ion.	*Chemistry Select* **2018**, *3*, 481-485
Prof. D K Das	Condensation product of 2-hydroxy-1-napthaldehyde and 2-aminophenol: Selective fluorescent sensor for Al^{3+} ion.	*Inorg. Chim. Acta*, **2018**, *469*, 202-208
Dr. R. J. Sarma	Mechano-Luminescent Behavior of a Pyridine-Containing Anthracene Derivative: Role of Aromatic Stacking Interactions	*Crystal Growth and Design* **2018**, *18*, 4963-4970
Dr. R. J. Sarma	Cooperative Binding of Fluoride Anions to a Flexible Cystine-Based Receptor Containing Two 3,5-Dinitrobenzamide Motifs	*ChemistrySelect* **2018**, *3*, 5786-5791
Dr. R. J. Sarma	Synthesis of Cu–Cr diketo, sublimable, eutectic composite complex, rod crystals from LDH as suitable MOCVD precursor of $CuCr_2O_4$ catalysts upon ceramic preforms for N_2O decomposition	*Materials Today Chemistry* **2018**, *7*, 40-52
Dr. S. K. Gogoi	Nitrogen-doped carbon dots as fluorescence ON–OFF–ON sensor for parallel detection of copper(II) and mercury(II) ions in solutions as well as in filter paper-based microfluidic device	*Nanoscale Adv.* **2019**, *1*, 592-601.
Dr. D. Mahanta	Surface modified polypyrrole for the efficient removal of phenolic compounds from aqueous medium	*Journal of Environmental Chemical Engineering* **2018**, *6 (2)*, 2588-2596.
Dr. D. Mahanta	Kinetic and Equilibrium Modeling of Anionic Dye Adsorption on Polyaniline Emeraldine Salt: Batch and Fixed Bed Column Studies	*Fibers and Polymers* **2019**, *20 (6)*, 1226-1235.
Dr. R. Thakuria	Mechanochemical Synthesis of Olanzapine Salts and Their Hydration Stability Study Using Powder X-Ray Diffraction.	*Cryst. Growth Des.* **2018**, *18*, 2138–2150.
Dr. R. Thakuria	Preparation of Pyrazinamide Eutectics Vs. Cocrystals Based on Supramolecular Synthon Variations	*Cryst. Growth Des.* **2018**, *18*, 6640-6651.
Dr. R. Thakuria	The Nature and Applications of π-π Interactions- A Perspective.	*Cryst. Growth Des.* **2019**, *19*, 523–528.
Dr. R. Thakuria	Cocrystal dissociation under controlled humidity: A case study of caffeine-glutaric acid cocrystal polymorphs	*Org. Pros. Res. Dev.* **2019**, *23*, 845-851.
Dr. R. Thakuria	A revisit to the multi-component reaction of indole, aldehyde, and N-substituted aniline catalyzed by PMA–SiO_2	*Monatsh. für. Chem.* **2018**, *149*, 2245-2252.
Dr. D. J. Kalita	*Strategical Designing of Diketopyrrolopyrrole-Thiophene Based Donor-Acceptor Type Organic Oligomers and Study Their Transport Properties: A DFT/TD-DFT Perspective*	*Chem. Phys. Lett. 730 &15 May 2019*
Dr. D. J. Kalita	*Experimental cum Theoretical study of Cryptand Derivative Having High Selectivity and Sensitivity Towards Zn*	*Journal of Molecular Structure, 1194* & 15 October **2019**

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Dr. T K. Goswami	Photocytotoxic copper(II) complexes of N-salicylyl-L-tryptophan and phenanthroline bases	*J. Inorg. Biochem.* **2019**, *191*, 60-68.
Dr. T K. Goswami	Cell-Penetrating Protein/Corrole Nanoarticles	*Scientific Reports* **2019**, *9*, 1-11 (2294).
Dr. S. Ghosh	New Set of Multicomponent Crystals as Efficient Heterogeneous Catalysts for the Synthesis of Cyclic Carbonates of One-Dimensional Coordination Polymer Catalyst	*ACS Omega* **2019**, *4*, 5221-5232.
Dr. S. Ghosh	A Triangular Platinum(II) Multinuclear Complex with Cytotoxicity Towards Breast Cancer Stem Cells	*ACS Omega* **2019**, *4*, 14074-14084.
Dr. S. Ghosh	Green Synthesis of Novel Polyesterurethane Materials from Epoxides and Carbon Dioxide by New Set	*Angewandte Chemie, Int. Ed.* **2019**, *58*, 12059-12064.
Dr. N. Nath	Insight into old and new pure shift nuclear magnetic resonance methods for enantiodiscrimination.	*Magn. Reson. Chem.* **2018**, 876-892.
Dr. B. Banik	Nanotechnology-mediated crossing of two impermeable membranes to modulate the stars of the neurovascular unit for neuroprotection	*Proc. Natl. Acad. Sci. USA* **2018**, *115 (52)*, E12333 - E12342.

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications
- NIL	NIL	NIL

28. Placement record during the period (Please state briefly): Students are placed at various research positions and regular jobs.

29. Placement services provided to students by the Department/Centre, if any: NIL

30. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report. Counseling is provided by the faculty members who are assigned as the mentors of the students.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	1450 (approx.)
b)	New Books procured during the period	150
c)	No. of Journals as on 31.03.2019	5 in regular subscription
d)	New Journals procured during the period	Do
e)	No. of users during the period :	MSc students and PhD students

32. Departmental publications : NIL

33. Activities and support from the Alumni Association of the Department/Centre : NIL

34. Activities and support from the Parent-Teacher Associations if any: Parent-teacher interaction program is conducted every year in the department. Parent-teacher interaction forum was formed. **Prof. B. K. Das** was the chairman, currently he is the Vice Chancellor of Bhattadev University, Bajali. **Dr N. Nath** is the Coordinator. The first meeting was held on 28-October-2017 in the Department premises. Parent-Teacher meet in this year is conducted on 1st August 2019.

35. Involvement in Community services:

(i) Organization of State Level Chemistry Olympiad

(ii) Outreach program is conducted for High School and Higher Secondary students by the faculty members of Chemistry department, GU.

(iii) Took part as a subject expert in a Popular TV program on News 18 (Dr. R. J. Sarma) related to the topic of contamination of fish with formalin and adulteration.

(iv) Took part in a brainstorming program on 'water pollution and reverse osmosis methods' in the Institution of Engineers, Panbazar organized by Retired Public Health Engineers. Delegates from our department: Prof. A. K. Talukdar, Prof. D. K. Kakati, Dr. R. J. Sarma, Dr. S. K. Gogoi.

36. Provision for financial aid to students in the Department/Centre, if any: NIL

37. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated. : Yes, we have collected students feedback for all the courses and the analysis/report to be shared with the university.

38. Information on up to five Good Practices followed by the Department/Centre:

i) Remedial classes and tutorials are organized regularly; Special orientation lectures are held for the benefit of the M.Sc. students.
ii) Students have been assigned Faculty mentors for their academic and personal guidance.
iii) Facilitate and promote students to take part in summer training programs, in prestigious institutes including IISc Bangalore, IITs, IISERs, CSIR Laboratories and some other good universities.
iv) Provision for book banks, departmental library and reading room facility.
v) Invited eminent scientists from different institutes for motivating and interacting with the PG students and research students.
vi) Selected students were encouraged to take part in a NET orientation and workshop in the University of Hyderabad.

39. Detail the plans of the Department/Centre/Institute for the next year :

i) Proposal to introduce CBCS syllabus in the Post Graduate Diploma in Analytical Chemistry (PGDAC) course being offered by the Department.
ii) Proposal to initiate a collaborative research program with CSIR-NEIST Jorhat.
iii) Department has proposed a three months certificate course on handling of sophisticated analytical instruments.

Head, Dept. of Chemistry

ANNUAL REPORT : DEPARTMENT OF ENVIRONMENTAL SCIENCE GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 201 TO MARCH 2019)

1.a. Name of the Department: ENVIRONMENTAL SCIENCE
b. Year of establishment :1980
2. Head of the Department : Prof. Hari Prasad Sarma
3. Details of academic staff : .....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. Hari Prasad Sarma	Professor	Full Time (on lien)	Male	Gen	
2.	Dr. Pallavi Sharma	Assistant Professor	Full Time	Female	Gen	
3.	Dr. Minakshi Bora	Assistant Professor	Contractual	Female	OBC	

4. Course(s)/Programme offered. M.Sc., Ph D.
5. Special Branches in the Department/Centre: Environmental Pollution & Natural Hazards in NE India
6. New Academic Programme initiated during the period under report: M.Sc. in Environmental Science (CBCS)

7. Innovation in Curricular design:
8. Inter disciplinary Programme started: Both M.Sc. & Ph.D. courses are interdisciplinary
9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST: No
10. Total number of Research Scholar working at present:

a) Full Time: 8	b) Part time:

11. Enrolment of Students in various courses (April 2018- March 2019):

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st	15	4	11	15	0	2	2	2	1	3	0	0	0	0	3	3	-	-	-
	2nd	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3rd	15	5	8	13	1	1	2	0	2	2	1	0	1	1	1	2	-	-	-
	4th	15	5	8	13	1	1	2	0	2	2	1	0	1	1	1	2	-	-	-

12. Teacher-Student and Teacher- Non-teaching staff Ratio:

No. of Teacher	No. of student	No. of Non-teaching staff
3	30	7

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:10	1: 2.3

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	6	5	11	-	1	1	-	-	-	-	1	1	-	2	2	-	-	-

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	6	5	11	-	1	1	-	-	-	-	1	1	-	2	2	-	-	-

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Abeda Khatun	Role of land use on urban stormwater quality management: A case study with respect to Guwahati and its suburbs.	Prof. H.P. Sarma, Prof. K.G. Bhattacharyya
Debajit Dutta	Hydro chemical study of Dikrong river basin Papumpare district, Arunachal Pradesh	Prof. H.P. Sarma
Nitali Doley	A Study on the Wetlands of Lower Subansiri Basin (Assam)	Prof. Sarbeswar Kalita
Harekrishna Dutta	Land Resources Evaluation for Sustainable Development in Remi Watershed in East Siang District of Arunachal Pradesh: A Geo-Environmental Study Using Remote Sensing and GIS Techniques.	Prof. Dulal C Goswami Prof. R. M. Karmakar
Bahnika Sen	Study on Biosorption of Heavy Metals from Simulated Waste Water Using *Adenanthera Pavonina Seeds*	Prof. Hari Prasad Sarma
Saherah Jahan	An Investigation on the Effects of Forest Fragmentation and Channel Migration on Wildlife habitat in Sonai-Rupai Wildlife Sanctuary, Assam.	Prof. Sarbeswar Kalita, Dr. Binod Kr. Baruah,

15. Number of students qualified in.

NET(JRF)	NET	SLET	GATE	Any others
	2	1		

Chapter-B

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2017-18:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: 15 nos. of computers with LAN connections across all rooms are available in the Department.

25.Technology up gradation in the Department/Centre during the period 2018-19:

26.Linkages developed with National/International/Academic/Research Bodies:

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshops

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course

d) Details of paper published in the Referred journals during the period:

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications

28.Placement record during the period (Please state briefly): Few students passing out from the department have joined research organizations for further studies and some have joined private establishments in the relevant environmental sector.

29.Placement services provided to students by the Department/Centre, if any: None

30. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report.

31. Departmental Library:

a)	No. of Books as on 31.03.2019	911
b)	New Books procured during the period	-
c)	No. of Journals as on 31.03.2018	-
d)	New Journals procured during the period	-
e)	No. of users during the period :	50

32.Departmental publications:

33.Activities and support from the Alumni Association of the Department/Centre:

34.Activities and support from the Parent-Teacher Associations if any:

35.Involvement in Community services:

36.Provision for financial aid to students in the Department/Centre, if any:

Institutional Fee Waiver provided to 2 nos. of student.

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

38.Information on up to five Good Practices followed by the Department/Centre:

- Students' academic performances are being assessed with innovative methods which includes unit based tests and practical class assessments. MCQ based papers are being set for internal assessment.
- Seminar presentation by students have been made mandatory for developing their communication skills.
- Mentor-Mentee scheme is being introduced and follow up action taken up.
- DAC reviews the infrastructural requirement regularly to meet up the needs of students, teachers and staff members
- Cleanliness of the department is thoroughly monitored by every member of the department.

39.Detail the plans of the Department/Centre/Institute for the next year:

The department plans to set up an Environmental Earth Science lab in the old departmental campus near the Botany Department by the next financial year. The department also has plans for forming the departmental Alumni Association at the earliest.

Head, Dept. of Environmental Science

ANNUAL REPORT : DEPARTMENT OF GEOGRAPHY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Geography
   b. Year of Establishment : 1948
2. Head of the Department : Prof. Madhushree Das
3. Details of Academic Staff :

Sl. No.	Name of the Teacher	Qualification	Specialization	Sex (Male/ Female)	Caste (Gen/ SC/ST/ OBC /Ph)	Career status (Prof/ Associate Prof/Asst. Prof)	Full/ Part time
1.	Dr. A.K. Bhagabati	M.A., M.Phil, Ph. D.	Agricultural Geography & Environmental Geography	Male	Gen	Professor	Full Time
2.	Dr. A.K. Bora	M.Sc, Ph.D.	Geomorphology, Fluvial Geomorphology & Remote Sensing	Male	Gen	Professor	Full Time
3.	Dr. B.K. Kar	M.Sc, Ph.D.	Population Geography & Cartography	Male	Gen	Professor	Full Time
4.	Dr. A. Saikia	M.A., M.Phil, Ph.D	Geoinformatics, Land Change Science, Climate Change and Protected Areas	Male	Gen	Professor	Full Time
5.	Dr. M. Das	M.A., M.Phil, Ph.D.	Social Geography Tribal Studies	Female	Gen	Professor	Full Time
6.	Dr. D. Sahariah	M.A., M.Phil, Ph.D.	Geomorphology, GIS and Remote Sensing	Male	Gen	Associate Professor	Full Time
7.	Dr. P. Bhattacharya	M.Sc, Ph. D.	Cartography Geography of Tourism	Male	Gen	Associate Professor	Full Time
8.	Dr. U.D. Baruah	M.Sc Ph.D.	Cartography, Climate Change, Glaciology	Male	ST(P)	Assistant Professor	Full Time
9.	Dr. N. Deka	M.A., M.Phil, Ph.D.	Fluvial Geomorphology Agroecosystem and PRA	Male	Gen	Assistant Professor	Full Time
10.	Dr. M. J. Nath	M.A., Ph.D.	Population Geography, Medical Geography	Male	OBC	Assistant Professor	Full Time
11.	Dr. N. Chetry	M.Sc. Ph.D.	Cartography, GIS and Remote Sensing	Male	Gen	Associate Professor	Guest Teacher
12.	Dr. M. Rahman	M.Sc. Ph.D.	Social Geography and Medical Geography	Female	Gen	Associate Professor	Guest Teacher
13.	Dr. J. Bora	M.Sc. Ph.D.	Regional Planning and Development	Female	Gen	Associate Professor	Guest Teacher

14	Dr. A. C. Mohapatra	M.A., M.Phil, Ph.D.	Regional development & Planning, Theory	Male	Gen	Professor	Visiting Professor

4. Courses/Programme offered : **M.A./M.Sc., M.Phil., Ph.D.**
5. Special Branches in the Department/Centre : **Cartography, Fluvial Geomorphology, Social Geography, Geoinformatics, Regional Development and Planning, Geography of Rural Development**

6. New Academic Programme initiated during the period under report: **Proposal Submitted**
7. Innovation in Curricular design : **Revision of Syllabus in progress**
8. Inter disciplinary Programmes started: **Yes**
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST : **SAP-III (2013-2018)**
10. Total number of Research Scholars working at present:

a. Full Time	b. Part time
15	40

11. Enrolment of students in the various courses (April 2018 – March 2019):

	Sem	Intake Capacity	No. admitted			S.C.			S.T.(P)			S.T.(H)			OBC/MOBC			P.H.		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	1st	39	15	24	39	2	3	5	1	3	4	1	1	2	5	7	12	0	0	0
	2nd																			
	3rd	40	11	29	40	1	1	2	2	3	5	0	2	2	6	9	15	1	0	1
	4th																			
M.Phil.		11	6	5	11	1	1	2	0	1	1				0	1	1	1	0	1
Ph.D.		20	5	15	20	0	1	1	0	2	2	1	3	4	2	3	5			
Others																				

12. Teacher- student Teacher-Non-teaching staff ratio

No. of Teachers	No. of students	T/S Ratio
10	80 (P.G.) + 11 (M. Phil)	1 : 9.1

Teacher/Students Ratio	Teacher-Non-Teaching Staff
1: 9.1	1: 1.4

13. Final Examination result during the session 2018- 2019:

(a) No. Appeared 40

Subject	Total Appeared			S.C.			S.T.(P)			S.T.(H)			OBC/MOBC			P.H.	
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Geography	11	29	40	0	2	2	0	3	3	0	3	3	1	5	6	1	0

(b) No. of Candidates Passed : 40

Subject	Total Appeared			S.C.			S.T.(P)			S.T.(H)			OBC/MOBC			P.H.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Geography	11	29	40	0	2	2	0	3	3	0	3	3	1	5	6	1	0	1

14. Details of Ph. D. awarded (2018 – 2019) : (Separate sheet)

15. Number of students qualified in : (April 2018 – March 2019):

NET(JRF)	NET	SLET	GATE	Any Others
	12	8		

16. Important students activities and achievements and awards during the period (please state briefly)
Ms. Madhusmita Das, a student of this Department, received Professor H.P. Das Memorial Award for securing 1st Position in the M.A/M.Sc. Final Exam, 2018

17. Seminar/Summer School/Workshop conducted during the period 2018-19

Sl. No.	Name of the Co-ordinator	Name of the Seminar/Summer School/Workshop/Refresher Course	Date	Sponsorship

18. Honours /Awards/Fellowship (with National/ International repute) earned by the Faculty Members (2018-2019) : NIL

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19. Visit abroad by the Faculty member (2018-2019):

Name of the Faculty	Institute visited	Purpose	Period

20. (a) Sponsored Research Project (2018-2019):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Dr. D. Sahariah	Dynamics of sedimentation and its impact on local resources in Upper North Bank of Brahmaputra: An integrated study using field surveys and geospatial technologies	ISRO, Department of Space, Govt. of India	3 Years	

(c) Patent Generated

Sl. No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during 2018- 2019

Sl. No.	Name of Examination/Programme	Name of student	Position hold
	a. In the P.G. level Examination	Ms. Madhusmita Das	Ist Class 1st
	b. No of students passed UGC-	12	

	CSIR Exam. (NET) (2018-2019)		
	c. No. of students passed GATE	-	
	d. No. of students passed Indian Civil Service Examination	-	
	e. No. of students passed GRE	-	
	f. No. of students passed TOEFL	-	
	g. No of students passed GMAT	-	
	h. Any other (Specify), Assam Civil Service Examination	3	

22. Distinguish Visitors to the Department during the year 2018-2019

Name of visitors	Address & Designation	Purpose of visit

23. Creation/ Increase in infrastructural faculties in the Department/Centre during the period 2018-19 : **No**
24. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teacher staff and students of the Department/Centre: **YES**
25. Technology upgradation in the Department/Centre during the period 2018-19 : **No**
26. Linkages developed with national/International/Academic/Research Bodies : **Yes**

27. Academic activities of Faculty members during the period of report (2018-19)

(a) Seminar/Workshops attend/Presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminars	No. of Workshops
Dr. A. K. Bhagabati	2	3
Dr. Ashok K. Bora		2
Dr. Bimal K. Kar	4	1
Dr. A. Saikia	1	1
Dr. Madhushree Das	3	1
Dr. D. Sahariah	3	2
Dr. P. Bhattacharya	1	-
Dr.Ujjal Deka Baruah	2	1
Dr. N. Deka	3	1
Dr. M. J. Nath	2	1

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Name of the Faculty	Institution name
Dr. A.K. Bhagabati	Assam Science Socirty, Geographical Society of India, K. K. Handique Open State University, B. Borooah College, Cotton College, Sonapur College, Cotton university
Dr. A. K. Bora	B. Borooah College, USTM, UGC HRD Centre G.U., Sonapur College,

	Darrang College, Tezpur College, Cotton University
Dr. B.K. Kar	B. Borooah College, UGC HRD Centre G.U., Bajali College, Cotton University, Sonapur College
Dr. A. Saikia	B. Borooah College, USTM, UGC HRD Centre G.U., Sonapur College, Cotton University
Dr. M. Das	B. Borooah College, Sonapur College, Bajali College, Cotton University, Folklore Dept. GU
Dr. D. Sahariah	B. Borooah College, Nalbari College, Arya College, Assam Science Society, Sonapur College, Cotton University, USTM, Assam Don Bosco University
Dr. P. Bhattacharya	B. Borooah College
Dr. U. D. Baruah	Electronics Dept. GU
Dr. N. Deka	Cotton University,Assam Science Society, Sonapur College
Dr. M. J. Nath	Darrang College, Sonapur College

© Refresher Course/Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. M. J. Nath		Participated in the UGC-sponsored Orientation Programme (OP-118) held from 15th Dec. 2018 to 11th Jan 2019 at UGC-HRDC, Gauhati Universit

(d) Details of paper published in the Referred Journals during the period : (April 2018 – March 2019):

Name of the faculty	Title of the Paper	Name of the Journal with Vol. No. & Date
Dr. A. K. Bhagabati	Ecology and Economy of Home Gardens in a Village Environment of the Brahmaputra Valley, Assam	*National Geographical Journal of India*, BHU, ISSN: 0027-9374/2018/1650,Vol. 64, No. 1-2. (co-authored)
	Dhekiajulir Bhugol	Loknayak Amiyo Kumar Das Mahavidyalaya, Dhekiajuli, Assam
	Revitalizing Biogeographic Research and Discourse in India: Some observations	Presidential address to the 40th Indian Geographers Meet, Institute of Indian Geographers (IIG), 2019
Dr. Ashok K. Bora	Flood Hazards and Risk Management Issues of Brahmaputra River, Assam. (Co-authored)	ACTA Publication on *"Flood Erosion and Big Dam Issues in Deka, Dhanjit and Paul* R.S. edited, ISBN : 978-93-88645-34-8, 2019, pp. 1-16
	Dwindling orests and Their Protection Strategies Through Joint Forest Management in Assam (Co-authored)	*Journal of Agroecology and Natural Resources management,* Vol.6, Issue-4 July-September, 2019, Krishi Sanskrit Publication. ISSN – 2394-0786
	Extracting Some Terrain Parameters from SRTM DEM of a Hill District in Assam (Co-authored)	*A Glimpse of Geospatial*
Dr. Bimal K. Kar	The Pachyderm Dread: A Case Study of Human-Elephant Conflict in the Fringe Areas of Sonai-Rupai Wildlife Sanctuary, Assam	*Space and Culture, India* (ISSN: 2052-8396: Online), Vol. 6 (3), 2018, pp. 142-155.
	Socio-Spatial Patterns of Age Disparity Between Widow and Widower in North-East India	*National Geographical Journal of India* (ISSN: 0027-9374), Vol. 64 (3-4), pp. 1135-145.
	Estimating the global distribution of field size using crowdsourcing.	Global Change Biology, 25, 1: 174-186.

Dr. Anup Saikia	How green was my valley: forest canopy density in relation to topography and anthropogenic effects in Manipur valley, India.	Geografisk Tidsskrift - Danish Journal of Geography, 118, 2 : 137-150.
Dr. M. Das	Women and Wedlock: A Study on female Marital Status among the Hindus, Muslims and Christians of Assam, India. Space and Culture, India	*Space and Culture, India 6.1* ISSN 2052-8396, https//doi.org/10.20896/saci.v6i1.294
	Spatialities of Crime against Women in Assam.	Geographical Review of India 80(1):43-62, ISSN 0375-6386
	Status of Biomass energy resource in Assam.	Transactions, Journal of the Institute of Indian Geographers, Pune, Volume 40(1):45-56, ISSN 0970-9851
	Pattern of female work participation and gender disparity among Hindus, Muslims and Christians of Assam.	North-Eastern Geographer Vol 39(1&2):91-106, ISSN 0973-0915
Dr. D. Sahariah	Estimation of soil loss sensitivity in the Jinari river basin using the Universal Soil Loss Equation,	*National Geographical Journal of India*, BHU, ISSN: 0027-9374/2018/1650,Vol. 64, No. 1-2. (co-authored)
	Estimating the global distribution of field size using crowd sourcing,	*Global Change Biology*, 25(1), DOI: 10.1111/gcb.14492 (co-authored)
Dr. N. Deka	Evolution of Landscape in a Floodplain Village of the Brahmaputra Valley, Assam	*Indian Journal of Landscape Systems and Ecological Studies*, Kolkata Vol. 41, No 1 pp 120-132 ISSN No. 0971-4170 (co-authored)
	Ecology and Economy of Home Gardens in a Village Environment of the Brahmaputra Valley, Assam	*National Geographical Journal of India*, BHU, ISSN: 0027-9374/2018/1650,Vol. 64, No. 1-2. (co-authored)
	Dhekiajulir Bhugol	*Loknayak Amiyo Kumar Das Mahavidyalaya, Dhekiajuli, Assam*
Dr. U. D. Baruah	Shrinking Glaciers of the Himachal Himalaya: A Critical Review	Environmental Change in the Himalayan Region. Springer, Cham
	Evaluation of Meltwater Quality Using Dissolved Ions Chemistry and Multivariate Statistical Methods: A Case Study of the Manimahesh Glacier, Ravi Basin, Himachal Pradesh, India	Proceedings of the National Academy of Sciences, India Section A: Physical Sciences. doi: 10.1007/s40010-018-0560-0
	Response of long-to short-term changes of the Puri coastline of Odisha (India) to natural and anthropogenic factors: a remote sensing and statistical assessment	Environmental Earth Sciences, 78(11), 338
Dr. M. J. Nath	Climate change and human health	Reflection, Guwahati, pp 205-211.

(e) Paper published in other journals during the period (only those considered for API score) Included in the above list.

Name of the faculty	Title of the Paper	Name of the Journal with Vol. No. & Date

(f) Details of Book published during the period : (April 2018 – March 2019):

Chapter-B

Name of the faculty	Title of the Book(s)	Date of publications
Dr. B. K. Kar	Population, Environment and Emerging Challenges	2018

28. Placement record during the period (Please state briefly) : **Through University**
29. Placement services provided to students by the Department/Centre, if any: **G.U. Centrally**
30. Is there any student Counseling Unit in the Department/Centre, if yes state activities during the period under report. **No**
31. Departmental Library :

a.	No. of Books as on 31.03.2019	2030
b.	New Books procured during the period	-
c.	No. of Journals as on 31.03.2019	220 –International = 17 National = 192 Local = 11
d.	New Journals procured during the period	Nil
e.	No. of users during the period :	170

32. Departmental Publication : **one (Conservation and Management of Natural Resources in North East India) Edited By Dr. D. Sahariah and Prasanta Bhattacharya**
33. Activities and support from the Alumni Association of the Department/Centre : **No**
34. Activities and support from the parent-Teacher associations if any : **No**
35. Involvement in Community services : **NEIGS, Assam Science Society**
36. Provision for financial aid to students in the Department/Centre, if any : **Basic Scientific Research (BSR) Fellowship of UGC to Research Scholars**
37. Provision for student assessment of teachers. If such provisions exists, the courses in which assessment is obtained and action taken of this feedback may please be stated: **Feedback taken annually**
38. . Information on up to five Good Practices followed by the Department/Centre :
    (i) The Department being the headquarters of the North East India Geographical Society (NEIGS), The faculty members are engaged in extension lecture, etc.
    (ii) The students of the department also have a P.G. Geography students forum (since 1977) to carry out various academic activities including bringing out a wall magazine and a Journal named 'Geographical Horizon'.
    (iii) The department also brings out a research Journal named Journal of Geography (since 1995).
    (iv) Conducting need-based Remote Sensing & Geographical Information System training/workshop for Research Scholars, College Teachers and govt. officials.
    (v) Carrying out research work in the department with fund of UGC – SAP and individual projects.

