# ANNUAL REPORT: DEPARTMENT OF ANTHROPOLOGY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017 TO MARCH 2018)

1. a. Name of the Department : Anthropology b. Year of establishment : 1948

2. Head of the Department : Prof. A. A. Ashraf

3. Details of academic staff

Sl.	Name of the	Qualifi	Specialization	Sex	Caste(	Carrier status	Full/Part
No.	teacher	cation		(Male/	Gen/S	(Professor/Asso	time/Contra
				Female	C/ST/O	ciate Prof/	ctual
					BC/PH	Asstt.	
						Professor	
1.	Dr. Rekha Das	M.Sc.,	Physical	F	OBC	Professor	Full time
		Ph.D.	Anthropology.				
2.	Dr. M.			F	Gen	Professor	Full time
	Bhattacharyya						
	Thakur	3.5.0		1.5	~		
3.	Dr. A.A.Ashraf	M.Sc.,	Prehistoric	M	Gen	Professor	Full time
		Ph.D.	Anthropology				
4.	Dr. Dwipen	M.Sc.,	Prehistoric	M	Gen	Professor	Full time
	Bezbarua	Ph.D.	Anthropology	<u> </u>	_		
5.	Dr. G. Begum	M.Sc.,	Physical	F	Gen	Associate	Full time
		Ph.D.	Anthropology.			Professor	
6.	Dr. Chandana	M.Sc.,	Physical	F	Gen	Associate	Full time
	Sarma	Ph.D.	Anthropology			Professor	
7.	Dr. Arifur Zaman	M.Sc.,	Social	M	Gen	Associate	Full time
		Ph.D.	Anthropology.			Professor	
8.	Dr. Robinson Senar	M.Sc.	Prehistoric	M	ST(P)	Asstt. Professor	Full time
		Ph.D.	Anthropology				
9.	Ms. Humi Thaosen	M.Sc.,	Social	F	ST(H)	Asstt. Professor	Full Time
			Anthropology.				
10.	Dr. Smita Devi	M.Sc.,	Prehistoric	F	OBC	Asstt. Professor	Full Time
	Bora	Ph.D.	Anthropology				
			, 0,				
11.	Dr. Shangpam	M.Sc.,	Social	F	Gen	Asstt. Professor	Part Time
	Kashung	Ph.D.	Anthropology				
12.	Dr Dhanmani	M.Sc,	Physical	F	OBC	Asstt. Professor	Part Time
	Medhi	Ph.D	Anthropology				
13.	Mr. Jyotishman	M.Sc.	Social	M	ST(P)	Asstt. Professor	Part Time
	Taye		Anthropology.				

- 4. Course 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 (2017-18)

10. Total number of Research Scholar working at present:

a) Full time - 4	b) Part time = 42

11. Enrolment of students in various courses (April 2017-March 2018)

Courses	Sem	Intake Capac ity	No.	admitt	ed	S.C.	S.C. S.T.(P)		S.T.(H) OBC/M BC			10	P.H.							
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post- Graduate	1 <sup>st</sup>	26	5	21	26	0	1	1	1	3	4	2	1	3	1	8	9	0	0	0
	2 <sup>nd</sup>	26	5	21	26	0	1	1	1	3	4	2	1	3	1	8	9	0	0	0
	3 <sup>rd</sup>	24	7	17	24	1	3	4	1	4	5	0	1	1	2	4	6	0	0	0
	4 <sup>th</sup>	24	7	17	24	1	3	4	1	4	5	0	1	1	2	4	6	0	0	0

M. Phil																			
Ph.D.		1	2	3	0	0	0	1	0	1	0	0	0	0	1	1	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	50	11
Teacher/St	tudent Ratio	Teacher-Non-teaching Staff Ratio
1 :	3.85	1 : .85

# 13. Final Examination result during the session 2017- 2018 (a) No. appeared

Subject	Tot	al		S.C			S.T	.(P)		S.T	(H).		O.B.C./M.O.B.C.		P.H			Foreign			
	App	earec	i																Stu	dent	
Anthropology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	3	23	26	0	2	2	1	4	5	0	0	0	1	9	10	0	0	0	0	0	0

### (b) No. Passed

Subject	Tota	al		S.C			S.T	.(P)		S.T	(H).		O.B.C./M.O.B.C.		P.H			Foreign			
	Pas	sed																	Stu	dent	
Anthropology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	3	22	25	0	2	2	1	4	5	0	0	0	1	9	10	0	0	0	0	0	0

## 14. Details of Ph. D. awarded (2017-18):

Name of the Ph.D.	Title of Ph.D. Thesis	Guide
scholars		
Meyajungla Longchar	Women Entrepreneurship: The Case of the Ao Women in Dimapur, Nagaland.	Dr. Upala Baruah
Likhan Chandra Doley	Impact of Flood on the Mishings of Dhemaji District, Assam: An Anthropological Study.	Dr. Upala Baruah
Moushumi Das	An Ethnographic Study of the Potters of Salmara, Majuli and its Archaeological Perspective.	Prof. A.A. Ashraf
Pahari Gogoi	Morbidity and Mortality among the under five children of the Bodos, Garos and Caste population in the Rani area of Kamrup District, Assam.	Prof. Bapukan Choudhury
Luna Goswami	Assamese Hindu Family Structure and Kinship Network in Rural and Urban Contexts in Kamrup District, Assam	Dr. Upala Baruah
Nabanita Medhi	An Assessment on Education among the Youths in the Urban Slums of Guwahati City, Assam.	Prof. Mini Bhattacharyya Thakur
Ranjan Kumar Bhatta	Cultural Traditions of the Nepalese of Assam.	Prof. Dilip K. Medhi
Smita Devi Bora	Geocultural Context of the Prehistoric Sites of West Garo Hills, Meghalaya.	Prof. Dwipen Bezbaruah
Hemanta Sharma	An Anthropological Study of the Alcoholics in Guwahati.	Prof. Birinchi K. Medhi
Madhurya Chetia	Socio Economic Features of Tea Community in sibsagar Sub- division of Assam.	Dr. Tiluttoma Baruah
Dhani Ram Baro	Patterns of Morbidity among the Bodos and the Rabhas of Goalpara District, Assam.	Prof. Rekha Das
Mitali Rabha	Festivals of the Rabhas in Goalpara District of Assam: Continuity and Change.	Prof. Mini Bhattacharyya Thakur
Humen Chutia	An Anthropogenetic Study among the Deoris of Bordoloni Development Block, Dhemaji District, Assam.	Dr. Tiluttoma Baruah
Nancy C.	Understanding the Socio-cultural Heritage of the Kuki in Assam	Prof. Mini Bhattacharyya
Malsawmtluangi	in the light of Christianity: An Anthropological Approach.	Thakur
Suryatapa Nath	Marriage and Family: Change and Contunity among the Meities of Cachar District, Assam.	Dr. Chandana Sarma, CU
Sabita Devi  15. Number of students of	A Study of the Problems of Intellectually Disabled Persons and the Available Resources for their Empowerment in Assam: A Case Study of Guwahati, Assam	Dr. Upala Baruah

15. Number of students qualified in

NET (JRF)	NET	SLET	GATE	Any others
1	3	2		

- 16. Important students' activities and achievement and awards during the period (Please state briefly)
- 17. Seminar/Summer School/Workshop conducted during the year 2017-18

Sl.No.	Name of the Co-	Name of the Seminar/Summer	Date	Sponsorship
	coordinator	School//Workshop/Refresher Course		
1.	Prof. A.A.Ashraf	Changing Facets of Human Biology	21-23	Dept. of
		and Culture: Prospects for	Feb,2018	Anthropology, G.U.
		Development"		and INCAA
2.				

18. Honours/Award/ Fellowship(with National/International repute) earned by the faculty members (2017-18)

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

19. Visit abroad by the Faculty members (2017-18)

Name of the Faculty	Institute visited	Purpose	Period
•			

20. Sponsored Research Project (2017-18)

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount (Rs.)
Dr. Dwipen Bezbaruah	Multidisplinary Studies on Rock Art and Allied subject in N.E. India	Indira Gandhi National Centre for the ARTS,IGNCA, New Delhi	5 years	2 Lakhs (for fifth phase)
Prof. Mini Bhattacharyya	SAP DRS-I	UGC	5 Yrs	87 Lakhs
Dr. Gulrukh Begum	Impact of consanguinity on health: A study in Barpeta district, Assam	ICSSR		
Ms. Humi Thaosen	Traditional Bamboo and Cane Craft Among the Plain and Hill Tiwas of Assam	UGC-SAP		

21. Academic distinction earned by the students during 2017-18

Sl.No.	Name of	Name of the	Position held
	Examination/Programme	student	
1.	MA/M.Sc. 4 <sup>th</sup> Semester,	Sri John	First class first
	2017	Basumatary	Honoured by Manju Rani Goswami
		-	Barkataki Gold Medal and Mallika
			Mahanta Memorial award

22. Distinguish Visitors to the Department during the year 2017-2018

Name of the visitors	Address & Designation	Purpose of visit
<ol> <li>Prof. Ajit Prasad</li> </ol>	Professor of M.S.	Deliver a lecture on the topic "Indus Valley
	University, Baroda.	Civilization" on 17/5/17
2. Dr. S. B. Ota	Joint Director, A. S. I.	Deliver a lecture on the topic :Site
		Formation Process" on 22/11/17

- 23. Increase in infrastructural facilities in the Department/Centre during the period 2017-18
- 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 2017-18
- 26. Linkages developed with National/International/Academic/Research Bodies:
- 27. Academic activities of Faculty members during the period of report (2017-18)
  - a) Seminar/Workshops attended/presented paper by the faculty during the period:

Name of the faculty	No. of Seminar	No. of Workshop
1.Prof. A. A. Ashraf	2	
2. Prof. D. Bezbaruah	3	
2. Dr. Gulrukh Begum	7	
3. Dr. Chandana Sarmah	2	
4.Dr. Arifur Zaman	2	1
5. Dr. Smita Devi Bora	3	
6. Ms. Humi Thaosen	3	

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

1. Prof. A. A. Ashraf Regularly acted as Resource person since 2017 for each and every

orientation course batches of H.R.D.C, G.U.

2. Prof. D. Bezbaruah Resource person in the Refresher Course of H.R.D.C, G.U.

3. Dr. Gulrukh Begum (a) Resource person in the UGC sponsored National Seminar, Women

in North East India: Issues and Challenges

(b) Chaired a session "Aspects of Demography" in Indian

Anthropology Congress- 2018 (Changing Facets of Human Biology and Culture: Prospects for Development)

4. Dr. Chandana Sarmah (a). Invited Lecture: Society's Responsibility towards Elderly National CME on Geriatric Care and Social Responsibility Organised by IJHRMLP Academic Group 27<sup>th</sup> January 2018 Gauhati Medical College Auditorium Complex

(b) Refresher Course in Nano Science and Nano Technology UGC-Human Resource Development Centre, Gauhati University

5. .Dr. Smita Devi Bora

(a) Resource person on 3<sup>rd</sup> Dimasa Youth Festival on topic "workshop on Stone Craft"

6.Ms. Humi Thaosen

(a). Invited as a speaker on the theme 'Women Empowerment',

during the 46th General Conference of Dimasa Students' Union held from 26th to 28th December, 2017, at Kalachand, Dima Hasao, Assam.

- (b). Conducted an Open Discussion as a moderator on 'Role of Daikho System in the Socio-Religious Life of the Dimasas', held during the 3rd Dimasa youth Festival, at Dhansiri, Karbi Anglong, Assam, on 12th and 13th January, 2018, organized by Dimasa Youth Forum.
- (c). Invited as a Chief Guest / Speaker at the Felicitation Programme of successful students of HSLC, HSSLC & Degree Examination, 2018, organised by Dimasa Students' Union, Nagaland, with the theme, 'The Higher The Obstacles, The Higher We Get To Rise', held on the 14th of July, 2018, at DBIL Hall, Don Bosco Higher Secondary School Campus, Duncan Basti, Dimapur, Nagaland.
- c) Refresher Course/Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
Prof. A. A. Ashraf		8

## 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. A. A. Ashraf	Reg. Discovery of Salver (Rice Cake)	Highlighted News in the front page of Assam Tribune, 15 <sup>th</sup> May 2018 (This is the earliest date (3226 years) of origin of (pitha-pana) in Assam)
Prof. D. Bezbaruah	<ul> <li>(a) Anthropomorphic and Non-anthropomorphic shrines in the monuments of Greater Guwahati, Assam.</li> <li>(b) Ethnographic attributes &amp; archaeological correlates: an investigation among the Garos</li> </ul>	The Oriental Anthropologist, Vol. 17. No.1  , Journal of Humanities & Social Science, Vol.22 Issue 9, 2007

	of West Garo Hills, Meghalaya	
	of west Galo fillis, Meghalaya	
Dr. Gulrukh Begum	<ul> <li>(a) Nutritional status of the preschool Sonowal Kachari children of Lakhimpur district, Assam (2017): 151-163</li> <li>(b) Association between Body Mass Index, Blood Pressure and Age: A Study among Ahoms of North Lakhimpur, Assam. In:)</li> <li>(c) Regional Variation in Body</li> </ul>	(a) Cultural heritage of Assam, (ed) SKChaudhuri and MBThakur, Indira Gandhi Rashtriya Manav Sangrahalaya, Bhopal (2017)  (b) Anthropology in North East India, (ed) Sarthak Sengupta, Gyan Publishing House (2018)  (c) Human Biology Review, 6(2): 130-140
	Dimensions of the Deoris of Assam and Arunachal Pradesh	(d) <i>Human Biology Review</i> , 6(4): 403-420
	(2017)	(e) Bulletin of the Dept of Anthropology, Gauhati Uni- versity, XVII
	(d) Patterns of Growth and Menarcheal Age among the Adolescent Tea Garden Worker Girls of Dibrugarh District, Assam (2017).  (e) Status of nutrition among the	
	Karbi girls of Kamrup district, Assam. (2017).	
Dr. Arifur Zaman	(a) Dimensions of Child Care Practice: the Case of the Deoris of Assam, (jt)	(a) Indian Journal of Research in Anthropology , Volume 3 Number 2 , July - December 2017, (pISSN: 2454- 9118, eISSN: 2455-829X)
	(b) Significance of Bamboo among the Tai Ahoms in Rural Situations of Assam(jt),	(b) Periodic Research, VOL6, ISSUE- 2, November - 2017 ISSN No. 2231-0045 RNI No. UPBIL/2012/55438 E: ISSN No. 2349-9435
	(c) Position of women and their role in income generating activities among the Misings of Upper Assam(jt.),	(c) Voice of Intellectual Man- An International Journal, 2017, Volume-7, Issue-2, Print ISSN: 2231-6914 Online ISSN:2319- 4308, Article DOI: 10.5958/2319- 4308.2017.00019.6.
Dr. Smita Devi Bora	Ethnographic Attributes and Archaeological Correlates	IOSR -JHSS

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

Name of the	Title of the paper	Name of the journal with Vol. No. &
faculty		Date
Ms. Humi Thaosen	Papers: Studies on Dimasa History, Language and Culture, ISBN 978-93- 85839-08-5, Monali Longmailai (ed.),	'Semkhor Daikho: Outlining the Sacred Groves of Semkhor', 2017, Volume 1, DYF Selected DVS Publishers, Guwahati, pp.145-157.

## f) Details of book published during the period

Name of the faculty	Title of the Book(s)	Date of publications
<ol> <li>Prof. D. Bexbatruah</li> </ol>	Edited:	

Cultural Ecology: Prehistory & Ethnoarchaeology/Context of Indian Rock Art with Emphasis on NE States (Eds. Book).
Publisher, IGNCA, New Delhi

2. Dr. Gulrukh Begum

Edited : Bulletin of the Department of Anthropology, G.U.

3. Dr. Chandana Sarmah

 Socio Economic Condition and Social Support Among the Ageing Tiwas of Assam in Elderly Care in India, Societal and State Responses, Ed. S. I. Rajan and G. Balagopal, Springer Nature, Singapore Pte. Ltd. ISBN: 978-981-10-3438-1 Year – 2017 (pp 117-132)

Authors- Chandana Sarmah and Barnali Das

2. Nutritional Status and Blood
Pressure among the Ageing Tiwas of
Morigaon Districtof Assam in People
of North East India: Biocultural
Dimensions, Ed. R. Khongsdier and S.
Sengupta, Kalpaz Publication, Delhi,
ISBN: 978-93-5128-238-9 Year 2017
(pp109-122)

Authors- Barnali Das and Chandana Sarmah

3. Elderly Health Care: Needs and
Strategies for Services in
Anthropology in North East India, Ed.
Sarthak Sengupta, Gyan Publishing
House, New Delhi

ISBN: 978-812-12-1424-7 (HB) Year - 2018

Author- Chandana Sarmah

Spectrum of Vaishnavite Mask in the Majuli Island of Assam", 2018, in *Anthropology in North East India*. S. Sengupta(Ed), Gyan Publishing House, New Delhi: 137-145. ISBN: 97881 21214247.

2018

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

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
- 30. placement services provided to students by the Department/Centre, if any:
- 31. Departmental Library:

Dr. Arifur Zaman

a)	No. of Books as on 31.03.2016	1542
b)	New Books procured during the period	127
c)	No. of Journals as on 31.03. 2016	123
d)	New Journals procured during the period	
e)	No. of users during the period:	195 nos.

- 32. Departmental publications: Departmental Bulletin
- 33. Details of Patents generated, if any:
- 34. Citation index of faculty members and impact factor:
- 35. Activities and support from the Alumni Association of the Department/Centre:
  - Gold medal from Alumni, monetary award.
- 36. Activities and support from the Parent-Teacher Association if any:
- 37. Involvement in Community services:
- 38. Provision for financial aid to students in the Department/Centre, if any:
- 39. Provision for student assessment of teachers. If such provisions exist, the courses in which student assessment is obtain and action taken on this feedback may please be stated.
- : Students assessment was done for 2<sup>nd</sup> and 4<sup>th</sup> semester students (but feedback not yet received)
- 40. Information on up to five Good Practices followed by the Department/Centre:
- 41. Details the plans of the Department/Centre/Institute for the next year:

Head of the Dept. of Anthropology

# ANNUAL REPORT : DEPARTMENT OF BOTANY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017 TO MARCH 2018)

1. a. Name of the Department :Botany b. Year of establishment : 1948

2. Head of the Department : Prof. 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 (H Index Google Scholar)
1.	Prof. S. K. Borthakur	Professor	Full Time	Male	General	16
2.	Prof. D. K. Jha	Professor	Full Time	Male	General	10
3.	Prof. P. P. Baruah	Professor	Full Time	Male	General	6
4.	Prof. N. Devi	Professor	Full Time	Female	General	3
5.	Prof. B. Tanti	Professor	Full Time	Male	OBC	9
6.	Dr. K. Tayung	Professor	Full Time	Male	ST	10
7.	Dr. N. Nath	Associate Professor	Full Time	Female	OBC	2
8.	Dr. D. Narzary	Associate Professor	Full Time	Male	ST	7
9.	Dr. H. Deka	Assistant professor	Full Time	Male	General	5
10.	Dr. N. Agarwala	Assistant professor	Full Time	Male	General	4
11.	Dr. N. Bhattacharyya	Assistant Professor	Full Time	Female	General	1
12.	Dr. A. Ghosh	Assistant professor	Contractual	Male	General	7
13.	Mr. J. Rabaha	Assistant professor	Contractual	Male	ST	0
14.	Mr. Tridip Phukan	Assistant Professor	Contractual	Male	OBC	NA

- 4. Course(s)/Programme offered: M Sc in Botany, M Sc Microbiology, M Phil, 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: Nil
- 8. Inter disciplinary Programme started: Nil
- 9. Department/Centre under: SAP/COSSIST (ASSIST)/DST/FIST: SAP
- **10.** Total number of Research Scholar working at present:

a) Full Time:	60	b) Part time: 00

11. Enrolment of Students in various courses (April 2017- March 2018):

Courses	Sem	Intake Capacity	Ac	No. Imitte	ed		S.C.		S	S.T(P)	)	\$	S.T.(H	()	OB	C/MC	OBC
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	1	40	11	29	40	03	03	06	01	04	05	00	01	01	04	09	13
M.Sc.	2	40	07	33	40	00	04	04	03	02	05	00	02	02	04	11	15
Botany	3	40	11	29	40	03	03	06	01	04	05	00	01	01	04	09	13
	4	40	07	33	40	00	04	04	03	02	05	00	02	02	04	11	15
M.Sc.	1	10	01	09	10	00	01	01	01	01	02	00	00	00	00	02	02
Microbiolog	2	10	01	09	10	00	02	02	00	01	01	00	01	01	01	01	02
y	3	10	01	09	10	00	01	01	01	01	02	00	00	00	00	02	02
	4	10	01	09	10	00	02	02	00	01	01	00	01	01	01	01	02
M.Phil.		20	05	08	13	00	01	01	00	00	00	00	00	00	03	04	07
Ph.D.	-	-	02	07	09	00	00	00	00	00	00	00	01	01	00	01	01
Others	NA	NA	N A	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

No. of Teacher	No. of st	tudent	No. of Non-teaching staff	
14	100	12		
Teacher/Student Rat	io	Teacher-Non-teaching Staff Ratio		
1:7		1:0.85		

13. Final Examination result during the session 2017-18:

(a) No. Appeared

Subject	A	Total Appear			S.C.			S.T(P	)	S	S.T.(H	)	OF	BC/M(	OBC		fere able	ntly d
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	Т
M.Sc. Botany	08	32	40	00	03	03	02	02	04	0	01	01	04	10	14	1	1	-
M.Sc. Microbiol ogy	01	09	10	00	02	02	00	02	02	-	-	-	01	01	02	-	1	-

(b) No. Passed

Subject	]	Total Passed			S.C.			S.T(P	)	S	S.T.(H	)	OE	BC/M(	OBC		eren bled	•
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.Sc. Botany	08	32	40	00	03	03	02	02	04	0	01	01	04	10	14	-	-	-
M.Sc. Microbiol ogy	01	09	10	00	02	02	00	02	02	-	-	-	01	01	02	-	-	-

14.Details of Ph.D. awarded (1st April 2017- 31st March 2018):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Kangkan Pagag	Studies on macrophytic diversity of	Prof. S. K. Borthakur
	wetlands of Lakhimpur District, Assam	

Sanjeev Kumar	Development of transgenic cowpea for virus resistance through RNA interference (RNAi)	Prof. B. Tanti
Anaru Boro	Floristic study of Udalguri District, Assam	Dr. G.C. Sarma
Shamsun Nahar	Studies on drought induced oxidative stress and response of antioxidant metabolism in some traditional rice varieties of Assam	Prof. B. Tanti
Ranjita Tamuli Talukdar	Systematic study on Aroids of Kamrup District, Assam	Prof. N. Devi
Daimalu Baro	Studies on macrophytic diversity of Baksa District (BTAD), Assam	Prof. S. K. Borthakur

#### 15. Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
01	03	12	04	NA

16. Important students' activities and achievements and awards during the period (Please state briefly): Departmental activity: i)2<sup>nd</sup> prize in drama competition in the varsity week 2017-18

ii) 2<sup>nd</sup> prize in folk dance competition in the varsity week 2017-18

iii) 2<sup>nd</sup> Prize in wall magazine competition in the varsity week 2017-18