39. Details of the plans of the Department/Centre/Institute for the next year :
    Department proposes to open the following courses in near future :
    (i) PG Diploma in Remote Sensing (RS) and Geographical Information System (GIS)
    (ii) PG Diploma in Disaster management
    (iii) PG Diploma in Tourism and Leisure Studies

    Department also has a plan to build a Geography museum and a centre for regional development studies

Head, Deptt. of Geography

ANNUAL REPORT: DEPARTMENT OF GEOLOGICAL SCIENCES GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Geological Sciences
   b. Year of establishment : 1956
2. Head of the Department : Prof. Parag Phukon
3. Details of academic staff :

Sl. No.	Name of the teacher	Designation(Professor/Associate Prof. /Asstt. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ST/ OBC/PH	Citation Index
1.	Dr. Amulya Chandra Mazumdar	Professor	Full time	Male	General	4
2.	Dr. Bhagawat Pran Duarah	Professor	Full time	Male	General	3
3.	Dr. Parag Phukon	Professor	Full time	Male	O. B. C.	3
4.	Dr. Sarat Phukan	Associate Professor	Full time	Male	General	3
5.	Dr. Bikash Gogoi	Associate Professor	Full time	Male	O. B. C.	1
6.	Dr. Jayanta Jivan Laskar	Associate Professor	Full time	Male	General	1
7.	Dr. Balen Bhagabaty	Associate Professor	Full time	Male	General	-
8.	Dr. Pranjit Hazarika	Assistant Professor	Full time	Male	General	7
9.	Dr. Surajit Misra	Assistant Professor	Full time	Male	General	5
10.	Dr. Runti Choudhury	Assistant Professor	Full time	Female	General	9
11.	Dr. Dhirendra Nath Das	Professor (Retd)	Contractual	Male	General	-

4. Course(s)/Programme offered: M. Sc. and Ph. D
5. Special Branches in the Department/Centre: No
6. New Academic Programme initiated during the period under report: No
7. Innovation in Curricular design: No
8. Inter disciplinary Programme started: No
9. Department/Centre under:
10. Total number of Research Scholar working at present: 30

a) Full Time:13	b) Part time: 11

11. Enrolment of Students in various courses (April 2018- March 2019):

Courses	Sem	Intake Capacity	No. Admitted			S.C			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	4th (2016-2018)	28	14	14	28	3	5	5	1	3	4	1	0	1	4	5	9	0	0	0
	2nd (2017-2019)	30	20	10	30	0	1	1	4	0	4	2	1	3	8	3	11	0	0	0
	1st (2018-2020) (New enrolment)	30	16	14	30	1	1	2	2	2	4	0	2	2	4	8	12	0	0	0
	3rd (2017-2019)	30	20	10	30	0	1	1	4	0	4	2	1	3	8	3	11	0	0	0
	2nd (2018-2020)	30	16	14	30	1	1	2	2	2	4	0	2	2	4	8	12	0	0	0
	4th (2017-2019)	30	20	10	30	0	1	1	4	0	4	2	1	3	8	3	11	0	0	0
Ph.D.		54	11	13	24	0	1	1	2	3	5	0	1	1	5	4	9	0	0	0

Chapter-B

12. Teacher-Student and Teacher- Non-teaching staff Ratio:

No. of Teacher (including Guest Teacher)	No. of student	No. of Non-teaching staff
11	60	9

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:5.5	1:0.8

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Geology	11	13	24	1	2	3	1	3	4	1	0	1	2	5	7	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			P.H.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Geology	6	8	14	1	1	2	1	0	1	1	0	1	2	4	6	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Dr. Bijit Kr. Choudhury	Study of 3-D velocity structure by seismic tomography and Lg wave attenuation in Northeastern India.	Dr. B. P. Duarah
Dr. Ratamali Machahary	The Brahmaputra River, Assam, India: A Study on bedform morphology, spatio temporal variation and erosional vulnerability.	Dr. Parag Phukon
Dr. Diganta Kumar	Tectonic activities in the Eastern Himalayas : An integrated study based on geomorphological and seismological evidences.	Dr. B. P. Duarah
Dr. Mridul Rabha	Evolution of metapelitic rocks in the Umpyrtha-Patharkhammah area central part of Shillong Plateau, India : An attempt on Gondwanaland reconstruction through thermo chronology	Dr. A. C. Mazumdar

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
0	1	-	0	

16. Important students' activities and achievements and awards during the period (Please state briefly)

Mr Pritam Talukdar, a M.Sc 4th Semester student, won the second prize in Indian Geological Congress Pan India Debate in 2015 for eastern region organized by Department of Geological Sciences, Gauhati University sponsored by Indian Geological Congress.

17. Seminar/Summer School/Workshop conducted during the period 2018-19: 1 (one)

Sl.No.	Name of the Co-ordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. Pranjit Hazarika	Workshop on 'Advance Petrography'	June 26 to July 2018	Self-Sponsored

18. Honours/Awards/Fellowship (with National/I... lty members (2018-19): Nil

Name of the Faculty	Name of the Aw...

19. Visit abroad by the Faculty members (2018-19):

Name of the Faculty	Institute visited
x	x

20. Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	F...		
Dr Sarat Phukan	Study of Hydrocarbon Potential, depositional environment and geological mapping of the Disang-Barail transitional sequence in Assam, Nagaland and Arunachal Pradesh	Oil India Limited	2 years	39.83lakhs
Dr. Bikash Gogoi	Integrated palynofacies and magnetostratigraphic study of the Bhuban Formation in some selected outcrops exposed in the central part of Mizoram, NE india	Oil India Limited	2 years	39.64lakhs
Dr Pranjit Hazarika	Determination of elemental and Isotopic composition of tourmaline from Pb-Zn and Cu-Au deposits of north-western India : implication for compositional fractionations, ore genetic processes and source of ore forming fluid.	DST-INSPIRE	5 years	35 lakhs

21. Academic Distinction earned by the students during 2018-19

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held
1	UGC-CSIR Exam.(NET)	Niraj Bhuyan	
2	GATE		

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit

23.Increase in infrastructural faculties in the Department/Centre during the period 2018-19:

24.Provisions for

(a) Computer access: Yes
(b) Internet access: Yes
(c) Training to teachers, non-teaching staff and students of the Department/Centre: Partially Yes

25.Technology upgradation in the Department/Centre during the period 2018-19:
New equipments/instruments procured during the period 2018-19

26 Linkages developed with National/International/Academic/Research Bodies :

27.Academic activities of Faculty members during the period of report (2013-14)

a) Seminar/Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshop	No. of papers presented

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)
Prof. Amulya Mazumdar, Dr. Parag Phukon, Dr. Sarat Phukon, Dr. Bikash Gogoi, Dr. B.P. Duarah delivered lectures and interacted with the participants as resource persons in the Academic Staff College (UGC-HRD Centre), Gauhati University. On 13 February, 2015 Dr. B.P. Duarah delivered an invited lecture on river valley projects at Hojai College organized by Hojai College Teachers' Association.

c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course

d) Details of paper published in the Referred journals during the period:

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date

e) Paper published in other journals during the period (only those considered for API Score):

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of book published during the period: Nil

Name of the faculty	Title of the Book(s)	Date of publications

28. a) Placement record during the period (Please state briefly):

As per record of the department the following passed out students of 2018-19 batch and research scholars got employment in the organization indicated against their names –

Name of the student	Employer
1.	

b) Placement services provided during the period (Please state briefly):

29. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report: No

30. Placement services provided to students by the Department/Centre, if any: No

31. Departmental Library

a)	No. of Books as on 31.03.2014	773
b)	New Books procured during the period	20
c)	No. of Journals as on 31.03.2014	**Department relies on the journal available in the central library and also on the journal available through the UGC-inflibnet**
d)	New Journals procured during the period	Nil
e)	No. of users during the period :	Nil

32. Departmental publications : Nil

33. Details of Patents generated, if any : Nil

34. Citation index of faculty members and impact factor:

35. Activities and support from the Alumni Association of the Department/Centre :

36. Activities and support from the Parent-Teacher Associations if any :

37. Involvement in Community services : Teachers are involved.

38. Provision for financial aid to students in the Department/Centre, if any: No

39. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

40. Information on up to five Good Practices followed by the Department/Centre:

(a) Completion of course syllabus.

(b) Encouraging students to attend classes. 75% attendance is compulsory to appear in the end semester examinations. Extra classes are arranged for the students whose attendances fall short of 75%, so that they get required attendance.

(c) Help and encouraged the students to prepare for job.

(d) Summer training programmes are arranged for good students with different organizations wherever possible.

(e) Maintaining healthy students-teachers relationship.

41. Detail the plans of the Department/Centre/Institute for the next year :

Planning to open a self-finance certificate course on GIS and Remote Sensing.

Head, Department of Geological Sciences

ANNUAL REPORT : DEPARTMENT OF MATHMATICS GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department :Mathematics
   b. Year of establishment :1948
2. Head of the Department : Prof. Rudra Kanta Deka.
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Dr. Kuntala Patra	Professor	Full Time	Female	Gen	
2.	Dr. Rita Choudhury	Professor	Full Time	Female	Gen	
3.	Dr. Helen Kumari Saikia	Professor	Full Time	Female	GEN	
4	Dr. Rudra Kanta Deka	Professor	Full Time	Male	GEN	
5.	Dr. Nazibuddin Ahmed	Professor	Full Time	Male	GEN	
6.	Dr.Hemanta Kumar Sarmah	Professor	Full Time	Male	GEN	
7.	Dr. Kanika Das	Professor	Full Time	Female	GEN	
8.	Dr. Chandra Rekha Mahanta	Associate Professor	Full Time	Female	GEN	
9.	Dr. Bipan Hazarika	Associate Professor	Full Time	Female	Gen	
10.	Dr. Nilakshi Goswami	Asstt. Professor	Full Time	Female	GEN	
11.	Dr. Hemen Dutta	Asstt. Professor	Full Time	Male	GEN	
12.	Dr. Utpal Jyoti Das	Asstt. Professor	Full Time	Male	Gen	
13.	Dr. Debasish Bhattacharjee	Asstt. Professor	Full Time	Male	GEN	
14.	Dr. Ranu Paul	Asstt. Professor	Full Time	Female	GEN	
15.	Dr. Jituparna Goswami	Asstt. Professor	Full Time	Male	Gen	

4. Course(s)/Programme offered : M.A/M.Sc./ Ph.D./M.Phil
5. Special Branches in the Department/Centre :

   Name of Special Papers

   1. Algebra
   2. Functional Analysis
   3. Fluid Dynamics
   4. Relativity
   5. Space Dynamics
   6. Algebraic Topology
   7. Fuzzy Sets and application
   8. Mathematical Logic
   9. Computer Algebra
   10. Partial Differential Equation

6. New Academic Programme initiated during the period under report :M.Phil
7. Innovation in Curricular design: Yes. Course curriculum is revised as per PG CBCS 2016 regulation, GU. Few changes have been made incorporating new modern theory papers, computer practicals.
8. Inter disciplinary Programme started: Yes
9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST: **SAP (DRS-II)**

10. Total number of Research Scholar working at present :

a) Full Time:14	b) Part time:37

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st sem	87	55	32	87	03	02	05	03	06	09	02	02	04	20	09	29	00	00	00
M.Phil.																				
Ph.D.			14	02	16															
Others																				

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
15	160	05
Teacher/Student Ratio	**Teacher-Non-teaching Staff Ratio**	
3:32	**3:1**	

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Mathematics	54	22	76															

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	34	20	54															

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Joy Roy	A Study On Some Graph Theoretic Properties Of Rings	Prof. Kuntala Patra
Samiran Das	Investigation of Non-Linear Waves in Plasmas	Prof. B. C. kalita
Moytri Sarmah	A Study on Some Structures of Graphs Associated with Rings	Prof. Kuntala Patra
Bibhash Deka	Certain aspects of visco-elastic fluid flow problems with heat and mass transfer	Prof. Rita Choudhury
Nripen Medhi	Some Problems of Heat and Mass Transfer in Magnetohydrodynamics (MHD)	Dr. Shyamanta Chakraborty
Bamdeb Dey	Analytical studies of some flow problems with emphasis on visco-elasticity	Prof. Rita Choudhury
Syed Hamidul Islam	A study of some MHD heat and mass transfer problems with or without radiation	Prof. Nazibuddin Ahmed
Sankar Haloi	A Study on Topological Entropy and the Universality of Chaos in Non Linear Systems	Prof. T. K. Dutta
Debasmriti Bhattacherjee	A Graph Theoretic Perspective on	Prof. T. K. Dutta

	Periodicity and Limit Cycle Behaviour of Some Non Linear Systems	
Hamida Aktara Haque	Study of some aspects of disemigraph	Dr. Prabin Das
Arun Mahanta	A study on some fractals and their related dimensions	Prof. Hemanta Kr. Sarmah and Dr. Gautam Choudhury
Mwblib Basumatary	Computational Studies of Some Fluid Flow Problems with Variable Viscosity	Prof. R. K. Deka
Rajesh Misra	SOME STUDIES ON BLACK HOLES	Dr. C. R. Mahanta
Kangkan Choudhury	Heat and Mass Transfer in some Newtonian Flows: A Theoretical Investigation	Prof. N. Ahmed
Azizur Rahman Sheikh	A study on some cosmological models and accelerated expansion of the universe	Dr. C. R. Mahanta
Mriganka Sekhar Dutta	A Study of Rings and Modules with applications in Coding Theory	Prof. H. K. Saikia
Sinam Iboton Singh	A study of some magnetohydrodynamics (MHD) convective flow problems	Dr. Dipak Sarma

15 Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
02	03	01	01	

16. Important students' activities and achievements and awards during the period (Please state briefly):
NIL

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Rudra Kanta Deka	Workshop on Degree syllabus	15th to 16th March, 2019	Gauhati University
2	Rudra Kanta Deka	3rd Late B.C. Deka Memorial Lecture	15th February, 2019	Endowment Fund

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :NIL

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :NIL

Name of the Faculty	Institute visited	Purpose	Period
HemenDutta	University of Phayao, Thailand	Workshop on "Advanced Researches in Fixed Point Theory and Applications" and delivered an invited talk on "Summable spaces and their fixe properties" d point	23-24 January, 2019

20.(a) Sponsored Research Project (2018-19):NIL

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

(b) Patent Generated: NIL

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Prof. Sujit Kumar Sardar	Professor, Jadavpur University	Viva-voce
Prof. P. Chatterjee	Professor	Viva-voce
Prof. K. S. Prasad	Professor	Viva-voce
Prof. B. R. Sharma	Professor, Dibrugarh University	Viva-voce
Prof. S. Natesan	Professor, IIT Guwahati	Viva-voce
Prof. Uma Basu	Professor, Dept. of Applied Mathematics, University of Calcutta	Viva-voce
Prof. Gopal Hazarika	Professor, Dibrugarh University	Viva-voce
Prof. D. K. Bhattacharya	Professor, Dept. of Pure Mathematics, Calcutta University	Viva-voce
Prof. Sahin Ahmed	Dept. of Mathematics, R. G. University	Viva-voce
Prof. Tazid Ali	Dept. of Mathematics, Dibrugarh University	Viva-voce
Prof. Mridul Kanoria	Professor, Dept. of Applied Mathematics, Calcutta University	Viva-voce
Prof. Subinoy Chakraborty	Professor, Dept. of Mathematics, Jadavpur University	Viva-voce
Prof. P. K. Kundu	Professor, Dept. of Mathematics, Jadavpur University	Viva-voce
Prof. U.C. De	Professor, U. C. De, Emeritus Professor, Dept. of Mathematics, Calcutta University	Viva-voce
Prof. Fazal Mehdi	Dept. of Mathematics, Aligarh Muslim University	Viva-voce

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:NIL

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:Extension of LAN connection

(a) Computer access: Yes, for all, students, research scholars and faculties.
(b) Internet access: Yes, for all research scholars and faculties and limited excess to students
(c) Training to teachers: NIL

25.Technology up gradation in the Department/Centre during the period 2018-19: NIL

26.Linkages developed with National/International/Academic/Research Bodies : NIL

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Prof. Rita Choudhury	02	NIL
Prof. N. Ahmed	04	NIL
Bipan Hazarika:	1	NIL
Dr. N. Goswami	01	02
Dr. Debasish Bhattacharjee	01	NIL

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Prof. Kuntala Patra :

1. Refresher Course in Mathematics, MHRD, GU
2. Chairperson of one session in the National Conference 22nd to 23rd December, 2018

Prof. Rita Choudhury :

1. Resource Person in Refresher Course in December, 2018
2. Act as chair person for two sessions on "National Seminar on Statistics for People, Society and Economy" held on 22 -23 February, 2019 at Statistics Department, Gauhati University

Prof. H. K. Saikia

1. Acted as resource person in the Refresher course held in 2018.
2. Chaired a session in the national conference Recent advances in applied sciences 2019 organized by dept of Applied Sciences, GU on May 17-18, 2019.
3. Chaired a session in the national seminar on National Mathematics Day organized by dept of Mathematics, GU on December 22, 2018.

Dr. Chandra Rekha Mahanta:

1. State Level Master Resource Person Workshop-cum-Hands on Training on **Basic Observational Astronomy through Naked Eye and Telescope** held at Guwahati Planetarium from 20th April to 22nd April, 2018.
2. **Review Workshop on Mathematics Textbook** for Class-III held at the Office of the Director, State Council of Educational Research and Training (SCERT),Guwahati from 7th May to 10th May, 2018.
3. DBT Star College Scheme Supported **Summer Camp for UG Students** held at Jawaharlal Nehru College, Boko, Kamrup from 26th June to 2nd July, 2018.
4. **Refresher Course on Mathematics and Statistics** held at UGC-HRDC, Gauhati University from 19th December, 2018 to 8th January, 2019.
5. **Orientation Programme (OP-118)** held at UGC-HRDC, Gauhati University from 15th December, 2018 to 11th January, 2019.

Dr. Bipan Hazarika:

Resource persons in:

1. **1.** Title: Quasi-Cauchy Sequence, Refresher Course Programme: Mathematics and Statistics, 19-12-2018 to 08-01-2019, UGC-HRDC, Gauhati University, 31-12-2018.
2. Resource Person in KRP/RP Training on Mathematics for Secondary Teachers, SCERT, Samagra
   Siksha Abhijan, Assam 2019, date: 1-3-2019 to 5-3-2019. Talk on: Fundamentals of number theory

Presented Invited Talk:

1. Title: Linear functional: University of Science and Technology Meghalaya, 18 August 2018
2. Title: Importance of convergence and linear functional: Assam Don Bosco University, 16 November 2018
3. Title: Application of measure of non-compactness and simulation function for solvability of nonlinear
   functional integral equations, International Conference of Recent Advances of Mathematics and Applications, 2019 (16-18 July, 2019), Tripura University, Agartala, India

Dr. Hemen Dutta:

Resource Persons:

1. Content Enrichment Programme for TGT (Maths) organized by Navodaya Leadership Institute, Rangia, Assam on 27-10-2018,
2. DST-sponsored National Workshop on "Science Fare Creating Awareness, Interest, Motivation in Science and Mathematics for School Students and Teachers" organized byRamanujan Society of Mathematics and Mathematical Sciences&T.D.P.G. College, Uttar Pradesh during 10-13November, 2018, and
3. Refresher Course in Mathematics & Statistics organized by UGC-HRDC, Gauhati University during 19th December, 2018 to 8th January, 2019.

Innvited Talk in conference:

1. DST-sponsored National Conference on "Fractional Calculus, Special Functions and their Applications in Computer Science" organized by Ramanujan Society of Mathematics and Mathematical Sciences&T.D.P.G. College, Uttar Pradesh during 10-12 November, 2018,

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. N. Ahmed	Refresher course in Mathematics and Statistics	
Dr. C. R. Mahanta	01 (Participated and Chaired a Session in **National Seminar on Advances in Mathematical Sciences** held in the Department of Mathematics, Gauhati	02

	University on 22 December, 2018)	
Dr. N. Goswami	**STC (UGC sponsored) on Disaster Management from 30th October to 5th November, 2018 at UGC, HRDC, GU.**	
Dr. D. Bhattacharjee	**01**	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Rita Choudhury	Impact of Thermophoretic MHD Visco-Elastic Fluid Flow Past a Wedge with Heat Source and Chemical Reaction	Advances in Intelligent Systems and Computing, 755, pp. 541-552 (2019) (UGC and Scopus)
	Slip Effects on Heat and Mass Transfer in MHD Visco-Elastic Fluid Flow Through a Porous Channel	Advances in Intelligent Systems and Computing, 755, pp. 553-564 (2019) (UGC and Scopus)
	Impact of Oblique Magnetic Flux upon Second-Grade Fluid Flow with Dissipation	Advances in Intelligent Systems and Computing, 755, pp. 611-620 (2019) (UGC and Scopus)
Kuntala Patra	Some aspects of order-Congruence graph of the commutative Ring Z_n	Bull. Cal. Math. Soc., III (2) 165-172 (2019)
Helen K Saikia	On Nilpotency Of The Right Singular Ideal Of Semiring	Bol. Soc. Paran. Mat. (3s.) v. 37 2 (2019): 121–125
	A Study of Cyclic Codes Via a Surjective Mapping	MATEMATIKA, 2018, Volume 34, Number 2, 325–332
	Singular and semi-simple character in E-injective N-groups with weakly descending chain conditions	*Afrika Matematika* 29(3) · May 2018.
	ON INJECTIVE MODULES	Algebra Letters, 2018, 2018, doi.org/10.28919/al/3697
	Prime intersection graph of ideals of a ring	Proceedings - Mathematical Sciences(accepted for publication)
N. Ahmed	Natural convection in transient MHD dissipative flow past a suddenly started infinite vertical porous plate: A finite – difference approach	Heat Transfer Research, **49(6), 491-508, 2018**
	MHD mass transfer flow past an inclined plate with variable temperature and plate velocity embedded in a porous medium,	Heat Transfer - Asian Research (**Wiley**), 47, 27-41, 2018
	Heat and mass transfer in three-dimensional flow through a porous medium with periodic permeability	Heat Transfer - Asian Research (**Wiley**), 48(2), 644-662, 2019
	Heat and mass transfer in MHD Poiseuille flow with porous walls	Journal of Engineering Physics and Thermophysics (**Springer**), 92(1), 122-131, 2019
	Hydromagnetic natural convection from a semi-infinite vertical porous plate in presence of thermal radiation	JP Journal of Heat and Mass Transfer, 17(1), 77-95, 2019
	Effects of thermal diffusion and chemical reaction on MHD free convective flow past an infinite isothermal vertical plate with heat source/sink	Italian Journal of Pure and Applied Mathematics, 42, 559-574, 2019
	Unsteady MHD mass transfer flow past a temporarily accelerated semi-infinite vertical plate in presence of thermal diffusion with ramped wall temperature	Mathematical Modelling of Engineering Problems, 6(2), 241-248, 2019

C. R. Mahanta	Bianchi Type I solution in $f(T)$ gravity	International Journal of Mathematical Archive ISSN 2229-5046 Vol.9(5), p.216-220 (May, 2018)
Bipan Hazarika	Metric-like spaces to prove existence of solution for nonlinear quadratic integral equation and numerical method to solve it	Journal of Computational and Applied Mathematics, 328(15) (2018) 302-313, **SCI, IF: 1.883. Elsevier Publication & November 2018**
	G-Calculus	TWMS Journal of Applied and Engineering Mathematics, 8(1) (2018), 94-105, **Emerging Sources Citation Index (ESCI), SCOPUS & July 2018**
	Existence of Solutions of Infinite Systems of Differential Equations of General Order with Boundary Conditions in the Spaces c_0 and ℓ_1 via the Measure of Noncompactness	Mathematical Methods in the Applied Sciences, 41(10)(2018) 3558-3569, **SCI, IF: 1.533, John Wiley & Sons & October 2019**
	Existence of solution for an infinite system of nonlinear integral equations via measure of noncompactness and homotopy perturbation method to solve it	Journal of Computational and Applied Mathematics, 343(2018) 341-352 **SCI, IF: 1.883. Elsevier Publication & September 2018**
	Lacunary Arithmetic convergence	Proceedings of the Jangjeon Mathematical Society, 21(3)(2018), 507-513. **SCOPUS & October 2018**
	Lacunary statistically slowly oscillating continuity in abstract space	Proceedings of the National Academy of Sciences, India Section A. Physical Sciences, 88(4)(2018), 607-615, **SCIE, IF: 0.754, Springer Publications & December 2018**
	Bigeometric integral calculus	TWMS Journal of Applied and Engineering Mathematics, 8(2) (2018), 374-385. **Emerging Sources Citation Index (ESCI), SCOPUS & December 2018**
	On ideal convergence in measure for sequences of fuzzy valued functions	Journal of Intelligent and Fuzzy Systems, 35(5)(2018), 5729-5740. **SCIE, IF: 1.637 & August 2018**
	Lacunary Ideal quasi Cauchy sequences	Annals of the University of Craiova-Mathematics and Computer Science Series, 45(2)(2018), 1-12, **SCOPUS & December 2018**
	Applications of a fixed point theorem for the existence of solutions of nonlinear functional integral equations in two variables	Rendiconti del Circolo Matematico di Palermo Series 2, 68(2019) 139-152, **SCOPUS, ESCI, Springer Publication & March 2019**
	Soft ideal topological space and Mixed fuzzy soft ideal topological space	Boletim da Sociedade Paranaense de Matematica 37(1)(2019), 141-151, **SCOPUS, Emerging Sources Citation Index (ESCI)** & Januray 2019
	Solvability of nonlinear quadratic integral equation by using simulation type condensing operator and measure of non-compactness	Applied Mathematics and Computation, 349(15)(2019), 102-117. **SCI, IF: 3.092, Elsevier Publication, & 6th June 2019**
	Application of measure of noncompactness for solvability of the infinite system of integral equations in two variables in ℓ_p $(1 < p < \infty)$	Revista de la Real Academia de Ciencias Exactas, Fisicas y Naturales. Serie A. Matematicas, 113(1)(2019), 31-40. **Springer Publications, Impact Factor 1.028, SCIE & January 2019**
	Coupled fixed point theorems in	Journal of Fixed Point Theory and

	partially ordered metric spaces via mixed g-monotone property	Applications, 29(1)(2019) 1-19 **SCIE, IF: 1.253, Springer Publication & January 2019**
	Some new generalization of Darbo's fixed point theorem and its application on integral equations	Mathematics, 7(3)(2019), 214; pages 9, **SCIE, IF: 1.105 &** 26 February 2019
	Application of simulation function and measure of non-compactness for solvability of nonlinear functional integral equations and introduction of an iteration algorithm to find solution	Applied Mathematics and Computation, 360(1)(2019), 131-146, **SCI, IF: 3.092, Elsevier Publication, & 3rd January 2019**
	Existence of solution for non-linear functional integral equations of two variables in Banach algebra	Symmetry, 2019, 11,674, 1-16, doi:10.3390/sym11050674, **SCIE, I.F. 2.143 &** 16 May 2019
	Weighted statistical convergence through difference operator of sequences of fuzzy numbers with application to fuzzy approximation theorems	International Journal of General Systems, 48(5)(2019), 463-475, **Taylor and Francis, SCIE, Impact Factor 2.931 &** 01 May 2019
	On sequence spaces generated by binomial difference operator of fractional order	Mathematica Slovaca, 69(4)(2019), 901-918, **SCIE, Impact Factor 0.490 & July 2019**
Utpal Jyoti Das	Soret and Dufour effects on three dimensional mixed convective hydromagentic flow of a visco-elastic fluid past an infinite inclined plate	Latin American Applied Research, 49(1), 7-12. (January 2019)
	Magnetohydrodynamic Boundary Layer Flow with Soret/Dufour effects in presence of Heat source and Chemical Reaction	International Journal of Applied Engineering Research, 14(2), pp. 485-490. (January 2019)
	Unsteady MHD Flow of Viscoelastic Fluid Through a Porous Medium in a Vertical Porous Channel	Advances in Intelligent Systems and Computing, 755, pp. 341-354 (2019)
Nilakshi Goswami	Fixed Point theorems in Fuzzy Metric spaces for Mappings with Some Contractive Type Conditions	Korean J. Math., Vol 26, No. 2, page 307-326, June, 2018.
	Some Results on Fixed Point Theory for a Class of Generalized Non expansive Mappings, Fixed Point Theory and Applications	(Springer), (2018), 2018:19, August, 2018.
	Some Fixed Point Theorems in Partially Ordered Fuzzy Metric Spaces using Altering Distance Function	Mathematical Sciences Letters, Vol 7 (No. 3 page 117-124, September, 2018.
Hemen Dutta	Fuzzy stability of a rational functional equation and its relevance to system design	Journal of General Systems, 48(2) (2019), 157-169 (SCIE, IF: 2.931)
	Approximation of a system of system of rational functional equations in three variables	International Journal of Applied and Computational Mathematics, 5:39(2019), 1-15 (Scopus)
	Approximation of multiplicative inverse undecic and duodecic functional equations	Mathematical Methods in the Applied Sciences, 42(2019), 1073-1081 (SCIE, IF: 1.18)
	Stability of mixed type functional equation in normed spaces using fuzzy concepts	International Journal of General Systems, 48(5) 2019, 507–522 (SCIE, IF: 2.931)
	Characterization of some matrix classes involving some sets with speed	Miskolc Mathematical Notes, 19(2) (2018), 813-821 (SCIE, IF: 0.585)
	Tauberian Theorems for Cesàro Summability of nth Sequences	Filomat 32:11 (2018), 3993-4004 (SCIE, IF: 0.635)

	Duals and matrix classes involving Cesàro type classes of sequences of fuzzy numbers	Advances in Fuzzy Systems, Volume 2018, Article ID 8636121, 9 pages (ESCI, Scopus)
	Fuzzy p-absolutely summable difference sequences	New Mathematics and Natural Computation, Vol. 14, No. 2 (2018), pp. 221-233 (ESCI, Scopus)
	Fixed point of nonself total asymptotically nonexpansive mappings in Banach spaces	Applied Sciences, Vol. 20, 2018, pp. 102-116 (Scopus)
	Non-Archimedean stability of a generalized reciprocal-quadratic functional equation in several variables by direct and fixed point methods	Filomat 32:9 (2018), 3199-3209 (SCIE, IF: 0.635)
	Some summable sequence spaces defined by the weighted mean method and modulus functions	Proceedings of the Jangjeon Mathematical Society, Vol. 21, No. 2, 2018, pp. 601-607 (Scopus, KCI)
	Characterization of matrix classes involving some sets of summable double sequences of fuzzy numbers	Journal of Intelligent and Fuzzy Systems, Vol. 34 (6) (2018), pp. 4279-4290 (SCIE, IF: 1.426)
Ranu Paul	A Policy to Eradicate Tumor in a Discrete-Continuous Immune Cell-Tumor Cell-Drug Administration Model with the Help of Stability Analysis and Bifurcation Analysis of the Model	International Journal of Applied Engineering Research, Volume 14, Number 9 (2019), pp. 2192-2197
R. K. Deka	Effect of variable viscosity on a nanofluid over a porous wedge	Int. J. Fluid Mechanics Research, DOI: 10.1615/InterJFluidMechRes.2018019500. pages 355-368

e) Paper published in other journals during the period (only those considered for API Score) : Nil

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications
Dr. Nazibuddin Ahmed	A Chapter titled "MHD mass transfer flow past an impulsively started semi-infinite vertical plate with Soret effect and ramped wall temperature" published in the book SSDC, Mathematics Applied to Engineering, Modelling, and Social Issues. Studies in Systems, Decision and Control, Springer, Cham, Vol 200, 245-279, 2019	January, 2019
Dr. Hemen Dutta	Advanced Topics in Mathematical Analysis, CRC Press, Taylor & Francis, USA	18th December, 2018 (ISBN 9780815350873) (jointly edited with M. Ruzhansky)
	Mathematical Analysis and Applications: Selected Topics, John Wiley & Sons, Inc., USA (ISBN 9781119414346),	May, 2018 (jointly edited with M. Ruzhanskyand R.P. Agarwal)
	Mathematics Applied to Engineering, Modelling, and Social Issues, Springer, Switzerland	March, 2019 (ISBN 9783030122317) (jointly edited with F. Smith and J.N. Mordeson)

28 Placement record during the period (Please state briefly):

a. Joytirmay Borah - IOCL, Bongaigaon: Oil Officer
b. Sanjib kalita, IOCL, Noonmati, Guwahati: Oil Officer
c. Anusuya Hazarika: POST Master, Ghunaisuti, Demaji
d. Dr. Joy Roy, Assistant Professor , Assam Don Bosco University, Guwahati
e. Dr. Sazida Begum, Assistant Professor, Royal Global University, Guwahati
f. Dr. Bamdev Dey: Assistant Professor , Assam Don Bosco University, Guwahati

29.Placement services provided to students by the Department/Centre, if any: **NIL**

30.Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.: **No**

31. Departmental Library :

a)	No. of Books as on 31.03.2019	7258
b)	New Books procured during the period	293
c)	No. of Journals as on 31.03.2019	62
d)	New Journals procured during the period	04
e)	No. of users during the period :	More than 300 users

32.Departmental publications: **NIL**

33.Activities and support from the Alumni Association of the Department/Centre: **NIL**

34.Activities and support from the Parent-Teacher Associations if any: **NIL**

35.Involvement in Community services :

a. **Prof. K. Patra** : Involved in various activities with different educational institutes.
b. **Prof. R. Choudhury** : Working for the promotion of scientific awareness and engaged in various social activities.
c. **Prof. H. K. Saikia** : Working for the promotion of Mathematics in the field of research
d. **Dr. N. Goswami** : Working for the upliftment of Mathematics in the region.
e. **Dr. H. Dutta** : Involved in popularizing Mathematics in the masses.

36.Provision for financial aid to students in the Department/Centre, if any:

Scholarships/Prize awarded :

a. The Amala Bezbaruah Memorial Prize of Rs. 10,000/- along with a citation is awarded every year to the student who secures the highest aggregate mark in the first and second semesters.
b. Dr. B. C. Deka, Memorial Lecture and Award of Rs. 10,000/- with a citation is awarded every year to the 1st ranked student in MA/M.Sc . Mathematics

37. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

38. Information on up to five Good Practices followed by the Department/Centre:

a. **Wall Magazine (Prameyika)**: A wall magazine is published annually as part of University week that contains articles on popular and advanced mathematics.
b. **Ramanujan Day celebration**: Every year Ramanujan Day is celebrated by inviting speakers and paper presentation by research scholars under Gauhati University.
c. **Amala Bezbaruah Memorial award ceremony**: This award ceremony is celebrated annually or bi-annually, in memory of late **Amala Bezbaruah** a faculty of this department. Mathematician, invited from higher institutes like IIT etc, delivers an illuminating talk. A cash prize of Rs. 10,000/ is given to the topper in 1st & 2nd semester exams. Late Bezbaruah's family provides the fund for the function.
d. **Phanidhar Datta Memorial Lecture (Every Year)**: This memorial lecture is held annually in memory of late **Phanidhar Datta**, first registrar of GU. A mathematical talk is arranged and the talk is given by mathematicians from IIT, Calcutta University etc.
e. **B. C. Deka memorial lecture:** This lecture is arranged in memory of late **B. C. Deka**, a faculty of this department. Speakers are invited from IITG, Panjab University.

39.Detail the plans of the Department/Centre/Institute for the next year :

a. **Renovation of Library:** The library containing 7000+ books will be converted to library cum reading room with AC facility and floor tiles
b. **Renovation of Computer Lab:** The computer lab will be equipped with more computers to fit the new course curriculum revised this year.
c. **Modernization of Class Rooms:** One class room will be converted to conference/seminar room with all modern audio-visual facilty, floor tiles and AC.
d. **Conversion of class room to research scholars' room:** One class room will be converted with separate cubicles and net facility.
e. **Construction of office room:** As there is no independent office room, one class room will be converted to office room.

Head, Dept. of Mathematics

ANNUAL REPORT : DEPARTMENT OF PHYSICS
GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Physics
   b. Year of establishment: 1954
2. Head of the Department: Dr. Madhurjya P. Bora
3. Details of academic staff:

Sl. No	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/ OBC /DA	Citation index
1	Dr. Kalyanee Boruah	Professor	Full Time	Female	GEN	Citations: 77 h-index: 5
2	Dr. Anurup Gohain Barua	Professor	Full Time	Male	OBC	Citations: 184 h-index: 7
3	Dr. Madhurjya P. Bora	Professor and Head	Full Time	Male	GEN	Citations: 218 H-index 8
4	Dr. Buddhadev Bhattacharjee	Professor	Full Time	Male	GEN	Citations: 4553 h-index. 37
5	Dr. Deepali Sarkar	Professor	Full Time	Female	GEN	Citations: 496 h-index: 13
6	Dr. Banty Tiru	Associate Professor	Full Time	Female	MOBC	Citations: 22 h-index: 2
7	Dr. Kalpana Bora	Associate Professor	Full Time	Female	GEN	Citations: 271 h-index: 9
8	Dr. Kushal Kalita	Associate Professor	Full Time	Male	GEN	Citations: 298 h-index: 10
9	Dr. Biman J Medhi	Associate Professor	Full Time	Male	GEN	Citations: 217 h-index. 9
10	Dr. Manos P. C. Kalita	Assistant Professor	Full Time	Male	GEN	Citations: 177 h-index 8
11	Dr. Sanjeev Kalita	Assistant Professor	Full Time	Male	GEN	Citations 13 h-index 1
12	Dr. Abhijit Das	Assistant Professor	Full Time	Male	SC	Citations: 20 h-index: 3
13	Dr. Bimal K. Sarma	Assistant Professor	Full Time	Male	GEN	Citations: 199 h-index 9
14	Dr. Sulochana Deb	Assistant Professor	Full Time	Female	GEN	Citations: 12 h-index: 3
15	Dr. Simanta Hazarika	Assistant Professor	Full Time	Male	GEN	Citations: 47 h-index: 5
16	Dr. Subhankar Roy	Assistant Professor	Full Time	Male	GEN	Citations: 20 h-index: 3
17	Dr. Hemen Kumar Kalita	Assistant Professor	Full Time	Male	GEN	Citations: 197 h-index 9
18	Dr. Hirakjyoti Goswami	Assistant Professor	Full Time	Male	GEN	Citations 10 h-index 2

4. Course(s)/Programme offered:
M. Sc. in Physics, M. Sc. in Radiological Physics, PhD in Physics, PhD in Radiological Physics

5. Special Branches in the Department/Centre:
The Department of Physics has following thrust areas of research and offers elective papers to M. Sc course – Astronomy and Astrophysics, Condensed Matter Physics, Electronics, High Energy Physics, Nanophysics, Nuclear Physics & Cosmic Rays, Plasma Physics and Spectroscopy

6. New Academic Programme initiated during the period under report: PhD in Radiological Physics

7. Innovation in Curricular design:
The revised M. Sc. course structure with effect from August 2018 is in place. The pre-PhD coursework for Radiological Physics is mapped under common pre-PhD coursework for Physics and Radiological Physics.

8. Inter disciplinary Programme started: Nil

9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST:
UGC-SAP (DRS III)
FIST (Level I)

10. Total number of Research Scholar working at present:

a) Full Time: 35	b) Part time: Nil

11. Enrolment of Students in various courses (April 2018-March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate (M. Sc. Physics)	I	50	40	12	52	3	1	4	4	2	6	1	1	2	11	3	14	_	_	_
M.Phil.																				
Ph.D.		21	17	4	21	4	-	4	1	1	2	--	1	1	5	-	5	--	-	-
Others (M.Sc Radiological Physics)	I	10	9	2	11	—	–	–	—	-	—	--	-	- -	1	1	2	--	-	-

12. Teacher-Student and Teacher-Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
18	120	27
Teacher/Student Ratio		Teacher-Non-teaching Staff Ratio
3:20		2:3

13. Final Examination result during the session 2018-19:
(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T

Physics	30	17	47	3	1	4	3	3	6	1	--	1	9	7	16	--	---	----
Radiological Physics	4	5	9	1	---	1	----	1	1	1	---	1	---	1	1	--	----	----

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T (H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Physics	24	16	40	3	1	4	3	3	6	1	---	1	5	7	12	---	----	-----
Radiological Physics	4	5	9	1	---	1	----	1	1	1	---	1	-	1	1	---	----	-----

14. Details of Ph.D. awarded (2018-19):

Name of the Ph D. Scholars	Title of the Ph.D. thesis	Guide
Mr. Upakul Mahanta	Studies on the distribution of elements in metal poor stars in Globular clusters	Dr. Kalpana Duorah
Mr. Kuldeep Deka	Studies on Microstructural, Optical and Magnetic Properties of Some Transition Metal Doped Nanostructured Semiconductors	Dr. Manos Pratim Chakrapani Kalita
Mr. Konsam Sashikanta Singh	Origin of the Neutrino Masses and Mixings and their Radiative Corrections at Low Energy Scales	Prof. Ngangkham Nimai Singh
Mr. Abdul Kader	Studies of Magnetars as Gamma Ray Bursters and other exotic events	Dr. Kalpana Duorah
Mr. Shakeel Zamal	Studies on some effects of atmospheric parameters on the propagation of secondary cosmic rays	Prof. Kalyanee Boruah
Ms. Rajita Goswami	A study on nonlinear evolution of acoustic waves in space and laboratory plasmas	Prof. M.P. Bora

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
01	03	02	02	

16. Important students' activities and achievements and awards during the period (Please state briefly)
Students participated in various activities organized by the Physical Society of the Department and other inter-departmental and inter-institutional events. The Department Foundation Day was organized where students actively participated in poster presentations and science projects demonstrations. Three posters and four projects presentations were awarded prizes decided by external evaluators.

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Physics	30	17	47	3	1	4	3	3	6	1	--	1	9	7	16	--	---	----
Radiological Physics	4	5	9	1	---	1	----	1	1	1	---	1	---	1	1	--	----	----

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Physics	24	16	40	3	1	4	3	3	6	1	---	1	5	7	12	---	----	-----
Radiological Physics	4	5	9	1	---	1	----	1	1	1	---	1	-	1	1	---	----	-----

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Mr. Shakeel Zamal	Studies on some effects of atmospheric parameters on the propagation of secondary cosmic rays	Prof. Kalyanee Boruah
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15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
01	03	02	02	

16. Important students' activities and achievements and awards during the period (Please state briefly)
Students participated in various activities organized by the Physical Society of the Department and other inter-departmental and inter-institutional events. The Department Foundation Day was organized where students actively participated in poster presentations and science projects demonstrations. Three posters and four projects presentations were awarded prizes decided by external evaluators.

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl. No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. Sanjeev Kalita and Dr. Biman J Medhi	Winter School in Astronomy, Astrophysics and Cosmology (WSAAC 2019)	7 – 13 January 2019	Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune and Gauhati University

18. Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19):

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19. Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
Dr. Banty Tiru	ICTP, Trieste, Italy	Workshop	26th Nov-7th Dec 2018
Dr. Anurup Gohain Barua	University of Nantes, France	Present a paper at 20th International Symposium on Bioluminescence and Chemiluminescence	May 28-31, 2018

20. (a) Sponsored Research Project (2017-18):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Dr. Abhijit Das	Design and implementation of scanned light sheet microscope with spatial light modulator based beam scanning	SERB DST	3 years	50,84,246.00
Dr. Buddhadeb Bhattacharjee	ALICE-Upgrade, Operation and Utilization	DST	5 years	18700000.00
Dr. Banty Tiru	Quantification and understanding of the variability of 3D turbulence using atmospheric radars	DST-SERB	3 years (2018-2021)	1830000.00
Dr. Hemen Kumar Kalita	Flexible and and surface tailored graphene based derivatives as toxic gas/vapor sensors	DST-SERB	3 years	48,26,800.00
Dr. Kushal Kalita	Investigating multi-nucleon transfer & n-p correlation: effects of nuclear deformation /orientation	DAE-BRNS	3 years (3/07/2018-2/07 2021)	25,56,400.00

Dr. Hirakjyoti Goswami	A study on thunderstorm genesis process & development of thunderstorm warning system.	ASTEC	2 Years (26/11/2018 - 26/11/2020)	4,41,280.00
Dr. Bimal Kumar Sarma	Colour pure near UV light emission enhancements from ZnO based thin film devices	ASTEC	3 years (2018-2021	3,50,000.00

(b) Patent Generated:

Sl. No.	Name of the Faculty	Patent Generated	Remarks
1	Dr. Bimal Kumar Sarma	An improved AZO sputtering target for manufacturing transparent conducting film and the method thereof, Indian Appl. No. 201831022820	Patent filed (19.06.2018) and published (13.07.2018)

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held
1	GATE (PH19S44003134)	Yoshini Bailung	JRF (IIT Indore)
2	NET (517648)	Bikash Sutradhar	
3	GATE (PH19S44003362)	Jayaditya Saha	
4	NET(517525)	Pankaj Ramchiary	
5	NET JRF (518642), SLET (1901340193)	Jinti Barman	Scientific Officer, Center of Plasma Physics- Institute for Plasma Research
6	NET (519326)	Mami Deka	JRF in CSIR Funded project, Cotton University
7	SLET (1901340069)	Lakhyajit Sarma	

22. Distinguished visitors to the Department during the period 2018-19.

Name of visitors	Address & Designation	Purpose of visit
Dr. Bidyut Jyoti Roy	Associate Professor, Physical Sciences, BARC, Mumbai	Talk and presentation
Dr. Tanmay Chakraborty	National Institute of Chemical Physics and Biophysics, Tallinn, Estonia	Talk and presentation
Dr. Subhaditya Bhattacharya	Assistant Professor, Departmen of Physics, IIT Guwahati	Talk and presentation
Dinesh Lahoti	Founder of Edugenie, Alumnus of IIT Guwahati	Talk and presentation
Dipankar Pathak	Institut für Geologie, Universität Bern, Bern, Switzerland	Talk and presentation

Prof. Rita Paikaray	Professor, Department of Physics, Revenshaw University	Talk and presentation
Prof. Sangeeta Sinha	Department of Physics at B R Ambedkar Bihar University,	Talk and presentation
Anjan Chowdhury	IIE Guwahati	Talk and presentation

23. Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
The Department of Physics has adequate facilities for teaching and learning. The Department houses 8 class rooms, 6 teaching laboratories, 11 research laboratories, 1 computer laboratory, 1 departmental library and a workshop. In addition, the department runs an Astronomical Observatory. These facilities are accessible to PhD scholars for their research and M. Sc students for regular lab and project activities. Major facilities of this department are presented below:

1. Astronomy & Astrophysics
   - 6-inch Refractor (Astronomical Telescope)
2. Nuclear Physics
   - Common Detector Testing & Data Acquisition System
   - Silicon Surface Barrier Detector Setup
   - Gamma-Ray Spectroscopy Setup
3. Nanophysics
   - Top-Down Synthesis of Nanomaterials
   - Absorption Spectrophotometer
   - Production and Measurement of Low Pressure
4. Condensed Matter Physics
   - Deposition and Characterization of Thin Films
5. Cosmic Ray Physics
   - Cosmic Ray Experiments using FPGA
6. Optics & Spectroscopy
   - Determination of Conversion Efficiency of Crystal: Second Harmonic Generation Setup
   - Zeeman Effect Experiment Setup
7. Electronics
   - Electronic System, testing, and Design Setup
   - Network Analysis Setup
   - Communication and Signal Processing Setup
   - System Design using Field Programmable Devices
8. High performance computing facility
   A 60-Core HPC (High Performance Computing) Cluster (Cygnus Cluster) running CentOS operating system is installed in the Department to perform high computation intensive parallel programs using MPI.

24. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:

The department has 24×7 computer facilities with high-speed, fiber optic as well as Wi-Fi internet connection. It facilitates all necessary commercial and open source software under Linux and Windows platform. Sophisticated Clusters for parallel computation are also introduced in this facility. There are all together 20 Brand New All-in-One business class desktop PCs, 10 nos. of ordinary desktop PCs, one network server, one internet server, two network file servers, and two high end computing servers. Besides, the lab has network laser printers, and a colour laser printer distributed across the department. The whole set up runs several high capacity online UPS, with connections spreading across the whole department and laboratories.

Students of the M.Sc Radiological Physics are trained by the experts of the different leading institutes like Tata Memorial Hospital, Mumbai, Medanta Medicity, New Delhi and Inlaks & Budhrani Hospital, Pune. The list is furnished below,

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration	participant
One year of compulsory internship under Msc (Radiological Physics)	Internship at various medical institutes of India	Dr. B. Borooah Cancer Institute, Guwahati	01.09.2018–31.08.2019	Priya Kakoty
		Dr. B. Borooah Cancer Institute, Guwahati	01.09.2018–31.08.2019	Thepuzhoyi Medeo
		Dr. B. Borooah Cancer Institute, Guwahati	01.09.2018–01.08.2019	Mayur Krishna Das
		Dr. B. Borooah Cancer Institute, Guwahati	01.09.2018–31.08.2019	Pankaj Kalita
		Tata Memorial Hospital, Mumbai	17.09.2018-16.09.2019	Nirjara Mahanta
		Tata Memorial Hospital, Mumbai	17.09.2018-16.09.2019	Rituraj Kalita
		Medanta Medicity, Gurgaon, New Delhi	04.06.2018-03.05.2019	Deepa Sharma
		Inlaks & Budhrani Hospital, Pune	05.09.2018–04.09.2019	Dipanjuli Basumatary

25. Technology upgrade in the Department/Centre during the period 2018-19:
    i. Old computer centre of the department is upgraded with the introduction of 20 high end all-n-one desktop computers. A 60-Core HPC (High Performance Computing) Cluster (Cygnus Cluster) is installed in the Department to perform highly computation intensive parallel programs, necessary for research work.
    ii. Online UPS facility is upgraded during this academic year to avail an uninterrupted power supply in all the MSc class rooms and laboratories.
    iii. Digital display is installed in the conference room.

26. Linkages developed with National/International/Academic/Research Bodies:
    - CERN, Geneva, Switzerland (Collaborative research)
    - GSI, Dermstadt, Germany (Collaborative research)
    - Rutherford Appleton Laboratory, UK (Collaborative research)
    - University of York, UK (Collaborative research)
    - UGC, New Delhi (Collaborative research)
    - DST, Govt. of India (Collaborative research)
    - ASTEC, Assam (Collaborative research)
    - IASST, Guwahati (Collaborative research)
    - National Atmospheric Research Laboratory, Tirupati (TARE fellowship)
    - Variable Energy Cyclotron Center, Kolkata (Collaborative research)
    - Bose Institute, Kolkata (Collaborative research)
    - Saha Institute of Nuclear Physics (Collaborative research)
    - National Institute of Science Education and Research, Bhubaneswar (Collaborative research)
    - Indian Institute of Technology, Bombay (Collaborative research)
    - Indian Institute of Technology, Indore (Collaborative research)
    - Aligarh Muslim University, Aligarh (Collaborative research)
    - Jammu University, Jammu (Collaborative research)
    - Institute of Physics, Bhubaneswar (Collaborative research)
    - Punjab University, Chandigarh (Collaborative research)
    - Rajastan University, Jaipur (Collaborative research)
    - Visiting associate of Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune for the second term, w.e.f August 2018.

- Member of International Science Development Team (ISDT) of Thirty Meter Telescope (TMT) in the Fundamental Physics & Cosmology group for the 4th term.
- BARC, Mumbai
- Dr BBCI, Guwahati (DAE aided Research Institute)

27. Academic activities of Faculty members during the period of report (2018-19):
a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Abhijit Das	0	1
Dr. Anurup Gohain Barua	2	0
Dr. Biman J Medhi	2	2
Dr. Banty tiru	0	1
Dr. Kushal Kalita	2	1
Dr. Sanjeev Kalita	1	0

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly):

Dr. Anurup Gohain Barua

- Delivered a talk on "Writing a research paper" at UGC HRDC, Gauhati University in the short course on Research Methodology held in March, 2019'.
- Delivered the keynote address in the National Science Day celebration at Department of Physics, IIT Guwahati on February 28, 2019.

Dr. Madhurjya P Bora:

- Invited Speaker at the Silver Jubilee of Regional Science Centre, March 15, 2019.
- Invited Speaker at the One-day symposium on Recent trends in Basic Plasma Research, CPP-IPR, March 7, 2019.
- Invited Speaker at the Meeting and Review of Science and Mathematics Facilitators at School, ASTEC, January 7-8, 2019.
- A series of two lectures on Nonlinear Dynamics at UGC Human Resource Development Centre (HRDC), GU, December 2018.
- Teaching Science with Innovations, Resource Person for the Content Enrichment Programme, Navodaya Leadership Institute (NLI), Rangia, November 19, 2018.
- Physics of Lunar Dust - how much do we know?, Research Institute of Science & Technology (Manipur University Campus), Imphal, November 16, 2018.
- Inaugural Lecture - Riding on a beam of light . . ., SPIE Meeting (International Day of Light), IIT Guwahati, May 16, 2018.
- Invited Lecture and Resource Person, Science Workshop, Regional Science Centre, Guwahati, April 12, 2018.

Dr. Biman J Medhi:

- Invited talk in IUCAA sponsored 4th North East Meet of Astronomer held in Assam University, Silchar, Assam, 26 - 28 November 2018.
- Chaired a session in IUCAA sponsored 4th North East Meet of Astronomer held in Assam University, Silchar, Assam, 26 - 28 November 2018.
- Invited as a Resource Person for the inaugural ceremony of Annual Science Exhibition and interaction with the students at St. Theresa's School, Sankardev Nagar, Morigaon, Assam, 11 August, 2018.
- Invited as a Resource person for the inaugural ceremony of Annual Science Exhibition and interaction with the students at St. Patric School, Sonapur, Guwahati, Assam, 25 August, 2018.
- Invited talk at Mongoldoi College, Mongoldoi, under UGC star college scheme, 30 March, 2019.

- Invited as a resource person in workshop cum training programme on basic observational astronomy through naked eye and telescope held at Guwahati Planetarium, 21 April, 2018.

Dr. Sanjeev Kalita

- Resource person for North-East Meeting of Astronomers (4), 26-28 November 2018 Assam University, Silchar
- Resource person for a colloquium at Pandu College during 22nd September 2018.
- Resource person for theb Workshop on Astronomy Organised by Pragjyotish Amateur Astronomers' Association, 20th April 2018.