Individual Activity: NAME: BIJIT DAS CLASS: M.Sc 4<sup>th</sup> Semester

1. First prize in quiz competition in the varsity week 2017-18

NAME: PARAMITA CHAKRAVORTY

CLASS: M.Sc 4<sup>th</sup> Semester

- 1. Second prize in wall magazine article writing competition in the varsity week 2017-18
- 2. Judges special prize in youth parliament competition in the varsity week 2017-18

NAME: MUNNI BORA CLASS: M.Sc 4<sup>th</sup> Semester

1. 3<sup>rd</sup> prize in wall magazine poem writing competition in varsity week 2017-18

NAME: NABASMITA MALAKAR

CLASS: M.Sc 4th Semester

1. 2<sup>nd</sup> best actress in drama competition in varsity week 2017-18

NAME: TRIDIP BORUAH CLASS: M.Sc 4<sup>th</sup> Semester

1. 2<sup>nd</sup> prize in news writing competition in varsity week 2017-18

NAME: KASTURI TALUKDAR

CLASS: M.Sc 2<sup>nd</sup> semester

- 1. Best team at 20<sup>th</sup> Nanda Talukdar Memorial North East Inter College, University Debate Competition 2017 organised by Pandu College.
- 2. Late Rambahadur Bhattacharya Memorial All Assam Inter Institutional Debate Cpmpetition2018 2<sup>nd</sup> best team.
- 3. All Assam state level debate competition by Socio Cultural Science Society ,Fatashil Ambari, 2018 ,3<sup>rd</sup>
- 4. Gauhati University, Varsity week 2018

2<sup>nd</sup> prize in youth parliament

3<sup>rd</sup> prize in debate 3<sup>rd</sup> prize in elocution 3<sup>rd</sup> best in drama

 $3^{rd}$  best co- actress

Youth festival ,2018

3<sup>RD</sup> prize in elocution

3<sup>rd</sup> best in drama

NAME: PALLAVI SHARMA CLASS: M.Sc 2<sup>nd</sup> semester

- 1. Noonmati Bihu Sanmilan lokgeet competition 2018 3<sup>rd</sup> prize
- Itabhata ,Fatashil Dhirenpara district level singing competition ,2018 Bhupendra sangeet -1<sup>st</sup> prize Bishnu Prasad Rabha sangeet -2<sup>nd</sup> prize
- Jyoti sangeet 2<sup>nd</sup> prize

  3. Varsity week ,2018 Sketch-1<sup>st</sup> prize

NAME: AMLAN ROY
CLASS: M.Sc 2<sup>nd</sup> semester
1. Varsity week,2018 Cartooning -1st prize NAME: RAHUL MALAKAR

- CLASS: M.Sc 3<sup>rd</sup> semester

  1. Letters to the editor competition -1<sup>st</sup> prize

  2. Love letter writing competition -2<sup>nd</sup> prize

  3. Limaric competition 2<sup>nd</sup> prize

#### 17. Seminar/Summer School/Workshop conducted during the period 2017-18: 01

Sl.No.	Name of the	Name of the Seminar/Summer School/	Date	Sponsorship
	Convenors	Workshop/ Refresher Course		
1	Dr. Hemen Deka	Alumni Meet and National Seminar on	25-26 November 2017	NA
	Dr. Niraj Agarwala	"Prospects and Challenges of Plant		
		Science Research in India"		

18. Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18):

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Dr Diganta Narzary	DBT Overseas Research Associateship	DBT, Govt. of India
Dr Hemen Deka	UGC Start-Up Grant	UGC, Govt. of India
	Summer Research Fellowship	Indian National Academy of Sciences
Dr Niraj Agarwala	Early Career Research Award	SERB, DST, Govt. of India
	UGC Start-Up Grant	UGC, Govt. of India

19. Visit abroad by the Faculty members (2017-18): Dr Diganta Narzary still in Japan under DBT-Over Seas Fellowship Programme

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

Name of the Principal	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Investigator				
Prof. Nilakshee Devi	Screening, Biochemical evaluation and Toxicity study of some wild edible Mushrooms of Assam	ASTEC, Govt. of Assam	2years	8.3 lakh
Prof. Partha Pratim Baruah	All India co-ordinated Project Taxonomy on "Assessing phytoplankton diversity in different fresh water habitats of Assam, Tripura and Arunachal Pradesh"	MoEF &CC, Govt. of India	2018-2021	22 Lakhs
Prof. Bhaben Tanti	1.Collection, evaluation documentation and conservation of banana genetic resources of NE region.	DBT, Govt. of India	3Yr (2018-2021)	37.98 lakh
	2. Whitefly( <i>Bemisiatabaci</i> ) in North Eastern India: Diversity, Factors of virus transmission and natural inhibitor	DBT, Govt. of India	3Yr (2018-2021)	42 lakh
Dr. Kumananda Tayung	Exploration of endophytic microorganisms from selected indigenous rice landraces of North-East India and their applications	DBT, Govt. of India	3 years	70 lakhs

	for improvement of growth and yield of traditional rice varieties			
Dr. Diganta Narzary	Meta-genomic and transcriptomic studies on Termitomyces growing fungal combs of termites found in Assam for bioprospection	DBT, Govt. of India	3 Yrs	Total: 1,13,67,000/- for all the three collaborating instructions  GU Share: 68,22,000/-
	Microbial and Biochemical study on traditionally fermented fish food 'Napham' of Assam for Value Addition	DST, Govt. of India	2 Yrs	11,72,940/-
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 Yrs	10 lakh
Dr. Niraj Agarwala	Deciphering miRNA-mRNA modules associated with Darjeeling tea quality	SERB,DST,Govt of India	3 years	43.73 lakhs
	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	10 lakhs
	Harnessing endophytes from wild tea germplasms for developing microbial bioformulation aimed at sustainable organic tea production	Gauhati University	3 years	1.5 lakhs
Dr. Nabanita Bhattacharyya	Investigation on air pollution tolerance index of some plants growing along NH 37, Guwahati	Gauhati University	3 years	1.5 Lakhs

(b) Patent Generated: Nil

Sl No.	Name of the Faculty	Patent Generated	Remarks
NA	NA	NA	NA

21. Academic distinction earned by the students during (2017-18):

Sl.No.	Name of Examination/Programme	Name of the student	Position held
2	M Sc (Microbiology)	Mandira Choudhury	1 <sup>st</sup> Class 1 <sup>st</sup>

# 22. Distinguish visitors to the Department during the period 2017-18:

Name of visitors	Address & Designation	Purpose of visit
Prof. D. K. Hore	Plant Consultant, IASST, Guwahati,	Academic Interaction
	Assam & Former Scientist, NBPGR,	
	Shillong	
Prof. A M Deshmuk	Former Professor, Department of	Academic Interaction
	Microbiology, DR. B R Ambedkar	
	Marathwada University,	
	Augangabad, Maharastra	
Prof. Toshiki Osada	Emeritus Professor, Tokyo	Academic Interaction
	University, Japan	
Dr. Chiskll Vander	Skllesbosch University	Academic Interaction

- 23. Creation /Increase in infrastructural facilities in the Department/Centre during the period 2017-18:
  - Upgradation of tissue culture and plant pathology laboratory
  - Installation of Plant Growth Chamber & central water distillation unit
  - Upgradation of ecology and environmental botany laboratory
- 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 facility are available in the department
- 25. Technology up gradation in the Department/Centre during the period 2016-17: Nil
- 26. Linkages developed with National/International/Academic/Research Bodies:
  - i) University of Naples, Italy
  - ii) Acharya N. G. Ranga Agricultural University (ANGRAU), Tirupati, India
  - iii) Advance center for Plant Virology, IARI, Delhi, India
  - iv) TERRI, School of Advance Studies, New Delhi, India
  - v) East Himalayan Society for Spermatophyte Taxonomy
- 27. Academic activities of Faculty members during the period of report (2017-18):
- 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. S K Borthakur	Nil	Nil
Prof. D K Jha	02	Nil
Prof. P P Baruah	04	02
Prof. N Devi	Nil	Nil
Prof. B Tanti	4	Nil
Prof. K Tayung	04	Nil
Dr. N Nath	01	01
Dr. D Narzary	02	02
Dr. H Deka	02	Nil
Dr. N Agarwala	01	01
Dr. N Bhattacharyya	03	02
Dr. A Gosh	02	02
Mr.J Rabha	02	Nil
Mr. Tridip Phukan	NA	NA

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

#### Prof S K Borthakur

 Resource person at Academic Staff College, Gauhati University in both Refresher and Orientation Programme

#### Prof. P.P. Baruah

• Delivered four lectures in Refreshers Courses as resource persons organized by HRDC-GU

### Prof. N. Devi

• Acted as resource person in College delivered lecture as a part of Annual lecture

#### Prof. Bhaben Tanti

- Acted as a resource person and delivered four lectures in different events.
- Visiting Professor, Department of Botany, USTM, Meghalaya.

### Prof. K Tayung

 Acted as Resource Person at Department of Botany, University of Science & Technology of Meghalaya

## Dr. Diganta Narzary

- Member Secretary, Institutional Ethics Committee, G.U. on Human Research
- Member, Assam Biodiversity Strategy and Action Plan
- Member, Report Drafting Committee, G.U. NAAC Preparation (Criteria VI)
- Member, Environment/Green Audit Committee, G.U.
- Member, IPR Cell, G.U.
- Co-Coordinator, Institutional Biotech Hub, G.U

#### Dr. Hemen Deka

- Invited as a resource person and delivered a Talk on "Vermitechnology in recycling of bio-waste" among the Intern students at Assam State Biodiversity Board on 4<sup>th</sup> September 2017 in connection with the Internship Programme on Biodiversity Conservation.
- Invited as a resource person and delivered a lecture on "Vermicomposting: Theory & Practice" in a refresher training course for Forester-I and Deputy Ranger at Assam Forest School, Jalukbari, Assam on 13<sup>th</sup> December 2017.
- Delivered an Invited Talk on "Recycling of agro-industrial waste biomass by vermicomposting" and Chair the Session on "Textiles Recycling" in the "Fourth International Conference on Reuse and Recycling of Materials (ICRM-2018)" jointly organized by Mahatma Gandhi University, Kottayam, Kerela, India and Wroclaw University of Technology, Wroclaw, Poland on 9-11 March 2018 at Mahatma Gandhi University, Kottayam, Kerela, India.

#### Dr. Niraj Agarwala

- Served as a Resource person at Hands on training programme organized by Advanced level Biotech Hub, DakshinKamrup College, Mirza held on 22-24 september, 2019 on the topic "Advanced Tools and techniques of Bioinformatics and Biological Sciences".
- Served as a Resource person at workshop on Basic Molecular Biology and Biotechnology held at RangiaCollege on 30<sup>th</sup> October to 1<sup>st</sup> November,2017 organized by Institutional Biotech Hub,Rangia College

#### Dr. Arabinda Gosh

- Presented a talk on "Bioinformatics: Basics and application" as a resource person in a seven days work shop "Prospecting traditional and herbal therapy to modern drug delivery" organized by institutional biotech hub (IBH-GU), department of biotechnology and Guwahati biotech park, 22-28 May, 2017
- c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
Prof. S K Borthakur		-
Prof. P P Baruah	-	
Dr Hemen Deka	01	
Dr Niraj Agarwala	01	

d) Details of	of paper published in the Referred journals during the period:	
Name of	Title of the paper	Name of the journal
the faculty		with Vol. No. & Date
Prof. S K	1. Contributions of plant taxonomy, herbarium and field germplasm bank to	Current Science,
Borthakur	conservation of threatened plants: case studies from the Himalayas and Eastern and Western Ghats.	114(3): 512.
	2. Smilax sailenii (Smilacaceae) - a new species from Assam, North East India.	Taiwania, 63(1): 32.
	3. Habitat distribution modelling for improving conservation status of <i>Brucea mollis</i> Wall. ex Kurz.–An endangered potential medicinal plant of Northeast India.	Journal for Nature Conservation, 43: 104.
	4. Habitat mapping, population size and preventing extinction through improving the conservation status of <i>Calamus nambariensis</i> Becc an endemic and threatened cane of Assam, India,	Acta Ecologica Sinica DOI:10.1016/j.chnaes.2 018.03.005
	5. Habitat distribution modelling and reinforcement of <i>Elaeocarpus</i> serratus L A threatened tree species of Assam, India for improvement of its conservation status.	Acta Ecologica Sinica https://doi.org/10.1016/j .chnaes.2018.06.002
	6. Lectotypification of <i>Calamus nambariensis</i> Becc. (Arecaceae)	Nordic Journal of Botany, https://doi.org/10.1111/ njb.01953
	7. Contribution to Biodiversity Hotspot: Assessment of Forest Types, Floristic Composition and Economic wealth of Nokrek Biosphere Reserve in Northeast India.	Indian Forester, 144(8):734-741

Prof. D K Jha	1. Antimicrobial Activity of Endophytic Fungi from Leaves and Barks of <i>Litsea cubeba</i> Pers., a Traditionally Important Medicinal Plant of North East India.	Jordan Journal of Biological Sciences 11(1):73-79
	2. Tea root brown rot fungus disease reduction and yield recovery with rhizobacteria inoculation in both nursery and field trials.	Rhizosphere <b>6:</b> 89-97
Prof. P P Baruah	Biomass accumulation and carbon sequestration in Perseabombycina plantation in Assam, India	International Journal of Environmental Biology. 7: (1): 16 - 21. 2017
Prof. N Devi	1.Studies on foliar micro-morphology and pollen morphology of some members of Solanaceae from the Jalukbari area of Guwahati in Assam, India	Pleione 11(1): 125 - 136.
	2. Calystegia hederacea Wall. (Convolvulaceae): new report of occurrence in Assam (India)	Pleione 11(1): 163 - 166. 2017.
Prof. B Tanti	1. Cytotoxic effect of naphthalene on root meristem of Allium cepa L.	Annals of Plant Sciences 6 (2), 1579-1584
	2. Assessment of few unexplored RET plant wealth of Assam, India	Journal of Advanced Plant Sciences 9 (2), 10-15.
	3. In vitro regeneration of plantlets from nodal explants of Aristolochiasaccata and Aristolochiacathcartii	European Journal of Biological Research 7 (3), 191-201
	4. Analysis of genetic diversity of certain species of Aristolochia using ISSR-based molecular markers	Current Life Sciences, 3 (4), 47-53
	5. Freshwater Diatoms from DeeporBeel - A Ramsar Site of Assam, India Revealed Potential Photoluminescence Properties for Nanotechnological Applications	Research & Reviews: Journal of Material Sciences 5 (6), 17-22
	6. Preventing extinction and improving conservation status of Vanilla borneensis Rolfe - A rare, endemic and threatened orchid of Assam, India	Journal of Nature Conservation, 37:39-46 (Elsevier)
	7. Effect of Paper Mill Effluents on Some Traditional Rice Cultivars of Assam	International Journal of Multidisciplinary Approach and Studies 4 (3):88-96
	8. Phylogenetic Analysis and Homology Modelling of Betaine Aldehyde Dehydrogenase - An Aroma Producing Protein in Rice (Oryza sativa L.)	International Journal of Multidisciplinary Approach and Studies 4 (3): 139-148.
	9. Phytochemical Analysis and Antioxidant Activities of Garcinia morellaDesr.	International Journal of Multidisciplinary Approach and Studies 4 (4): 31-37.
	10 Effect of 2.4 D on callus induction at nodel and intermedal avalants of	Bioscience Discovery 8 (3): 369-374
	10. Effect of 2, 4-D on callus induction at nodal and internodal explants of Bruceamollis Wall. ex Kurz- an endangered plant of Northeast India	Biocatalysis and Agricultural Biotechnology 11:183- 191. (Elsevier)
	11. Molecular characterization and infectivity of Mungbean Yellow Mosaic India virus associated with yellow mosaic disease of cowpea and mungbean	International Journal of Multidisciplinary

- 12. Cytotoxic Effect of Malathion and Furadan On Allium Cepa L. and Growth Parameters of Oryza Sativa L.
- 13. RNAi-derived transgenic resistance to Mungbean yellow mosaic India virus in cowpea.
- 14. Distribution and population dynamics of Calamus nambariensis Becc.-An endemic and threatened cane of Assam
- 15. Study of morphological diversity of traditional aromatic rice landraces (Oryza sativa L.) collected from Assam, India
- 16. Characterization of  $\beta$ -galactosidase from yeast associated with starter cultures used in household alcohol production in Northeast India
- 17. Phytochemical screening and antioxidant activity of Elaeocarpus serratus L. of Assam
- 18. In vitro callus induction and indirect organogenesis of BruceamollisWall.exKurz A potential medicinal plant of Northeast India
- 19. Lectotypification of Calamus nambariensis Becc. (Arecaceae)
- 20. Habitat mapping, population size and preventing extinction through improving the conservation status of Calamus nambariensis Becc.-an endemic and threatened cane of Assam, India
- 21. Phytochemical screening and antioxidant activity of leaf extract of PhlogacanthusthyrsiflorusNees. a medicinal plant of Assam, India.
- 22. Cytotoxic effect of acridine orange and ethidium bromide on Allium cepa L. and Oryza sativa L.
- 23. Regeneration of Plantlets from Rhizome Bud Explants of Lasiaspinosa (Lour.) Thwaites- A Medicinal Plants of Assam
- 24. Habitat distribution modelling and reinforcement of Elaeocarpus serratus L. A threatened tree species of Assam, India for improvement of its conservation status
- 25. Habitat distribution modelling for improving conservation status of Bruceamollis Wall. ex Kurz.—An endangered potential medicinal plant of Northeast India
- 26. Screening of drought tolerant rice through morpho-physiological and biochemical approaches
- 27. Arsenic stress responses and tolerance in rice: physiological, cellular and molecular approaches
- 28. Antioxidant Protection Mechanisms Reveal Significant Response in Drought-Induced Oxidative Stress in Some Traditional Rice of Assam, India

Approach and Studies 4 (4):60-75 PLoS ONE 12 (10), e0186786. https://doi.org/10.1371/journ

Annals of Plant Sciences 6 (12):1829-1834

Annals of Plant Sciences 6 (12):1855-1861

Indian Journal of Biotechnology 16 (1): 100-105.

Journal of Pharmacognosy and Phytochemistry 6 (4): 866-869.

South African Journal of Botany 119: 203-211.(Elsevier)

Nordic Journal of Botany (Wiley)

ActaEcologicaSinica, https://doi.org/10.1016/j .chnaes.2018.03 (Elsevier)

Bioscience Discovery 9 (2):237-243

Bioscience Discovery 9 (2): 251-259.

Int. J. Life. Sci. Scienti. Res 4 (3):1736-1743.

ActaEcologicaSinica, https://doi.org/10.1016/j .chnaes.2018.06 (Elsevier)

Journal for Nature Conservation 43: 104-110(Elsevier).

Biocatalysis and Agricultural Biotechnology 15:150-159(Elsevier).

Rice Science 25 (5): 235–249 (Elsevier)

Rice Science 25 (5):185–196 (Elsevier)

Dr. K Tayung	1. Molecular Characterization and Antimicrobial Activity of an Endolichenic Fungus, <i>Aspergillus</i> sp. Isolated from <i>Parmeliacaperata</i> of Similipal Biosphere Reserve, India,	Springer.InterdiscipSci Comput Life Sci, DOI 10.1007/s12539-016- 0146-y
	2. Biocontrol potentials of some plant and spice extracts against fungi contaminating post harvested stored grains.	International Journal of Advance Research. 5(10): 575-580
	3. Fungi Associated with Contaminated Stored Grains and their Biological Control using <i>Zanthoxylumrhetsa</i> Essential Oil.	International Journal of Advances in Agricultural Science and Technology. 4 (11): 10-26
	4. Antifungal activity of <i>cymbopogonnardus</i> essential oil against some fungi contaminating cereals and pulses.	Research Journal of Life sciences, Bioinformatics, Pharmaceuticals and Chemical sciences. 3(4): 26-34
	5. Antimicrobial potentials of spore culture of <i>Geastrums</i> p., a rare wild edible mushroom of Similipal Biosphere reserve, Odisha, India against some significant human pathogens.	International Journal of Advance Research. 5(9): 1508-1516
Dr. D. Narzary	Diversity study on endophytic fungi associated with <i>Oroxylum indicum</i> and their interactions with some phytopathogens	Botanical Journal of Assam 9(2): 27-41
Dr. H Deka	I. Isolation of polycyclic aromatic hydrocarbons (PAHs)degrading fungal candidate from oil contaminated soil and degradation potentiality study on anthracene	Polycyclic Aromatic Compounds, 37 (2-3): 141-147, 2017Taylor and Francis.(Impact Factor 1.569)
	2. Biodegradation of Benzo(a)anthracene Employing <i>Paenibacillus</i> sp. HD1PAH: A Novel Strain Isolated from Crude Oil Contaminated Soil	Polycyclic Aromatic Compounds, 37 (2-3): 161-169, 2017 Taylor and Francis.(Impact Factor 1.569)
Dr. N Agarwala	1. Transgenic Tea Over-expressing <i>Solanumtuberosum</i> Endo-1,3-beta-d-glucanase Gene Conferred Resistance Against Blister Blight Disease	Plant Molecular Biology Reporter.2018. https://doi.org/10.1007/ s11105-017-1063-x
	<ol> <li>A Proteomic Approach to Evaluate the Effects of Endogenous Expression of Cryptogein Gene in Crypt-Transgenic Plants of <i>Bacopamonnieri</i>.</li> <li>Draft genome sequence of a Polymyxin B resistant ST195 clinical isolate of <i>Acinetobacterbaumannii</i> from India</li> </ol>	Journal of Applied Biotechnology & Bioengineering.2017.4( 3)
	of Active to Ductier of duminimum in Tribin India	GenomeAnnouncement, 2018 6:e00031-18
Dr. Nabanita Bhattacha ryya	Biochemical Composition and Isoenzymes of Enzyme Peroxidase of Houttuynia cordata Thunb. from Brahmaputra Valley of Assam, India	International Journal of Bio-resource and Stress Management, 8(3): 375- 381.
Dr. Arabinda Ghosh	OMP36 mediated meropenem resistance in clinical isolates of Klebsiella pneumonia.	International Journal of Current Advanced Research. (2018), DOI: 10.24327/ijcar.2018.91 91.1508.
	2. In-vitro antimicrobial screening of plant extracts of Anthocephalus cadamba (Roxb.).	Journal of Advanced Plant Sciences. 9(2), 41-44. (2017)
	3. Isolation and biochemical characterization of thermophilic bacteria from	Journal of Advanced

the hotspring of Garampani wildlife sanctuary, Assam, India.	Plant Sciences. 9(1), 13-18. (2017)
4. Clinical analysis of poly herbal compounds in the management of tamaka swasa (bronchial asthma)-An Insilico approach of Vasaka (Adhatoda vasica Nees).	International Journal of Recent Scientific Research. 8(12), 22146- 22152. (2017)