Dr. Bimal Kumar Sarma

- Delivered an invited talk as a resource person in the Workshop on Procedures and Applications of XRD, XRF, & Single Crystal XRD at SAIF, Gauhati University, July 27 - Aug 01, 2018
- Delivered an invited talk at Bodoland University on 29 March 2019 as a part of the C.V. Raman Lecture Series organized by the Department of Physics, Bodoland University.

c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
Dr. Hemen Kr. Kalita		OP117, Gauhati University, HRDC
Dr. Hirakjyoti Goswami		OP117, Gauhati University, HRDC

d) Details of paper published in the Referred journals during the period:

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Dr. Buddhadeb Bhattacharjee	Color reconnection as a possible mechanism of intermittency in the emission spectra of charged particles in PYTHIA-generated high-multiplicity ppcollisions at energies available at the CERN Large Hadron Collider	Physical Review C 99, 034901 (2019)
	Multiplicity dependence of light-flavor hadron production in pp collisions at $\sqrt{s}$=7 TeV	Physical Review C 99, 024906 (2019)
	Transverse momentum spectra and nuclear modification factors of charged particles in pp, p-Pb and Pb-Pb collisions at the LHC	Journal of High Energy Physics 1811 (2018) 013
Dr. Anurup Gohain Barua	Manifestation of peaks in a live firefly flash	Journal of Fluorescence, 29 (2019) 505-513
Dr. Biman J Medhi	3.6m Devasthal Optical Telescope Project: Completion and first results	BSRSL, 78, 29, 2018
	VR CCD photometry of variable stars in globular cluster NGC 4147	AJ, 158, 51, 2019
	Bok globule CB17: Polarization,	MNRAS, 487, 475,

	extinction and distance	2019
Dr. Deepali Sarkar	Development of room temperature ethanol sensor from polypyrrole (PPy) embedded in polyvinyl alcohol (PVA) matrix	Polymer Bulletin, Volume 75, Issue 7, July, 2018, pp 3109-3125
	Investigation on dielectric properties of polyaniline (PANI) sulphonic acid (SA) composites prepared by interfacial polymerization	Synthetic Metals, Vol 249, March, 2019, pp 69-80
	Silver ion concentration dependent properties of silver nanostructured nanocomposite films	Journal Of Optoelectronics And Advanced Materials, Vol 21, Issue 3-4, March 2019, pp 275-280
Dr. Manos P. C. Kalita	Structural phase controlled transition metal (Fe, Co, Ni, Mn) doping in CdS nanocrystals and their their optical, magnetic and photocatalytic properties	Journal of Alloys and Compounds 757 (2018) 209-220
	Microstructural, optical, magnetic and photocatalytic properties of Mn doped ZnO nanocrystals of different sizes	Physica B 552 (2019) 30-46
Dr. Banty Tiru	Emulating the Statistical Properties of Indoor Power Line Colored Background Noise for Development of a Power Line Noise Simulator	Journal of Circuits Systems and Computers (2019) https://doi.org/10.1142/S0218126620500553
	An Alternate Method for Prediction and Analysis of Notch Characteristics in Indoor Power Lines Under Varied Channel Conditions	Arabian Journal of Science and Engineering (2019) https://doi.org/10.1007/s13369-019-04052-w
Dr. Kushal Kalita	"Fabrication and characterization of thin targets of nickel (61,62Ni) isotopes by physical vapour deposition technique for nuclear reaction studies"	Vacuum 163 (2019) 148–157
	Theoretical aspect of the deformation effect on fusion cross-sections induced by heavy ion systems 16,18O + 58Ni and 112Sn	Indian Journal of Pure & Applied Physics 57, (2019), 590-595
	Precision resonance energy scans with the PANDA experiment at FAIR -- Sensitivity study for width and line-shape measurements of the X(3872)	Eur. Phys. J. A (2019) 55: 42
Dr. Simanta Hazarika	Laser induced fluorescence resonance energy transfer for detection of arsenic in water	Laser Phys. 29 (2019) 015601 (5pp)

Dr. Hemen Kumar Kalita	Graphene oxide based soil moisture microsensor for in situ agriculture applications	Sensors and Actuators B: Chemical 273, 1660-1669
Dr. M. P Bora	Modeling aperiodic magnetospheric oscillations	Phys. Rev. E 99 (2019) 013205
	Dust levitation in an inverse sheath	Phys. Plasmas 25 (2018)103704
Dr. Kalpana Bora	Compatibility of A_4 flavour symmetric minimal extended seesaw with (3+1) neutrino data	Eur. Phys. J. C 79 (2019)129, 36 pp.
Dr. Bimal Kumar Sarma	AZO (Al:ZnO) thin films with high figure of merit as stable indium free transparent conducting oxide	Appl. Surf. Sci. 479 (2019) 786 - 795
	Microstructural evolution and optical dispersion of sputtered ZnO thin films at low annealing temperature	Mater. Res. Exp. 6 (2019) 016420

e) Paper published in other journals during the period (only those considered for API Score)

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Dr. Bimal Kumar Sarma	Nanostructured ZnO and its derivatives - properties and applications (Featured Article)	Bull. Phys. Proj. 3 (2018)1–10

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications

28. Placement record during the period (Please state briefly):
Students are able to join PhD programs in institutes of national importance such as IITs, SINP etc. in addition to their placements for research works at various state and central Universities, IASST, CPP-IPR and NITs. Some students have joined regular jobs at central institutes, colleges, schools, and banking sectors.
    1. Yoshini Bailung, PhD Scholar, IIT, Indore
    2. Jinti Barman, Scientific Officer, Centre of Plasma Physics- Institute for Plasma Research
    3. Mami Deka, JRF in CSIR Funded project, Cotton University
29. Placement services provided to students by the Department/Centre, if any: NA
The University has dedicated placement cell and students receive communications from the cell for recruitment drive by several agencies. In addition, students are made aware of various job vacancies and national and international research positions for PhD programme.
30. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report.
Although we do not have dedicated Unit for Student Counseling, the Department has mentor-mentee system in place where 5-6 students are allotted a faculty member as mentor for counseling. The students are advised on issues pertaining primarily to their academics from time to time and as and when necessary.
31. Departmental Library:

a)	No. of Books as on 31.03.2019	950 (Old journals and magazines are not included)
b)	New Books procured during the period	23 (under Department's fund) and 63 (under RUSA Grant)= 86
c)	No. of Journals as on 31.03.2019	350

d)	New Journals procured during the period	NIL
e)	No. of users during the period :	108

32. Departmental publications:
The Department has annual research publication, Horizon – a journal of Physics where invited research articles from distinguished scientists, regular research papers from the Department and affiliated colleges are published as peer review publications.

33. Activities and support from the Alumni Association of the Department/Centre:
NIL

34. Activities and support from the Parent-Teacher Associations if any: NIL

35. Involvement in Community services:
The faculty members frequently visit different colleges, schools, and centers to deliver scientific presentations and motivate students to devote in understanding Physics. The Department under the banner of Physical Society, G.U. has initiated extension and outreach activities where students and faculty members will visit schools and interact through scientific activities for promoting science education. Some of the outreach activities are listed below.

i. Interactive session.
Speaker: Prof Madhurjya P Bora (HOD, Physics, GU)
Targeted audience: High school students.
Date: 6th February, 2019.
Venue: Jalukbari Jatiya Vidyalaya, Forest School, Guwahati-781014.

ii. Public talk: How Big is our Universe?
Speaker: Dr. Sanjeev Kalita.
Targeted audience: School students (Class VIII-X)
Date: 15 th February, 2019.
Venue: Jalukbari Girl's School.

36. Provision for financial aid to students in the Department/Centre, if any:
Students from low family income background are admitted under fee waiver scheme of the Government of Assam. Students are encouraged to participate in various scientific events and present their projects in science fair and related expenditures are met by the Department.

37. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.
The department has the provision of online students' feedback where anonymous students feedback are invited to assess the course outcome and teachers performance. The overall views and issues are shared and discussed and performances of teachers are confidentially communicated to the teachers individually.

38. Information on up to five Good Practices followed by the Department/Centre:

- Classes with rigorous approach to understand Physics problems
- Timely declaration examination results, regular students' feedback and follow up action
- Regular Friday Seminar by the students, invited distinguished scientists, research scholars, and faculty members and other co-curricular activities are conducted under the name of Physical Society of the Department.
- Continuous upgrade of Teaching Laboratories by introducing new experiments with uninterrupted power supply
- Non teaching members are trained to improve efficiency in official works and providing better technical assistance in Teaching Labs.

39. Detail the plans of the Department/Centre/Institute for the next year:
The Department of Physics is mapped under University CBCS for PG courses and new elective papers shall be introduced considering the students' interests and placements. New classrooms with adequate ICT will be created to improve the class room ambience. Lab space to start innovation practices will be made available in the upcoming extension building. An attempt will be made to create common research facilities and renovation of Physics workshop to cater needs of the students, research scholars, and faculties.

Head, Dept. of Physics

ANNUAL REPORT : DEPARTMENT OF STATISTICS GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department :.....Statistics
   b. Year of establishment :.....1948
2. Head of the Department : Prof. Labananda Choudhury
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. L. Choudhury	Professor	Full Time	Male	Gen	
2.	Prof. K. K. Das	Professor	Full Time	Male	Gen	
3.	Dr. Jagriti Das	Assistant Professor	Full Time	Female		
4.	Dr. Pallabi Medhi	Assistant Professor	Full Time	Female	Gen	
5.	Ms. Paramita Roy	Assistant Professor	Full Time	Female	Gen	
6.	Dr. Sahana Bhattacharjee	Assistant Professor	Full time	Female	General	

4. Course(s)/Programme offered . M.Sc., M. Phil, Ph.D.
5. Special Branches in the Department/Centre : Nil
6. New Academic Programme initiated during the period under report : Nil
7. Innovation in Curricular design :
8. Inter disciplinary Programme started : Nil
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: **FIST**
10. Total number of Research Scholar working at present :

a) Full Time:	b) Part time:

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st	30	14	16	30	1	1	2	3	1	4	0	0	0	6	3	9	0	0	0
Ph.D.			0	3	3															

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
6	30	4+4(Chowkidar)+2(Sweeper)

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:5	3:5

13. Final Examination result during the session 2018-19.
    (a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Statistics	14+2(Repeat)	13	27+2 (Repeat)															

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Statistics	6	10	16															

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Ajay Pandey	Neonatal Frailty and Random Effect Modeling: A Study of Differences in the Levels, Determinants and Contextual Influences in Empowered Action Group States of India	Prof. Dilip C. Nath
Chandi Ram Kalita	A Study on Some Unreliable Queueing Models with Two Types of General Heterogeneous Service	Dr. Gautam Choudhury, IASST
Vivek Verma	Bayesian Estimation under Ranked Set Sampling with Applications to Demography	Prof. Dilip C. Nath
Brajendra kanta Sarmah	Examination of Proper Randomness of Random Number Tables	Dr. Dhritikesh Chakrabarty, Handique Girls College
Dibyajyoti Bora	Proximate Determinants of Mental Disorders in Assam	Prof. Kishore K. Das
Nongmaithem Uttam Singh	Production dynamics of foodgrain in North Eastern India under spatio-Temporal Framework	Prof. Kishore K. Das
Anamika Dutta	An Empirical Study with Proteomics Datasets Using Different Techniques	Prof. Kishore K. Das

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1.	Dr. Sahana Bhattacharjee	Two Day National Seminar on Statistics for People, Society and Economy	22.02.2019 – 23.02.2019	Gauhati University
2.	Ms. Paramita Roy	Two day Workshop on Statistical Data Analysis using Python Programming Language	08.03.2019- 09.03.2019.	Gauhati University

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Professor Kishore K. Das	Adjunct Faculty of Assam University	Assam University

19.Visit abroad by the Faculty members (2018-19) : NA

Name of the Faculty	Institute visited	Purpose	Period

20.(a) Sponsored Research Project (2018-19): NA

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

(b) Patent Generated: NA

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit

23 Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
24 Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:
25 Technology up gradation in the Department/Centre during the period 2018-19:
26 Linkages developed with National/International/Academic/Research Bodies :
27 Academic activities of Faculty members during the period of report (2018-19):
a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. L. Choudhury	1	
Dr. Sahana Bhattacharjee	1	
Ms. Paramita Roy	1	
Dr. Pallabi Medhi	1	
Dr. Kishore K. Das	1	

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly) : Ms. Paramita Roy, Prof. Kishore K. Das
c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. Sahana Bhattacharjee		OP-116, conducted by UGC-HRDC, Gauhati University, during 01.06.2018 to 28.06.2018

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Dr. Sahana Bhattacharjee	Estimation of circular-circular probability distribution	Electronic Journal of Applied Statistical Analysis, 11(1), date: 27.04.2018
Dr. Sahana Bhattacharjee	A Counting Process With Generalized Exponential Inter-Arrival Times	STATISTICA, 78(1), date: 12.07.2018
Dr. Sahana Bhattacharjee	Regression Analysis involving Circular Response and Circular Explanatory Variable	International Journal of Scientific Research in Mathematical and Statistical Sciences, 5(4), date: August, 2018
Dr. Sahana Bhattacharjee	A New Three parameter Poisson-Lindley distribution for modelling over-dispersed count data	International Journal of Applied Engineering Research, 13, date: December, 2018
Kishore K. Das, et.al	Estimation of growth rate and decomposition of output components of oilseed: A comparative study among the states of North East	Indian Journal of Hill Farming June 2018, Vo. 31, Issue 1, pp. 1-7.
Kishore K. Das, et.al	Dynamics of cereals production in the states of North Eastern Region of India: An Interstate comparative Study	Indian Journal of Hill Farming June 2018, Vo. 31, Issue 1, pp. 8-11.
Kishore K. Das	A New Three-Parameter	International Journal of Applied

	Poisson-Lindley Distribution for Modelling Over-dispersed Count Data	Engineering Research ISSN 0973-4562 Volume 13, Number 23 (2018) pp. 16468-16477

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Dr. Sahana Bhattacharjee	Estimation of circular-circular probability distribution	Electronic Journal of Applied Statistical Analysis, 11(1), date: 27.04.2018
Dr. Sahana Bhattacharjee	A Counting Process With Generalized Exponential Inter-Arrival Times	STATISTICA, 78(1), date: 12.07.2018

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications

28.Placement record during the period (Please state briefly):

29.Placement services provided to students by the Department/Centre, if any:

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	
b)	New Books procured during the period	
c)	No. of Journals as on 31.03.2019	
d)	New Journals procured during the period	
e)	No. of users during the period :	

32.Departmental publications :

33.Activities and support from the Alumni Association of the Department/Centre :

34.Activities and support from the Parent-Teacher Associations if any :

35.Involvement in Community services :

36.Provision for financial aid to students in the Department/Centre, if any:

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

38.Information on up to five Good Practices followed by the Department/Centre.

39.Detail the plans of the Department/Centre/Institute for the next year :

Head, Dept. of Statistics

ANNUAL REPORT: DEPARTMENT OF ZOOLOGY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Zoology
   b. Year of establishment : 1963
2. Head of the Department : Prof. P.K.Saikia
3. Details of Academic Staff (Zoology) :-

Sl No	Name	Qualification	Specialisation	Sex	Caste	Carrier status	Full/part time
1	Prof.P.K.Saikia	M.Sc,Ph.D	Animal Ecology & Wildlife Biology	Male	General	Professor	Full time
2	Prof.K.Dutta	M.Sc,Ph.D	Cell & Molecular Biology	Female	General	Professor	Full time
3	Prof.R.K.Bhola	M.Sc,Ph.D	Entomology	Male	General	Professor	Full time
4	Prof.J.C.Kalita	M.Sc,Ph.D	Physiology	Male	General	Professor	Full time
5	Prof.D.Sarma	M.Sc,Ph.D	Fish Biology & Fishery Science	Male	General	Associate Professor	Full time
6	Dr.B.Khanikar	M.Sc,Ph.D	Entomology	Female	General	Assistant Professor	Full time
7	Dr.Manas Das	M.Sc,Ph.D	Physiology	Male	General	Assistant Professor	Full time
8	Dr.B.Mech	M.Sc,Ph.D	Cell & Molecular Biology	Female	ST	Assistant Professor	Full time
9	H.Choudhury	M.Sc	Fish Biology & Fishery Science	Male	General	Assistant Professor	Full time
10	Dr.M.K.Saikia	M.Sc,Ph.D	Animal Ecology & Wildlife Biology	Female	General	Assistant Professor	Full time

Details of Academic Staff (Wildlife Science):-

Sl.No	Name	Qualification	Specialisation	Sex	Caste	Carrier status	Full/part time
1	Dr.M.K.Saikia	M.Sc,Ph.D	Animal Ecology & Wildlife Biology	Female	General	Assistant Professor	Part time
2	Prof.J.Kalita	M.Sc,Ph.D	Biodiversity & Conservation Biology	Male	General	Professor	Part time
3	Prof.P.K.Saikia	M.Sc,Ph.D	Animal Ecology & Wildlife Biology	Male	General	Professor	Part time
4	Dr.D.Sarma	M.Sc,Ph.D	Fish Biology & Fishery Science	Male	General	Associate Professor	Part time
5	Dr.B.Khanikor	M.Sc,Ph.D	Entomology	Female	General	Assistant Professor	Part time

4. **Courses Offered:**
   1. **M.Sc. in Zoology (4 Semester Regular Course)**
   2. **M.Sc. in Wildlife Science (4 Semester Regular Course)**
   3. **Pre-Ph.D. Course in Zoology**
   4. **Ph.D. in Zoology**
5. **Enrolment of Students in various courses:-**

Deptt	Sem	Intake Capacity	No. Admitted			SC			ST(P)			ST(H)			OBC/MOBC			PH		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Zoology M.Sc	1st	40	7	31	40	2	1	3	2	2	4	0	2	2	1	9	10	0	0	0
	2nd	40	9	31	40	2	1	3	2	5	7				1	9	10	0	0	0
	3rd	40	6	34	40	0	3	3	0	6	6	0	2	2	1	7	8	0	0	0
	4th	40	6	34	40	0	3	3	0	6	6	0	2	2	1	7	8	0	0	0
Animal Ecology & Wildlife Biology	1st	20	6	11	20	0	0	0							2	5	7	0	0	0
	2nd	20	9	11	20	0	0	0							2	5	7	0	0	0
Pre-Ph.d course		NA	5	15	20	1	1	2	1	0	1	0	0	0	1	5	6	0	0	0

6. **Teacher Student Ratio**

No. of Teachers	No. of Students	T/S Ratio
10	120	1:12

7. **Specializations Offered**

Sl.No	Name of Special paper	Intake Capacity	No. Admitted
1	Animal Physiology& Biochemistry	08	8
2	Cell & Molecular Biology	08	8
3	Fish Biology & Fishery Science	08	7
4	Entomology	08	8
5	Animal Ecology & Wildlife Biology	08	8

8. **Classes held during the Session 2018-2019**

Course	Theoretical	Practical
M.Sc 1st Semester	210	160
M.Sc 2nd Semester	230	158
M.Sc 3rd Semester	218	125
M.Sc 4th Semester	185	150
WLS 1st Semester	145	89
WLS 2nd Semester	150	79
Pre-Ph.D Course (Zoology)	118	Not applicable

9. Particulars of working days during the session Aug., 2018-July, 2019

1	No. of actual working days	180
2	No. of University Examination days	36
3	No. of Departmental Examination days	8
4	No. of days for co-curricular activities	14

10. Final Examination Results during the session 2018-19

(a). No. Appeared

Subject	Total Appeared			SC			ST(P)			ST(H)			OBC			PH		
Zoology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	6	32	38	0	3	3	0	5	5	0	2	2	1	6	7	0	0	0

(b). No. Passed

Subject	Total passed			SC			ST(P)			ST(H)			OBC			PH		
Zoology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	6	32	38	0	3	3	0	5	5	0	2	2	1	6	7	0	0	0

M.Sc. in Wildlife Science

(a). No. Appeared

Subject	Total Appeared			SC			ST (P)			ST (H)			OBC/ MOBC			PH		
WLS	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	8	12	20													0	0	0

(b). No. Passed

Subject	Total Passed			SC			ST (P)			ST (H)			OBC/ MOBC			PH		
WLS	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	7	12	19															

Pre-Ph.D Course in Zoology

(a). No. Appeared

Subject	Total Appeared			SC			ST (P)			ST (H)			OBC/ MOBC			PH		
Zoology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	5	15	20	0	1	1	0	3	3	0	0	0	1	5	6	.	.	..

(b). No. Passed

Subject	Total Passed			SC			ST (P)			ST (H)			OBC/ MOBC			PH		
Zoology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	5	14	19	0	1	1	0	3	3	0	0	0	1	5	6			

11. Details of Ph.D. awarded during 2018-19

Sl.No	Name of Ph.D. Student	Name of Guide
1	Tarali Kalita	Prof.K.Dutta
2	Sonali Barpatra Gohain	Dr.Sabitry Bordoloi Choudhury
3	Madhurima Das	Prof.Jatin Kalita
4	Jayaditya Purkayastha	Prof.Jatin Kalita
5	Pollobi Duara	Prof.Jatin Kalita
6	Jinu Lagachu	Prof.Jogen Ch.Kalita
7	Merina Narah	Prof.Jogen Ch.Kalita
8	Lipika Tamuli	Dr.Binode Kr.Baruah
9	Kishore Haloi	Dr.Dipali Devi
10	Meena A Sangma	Prof.P.K.Saikia
11	Priyanki Sarma	Prof.Jogen Ch.Kalita
12	Nazia Khatun	Dr.Rita Mahanta
13	Deba Kumar Dutta	Dr.Rita Mahanta
14	Geetoshree Goswami	Dr.Saibal Sengupta Dr.Binode Kr.Baruah
15	Sanhita Purkayasttha	Prof.Jogen Ch.Kalita

16	Mousumi Hazarika	Rtd.Prof.D.K.Sharma
17	Priyasha Saikia	Prof.K.Dutta
18	D.Khlur B Mukhim	Prof.D.Sarma
19	Dibyajyoti Saikia	Prof.D.Sarma
20	Anindita Deka	Dr.Ratul Ch.Rajkhowa
21	Alika Barphukan	Prof.Rakesh Kr. Bhola
22	Anamika Barman	Rtd.Prof.D.K.Sharma
23	Ananda Ram Boro	Prof.P.K.Saikia
24	Chiranjit Baruah	Prof.P.K.Saikia
25	Jaydev Mandal	Prof.P.K.Saikia
26	Anupam Kr. Medhi	Dr.Arup Kr. Hazarika
27	Nabanita medhi	Dr.Uma Dutta

12. Awards/Fellowship earned by Faculty members:-

Name of Faculty	Name of Award/Fellowship	Conferring Agency
Nil	Nil	Nil

13. Sponsored Research Project:-

Name of Principal Investigator	Title of the Project	Funding Agency	Duration	Amount
Dr. Dandadhar Sarma	ICAR-NBFGR collaborative program on technological and infrastructure support for development of tribal farmers under TSP scheme in Assam Region	NBFGR	2018-21	7,10,000/-
Dr. Dandadhar Sarma	Attempt to develop diagnostics and preventive measure for suspected fish viral diseases encountered in Assam	DBT,GOI	2018-21	1,43,23,600/-
Dr. Dandadhar Sarma	Establishment of Captive breeding protocols and value additions to selected indigenous ornamental fishes from North East India	DBT,GOI	2018-21	76,46,000/-
Dr. Dandadhar Sarma	Establishment of Aquarium Unit for culture and breeding of indigenous hills stream fishes	ICAR-DCFR,Bhimtal	2018-21	1,50,000/-
Dr. P. K. Saikia PI & Co- PI Dr. M. K. Saikia	Biodiversity of Himalayan foot hills of north Bank Landscape, Assam, India	NMHS , MOEF	2018-21	1.27,44.000.00

14. Academic distinction earned by the students during 2018-19:-

		Name of students	Position Held
A	In the PG level examination		
B	No. of students passed UGC-CSIR NET	9	
C	No. of students passed GATE	8	
D	No. of students passed Indian Civil Service Examination	No information	.....
E	No. of students passed GRE	No information	.....

F	No. of students passed TOEFL	No information	.....
G	No. of students passed GMAT	No information	.....
H	Any other (specify) SLET	8	

15. Development of the Department during 2018-19

i. Academic Development	**Sincere effort has been made to improve bench skill of the Stakeholders in theoretical as well as in practical knowledge. Following steps has been taken in 2018-19:** ⇒ By organizing **short term training courses** in Bioinformatics& proteomics application in Teaching and Research through BIF ⇒ By organizing **popular lecture** inviting distinguish Scholar of India ⇒ Stakeholders were also get benefitted due to the outcome of various ongoing research project of the department. ⇒ Effort were also imparted to the stake holders about career development by holding interactive session through invited scientist DBT, GOI, New Delhi.
ii. Infrastructure Development	⇒ The GU authority has allocated to the department an area of about 10 acres of land for construction of Aquaculture and Biodiversity project site to carry out advance Research and training. A total 09 pond has already been constructed along with facilities like Hatchery (Carp and Air breathing fishes), hatchling rearing unit, Aquaculture and Limnology laboratory etc (construction is in progress). The site also having a separate area for construction of infrastructure and facilities for Biodiversity thrust area. ⇒ The department has also successfully completed UGC (SAP) phase –II (DRS-II) in March/2013

16. Academic activities of Faculty Members:

Publication of Faculty Members (Academic Session 2018-19)

Prof.P.K.Saikia:-

1. Mahanta N, Saikia P.K., Mahawanda P, Saikia R (2018):First record of Limnodromus scolopaceus (Say, 1823) and Calidris ferruginea (Pontoppidan 1763) from North East India

Prof.Dandadhar Sarma:-

1. Sarma D ,Talukdar B ,Saikia D.J. , Chattopadhyay P, Banerjee G(2018) : Identification and Pathogenicity of Pseudomonas aeruginosa DJ1990 on Tail and Fin Rot Disease in Spotted Snakehead *JOURNAL OF THE WORLD AQUACULTURE SOCIETY*, Vol. 49, No. 4doi: 10.1111/jwas.12476
2. Sarma D , Saikia A, Choudhury H ,Kalita M (2018) :Length-weight relationships of four endemic snakeheads [Channa andrao Britz, 2013, Channa aurantimaculata Musikasinthorn, 2000, Channa bleheri Vierke, 1991, and Channa stewartii (Playfair, 1876)] from the Brahmaputra drainage, northeast India . *J Appl Ichthyol.* ; 34:1367–1368., DOI: 10.1111/jai.13804
3. Choudhury H , Dey A,Bharali R.C., Vishwanath W , Sarma D (2019):A new species of stone loach (Teleostei: Nemacheilidae: Schistura) from Arunachal Pradesh, India.

Chapter-B

Dr.Manas Das:-

1. Chutia P and Das M(2018): Review Article -Aquaporins: Structure and Physiology in Fish. *Journal of Bioresources 5(1): 1-17*
2. Konwar A, Das M*, Dey D, Chutia P (2018) :Effects of Altered pH on Antioxidant Defence System ofMonopterus cuchia (Hamilton, 1822) in Ex-situ Modulated Environment pH Condition. *Journal of Bioresources 5(1): 56-64*
3. Saikia A , Das M*, Saikia Q (2018) : Hepatoprotective potential of the methanolic extract of Colocasia esculenta on iron overload induced mice. *Medicinal Plants Vol. 10 (3), September 2018, 243-251,* doi : 10.5958/0975-6892.2018.00038.2
4. Basumatary P, Das M, Barman P, Choudhury M (2018): Molecular Docking Study of 2, 3-Dimethylmaleic Anhydride (3, 4-Dimethyl-2, 5-Furandione) as Anti-inflammatory Agent. *Trends in Bioinformatics* ISSN 1994-7941, DOI: 10.3923/tb.2018.
5. Das L, Das M and Kalita A (2018): Toxic effect of glyphosate-based herbicide on antioxidant defense system and heat shock protein 70 expression in Monopterus cuchia (Hamilton). *Applied Biological Research* 20(3): 278-290; (2018) DOI: 10.5958/0974-4517.2018.00038.1
6. Saikia Q, Das M*, Saikia A (2018) : Hepatoprotective Role of Phlogacanthus thyrsiflorus Nees. as a Potential Iron Chelating Drug. *International Journal of Pharmacology, Phytochemistry and Ethnomedicine* ISSN: 2297-6922, Vol. 12, pp 12-22 doi:10.18052/www.scipress.com/IJPPE.12.12 2019 SciPress Ltd., Switzerland
7. Das M , Ahmed K, Kalita A, Das L, Das P (2018) :Studies on toxicological responses of the herbicide paraquat dichloride on Monopterus cuchia (Hamilton) .*International Journal of Biosciences* | IJB | ISSN: 2220-6655 (Print), 2222-5234 (Online) http://www.innspub.net Vol. 12, No. 5, p. 118-134.
8. Das M , Kalita A, Chuia P,Das K, Das P (2018): Toxic effects of Paraquat Dichloride on mud eel(Monopterus cuchia). *Lap Lambert Academic Publishing*, ISBN:978-613-9-94456-9

Dr.Banasri Mech:-

1. Parbin H, Mech B(2019): Histopathological study of parasite infested Channa punctata. *International Journal of Life Sciences Research,* Vol. 7, Issue 3, pp: (44-52).

Head, Deptt. of Zoology

ANNUAL REPORT : DEPARTMENT OF APPLED SCIENCES GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : APPLIED SCIENCES
   b. Year of establishment : 2009 (Physical, Chemical & Mathematical Science); 2014(Applied Sciences)
2. Head of the Department : Dr. Pranjal Saikia
3. Details of academic staff :

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1	Dr. Eeshankur Saikia	Associate Prof.	Full Time	Male	Gen	h-index : 2 (Source: Scopus)
2.	Dr. Pranjal Saikia	Associate Prof.	Full time	Male	OBC	h -index : 16 i-10 index: 19 (google scholar)
3.	Dr. Pranjal K. Baruah	Associate Prof.	Full time	Male	Gen	h-index: 12 i10-index: 15 (google scholar)
4.	Dr. Sunanda Naik	Associate Prof.	Full Time	Female	Gen	h-index : 2 (Source: Scopus)
5.	Dr. Suparna Bhattacharjee	Asst. Professor (Stage II)	Full Time	Female	Gen	h-index :3 (Source: Scopus)
6.	Dr. Archana Bora	Asst. Professor	Full Time	Female	Gen	h-index : 2 (Source: Scopus)
7.	Dr. Madhurjya Modhur Borgohain	Asst. Professor	Full Time	Male	OBC	h -index : 1 i-10 index: 1 (google scholar)
8.	Dr. Manas Dutta	Asst. Professor	Full Time	Male	Gen	h-index : 2 (Source: Scopus)
9.	Dr. Bipul Bezbaruah	Asstt Professor	Full time	Male	OBC	h-index : 2 (Source: Scopus)
10.	Dr. Debajani Basumatary	Asstt Professor	Full time	Female	ST	h-index: 4 (Source: Scopus)
11.	F S Ahmed	Rtd. Associate Prof.	Contractual	Male	Gen	
12.	Dr. Manoj Kumar Deka	Guest Faculty	Contractual	Male	Gen.	h-index : 3 (Source: Scopus)
13.	Mrs. Jutika Devi	Guest Faculty	Contractual	Female	Gen	
14.	Upasana Bhattacharjee	Guest Faculty	Contractual	Female	Gen	

4. Course(s)/Programme offered : (i) M.S. in Physical Science, (ii) Ph.D. in Physical Science, (iii) M.S. in Chemical Science, (iv) Ph.D. in Chemical Science, (v) Ph.D. in Mathematical Science (vi) M.Tech. in Materials Science & Technology

5. Special Branches in the Department/Centre : : Nil
6. New Academic Programme initiated during the period under report: None
7. Innovation in Curricular design : Open elective CBCS courses offered
8. Inter disciplinary Programme started : Yes, CBCS course
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST No
10. Total number of Research Scholar working at present : Working: 36, Thesis Submitted: 01

a) Full Time:37	b) Part time: NIL

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.S. (Phy. Sc.)	2nd, 3rd & 4th	10	2	2	4	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
	4th	10	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
M.S. (Ch. Sc.)	2nd, 3rd & 4th	10	1	4	5	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0
	4th	10	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.Tech. (MST)	1st & 2nd	18	9	2	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2nd, 3rd & 4th	18	7	4	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4th	18	7	5	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ph.D.			3	1	4	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
14 (including part-time & contractual)	103	10

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:7.4	1:0.7

13. Final Examination result during the session 2018-19:
(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MS (Ph. Sc.) 2nd	2	2	4	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
MS (Ph. Sc.) 3rd	2	2	4	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
MS (Ph. Sc.) 4th	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
MS(Ch. Sc.) 2nd	1	4	5	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0
MS(Ch. Sc.) 3rd	1	4	5	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0
MS(Ch. Sc.) 4th	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.Tech. (MST) 1st	11	2	13	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
M.Tech.	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(MST) 2nd																		
M.Tech. (MST) 3rd	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.Tech. (MST) 4th	7	5	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MS (Ph. Sc.) 2nd	2	2	4	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
MS (Ph. Sc.) 3rd	2	2	4	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
MS (Ph. Sc.) 4th	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
MS(Ch. Sc.) 2nd	1	4	5	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0
MS(Ch. Sc.) 3rd	1	4	5	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0
MS(Ch. Sc.) 4th	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.Tech. (MST) 1st	8	2	10	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
M.Tech. (MST) 2nd	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.Tech. (MST) 3rd	7	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.Tech. (MST) 4th	7	4	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Himanshu Rajbongshi	Photocatalysis and Sensing applications of Silver based Core/Shell nanocomposites	1. Dr. Suparna Bhattacharjee 2. Prof. Pranayee Datta
Choitanya Dev Pegu	Application of Betti Bases in Organic Synthesis	Dr. Pranjal K. Baruah
Prantu Dutta	Porous Catalysts for C-C, C-N, C-O bond formation Reactions	Dr. Pranjal K. Baruah

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others

16. Important students' activities and achievements and awards during the period (Please state briefly)

1. Mis Prateeti Hazarika, M. S. in Chemical Science has been selected for PhD in University of Bern, Switzerland.

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. Pranjal Saikia	"Lecture Series:Materials Science"	March 29, 2019	Gauhati University

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Dr. Suparna Bhattacharjee	Young Faculty Research Fellowship (YFRF)	Ministry of Electronics and Information Technology (MeitY), Government of India

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Dr. Manoj Kr. Deka	Nonlinear Waves and Instabilities in Relativistically Degenerate Dense Plasmas	DST-SERB	3 Years	27.038 Lakhs

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks
1	Dr. Samiul Hoque	Development of thermistor device from the liquid crystalline polymers	Indian Patent No. 296096 Dt. 25/04/2018

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: **Yes, available**
25.Technology up gradation in the Department/Centre during the period 2018-19:
26.Linkages developed with National/International/Academic/Research Bodies : **IIT's, IISc, NCL, Diff. central & state universities**
27.Academic activities of Faculty members during the period of report (2018-19):
a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Suparna Bhattacharjee	02	04
Dr. Archana Bora	Nil	01
Dr. Debajani Basumatary	01	01
Dr. Sunanda Naik	Nil	01
Dr. Sankar Moni Borah	Nil	01
Dr. Bipul Bezbaruah	01	02

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

1. Dr. Pranjal Saikia delivered Invited Lectures in two seminars during this period.

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. Debajani Basumatary	UGC-HRDC,GU , 30thJan-19thFeb, 2019	
Dr. Manas Dutta	TEQIP III sponsored short term course on scientific computing and applications to industrial problems, Dept of Mathematics, IIT Kharagpur, (19-23) November 2018	
Dr. Manas Dutta	UGC sponsored refresher course on mathematics and statistics, UGC-HRDC gauhati university, 19 Dec 2018-8 January 2019	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Dr. Suparna Bhattacharjee	1. Effect of annealing temperature on the structural and optical properties of Zinc Oxide Nanoparticles prepared by chemical precipitation method 2. Shell Thickness dependent photocatalytic activity of EDTA-assisted Ag/ZnO core/shell nanoparticles under sunlight irradiation 3. Ultrasensitive fluorescence detection of Fe^{3+} ions using fluorescein isothiocyanate functionalized $Ag/SiO_2/SiO_2$ core/shell nanocomposites.	1.Optik (158), 2018, 1006 -1015 2. Mater. Res. Express 6 (2019) 045022 3. Journal of Materials Science: Materials in Electronics, 30 (2019) , 6, 5580-5597
Dr. Archana Bora	Estimation of error on the cross-correlation, phase and time lag between evenly sampled light curves	*Astronomy and Computing* Volume 23, April 2018
Dr. Sunanda Naik	1. An integral type operator on analytic function spaces. 2. Operators and multipliers on weighted Bergaman spaces. 3. Weighted fractional composition operators on certain function spaces.	*J. Analysis (springer), DOI 10.1007/s41478-018-0134-1.* 2. Afrika Matematika (springer), DOI 10.1007/s13370-018-0645-6 3. Asian-European Journal of Mathematics (world scientific), DOI10.1142/S1793557120500825
Dr. Sankar Moni Borah	A DFT study of structural, electronic and optical properties of heteroatom doped monolayer graphene	*Optik, 168, 228-236, 2018*
Dr. Bipul Bezbaruah	1. Quantum Mechanical Study on the π-π Stacking Interaction and Change in Conformation of Phenolic Systems with Different Intermolecular Rotations. 2. Theoretical Investigations on the π-π Stacking Interactions in Phenol-Water Complexes.	*1. Computational Chemistry, 2018, ISSN 2332-5968* 2. Computational Chemistry, 2018, ISSN 2332-5968
Dr. Pranjal Saikia	1. Dispersion of nanosized ceria-terbia solid solutions over silica surface: evaluation of structural characteristics and catalytic activity	*1. Molecular Catalysis 451 (2018) 96-104.*
Dr. Pranjal Kr. Baruah	**1.** l-Proline catalyzed domino Michael addition of N-substituted anilines 2. Oxidative Coupling of Naphthols to Ketones: An Approach to 1,2□Diketones 3. I_2/TBHP/cyclohexanone a novel catalyst system for the	1. Tetrahedron Lett. **2018,** 59, 4430-4433. 2. ChemistrySelect **2018,** 3, 1693-1696.

	oxidative dearomatization of indoles to indolin-3-ones at room temperature under solvent-free condition	3. Catal. Commun. 2018, 106, 68-72.
	4. A revisit to the multi-component reaction of indole, aldehyde, and N-substituted aniline catalyzed by PMA–SiO_2	4. Monatsh. Chem. **2018**, 149, 2245-2252.
	5. A one-pot catalyst/external oxidant/solvent-free cascade approach to pyrimidines via a 1,5-hydride transfer	5. Green Chemistry **2019**, 21, 69-74.

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Dr. Bipul Bezbaruah	Effect of pi-pi Stacking Interaction on Phenolic Systems and their Compatibility with Some Polar Solvents : A Quantum Mechanical Study	International Conference on Frontiers in Chemical Sciences (FICS-2018), IIT Guwahati, (6-8) December 2018
Dr. Manas Dutta	Natural convection in transient mhd dissipative flow past a suddenly started infinite vertical porous plate: A finite difference approach	HEAT TRANSFER RESEARCH BEGALL HOUSE, 49(6), P.491-508, APRIL 2018

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications
Dr. Debajani Basumatary	Title-Bio-Resources of North East India, Chapter- Natural Resources, biodiversity and sustainable development in Northeast India: An Overview	February, 2019
Dr. Pranjal Saikia	Chapter 24: Development of CeO_2 and TiO_2 Based Au Catalysts for Catalytic Applications in "Noble Metal-Metal Oxide Hybrid Nanoparticles: Fundamentals and Applications"	Elsevier Book Series, **2018,** Chapter 24, pp. 517-533, **(ISBN : 978-0-12-814134-2)**

28.Placement record during the period (Please state briefly):

29.Placement services provided to students by the Department/Centre, if any:

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	1130
b)	New Books procured during the period	Nil
c)	No. of Journals as on 31.03.2019	Nil
d)	New Journals procured during the period	Nil
e)	No. of users during the period :	108

32.Departmental publications : Nil

33.Activities and support from the Alumni Association of the Department/Centre : No

34 Activities and support from the Parent-Teacher Associations if any : No

35.Involvement in Community services : Yes, outreach programmes are conducted time to time.

36.Provision for financial aid to students in the Department/Centre, if any: **Yes, Research Assistantship (RA)**

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student

assessment is obtained and action taken on this feedback may please be stated. **Yes, M.Tech./M.S.**

38.Information on up to five Good Practices followed by the Department/Centre:

(1) Orientation of newly admitted students.
(2) "Art of Living" program is conducted at least once in a year in the department.
(3) Inter institutional academic and research collaboration for students and faculties.
(4) Monitoring committee for gender equality/sensitization.
(5) Conduct lecture series/seminars/workshops etc.

39.Detail the plans of the Department/Centre/Institute for the next year :

Head, Dept. of Applied Sciences

ANNUAL REPORT : DEPARTMENT OF BIOENGINEERING AND TECHNOLOGY
GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Bioengineering and Technology
   b. Year of establishment : 2009
2. Head of the Department :Dr. Kandarpa Kumar Saikia
3. Details of academic staff :

SL No	Name of the teacher	Qualification	Specialization	Sex(Male/ Female)	Caste(Gen /SC/ST/OBC/PH)	Designation	Full/Part -time
1	Prof. Manab Deka	PhD, Post Doc	Microbiology and Biomedical Science	Male	Gen	Professor.	Full time (on lien)
2	Prof. Vasudeva Singh	PhD	Food Science	Male	Gen	Professor.	
3	Dr. Kandarpa K Saika	PhD	Medical Biotechnology	Male	Gen	Associate Prof.	Full time
4	Dr. Debabrat Baishya	PhD	Microbial Biotechnology and Bioprospecting	Male	Gen	Assistant Prof. Stage II	Full Time
5	Dr. Sofia Banu	PhD	Plant Molecular Biology	Female	Gen	Assistant Prof. Stage II	Full time
6	Dr. Subhash Medhi	PhD, Post Doc (ICMR-IF)	Medical Virology & Oncology	Male	Gen	Assistant Prof. Stage II	Full time
7	Dr. Md. Ghaznavi Idris	PhD	Biochemistry and Biomedical Science	Male	Gen	Assistant Prof.	Full Time
8	Dr. Madhuri Das	MSc, M Tech PhD	Enzyme Biosensor	Female	SC	Assistant Professor	Full time
9	Nikhil Kumar Mahnot	M.Tech	Food Processing and Technology	Male	Gen	Assistant Prof.	
10	Bharati Baruah	M.Sc,	Animal Biotechnology	Female	Gen	Assistant Prof.	Full time

4. Course(s)/Programme offered: B.Tech (Biotechnology), M.Tech (Biotechnology) M. Sc (Cancer Biol.) M Sc PhD integrated Food Science,
5. Special Branches in the Department/Centre:
6. New Academic Programme initiated during the period under report: Nil
7. Innovation in Curricular design: CBCS, Open paper and Elective paper has been floated
8. Inter disciplinary Programme started: The B.Tech is interdisciplinary in nature
9. Department/Centre under: SAP/COSSIST (ASSIST)/DST/FIST: Nil
10. Total number of Research Scholar working at present:

a) Full Time:	b) Part time:

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C			S.T(P)			S.T.(H)			OBC/MOBC		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Graduate	8th	18	06	09	15	00	00	00	00	02	02	00	0	00	01	01	02
	6th	28	12	11	23	01	00	01	00	00	00	00	0	00	00	02	02
	4th	28	12	08	20	00	00	00	01	01	02	00	0	00	01	01	02
	2nd	34	16	18	34	01	00	01	00	01	01	00	0	00	01	01	02
	1st	18	5	13	00	00	00	00	00	00	00	00	0	00	02	03	05
Post Graduate (M.Tech)	4th	10	04	06	10	00	00	00	00	01	01	00	0	00	02	01	03
	1st	4	2	2	4	00	00	00	00	00	00	00	0	00	00	00	00
	3rd	10	07	03	10	01	00	01	00	01	01	00	0	00	02	00	02
Post Graduate (IFS)	1st	05	02	03	05	00	00	00	01	00	01	00	0	00	00	01	01
	3rd	05	04	01	05	00	00	00	01	00	01	00	0	00	01	00	00
Ph.D.			03	05	08	00	00	00	00	00	00	00	0	00	00	00	00

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
9	160	2

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
17:1	80:1

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
B.Tech(Biotech)	06	08	14	00	00	00	00	00	00	00	00	00	03	02	05	00	00	00
M.tech (Biotech)	04	06	10	00	00	00	00	01	01	00	00	00	02	01	03	00	00	00
M Sc(Food)	04	01	5	01	00	01	00	00	00	00	00	00	00	00	00	00	00	00

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
B.Tech(	05	04	1	00	00	00	00	00	0	00	00	00	00	01	0	00	00	00

Biotech)			0						0						1			
M.tech (Biotech)	04	06	1 0	00	00	00	00	01	0 1	00	00	00	02	01	0 3	00	00	00
M Sc(Food)	04	01	5	01	00	01	00	00	0 0	00	00	00	00	00	0 0	00	00	00

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Sandipan Talukdar Research Scholar, Gauhati,	Theoretical Analysis of Neuron's Intrinsic Plasticity in the Formation of Memory	Dr. Mohan Chandra Kalita, Dr. Kandarpa Kr. Saikia
Parikhit Borthakur.	Association of Nasopharyngeal Carcinoma with Epstein Barr Virus and Host Immune Response	Prof. Manab Deka,
Namrata Kumari	Molecular Epidemiology of Hepatitis B Virus infection in North East India and the Associative Role of Leptin and Adiponectin in Hepatitis B Virus Mediated Liver Disease	Prof. Manab Deka,
Debdutta Mukherjee	Polymorphisms in TollLike Receptors and Cytokine Genes and risk of Gastric Cancer in Mizoram.	Prof. Manab Deka
Sukanta Nath	Gauhati University Molecular Profiling and documentation of Adverse Drug Reactions in Acute Myeloid Leukaemia	Dr. Kandarpa Kumar Saikia
Rizwana Sultana	Understanding the Molecular Mechanism(S) Associated with Triple Negative Breast Cancer Development and Screening the Efficacy of Target Specific Drugs as Therapeutic Interventions.	Dr. Amal Ch. Kakati. Dr. Sujoy Bose,
Madhusmita Dehingia.	Effect of Ethnicity, Diet and Geography on the Gut Bacterial Composition of Few Tribes from Assam, Sikkim, Manipur & Telengana and Their Comparison with Worldwide Data	Dr. Mojibur R. Khan, Dr. Manab Deka,
Dushyant Kumar	Clinicopathological effect of DNMT3A mutation in Acute Myeloid Leukemia in coexistent with NPM1	Prof. Kandarpa Kr. Saikia,
Momita Das	Study of Polycyclic Aromatic Hydrocarbon and isolation Characterization of Hydrocarbon Degrading Bacteria from Some Polluted Sites of Guwahati City	Dr. Jibon Kotoky Dr. Sofia Banu,
Dipankar Bujarbaruah	Studies on Genetic Susceptibility to Malarial infection in Tribal Population of Dimoria Block, Kamrup, Assam	Dr. Sujay Bose,
Mrinal Kumar Baishya	Screening of Antibacterial and Antifungal Efficacy of Some Plant and Microbial species of Assam	Dr. Kandarpa Kumar Saikia
Partha Pratim Sarma	Evaluation of diagnostic and Prognostic Value of Molecular Markers and Gene Espression Profiling of Common Altered Pathways in Glioma	Dr. Kandarpa Kumar Saikia
Md. Iftikar Hussain	Molecular epidemiology of Clostridium perfringens and immunopotency of a novel epsilion toxoid vaccine adjuvanted with calcium phosphate nanoparticle	Dr. M. C. Kalita
Manoj Kumar Panigrahi	Clinicopathological Comparison of Progrostic and Predictive Factors and PIK 3CA Gene Mutation in HER2 Positive Breast Cancer in indian Population.	Dr. Kandarpa Kr. Saikia
Yogesh Babasaheb Chaudhari.	Isolation and Characterization of Cellulolytic Microbes and their Genes from Soils of North-East India	Dr. M. R. Khan, Dr, M. C. Kalita,

Purabi Sarkar,	Intervation of Antioxidants in Insulin Signalling and Oxidative Strees in Type 2 Diabetes Using Molecular Approach.	Dr. Sofiia Banu
Karishma Kashyap	Molecular and Biochemical Insight into Khasi Mandarin Citrus Reticulata Blanco), Fruit Development and Ripening: Understanding the Factors Associated with Fruit Development	Dr. Sofia Banu, Dr. Nirala Ramchiary

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Sofia Banu	Integrated approach to understand agarwood formation and value addition of agarwood (Aquilaria malaccensis	DBT	3 yrs	43.15 Lakh
	Study of molecular basis of fruit morphology variation in Assam lemon through genomic approach	DBT	3 yrs	44.332 Lakh
	Deciphering the role of microbes in agarwood deposition and functional characterization of important key enzymes	DBT	3 yrs	47.22996 Lakh
Dr. Subhash Medhi	ICMR Task Force project on Assessment of viral Hepatitis burden in Northeast India : A systematic Study	ICMR	4	Ninety three lakh ninety nine thousand eight hundred twenty (93,99,820.00)
	Human resource Development for Health Research in Molecular Biology/ Molecular Diagnosis	DHR	5	Sixty eight lakh seventy four thousand five hundred (68,74, 500.00)

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Prof. Premashis Kar	Director and Head, Department of Hepatology, Max Superspeciality Hospital, vaishali, Gaziabad, UP	INSA visiting faculty lecture

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:
25.Technology up gradation in the Department/Centre during the period 2018-19:
26.Linkages developed with National/International/Academic/Research Bodies :
27.Academic activities of Faculty members during the period of report (2018-19):
a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Debabrat Baishya	3	
Dr. Sofia Banu	5	

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Vasudeva Singh:

1. Whole grain red rice pasta: Development and quality characteristics with respect to cooking, sensory, nutrient and nutraceutical properties.
Delivered at the 19th IUFoST World Congress of Food Science & Technology to be held during 23-27 October 2018 at Mumbai.

2. A talk on the "Grain Processing in India" delivered at the Rural Technology dept at IIT, Gauhati on Monday, 29 th October 2018.

3. Invited talk at the Conference conducted at the dept. of Food Engg. And Technology, TIIFH, during Jan. 2019,Tezpur University. Very good interaction went with the speakers of different countries and our own country Scientists and constructive suggestions were given.

4. Invited talk at the Research Institute, Myanmar on grain processing in India with special reference to Raw and Parboiled rice on Dec. 2018.

5. Attended Indian Science Congress 2019 from Jan. 3 rd to 7 th Jan. 2019 at Jalandar, Lovely Professional University.

Dr. Debabrat Baishya:

1. **Invited speaker** in National conference on **"Translational Drug Discovery: current trends and future interventions" (Nov. 10-11/2018).** Organized by Assam Down Town University, Guwahati, Assam.

2. Attended and participated as Invited Speaker in Assam Botany Congress and "International conference on plant science" (Feb. 4-6/2019). Organized by Department of Botany, Gauhati University, Cotton University, Assam Down Town University and ASTEC.

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr Subhash Medhi	REFRESHER COURSE ON ENVIRONMENTAL STUDIES- IDC	

	Faculty Development Programme on BEHAVIORAL REMODELING & USE OF ICT TOOLS FOR CLASSROOM DELIVERY OF TEACHERS Faculty Development Programme- Teaching Learning Centre, Indian Institute of Technology Madras	

d) Details of paper published in the Referred journals during the period:

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Nikhil Kumar Mahnot	1. Strategy to achieve a 5-log Salmonella inactivation in tender coconut water using high voltage atmospheric cold plasma 2. Atmospheric cold plasma inactivation of Escherichia coliandListeriamonocytogenesin tender coconut water: Inoculation and accelerated shelf-life studies 3. Shelf life enhancement and associated quality and sensory changes on refrigerated storage of tender coconut water subjected to non-thermal microfiltration and treated with additives 4. Quality characterization andeffect of sonication time on bioactive properties of honey from North East India	Food Chemistry, 284, 19/01/2019 Food Control, 106, 19/06/19 Journal of food Science and Technology, 56, 23/05/2019 Journal of food Science and Technology, 56, 23/11/2018.
Vasudeva Singh	1.Influence of milling on the nutritional composition of bran from different rice varieties. 2. Influence of parboiling on physical properties, nutrient composition, phytochemicals and anti-oxidant activities of de-husked rice as well as bioaccessibility of mineral, starch and antioxidant properties.	Journal of Food Science and Technology. 55:2259-2269. SCI IF Journal of Food Biochemistry. DOI:10.1111/jfbc.12839,
Dr. Debabrat Baishya	1. Expression Analysis of Serum microRNA-34a and microRNA-183 in Hepatocellular Carcinoma 2. Thermozymes: adaptive strategies and tools for their biotechnological applications 3. Delineating thermophilic xylanase from *Bacillus licheniformis* DM5 towards its	Asian Pacific Journal of Cancer Prevention Vol.19: 2561-2568. DOI:10.22034/APJCP.2018.19.9.2561, 2018 Bioresource Technology Vol 278: 372-382 (IF: 6.669). 2019 World Journal of Microbiology and Biotechnology Vol. 35: 34-41 (IF

	potential application in xylooligosaccharides production	2.567). 2019
Sofia Banu	Silver nanoparticle modified Pt electrode as voltammetric and electrochemical impedance sensor for hydrogen peroxide in live biological cells	Indian J Chem, 57A (2018) 485-489.
	Comparative analysis of different dietary antioxidants on oxidative stress pathway genes in L6 myotubes under oxidative stress.	Cytotechnology August 2018, Volume 70, Issue 4, pp 1177–1192 2018 (Online Mar 14. doi: 10.1007/s10616-018-0209-5.)
	Effects of Resveratrol and Mangiferin on PPARγ and FALDH gene expressions in adipose tissue of streptozotocinnicotinamide induced diabetic rats.	Journal of Dietary Supplements (2018) DOI: 10.1080/19390211.2018.1472714
	Study of polyembryony and development of molecular markers for identification of zygotic and nucellar seedlings in Khasi mandarin (Citrus reticulata Blanco).	International Journal of Environment Agriculture and Biotechnology (2018)(ISSN: 2456-1878).3(2), pp.363-372. ISSN: 245-1878
Dr. Subhash Medhi	Association of toll-like receptor 9 (TLR9) alterations in malaria susceptibility and severity: Atribal population based study in the malaria endemic state of Assam, India (2018)	Journal of Krishna Institute of Medical Sciences University, 7 (2), pp. 21-32.
	Association of Toll-like receptor 4 with hepatitis A virus infection in Assam (2018)	Acta Virologica, 62 (1), pp. 58-67
	Detection of HBV genotype C in hepatocellular carcinoma patients from North East India: A brief report (2018)	Asian Pacific Journal of Cancer Prevention, 19 (7), pp. 1741-1746.
	Polymorphism of HLA class I and class II alleles in influenza A(H1N1)pdm09 virus infected population of Assam, Northeast India (2018)	Journal of Medical Virology, 90 (5),

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications

28. Placement record during the period (Please state briefly):

29. Placement services provided to students by the Department/Centre, if any:

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	157
b)	New Books procured during the period	Nil
c)	No. of Journals as on 31.03.2019	Nil
d)	New Journals procured during the period	Nil
e)	No. of users during the period :	88

32.Departmental publications : Nil
33.Activities and support from the Alumni Association of the Department/Centre : Nil
34.Activities and support from the Parent-Teacher Associations if any : Nil
35.Involvement in Community services : Nil
36.Provision for financial aid to students in the Department/Centre, if any: Nil
37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.: Nil
38.Information on up to five Good Practices followed by the Department/Centre: Nil
39.Detail the plans of the Department/Centre/Institute for the next year : Nil

Head, Dept. of Bio Engineering and Technology

ANNUAL REPORT : DEPARTMENT OF BIOTECHNOLOGY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Biotechnology
   b. Year of establishment : 1993
2. Head of the Department : Prof. M.C. Kalita
3. Details of academic staff :