- e) Paper published in other journals during the period (only those considered for API Score). NA
- f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications
Prof. S. K. Borthakur	Advances in Botanical Research in N.E. India. EBH Publishers     (India), Guwahati	2018 (ISBN 978-93-86302-52-6).
	2. Bamboos of North-East India. EBH Publishers (India), Guwahati	2018 (ISBN 9789383252176)
	3. Flora of BTAD [Vols. 1-4.] EBH Publishers (India), Guwahati	2018 (ISBN978-93-86302-57-1)
Prof. Bhaben Tanti	Fermented foods andbeverages     Advances in BOTANICAL  PESEA DOLLE IN North Foot In diagram.	August,2017
Dr. Namita Nath	RESEARCHE IN North East India  A Text Book for B' Sc. Botany 3 <sup>rd</sup>	March, 2018 2017
Dr. Namita Nath	semester	2017
	A Text Book for B' Sc. 5 <sup>th</sup> semester Botany	2017
	A Text Book for B' Sc. 2 <sup>nd</sup> Semester Botany	2018
	A Text Book for B' Sc. 4 <sup>th</sup> Semester Botany semester	2018
	A Text Book for B' Sc.1st Semester Botany	2018
	Advances of Botanical Research in North East India (Edited Book)	2018
Dr. Arabinda Ghosh	1.Manno-oligosaccharide from coprameal as prebiotic and anticancer agent	2017 . Lambert Academic Publishing, GmBH, Germany (ISBN 978-3-330-03979-7)
	2. Insilico analysis of xylanses from thermophilic bacteria.	2017, Lambert Academic Publishing, GmBH, Germany (ISBN: 978-3-330- 08294-6)

- 26. Placement record during the period (Please state briefly):
  - Recruited as Assistant Professor (Botany) in various colleges of Assam = 12
  - Placement in industry = 2 (one is in food industry and other in cosmetic industry
  - Others (recruited as TET teacher) = 8
  - Temporary placement (JRF/SRF and other project fellowship) = 7
- 27. Placement services provided to students by the Department/Centre, if any: NA
- 30. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report. NA

#### 31. Departmental Library:

a)	No. of Books as on 31.03.2018	916
b)	New Books procured during the period	17 Nos.
c)	No. of Journals as on 31.03.2018	
d)	New Journals procured during the period	
e)	No. of users during the period :	250

- 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: Distributation of plant saplings during 5<sup>th</sup> June on the occasion of World Environment Day
- 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 it exist and done during M Sc 4<sup>th</sup> semester examination in Botany and Microbiology. Based on feedback there was minor modification in the
- 38. Information on up to five Good Practices followed by the Department/Centre:
- i) Exposure trips to Botanical Survey of India Experimental Garden as well as to reserve forest and national Parks
- ii) Organizing academic interaction with reputed scientist/professors
- iii) Remedial Class
- iv) Vermicomposting for management of leaf litters and other biowaste
- 39. Detail the plans of the Department/Centre/Institute for the next year:
  - Departmental Conference Room
  - Departmental Museum
  - Installation of Atomic Absorption Spectrophotometer
  - Renovation of M Sc Class Room

Head, Dept. of Botany

# ANNUAL REPORT: DEPARTMENT OF CHEMISTRY GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017 TO MARCH 2018)

2. **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/Assoc iate Prof./Asst. Professor)	Full Time/ Contractual	Sex (Male/ Female)	Caste (Gen/ SC/ ST/OBC /DA	Citation index
15.	Prof. B. C. Goswami	Professor	Full time	M	Gen	212
16	Prof. D. C. Deka	Professor	Full time	M	Gen	626
17.	Prof. B. K. Das	Professor	Full time	M	Gen	822
18	Prof. D. K. Kakati	Professor	Full time	M	Gen	259
19	Prof. C. Medhi	Professor	Full time	F	Gen	526
20	Prof. A. K. Talukdar	Professor	Full time	M	Gen	380
21.	Prof. P. Phukan	Professor	Full time	M	Gen	2126
22.	Prof. D. K. Das	Professor	Full time	M	Gen	382
23.	Dr. R. J. Sarma	Associate Professor	Full time	M	Gen	984
24.	Dr. S. K. Gogoi	Assistant Professor	Full time	M	OBC	708
25.	Dr. D. Mahanta	Assistant Professor	Full time	M	Gen	694
26.	Dr. S. Brahma	Assistant Professor	Full time	M	ST (P)	244
27.	Dr. R. Thakuria	Assistant Professor	Full time	M	Gen	702

28	Dr. D.J. Kalita	Assistant	Full time	M	Gen	52
20	Di. D.J. Kuntu		1 dir time	171	Gen	32
		Professor				
29.	Dr. T. K.Goswami	Assistant	Full time	M	Gen	407
		Professor				
30	Dr. N. Nath	Assistant	Full Time	M	OBC	156
		Professor				
31	Dr. S. Ghosh	UGC-Assistant	Full Time	M	Gen	447
		Professor				
32.	Dr. B. Banik	DST-INSPIRE	DST-INSPIRE	M	SC	332
		Faculty	Faculty			

- 4. Course(s)/Program offered: M.Sc., PGDAC, Ph.D.
- 5. Special Branches in the Department/Centre : Organic Chemistry, Inorganic Chemistry,

Physical Chemistry, Materials Chemistry.

- 6. New Academic Program initiated during the period under report: NIL
- 7. Innovation in Curricular design: Choice Base Credit System (CBCS) adopted, introduction of new special papers on Materials Chemistry, Supramolecular Chemistry, Food and Nutrition Chemistry, Green Chemistry, Modern Methods of Analysis, Surface Chemistry and Analysis, Nanoscience and Nanotechnology, X ray Crystallography etc.
- 8. Inter disciplinary Program started: NIL
- 9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST.

10. Total number of Research Scholar working at present:

a) Full Time:	b) Part time:
77	0

11. Enrolment of Students in various courses (April 2017- March 2018):

Courses	Sem	Intake Capacity		No. mitted	ì		S.C.			<b>S.T.</b> (1	P)	S.	Т.(Н	)	OB	C/MO	ВС
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	1 <sup>st</sup>																
	2 <sup>nd</sup>	46	24	22	46	0	4	4	2	3	5	1	0	1	8	5	13
Post-	$3^{\rm rd}$																
Graduate	4 <sup>th</sup>	46	46	30	16	0	3	3	2	3	5	0	1	1	5	6	11
M.Phil.		NA															
Ph.D.		NA	26	51	77	1	0	1	3	2	5	0	0	0	4	9	13
Others (PGDAC)	1 <sup>st</sup>	15	6	5	11	1	1	2	1	0	1	0	1	1	3	2	5

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

No. of Teacher	No. of students	No. of non-teaching staff				
18	112	16				
Teacher/Student Rat	io Teacher-Nor	Teacher-Non-teaching Staff Ratio				
6.22		1.13				

#### 13. Final Examination result during the session (2017-18):

(a) No. Appeared: .....43.....

Subject			S.C.			S.T(	P)		\$	S.T.(	H)	OB	C/M	OBC	
	M	ppeare F	d T	M	F	Т	M	F	Т	M	F	T	M	F	T
Chemistry	13	30	43	0	3	3	0	3	3	0	1	1	3	6	9

(b) No Passed: 41

(b) No. 1	asseu: .	41.													
Subject	Subject Total			S.C.		<b>S.T(P)</b>		S.T.(H)		OBC/MOBC					
		Passe	d												
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Chemistry	12	29	41	0	3	3	0	3	3	nil	nil	nil	3	6	9

14. Details of Ph.D. awarded (2017-18)

17. Details of Fil.D. awarde	14. Details of 1 i.D. awarded (2017-10)							
Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide						
Biswajit Sarma	Studies on antidiabetic activity of a few medicinal plants.	Prof. B. C. Goswami						
Mostafa Momin	Physicochemical properties of petro- and bio-diesel mixs and evaluation of their performance	Prof. D. C. Deka						

C 1 I I' II I'	D 1 4 C 4 1 C 4 1 C	Prof. D. C. Deka
Subarna Jyoti Kalita	Development of green protocols for the synthesis of some pyrimidine and pyrazole based heterocycles	Prof. D. C. Deka
Pranami Handique	Traditional alcoholic beverages prepared by ethnic communities in Sivasagar district of Assam: study on methodology and composition	Prof. D. C. Deka
Monsumi Gogoi	Synthesis and X-ray Crystallographic Studies of Cobalt, Manganese and Manganese-Cobalt Complexes	Dr. B. K.Das
Sourav Jyoti Bharali	Studies on the synthetic use and catalytic applications of transition metal carboxylate complexes	
Chayanika Deka	Studies on chitosan based carrier vehicles for delivery of drugs.	Prof. D.K. Kakati
Jitendra Deka	Synthesis, Characterization and anticancer property of some Ruthenium Complexes	Prof. C. Medhi
Mithun Nandi	Synthesis, characterization and catalytic performance of ceria, zirconia, vanadia and mixed oxides supported on hierarchical MFI zeolite	Prof. A. K. Talukdar
Progyashree Goswami	Synthesis of Chalcones and Some Other Heterocycles as Bioactive Target	Prof. P. Phukan
Kaustav Mani Deka	A Theoretical Study on Some Aspects of Reactivity, Reaction Mechanism and Supra-Molecular Effects of Selected Organic Compounds	Prof. P. Phukan
Manash Jyoti Sarma	Development of new methodologies towards Carbon- Heteroatom bond forming reactions	Prof. P. Phukan
Nabajyoti Hazarika	Development of synthetic methodologies using Tandem three component reactions	Prof. P. Phukan (Jointly with Dr. Gakul Baishya, CSIR-NEIST, Jorhat)
Probhali Doley	Isolation and Characterization of Antimicrobial Agent Producing Endophytes from Some Endemic Medicinal Plants of Assam	P. Phukan (Co-guide) Guide: Prof. D. K. Jha, Botany Deptt.
Partha P Biswas	Synthesis and characterization of complexes of Vanadium, Copper, Zinc and Ruthenium with Schiff base	Prof. D. K. Das
Manash Jyoti Goswami	Synthesis, Characterization, Electrochemical Investigations and Bromoperoxidase activity of a few Vanadium peroxo complexes	Prof. D. K. Das
Dhanada Sarmah	Electrochemical study of few active centre analogues of [Fe <sub>2</sub> S <sub>2</sub> ] and [VFe <sub>3</sub> S <sub>4</sub> ] type ferredoxins in charged solutions and film	Prof. D. K. Das
Jutika Kumar	New ferrocene linked fluorophores: Dual (Fluorescent /Electrochemical) sensor for a few heavy metal ions	Prof. D. K. Das

15. Number of students qualified in:

15.	Trumber of state	icinis qualifica iii.			
	NET(JRF)	NET	SLET	GATE	Any others
	03	05	03	08	

- 16. Important students' activities and achievements and awards during the period (Please state briefly):
  - Mr. Debashish Mishra, PhD student under Prof. P. Phukan received Best Poster Award in seminar "Emerging Trends in Chemical Sciences" held on 29<sup>th</sup> January, 2018 at the department of Chemistry, Gauhati Univeristy.
  - ii) Many of the PhD students from the department did oral and poster presentation in different conferences held in different institutions of India.
  - iii) Five PhD students attended the Training Cum Orientation programme conducted by IICT Hyderabad.
  - iv) Four MSc Students did summer internship in the laboratories of Academy Fellows working at institutions of national importance.

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

Name of the	Name of the Seminar/Summer School/	Date	Sponsorship						
Coordinator	Workshop/ Refresher Course								
Prof. B. K. Das	Short Term Course on Research	20-25 November, 2017	UGC-HRDC,						
	Methodology		Gauhati University						
Prof. D. K. Kakati	Emerging Trends in Chemical	29 January 2018							
	Sciences (ETCS-2018) Department of								
	Chemistry, Gauhati University								

<sup>18.</sup> Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18):

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Prof. D. C. Deka	Leading Educationist Award 2018 (March	Friendship Forum of India, New
	2018)	Delhi
Prof. P. Phukan	Fellow of the Royal Society of Chemistry (FRSC), UK (2017)	Royal Society of Chemistry, UK
Prof. P. Phukan	Joint Secretary, Chemical Research Society of India	Chemical Research Society of India
Prof. P. Phukan	Member, Executive Committee, Indian Society	Indian Society for Surface Science
	for Surface Science and Technology	and Technology
Dr. R. Thakuria	Invited as Guest editor for a special issue in	ACS publication
	Crystal Growth & Design	
Dr. R. Thakuria	Considered among top 3 referee of Crystal	ACS publication
	Growth & Design	
Dr. D. Mahanta	Visiting Fellowship JNCASR (2017-2018)	JNCASR

19. Visit abroad by the Faculty members (2017-18):

Name of the Faculty	Institute visited	Purpose	Period
Prof. B. K. Das	University of	To present a paper in Fourth	July, 2017
	Copenhagen, Denmark	EuCheMS Inorganic	
		Chemistry Conference	
Dr. S. Ghosh	King's College London	Presentation on joint project	From 6-07-2018 upto 19-
		from Newton Alumni Funding	07-2018

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

Name of the Principal	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Investigator Prof. C. Medhi	Helping the Socio-Economically backward SC/ST communities to get potable water	Shakya, University of Cambridge	1 year	550 pounds
Prof. A. K. Talukdar (co-investigator)	Bioactivity guided fractionation of <i>Dillenia indica</i> Linn. and <i>Murraya koeningi</i> i leaf extract for antidiabetic potency	Ministry of Health & Family Welfare	3 years	18 L
Prof. P. Phukan	Activation and Functionalization of Organic Molecules using Sulphonamide Based Reagents	SERB	3 years	49.8 lakhs
Prof. D. K. Das	Fluorescent self assembled monolayers on quartz glass substrates: Sensing metal ions and small biomolecules	DST-SERB	2017-2020	36.4 lakhs
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 Materials- Conducting Polymer Composites for Electrochemical Supercapacitors	SERB	2018-2021	38 L
Dr. S. Brahma	Asymmetric Hydrogenation of Various Pro-Chiral Organic Substrates by Catalyst Metal Nanoparticle Encaptulated in Chiral Metal Organic Framework MNP@CMOFs	DST-SERB	3 years	27.06 lakhs
Dr. D. Kalita	Molecular engineering, hoping transport and tuning of electronic properties of conjugated organic semiconductors based on donor-acceptor approach for potential applications in optoelectronics.	Gauhati University	N/A	1.5 lakhs
Dr. T. K. Goswami	Targeted Organometallic Compounds for Photodynamic Destruction of Cancer	DST	5 years	35 lakhs

	Photoinduced Anticancer Activities of Targeted Ferrocene-conjugated 3d Metal Complexes	UGC	2 years	10 lakhs
Dr. S. Ghosh	Designing Suitable Host Molecules as Enzyme Mimics for Supramolecular Catalysis	UGC Start-up grant	2 years	6 lakhs
	Synthesis of Polycarbonates from the Greenhouse Gas CO <sub>2</sub> by Supramolecular Catalysts Designed via Co-ordination Driven Selfassembly.	DST-SERB	3 years	30.06 lakh
Dr. N. Nath	Pure Shift NMR Methods for the Enantiodiscrimination in Chiral Anisotropic Media	UGC-BSR Start- Up-Grant)	2017-2019	10 lakhs
Dr. B. Banik	Stimuli-responsive nano-constructs for targeted delivery and site- selective release and activation of combination drugs	Department of Science and Technology (DST), India	Oct 2017 to Oct 2022	35 lakhs

#### (b) Patent Generated (2017-2018):

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

21. Academic distinction earned by the students during (2017-18):

Sl.No.	Name of Examination/Program	Name of the student	Position held
1.	Post-Doctoral Fellowship in China	Dr. Subarna Jyoti Kalita	Post-Doctoral Fellow in Wuhan University of
		(PhD Student of Prof. Prof.	Technology, Wuhan
		Dibakar Chandra Deka)	430070, China.

22. Distinguish visitors to the Department during the period (2017-18):

Name of visitors	Address & Designation	Purpose of visit
Prof. C. Greisinger	Max Planck Institute for Biophysical	Academics, Invited Lecture in R.
	Chemistry	K. Baruah Memorial Lecture
Prof. A. R. Chakravarty	Dept. of Inorganic and Physical	Visiting professor, Department of
	Chemistry, IISc Bangalore	Chemistry Gauhati University
Prof. V. Chandrashekar	Director, TIFR	To deliver P. K. Sarma memorial
	Hydera	lecture on the occasion of prize
	bad	distribution ceremony of State
		Chemistry Olympiad, Assam.
Prof. R. N. Prasad	President, Indian Chemical Society,	Lecture cum interaction program
	Dean of School of sciences JECRC	with students organized by Society
	University, Ex Professor, Rajasthan	for Chemical Education, Assam
	University	and Dept. of Chemistry, GU.

- 28. Creation /Increase in infrastructural facilities in the Department/Centre during the period 2017-18:
  - (a) Procured Hitachi make UV/Vis spectrophotometer (5 lakhs) from RUSA fund.
  - (b) Procured Hitachi make Fluorescence spectrometer (12 lakhs) from RUSA fund.
- 29. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre computer:
  - Department has a facility with twenty computers for general and internet uses by the students and teachers.
  - ii) Work station for computational works for research students.
- 30. Technology up gradation in the Department/Centre during the period 2017-18:
  - The department has set up a Computation facility for the students which can be used by students for their research requirement.
  - ii) The classrooms are made ICT compatible.
- 31. Linkages developed with National/International/Academic/Research Bodies: Collaborative research by faculty members has been initiated with NEIST Jorhat, IASST Boragaon, Kings' College London, VIT-Vellore, and IISc Bangalore.
- 32. Academic activities of Faculty members during the period of report (2016-17):
- a) Seminar/Conferences/ Workshops attended/presented paper by the faculty during the period :

Name of the faculty(s)	No. of Seminars	No. of Workshops
Prof. B. K. Das	4 (1 National, 3 International)	
Prof. D. K. Kakati	01	01
Prof. D. C. Deka	05	01
Prof. A. K. Talukdar	01	01
Dr. R. J. Sarma	01	01
Dr. S. K. Gogoi	01	Nil
Dr. R. Thakuria	02	Nil
Dr. T. K. Goswami	02	Nil
Dr. S. Ghosh	01	Nil
Dr. N. Nath	01	01

- b) Name of the teacher(s) acted as resource person(s) during the period (state briefly)
  - 1. Prof. D. C. Deka as Visiting Professor to Handique Girls' College, Guwahati.
  - 2. Prof. D. C. Deka Preparation of trilingual glossary for science and technology terminology by the Commission for Science & Technology Terminology, New Delhi.
  - **3. Prof. B. K. Das as a resource person** invited to speak on Curriculum Designing and Content Development on 16-02-2018 at Orientation Programme at GU-HRDC.
  - **4. Prof. B. K. Das as a resource person** invited to speak on Curriculum Designing and Content Development: brief guidelines on 07-12-2017 at Orientation Programme at GU-HRDC.
  - 5. Prof. B. K. Das as a resource person invited to speak at Refresher Course on Emerging Trends in Science & Technology (October-November, 2017) 'Emerging Trends in S&T'.
  - **6. Prof. B. K. Das as a resource person** invited to speak on 'Methods of Research' at Short Term Course on Research Methodology held on 25 November, 2017
  - Prof. B. K. Das as a resource person invited to speak on 'Schemes for Research Funding' at Refresher Course held on 1 April 2017.
  - 8. Prof. A. K. Talukdar as Resource person in Refreshers Course conducted by HRD Centre GU.
  - 9. Prof. D. K. Kakati as Resource person in Orientation cum Workshop For Laboratory staff conducted by Advance Level Institutional Biotech Hub, Department of Biotechnology/ Gauhati University.
  - Prof. D. K. Kakati chaired a session in the National Seminar on Harmony with Nature in context of Chemistry and Environment Issues and Challenges, September 11-12, 2017, in Pub-Kamrup College, Assam
  - 11. Prof. A. K. Talukdar as Resource person in Orientation cum Workshop For Laboratory staff conducted by Advance Level Institutional Biotech Hub, Department of Biotechnology/ Gauhati University.
  - 12. Prof. A. K. Talukdar chaired a session in the National Seminar on Harmony with Nature in context of Chemistry and Environment Issues and Challenges, September 11-12, 2017, in Pub-Kamrup College, Assam
  - 13. Dr. R. Thakuria worked as a Jt. Convener and delivered an invited talk in Emerging Trends in Chemical Sciences (ETCS-2018) organized by Department of Chemistry, Gauhati University, January 29, 2018.
  - 14. Dr. R. Thakuria delivered an Invited talk in a conference on mechanical properties of molecular crystals organized by Indian Academy of Science, Bangalore, November 26-30, 2017 at Coorg, India.