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index (as per scopus)	
						Total Citation	*h*-index
1.	Arun Kumar Handique	Professor	Full time	Male	Gen	156	7
2.	Mohan Chandra Kalita	Professor	Full time	Male	Gen	755	17
3.	Pratap Jyoti Handique	Professor	Full time	Male	Gen	173	8
4.	Rupjyoti Bharali	Professor	Full time	Female	Gen	313	10
5.	Sujoy Bose	Assistant Professor	Full time	Male	Gen	380	8
6.	Hridip Kumar Sarma	Assistant Professor	Full time	Male	Gen	144	9
7.	Shyam Sundar Swargiary	Assistant Professor	Full time	Male	Gen	33	2
8.	Pranjan Barman	Assistant Professor	Full time	Male	Gen	56	3
9.	Debasish Borbora	Assistant Professor	Full time	Male	Gen	10	2
10.	Md. Imtiyaj Khan	Assistant Professor	Full time	Male	Gen	331	10

4. Course(s)/Programme offered : M.Sc. Biotechnology, PhD Biotechnology
5. Special Branches in the Department/Centre. N/A
6. New Academic Programme initiated during the period under report: N/A
7. Innovation in Curricular design:
8. Inter disciplinary Programme started: N/A
9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST: Computer Lab, FIST Lab, DST FIST Program, RUSA funded Lab.
10. Total number of Research Scholar working at present:

a) Full Time: 45	b) Part time: N/A

11. Enrolment of Students in various courses (April 2018- March 2019):

Courses	Sem	Intake Capacity	No. Admitted.			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st	20	8	11	19	1	-	1	1	1	2	-	-	-	1	1	2	-	-	-
	3rd	20	5	14	19	1	-	1	1	1	2	-	-	-	-	3	3	-	-	-
M. Phil.	N/A																			
Ph.D.		11	4	7	11															

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
10	38	13

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
1:4	1:1

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.Sc. Biotechnology 1st Semester	5	14	19	1	-	1	1	1	2	-	-	-	-	3	3	-	-	-
M.Sc. Biotechnology 3rd Semester	8	12	20	1	0	1	1	0	1	-	-	-	1	1	2	-	-	-

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.Sc. Biotechnology 1st Semester	3	10	13															
M.Sc. Biotechnology 3rd Semester	9	11	20															

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Zeeshan Ahmed Khan	*Photoperiod and Ovarian Physiology: A Chronobiological Approach in Zebrafish (Danio rerio).*	Prof. R. Bharali Department of Biotechnology, Gauhati University Dr. Asamanja Chattoraj IBSD, Impha
Chongtham Rajiv	Extra pineal sources of melatonin: the expressivity of its bio-synthetic genes in annual gonadal cycle in indian major carp	Prof. R. Bharali Department of Biotechnology, Gauhati University Dr. Asamanja Chattoraj IBSD, Imphal
Jiumoni Lahkar	Studies on antifungal activity of biosurfactant produced by soil bacteria against phytopathogens *Alternaria solani* and *Colletotrichum capsici*	Prof. G.U. Ahmed, Retired Professor, Department of Biotechnology, Gauhati University Prof. S. Deka, IASST, Guwahati
Sila Moirangthem	Identification and characterization of *Citrus reticulata* scion using biochemical and molecular markers and screening of rootstocks tolerant to *phytophthora.*	Prof. P.J. Handique Department of Biotechnology, Gauhati University Dr. H.S. Devi, IBSD
Mridusmita Choudhury	Expression and purification of invH Gene of Salmonella and its Immunogenic studies in Mice	Dr. H. K. Sarma, Department of Biotechnology, Gauhati University
Nongthombam Grihalakshmi Devi	Prospect of Bioethanol production from Bio-wastes generated within the Imphal Valley.	Prof. P.J. Handique, Department of Biotechnology, Gauhati University
Bhaswati Choudhury	Evaluation of anticancer activity of few medicinal plants of Assam	Prof. R. Bharali, Department of Biotechnology, Gauhati University
Ankita Hazarika	Protective effects of a herbal formulation from North East India on metabolic syndrome induced in animal model.	Prof. M.C. Kalita Department of Biotechnology, Gauhati University

Nadia Ullah	Quality assessment of several dried and fermented fish of North East India and their taxonomic determination using DNA barcoding.	Prof. P.J. Handique Department of Biotechnology, Gauhati University
Saurov Mahanta	*In silico* prospecting of Biomolecules for detection of Highly Efficient Anti-tubercular agents.	Prof. P.J. Handique Department of Biotechnology, Gauhati University
Anannya Gogoi	Study of Y chromosome Microdeletions and oxidative stress associated with infertility in North Eastern region.	Prof. G.U. Ahmed (Rtd.) Department of Biotechnology, Gauhati University Dr. Rita Mahanta Associate Professor(Rtd.) Department of Zoology, Cotton College, Guwahati
Afruza Zaman	Transformation of E. coli through manipulation of DFR and LAR genes for enhanced production of catechins	Prof. M.C. Kalita Department of Biotechnology, Gauhati University
Beauty Borah	A study of Antioxidant and Chemopreventive potential of Dillenia indica Linn.	Prof. R. Bharali Department of Biotechnology, Gauhati University
Jintu Rabha	Studies on Rhizosphere microflora of Som plants (Persea bombycina Kost.) and induction of systemic induced resistance for controlling foliar diseases.	Dr. H.K. Sarma Department of Biotechnology, Gauhati University & Prof. D. K Jha Department of Botany Gauhati University
Ms. Trishna Konwar	Genetic transformation of black garm (Vigna mungo L.) using a chimeric Bt-Cry2Aa gene.	Prof. A.K Handique Department of Biotechnology, Gauhati University & Prof. B.K. Sarma, AAU, Jorhat
Sandipan Talukdar	Theoretical analysis of Neuron's intrinsic plasticity in the formation of memory.	Prof M. C. Kalita, jointly with Dr K K Saikia, GUIST, GU
Md Iftikar Hussain	Molecular epidemiology of Clostridium perfringens and immunopotency of a novel epsilon toxoid vaccine adjuvanated with calcium phosphate nanoparticle.	Prof M. C. Kalita, Department of Biotechnology, Gauhati University
Yogesh Babasaheb Chaudhari	Isolation and characterization of cellulolytic microbes and their genes from soils of North-East India.	Prof M. C. Kalita, Department of Biotechnology, Gauhati University (Jointly with Dr M. Khan, IASST, Guwahati)

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
	2		1	

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
Prof. Mohan Chandra Kalita	Workshop on Natural Product Chemistry and Molecular Biology for BLISS-Govt of India recognized school teachers.	14-20 May 2018	DBT Govt of India
	Hands on Training for laboratory staffs of colleges under Gauhati University Organized by Advanced	9-11 August 2018	DBT Govt of India

	level IBH GU		
	"Bee Keeping for Livelihood" Organized by Advanced level IBH GU Conducted at Bartari village, Barpeta, Assam.	6-7 October 2018	DBT Govt of India
	Prospects of Mushroom cultivation and Vermi-composting Organized by Advanced level IBH GU in association with IASST Guwahati	16-17 November 2018	DBT Govt of India
	Hands on Training for laboratory staffs of Departments of Gauhati University Organized by Advanced level IBH GU	22-24 November 2019	DBT Govt of India Gauhati University
	Workshop on "Urban Agriculture" Organized by Advanced level IBH GU in association with Assam Science Society, Guwahati. Conducted at Assam Science Society Office, Khanapara, Guwahati, Assam	25 January 2019	ASTEC Govt of Assam
	Potential of Edible Insects of NE India Organized by Advanced level IBH GU.	30 March 2019	DBT Govt of India

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Prof Mohan Chandra Kalita	Fellow of Linnaean Society (FLS), London (UK)	Linnaean Society (FLS), London (UK)

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
Prof Mohan Chandra Kalita	Global Biotechnology Congress, 2018 held in Bangkok (Thailand)	Resource Person	6-7, Sept. 2018

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Prof Mohan Chandra Kalita	Integrated Biorefinery approach towards production of sustainable fuel and chemicals from algal biobased systems.	DBT (Indo-Brazil International Research Collaboration)	2016-2020	Rs 2,44,00,000
	Integrating herbal medicine of NER with contemporary approaches to develop therapeutic strategies for metabolic syndrome.	DBT – Govt of India	2016-2019	Rs 24,55,00,000
	Establishment of Institutional Biotech Hub.	DBT – Govt of India	2011-2019	Rs 1,05,00,000
	Quest for Cancer Drugs: Screening and Bioassay Guided Phytochemical Investigation of Selected Endemic Medicinal Plants of Eastern Himalaya.	DBT – Govt of India	2018-2021	Rs 1,35,33,988
Dr. P. Barman	"Molecular and Biochemical studies on indigenous medicinal plants from the North East India	DBT, Govt. of India	3 years from March 2019.	35 Lakhs

	including *Urgineaindica* (Bon Pollundu) and*Dactyloscapnosscandens* for the development of potential Anti-diabetic formulations"			

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks
1	Prof Mohan Chandra Kalita	Patent Application Grant no: 303359 Granted in 2018	Title: Substrate based bioformulation for control of bacterial wilt of brinjal and its preparation thereof.

21. Academic distinction earned by the students during (2018-19): N/A

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19: Conference room upgradation.

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: two computer laboratory with internet facility

25.Technology up gradation in the Department/Centre during the period 2018-19: Overhead projector in 3 classrooms,

26.Linkages developed with National/International/Academic/Research Bodies : N/A

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Prof Mohan Chandra Kalita	6	5
Dr. M.I. Khan	1	2
Dr. P. Barman	1	
Dr. S. Swargiary	3	

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Prof. M.C. Kalita

1. Plenary lecture delivered on "Traditional Health Care Remedy in NE India:Challenges, Prospects and Approaches for Biotechnological Exploration " in REDIMAP-2018 organised by ADP College, Nagaon on 18th Aug. 2018

2. Keynote Speaker "Abundance of Microalgae of NE India for generation of sustainable Energy and other novel products" Symposium on Bioresources and Renewable Energy , organized by AIMT, Guwahati Date 14th May18

3. Invited Guest Speaker ." Traditional Herbal Health Care Practices in NE India: Quest for novel drug potential" National Conference on Translational Drug Discovery : Current Trends and Future Interventions , Organised by Assam down town University 10th Nov. 2018

4. Invited Lecture delivered on "*Plentiful Plant Bioresource in NE India: SustainableUtilization, Start-up Potential and Conservation*" in Assam Botanical Congress and International Conference on Plant Science, organized by Deptt. of Botany , GU and Assam Botanical Society , 4-6 Feb. 2019

5. Chairman of a Technical Session on 6th Feb. 19 in Assam Botanical Congress and International Conference on Plant Science, organized by Deptt. of Botany, GU and Assam Botanical Society, 4-6 Feb. 2019

6. Penalist in the Assam Science Festival (23-25 March 2019) on 24th March, 2019 (*Stimulating the*

Young Minds, an interactive students programme) organized by Tezpur University, sponsored by Ministry of Science & Technology, Govt. of Assam and ASTEC, Govt. of Assam

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Prof Mohan Chandra Kalita	1. Resource person on " Chemical Energy versus Bioenergy " in the Refresher Course on Environmental Science, organized by UGC-HRDC, Gauhat University on 28th Sept. 18 2. Resource person " Abundance of bioresource in NE India : Biotechnological intervention and start-up potential , GU Refresher Course on Life Sciecne by UGC-HRDC Date: 20-7-18 3. Resource person "Chemical Farming and growing health hazards : A man made disaster and alternative approaches for safe farming " Short Term Refresher Course on Disaster Management organized by GU, HRDC, 2-11-18	1. Resource Person in the Orientation Program, organized by UGC-HRDC, Gauhati University and delivered lecture on "Indigenous Knowledge and Natural Resource Management" on 7th March, 2019
Mohammad Imtiyaj Khan	1	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper Name of the journal with Vol. No. & Date
Prof Mohan Chandra Kalita	1. Sultana, N C Adhikary, M C Kalita, N C Talukdar and M R Khan, Study of the Efficiency of a Double-chambered Microbial Fuel Cell using Ctrobacter sp. *International Journal of Scientific Research in Biological Sciences* 6(1) P. 01-09, 2019 2. Rabiya Sultana, N C Adhikary, M C Kalita, N C Talukdar and M R Khan Use of Glycerol as Substrate for Electricity Generation using Citrobacter sp. In a Double Chambered Microbial Fuel Cell. *Journal of Biological Engineering Research and Review* 6(1) P. 14-20, 2019 3. Manas Majumder, Navneet Hazarika, M C Kalita and K K Saikia , Prevalence of Methicillin Resistant Staphylococcus aureus in Community and Hospital Environment in Assam, *International Journal of Pharmacy and Biological Sciences* (IJPBS) 2019 9(2) : 156-163 4. Rupshika Patowary, Kaustuvmani Patowary, Mohan Chandra Kalita, Suresh Deka. Application of biosurfactant for enhancement of bioremediation process of crude oil contaminated soil . *International Biodeteriation and Biodegradation* (2018) doi.org/10.1016/J.ibiod.2018.01.004 Impact Factor of 2.962 5.Sanasam Shantibala Devi, Nongthombam Grihalakshmi Devi, Mohan Chandra Kalita, Narayan Chandra Talukdar. Isolation and srlection of cellulose degrading microorganisms for utilization along with eatyhworms in efficient conversion of municipality waste mix to compost. *Current Science* (2018) Vol. 114, No. 6. Pg 1261-1274. Impact Factor – 0.926

	6. Emica, A. Pattanayak, B Iangrai, D Evanoreen, A Khongwir, G Pale and M C Kalita . Optimizing Tissue Culture Media for Efficient Callus Induction and Regeneration from Rice Seeds.*International Journal of Current Trends in Science and Technology8(4) BT 20201-20210* *2018* 7. Afruja Zaman, M. Gogoi, M C Kalita and T Bandyopadhyay. Cloning and Expression study of Leucoanthocyanidin Reductase Gene (CaLAR) from *Camellia assamica. Biotechnology: An Indian Journal* 14(1) :158, 2018 Impact Factor 0.89 8. Velentina Das, Anuchaya Devi, Rengonee Das, M. C. Kalita and Dhanapati, Deka. Microalgal lipid augmentation of Chlorella sp. And algal biodiesel Production using CaO as catalyst: A green outlook, *Journal of Agal Biomass Utilization* 2019, 10(1), 43-53 9. Subhankar Das, Kalita M C and Shukla Susmita (2018) Rapid biosynthesis of silver nanoparticles using leaf extract of Brassica oleracea and their antimicrobial activity against bacteria *World Journal of Phaemacy and Pharmaceutical Sciences* 7(8): 1135-1145 10. Purabi Sarkar, Ananya Bhowmick, Mohan Chandra Kalita. Effects of reserveratrol and mangiferin on PPARγand FALDJ gene expressions in Adipose Tissue of Streptozotocin-Nicotinamide induced diabetes in Rats. *Journal of Dietary Supplements*, (2018): 1-17. 11. Subhankar Das, Rantumoni Sharma, Namita Nath, Mohan Chandra Kalita. Phyto assisted rapid biosynthesis of silver nanoparticles using leaf extract of Croton caudatus and assessment of their dye degradation and antimicrobial activity. IJSRR 2019, 8(2), 2791-2808.
Dr. P. Barman	1. Molecular Docking Study of 2,3-Dimethylmaleic Anhydride (3,4-Dimethyl-2,5-Furandione) as Anti-inflamatory Agent. Trends in Bioinformatics 2. Spectrum of complication of Chronic Liver Diseases in Gauhati Medical College and Hospital: A hospital based study. Journal of Clinical and Diagnostic Research (Web of Science) Vol. 13(6): OC07- OC12

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications

28.Placement record during the period (Please state briefly): N/A

29.Placement services provided to students by the Department/Centre, if any: N/A

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report. N/A

31. Departmental Library :

a)	No. of Books as on 31.03.2019	500 +
b)	New Books procured during the period	0
c)	No. of Journals as on 31.03.2019	0
d)	New Journals procured during the period	0
e)	No. of users during the period :	45 +

32.Departmental publications : N/A

33.Activities and support from the Alumni Association of the Department/Centre : N/A

34.Activities and support from the Parent-Teacher Associations if any : N/A

35.Involvement in Community services : N/A

36.Provision for financial aid to students in the Department/Centre, if any: N/A

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated. N/A

38.Information on up to five Good Practices followed by the Department/Centre: N/A

39.Detail the plans of the Department/Centre/Institute for the next year : N/A

Head, Dept. of Biotechnology, G.U.

ANNUAL REPORT : DEPARTMENT OF COMPUTER SCIENCE GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : **Computer Science**
   b. Year of establishment : **1985**
2. Head of the Department : **Prof. Anjana Kakoti Mahanta**
3. Details of academic staff : Full Time – 04, Full Time (Contractual) - 02, Part Time - 07

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. Anjana Kakoti Mahanta	Professor	Full Time	Female	Gen	
2.	Dr. Abhijit. Sarma	Associate Professor	Full Time	Male	Gen	
3.	Dr. Sanjib Kalita	Asst. Professor	Full Time	Male	Gen	
4.	Mr. Dwipen Laskar	Asst. Professor	Full Time	Male	ST(P)	
5.	Mrs. Irani Hazarika	Asst. Professor (Contractual)	Full Time	Female	Gen	
6.	Dr. Pranamika Kakati	Asst. Professor (Contractual)	Full Time	Female	Gen	
7.	Dr. Dwiraj Talukdar.	Guest Teacher	Part Time	Male	Gen	
8.	Mr. Kandarpa Das	Guest Teacher	Part Time	Male	SC	
9.	Mr. Bireswar Banik	Guest Teacher	Part Time	Male	Gen	
10.	Mr. Dhrubajyoti Borah	Guest Teacher	Part Time	Male	Gen	
11.	Mr. Surajit Medhi	Guest Teacher	Part Time	Male	Gen	
12.	Mr. Kalyanbrat Medhi	Guest Teacher	Part Time	Male	Gen	
13.	Mr. Nibir Borpuzari	Guest Teacher	Part Time	Male	Gen	

4. Course(s)/Programme offered: **M.Sc. in Computer Science, M.Sc. in Information Technology, Ph.D**
5. Special Branches in the Department/Centre: **NIL**
6. New Academic Programme initiated during the period under report: **No**
7. Innovation in Curricular design: **Yes, C.B.C.S curriculum has been started**
8. Inter disciplinary Programme started: **NIL**
9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST: **Does not arise**
10. **Total number of Research Scholar working at present:**

a) Full Time: 03	b) Part time:26

11. **Enrolment of Students in various courses (April 2018- March 2019):**

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st	35	29	6	35		1	1	4	0	4	0	0	0	7	1	8	0	0	0
	2nd	35	29	6	35		1	1	4	0	4	0	0	0	7	1	8	0	0	0

	3rd	33	25	9	34	2	0	0	0	0	0	0	0	0	8	3	11	0	1	1
	4th	33	25	9	34	2	0	0	0	0	0	0	0	0	8	3	11	0	1	1
M.Phil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ph.D.	NIL	03	2	1	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

12. **Teacher-Student and Teacher- Non-teaching staff Ratio:**

No. of Teacher	No. of student	No. of Non-teaching staff
13	68	2

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
68:13	34:1

13.Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Computer Science	15	4	19	1	0	1	1	0	1	0	0	0	6	1	7	0	0	0
Information Technology	07	4	11	0	0	1	0	0	0	0	0	0	1	2	3	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Computer Science	09	04	13	2	0	2	0	0	0	0	0	0	5	1	6	0	0	0
Information Technology	4	4	8	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0

14. Details of Ph.D. awarded (2018-19):

Sl. No	Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
01	Mr. Dipen Nath	Speaker Independent Spoken Word Recognisation and Identification using Unsupervised Learning	Dr. Sanjib Kumar Kalita

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
NIL	01	02	NIL	NIL

16. Important students' activities and achievements and awards during the period (Please state briefly)
NIL

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
01	Prof. Anjana Kakoti Mahanta	Workshop on Rights of persons with Disabilities	4th May, 2018	NIL
02	Prof. Anjana Kakoti Mahanta	Reading without seeing and carrier consultancy	12th May to 13th May, 2018	NIL
02	Mrs. Irani Hazarika	One week National Workshop on Emerging	11th to 17th March, 2019	NIL

	Dr. Pranamika Kakoti	Trends and Technologies in Computer Science		

18. Honors/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19):

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
-	-	-

19. Visit abroad by the Faculty members (2018-19):

Name of the Faculty	Institute visited	Purpose	Period
-	-	-	-

20. (a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
-	-	-	-	-

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks
-	-	-	-

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held
01	M.Sc. in Computer Science	Ms. Samaphi Jyrwa	1st class 1st
02	M.Sc. in Information Technology	Ms. Labhita Sarma	1st class 1st
-	-	-	-

22. **Distinguish visitors to the Department during the period 2018-19:**

Name of visitors	Address & Designation	Purpose of visit
Mr. Binod Deka	System Analyst, KKHSOU, Guwahati	To deliver lecture on "Tools and Techniques for project Implementation at PG level"
P. K. Pincha	Chief Commissioner , Office of the Chief Commissioner for Disables, Guwahati	Workshop on Rights of persons with Disabilities

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
RUSA (Rashtriya Uchchatar Shiksha Abhiyan) funded Laboratory: RUSA has funded two classroom and one seminar room along with separate washrooms for male and female.

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:
10 GBPS lease line provided by NKN.
60 Computers connected via internet.

25.Technology up gradation in the Department/Centre during the period 2018-19: NIL

26.Linkages developed with National/International/Academic/Research Bodies : NIL

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Sanjib Kumar Kalita	00	02
Mr. Dwipen Laskar	00	01
Mrs. Irani Hazarika	00	01
Dr. Pranamika Kakati	00	01
Mr. Kandarpa Das	00	01
Mr. Dhrubajyoti Borah	00	01
Mr. Surajit Medhi	00	01
Mr. Kalyanbrat Medhi	00	01
Mr. Nibir Borpuzari	00	01

b) **Name of the teacher(s) acted as resource person(s) during the period (state briefly):**NIL

c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
Dr. Sanjib Kumar Kalita	"ICT & MOOCs", HRDC, GU, 4th – 17th July, 2019	-
-	-	-

d) Details of paper published in the Referred journals during the period:

Sl. No.	Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
01	Dr. Abhijit Sarma	"Phishing URL detection system based on URL features using SVM"	International Journal of Electronics and Applied Research, vol 5, issue 2, 2018.
02	Dr. Sanjib Kr. Kalita	Spectral Spatial Feature Based Classification of Hyperspectral Image using Support Vector Machine	IEEE 6th International Conference on Signal Processing and Integrated Networks (SPIN), Organized by Amity University, Sec-125,Noida, Delhi-NCR, India, 7 -8 March 2019
03	Dr. Sanjib Kr. Kalita	A study of spoken word Recognition using unsupervised learning with reference to Assamese Language	IEEE 2nd International Conference on Innovations in Electronics, Signal Processing and Communication Engineering, Organized by Department of Electronics and Communication Engineering, NIT Meghalaya, Shillong, 1st March, 2019
04	Dr. Sanjib Kr. Kalita	"Speaker Identification with reference to Assamese Language using fusion techniques"	IEEE 2nd International conference on Advances in computing control and Communication technology, IAC3T, September, 2018
05	Prof. Anjana Kakoti Mahanta	Design of Algorithms for detection of Intelligent Plagiarism	International Journal of Applied Engineering Research; Vol – 13, No – 9, Oct 2018.
06	Prof. Anjana Kakoti Mahanta	Rough set based approach to detect Apocryphal Survey Document	Proceedings of IEEE ICECCT Conference; Feb 2019.

e) Paper published in other journals during the period (only those considered for API Score).

Sl. No	Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
01	Dr. Sanjib Kr. Kalita	"Speech recognition with reference to Assamese language using novel fusion technique"	International Journal of Speech Technology, Volume 21, Issue 2, pp 251–263

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications
-	-	-

28.Placement record during the period (Please state briefly): NIL
29.Placement services provided to students by the Department/Centre, if any: NIL
30. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report.

For Student Counseling Unit, our department maintains a student mentoring system for the students. To maintain the student mentoring system each and every students are allotted among different faculty members. Those faculty members keeps track of all the information of those mentees irrespective of personal, educational and any other aspects. Mentors counsel and guides the mentees time to time during the entire semester. The student mentoring system is maintained by the faculty-in-charge during the entire semester.

31. Departmental Library:

a)	No. of Books as on 31.03.2019	1742
b)	New Books procured during the period	42
c)	No. of Journals as on 31.03.2019	00
d)	New Journals procured during the period	00
e)	No. of users during the period :	100

32. Departmental publications: NIL
33. Activities and support from the Alumni Association of the Department/Centre: NIL
34. Activities and support from the Parent-Teacher Associations if any: NIL
35. Involvement in Community services: NIL
36. Provision for financial aid to students in the Department/Centre, if any: NIL

37. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.
It is a part of the student mentoring programme present in the system and it is managed by respective faculty members.

38. Information on up to five Good Practices followed by the Department/Centre:

1. Paperless Administration.
2. Extra-Curricular Activities for the students on 2nd and 4th Saturday of every month.
3. Student Mentoring system.
4. Initiation of Department relief fund.
5. Involvement in community services.

39. Detail plans of the Department/Centre/Institute for the next year:

1. M.Phil in computer science from the following academic year.
2. Ph.D course work syllabus updation.

Head, Dept. of Computer Science

ANNUAL REPORT: DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department:..... **Electronics and Communication Engineering**
   b. Year of establishment : 2009.....
2. Head of the Department : Prof. Kandarpa Kumar Sarma.....
3. Details of academic staff :

Sl. No.	Name of the teacher	Qualification	Specialization	Sex (Male/ Female)	Caste (Gen/ SC/ST/ OBC/PH	Carrier status (Professor/ Associate Prof./Asstt. Professor	Full Time/ Contractual
1.	Prof. Kandarpa Kumar Sarma	MTech, PhD	Mobile Communication, Deep Learning	Male	Gen	Professor	Full time
2.	Jyoti Prakash Medhi	MTech	Bioelectronics. (Biomedical Image Processing)	Male	SC	Asstt. Professor	Full time
3.	Anjan Kumar Talukdar	MTech	Bio-Electronics	Male	Gen	Asstt. Professor	Full time
4.	Manash Pratim Sarma	MTech	Electronics Design & Technology	Male	Gen	Asstt. Professor	Full time
5.	S. R. Nirmala	MTech, PhD	Industrial Electronics	Female	Gen	Asstt. Professor	Full time
6.	Apurba Bikash Kalita	MTech	Electronics Design & Technology	Male	Gen	Asstt. Professor	Full time
7.	Aradhana Misra	MTech	Electronics &Communication Technology	Female	Gen	Asstt. Professor	Full time
8.	Naorem Yaipharenba Meitei	MTech	VLSI and Design	Male	Gen	Asstt. Professor	Contractual (TEQIP III)
9.	Nazma Begum	MTech	VLSI and Design	Female	Gen	Guest Faculty	Part time
10.	Ashok Mahato	MTech	Electronics and Communication Technology	Male	Gen	Guest Faculty	Part time
11.	Upasana Bhattacharjya	MTech	Electronics and Communication Technology	Female	Gen	Guest Faculty	Part time
12.	Amrita Choudhury	MTech	Bio-Electronics	Female	Gen	Guest Faculty	Part time
13.	Monalisa Das	MTech	VLSI and Design	Female	OBC	Guest Faculty	Part time
14.	Amitav Nath	MTech	Electronics &Communication Engineering	Male	OBC	Guest Faculty	Part time
15.	Purabi Sarma	MTech	Electronics &Communication Engineering	Female	Gen	Guest Faculty	Part time
16.	Dr. Bhupen Goswami	Msc, PhD	Mathematics	Male	Gen	Guest Faculty	Part time

Chapter-B

4. Course(s)/Programme offered : BTech in Electronics and Communication Engineering
   MTech in Signal Processing and Communication
   MTech in Signal Processing and VLSI Design
   PhD
5. Special Branches in the Department/Centre: None
6. New Academic Programme initiated during the period under report: x
7. Innovation in Curricular design: Most courses under different programmes have been modified with a significant practical component
8. Inter disciplinary Programme started: x
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: x
10. Total number of Research Scholar working at present:

a) Full Time: 15	b) Part time: Nill

11. Enrolment of Students in various courses (April 2018- March 2019):

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st/2nd	36	7	9	16	0	0	0	0	0	0	0	0	0	2	1	3
	3rd/4th	36	14	22	36	1	1	2	0	0	0	0	1	1	3	3	6
M.Phil.																	
Ph.D.			1	2	3	0	0	0	0	0	0	0	0	0	0	1	1
Under Graduate-(BTech)	1st /2nd	45	35	5	40	2	1	3	1	0	1	0	0	0	4	2	6
	3rd /4th	45	28	7	35	0	1	1	0	2	2	0	0	0	5	0	5
	5th /6th	45	33	7	40	1	1	2	1	0	1	0	0	0	10	0	10
	7th /8th	45	22	11	33	0	1	1	1	1	2	0	0	0	4	1	5
Total		252	140	62	202	4	5	9	3	3	6	0	1	1	28	8	36

12. Teacher-Student and Teacher- Non-teaching staff Ratio:

No. of Teacher	No. of student	No. of Non-teaching staff
16	202	9
Teacher/Student Ratio	**Teacher-Non-teaching Staff Ratio**	
1:12.6	**16:9**	

13. Final Examination result during the session 2018-19:
(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			P.H.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MTech	17	20	37	2	1	3	0	2	2	0	0		7	3	10	0	0	0
BTech	35	10	45	3	2	5	2	1	3	1	0	1	8	6	14	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			P.H.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MTech	17	19	36	2	1	3	0	2	2	0	0		7	3	10	0	0	0
BTech	25	8	33	3	2	5	2	1	3	0	0	0	8	6	14	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Mridusmita Sharma	Soft Computational Based Spectral and Temporal Models of Linguistically Motivated Assamese Telephonic Conversation Recognition	Prof. Kandarpa Kumar Sarma

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
	1		6	CAT-1

16. Important students' activities and achievements and awards during the period (Please state briefly)

1. Design completion of Electronics systems among students of BTech ECE on 15 June, 2018. About 40 students took part.
2. A five day workshop named *Emerging Technologies, Innovation, Incubation and Entrepreneurship Development* was organized between 23 - 24 February, 2019 by Centre for Development of Advanced Computing (CDAC), A Scientific Society of Ministry of Electronics and Information Technology (MeitY), Government of India with Dept. of ECE and Dept. of IT, Gauhati University.
3. Special training programme in Machine Learning during June, 2018 for students.
4. Special training programme in electromagnetic system design using HFSS during September, 2018.