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

Name of the faculty	Refresher Course	Orientation Course
Dr R. Thakuria		<b>01</b> [OP-114 (UGC-HRDC, GU)]
Dr T. Kumar Goswami		<b>01</b> [OP-114 (UGC-HRDC, GU)]

d) Details of paper published in the Referred journals during the period (2017-18):

Name of the	Title of the paper	Name of the journal with
faculty		Vol. No. & Date
Prof. D. C. Deka	A molecular hybridization approach for simple and	ChemistrySelect 2018, 3,
	expeditious synthesis of novel spiro[oxindoline-3,4'-	7862-7866.
	isoxazolo[5,4-b]pyrazolo[4,3-e]pyridines] in water	
	Occurrence of estrogenic heavy metals in three major	International journal of basic
	fresh water bodies of Guwahati city, Assam, India	and applied research, 2018,
	·	8, 839-49.
	Antioxidant-activity and physico-chemical indices of	Journal of the ASBC 2018,
	the rice beer used by the <i>Bodo</i> community in North-East	<i>76</i> , 112-116.
	India	
	A quick micelle catalyzed one-pot synthesis of	ChemistrySelect 2018, 3,
	spiro[indoline-3,4'-pyrano[2,3-c]pyrazoles] in water at	1512-1516.
	room temperature	
	2-Phenyl-2,3-dihydrobenzo[d]thiazole: A Mild,	Synlett <b>2018</b> , 29, 477-482.
	Efficient, and Highly Active in situ Generated	
	Chemoselective Reducing Agent for the One-Pot	

	Synthesis of 5-Monoalkylbarbiturates in Water	
	A Quick, Simple and Clean Synthesis of Spiro[indoline-	ChemistrySelect 2017, 2,
	3,4'-pyrazolo[4',3':5,6]pyrido[2,3-d]pyrimidines] in Water through a Novel One-pot Multicomponent	5701 – 5706.
	Reaction	
	L-Proline-Catalysed One-Pot Regio- and Diastereoselective Synthesis of Spiro[2,3-d]pyrimidin-	SynOpen <b>2017</b> , <i>I</i> , 45-49.
	2-amines-6,5'-pyrimidines] in Water	
	An Expeditious Synthesis of 2,3-dihydroquinazolin-4(1H)-ones in Aqueous Medium Using Thiamine Hydrochloride (VB1) as a Mild, Efficient and Reusable Organocatalyst	Synthetic Communications <b>2017</b> , 47, 1601–1609.
	Evaluation of Anticancer and Antimicrobial Activity of Arborinine from <i>Glycosmis pentaphylla</i>	Journal of Biologically Active Products from Nature, <b>2017</b> , 7, 131-139.
	Single crystal X-ray diffraction in structure elucidation of arborinine from <i>Glycosmis pentaphylla</i>	The Natural Products Journal, 2017, 7, 1-7.
	Metal profile of traditional alcoholic beverages prepared by the ethnic communities of Assam, India	Journal of the Institute of Brewing 2017, 123, 289-295.
	A new, convenient and expeditious synthesis of 4-alkyl-5-methyl-1 <i>H</i> -pyrazol-3-ols in water through a multicomponent reaction	Tetrahedron Letters, <b>2017</b> , 58, 566-569.
	Synthesis of β-aminocarbonyl and β-aminonitrile compounds catalyzed by water extract of <i>Musa balbisiana</i> (Colla) <i>via</i> aza-Michael reaction	Asian Journal of Organic & Medicinal Chemistry <b>2017</b> , 2, 138-142.
Prof. B. K. Das	Dimeric copper(II) carboxylates as catalysts in the	Polyhedron 2018, 155, 351-
	selective epoxidation of styrene.	358.
	Oxidation of DPM Catalyzed 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.
	Study of distorted octahedral structure in 3d transition metal complexes using XAFS.	Chemical Physics Letters 2018, 692, 382-387.
	Photocatalytic Degradation of Organic Dyes by Nanostructured Cobalt Oxides under UV-light.	Chemical Science Transactions 2018, 7, 112- 118.
	Controlled synth. of $\alpha$ - and $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> nanoparticles via thermolysis of PVA gels and studies on $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> catal. styrene epoxidation.	Journal of Saudi Chemical Society 2017, 21, S170-S178.
Prof. D. K. Kakati	Investigation of pH sensitive swelling and curcumin release behavior of Chitglc-hydrogel	Journal of Polymer and Environment <b>2018</b> . doi/10.1007/s10924-018- 1272-x
	Alkyds from red-silk cotton ( <i>Bombax ceiba</i> ) seed oil and investigation on their microbial degradation	Progress in Organic Coating 2018, 124,71-79
Prof. C. Medhi	Quantum mechanical studies on the existence of AC mismatches through prototopic tautomerization pathway in adenine and cytosine recognition.	Journal of Theoretical and Computational Chemistry <b>2017</b> , 16, 1750027.
	Design, Synthesis and Preliminary Pharmacological Screening (antimicrobial, analgesic and anti- inflammatory activity) of Some Novel Quinazoline Derivatives.	Journal of Applied Pharmaceutical Science <b>2017</b> , 7, 083-096.
	.Comparison of donor-acceptor properties of N-heterocyclic rings in Ruthenium complexes by quantum mechanical calculations.	Int. J. of Current Research 2018, 10, 72212-72217.
	The Effect Of Proton And Water Molecule On Watson Crick Hydrogen Bonds And The Formation Of Cytosine(C)-Thymine(T) Base Pairs.	Int. J of Research in Engineering and Science (IJRES), <b>2018</b> , 6, 54-65.
	Structure and Selectivity of binding sites in HIV protein	Asian Journal of Science and

	by 6-aminoquinolines. Molecules: Docking and Molecular Mechanics studies.	Technology (In Press), 2018.
	Is Guanine(G) tautomer interaction responsible for the existence of GG mismatches? A quantum mechanical studies on G tautomer combination.	Int. J. of Innovative Research and Advanced Studies (In Press), 2018.
	Electronic Properties of Ruthenium complexes having Vinyl imidazole ligand.	Int. J. of Current Research (in press), 2018.
Prof. A. K. Talukdar	Vanadia loaded hierarchical ZSM-5 zeolite: a promising catalyst for epoxidation of cyclohexene under solvent free condition	Journal of Porous Materials <b>2017</b> , 23, 1143–1154.
	Effective Removal of Cr(VI) From Aqueous Solution By Diamino-Functionalised mesoporous MCM-48 And Selective Oxidation of Cyclohexene And Ethylbenzene Over The Cr Containing Spent Adsorbent.	Journal of Environmental Chemical Engineering 2017, 5, 4707–4715.
	Removal of Cu(II) and Pb(II) from aqueous solution using nanoporous materials.	Russian Journal of Physical Chemistry A 2018, 29, 976– 983.
	Facile Synthesis of Titanium-Loaded MCM-48 as an Efficient Heterogeneous Catalyst for Selective Oxidation of Aniline to Azoxybenzene.	Chemistry Select <b>2017</b> , 2, 8983-8989.
Prof. P. Phukan	Cu-doped CoFe <sub>2</sub> O <sub>4</sub> nanoparticles as magnetically recoverable catalyst for C-N cross-coupling reaction.	Catal. Commun. 2018, 109, 38-42
	Copper-Catalyzed Stereoselective Domino Synthesis of ( <i>Z</i> )-3-Methyleneisoindolin-1-one.	ChemistrySelect <b>2018</b> , 3, 2474–2478
	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 <b>2018</b> , 469, 202–208
	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
	Metal-free synthesis of secondary amines by the reaction of tosyl triazene and aryl boronic acid.	Synth. Commun. 2018, 48, 656–662
	CuI catalyzed sulfamidation of arylboronic acid using TsNBr <sub>2</sub> at room temperature.	Tetrahedron Lett. <b>2017</b> , 58, 4855-4858
	CoFe <sub>2</sub> O <sub>4</sub> -SiO <sub>2</sub> -SO <sub>3</sub> H Nano Composite as a Magnetically Recoverable Catalyst for Oxidative Bromination of Alkynes.	Synth. Commun. <b>2017</b> , <b>47</b> , 2330-2341
Prof. D. K. Das	Nickelhexacyanoferrate modified Glassy Carbon electrode as voltammetric and electrochemical impedance spectroscopic sensor for thiocyanate ion.	Chemistry Select <b>2018</b> , 3, 481-485.
	Condensation product of 2-hydroxy-1-napthaldehyde and 2-aminophenol:Selective fluorescent sensor for Al <sup>3+</sup> ion.	Inorg. Chim. Acta <b>2017</b> , 469, 202-208.

	Schiff base modified Pt electrode as sensor for Al(III) and Pb(II)	Indian J Chemistry A <b>2017</b> , 56A, 832-837.
	2-Hydroxyacetophenone and ethylenediamine condensed Schiff base: Fluorescent sensor for Al <sup>3+</sup> and PO <sub>4</sub> <sup>3-</sup> , biological cell imaging and INHIBIT logic gate	Inorg. Chim. Acta <b>2017</b> , 462, 167–173
	Voltammetric distinction between dopamine and ascorbic acid using bare Platinum disc electrode catalysed by bisethylenediaminecopper(II).	Indian J. Chem. Tech. <b>2017</b> , 24, 102-106.
Dr. R. J. Sarma	Mechano-Luminescent Behavior of a Pyridine- Containing Anthracene Derivative: Role of Aromatic Stacking Interactions	Cryst. Growth Des. <b>2018</b> , 18, 4963–4970.
	Cooperative Binding of Fluoride Anions to a Flexible Cystine-Based Receptor Containing Two 3,5- Dinitrobenzamide Motifs	ChemistrySelect, <b>2018</b> , 3, 5786–5791
	Naphthalimide-Containing Isomeric Urea Derivatives: Mechanoluminescence and Fluoride Recognition	ChemPhotoChem <b>2017</b> , <i>1</i> , 524 – 531
	Synthesis of Cu-Cr diketo, sublimable, eutectic composite complex, rod crystals from LDH as suitable MOCVD precursor of CuCr <sub>2</sub> O <sub>4</sub> catalysts upon ceramic preforms for N <sub>2</sub> O decomposition	Materials Today Chemistry 2018, 7, 40-52.
Dr S. K. Gogoi	Facile Synthesis of Photoluminescent Graphitic Carbon Nitride Quantum Dots for Hg <sup>2+</sup> Detection and Room Temperature Phosphorescence	ACS Sustainable Chem. Eng. 2018, 6, 1732-1743.
Dr D. Mahanta	One-Step Preparation of Freestanding Polypyrrole Films	Chemistry Select <b>2017</b> , 2, 9930 – 9933
	at Air-Water Interface	
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.
	Drug-drug and drug-nutraceutical cocrystal/ salt as alternative medicine for combination therapy: A Crystal Engineering approach.	Crystals 2018, 8, 101.
	First-line antituberculousis drug Pyrazinamide: Its pharmaceutically relevant salt and cocrystals.	Acta Cryst B <b>2017</b> , 73, 1007–1016. ( <b>Most read article</b> )
	Open Flask, Clean and Practical Protocol for Diastereoselective Syntheses of Oxindole Containing	Chemistry Select <b>2018</b> , 3, 3221-3224.
	Phosphinoyl Compounds under Catalyst-Free and	
	Solvent-Free Conditions.	

	Efficient Access to Imidazo[1,2-a]pyridines-/pyrazines/pyrimidines via Catalyst-Free Annulation Reaction under Microwave Irradiation in Green Solvent.	ACS Comb. Sci. <b>2018</b> , 20, 164-171.
	I <sub>2</sub> /TBHP/cyclohexanone a novel catalyst system for the oxidative dearomatization of indoles to indolin-3-ones at room temperature under solvent-free condition.	Catalysis Communications 2018, 106, 68–72.
Dr D. Kalita	Charge Injection and Hopping Transport in bridged-dithiophene-Triazole-bridged-dithiophene (DT-Tr-DT) Conducting Oligomers: A DFT Approach,	Computational and theoretical Chemistry, 2018, 1132, 42–49.
	Novel Isophthalohydrazide-cDB24C8 cryptand derivative for the selective recognition of fluoride ion: An experimental and DFT study	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 2018, 204, 225- 231.
	Narrowing the band gap of graphitic carbon nitride sheet by coupling organic moieties: A DFT Approach	Chem. Phys. Lett. 2018, 707, 101-107.
Dr. S. Ghosh	Synthesis, characterization, and cytotoxic properties of mono- and di-nuclear cobalt(II)-polypyridyl complexes	Dalton Trans. 2018, 47, 5755
Dr. N. Nath	Insight into old and new pure shift nuclear magnetic resonance methods for enantiodiscrimination	Magn. Reson. Chem. <b>2018</b> , 1–17.
Dr. B. Banik	Core Hydrophobicity Tuning of a Self Assembled Particle Results in Efficient Lipid Reduction and Favorable Organ Distribution	Nanoscale <b>2018</b> , 10, 366-377

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	A molecular hybridization approach for simple and expeditious synthesis of novel spiro[oxindoline-3,4'-isoxazolo[5,4- <i>b</i> ]pyrazolo[4,3- <i>e</i> ]pyridines] in water	ChemistrySelect <b>2018</b> , 3, 7862-7866.
	Occurrence of estrogenic heavy metals in three major fresh water bodies of Guwahati city, Assam, India	International journal of basic and applied research, <b>2018</b> , 8, 839-49.
	Antioxidant-activity and physico-chemical indices of the rice beer used by the <i>Bodo</i> community in North-East India	Journal of the ASBC <b>2018</b> , 76, 112-116.
	A quick micelle catalyzed one-pot synthesis of spiro[indoline-3,4'-pyrano[2,3-c]pyrazoles] in water at room temperature	ChemistrySelect <b>2018</b> , 3, 1512-1516.
	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.
	A Quick, Simple and Clean Synthesis of Spiro[indoline-3,4'-pyrazolo[4',3':5,6]pyrido[2,3-d]pyrimidines] in Water through a Novel One-pot Multicomponent Reaction	ChemistrySelect <b>2017</b> , 2, 5701 – 5706.
	L-Proline-Catalysed One-Pot Regio- and Diastereoselective Synthesis of Spiro[2,3-d]pyrimidin- 2-amines-6,5'-pyrimidines] in Water	SynOpen <b>2017</b> , 1, 45-49.
	An Expeditious Synthesis of 2,3-dihydroquinazolin-4(1H)-ones in Aqueous Medium Using Thiamine Hydrochloride (VB1) as a Mild, Efficient and Reusable Organocatalyst	Synthetic Communications <b>2017</b> , 47, 1601–1609.
	Evaluation of Anticancer and Antimicrobial Activity of	Journal of Biologically Active

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D 1 . C N . 2015		
	Arborinine from Glycosmis pentaphylla	Products from Nature, <b>2017</b> , 7, 131-139.		
	Single crystal X-ray diffraction in structure elucidation of arborinine from <i>Glycosmis pentaphylla</i>	The Natural Products Journal, 2017, 7, 1-7.		
	Metal profile of traditional alcoholic beverages prepared by the ethnic communities of Assam, India	Journal of the Institute of Brewing 2017, 123, 289-295.		
	A new, convenient and expeditious synthesis of 4-alkyl-5-methyl-1 <i>H</i> -pyrazol-3-ols in water through a multicomponent reaction	Tetrahedron Letters, <b>2017</b> , 58, 566-569.		
	Synthesis of β-aminocarbonyl and β-aminonitrile compounds catalyzed by water extract of <i>Musa balbisiana</i> (Colla) <i>via</i> aza-Michael reaction	Asian Journal of Organic & Medicinal Chemistry <b>2017</b> , 2, 138-142.		
Prof. B. K. Das	Dimeric copper(II) carboxylates as catalysts in the selective epoxidation of styrene.	Polyhedron <b>2018</b> , 155, 351-358.		
	Oxidation of DPM Catalyzed 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.		
	Study of distorted octahedral structure in 3d transition metal complexes using XAFS.	Chemical Physics Letters <b>2018</b> , 692, 382-387.		
	Photocatalytic Degradation of Organic Dyes by Nanostructured Cobalt Oxides under UV-light.	Chemical Science Transactions 2018, 7, 112- 118.		
	Controlled synth. of $\alpha$ - and $\gamma$ -Fe <sub>2</sub> O <sub>3</sub> nanoparticles via thermolysis of PVA gels and studies on $\alpha$ -Fe <sub>2</sub> O <sub>3</sub> catal. styrene epoxidation.	Journal of Saudi Chemical Society 2017, 21, S170-S178.		
Prof. D. K. Kakati	release behavior of Chitglc-hydrogel			
	Alkyds from red-silk cotton ( <i>Bombax ceiba</i> ) seed oil and investigation on their microbial degradation	Progress in Organic Coating 2018, 124,71-79		
Prof. C. Medhi	Quantum mechanical studies on the existence of AC mismatches through prototopic tautomerization pathway in adenine and cytosine recognition.	Journal of Theoretical and Computational Chemistry 2017, 16, 1750027.		
	Design, Synthesis and Preliminary Pharmacological Screening (antimicrobial, analgesic and anti-inflammatory activity) of Some Novel Quinazoline Derivatives.	Journal of Applied Pharmaceutical Science <b>2017</b> , 7, 083-096.		
	.Comparison of donor-acceptor properties of N-heterocyclic rings in Ruthenium complexes by quantum mechanical calculations.	Int. J. of Current Research 2018, 10, 72212-72217.		
	The Effect Of Proton And Water Molecule On Watson Crick Hydrogen Bonds And The Formation Of Cytosine(C)-Thymine(T) Base Pairs.	Int. J of Research in Engineering and Science (IJRES), <b>2018</b> , 6, 54-65.		
	Structure and Selectivity of binding sites in HIV protein by 6-aminoquinolines. Molecules: Docking and Molecular Mechanics studies.	Asian Journal of Science and Technology (In Press), 2018.		
	Is Guanine(G) tautomer interaction responsible for the existence of GG mismatches? A quantum mechanical studies on G tautomer combination.	Int. J. of Innovative Research and Advanced Studies (In Press), 2018.		
	Electronic Properties of Ruthenium complexes having Vinyl imidazole ligand.	Int. J. of Current Research (in press), 2018.		

Prof. A. K. Talukdar	Vanadia loaded hierarchical ZSM-5 zeolite: a promising	Journal of Porous Materials
	catalyst for epoxidation of cyclohexene under solvent free condition	<b>2017</b> , <i>23</i> , 1143–1154.
	Effective Removal of Cr(VI) From Aqueous Solution By Diamino-Functionalised mesoporous MCM-48 And Selective Oxidation of Cyclohexene And Ethylbenzene Over The Cr Containing Spent Adsorbent.	Journal of Environmental Chemical Engineering 2017, 5, 4707–4715.
	Removal of Cu(II) and Pb(II) from aqueous solution using nanoporous materials.	Russian Journal of Physical Chemistry A 2018, 29, 976– 983.
	Facile Synthesis of Titanium-Loaded MCM-48 as an Efficient Heterogeneous Catalyst for Selective Oxidation of Aniline to Azoxybenzene.	Chemistry Select <b>2017</b> , 2, 8983-8989.
Prof. P. Phukan	$\begin{tabular}{ll} Cu-doped $CoFe_2O_4$ nanoparticles as magnetically recoverable catalyst for $C-N$ cross-coupling reaction. \end{tabular}$	Catal. Commun. 2018, 109, 38-42
	Copper-Catalyzed Stereoselective Domino Synthesis of ( <i>Z</i> )-3-Methyleneisoindolin-1-one.	ChemistrySelect <b>2018</b> , 3, 2474–2478
	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 <b>2018</b> , 469, 202–208
	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
	Metal-free synthesis of secondary amines by the reaction of tosyl triazene and aryl boronic acid.	Synth. Commun. <b>2018</b> , 48, 656–662
	CuI catalyzed sulfamidation of arylboronic acid using $TsNBr_2$ at room temperature.	Tetrahedron Lett. <b>2017</b> , 58, 4855-4858
	CoFe <sub>2</sub> O <sub>4</sub> -SiO <sub>2</sub> -SO <sub>3</sub> H Nano Composite as a Magnetically Recoverable Catalyst for Oxidative Bromination of Alkynes.	Synth. Commun. 2017, 47, 2330-2341
Prof. D. K. Das	Nickelhexacyanoferrate modified Glassy Carbon electrode as voltammetric and electrochemical impedance spectroscopic sensor for thiocyanate ion.	Chemistry Select <b>2018</b> , 3, 481-485.
	Condensation product of 2-hydroxy-1-napthaldehyde and 2-aminophenol:Selective fluorescent sensor for Al <sup>3+</sup> ion.	Inorg. Chim. Acta <b>2017</b> , 469, 202-208.
	Schiff base modified Pt electrode as sensor for Al(III) and Pb(II)	Indian J Chemistry A <b>2017</b> , 56A, 832-837.
	2-Hydroxyacetophenone and ethylenediamine condensed Schiff base: Fluorescent sensor for Al <sup>3+</sup> and PO <sub>4</sub> <sup>3-</sup> , biological cell imaging and INHIBIT logic gate	Inorg. Chim. Acta <b>2017</b> , 462, 167–173
	Voltammetric distinction between dopamine and ascorbic acid using bare Platinum disc electrode catalysed by bisethylenediaminecopper(II).	Indian J. Chem. Tech. <b>2017</b> , 24, 102-106.

Dr. R. J. Sarma	Mechano-Luminescent Behavior of a Pyridine- Containing Anthracene Derivative: Role of Aromatic Stacking Interactions	Cryst. Growth Des. <b>2018</b> , 18, 4963–4970.
	Cooperative Binding of Fluoride Anions to a Flexible Cystine-Based Receptor Containing Two 3,5- Dinitrobenzamide Motifs	ChemistrySelect, <b>2018</b> , 3, 5786–5791
	Naphthalimide-Containing Isomeric Urea Derivatives: Mechanoluminescence and Fluoride Recognition	ChemPhotoChem <b>2017</b> , <i>I</i> , 524 – 531
	Synthesis of Cu-Cr diketo, sublimable, eutectic composite complex, rod crystals from LDH as suitable MOCVD precursor of CuCr <sub>2</sub> O <sub>4</sub> catalysts upon ceramic preforms for N <sub>2</sub> O decomposition	Materials Today Chemistry 2018, 7, 40-52.
Dr S. K. Gogoi	Facile Synthesis of Photoluminescent Graphitic Carbon Nitride Quantum Dots for Hg <sup>2+</sup> Detection and Room Temperature Phosphorescence	ACS Sustainable Chem. Eng. <b>2018</b> , 6, 1732-1743.
Dr D. Mahanta	One-Step Preparation of Freestanding Polypyrrole Films	Chemistry Select <b>2017</b> , 2, 9930 – 9933
	at Air-Water Interface	
Dr R. Thakuria	Mechanochemical Synthesis of Olanzapine Salts and Their Hydration Stability Study Using Powder X-Ray Diffraction.	Cryst. Growth Des. <b>2018</b> , 18, 2138–2150.
	Drug-drug and drug-nutraceutical cocrystal/ salt as alternative medicine for combination therapy: A Crystal Engineering approach.	Crystals 2018, 8, 101.
	First-line antituberculousis drug Pyrazinamide: Its pharmaceutically relevant salt and cocrystals.	Acta Cryst B <b>2017</b> , 73, 1007–1016. ( <b>Most read article</b> )
	Open Flask, Clean and Practical Protocol for Diastereoselective Syntheses of Oxindole Containing	Chemistry Select <b>2018</b> , 3, 3221-3224.
	Phosphinoyl Compounds under Catalyst-Free and	
	Solvent-Free Conditions.	
	Efficient Access to Imidazo[1,2-a]pyridines-/pyrazines/pyrimidines via Catalyst-Free Annulation Reaction under Microwave Irradiation in Green Solvent.	ACS Comb. Sci. <b>2018</b> , 20, 164-171.
	I <sub>2</sub> /TBHP/cyclohexanone a novel catalyst system for the oxidative dearomatization of indoles to indolin-3-ones at room temperature under solvent-free condition.	Catalysis Communications 2018, 106, 68–72.
Dr D. Kalita	Charge Injection and Hopping Transport in bridged-dithiophene-Triazole-bridged-dithiophene (DT-Tr-DT) Conducting Oligomers: A DFT Approach,	Computational and theoretical Chemistry, <b>2018</b> , 1132, 42–49.

	Novel Isophthalohydrazide-cDB24C8 cryptand derivative for the selective recognition of fluoride ion: An experimental and DFT study	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy <b>2018</b> , 204, 225- 231.
	Narrowing the band gap of graphitic carbon nitride sheet by coupling organic moieties: A DFT Approach	Chem. Phys. Lett. 2018, 707, 101-107.
Dr. S. Ghosh	Synthesis, characterization, and cytotoxic properties of mono- and di-nuclear cobalt(II)-polypyridyl complexes	Dalton Trans. 2018, 47, 5755
Dr. N. Nath	Insight into old and new pure shift nuclear magnetic resonance methods for enantiodiscrimination	Magn. Reson. Chem. <b>2018</b> , 1–17.
Dr. B. Banik	Core Hydrophobicity Tuning of a Self Assembled Particle Results in Efficient Lipid Reduction and Favorable Organ Distribution	Nanoscale <b>2018</b> , 10, 366-377

f) Details of book/chapter published during the period :

Name of the faculty	Title of the Book(s)/Chapter	Date of publications
Prof. D. K.Kakati	Advances in Experimental Medicine and	Nature Springer. 2018
	Biology 1052: Encapsulation of	
	theophylline in gelatin A-pectin complex	
	coacervates.	
Prof. A. K.Talukdar	Moula Abishkarar Rsal Kahini	2017
	(Interesting Story of Discovery of	
	Elements)	
Prof. A. K. Talukdar	Career in Chemistry and Future of	2017
	Chemistry (Book Chapter)	
Dr. R. Thakuria	Hydrogen Bonding in Molecular	Comprehensive Supramolecular
	Crystals. (Book Chapter)	Chemistry, 2 <sup>nd</sup> Edition, 2017, vol. 7, pp.
		25–48.
Dr. R. Thakuria	Crystal Polymorphism in	Comprehensive Supramolecular
	Pharmaceutical Science. (Book Chapter)	Chemistry, 2 <sup>nd</sup> Edition, 2017, vol. 5, pp.
		283–309.

- 33. Placement record during the period (Please state briefly): More than 50% students were placed at various research positions and regular jobs as per information available with us.
- 34. Placement services provided to students by the Department/Centre, if any:
  Department provides information and helps the students in getting placements in several industries particularly the cement industries of North east region.
- 30. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report:

There is a student counseling and placement cell in the department, with Prof. B. K. Das as the Chairman, and Prof. D. K. Das as the Coordinator.

#### 31. Departmental Library:

51. D	epartmentar Elorary:	
a)	No. of Books as on 31.03.2017	1050 (approx.)
b)	New Books procured during the period	85
c)	No. of Journals as on 31.03.2017	5 in regular subscription
d)	New Journals procured during the period	Do
e)	No. of users during the period :	Al students and faculties.

- 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 forum is formed. Prof. B. K. Das is currently the Chairman, and Dr N. Nath is the Coordinator. The first meeting was held on 28-October-2017 in the Department premises.
- 35. Involvement in Community services: Department provides expert services in analyzing the potable water qualities brought by different NGOs for analysis.

- 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 done centrally by IQAC in university.
- 38. Information on up to five Good Practices followed by the Department/Centre:
  - Remedial classes are organized regularly; Special orientation sessions are held for the benefit of the M.Sc. students
  - ii) Mentoring of students
  - iii) Facilitate students to take part in summer training programs, in prestigious institutes including IISc Bangalore, IITs and CSIR Laboratories.
  - iv) Provision of book banks
  - v) Invitation of eminent scientists from different institutes for motivation and interactions.
- 39. Detail the plans of the Department/Centre/Institute for the next year :
  - Department proposes to introduce CBCS program in the Post Graduate Diploma in Analytical Chemistry (PGDAC) course.
  - ii) Department plans to initiate a collaborative research program, and students exchange program with Mangalore University, Karnataka.
  - 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 2017 TO MARCH 2018)

3. 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	Full Time/ Contractual	Sex (Male/	Caste (Gen/ SC/ ST/OBC	Citation index
110.		Prof./Asst.			/DA	muca
		Professor				
33.	Prof. Hari Prasad Sarma	Professor	Full Time (on lien)	Male	Gen	
34.	Dr. Pallavi Sharma	Assistant Professor	Full Time	Female	Gen	
35.	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 & Environmental Hazard
- 6. New Academic Programme initiated during the period under report: None
- 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 2017- March 2018):

Courses	Sem	Intake Capaci ty		No. mitte	ed	S.C.		S.T(P)		S.T(P) S.T.(H)		OBC/MO BC			Differen tly abled					
			M	F	Т	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	1 <sup>st</sup>																			
Post-	2 <sup>nd</sup>	15	7	8	15	1	-	1	-	1	1	1	-	1	2	-	2	-	-	-
Graduate	3 <sup>rd</sup>																			
	4 <sup>th</sup>	15	10	5	15	-	1	1	2	-	2	1	-	1	3	1	4	-	-	-

Teacher-Student and Teacher-Non-teaching staff Ratio: No. of Non-teaching staff No. of Teacher No. of student 30 **Teacher/Student Ratio** Teacher-Non-teaching Staff Ratio 1:10 1: 2.3 13. Final Examination result during the session 2017-18: (a) No. Appeared Differently S.T.(H) OBC/MOB **Subject Total** S.C. S.T(P)<u>Appe</u>ared abled M  $\mathbf{F}$  $\mathbf{F}$ F M F T M F T M T M F 5 11 1 2 2 1 1 (b) No. Passed OBC/MOB **Subject Total** S.C. S.T(P)S.T.(H) Differently **Passed** abled F T F F M F T M T M FT M T  $\mathbf{M}$ F M 5 2 2 11 1 6 1 Details of Ph.D. awarded (2017-18): Title of the Ph.D. thesis Name of the Ph.D. Guide **Scholars** Karishma Baishya A study on the Impact of Selected Organophosphorus Pesticides on the Prof. H.P. Soil Quality of Different Land-Uses of Dimoria Tribal Development Sarma Block, Assam Jaideep Baruah Environmental Impact of open cast coal Mining in Ledo-Margherita range Prof. S. Kalita of Assam with special reference to water and soil Quality A geo-environmental study for restoration of Kolong river in Nagaon and Minakshi Bora Prof. D.C. Morigaon districts of Assam Goswami Hupesh Choudhury A study on Mesoscale Convective Systems (MCSs) over Northeast India Prof. S. Kalita and its adjoining Region. 15. Number of students qualified in: SLET **GATE** NET(JRF) NET 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 2017-18: Sl.No. Date Name of the Name of the Seminar/Summer School/ Sponsorship Coordinator Workshop/ Refresher Course 18.Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18): Name of the Faculty Name of the Award/Fellowship Conferring agency 19. Visit abroad by the Faculty members (2017-18): Name of the Faculty Institute visited Purpose Period 20.(a) Sponsored Research Project (2017-18): Name of the Principal Title of the Project Funding Agency Duration Amount(Rs.) Investigator (b) Patent Generated: Sl No. Name of the Faculty Patent Generated Remarks 21. Academic distinction earned by the students during (2017-18): Name of Examination/Programme Name of the student Position held Distinguish visitors to the Department during the period 2017-18:

T

Address & Designation

Purpose of visit

Name of visitors

- 36. 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.
- 37. Technology up gradation in the Department/Centre during the period 2017-18:
- 38. Linkages developed with National/International/Academic/Research Bodies:
- 39. Academic activities of Faculty members during the period of report (2017-18):

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		
Dr. Pallavi Sharma		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
Dr. Minakshi Bora	Water quality assessment in terms of water quality index	Applied Water Science, Vol.
	(WQI): case study of the Kolong River, Assam, India	7(6); 2017
Dr. Minakshi Bora	Channel morphology and hydraulic geometry of River	Current Science, vol. 113(4),
	Kolong, Nagaon, Assam, India: a study from the	2017
	standpoint of river restoration.	

f) Details of book published during the period:

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

- 40. 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.
- 41. 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 31.03.2018	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 2017 TO MARCH 2018)

1. a. Name of the Department : Geography b. Year of Establishment : 1949

2. Head of the Department : Prof. Anup Saikia

3. Details of Academic Staff

Sl. No.	Name of the Teacher	Qualificati on	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,	Male	ST(P)	Assistant Professor	Full Time

			Glaciology				
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	Gen	Assistant Professor	Full Time
11.	S.P. Sharma	M.Sc.	Regional Planning and Remote Sensing	Male	Gen	Associate Professor	Guest Teacher
12.	Dr. R. Barman	M.Sc. Ph.D.	Cartography & Fluvial Geomorphology	Male	Gen	Professor	Guest Teacher
13.	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: Syllabus revised (2016)
- 8. Inter disciplinary Programmes started: -
- 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
11	09

## 11. Enrolment of students in the various courses (April 2017 – March 2018 ):

	Sem	Intake Capacity	ac	No. Imitto	ed	S.C.		S.C.		S.C.		S.C.		T.(P	<b>P</b> )	S.	T.(H	I)	OB	C/M(	OBC	]	P.H.											
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T														
	1 <sup>st</sup>	40	11	29	40	1	1	2	2	3	5	0	2	2	6	9	15	1	0	1														
	2nd																																	
	3rd	40	11	29	40	0	2	2	0	3	3	0	3	3	1	5	6	1	0	1														
	4 <sup>th</sup>																																	
M.Phil.		12	3	9	12	0	2	2	0	0	0	0	1	1	1	2	3																	
Ph.D.			1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0														
Others																																		

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

No. of Teachers	No. of Teachers No. of stu		T	V/S Ratio	
Name of the Awardee	f the Awardee Title of Ph.D. T		Time of Award	Supervisor	
10	80 (P.G.) + 12	(M. Phil)	1:9.2		
Teacher/Stu	Teac	her-Non-Teachi	ing Staff		
1:		1: 1.2			

# 13. Final Examination result during the session 2017- 2018: (a) No. Appeared 38

Subject	Total	Appea	red	S.C			S.T.	(P)		S.T.	(H)		OBC BC	C/M(	С	P.H.		
	M	F	T	M	F	T	M	F	T	M	F	Т	M	F	T	M	F	T
Geography	14	24	38	1	3	4	2	4	6	2	1	3	2	7	9	1	0	1

(b) No. of Candidates Passed: 37

Subject	Total	Appea	ared	S.C.			S.T.(	<b>P</b> )		S.T.(	H)		OBC C	C/MOI	3	P.H.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Geography	14	24	38	1	3	4	2	4	6	2	1	3	2	7	9	1	0	1

## 14. Details of Ph. D. awarded (2017 – 2018) :

1.Nilotpal Kalita	Flood Erosion and Bed Aggradation in the Belsiri River of Assam, India	April, 2017	Prof. A. K. Bora Dr. R. Sarmah
2.Monjit Borthakur	The Heat is on : Estimating the Urban Heat Island Effect in Greater Guwahati Area, Assam	May, 2017	Prof. Anup Saikia
3.Pallabi Borah	The river and a city: Changing geography of Guwahati on the bank of Brahmaputra	June 2017	Prof. A. K. Bhagabati
4.Jyoti Prasad Das	Changing wetland environment and its impact on socio-economic condition of wetland dependent communities in Nalbari district, Assam	July 2017	Dr. P. Sharma
5.Juthika Mahanta	Tourism and associated developments in and around Nilachal Kamakhya: a geographical analysis.	July 2017	Dr. B. C. Kalita
6.Purabi Hazarika	Flow variability ,channel changes and associated hazards of Noa-Mangaldoi river system, Assam	August 2017	Prof. A. K. Bora
7.Junmoni Dutta	Role of airports of Assam in the economy, society and culture of their surrounding areas: a geographical analysis	Septembe r 2017	Dr. P. Sharma
8.Dhrubajyoti Rajbangshi	Land use and land cover change and growing drainage sewerage problems of Guwahati city: a study on urban geomorphology	Novembe r 2017	Prof. A. K. Bora
9.Dhananjoy Medhi	Forest-land encroachment in Goalpara district, Assam: a study of its dimensions causes and consequences	Decembe r 2017	Prof. B. K. Kar
10.Ashis Saha	Emerging cross - Border trade relations and changing economy of North-east India	Decembe r 2017	Prof. M. Das
11.Arzufa Khanom	Channel dynamics, fluvio-geomorphic hazards and human responses in the charlands of the lower reach of the Brahmaputra river in Assam	March 2018	Prof. A. K. Bora
12.Trishna Changkakati	Variability of the Normalized Difference Vegetation Index in relation to climatic attributes and institutional structures in North-east India.	March 2018	Prof. A. Saikia

13.Sibani Basumatary	Education ,occupation and health status in Bodoland territorial areas district (BTAD),	March 2018	Prof. B. K. Kar
	Assam: A socio- spatial analysis		
14.Swarup Jyoti Baishya	Natural hazard vulnerability assessment and management in the Baralia-nona basin, Assam.	March 2018	Dr. D. J. Sahariah

15. Number of students qualified in : (April 2017 – March 2018 ):

NET(JRF)	NET	SLET	GATE	Any Others
1	10	7		

<sup>16.</sup> Important students activities and achievements and awards during the period (please state briefly)

<sup>17.</sup> Seminar/Summer School/Workshop conducted during the period 2017-18

Sl.	Name of the	Name of the Seminar/Sumn	er Date	Sponsorship
No.	Co-ordinator	School/Workshop/Refresher Course		
1.	Dr. U. D. Baruah	"Application of Methods and Techniques	in September	
		Contemporary Research"	22-23rd,	
			2017.	

- 18. Honours /Awards/Fellowship (with National/ International repute) earned by the Faculty Members (2017-2018): NIL
- 19. Visits abroad by the Faculty member (2017-2018):

Name of the Faculty	Institute visited	Purpose	Period
	Boston, USA	Presented paper on Witch Hunting -A	07.04.2017
		Heinous Social Crime of Assam, India, as	
Prof. M. Das		part of session titled" Cultural Geographies"	
		on 07/04/2017 in Boston, USA at the 2017	
		Annual Meeting of the American Association	
		of Geographers	
	Sydney, Australia	Visited different Universities of Sydney and	Nov. 25 <sup>th</sup> -30 <sup>th</sup> ,
		Canberra as a part of the team from Gauhati	2017
		University to establish academic	
		collaboration and linkages, 2017. Probable	
		collaboration with University of New South	
		Wales and Canberra University	

### 20. (a) Sponsored Research Project (2017-2018):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
Prof. M. Das	Continuity and change among the Buddhist Tai Communities	UGC	2013-2016 (under extn.)	12.05 lakhs
	of Assam			

(c) Patents Generated

Sl. No.	Name of the Faculty	Patent Generated	Remarks
-	nil	nil	

## 21. Academic distinction earned by the students during 2017-2018

Sl.	Name of Examination/Programme	Name of student	Position held
No.			
	a. In the P.G. level Examination	Ms. Suli Yohana Ayemi	Ist Class 1 <sup>st</sup>
	b. No of students passed UGC-	10	
	CSIR Exam. (NET)		
	(2017-2018)		
	c. No. of students passed GATE	-	
	d. No. of students passed Indian Civil Service	-	
	Examination		
	e. No. of students passed GRE	-	

Ms. Suli Yohana Ayemi, a student of this Department, received Professor H.P. Das Memorial Award for securing 1<sup>st</sup> Position in the M.A/M.Sc. Final Exam, 2017

f. No. of students passed TOEFL	-
g. No of students passed GMAT	-
h. Any other (Specify), Assam Civil Service	-
Examination	

#### 22. Distinguished Visitors to the Department during the year 2017-2018

Name of visitors	Address & Designation	Purpose of visit			
Dr. Santonu Goswami	Scientist, Earth and Climate Sciences	Delivered a lecture on India's			
	NRSC, ISRO	mission to Antarctica.			

- 23.Creation/ Increase in infrastructural faculties in the Department/Centre during the period 2017-18: 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 2017-18:
- 26. Linkages developed with national/International/Academic/Research Bodies: -
- 27. Academic activities of Faculty members during the period of report (2017-18)
  - (a) Seminar/Workshops attended/Presented papers by the faculty during the period:

Name of the faculty(s)	No. of Seminars	No. of Workshops
Dr. A. K. Bhagabati	3	4
Dr. Ashok K. Bora		1
Dr. B. K. Kar	3	1
Dr. A. Saikia	1	1
Dr. M. Das	5	-
Dr. D. Sahariah	3	2
Dr. P. Bhattacharya	2	-
Dr. U. Deka Baruah	1	1
Dr. N. Deka	3	1
Dr. M. J. Nath	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	Geographical Society of India, Calcutta University, K. K. Handique Open State
	University Guwahati, Garhgaon College, Sibsagar B. Borooah College
Dr. A. K. Bora	B. Borooah College, USTM, UGC HRD Centre G.U., Sonapur College
Dr. B.K. Kar	B. Borooah College, UGC HRD Centre G.U., Bajali College,
Dr. A. Saikia	University of Science & Technology, Meghalaya, UGC HRD Centre G.U.,
	Computer Science G.U.
Dr. M. Das	B. Borooah College, Sonapur College, Bajali College, Cotton College
Dr. D. Sahariah	B. Borooah College, Nalbari College, Arya College, Assam Science Society
Dr. P. Bhattacharya	B. Borooah College
Dr. N. Deka	Assam Science Society
Dr. M. J. Nath	Darrang College

- (c) Refresher Course/Orientation Course attended by the teachers during the period: Nil
  - (d) Details of papers published in the Referred Journals during the period: (April 2017 March 2018):

Name of the	Title of the Paper	Name of the Journal with Vol. No. &
faculty		Date
Dr. Ashok K. Bora	Geophysical changes of wetland resources and their management in Nonoi watershed Assam,	Transactions of the Inst of Indian Geographers, Vol.39, No.2, pp-223-236. (Co-authored)
Dr. Anup Saikia	1.Unplanned urban growth: land use/land cover change in the Guwahati Metropolitan Area,India.	Geografisk Tidsskrift - Danish Journal of Geography 118(1): 88-100 (Coauthored)
	2.A global reference database of crowd sourced cropland data collected using the Geo-Wiki platform (Co-authored),	Scientific Data 4: sdata 2017136, DOI:10.1038/sdata.2017.136 (Co- authored) (Co-
Dr. M. Das	1.Crime Against Women in Brahmaputra Valley,	Transactions of the Inst of Indian Geographers, 39(1):47-57 (2017) (Co-

		authored)	
Dr. D. Sahariah	1.A global reference database of crowd sourced cropland data collected using the Geo-Wiki platform (Co-authored)		4,170136. (Co-

(e) Papers 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				
Dr. A. K. Bhagabati	1.Dynamics of Agroecosystems in the Brahmaputra Valley, Assam (India),	Journal of Agroforestry and Environment, Agroforestry Society of Bangladesh, 11, 1 & 2. (Coauthored)				
	2.Natural Resources in a Village Environment of Brahmaputra Floodplain, in Thakur, B. et al. (ed),	Regional Development: Theory and Practices, Concept Publishing Company, New Delhi.				
	4.Wetlands: Dying Ecosystems in a Degraded Environment,	North-Eastern Geographer, Vol.39, No 1 and 2, 2016-18				
	1.Water resources: Its potential and utilization in rural landscape of Nonoi watershed, Assam.	Jl. of NE India Council for Social Science Research, 41 (1&2):41-43				
	2.Analysis of Landuse/Landcover in Dhemaji district of Assam using IRS LISS-III data,	Asian Journal of Research in Social Sciences and Huminities, Vol.7 No. 7				
Dr. Ashok K. Bora	3.Impact of Landuse/Landcover changes in Guwahati city, Assam India, <i>International</i>	Journal of Innovative Research in Technology Vol. 4, Issue.4, ISSN: 2349-6002				
	4.Geo-environmental problems in Guwahati city, Assam India,	The Public: Problems and Solutions, Vol.6 (2), PP.56-61				
	5.Pattern of Charland Dynamics in the Lower Brahmaputra Reach in Assam,	North Eastern Geographer, Vol. 39, No.1& 2, ISSN: 0973-0915				
Dr. Bimal K. Kar	Deforestation of Protected Areas: A Case Study of Sonai-Rupai Wildlife Sanctuary in Assam	North Eastern Geographer 39, 1 & 2, 2016-17,pp.114-123 (Coauthored).				
Dr. M. Das	1.Ambubachi Mela of Kamakhya Temple: Beliefs and Nature of Pilgrim Participation.	Geographical Review of India, 78 (12), pp.181-191 (2016)				
Dr. D. Sahariah	1.A study on morphometric characteristics of Jiadhal River basin using remote sensing and GIS,	International Journal of Research in Management & Social Science, Volume 5, Issue 3 (I): September, (2017), (Co-authored)				
	2.Bank erosion and changing course of Baralia and Nona rivers of Assam,	North Eastern Geographer, Vol. 39, No. 1 & 2, (2017), (Co-authored)				
Dr.Prasanta Bhattacharya	1.Direct Validation of TRMM/PR Near Surface Rain over the Northeastern Indian Subcontinent Using a Tipping Bucket Raingauge Network,	SOLA (Scientific Online Letter on the Atmosphere) Vol.13, 2017, pp. 157-162, Meteorological Society of Japan, ISSN:1349-6476,(co- authored)				
	2.Stakeholder's Sustenance in Tourism Progression in Ziro Valley of Arunachal Pradesh,	Erudition, Vol. 1, Issue-1, 2017, pp. 20-26, ISBN: 978-93-5288-241-0, (co-authored)				
	3.A checklist of exotic plants in Subankhata reserve	Indian Forest, Pp. 1117-1120 Vol.				

	forest, Baksha district of Assam, India,	142 (11), ISSN: 0019-4816, (co-
		authored)
	1.Dynamics of Agroecosystems in the Brahmaputra	Journal of Agroforestry and
	Valley, Assam (India),	Environment, Agroforestry Society
Dr. N. Deka		of Bangladesh, 11, (1 & 2). (co-
		authored)
DI. N. Deka	2.Diversity and Dynamics of Rural Landscapes in the	Natural Resource Management for
	Brahmaputra Floodplain, Assam,	Sustainable Development and Rural
		Livelihood, Vol.3, Today and
		Tomorrow's Publ., New Delhi.

(f) Details of books published during the period : (April 2017 – March 2018 ):

Name of the faculty	Name of the faculty Title of the Book(s)								
	1.Society and Environment, EBH Publishers (India), Guwahati	2017							
Dr. A. K. Bhagabati	2.Ganitiyo Prabandhamala, Dr. B. C. Deka (ed), published by Assam Science Society, Guwahati	2018							
	3.Pragya- Pathikrita Adhyapok Asraf Ali, Published by S. Ali, Guwahati	2018							
Dr. B. K. Kar	I.Society and Development: Human Geographic Perspectives, EBH Publishers (India), Guwahati, 2017, ISBN: 978-93-86302-01-4 (Jointly Edited).								
	2017								
Dr. D. Sahariah	(Jointly Edited).  Dr. D. Sahariah  1.Lessening urban forest landscape and growing human - leopard conflictin greater Guwahati. in Patowary, B. (eds), Environment and Development, Olympia Publications, Guwahati, (Co-authored)								
Dr. P. Bhattacharya	1.Population Environment and Emerging Challenges, Organizing Committee of the 36th IIG Congress, Dept. of Geography, Guahati University in Association with Techno Ed, Guwahati, ISBN:978-93-81859-53-7, jointly edited	2018							
Dr. N. Deka	1.Population growth and infiltration: related problems in Assam in Palme Borthakur, Lalit Saikia and Eahya Al Huda (eds) <i>Resources and Challenges in North East India</i> , Chandra Prakash, Panbazar, Guwahati -1, pp 184-198 (co-authored)	2018							

- $28.\ Placement\ record\ during\ the\ period\ (Please\ state\ briefly): \textbf{Through}\ \textbf{University}$
- 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 31.03.2018	1974
b.	New Books procured during the period	-
c.	No. of Journals as on 31.03.2018	220 –International = 17  National = 192  Local = 11
d.	New Journals procured during the period	Nil
e.	No. of users during the period :	160

- **32.** Departmental Publication : (in press)
- ${\bf 33.} \ {\bf Activities} \ {\bf and} \ {\bf support} \ {\bf from} \ {\bf the} \ {\bf Alumni} \ {\bf Association} \ {\bf of} \ {\bf the} \ {\bf Department/Centre}: {\bf No}$
- 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), its 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 government 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, Department of Geography

# ANNUAL REPORT: DEPARTMENT OF GEOLOGICAL SCIENCES GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017 TO MARCH 2018)

4. a. Name of the Department : Geological Sciences

b. Year of establishment : 1950

2. Head of the Department : Prof. Parag Phukon

**3.** Details of academic staff :

Sl. No.	Name of the teacher	Designation	Full Time/ Contractual	Sex (Male/ Female)	Citation Index (h-index)
36.	Dr. Amulya Chandra Mazumdar	Professor	Full time	Male	Scopus 4 Google Scholar: 4
37.	Dr. Bhagawat Pran Duarah	Professor	Full time	Male	Scopus 3
38.	Dr. Parag Phukon	Professor	Full time	Male	Scopus 3
39.	Dr. Sarat Phukan	Professor	Full time	Male	Scopus 3 Google Scholar: 4
40.	Dr. Bikash Gogoi	Associate Professor	Full time	Male	Scopus 1 Google Scholar: 3
41.	Dr. Jayanta Jivan Laskar	Associate Professor	Full time	Male	Scopus 1
42.	Dr. Balen Bhagabaty	Associate Professor	Full time	Male	
43.	Dr. Pranjit Hazarika	Assistant Professor	Full time	Male	Scopus 6 Google Scholar: 6
44.	Dr. Surajit Misra	Assistant Professor	Full time	Male	Google Scholar: 4
45.	Dr. Runty Choudhury	Assistant Professor	Full time	Female	Scopus 3
46.	Dr. Dhirendra Nath Das	Professor (Retd)	Contractual	Male	

- 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:
  - Program Specific Objectives (PSO) and Course Objectives (CO) are added to the syllabus.
- 8. Inter disciplinary Programme started: No
- 9. Department/Centre under:
- 10. Total number of Research Scholar working at present: 29

a) Full Time: 21	b) Part time: 8
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47. Enrolment of Students in various courses (April 2017- March 2018):

Post graduate course in Geology (M.Sc.)