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Co-ordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
	Prof. Kandarpa Kumar Sarma	Five day workshop named *Emerging Technologies, Innovation, Incubation and Entrepreneurship Development*	23 - 24 February, 2019	CDAC

18. Honours/Awards/Fellowship (with National/ International repute) earned by the Faculty members (2018-19):

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Prof. Kandarpa Kumar Sarma	Selected for AICTE-UKIERI Leadership Development Programme	British Council

19. Visit abroad by the Faculty members (2018-19):

Name of the Faculty	Institute visited	Purpose	Period

20. Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Dr. H.S. Jatana,	Scientist 'G' and Head, Design and Process Group, Semi-Conductor Laboratory, Mohali, Chandigarh	Invited lecture session on VLSI Design and Fabrication
Dr. Hemanta Sarma	Professor, Oil and Gas Engineering, Department of Chemical and Petroleum Engineering, University of Calgary, Canada	Career Avenues in Oil Industry and Relevance of Reservoir Engineering

23. Increase in infrastructural faculties in the Department/Centre during the period 2018-19: x

24. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: 24 x 7 internet access

25. Technology upgradation in the Department/Centre during the period 2018-19 :

a. Procurement of CNC machine and antenna prototyping system

b. Procurement of Optical Fiber Training System

26.Linkages developed with National/International/Academic/Research Bodies :

c. MoU with Department of ECE, NIT Silchar
d. Working relationship with SCL Chandigarh
e. MoU with GIMT Guwahati

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshops

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

- Prof. Kandarpa Kumar Sarma,
  - Invited Speaker, North Eastern Regional Institute of Management, "Tools of Artificial Intelligence" on 18 March, 2019.
  - Invited Speaker, IEEE National Workshop on Remote Sensing and Signal Processing 2018, delivered a talk on "Signal Processing and Learning aided Techniques for Information Retrieval and Remote Sensing Applications", Department of Electronics and Communication Technology, Gauhati University, 26-30 November, 2018.

c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course

d) Details of paper published in the Referred journals during the period:

Kandarpa Kumar Sarma

I. Mridusmita Sharma, Kandarpa Kumar Sarma and Nikos Mastorakis, "Aircraft Image Denoising and Identification using Deep Neural Network", International Journal of Circuits, Systems and Signal Processing, vol. 13, pp. 430-437, March, 2019.
II. Manash Pratim Sarma, Kandarpa Kumar Sarma, "A Transmission Gate based High Frequency Rectifier Designed using 45nm CMOS Process for RF Energy Harvesting Application", WSEAS Transactions on Circuits and Systems, ISSN / E-ISSN: 1109-2734 / 2224-266X, Volume 18, 2019, Art. #8, pp. 44-49.
III. Sabyasachi Bhattacharyya, Aradhana Misra, & Kandarpa Kumar Sarma, "DPLLs in Wireless Communication: Current State and Trends—A Literature Survey", J. Inst. Eng. India Ser. B (2019).
IV. Mosumita Sarma and Kandarpa Kumar Sarma, "Long Term Critical Band Energy Based Feature Set for Dialect Identification using Neuro-Fuzzy Approach", IEEE Journal of Intelligent Systems, vol. 33, no.1, pp. 40-52, 2018.

Manash Pratim Sarma

I. Himashree Das, Manash Pratim Sarma, Nikos E. Mastorakis; "Design of a Wireless Cost Effective Patient Monitoring System using IoT", WSEAS Transactions on Computers, ISSN / E-ISSN: 1109-2750 / 2224-2872, Volume 17, 2018, Art. #35, pp. 284-292.
II. Manash Pratim Sarma, Kandarpa Kumar Sarma, "A Transmission Gate based High Frequency Rectifier Designed using 45nm CMOS Process for RF Energy Harvesting Application", WSEAS Transactions on Circuits and Systems, ISSN / E-ISSN: 1109-2734 / 2224-266X, Volume 18, 2019, Art. #8, pp. 44-49.

Aradhana Misra

I. S. Bhattacharyya, , A. Misra, & K.K. Sarma, "DPLLs in Wireless Communication: Current State and Trends—A Literature Survey", J. Inst. Eng. India Ser. B (2019).

e) Paper published in other journals during the period (only those considered for API Score).

Kandarpa Kumar Sarma

Book Chapters

1. Sivaranjan Goswami, Kumaresh Sarmah, Angana Sarma, Kandarpa Kumar Sarma, Sunandan Baruah, "Design Considerations Pertaining to the Application of Complementary Split Ring Resonators in Microstrip Antennas", as a part of a volume titled *Emerging Innovations in Microwave and Antenna Engineering*, pp. 25-36, IGI Global, USA, Jan., 2019.

2. Jutika Borah, Kandarpa Kumar Sarma and Pulak Jyoti Gohain, "Learning-Aided IoT Set-Up for Home Surveillance Applications", as a part of a volume titled *Predictive Intelligence Using Big Data and the Internet of Things*, pp. 180- 205, IGI Global, USA, Jan., 2019.
3. Ananya Choudhury and Kandarpa Kumar Sarma, "Visual Gesture-Based Character Recognition Systems for Design of Assistive Technologies for People With Special Necessities", as part of a volume titled *Handmade Teaching Materials for Students With Disabilities*, IGI Global, USA, July, 2018.
4. Ankumoni Bora and Kandarpa Kumar Sarma, "Big Data and Deep Learning for Stochastic Wireless Channel", chapter as part of a volume titled *Computational Intelligence in Sensor Networks*, July, 2018.
5. Punam Dutta Choudhury, Ankumoni Bora and Kandarpa Kumar Sarma, "Big Spectrum Data and Deep Learning Techniques for Cognitive Wireless Networks" as part of a book *Deep Learning Innovations and Their Convergence With Big Data*, IGI Global, USA, May, 2018.

Conference Publications

1. Minakshi Agarwala, Manash Pratim Sarma and Kandarpa Kumar Sarma, "Implementation of a Modified Global Routing Algorithm on a High-throughput Parallel Environment", in proceedings of 2*nd* IEEE International Conference On Innovations In Electronics, Signal Processing and Communication (IESC 2019), 2019, Shillong, Meghalaya.
2. Smriti Rekha Das, Parismita Kashyap, Sunandan Baruah and Kandarpa Kumar Sarma, "Nano-sized Slotted Microstrip Patch Antenna for X Band Operation", in proceedings of 2*nd* IEEE International Conference On Innovations In Electronics, Signal Processing And Communication (IESC 2019), 2019, Shillong, Meghalaya.
3. Pankaj Jyoti Das, Anjan Kumar Talukdar and Kandarpa Kumar Sarma, "A Framework For Human Behaviour Detection Using Combined Analysis of Facial Expression and Eye Gaze", in proceedings of 2*nd* IEEE International Conference On Innovations In Electronics, Signal Processing And Communication (IESC 2019), 2019, Shillong, Meghalaya.
4. Surajit Deka and Kandarpa Kumar Sarma, "Joint Source Channel Coding with MIMO MC-CDMA for Efficient Communication", in proceedings of 2*nd* IEEE International Conference On Innovations In Electronics, Signal Processing And Communication (IESC 2019), 2019, Shillong, Meghalaya.
5. Manami Barthakur and Kandarpa Kumar Sarma, "Semantic Segmentation using K-means Clustering and Deep Learning in Satellite Image", in proceedings of 2*nd* IEEE International Conference On Innovations In Electronics, Signal Processing And Communication (IESC 2019), 2019, Shillong, Meghalaya.
6. Mousmita Sarma, Pegah Ghahremani, Daniel Povey, Nagendra Kumar Goel, Kandarpa Kumar Sarma and Najim Dehak, "Emotion Identification from raw speech signals using DNN", in Proceedings of Interspeech 2018, Hyderabad, 2018.
7. Mridusmita Sharma, Kandarpa Kumar Sarma and Nikos Mastorakis, "AE and SAE Based Aircraft Image Denoising", in proceedings of 5*th* IEEE International Conference on Mathematics and Computers in Sciences and Industry (MCSI 2018), Corfu Islands, Greece, August, 2018.
8. Mahuya Deb, Prabjot Kaur and Kandarpa Kumar Sarma, "Inventory Classification Using Fuzzy Approach", in proceedings of 5*th* IEEE International Conference on Mathematics and Computers in Sciences and Industry (MCSI 2018), Corfu Islands, Greece, August, 2018.
9. Shobha Kalita, Manash Pratim Sarma, Kandarpa Kumar Sarma, Manash Jyoti Bhuyan, Nikos E. Mastorakis, "Designing an Intelligent Support System for Emergency Cardiac Care", in Proceedings of 22*nd* International Conference on Circuits, Systems, Communications and Computers (CSCC 2018), Majorca, Spain, July 14-17, 2018.
10. Dikshita Sarma, Manash Pratim Sarma, Kandarpa Kumar Sarma, Nikos Mastorakis, "Implementation of Galois Field for Application in Wireless Communication Channels", in Proceedings of 22*nd* International Conference on Circuits, Systems, Communications and Computers (CSCC 2018), Majorca, Spain, July 14-17, 2018.

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications

28. a) Placement record during the period (Please state briefly): 28 out of 33 students placed.
b) Placement services provided during the period (Please state briefly):

29. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report.
30. Placement services provided to students by the Department/Centre, if any:
31. Departmental Library :

a)	No. of Books as on 31.03.2018	1085
b)	New Books procured during the period	50
c)	No. of Journals as on 31.03.2018	
d)	New Journals procured during the period	
e)	No. of users during the period :	

32. Departmental publications : x
33. Details of Patents generated, if any : x
34. Citation index of faculty members and impact factor:
    Kandarpa Kumar Sarma- Google citation - 1182, Scopus- 9 (total citations - 400)
35. Activities and support from the Alumni Association of the Department/Centre :
    a. Alumni association formed.
    b. Alumni helping in placement and start-up activities
    c. Alumni helping with inputs in curriculum formulation

36. Activities and support from the Parent-Teacher Associations if any :
    a. Inputs obtained regarding challenges faced by student learners
37. Involvement in Community services :
    Few faculty members of Gauhati University specially from the Department of ECE has adopted a village named Bamundi in Kamrup (R) district. It is about 31 KM from the University campus and is well connected. The village is just beyond Sualkuchi which is famous for its silk cloths. As part of the village adoption, the faculty members have been associated with several works. First, is to help in spreading quality education in the primary level. In this respect, the faculty members have assisted a new established school named Sreeman Chakravarty Academy in providing quality education in a stress free environment. Here the focus is on developing the young mind and inculcate in them the importance of cleanliness, developing creativity through drawing, painting, singing, dance etc, spreading the spirit of brotherhood and love for the country etc.
38. Provision for financial aid to students in the Department/Centre, if any: x
39. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.
    Feedbacks of all teachers for all courses are taken and appropriate action is taken wherever is found necessary.

40. Information on up to five Good Practices followed by the Department/Centre:
    a. Orientation training to all BTech and MTech students
    b. Continuous evaluation is the means of evaluation of students performance
    c. Stress on innovation and inculcation of competitive mindset among students through heckathons and design competition

41. Detail the plans of the Department/Centre/Institute for the next year : NBA accreditation

Head, Deptt. of Electronics and Communication Engineering

ANNUAL REPORT : DEPARTMENT OF ELECTRONICS AND COMMUNICATION TECHNOLOGY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department :DEPARTMENT OF ELECTRONICS AND COMMUNICATION TECHNOLOGY
   b. Year of establishment : 1993
2. Head of the Department : Prof. Tulshi Bezboruah (on Medical Leave)
3. Details of academic staff :

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. Pranayee Datta	Professor	Rtd. On 31st Aug, 2018	Female	Gen	323
2.	Prof. Tulshi Bezboruah	Professor	Full Time	Male	OBC	338
3.	Prof. Kandarpa Kumar Sarma	Associate Professor	On lien	Male	Gen	1131
4.	Dr. Hidam Kumarjit Singh	Assistant Professor	Full Time	Male	Gen	127
5.	Mr. Kumaresh Sarmah	Assistant Professor	Full Time	Male	Gen	3
6.	Dr. Ram Kishore Roy	Assistant Professor	Full Time	Male	Gen	5
7.	Dr. Hirendra Das	Assistant Professor	Contractual	Male	SC	14
8.	Mr. Sivaranjan Goswami	Assistant Professor	Contractual	Male	Gen	3

4. Course(s)/Programme offered:
   (i)M.Sc. in Electronics and Communication Technology (Intake: 20 seats)
   ii)M.Sc. in Micro-electronics and Advanced Communication (Intake: 12 seats)
5. Special Branches in the Department/Centre: NIL
6. New Academic Programme initiated during the period under report: NIL
7. Innovation in Curricular design: CBCS pattern is being followed in both UG & PG courses of Electronics
8. Inter disciplinary Programme started: NIL
9. Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST:
10. Total number of Research Scholar working at present:

a) Full Time: 07	b) Part time: 03

11. Enrolment of Students in various courses (April 2018- March 2019):

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	2nd Sem	ECT=20	14	6	20	0	0	0	1	0	1	0	0	0	2	3	5	0	0	0
		MEAC=12	7	5	12	1	1	2	0	0	0	0	0	0	2	3	5	0	0	0
	4th Sem	ECT=20	16	4	20	0	2	2	1	0	1	0	0	0	3	0	3	0	0	0
		MEAC=10	7	3	9	1	0	1	1	0	1	0	0	0	2	1	3	0	0	0

M.Phil.	0																			
Ph.D.	2		2	0	2															
Others																				

12. Teacher-Student and Teacher- Non-teaching staff Ratio:

No. of Teacher	No. of student	No. of Non-teaching staff
4 (Regular) + 02 (Contractual) = 06	32(Sem-I) + 30 = 62	2 (Permanent Staff)+1(Contractual staff)+ 2 (Contractual Cleaner)

Teacher/Student Ratio	Teacher-Non-teaching Staff Ratio
0.097	1.2

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
ECT	15	3	18	0	2	2	1	0	1	0	0	0	3	0	3	0	0	0
MEAC	4	3	7	0	0	0	1	0	1	0	0	0	1	1	2	0	0	0

(b) No. Passed **(Results have not been announced yet)**

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Jutika Devi	Modeling, Simulation and Characterization of Nano Devices for Application in Communication	Prof. Pranayee Datta
Dipankar Chetia	Investigations on Some Aspects of Developing Fiber-Optic Sensors for Monitoring Refractive Indices of Liquids	Prof. Tushi Bezboruah
Ram Kishore Roy	Design, Development and Implementation of a Web Based Distributed Data Acquisition System for Monitoring Physical Parameters	Prof. Tuishi Bezboruah

15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
	03		01	

16. Important students' activities and achievements and awards during the period (Please state briefly):
N/A

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Prof. Tushi Bezboruah	National Workshop on Remote Sensing and Signal Processing	26th November – 1st December, 2018	IEEE, GRSS Kolkata Chapter
2		STC on Research Methodology	14 – 20 March 2019	GU, UGC-HRDC

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Dr. Hidam Kumarjit Singh	Visvesvaraya Young Faculty Research Fellowship	MeitY, Govt. of India

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period

20.(a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Prof. Tulshi Bezboruah	Visvesvaraya Fellowship Scheme	MeitY, Govt. of India	5 Years	
Dr. Hidam Kumarjit Singh	Design and fabrication of low cost indigenous instrumentation systems for use in characterization of photoresistors, photodetectors and solar cells	MeitY, Govt. of India	02 Years (Initial stage)	10,00,000.0 (Annually) w.e.f. 2019
Mr. Kumaresh Sarmah	Soft computational framework for simulation, design and fabrication of a metamaterial loaded antenna for wireless application	Gauhati University	2 years	1.5 lakh

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Prof. Asish Gosh	IST , Kalkata; Professor	Resource Person for Remote Sensing Workshop
Prof. Jiten Chandra Dutta	Tezpur University; Professor	Ph.D. Viva voce
Prof. Bosanta R Boruah	Indian Institute of Technology Guwahati; Professor	Ph.D. Viva voce

23 Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:
Two new Laboratory rooms have been constructed on top floor of the department under funding from RUSA.

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:
Department has well equipped computer laboratory of MSc/PhD students, which is also often used by HRDC of Gauhati University during their training programs.

25 Technology up gradation in the Department/Centre during the period 2018-19:

26.Linkages developed with National/International/Academic/Research Bodies : N/A

27 Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshops
Prof. Pranayee Datta	NIL	NIL
Prof. Tulshi Bezboruah	NIL	NIL
Dr. Hidam Kumarjit Singh	NIL	NIL
Mr. Kumaresh Sarmah	*1(Conference at SPIN, 2019 at Amity University, New Delhi)*	*1 (amazingNANO-2019 at ADBU)*
Dr. Ram Kishore Roy	NIL	NIL
Dr. Hirendra Das	NIL	NIL

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

Prof. Tulshi Bezboruah

1. Resource Person in Orientation Programme held from 02/8/2018 to 29/8/2018 conducted by UGC HRDC, Gauhati Universiy.
2. Resource Person in Refresher course on Environmental Studies held from 25/9/2018 to 14/10/2018 conducted by UGC HRDC, Gauhati Universiy. (Co-ordinator: Prof. Bhaben Tanti)

Mr. Kumaresh Sarmah

1. Invited Talk in "Prospects of Nanotechnology" in a one-week Short Term Training Program "amazingNANO-2019", at Assam Don Bosco University on the 1st March, 2019 from 10:30 am to 11:30 am at Azara Campus

2. Resource Person for the "Professional Development of Non-Teaching Staff", organized by HRDC, Gauhati University on 20-02-19 at HRDC, Gauhati University

3. Resource Person of "Refresher Course in Economics and Commerce 2018", organized by HRDC, Gauhati University on 15-11-18 at HRDC, Gauhati University

Mr. Sivaranjan Goswami acted as resource person in the Workshop on Emerging Technologies, Innovation, Incubation and Entrepreneurship Development (March 25th to 29th, 2019). Conducted by CDAC at Gauhati University

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. Ram Kishore Roy		2nd August – 29th August, 2019

d) Details of paper published in the Referred journals during the period:

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Prof. Pranayee Datta	Ultrasensitive fluorescence detection of Fe^{3+} ions using fluoresce in isothiocyanate functionalized Ag/SiO_2 /SiO_2 core–shell nanocomposites	Journal of Materials Science: Materials in Electronics, Vol. 30, Issue 1, 1st March 2019.
	Shell thickness dependent photocatalytic activity of EDTA-assisted Ag/ZnO core-shell nanoparticles under sunlight irradiation	Materials Research Express, Volume 6, Issue 4, 11 January 2019.
	Optically sensitive I-V properties of CdS and CdS:Cu quantum dots	Materials Research Express, Volume 6, Issue 4, 2019.
	Non-linear model of nanoscale devices for memory application	Indian Journal of Physics, Volume 92, Issue 12, 1 December 2018.
	Opto-Electronic Properties of Green Synthesized ZnS Nanostructures	International Journal of Nanoscience, Volume 17, Issue 4, 1 August 2018.
	A Study on Dielectric Properties of Cadmium Sulfide–Zinc Sulfide Core–Shell Nanocomposites for Application as Nanoelectronic Filter Component in the Microwave Domain	Journal of Electronic Materials, Volume 47, Issue 7, 1 July 2018.
Prof. Tulshi Bezboruah	Low-Cost Refractive Index Sensor With Optical Fibers Attached to a U-Shaped Glass Tube	IEEE Sensors Letters, Volume: 2, Issue: 3, Sept. 2018, IEEE. (*In press*)

	A Novel Optical Method to Measure Weight by Using Linear Extension Spring	IEEE Sensors Letters (Volume: 2, Issue: 3, Sept. 2018, IEEE. (*In press*)
	Fiber Optic Capillary Flow Viscometer	IEEE Sensors Letters, Volume: 3, Issue: 2, Feb. 2019, IEEE. (*In press*)
	Non-contact method based on intensity modulation of light for measurement of vibration of a thin cantilever beam	IET Science, Measurement & Technology, Volume: 13 , Issue: 5, 2019.
	Oblique fed ring antenna mounted in car headlight for automotive applications	IET Electronics Letters, Volume 55, Issue 7, 04 April 2019.
	A Study on and947 - Optimization Parameter and Phase Margin of Fourth Order Phase-Locked Loop	International Journal Of Computer Sciences And Engineering, Volume-6 , Issue-12, Dec-2018.
	Some Aspects of Reliability Evaluation of Multi Service Multi-Functional SOAP Based Web Services	International Journal of Information Retrieval Research, Volume 8 Issue 4, October 2018.
	A Real-Time Data Acquisition System for Monitoring Sensor Data	International Journal Of Computer Sciences And Engineering, Volume-6, Issue-6, Jun-2018
Dr. Hidam Kumarjit Singh	Low-Cost Refractive Index Sensor With Optical Fibers Attached to a U-Shaped Glass Tube	IEEE Sensors Letters, Volume: 2, Issue: 3, Sept. 2018, IEEE. (*In press*)
	A Novel Optical Method to Measure Weight by Using Linear Extension Spring	IEEE Sensors Letters (Volume: 2, Issue: 3, Sept. 2018, IEEE. (*In press*)
	Fiber Optic Capillary Flow Viscometer	IEEE Sensors Letters, Volume: 3, Issue: 2, Feb. 2019, IEEE. (*In press*)
Mr. Kumaresh Sarmah	Modified Groove Coupled Compact EBG Unit Cell as Notch Filter in a UWB Antenna	International Journal of Electronics And Telecommunications (accepted for publication)
Dr. Ram Kishore Roy	A Novel Optical Method to Measure Weight by Using Linear Extension Spring	IEEE Sensors Letters (Volume: 2, Issue: 3, Sept. 2018, IEEE. (*In press*)
	Non-contact method based on intensity modulation of light for measurement of vibration of a thin cantilever beam	IET Science, Measurement & Technology, Volume: 13, Issue: 5, 2019.
Dr. Hirendra Das	Optically sensitive I-V properties of CdS and CdS:Cu quantum dots	Materials Research Express, Volume 6, Issue 4, 2019.
Mr. Sivaranjan Goswami	Modified Groove Coupled Compact EBG Unit Cell as Notch Filter in a UWB Antenna	International Journal of Electronics And Telecommunications (accepted for publication)

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Prof. Pranayee Datta		
Prof. Tulshi Bezboruah		
Dr. Hidam Kumarjit Singh		
Mr. Kumaresh Sarmah		
Dr. Ram Kishore Roy		
Dr. Hirendra Das		

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications

28.Placement record during the period (Please state briefly): N/A

29.Placement services provided to students by the Department/Centre, if any: N/A

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report.

31. Departmental Library :

a)	No. of Books as on 31.03.2019	3528
b)	New Books procured during the period	35
c)	No. of Journals as on 31.03.2019	0
d)	New Journals procured during the period	0
e)	No. of users during the period :	Used by all the faculty members Research scholars & students of the department

32.Departmental publications : N/A

33.Activities and support from the Alumni Association of the Department/Centre : N/A

34.Activities and support from the Parent-Teacher Associations if any : N/A

35.Involvement in Community services : N/A

36.Provision for financial aid to students in the Department/Centre, if any:

- Being provided as per provision of GU guidelines, such as fee waiver scheme for PG admission.

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

- Students Feedback is taken for both courses, M.Sc. in ECT and MEAC. We have shared the feedback amongst the faculty members for further improvement.

38. Information on up to five Good Practices followed by the Department/Centre:

i. Strictly following the Academic calendar.
ii. Remedial classes for academically weak students
iii. Tutorial classes for NET Examinations
iv. Easy access of students to each & every faculty of the department for any help as well as guidance.
v. Organizing one internal conference per year.

39. Detail the plans of the Department/Centre/Institute for the next year:

i. To establish a well equipped Measurement and Instrumentation laboratory.
ii. To establish a well equipped Smart Class room for students.