Sem	Intake				S.C.		S	S.T(P	)	S.T.(H)		OBC/MOBC			Differently		tly		
	Capacity	A	dmitte	d											abled				
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
4 <sup>th</sup> (2015-	28	19	9	28	0	2	2	2	1	3	3	1	4	4	2	6	0	0	0
2017)																			
2 <sup>nd</sup> (2016-	28	14	14	28	3	2	5	1	3	4	1	0	1	4	5	9	0	0	0
2018)																			
1 <sup>st</sup> (2017-	30	20	10	30	0	1	1	4	0	4	2	1	3	8	3	11	0	0	0
2019)																			
(New																			
enrolment)																			
3 <sup>rd</sup> (2016-	28	14	14	28	3	2	5	1	3	4	1	0	1	4	5	9	0	0	0
2018)																			
2 <sup>nd</sup> (2017-	30	20	10	30	0	1	1	4	0	4	2	1	3	8	3	11	0	0	0
2019)																			
4 <sup>th</sup> (2016-	28	14	14	28	3	2	5	1	3	4	1	0	1	4	5	9	0	0	0
2018)																			

PhD in Geology

									- 00									
Intake		No.			S.C.		2	S.T(P	)	S	.T.(H	(I)	OB	C/M	OBC	Di	fferen	tly
Capacity	A	dmitte	d														abled	
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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			
0.18	1.22				

**13.** Final Examination result during the session 2017-18:

(a) No. Appeared

Subject	Total		S.C. S.T(P)		S.T.(H)		OB	C/M	ЮВС	Differently		ıtly						
	A	Appeare	d														ablec	i
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Geology	14	8	22	1		1	2	2	4	1	0	1	3	2	5	0	0	0

(b) No. Passed

Subject	Total		S.C.		S.T(P)			S.T.(H)			OBC/MOBC			P.H.				
	Passed																	
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Geology	11	8	19	1	0	1	1	2	3	1	0	1	3	2	5	0	0	0

## 48. Details of Ph.D. awarded (2017-18):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
1. Ms. Watinaro Imsong	Geomorphological Appraisal of Neotectonic Activities in the Shillong Plateau, Northeast India	Prof. Sarat Phukan
2. Ms. Nandita Mazumdar	Structure and stratigraphy of rocks along Bhalukpong- Tawang geo-transect, Western Arunachal Himalaya, India with special reference to anisotropy of magnetic susceptibility of Bomdila Gneiss	Prof. K. P. Sarma
3. Ms. Rupshikha Sarma	Structure, tectonic stratigrahy and magnetic susceptibility of rocks along Lohit river valley of Mishimi Block, Arunachal Himalaya, India	Prof. K. P. Sarma

**15.** Number of students qualified in:

NET(JRF)	NET	SLET	GATE	Any others
1			1	

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

17. Seminar/Summer School/Workshop conducted during the period 2017-18: 2 (Two)

Sl.No.	Name of the Co-Ordinator	Name of the Seminar/Summer School/ Workshop/ Refresher Course	Date	Sponsorship
1	Dr. Pranjit	Workshop on 'Advanced Petrography'	June 26 to July, 2018	Self-sponsored
	Hazarika			
	Dr. Sarat Phukan	GEoinformatics for UG students		Self-sponsored

18. Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18): Nil

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

19. Visit abroad by the Faculty members (2017-18): Nil

Name of the Faculty	Institute visited	Purpose	Period
X	X	X	X

#### **20.** Sponsored Research Project (2017-18):

Name of the Principal Investigator	Title of the Project	Funding Agency	Duration	Amount(Rs.)
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	39.83 lakh
Dr. Bikash Gogoi	Integrated palynofacies and magnetostratigraphic study of Bhuban Formation in some selected outcrops exposed in the central part of Mizoram, NE India	Oil India Limited	2 years	39.64 lakhs
Dr. A. C. Mazumdar	Tectonothermal evolution and EPMA geochronology of granulite facies rocks from the Gneissic Complex of Shilong Plateau, India	UGC	2 years	14.97 lakhs
Dr. Pranjit Hazarika	Determination of elemental and isotopic compositions of tourmaline from Pb-Zn and Cu-Au deposits of Northwestern India: implications for compositional fractionation, ore genetic processes and source of ore forming fluid.	DST- INSPIRE	5 years	35 lakhs

- 21. Academic Distinction earned by the students during 2017-18
- **22.** Academic distinction earned by the students during (2014-15):

Sl.No.	Name	of	Name of the student	Position held
	Examination/Programme			
1	UGC-CSIR Exam.(NET)		Tapash Chandra Baro	116
2	GATE		Tapash Chandra Baro	

**23.** Distinguished visitors to the Department during the period 2014-15:

Name of visi	itors	Address & Designation	Purpose of visit	
Prof. Abhijit		Department of Geology & Geophysics,	Classroom lectures for second semester	
Bhattacharya		Kharagpur	students (Visiting Professor)	
MS. Reba Devi		Executive Director, Oil India Ltd.	Student interaction on "Hydrocarbon	
		COEE, OIL, Guwahati		Exploration by Oil India Ltd."

- **24.** Increase in infrastructural faculties in the Department/Centre during the period 2017-18:
- New microscope facility
- New Central Computer Lab.

- Department library
- **25.** 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
- **26.** Technology upgradation in the Department/Centre during the period 2017-18:
- 12 nos. of student grade Leica petrological microscope, 1 Leica stereo zoom microscope, 1 research grade Leica
  petrological microscope and one Leica DGPS system had been procured with the DST-FIST, 2016 grant
  during this period.
- A research grade microscope (Olympus) and number of minor equipments were procured through RUSA grant
- The Internet Network connected to the NKN facility of GU was upgraded through replacement of earlier network
- 27. Linkages developed with National/International/Academic/Research Bodies:

Linkages developed through collaborative research programme with the following academic and research institutions:

- Birbal Sahni Institute of Paleobotany
- Nagaland University
- Centre of Excellence in Energy Research, Oil India Ltd., Guwahati
- **28.** Academic activities of Faculty members during the period of report (2017-18)
- 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
Prof. A C. Mazumdar	0	0	0
Prof. B. P. Duarah	0	0	0
Prof. Parag Phukon	2	4	1
Sarat Phukan	0	0	0
Bikash Gogoi	2	0	2
J. J. Laskar	0	0	0
Balen Bhagabaty	1	1	1
Pranjit Hazarika	0	2	0

- Name of the teacher(s) acted as resource person(s) during the period (state briefly)
   Prof. Parag Phukon, Prof. B. P. Duarah, Prof. Sarat Phukan, Dr. Bikash Gogoi, Dr. Balen Bhagabati and Dr. Pranjit Hazarika delivered lectures at various forums
- c) Refresher Course/ Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
X	X	X

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
Machahary, Ratamali and Phukon, P	Analysis of Erosion vulnerability of an alluvial segment of the Brahmapugtra river between Disangmukh and Dhansirimukh, Assam	Bulletin, Ind. Geol. Cong., 2017, 9:1
Priyam L. Borgohain, Sarat Phukan & Dilip R. Ahuja	Downstream channel changes and the likely impacts of flow augmentation by a hydropower project in River Dikrong, India	International Journal of River Basin Management, 2018, 10.1080/ 15715124.2018.1439497
Watinaro Imsong, Swapnamita Choudhury, Sarat Phukan & B. P. Duarah	Morphodynamics of the Kulsi River Basin in the northern front of Shillong Plateau: Exhibiting episodic inundation and channel migration	Journal of Earth System Science, 2017, 127:5.
Arpita Sharma, Sarat Phukan, Binoy K. Saikia and Bimala P. Baruah	Geochemical evaluation of the hydrocarbon prospects of carbonaceous shale and coal of Barail Group, Upper Assam Basin	International Journal of Oil, Gas and Coal Technology, DOI: 10.1504/ IJOGCT.2019.10012759
Balen Bhagabaty and A. C. Mazumdar,  Bhagabaty, Balen and A.	Geochemical Characteristics of Tukreswari and Borbhita Granitoid in Goalpara District, Assam. Geochemistry of Precambrian metapelites	Journal of Geological Society of India, 89:5  International Research Journal of Earth
C. Mazumdar,	from Patharkhang, West Khasi Hills district,	Sciences, 5:8

	Meghalaya, India.	
Bhagabaty, Balen and A. C. Mazumdar,	Geochemistry of Precambrian metapelites from Patharkhang, West Khasi Hills district, Meghalaya, India.	Open Journal of Geology, 7
Hazarika, P., Mishra, B., & Pruseth, K. L.	Trace-element geochemistry of pyrite and arsenopyrite: ore genetic implications for late Archean orogenic gold deposits in southern India	Mineralogical Magazine, 2017, 81:3
Mishra, B., Pruseth, K. L., Hazarika, P., & Chinnasamy, S. S. Dutta, Parag Jyoti, Sarma, S., and Laskar, Jayanta Jivan	Nature and source of the ore-forming fluids associated with orogenic gold deposits in the Dharwar Craton  Predicting the spatial distribution of rain-induced shallow landslides by applying GIS and Geocomputational Techniques:  A case study from North East India.	Geoscience Frontiers, 2018, 9:3  International Journal on Recent & Innovation Trends in Computing and Communication. 2017, Vol.5, No.5, p. 1306-1319.
Konwar, S., <b>Laskar</b> , <b>J.J.</b> , and Borah, M.  Rahman, N.S., and <b>Laskar</b> , <b>J.J.</b>	Geotechnical studies to assess the stability of large granite and gneiss boulders occurring on hillslopes at Katabari, Gorchuk in Guwahati, Assam, India	International Journal of Applied Environmental Sciences. 2017, Vol.12, No.5, p. 877-886  Asian Journal of Multidisciplinary Studies2017, Vol.5, No.8, p. 32-39.
Saikia, S., <b>Laskar, J.J</b> . and Rahman, N.S.	Lithofacies associations and channel flow characteristics associated with a Unit Bar of the Brahmaputra River in Dibrugarh, Assam, India	International Journal of Recent Scientific Research. 2017, Vol.8, No.11, p.21392 – 21398
Saikia, S.,and <b>Laskar, J.J.</b>	Geotechnical analysis of river bank slopes in the southern part of Majuli, Assam, India,	Asian Journal of Multidisciplinary Studies, Vol.5. No.11, p. 262-267
Sonowal, S. and <b>Laskar</b> , <b>J.J</b> . Saikia, S, and <b>Laskar</b> , <b>J.J</b> .	An account on bedform features and lithofacies types of the Brahmaputra River found in Kakari Kata Bar, Majuli	International Journal of Recent Scientific Research. Vol.8, No.11, p. 21392 - 21398. International Research Journal of
Srivastava, S.K., Laskar, J., Keditsu, V. and Awomi,	District, Assam.  Studies on textural characteristics of the Jiadhal river sediments, Dhemaji District, Assam, North east India.	Environmental Sciences2017, Vol.6, No.11, p. 16-22  Journal of Applied Geochemistry2018, Vol.20, No.1, p. 41-49
	Mineralogical composition and spatial variation of suspended sediments in a 2nd order channel of the Brahmaputra River in Majuli, Assam, India.  Petrography and major element	
	geochemistry of Palaeogene sandstones, south of Kohima town, Nagaland	

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
X	X	X

## f) Details of book published during the period:

Name of the faculty	Title of the Book(s)	Date of publications			
Mahananda Borah, Balen Bhagabaty	Gems and Jewels	2017			
and P. K. Das					
Phukan, Sarat and Jahnavi Khound	Coal Deposits of Northeast India	2017			

**<sup>28.</sup>** a) Placement record during the period (Please state briefly):

As per record of the department the following passed out students of 2014-15 batch and research scholars got employment in the organization indicated against their names:

	Name of the student	Employer
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1.	Rajashree Gogoi	Geologist in Oil India Ltd. through Campus Recruitment
2.	Manaswita Bordoloi	Geologist in Oil India Ltd. through Campus Recruitment
3.	Dicton Saikia	Assistant Geologist at Geological Survey of India
4.	Sorat Konwar	Assistant Professor, Department of Geology, JB College

- b) Placement services provided during the period (Please state briefly): A campus placement by the Oil India Ltd. had been organized in the Department and two students got placement.
- 29. Is there any Student Counseling Unit in the Department/Centre? If yes state activities during the period under report: Yes
- **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	753
b)	New Books procured during the period	24
c)	No. of Journals as on 31.03.2014	Department relies on the journals available in the Central Library and also on the online journals 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: Impact factor: 0.824
- 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, research scholars and students of the Department organized an exhibition cum demonstration programme on geology for the benefit of the students of Nalbari Jatia Vidyalaya, Bagurihati High School and Goalpara High School in 28 October, 2017

- 38. Provision for financial aid to students in the Department/Centre, if any: Nil
- 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.
  At individual level, teachers occasionally take feedbacks from students on the teaching-learning process
- **40.** Information on up to five Good Practices followed by the Department/Centre:
- (a) Maintaining a clean and green ambience of the department. A plantation and mass cleaning was organized on 15August and 15 October, 2017 involving students, research scholars and teachers as well as non teaching staff members.
- (b) Departmental activities are conducted through participatory management. Teacher in-charge for Departmental Examination Cell, Career Counseling, Training and Placement Cell, Seminar Library, Departmental Quality Assurance Cell, Geolgical Museum, Various labs takes care of the respective issues. Student Coordinators from each of the classes are entrusted to liaise various student related activities.
- (c) Punctuality and regularity in classes is strictly adhered to by the teachers. Attendance of students through a signature
  - system in each class ensures a transparent way of record keeping and a monthly release of attendance record for all the students help keep track of their regularity in classes.
- (d) As part of student enrichment programme occasional thematic talks are arranged. In the last academic session altogether 11 invited lectures were organized in the Department by the Placement Cell. Renown faculty from IIT-Kharagpur appointed as Visiting Professor, takes classes on selected topics of the syllabus for the benefit of students. Summer training programmes are arranged for students in different industry and research organizations, wherever possible.
- (e) Well equipped labs, well stocked Geological Museum and Departmental Library which remains open 24X7 and a

positive student-teacher relationship provide a healthy academic ambience in the department

- **41.** Detail the plans of the Department/Centre/Institute for the next year :
- Improving the lab. facility (Viz., Geoinformatics lab, chemical lab, petrology lab, hydrogeology lab) and strengthening

the departmental library through more procurement of books

- Introducing a two module evening course in geoinformatics
- Conducting workshops as part of extension activity using DST-FIST microscope facility
- Developing linkages with other academic and research organizations

# ANNUAL REPORT: DEPARTMENT OF MATHEMATICS GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017TO MARCH 2018)

1. a. Name of the Department : Mathematics b. Year of establishment :1948

2. Head of the Department :Prof. R. K. Deka

3. Details of academic staff:

Sl.	Name of teacher	Designation	Full Time/	Sex	Caste	Citation
No.			Contractual	(Male/Female)		Index
1	Dr. KuntalaPatra	Professor	Full Time	F	GEN	2
2	Dr. Rita Choudhury	Professor	Full Time	F	GEN	
3	Dr. Helen	Professor	Full Time	F	GEN	
	KumarSaikia					
4	Dr. RudraKanta Deka	Professor	Full Time	M	GEN	
5	Dr. Nazibuddin	Professor	Full Time	M	GEN	
	Ahmed					
6	Dr.HemantaKumar	Professor	Full Time	M	GEN	
	Sarmah					
7			Full Time		GEN	
	Dr. Kanika Das	Professor		F		
8	Dr. Chandra	Associate	Full Time	F	GEN	
	RekhaMahanta	Professor				
9	Dr. BipanHazarika	Associate	Full Time	M	GEN	
		Professor				
10	Dr. NilakshiGoswami	Asstt.	Full Time	F	GEN	
		Professor				
11	Dr. HemenDutta	Asstt.	Full Time	M	GEN	
		Professor				
12	Dr.	Asstt.	Full Time	M	GEN	
	DebasishBhattacharjee	Professor				
13	Dr. Ranu Paul	Asstt.	Full Time	F	GEN	
		Professor				
14	Dr. JituparnaGoswami	Asstt.	Full Time	Full Time M		
	_	Professor				
15	Dr. UtpalJyoti Das	Asstt.	Full Time	M	GEN	
		Professor				

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

## Name of Special Papers

1. Algebra

- Functional Analysis
- Fluid Dynamics
- 4. Relativity
- 5. Space Dynamics
- Algebraic Topology 6.
- Fuzzy Sets and 7. application
- Mathematical Logic 8.
- Computer Algebra
- 10. Partial Differential Equation
- 11. Programming with C
- 6. New Academic Programme initiated during the period under report :M.Phil
- 7. Innovation in Curricular design :Yes
- Inter disciplinary Programmestarted :Yes 8.
- Department/Centre under: SAP/COSSIST(ASSIST)/DST/FIST: NIL 9.
- 10. Total number of Research Scholar working at present:

a) Full Time:04 b) Part time:33

11. Enrolment of Students in various courses (April 2017- March 2018):

Courses	Sem	Intake Capacity	Ac	No. Imitte	ed		S.C.			S.T(I	<b>P</b> )	S.	T.(H	(I)	OBO	C/M	OBC
			M	F	T	M	F	Т	M	F	T	M	F	T	M	F	T
		80	58	22	80	3	1	4	9	3	12	0	0	0	15	2	17
Post-																	
Graduate																	
M.Phil.																	
Ph.D.			3	1	4	2	0	2				0	0	0	0	1	1
Others																	

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

No. of Teacher	No. of studen	nt	No. of Non-teaching staff
15	160		5
Teacher/Student Rati	io	Tea	cher-Non-teaching Staff Ratio
3:32		3:1	

13. Final Examination result during the session 2017-18:

(a) No. Appeared

Subject		Total			S.C.			S.T(1	<b>?</b> )	S.	Т.(Н	()	OB	C/M(	OBC	]	Р.Н.	
	Α	ppeare	ed															
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	43	31	74															

(b) No. Passed

Subject		Fotal assed		S.	C.			S.T(I	<b>P</b> )	\$	S.T.(	(H)	OBC	C/M(	OBC
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	38	25	63												

#### 14. Details of Ph.D. awarded (2017-18):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
HemenBharali	A study on ore's harmonic numbers and some generalized forms, including a few group theoretic aspects	Prof. Helen K Saikia
Anjan Kumar Deka	A Study of Some Steady and Unsteady Heat and Mass Transfer Problems	Dr. DipakSarma
Bhabesh Das	A study on perfect numbers and associated arithmetic functions	Prof. Helen K Saikia
Bandita Das	Flow behavior of some momentum and heat transfer problem in visco-elastic fluids	Prof. Rita Choudhury
Mridul Ch. Das	Study of various bifurcation and their associated properties in nonlinear systems	Prof. H. K. Sarmah
Bijoy Kamal Bhattacharyya	A study on some local and global properties of the chaotic Logistic map	Prof. Hemanta Kr. Sarmah
ManasDutta	Analytical and numerical solutions of some Hydrodynamic and Hydromagnetic flow problems	Prof. N. Ahmed

Dipankar Das	A study of some fixed point theorems in tensor product spaces	Dr. NilakshiGoswami
Ali Hussain Sheikh	Analytical solutions of some problems on MHD convective flow through channels and past flat plates	Prof. N. Ahmed
SumanAgarwalla	A study of some hydromagnetic and hydrodynamic heat transfer problems	Prof. N. Ahmed
Rumi Chaharia	Study of non linear wave phenomena in plasma	Dr. Nirupama Devi
SuwagMoni Das	A Theoretical Analysis of some hydrodynamic and hydromagnetic flow problems with heat and mass transfer	Prof. N. Ahmed
RekhaKalita	Studies of Non linear waves in plasmas with various compositions	Prof. B. C. Kalita
PramilaKumariPrajapati	Analysis on Stability of Periodic Orbits, Limit Cycles and Hopf Bifurcations in non linear differential equations	Prof. T. K. Dutta
NitinSarma	A study of cosmological dynamics in some modified gravity models	Dr. C. R. Mahanta

## 15. Number of students qualified in :

NET(JRF)	NET	SLET	GATE	Any others
NIL	01	7	1	

<sup>16.</sup> Important students' activities and achievements and awards during the period (Please state briefly ) NabanitaGoswami, a research scholar of the department, presented a poster in the IWM Annual conference 2017 held at IISc Bangalore from 13<sup>th</sup> July to 15<sup>th</sup> July 2017.

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

Sl.No.	Name of the Co-ordinator	Name of the Seminar/Summer School/ Workshop/ Refresher	Date	Sponsorship
1	Prof. R. K. Deka	Course  Late B.C. Deka Memorial Lecture	29 <sup>th</sup> January, 2018	Endowment fund

18. Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18):

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

19. Visit abroad by the Faculty members (2017-18): NIL

Name of the Faculty	Institute visited	Purpose	Period

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

Name of the Principal	Title of the Project	Funding	Duration	Amount(Rs.)
Investigator		Agency		
Prof. Rita Choudhury	Mathematical Modeling in MHD Visco-Elastic Fluid with emphasis on heat and mass transfer	UGC	3 years (July 2015-June 2017)	Rs.15,45,000/-

(b) Patent Generated:

Sl. No.	Name of Faculty	Patent Generated	Remarks

21. Academic distinction earned by the students during (2017-18):

Sl.No.	Name of Examination/Programme	Name of the student	Position held
1.			

22. Distinguish visitors to the Department during the period 2017-18 :

Name of visitors	Address & Designation	Purpose of visit

Dr. Promode K Saikia	Professor, NEHU	Viva-voce exam
Dr. B. R. Sarma	Professor, Dibrugarh University	Viva-voce exam
Dr. S. K. Tomar	Professor, Panjab University	Bhupati Deka Memorial Lecture
Dr. T. K. Dutta	Professor, Calcutta University	Viva-voce exam
Dr. Prabir Kr. Kundu	Professor, Jadavpur University	Viva-voce exam
Dr. S. N. Bora	Professor, IIT, Guwahati	Viva-voce exam
Dr. Ranjit Singh Maibam	Professor, Manipur University	Viva-voce exam
Dr. Kallol Paul	Professor, Jadavpur University	Viva-voce exam
Dr. MridullaKanoria	Professor, Calcutta University	Viva-voce exam
Dr. RajkumarRoychoudhury	ISI, Kolkata	Viva-voce exam
Dr. PrasantaChatterjee	Professor, Calcutta University	Viva-voce exam
Dr. M.S. Chaudhuri	Professor,	Viva-voce exam
Dr. UdayChand Dey	Professor, Calcutta University	Viva-voce

- 23. Creation/Increase in infrastructural faculties in the Department/Centre during the period 2017-18:NIL
- 24. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:
  - (a) Computer access is there to all the faculty members, research scholars, students and office staff.
  - (b) Internet Access is there to all the faculty members, research scholars, students and office staff. In the western wing of the department new internet ports were provided during this period.
  - (c) Training to teachers, non-teaching staff and students : NIL
- 25. Technology up gradation in the Department/Centre during the period 2017-18:
- 26. Linkages developed with National/International/Academic/Research Bodies:
- 27. Academic activities of Faculty members during the period of report (2017-18):

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

Name of the faculty(s)	No. of Seminar	No. ofWorkshop
Prof. K. Patra	2	1
Prof. R. Choudhury	3	1
Dr. Ranu Paul	1	

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

#### Prof. KuntalaPatra:

Acted as invited speaker ,in the National Conference- March 9-10, 2018 at Imphal Acted as Invited speaker in an International conference from March 24<sup>th</sup> to 25<sup>th</sup>, 2018, Agartala, Tripura University.

#### **Prof. Rita Choudhury:**

Invited speaker and chairperson in the International conference on recent trends in Mathematical Sciences organized by the Department of Appl Mathematics, MBB University jointly with Tripura Mathematical Society during 24-25 March, 2018.

Invited speaker and chairperson in 105<sup>th</sup> Indian Science Congress held in Manipur University, Imphal, 16-20 March, 2018

Invited speaker and chairperson in the International conference on Emerging Technologies in Data Mining and Information Security held in IEM Group, Kolkata during 23-25 February, 2018.

Invited speaker in the Orientation Programme (Mathematics Department) held in the University of Science and Technology (USTM), Meghalaya on 07.09.2017.

#### Dr. C. R. Mahanta

Resource person in the orientation workshop on Mathematics held in Maharishi VidyaMandir, Silpukhuri during 27 jun, 2017 to 2<sup>nd</sup> July, 2017.

**Dr. RanuPaul :**Attended one International conference on "Mathematical Sciences for Advancement of Science and Technology" (MSAST 2017) during December 21-23, 2017

Paper Presented Global stability analysis of tumor free critical points to control growth of tumor in an immune-tumor drug model.

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

Name of the faculty	Refresher Course	Orientation Course
Dr. U.J. Das	Participated in a Refresher Course	
	"Emerging Trends in Science &	

	Technology (IDC) -I" held at	
	Human Resource UGC-Human	
	Resource Development Centre,	
	Gauhati University, Guwahati from	
	25 <sup>th</sup> October to 14 <sup>th</sup> November 2017	
Dr. Ranu Paul	01 (January 30,2018 to February 19,	
	2018)	

#### (FOR THE PERIOD APRIL 2017TO MARCH 2018)

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

#### Prof. KuntalaPatra

- 1. On the subset graph of a near ring, International J. of Math. Archive Vol 8 (3), 2017 ISSN 2229-5046
- 2. On a generalized zero division graph of a commutative ring with respect to an ideal, Communications in Mathematics and Application. Vol. 8. No.3, 2017, ISSN 0975-8607.
- 3. On a zero –division based graph structure of a commutative ring. Asian J. of Mathematics and computer research Vol 25 (3), 2018. ISSN 2395-4205

**Prof. Rita Choudhury** 

1101.1	ata Cnoudnury			
Sl.	Title of the publication	Year of	Name of journal	ISBN/ISSN
No.		Publication	where published	
1.	Flow Features of a conducting Visco-	2017, Vol.	Global Journal of	0973-1768
	Elastic past a vertical permeable plate, Rita	13, No. 9,	Pure and Applied	
	Choudhury and BamdebDey	pp 5687-	Mathematics,	
		5702	India	
2.	Impact of Visco-Elastic of MHD Free	2017, Vol.	Advances and	0973-4686
	convective flow past a vertical surface	20, No. 2,	application in fluid	
	embedded in porous medium, Rita	pp. 211-	Mechanics, INDIA	
	Choudhury and BamdebDey	228		
3.	Diffusion-Thermo and Thermo-Diffusion	2017, Vol.	International	0975-4024
	Effects on Heat and Mass Transfer MHD	9, No. 3,	Journal of	
	Visco-Elastic Flow past a plate, Rita	pp471-482	Engineering and	
	Choudhury and Bibhash Deka		Technology,	
	-		INDIA	
4	MHD visco-elastic fluid flow and heat	2017, Vol.	WSEAS	2224-347X
	transfer around a circular cylinder, Rita	12, pp 98-	Transactions on	
	Choudhury and Bibhash Deka	107	Fluid Mechanics,	
			GREECE	
5	Hydromagnetic channel flow of a second	2017, Vol.	ActaTechnicaCsav	0001-7043
	grade fluid induced by Thermal Radiation	62, No. 3,	(CeskoslovenskAk	
	and Chemical Reaction, Rita Choudhury	pp. 207-	ademieVed),	
	and Bibhash Deka	220	Czech Republic	
6	Unsteady Thermal Radiation effects on	2018, Vol.	International	0973-1377
	MHD convective slip flow of visco-elastic	57, No. 2,	Journal of Applied	
	fluid past a porous plate embedded in	pp. 215-	Mathematics and	
	porous medium, Rita Choudhury and	226	Statistics, INDIA	
	BamdebDey			
	·			<u> </u>

#### Prof. Helen K Saikia

- 1. On total directed graphs of non-commutative rings, KukilKalpaRajkhowa, Helen K. Saikia. AKCE *International Journal of Graphs and Combinatorics*, December 2017, Volume 14, Issue 3, pp 261–268.
- 2. On \*\*torsion module, Himashree Kalita, Azizul Hoque, Helen K. Saikia. *Bollettinodell'UnioneMatematicaItaliana*, June 2017, Volume 10, Issue 2, pp 223–228.
- 3. On abundancy index of some special class of numbers, Bhabesh Das, Helen K. Saikia. *Sohag Journal of Mathematics*, May 2017, Volume 4, Issue 2, pp 37-40.

#### Prof. R. K. Deka

- Effect of variable viscosity on a nanofluid over a porous wedge. International Journal of Fluid Mechanics Research, DOI:10.1615/InterJFluidMechRes.2018019500 pages 355-368, 2018.
- 2. Transient free convection flow past vertical cylinder with constant heat flux and mass transfer. Ain Shams Engineering Journal (2017) 8,643-651
- 3. Unsteady Natural Convection Flow past an Infinite Cylinder with Thermal and Mass Stratification. International Journal of EngineeringMathematics, Volume 2017, Article ID 8410691, 13 pages

Sl. No	Title with page nos	Journal	ISSN/ISBN no	Whether peer reviewed, Impact Factor, if any
1	Natural convection in transient MHD dissipative flow past a suddenly started infinite vertical porous plate: A finite – difference approach, 49(6), 491-508, 2018	Heat Transfer Research, Begell House(SCI)	2162-6561	Impact Factor 0.93
2	Radiation Effect on Unsteady MHD Flow past a semi-infinite vertical porous plate in presence of thermal diffusion and chemical reaction,21(3),305-323, 2018	Advances and Applications in Fluid Mechanics	0973-4686	Peer reviewed
3	MHD mass transfer flow past an inclined plate with variable temperature and plate velocity embedded in a porous medium, 47,27-41, 2018 DOI: 10.1002/htj.21288	Heat Transfer - Asian Research ( Wiley, Web of Science)	1099-2871 and 1523-1496	
4	MHD free convective dissipative flow past a porous vertical plate in presence of heat sink, 14(1), 17-36, 2018	Journal of Calcutta Mathematical Society	2231-5314	Peer reviewed
5	Steady MHD mass transfer flow in presence of heat sink and chemical reaction, Vol. 44(1), 15-39, 2017	International Journal of fluid mechanics research, Begell house( Web of Science)	2152-5102	Peer reviewed
6	Effects of thermal radiation and chemical reaction on transient MHD free convection Couette flow in a porous medium ,20(2),229-248, 2017	Advances and Applications in Fluid Mechanics ( Scopus)	0973-4686	Peer reviewed
7	Effect of radiation on convective MHD flow past a moving vertical porous plate, 20(3), 363-374, 2017 (July)	Advances and Applications in Fluid Mechanics ( Scopus)	0973-4686	Peer reviewed
8	Heat and mass transfer in transient MHD radiating flow through an infinite annulus in a porous medium in presence of chemical reaction ,13(1), 1-24,2017	Journal of Calcutta Mathematical Society	2231-5314	Peer reviewed
9	Thermal diffusion effect on MHD oscillatory channel flow with slip condition and mass transfer	Journal of Rajasthan Academy of Physical Sciences	0972-6306	Peer reviewed
10	Hydromagnetic free convective flow past a vertical plate moving with time dependent plate velocity,96(6), 331-350, 2017	Far East Journal of Applied Mathematics	0972-0960	Peer reviewed
11	Soret effect on oscillatory MHD free convective flow past a vertical porous plate in slip-flow regime with chemical reaction and radiation, 13(1), 41-58, 2017	Journal of Calcutta Mathematical Society	2231-5314	Peer reviewed
12	Unsteady MHD free convective flow past a moving vertical plate in presence of heat sink,16(1,2), March-June, 2017,21-39.	Journal of Rajasthan Academy of Physical Sciences	0972-6306	Peer reviewed
13	Soret and Dufour effects on MHD convective flow past a moving vertical porous plate in presence of thermal radiation, 32(2),147-166, 2017	Bulletin of the Allahabad Mathematical Society	0971-0493	Peer reviewed

## Dr. C. R. Mahanta

- 1. Bianchi type II universe with wet dark fluid in general theory of relativity- Astrophysics and space
- science, Vol. 362, issue 9 p. 154 (2017) issn-0004-640X
  Anistropic ghost dark energy cosmological model with hybrid expansion law-New Astronomy, Vol. 57, p.70 (2017) Dr. BipanHazarika

	Title with Page No.		Journal name and	Whether peer reviwed,
S. No		Authors as they appear	ISBN/ISSN No	Impact factor if any
	1 <sup>st</sup> April 2017 to 31 <sup>st</sup> March 2018			
1	On arithmetical summability and multiplier aequences, 40(1)(2017), 43-46	TajaYaying and BipanHazarika	National Academy Science Letters, Springer Publications, ISSN No: 0250-541X	peerreviwed, SCIE, IF 0.345
2	Some new Fibonacci difference spaces of non-absolute type and compact operators, 65 (12) (2017), 2551–2573	Anupam Das and BipanHazarika	Linear and Multiliear Algebra, Taylor and Francis, ISSN No 1563-5139	peerreviwed, SCIE, IF 0.89
3	Application of geometric calculus in numerical analysis and difference sequence spaces, 449 (2) (2017), 1265–1285	KhirodBoruah and BipanHazarika	Journal of Mathematical Analysis and Applications, Elsevier Publications, ISSN No 0022-247X	peerreviwed, SCI (Science Citation Index), IF 1.014
4	Pointwise ideal convergence and uniformly ideal convergence of sequences of fuzzy valued functions, 32 (3) (2017), 2665–2677	BipanHazarika	Journal of Intelligent and Fuzzy Systems, ISSN No-1064- 1246	peerreviwed, SCIE, IF 1.261
5	Some classes of ideal convergent sequences and generalized difference matrix operator, 31(6)(2017), 1827-1834	Syed Abdul Mohiuddine and BipanHazarika	Filomat, ISSN No- 0354-5180	peerreviwed, SCIE, IF 0.695
6	On asymptotically Wijsmanlacunary statistical convergence of set sequences in ideal context, 31(9)(2017), 3691-3703	<b>BipanHazarika</b> and AyhanEsi	Filomat, ISSN No- 0354-5180	peerreviwed, SCIE, IF 0.695
7	On statistical convergence of double sequences of fuzzy valued functions, 32(6)(2017), 4331-4342	S.A. Mohiuddine, BipanHazarika and Abdullah Alotaibi	Journal of Intelligent and Fuzzy Systems, ISSN No-1064- 1246	peerreviwed, SCIE, IF 1.261
8	Solvability of the infinite system of integral equations in two variables in the sequence spaces $c_0$ and $\ell_1$ , 326(2017) 183-192	Anupam Das, Bipan Hazarika, Reza Arab and M. Mursaleen	Journal of Computational and Applied Mathematics, Elsevier Publication, ISSN No 0377- 0427	peer reviwed, SCI, IF:1.357
9	On arithmetic continuity in metric spaces, 28(2017), 985-989	Taja Yaying and Bipan Hazarika	Afrika Matematika, Springer Publications, ISSN: 1012-9405	peer reviwed, SCOPUS
10	On some generalized geometric difference sequence spaces, 36(3)(2017), 373-395	Khirod Boruah and Bipan Hazarika	Proyecciones Journal of Mathematics, ISSN: 0717-6279	peer reviwed, SCOPUS

11	Some applications of similarity of soft sets, 33(6)(2017), 3767-3777	Manash Jyoti Borah and <b>Bipan</b> <b>Hazarika</b>	Journal of Intelligent and Fuzzy Systems, ISSN No-1064- 1246	peer reviwed, SCIE, IF 1.261
12	Some properties of Generalized Fibonacci difference bounded and p- absolutely convergent sequences, 36(1)(2018),37-50	Anupam Das and Bipan Hazarika	Boletim da Sociedade Paranaense de Matematica, ISSN No: 0037- 8712	peer reviwed, SCOPUS
13	Matrix transformation of Fibonacci band matrix on generalized <b>bv</b> -space and its dual spaces, 36(3)(2018) 41-52	Anupam Das and Bipan Hazarika	Boletim da Sociedade Paranaense de Matematica, ISSN No: 0037- 8712	peer reviwed, SCOPUS
14	Metric-like spaces to prove existence of solution for nonlinear quadratic integral equation and numerical method to solve it, 328(2018) 302-313	Bipan Hazarika, Erdal Karapınar, Reza Arab and Mohsen Rabbani	Journal of Computational and Applied Mathematics, Elsevier Publication, ISSN No 0377- 0427	peer reviwed, SCI, IF:1.357
15	Some operators on intervalvalued Hesitant fuzzy soft sets, 29(3)(2018), 509-529	Manash Jyoti Borah and <b>Bipan</b> <b>Hazarika</b>	Afrika Matematika, Springer Publication, ISSN: 1012-9405	peer reviwed, SCOPUS
16	Existence of solution foran infinite system of nonlinear integral equations via measure of noncompactness and homotopyperturbation method to solve it, 343(2018) 341-352	Bipan Hazarika, H. M. Srivastava, Reza Arab and Mohsen Rabbani	Journal of Computational and Applied Mathematics, Elsevi er Publication, ISSN No 0377- 0427	peer reviwed SCI, IF:1.357

#### Dr. Nilakshi Goswami

- (1) Some fixed point theorems in the projective tensor product of 2-Banach spaces, Global Journal of advanced research on classical and Modern Geometries, Vol. 6 (Issue 1), Page 20-36, 2017.
- (2) Some Results on Positive elements in the Tensor product of C\*-algebras, International Journal of Mathematics Trends and Technology, Vol. 51, No. 3, Page 1-7, November, 2017.
- (3) On a subset of invertible elements of C\*-algebras and some related fixed point theorems, Journal of Tripura Mathematical Society, Vol 19, page 21-37, 2017.
- (4) Hyers-Ulam-Rassias stability of an additive functional Equation in b-metric spaces, Journal of Assam Academy of Mathematics, Vol. 8, Page 12-25, February, 2018.
- (5) Some Results on Stability of bi-exponential functional equations over b-metric spaces, Journal of Global Research in Mathematical Archieves, Vol. 5, No. 3, Page 106-112, March, 2018.

#### Dr. Hemen Dutta

- 1. Identities on some special poynomials derived from the concepts of *n*-normed structures, accretive operators and contraction mappings, Iranian Journal of Science and Technology, Transactions A: Science, Vol. 42, No. 2, 2018, pp. 787-792 (SCI-Exp., IF: 0.757) (jointly with M. Kir, M. Acikgoz and S. Araci)
- 2. Statistical deferred weighted *B*-summability and its applications to associated approximation theorems, Journal of Inequalities and Applications, 2018:65, 27 March 2018, 21 pages (SCI-Exp, IF: 0.966) (jointly with T. Pradhan, S.K. Paikray, B.B. Jena)
- 3. Mathematical Modelling of Bacterial Meningitis Transmission Dynamics with Control Measures, Computational and Mathematical Methods in Medicine, Article ID 2657461, 27 March 2018, 22 pages. (SCI-Exp, IF: 1.545) (jointly with J.K.K. Asamoah, F. Nyabadza, B. Seidu, M. Chand)
- 4. Characterization of matrix classes involving some sets of sequences of fuzzy numbers, Filomat, Vol. 31, No. 19, 2017, pp. 6101–6112. (SCI-Exp., IF: 0.695) (jointly with J. Gogoi)

- 5. An extension of rational contractive condition in partially ordered rectangular metric spaces, Miskolc Mathematical Notes, Vol. 18, No. 2, 2017, pp. 873–888. (SCI-Exp., IF: 0.388) (jointly with M. Kir, M.A. Akturk and E. Yolacan)
- 6. On the convergence of an iteration process for nonself totally asymptotically *I*-quasi-nonexpansive mappings, Proceedings of the Jangjeon MathematicalSociety, Vol. 20, No. 3, 2017, pp. 377-389 (Scopus) (jointly with B. Gunduz).

Dr. Utpal Jyoti Das

	Name of the	TPAL CAL . D	Name of the Toronal reduces as a second	
Sr. No.	Name of the	Title of the Paper	Name of the Journal, volume no., page no.,	
	faculty		year	
1	U. J. Das	Heat and mass transfer of MHD visco-elastic oscillatory flow through an inclined channel with	Latin American Applied Research, 47, 47-52, 2017.	
		heat generation/ absorption in presence of chemical reaction		
2	U. J. Das	Heat transfer to MHD oscillatory	Latin American Applied Research,	
		dusty visco-elastic fluid flow in an	47, 145-150, 2017.	
		inclined channel filled with a porous medium		
3	U. J. Das	Unsteady two dimensional	Journal of the Tripura Mathematical	
	(With S.	hydromagnetic visco-elastic flow	Society, 19, 38-51, 2017.	
	Dorjee)	and heat transfer along a porous oscillating channel		
4	U. J. Das	MHD oscillatory slip flow of visco-	Journal of the Assam Academy of	
	(With S.	elastic fluid through a channel	Mathematics, 18, 1-11, 2018.	
	Dorjee)	filled with porous medium	, , , ,	

## Dr. Debasish Bhattacherjee

DebasishBhattacharjee,(2017) "On Some Dynamical Behavior Of Modified Ricker Model", J.Assam.Acad.Math. Vol.7(2017) pp: 86-93

B. C. Kalita, S. Das, and D. Bhattacharjee (2017), "Determination of the measure of size (amplitude) of perturbation and its role in the process of enforcing discrete Korteweg-de Vriessolitons to modified Korteweg-de Vriessolitons as means of continuum hypothesis in a multi-component dusty plasma", Physics of Plasmas 24, 102121 (2017); doi: 10.1063/1.5005535

Dr. Jituparna Goswami

Name of the faculty	Title of the paper	Name of the Journals with Vol. No.
·		& Date
Jituparna Goswami	Characterization of a hyperperfect	MATEMATIKA, Vol. 33, No. 1,97-
	group	103, June 2017 (E-ISSN: 0127-
		9602)

Name of the faculty	Title of the paper	Name of the Journals with Vol. No.
		& Date
Jituparna Goswami	Some Properties of Strongly Perfect	Journal of Assam Academy of
	Groups	Mathematics, Vol. 8 (2018), pp:26-
		33 (ISSN:2229-3884)

#### Ranu Pau

e) Paper published in other journals during the period (only those considered for API Score). All given in 27 (d)

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
Hemen Dutta	An Introductory Course in Summability Theory, First Edition, John	
	Wiley & Sons, Inc., USA, 2017, ISBN: 9781119397694 (jointly	
	with A. Aasma and P.N. Natarajan)	

- 28. a) Placement record during the period (Please state briefly):
  - b) Placement services provided during the period (Please state briefly):
- 29. Is there any StudentCounseling Unit in the Department/Centre? If yes state activities during the period under report.
- ${f 30.}$  Placement services provided to students by the Department/Centre, if any:

31. Departmental Library:

a)	No. of Books as on 31.03.2017	6965	

b)	New Books Procured during the period	198
c)	No. of Journals as on 31.03.2017	58
d)	New journals procured during the period	04
e)	Number of users during the period	More than 300 users

- **32.** Departmental publications :
- 33. Details of Patents generated, if any: NIL
- **34.** Citation index of faculty members and impact factor:

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

- 35. Activities and support from the Parent-Teacher Associations if any: Positive
- **36.** 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.
  - **37.** Provision for financial aid to students in the Department/Centre, if any:

#### Scholarships/Prize awarded:

- 1. 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.
- Dr. B. C. Deka, Memorial Lecture and Award of Rs. 10,000/- with a citation is awarded every year to the 1<sup>st</sup> ranked student in MA/M.Sc. Mathematics
  - **38.** 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. Information on up to five Good Practices followed by the Department/Centre:

Wall Magazine (Prameyika)

Ramanujan Day celebration

Celebration of Amala Bezbaruah Memorial award ceremony

Bulletin of Gauhati University Mathematics Association

Phanidhar Datta Memorial Lecture (Every Year)

Teachers day celebration.

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

Extension of Library.

Extension of Computer Lab.

Modernization of Class Rooms.