Head, Dept. of Electronics and Communication Technology

ANNUAL REPORT : DEPARTMENT OF INFORMATION TECHNOLOGY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department :..... INFORMATION TECHNOLOGY .....
   b. Year of establishment :.....2009.....
2. Head of the Department :.....Dr. Vaskar Deka.....
3. Details of academic staff :.....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. Shikhar Kr. Sarma	Professor	Full Time	Male	Gen	
2.	Dr. Mirzanur Rahman	Asst. Professor	Full Time	Male	Gen	
3.	Dr. Vaskar Deka	Asst. Professor	Full Time	Male	Gen	
4.	Dr. Parismita Sarma	Asst. Professor	Full Time	Female	Gen	
5.	Dr. Nabamita Deb	Asst. Professor	Full Time	Female	Gen	
6.	Dr. Satyajit Sarmah	Asst. Professor	Full Time	Male	Gen	
7.	Chandan Kalita	Asst. Professor	Full Time	Male	Gen	
8.	Kishore Kashyap	Asst. Professor	Full Time	Male	Gen	
9.	Epsita Medhi	Guest Faculty	Full Time	Female	Gen	
10.	Harish Patodia	Guest Faculty	Full Time	Male	Gen	
11	Jayanta Kumar Nath	Guest Faculty	Full Time	Male	OBC	
12	Lipichanda Goswami	Guest Faculty	Full Time	Female	Gen	
13.	Hrishikesh Deka	Guest Faculty	Full Time	Male	Gen	
14.	Partha Bhowmik	Guest Faculty	Full Time	Male	Gen	
15.	Kasturi Kankana Borah	Guest Faculty	Full Time	Female	OBC	
16.	Rita Paul Borgoyary	Guest Faculty	Full Time	Female	Gen	
17.	Hemangi Goswami	Guest Faculty	Full Time	Female	Gen	
18	Dr. Jyotismita Talukdar	Guest Faculty	Full Time	Female	Gen	
19	Kamal Jyoti Barman.	Guest Faculty	Full Time	Male	Gen	

4. Course(s)/Programme offered :
   1) PhD
   2) M.Tech. in Information Technology,
   3) B.Tech. in Computer Science & Engineering
   4) B.Tech. in Information Technology
5. Special Branches in the Department/Centre : Nil
6. New Academic Programme initiated during the period under report : Nil
7. Innovation in Curricular design : Nil
8. Inter disciplinary Programme started : Nil
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST: Nil

10. Total number of Research Scholar working at present :

a) Full Time: 9	b) Part time: 7

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st / 2nd	18	13	2	15	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0
	3rd / 4th	18	9	7	16	0	0	0	0	1	1	1	0	1	3	1	4	0	0	0
Ph.D.		4	0	4	4	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Under-Graduate (B.Tech in CSE)	1st / 2nd	36	29	10	39	2	0	2	1	2	3	1	0	1	7	1	8	0	0	0
	3rd / 4th	36	27	10	37	1	1	2	4	0	4	0	0	0	5	2	7	0	0	0
	5th / 6th	36	29	13	42	2	1	3	1	2	3	1	2	3	8	1	9	0	0	0
	7th / 8th	36	28	9	37	2	0	2	1	2	3	2	0	2	6	3	9	0	0	0
Under Graduate (B.Tech in IT)	1st / 2nd	36	28	7	35	1	0	1	1	0	1	0	0	0	6	2	8	0	0	0
	3rd / 4th	36	23	11	34	1	1	2	0	0	0	0	0	0	6	3	9	0	0	0
	5th / 6th	36	41	5	46	1	0	1	3.	0	3	2	0	2	16	2	18	0	0	0
	7th / 8th	36	28	7	35	2	1	3	3	0	3	0	0	0	8	2	10	0	0	0

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
19	340	6
Teacher/Student Ratio		**Teacher-Non-teaching Staff Ratio**
1:17.89		3.17:1

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently able		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.Tech.(IT)	9	7	16	0	0	0	0	1	1	1	0	1	3	0	3	0	0	0
B.Tech.(IT)	23	9	32	1	1	2	0	1	1	0	0	0	5	1	6	0	0	0
B.Tech.(CSE)	26	13	39	2	0	2	3	0	3	1	1	2	5	4	9	0	0	0

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently able		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.Tech.(IT)	9	7	16	0	0	0	0	1	1	1	0	1	3	0	3	0	0	0
B.Tech.(IT)	20	9	29	0	1	1	0	1	1	0	0	0	5	1	6	0	0	0
B.Tech.(CSE)	25	12	37	2	0	2	3	0	3	1	1	2	5	4	9	0	0	0

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Tarali Kalita	Quality of Service of Multi-cast Routing in Ad-hoc Wireless Networks	Prof. Shikhar Kumar Sarma
Vaskar Deka	Design and Development of Smart Environment using Hybrid Network and Hardware Technologies.	Prof. Shikhar Kumar Sarma
Kangkana Bora	Development of a DSS for Detection of Malignancy in Cervix using Pap	Dr. Lipi B. Mahanta

	Smear Images.	
Jumi Sarmah	Word Sense Disambiguation for Assamese Language.	Prof. Shikhar Kumar Sarma

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
			1	

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2018-19:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. Vaskar Deka	Modern Web Development	30/03/2019 & 31/03/2019	GUIST

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period
Prof. Shikhar Kr Sarma	University of London	Attended the "International Meeting ISO/IEC JTC 1/SC 2 Coded Character Set"	18th to 22nd June, 2018
Prof. Shikhar Kr Sarma	Wroclaw University of Science and Technology, Poland	Visiting Researcher	10th to 28th July, 2018
Prof. Shikhar Kr Sarma	Wroclaw University of Science and Technology, Poland	Visiting Researcher	1st to 16th January, 2019

20.(a) Sponsored Research Project (2018-19).

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19)

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22 Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit

22.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:

23.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: There are eight computer laboratories in the department with internet connectivity to each and every computer.

24.Technology up gradation in the Department/Centre during the period 2018-19:

25.Linkages developed with National/International/Academic/Research Bodies :

26.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Vaskar Deka	1	2
Dr. Parismita Sarma	3	1
Dr. Nabamita Deb	3	3
Dr. Satyajit Sarmah	1	1

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

1. Dr. Vaskar Deka, acted as chairman of an session in 18th International Conference on Intelligent Systems Design and Applications (ISDA, 2018), VIT-Vellore, India

c) Refresher Course/ Orientation Course attended by the teachers during the period :

Name of the faculty	Refresher Course	Orientation Course
Dr. Nabamita Deb		Short Term Course in Research Methodology from 14th to 20th March 2019.
Dr. Satyajit Sarmah	1	
Chandan Kalita	1	

d) Details of paper published in the Referred journals during the period :

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Prof. Shikhar Kr. Sarma	Monolingual information retrieval in local language: case study in assamese	Scientific Yearbook of the Faculty of Management in Ciechanów, Vol. 12, 2018
Prof. Shikhar Kr. Sarma	Dynamic Bandwidth Management in 802.11Wireless LAN	International Journal of Computer Sciences and Engineering, Vol. 6., issue 6, Jun 2018
Prof. Shikhar Kr. Sarma	An N-gram based model for predicting of word-formation in Assamese language	Journal of Information and Optimization Sciences, Vol. 40, issue. 2, 8 Mar 2019
Prof. Shikhar Kr. Sarma	Marie: A Statistical Approach to Build a Machine Translation System for English Assamese Language Pair	International Journal of Computer Sciences and Engineering Vol. 7, issue 3, Mar 2019
Mirzanur Rahman	Application of Image Processing and Data Mining Techniques for Traffic Density Estimation and Prediction	International Journal of Computer Sciences and Engineering, Volume-7, Issue.3 , pp.248-253, Mar-2019
Dr. Parismita Sarma	A Study on Variation of Suprasegmental Phonetic Appearance Considered for Prosody Design with Respect to Assamese Language	Lecture Notes in Networks and Systems, book series (LNNS, volume 24) 1st April, 2018.
Dr. Nabamita Deb	The Role of Information Technology in the Predictive, Risk and Loss Estimate Models for various Natural Disasters	International Journal of Computer Sciences and Engineering, Vol.-6, Issue-6, June2018
Dr. Satyajit Sarmah	Dynamic Bandwidth Management in 802.11Wireless LAN	International Journal of Computer Sciences and Engineering, Vol.6, Jun-2018
Chandan Kalita	Comparative study of GFS, HDFS and GlusterFS	International Journal of Computer Sciences and Engineering, Vol.6, Jun-2018
Kishore Kashyap	Context-Sensitive Spelling Checker for Assamese Language	Recent Developments in Machine Learning and Data Analytics, Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 740)

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date
Prof. Shikhar Kr. Sarma	Automatic Formation, Termination & Correction of Assamese word using Predictive & Syntactic NLP	2018 3rd International Conference on Communication and Electronics Systems (ICCES), IEEE, 15-16 Oct. 2018
Prof. Shikhar Kr. Sarma	A Hybrid Approach to Analyze the Morphology of an Assamese Word	IC3 2018: Advances in Intelligent Systems and Computing, Springer, January 2019
Prof. Shikhar Kr. Sarma	Effects of Prediction-Length on Accuracy in Automatic Assamese word prediction	2019 IEEE International Conference on Electrical, Computer and Communication Technologies, 20-22 February 2019

Dr. Vaskar Deka	A New Design Prospective for User Specific Intelligent Control of Devices in a Smart Environment	Intelligent Systems Design and Applications, Springer
Dr. Parismita Sarma	Content Capture and Noise Cancellation Aided Mood Recognition using Assamese Speech	IEEE ***Xplore***: 27 September 2018,
Dr. Nabamita Deb	Computational Modeling and Analysis of Artificial Flood Using Automata	Lecture Notes in Mechanical Engineering. Springer, Singapore, 05 November 2018
Dr. Nabamita Deb	Context-Sensitive Spelling Checker for Assamese Language	Advances in Intelligent Systems and Computing, vol 740. Springer, Singapore 12 September 2018

f) Details of book published during the period :

Name of the faculty	Title of the Book(s)	Date of publications

27.Placement record during the period (Please state briefly):

Name of the company	Open for	Students placed	CTC offered	Total placed
Zaloni	CSE, ECE, IT	1. Ambarish Kapil, IT	3.37 LPA	1
TCS	CSE, ECE, IT	1. Akanksha Srivastava, IT 2. Alok Kumar Panjiyar, CSE 3. Vishesh Kumar Jha, IT	3.36 LPA	3
Hiferk Technologies Pvt Ltd	ECE	1. Abhijit Kumar Rai 2. Akashjyoti Banik 3. Manoj Debnath 4. Saahil Islam 5. Sanjay Chaudhury 6. Sanjib Kumar Singh 7. Subham Pandey 8. Suman Bhowmik 9. S Krishna Chandra	4.12 LPA	9
Alliance Communication	CSE, ECE, IT	1. Abhishek Kumar Singh, CSE 2. Bishal Chetry, IT 3. Debalina Banerjee, ECE 4. Khumbongmayum Jeorge Singh, ECE 5. Mrigakshi Chetia, CSE 6. Neelam Deb, ECE 7. Saahil Islam, ECE	1.8 LPA	7
Wipro	CSE, ECE, IT	1. Akashjyoti Banik, ECE 2. Chinmoy Medhi, CSE 3. Debalina Banerjee, ECE 4. Jayeesha Ghosh, CSE 5 Pushpa Ray, CSE 6. Himashree Kalita, CSE 7. Britidipta Saha, IT 8. Varsha Upadhyaya, CSE	3.5 LPA	8
Allsec	CSE, ECE, IT	*Via ICT Academy Job Fair* 1. Trishna Saikia, IT 2. Sayantika Dey, IT	1.4-3 LPA	2
S10	For all	*Via ICT Academy Job Fair* 1. Trishna Saikia, IT 2. Sayantika Dey, IT 3. Gunjan Pathowali, IT	1.4-3 LPA	3

vertex	For all	*Via ICT Academy Job Fair* 1. Trishna Saikia, IT 2. Sayantika Dey, IT 3. Jewel Das, CSE 4. Abdul Latif Sarkar, ECE	1.4-3 LPA	4
Subex Limited	CSE, ECE, IT	a. Abhishek Singh, CSE b. Ambarish Kapil, IT c. Karabi Doley, CSE d. Pushpa Ray, CSE	4 LPA	4
Federal Bank	For all	1. Debojit Chakraborty, CSE 2. Sayantika Dey, IT		2
Infosys	CSE, ECE, IT	1. Abhay Ojha , CSE 2. Dipanjan Deb , CSE 3. Manash Pratim Sarmah, IT 4. Mridudeep Pathak , CSE 5. Riha Verma , CSE 6. Sanjay Chaudhury , ECE 7. Surjakanta Gurumayum , CSE	3.6 LPA	7
Cognizant	CSE, ECE, IT	Programmer Analyst 1. Moushree Dey Engineer Trainee 1. Chandamita Kalita 2. Tridib Roy	3.38 LPA	3
Wipro (VOICE - Customer Service)	CSE, ECE	1. Mrigakshi Chetia CSE 2. Ravi.ECE	133500 to 250000	2
Ajmal Foundation	For all	None Selected		
Bookmyshow	CSE, ECE, IT	None Selected		
Maveric Technologies	CSE, ECE, IT	*Via ICT Academy* No show		
Abaqus Inc.	CSE, IT	1. Ashish Kumar Yadav	4.0 LPA	1

28.Placement services provided to students by the Department/Centre, if any: As mentioned in point 29.

29. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period Yes, Faculty Advisors assigned to the students for counseling.

30. Departmental Library :

a)	No. of Books as on 31.03.2019	799
b)	New Books procured during the period	NIL
c)	No. of Journals as on 31.03.2019	NIL
d)	New Journals procured during the period	NIL
e)	No. of users during the period :	381

31.Departmental publications :

32.Activities and support from the Alumni Association of the Department/Centre :

33.Activities and support from the Parent-Teacher Associations if any :

34.Involvement in Community services :

35.Provision for financial aid to students in the Department/Centre, if any:

36.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.

37.Information on up to five Good Practices followed by the Department/Centre:

38.Detail the plans of the Department/Centre/Institute for the next year :

Incorporation of new innovative and skill oriented programme .

Head, Dept. of Information Technology

ANNUAL REPORT : DEPARTMENT OF INSTRUMENTATION & USIC GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2018 TO MARCH 2019)

1. a. Name of the Department : Instrumentation and USIC
   b. Year of establishment : 1978
2. Head of the Department : Prof. Utpal Sarma
3. Details of academic staff : .....

Sl. No.	Name of the teacher	Designation (Professor/Associate Prof./Asst. Professor	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
1.	Prof. Utpal Sarma	Professor	Full Time	Male	Gen	6 (h-index)
2.	Dr. Debashis Saikia	Asst. Professor	Full Time	Male	Gen	2 (h- index)
3.	Nairit Barkataki	Asst. Professor	Instrumentation	Male	Gen	---
4.	Mr. Manash Pratim Goswami	Asst. Professor	Contractual	Male	Gen	1(h- index)
5.	Ms. Kunjalata Kalita	Asst. Professor	Contractual	Female	Gen	3 (h- index)
6.	Dr.P. K. Boruah	Professor (Retd)	Guest Teacher	Male	Gen.	6 (h- index)
7.	Dr. K.C. Sarma	Professor (Retd)	Guest Teacher	Male	Gen	13 (h-index)
8.	Dr. Banti Tiru	Associate Professor	Part time Teacher	Female		---
9	Dr.B C Sarma	Superintendent (Workshop, AEC)	Guest Teacher	Male	Gen	---
10.	Mr Amitabh Nath	Retired DGM, BSNL	Special Invitee	Male	Gen	---
11	Mr Dipak Das	Technical Officer	Part time Teacher	Male	Gen	---

4. Course(s)/Programme offered :
   MSc in Instrumentation & Applied Physics.
   PhD under Faculty of Technology, GU
5. Special Branches in the Department/Centre:
   1. Sophisticated Analytical Instrument Facility (SAIF) sponsored by the Department of science and Technology (DST), Govt. of india as one of the national facility Centre.
   2. University Science Instrumentation Centre (USIC) having Mechanical workshop consisting of Carpentry shop, Glass Blowing workshop, Machine shop, and Welding shop.
6. New Academic Programme initiated during the period under report:
   1. Post Graduate Diploma in Embedded System under process.
7. Innovation in Curricular design:
   Practical Industrial training is made part of the curriculum.
   Regular seminars by invited resource persons are organized.
   Students has to complete a project work and has to give seminar talks.
8. Inter disciplinary Programme started:
   1. Research work in collaboration with Deptt. of Chemistry, GU on Nano material
   2. Research work in collaboration with Department of Electronics, GU on Nano material and Electronic system design.
   3. Research work in Collaboration with Department of Physics, GU on Cosmic ray and Instrumentation.
   4. Research Collaboration with CEERI, Pillani on Agrielectronics
   5. Research work in Collaboration with Department of Bioengineering and Technology, GU on Agrielectronics.
9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST:
   Sophisticated Analytical Instrument Facility (SAIF) sponsored by DST is a National Facility.

10. Total number of Research Scholar working at present:

a) Full Time: 7	b) Part time: 9

11. Enrolment of Students in various courses (April 2018- March 2019) :

Courses	Sem	Intake Capacity	No. Admitted			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-Graduate	1st	20	14	6	20	1	-	1	1	2	3	-	-	-	5	3	8	-	-	-
	3rd	20	13	6	19	1	-	1	2	-	2	-	-	-	5	1	6	-	-	-
M.Phil.																				
Ph.D.		42	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Others																				

12. Teacher-Student and Teacher- Non-teaching staff Ratio :

No. of Teacher	No. of student	No. of Non-teaching staff
5	40	15
Teacher/Student Ratio		**Teacher-Non-teaching Staff Ratio**
8:1		1:3

13. Final Examination result during the session 2018-19:

(a) No. Appeared

Subject	Total Appeared			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MSc Final in Instrumentation	13	6	19	1	-	1	2	-	2	-	-	-	5	1	6	-	-	-

(b) No. Passed

Subject	Total Passed			S.C.			S.T(P)			S.T.(H)			OBC/MOBC			Differently abled		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
MSc Final in Instrumentation	12	6	18	1	-	1	2	-	2	-	-	-	5	1	6	-	-	-

14. Details of Ph.D. awarded (2018-19):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Dulal Chandra Das	Early detection of cardiac disorder using data mining techniques	Prof P. H. Talukdar, Retd Pofessor
Parag Moni Baruah	Toxicity evaluation and caffeine profile analysis of processed and unprocessed tea marketed in Sonitpur (Tezpur) and Biswanath (Gohpur) districts of Assam	Dr, S Bardaloi, Scientific Officer
Aniruddha Gogoi	Synthesis of metal oxide nanostructures and their composites for potential applications as catalyst	Prof. K. C. Sarma, Retd. Professor
Bimal Kumar Kalita	Multilevel speaker authentication system with reference to Bodo language	Prof P. H. Talukdar, Retd Pofessor
Akalpita Das	HMM based speaker independent emotional speech recognition using prosodic features with reference to Assamese language	Prof P. H. Talukdar, Retd Pofessor
Nipan Das	Study and development of online moisture measurement and	Prof. P. K. Boruah, Retd. Professor Prof. Utpal Sarma

	monitoring instrumentation for withering section of tea factory	
Bitopi Sharma	Complexity measures of Assamese phonemes using fuzzy	Prof P. H. Talukdar, Retd Pofessor
Barnali Kalita	Bodo emotional speech synthesis and recognition using HMM	Prof P. H. Talukdar, Retd Pofessor
Sharmila Sharma	Studies on measurement and monitoring of soil moisture, humidity and temperature for application in the field of agriculture	Prof. K. C. Sarma, Retd. Professor

15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
	1			

16. Important students' activities and achievements and awards during the period (Please state briefly)

17. Seminar/Summer School/Workshop conducted during the period 2017-18:

Sl.No.	Name of the Coordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. Debashis Saikia	6th School on system design using microcontroller	25th June to 30th June, 2018	ASTEC UGC unassigned grant, GU
2	Dr. Debashis Saikia	7th School on system design using microcontroller	18th to 23rd February, 2019	ASTEC UGC unassigned grant, GU

18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2018-19) :

Name of the Faculty	Name of the Award/Fellowship	Conferring agency

19.Visit abroad by the Faculty members (2018-19) :

Name of the Faculty	Institute visited	Purpose	Period

20 (a) Sponsored Research Project (2018-19):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration.	Amount(Rs.)
Dr. Debashis Saikia	Development of a customised E-Nose setup for tea quality discrimination	Gauhati University	3 Years	1.5 Lakhs

(b) Patent Generated:

Sl No.	Name of the Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2018-19):

Sl.No.	Name of Examination/Programme	Name of the student	Position held

22. Distinguish visitors to the Department during the period 2018-19:

Name of visitors	Address & Designation	Purpose of visit
Prof D. K. Bhattacharyya	Department of Computer Science and Engineering, Tezpur University	Ph. D. Viva
Prof Ashok Kumar	Physics Department, Tezpur University	Ph. D. Viva
Prof Utpal Sharma	Department of Computer Science and Engineering, Tezpur University	Ph. D. Viva
Prof. Rakesh Chandra	IIIT Bhubaneswar	Ph. D. Viva

Balabantaray		
Dr. Pabitra Nath	Physics Department, Tezpur University	Ph. D. Viva and deliver a popular lecture
Prof. Channappa Akki	IIIT Allahabad	Ph. D. Viva
Prof. Sunanda Dhar	Department of Electronic Science, Calcutta University	Ph. D. Viva
Dr. Sunandan Baruah	Assam Don-Bosco University	Deliver a popular lecture
Prof. N.R. Pal	Indian Statistical Institute	Expert for INSPIRE elevation

23.Creation /Increase in infrastructural facilities in the Department/Centre during the period 2018-19:

(1) Classroom furniture
(2) Renovation of electrical wiring of Mechanical workshop
(3) One new building (used as Science Canteen) allocated to this department for research and computational facility

24.Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre: YES

25.Technology up gradation in the Department/Centre during the period 2018-19:

TGA and DSC instruments funded by DST, Govt of India for SAIF Guwahati have been added.

26.Linkages developed with National/International/Academic/Research Bodies:

(i)Research Collaboration with CERI, Pillani on Agrielectronics. MOU continuing.
(ii) Tea process monitoring with tea gardens located in Mongaldoi and adjoining places of Guwahati.
(iii) MOU with AAU regarding instrumentation for Precision Horticulture.

27.Academic activities of Faculty members during the period of report (2018-19):

a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period:

Name of the faculty(s)	No. of Seminar	No. of Workshops

b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)

i. Prof. Utpal Sarma:
1. Role of IQAC in Higher Ed. Accreditation: ref to IHE dt. 08.01.2019
2. RAF NAAC: Morigaon College: 9.06.2018
3. Challenges and Opportunities of RAF of NAAC: Shillong College 23.08.18
4. AF NAAC: Puthimari College: 29.09.2018
5. RAF of NAAC: ADP College: 24.11.2018
6. RAF of NAAC: Pandu College: 04.12.2018
7. RAF of NAAC: Birjhora Mahavidyalay: 01.02.2019
8. RAF of NAAC: Handique Girls' College: 19.03.2019

c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
Dr. Debashis Saikia	No	**Yes**

d) Details of paper published in the Referred journals during the period:

Name of the faculty	Title of the paper	Name of the journal with Vol. No. & Date
Dr. Debashis Saikia	Development of a wireless sensor network based smart multiple ambient conditions sensing system for the rearing process of eri silkworm	International Journal of Advanced Technology and Engineering Exploration, Vol-6, Issue-52, March-2019; PP. 50-60
Prof. Utpal Sarma	Emulating the Statistical Properties of Indoor Power Line Colored Background Noise for Development of a Power Line Noise Simulator	Journal of Circuits, Systems and Computers, 2050055
Prof. Utpal Sarma	Studies on change of strain developed in different wood samples due to change in relative humidity	Sensing and Bio-Sensing Research 22, 100264
Prof. Utpal Sarma	An Alternate Method for Prediction and Analysis of Notch Characteristics in Indoor Power Lines Under Varied Channel Conditions	Arabian Journal for Science and Engineering, 1-22

Prof. Utpal Sarma	Effect of Microwave Heat on the Nutritional Properties of Infected Red Kidney Beans	IEEE Access 6, 57137-57143
Prof. Utpal Sarma	Design and Characterization of a Fringing Field Capacitive Soil Moisture Sensor	IEEE Transactions on Instrumentation and Measurement 68 (3), 913-922
Prof. Utpal Sarma	Design and Optimization of Quadrilateral Shaped PVDF Cantilever for Efficient Conversion of Energy from Ambient Vibration	IEEE Sensors Journal 18 (10), 3977-3988
Mr. Manash Protim Goswami	Design and Characterization of a Fringing Field Capacitive Soil Moisture Sensor	IEEE Transactions on Instrumentation and Measurement 68 (3), 913-922
Dr. Kunjalata Kalita	Studies on change of strain developed in different wood samples due to change in relative humidity	Sensing and Bio-Sensing Research 22, 100264

e) Paper published in other journals during the period (only those considered for API Score).

Name of the faculty	Title of the paper	Name of the Journals with Vol. No. & Date

f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications

28.Placement record during the period (Please state briefly):

Sl. No	Student Name	Employer
1	Aparupa Borgohain	APSC, Govt. of Assam
2	Kakuli Rajkonwar	NF Railway, Govt. of India
3	Moyurima Sarma	Assam Secretariat, Govt. of Assam
4	Nairit Barkataki	Asst. Professor, Gauhati University

29.Placement services provided to students by the Department/Centre, if any: NIL

30. Is there any Student Counseling Unit in the Department/Centre ? If yes state activities during the period under report : NIL

31. Departmental Library:

a)	No. of Books as on 31.03.2019	997
b)	New Books procured during the period	43
c)	No. of Journals as on 31.03.2019	
d)	New Journals procured during the period	
e)	No. of users during the period :	

32.Departmental publications: NIL

33.Activities and support from the Alumni Association of the Department/Centre: NIL

34.Activities and support from the Parent-Teacher Associations if any: NIL

35.Involvement in Community services: NIL

36.Provision for financial aid to students in the Department/Centre, if any: NIL

37.Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtained and action taken on this feedback may please be stated.:

Feedback from students are collected. Teachers are informed. Curriculum enrichment is done.

38. Information on up to five Good Practices followed by the Department/Centre:

1. Regular seminars are held for teaching learning process on every Friday
2. Tutorial classes are held for students benefit in addition to normal classes.
3. More importance is given on practical classes
4. Bridge courses conducted at the beginning of the semester.
5. Pre Lab Viva is conducted

39. Detail the plans of the Department/Centre/Institute for the next year:

(i) Introduction of new courses.

(a) Proposal for Introduction of PG Diploma in Embedded system design has been approved and is planned for implementation shortly

(ii) Interdisciplinary joint research work with other department.: Dept. of Physics

(iii) Development of laboratory, establishment of new laboratories:

Communication lab, optoelectronic lab, Process control lab, DSP lab, Biomedical lab, Electronic workshop,

Industrial automation lab, Advanced electronics lab.

(iv) Augmentation of existing classrooms and laboratories with all modern ICT accessories.

(v) Creation of more space, proposal for a new building has already been submitted.

(vi) Procurement of Scanning electron microscope through SAIF. Proposal has already been submitted to the the DST through SAIF

(vii) Procurement of test equipment for electronic repair shop.

(viii). Proposal for store room extension in Workshop.

(ix) Proposal for building extension

(x) Proposal for renovation of building.

40. S A I F

The Sophisticated Analytical Instrument Facility (SAIF) funded by Department of Science & Technology (DST), Govt. of India, was established in the Department of Instrumentation & USIC, Gauhati University in the year 1986. It renders analytical services to the academicians and researchers of various institutions and industries. At present, the SAIF, GU is equipped with

1.	Instrument	Qty	Remarks
2.	Powder X-ray Diffractometer (XRD)	2 Nos	
3.	X-ray Fluorescence Spectrometer (XRF)	1 No	Sanction obtained for New one
4.	Thermo-gravimetric Analyser	1 no	
5	Differential Scanning Calorimeter	1	

SAIF, GU caters the needs of scientists, researchers, students and industries of the country in general and north east region in particular

During the year 2018-2019, 800 numbers of samples have been analysed and an amount of Rs3.05 Lakhs has been earned by SAIF, GU and the details are given below

	Number of Sample	Earning in Rs. lakh
XRD Internal Sample	211	73,805.00
XRD External Sample	183	
XRF Internal Sample	114	1.42,600.00
XRF External Sample	97	
SCD Internal Sample	132	88,800.00
SCD External Sample	63	
TOTAL	800	3,05,205.00

41. U S I C

During the year 2018 – 2019, in addition to the internal departmental jobs, jobs received from various GU departments and other institutions were done.

Technical staff of Electrical/electronic workshop assist in conducting practical classes in laboratory. The practical classes of Workshop Practice of MSc Instrumentation Course and of Third Semester BS/BTech Course of IST,GU is presently conducted in the USIC workshops of this department.

Renovation of electrical wiring of the Mechanical workshop of USIC was done. Proposal for store room and sitting room for workshop staff has been submitted.

Head, Dept. of Instrumentation and USIC