Head, Deptt. of Mathematics

# ANNUAL REPORT DEPARTMENT OF PHYSICS GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017 TO MARCH 2018)

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/Associ ate 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: 48 h-index: 4
2.	Dr. Anurup Gohain Barua	Professor	Full Time	Male	OBC	Citations: 96 h-index: 6
3.	Dr. Madhurjya P. Bora	Professor and Head	Full Time	Male	GEN	Citations: 165 h-index: 5
4.	Dr. Buddhadev Bhattacharjee	Professor	Full Time	Male	GEN	Citations: 2881 h-index: 31

						1
5.	Dr. Deepali Sarkar	Professor	Full Time	Female	GEN	Citations: 399 h-index: 11
6.	Dr. Banty Tiru	Associate Professor	Full Time	Female	MOBC	Citations: 20 h-index: 2
7.	Dr. Kalpana Bora	Associate Professor	Full Time	Female	GEN	Citations: 103 h-index: 6
8.	Dr. Kushal Kalita	Associate Professor	Full Time	Male	GEN	Citations: 134 h-index: 7
9.	Dr. Biman J Medhi	Associate Professor	Full Time	Male	GEN	Citations: 168 h-index: 8
10.	Dr. Manos P. C. Kalita	Assistant Professor	Full Time	Male	GEN	Citations: 119 h-index: 5
11.	Dr. Sanjeev Kalita	Assistant Professor	Full Time	Male	GEN	Citations: 13 h-index: 2
12.	Dr. Abhijit Das	Assistant Professor	Full Time	Male	SC	Citations: 11 h-index: 3
13.	Dr. Bimal K. Sarma	Assistant Professor	Full Time	Male	GEN	Citations: 127 h-index: 8
14.	Dr. Sulochana Deb	Assistant Professor	Full Time	Female	GEN	Citations: 7 h-index: 2
15.	Dr. Simanta Hazarika	Assistant Professor	Full Time	Male	GEN	Citations: 26 h-index: 4
16.	Dr. Subhankar Roy	Assistant Professor	Full Time	Male	GEN	Citations: 7 h-index: 3
17.	Dr. Hemen Kumar Kalita	Assistant Professor	Full Time	Male	GEN	Citations: 125 h-index: 8
18.	Dr. Hirakjyoti Goswami	Assistant Professor	Full Time	Male	GEN	Citations: 5 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:
  - M. Sc. Physics Syllabi have been revised and restructured with effect from 2018 batch. Students' inputs have been considered for discussion and subsequent implementation of the new structure.
- 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: 33	b) Part time: 11

11. Enrolment of Students in various courses (April 2017- March 2018):

Courses	Se m	Intake Capac ity	A	No. dmitte	ed		S.C.		S.	T(P)	)	5	S.T.(	<b>H</b> )	ОВО	C/M(	ОВС		iffer y ab	
			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Post-	I	50	34	17	51	3	1	4	4	3	7	1	_	1	10	7	17	_	_	_
Graduate																				
(M. Sc.																				
Physics)																				
M.Phil.		N/A																		
Ph.D.		10	3	1	4	1	_	1	_	_	_	_	_	_	1	_	1	_	_	_
Others (M.Sc.Radi o-logical Physics)	I	10	5	6	11	1		1	1		1		-	_	1	2	3	_	-	1

No. of Teacher	No. of studer	nt	No. of Non-teaching staff
18	120		27
Teacher/Student Rati	io	Tea	cher-Non-teaching Staff Ratio
3:20		2:3	

## 13. Final Examination result during the session 2017-18:

(a) No. Appeared

Subject		otal peared		5	s.c.		9	S.T(I	?)	S	.T.(I	I)	ОВС	C/M(	OBC	Diffe a	erent bled	lly
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Physics	32	19	5 1	_	2	2	2	2	4	-	_	_	14	8	22	_	_	-
Radiological Physics	3	5	8	_	_	_	_	_	_	_	_	_	1	1	2	_	_	_

(b) No. Passed

Subject		Total Passed		5	S.C.			S.T(l	P)	;	S.T.(	(H)	OB	C/M	ЮВС		ffer abl	ent led
	M	F	T	M	F	Т	M	F	T	M	F	T	M	F	T	M	F	T
Physics	29	18	4 7	_	2	2	1	1	2	_	-	_	13	8	21		1	1
Radiological Physics	3	5	8	_	_	_	_	_	_	_	_	_	1	1	2	_	-	-

## 14. Details of Ph.D. awarded (2017-18):

Name of the Ph.D. Scholars	Title of the Ph.D. thesis	Guide
Dr. Kalyan Dey	A Study on the MUCH Geometry Optimization and Physics Observables of the Proposed FAIR-CBM Experiment	Dr. Buddhadev Bhattacharjee
Dr. Gayatri Ghosh	Aspects of fermion masses and mixings	Dr. Kalpana Bora
Dr. Punam Patgiri	Studies on some properties of photon induced Cosmic Ray air showers.	Dr. Kalyanee Boruah
Dr. Kuldeep Deka	Studies on microstructural, optical and magnetic properties of some transition metal doped semiconductor nanostructures	Dr. Manos P. C. Kalita
Dr. Upamanyu Sharma	Steady state and time resolved measurements of the bioluminescence emission of fireflies	Dr. Anurup Gohain Barua
Dr. Partha Pratim Dev Sarma	Synthesis and characterization of polypyrrole incorporated with biomolecule	Dr. Deepali Sarkar
Dr. Tapashi Das	A Study of Mesons and Glueballs.	Dr. Dilip Kr. Choudhury
Dr. Nibedita Kalita	Multi-band Studies of Blazars with XMMNewton	Dr. Kalpana Duorah
Dr. Baishali Saikia	A Study of Models of Nucleon Structure Functions	Dr. Dilip Kr. Choudhury
Dr. Bornali Chetia	Ionospheric Perturbation at varied Solar Geomagnetic Ambiences as seen through Satellite and Ground Based Techniques	Dr. Minakshi Devi
Dr. Mintu Das	Electrical and Optical properties of unpassivated and passivated nanoporous silicon	Dr. Deepali Sarkar
Dr. Yasmin Zahan	Understanding on growth and development processes of the Lower atmospheric turbulences leading to the severe weather condition at the subtropical environment by using Remote sensing Techniques	Dr. Minakshi Devi

## 15. Number of students qualified in:

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

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

Students participated in the Department Foundation Day Events where they showcased their talents by presenting science projects, scientific posters, etc. In addition, students are the active members of the organizing committee of the first ever Alumni meet cum get together organized by the Department in February 2018.

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

Sl.No.	Name of the	Name of the Seminar/Summer	Date	Sponsorship
	Coordinator	School/ Workshop/ Refresher		
		Course		
1	Dr. Kushal Kalita and Dr. Subhankar Roy	National Seminar on Progresses in Nuclear and High Energy Physics	30–31 March 2018	UGC-SAP(DRS- III)

## 18. Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18):

Name of the Faculty	Name of the Award/Fellowship	Conferring agency
Dr. Banty Tiru	Visiting Scientist	National Atmospheric Research
		Laboratory Gadanki
Dr. Buddhadeb Bhattacharjee	Physicist	GSI Helmholtzzentrum fur
		Schwerionerforschung
		GmbH, Darmstadt, Germany
Dr. Buddhadeb Bhattacharjee	Physicist	CERN, Switzerland
Dr. Hemen Kumar Kalita	Visiting Fellow	IIT Bombay
Dr. Kalpana Bora	Visiting Faculty	IIT Guwahati
Dr. Bimal K. Sarma	Outstanding Reviewer Status	Editors, Journal of Alloys &
		Compounds, Elsevier

#### 19. Visit abroad by the Faculty members (2017-18):

Name of the Faculty	Institute visited	Purpose	Period
Dr. Banty Tiru	National Atmospheric	Research work	March 2018 (4 days)
	Research Laboratory		
	Gadanki		
Dr. Buddhadeb	CERN, Switzerland	Research work	April 2017 (1 week)
Bhattacharjee			

#### 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. Bimal K. Sarma	ZnO based single layer and multilayer structures as smart transparent conductors	SERB (DST)	3 years	2274000.00
Dr. Buddhadeb Bhattacharjee	ALICE-Upgrade, Operation and Utilization	DST	5 years	18700000.00
Dr. Hemen Kumar Kalita	Graphene derivatives as resistive and capacitive based prototype sensor for soil moisture detection for agriculture applications	UGC	2 years	1000000.00
Dr. Hemen Kumar Kalita	Surface engineered graphene as toxic gas sensors	G. U.	2 years	150000.00
Dr. Hemen Kumar Kalita	Surface engineered graphene based prototype sensor for soil moisture application	ASTEC	2 years	250000.00
Dr. Kalpana Bora	Neutrino nucleon scattering cross sections across energy scales	SERB (DST)	3 years 6 months	2100000.00
Dr. Manos P. C. Kalita	Near-Infrared Emitting Water Soluble Quantum	SERB (DST)	3 years	2642000.00

	Dot	S			
(b) Pot	(b) Patent Generated:				
Sl. No.	Name of the Faculty	Patent Generated		Remarks	

21. Academic distinction earned by the students during (2017-18):

Nil

Sl.No.	Name of Examination/Programme	Name of the student	Position held
1	Visited CERN to participate LHC shift and	Nur Hussain	JRF
	ALICE data analysis (May 2017)		
2	Visited CERN to participate LHC shift and	Pranjal Sarma	JRF
	ALICE data analysis ( May 2017)		
3	Visited ICTP to participate in "Advanced	Rubi Baishya	JRF
	School on Programmable System-on-Chip		
	for Scientific Instrumentation"		
4	Visited ICTP to participate in "Advanced	Priya Sarma	JRF
	School on Programmable System-on-Chip		
	for Scientific Instrumentation"		

22. Distinguished visitors to the Department during the period 2017-18:

Name of visitors	Address & Designation	Purpose of visit
		Delivered a talk on "CLOUDS:
Prof. Bhupendra Nath Goswami	Former Director, IITM, Pune	Building Blocks of Tropical Weather
		and Climate", 16/02/2018
Prof. M. Gupta	Professor, Punjab University	Delivered a talk on "Understanding
1 ioi. ivi. Gupta	1 Tolessor, 1 unjab Chryersity	the flavor Riddle", 29/01/2018
		Delivered a talk on "Stefan Meyer
Dr. Ken Suzuki	Scientist, Stefan Meyer Institute,	Institute in Vienna and studies of
Dr. Ken Suzuki	Vienna, Austria	hadrons with the PANDA
		Experiment at FAIR",26/05/2017
Mr. C. Dahamath	Scientist C, ASTEC, Patent	Delivered a talk on "Intellectual
Mr. S. Debanath	Information Center, Guwahati	Property Rights", 27/10/2017
	Post Doctoral Fellow, Department	
Dr. Donnoditvo Dol	of Physics, School of Natural	Delivered a talk on 07/04/2017
Dr. Bappaditya Pal	Science, Far Eastern Federal	Delivered a talk off 07/04/2017
	University, Vladivostok, Russia	

28. Creation /Increase in infrastructural facilities in the Department/Centre during the period 2017-18:

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. Descriptions of the major facilities of this department are presented below:

Computer Laboratory: 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.

Nuclear Physics Teaching Laboratory: The laboratory is upgraded and renovated with air conditioning facility. Spectroscopy Research Laboratory: Spectroscopy research laboratory is recently renovated.

Adv. Electronics Laboratory: Adv. Electronics laboratory is upgraded with air-conditioning system.

Smart class room: Physics Gallery is recently upgraded to modern Smart Class room with audio and visual facilities.

Astrophysics Research Laboratory: Astrophysics research laboratory is recently renovated.

High Energy Physics Research Laboratory: High Energy Physics research laboratory is recently upgraded with Latest Desktop PCs and air-conditioning system.

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

- (a) Newly upgraded Computer Laboratory has installed 25 nos. of All in One Desktop computers with i7 processor with LINUX o/s and other latest softwares.
- (b)Printing Black/White and Colour laser printing facility is also installed. Training is provided to students of M.Sc in Physics and M.Sc in Radiological Physics regularly.
- 30. Technology up gradation in the Department/Centre during the period 2017-18:

The Department of Physics has centrally managed, 24×7, high-speed wireless facility which is accessible at each and every point of the department. Wi-Fi and LAN facilities are updated recently in terms of increased access points, speed, and network troubleshooting capability, access point management, energy efficient ethernet and network security. Computer lab is modernized with the introduction of 20 numbers of high speed, up-to-date configuration computers (Core-i7). The departmental office is automated by introducing high-speed Wi-Fi and LAN, copying, scanning and remotely accessible printing facilities. CCTV cameras are installed at the entrance of the department which is accessible via departmental LAN. Physics Lecture Gallery is fully modernized with the addition of ICT-enabled facilities like smart board, lecture recording system, video conference facilities etc. Student attendance in first year is taken biometrically and the attendance records are made available online to the students.

- 31. Linkages developed with National/International/Academic/Research Bodies:
  - · CERN, Geneva, Switzerland
  - GSI, Dermstadt, Germany
  - Rutherford Appleton Laboratory, UK
  - University of York, UK
  - UGC, New Delhi
  - DST, Govt. of India
  - ASTEC, Assam
  - IASST, Guwahati
- 32. Academic activities of Faculty members during the period of report (2017-18):
- 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. Madhurjya P Bora	1	
Dr. Anurup Gohain Barua	4	
Dr. Banty Tiru	2	
Dr. Bimal Kumar Sarma	1	1
Dr. Buddhadeb Bhattacharjee	1	
Dr. Hemen Kumar Kalita	1	
Dr. Kalpana Bora	1	1
Dr. Kalyanee Boruah	2	
Dr. Manos P C Kalita	1	
Dr. Sanjeev Kalita		1
Dr. Subhankar Roy	1	

- b) Name of the teacher(s) acted as resource person(s) during the period (state briefly):
  - Dr. Madhurjya P Bora delivered invited special evening lecture Hymn to Agni the source of life, SERB School on Frontiers in Quantum Optics, IIT Guwahati December 2017.
  - **Dr. Anurup Gohain Barua** acted as a resource person and delivered a talk on *The Light of the firefly* in the seminar on Recent Trend in Biophysics, Jawaharlal Nehru College, Boko, February 2018.
  - Dr. Sanjeev Kalita acted as a resource person and delivered a talk on Stars as distant markers in the
    Universe in the State Level Master Resource Person Workshop cum training on Basic Observational
    Astronomy, April 2018.
  - **Dr. Bimal K. Sarma** acted as a resource person and delivered a lecture on *Micro/Nanostructured Semiconductors and Their Hybrid Thin Films with Special Mention of Plasma Nanotechnology* in the National Workshop on Thin Film Technology and Applications at NIT Nagaland, February 9–13, 2018.
- c) Refresher Course/Orientation Course attended by the teachers during the period:

Name of the faculty	Refresher Course	Orientation Course
Dr. Sanjeev Kalita		OP-115
Dr. Sulochana Deb		OP-115

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. Kalyanee Boruah	Broadening of the thermal	New Astronomy 55 (2017) 22

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	component of the prompt GRB	
	emission due to rapid temperature	
	evolution	
Dr. Anurup Gohain Barua	Coherence of the light of the	Current Science 114 (2018) 637
	firefly Luciola praeusta	
Dr. Madhurjya P. Bora	Dust acoustic solitons and polarization force	Physics of Plasmas 25 (2018)14501
	Strange behavior of rapidity	-
	dependent strangeness enhancement	
	of particles containing and not	Nuclear Physics A 965 (2017) 74
	containing leading quarks	
	Role of net baryon density on	
Dr. Buddhadev Bhattacharjee	rapidity width of identified particles	
	from the lowest energies available at	
	the CERN Super Proton Synchrotron	Physical Review C 96 (2017) 24903
	to those at the BNL Relativistic	
	Heavy Ion Collider and at the CERN	
	Large Hadron Collider Effect of annealing temperature on	
	optical properties of silver-PVA	Optik 157 (2018) 1115
	nanocomposite	Орик 137 (2010) 1113
	Morphological, structural and	T. P. T. P. C. COCC.
	electrical properties of polypyrrole	Indian J. Fibre Text. Res. 43 (2018) 66
	nano coated bamboo cellulose fibre	00
	One-pot synthesis of zinc oxide-	
D D 110 1	polyaniline nanocomposite for	Ceramic International 43 (2017)
Dr. Deepali Sarkar	fabrication of efficient room	11123
	temperature ammonia gas sensor	
	Development of room temperature ethanol sensor from polypyrrole	
	(PPy) embedded in polyvinyl alcohol	Polymer Bulletin 75 (2018) 3109
	(PVA) matrix	
	UV-Visible optical photo-detection	C 14' 1M'
	from porous silicon (PS) MSM	Superlattices and Microstructures 101 (2017) 228
	<u>device</u>	101 (2017) 228
	An analysis of frequency selectivity	ARPN Journal of Engineering and
Dr. Banty Tiru	of indoor power line channels for	Applied Sciences 13 (2018) 2213
	broadband communication  Effects of Leptonic Nonunitarity on	
	Lepton Flavor Violation, Neutrino	Advances in High Energy Physics
	Oscillation, Leptogenesis, and	2018 (2018) 5093251
	Lightest Neutrino Mass	2010 (2010) 0030201
Dr. Kalpana Bora	Probing Majorana neutrino textures	Physical Review D 96 (2017)
	at DUNE	075006
	Neutrino cross-section in ultrahigh	
	energy regime using double	Pramana 89 (2017) 60
	asymptotic limit of QCD	
	Structural phase controlled transition metal (Fe, Co, Ni, Mn) doping in	
	CdS nanocrystals and their optical,	Journal Alloys and Compounds 757
	magnetic and photocatalytic	(2018) 209
	properties	
	Effects of size reduction on	
	microstructural, optical, vibrational,	Materials Characterization 137
	magnetic and photocatalytic	(2018) 109
D 14 D 2 T 11	properties of ZnO nanocrystals	
Dr. Manos P. C. Kalita	Structural, optical and ion sensing	Superlattices and Microstructures
	properties of 2-mercaptoethanol	111 (2017) 373
	capped Mn-doped ZnS nanocrystals On the influence of Raman scattering	
	of water in the photoluminescence	Methods and Applications in
	measurement of water dispersed	Fluorescence 5 (2017) 027001
	ZnO nanocrystals	(2017) 027001
	Williamson-Hall analysis and optical	
	properties of small sized ZnO	Physica E 92 (2017) 36
	nanocrystals	
Dr. Sanjeev Kalita	i	Astrophysics 60 (2017) 422

	Chandrasekhar mass limit	
	Effect of the Kerr metric on	
	Photospheric Radius Expansion in X	Astrophysics 60 (2017) 582
	Ray burst	
	Revealing new picture of dark matter	D N 4 A 5 1 (2017) 27
	through test of gravity near the Galactic Centre	Res. Notes AAS 1 (2017) 27
	Gravitational Theories near the	The Astrophysical Journal 955
	Galactic Center	The Astrophysical Journal 855 (2018) 70
	Role of residual stress and texture of	(2018) 70
	ZnO nanocrystals on electro-optical	Journal of Alloys and Compounds
	properties of ZnO/Ag/ZnO	734 (2018) 210
	multilayer transparent conductors	754 (2018) 210
	Fabrication of Ag/ZnO	
Dr. Bimal K. Sarma	heterostructure and the role of	
	surface coverage of ZnO microrods	
	by Ag nanoparticles on the	Applied Surface Science 410 (2017)
	photophysical and photocatalytic	557
	properties of the metal-	
	semiconductor system	
	Effect of annealing temperature on	
Dr. Sulochana Deb	optical properties of silver-PVA	Optik 157 (2018) 1115
	nanocomposite	
	Prediction of Ripening Stage of	International Journal of Fruit Science
Dr. Simanta Hazarika	Cameo Apple Using Fourier-	18 (2018) 188
	Transform Infrared Spectroscopy	10 (2010) 100
	Leptogenesis in quasi-degenerate	Canadian Journal of Physics 96
	neutrino mass models with non-zero	(2018) 71
Dr. Subhankar Roy	theta13	(====) . =
	Stability of the neutrino parameters	Physical Review D 97 (2018)
	and self complementarity relation	055038
	with varying SUSY breaking scale The PANDA Barrel-TOF Detector at	I1-fIt
	FAIR	Journal of Instrumentation, C08017, <b>12</b> , (2017)
Dr. Kushal Kalita	Momentum fractions carried by	<b>12</b> , (2017)
Di. Kushai Kanta	quarks and gluons in models of	International Journal of Modern
	proton structure functions at small x	Physics A 32 (2017)1750107
	Correlations between preparation	
	methods, structural features and	
Dr. Hemen Kumar Kalita	electrochemical Li-storage behavior	Nanoscale 9 (2017) 11303
	of reduced graphene oxide	
	Braphene omae	

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
	Nil	

f) Details of book published during the period:

	1	
Name of the faculty	Title of the Book(s)	Date of publications
	Nil	

#### 33. 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.

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

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 31.03.2018	2059
b)	New Books procured during the period	8
c)	No. of Journals as on 31.03.2018	405
d)	New Journals procured during the period	Nil
e)	No. of users during the period:	96

#### 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:

The Department organized Alumni meet in Feb 2018 and responses have been encouraging and the Department will look forward to have more such programs involving alumni to strengthen bonding of the Department with former students.

- 34. Activities and support from the Parent-Teacher Associations if any: Nil
- 35. Involvement in Community services:

The faculty members frequently visit different colleges, and centres 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.

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 upgradation 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 Robotics lab and 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.

# ANNUAL REPORT DEPARTMENT OF STATISTICS GAUHATI UNIVERSITY (FOR THE PERIOD APRIL 2017 TO MARCH 2018)

1.a. Name of the Department: STATISTICSb. Year of establishment: 1949

2. Head of the Department : Professor Labananda Choudhury

3. Details of academic staff

Sl.	Name of the	Qualificati	Specialization	Sex	Caste	Carrier	Full
No	teacher	on	21	(Male/ Female)	(Gen/ SC/ST/ OBC/ PH	status (Professor/ Associate Prof. / Asstt. Prof.	Time/ Contractua l
1.	Dr. H.K. Baruah (Retired on 30.11.2017)	M.Sc,Ph.D	Numerical Analysis,OR, Fuzzy Mathematics	Male	Gen	Professor	Full Time
2.	Dr. D.C. Nath (Retired on 30.11.2017)	M.Sc, Ph.D	Demography, Actuarial Statistics	Male	Gen	Professor	Full Time
3.	Dr. P. Sarmah (Retired on 31.1.2018)	M.Sc, M.Phil, Ph.D	Operation Research	Female	Gen	Professor	Full Time
4.	Dr. L. Choudhury	M.Sc, M.Phil, Ph.D	Demography	Male	Gen	Professor	Full Time
5.	Dr. K.K. Das	M.Sc, Ph.D	Combinatorial Probability, Distribution Theory, Data Analysis	Male	Gen	Professor	Full Time
6.	Dr. Amit Choudhury (On lien w.e.f.2.4.2018)	M.Sc, Ph.D	Operation Research	Male	Gen	Professor	Full Time
8.	Dr. Jagriti Das	M.Sc, Ph.D	Actuarial Statistics	Female	SC	Assistant Professor	Full Time
9.	Dr. Pallabi Medhi	M.Sc, Ph.D	Operation Research	Female	Gen	Assistant Professor	Full Time
10.	Ms. Paramita Roy	M.Sc	Operation Research	Female	Gen	Assistant Professor	Full Time
11.	Ms. Sahana Bhattacharjee	M.Sc	Distribution Theory	Female	Gen	Assistant Professor	Full Time

- 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 :Nil
- 8. Inter disciplinary Programme started :No
- 9. Department/Centre under : SAP/COSSIST(ASSIST)/DST/FIST : FIST

10. Total number of Research Scholar working at present : 35

a) Full Time:	7	b) Part time:	28

11. Enrolment of Students in various courses (April 2017- March 2018):

Course s	Se m	Inta ke Capa city	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
D4	1 <sup>st</sup>	30	11	20	31	0	2	2	2	2	4	1	1	2	2	5	7
Post- Graduat	2 <sup>nd</sup>	30	11	20	31	0	2	2	2	2	4	1	1	2	2	5	7
e	$3^{\rm rd}$	30	15	14	29	3	1	4	1	1	2	0	0	0	5	6	11
C	$4^{th}$	30	15	14	29	3	1	4	1	1	2	0	0	0	5	6	11
M.Phil.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ph.D.	-	-	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1
Others	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

No. of Teacher	No. of student	No. of Non-teaching staff
10	64	5
Teacher/Student Ra	tio Teache	er-Non-teaching Staff Ratio
5:32		2:1

13. Final Examination result during the session 2017-18:

(a) No. Appeared

Subject	Total		S.C. S.T(P)			S.T.(H)		OBC/MOBC			P.H.							
	Appeared		ed															
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Statistics	12	14	26	0	0	0	2	1	3	1	0	1	6	6	12	0	0	0

(b) No. Passed

Subject	Total Passed		ì	S.C.			S.T(P)		S.T.(H)		OBC/MOBC		P.H.		,			
	M	F	Т	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Statistics	6	13	19	0	0	0	0	1	1	0	0	0	3	6	9	0	0	0

14. Details of Ph.D. awarded (2017-18):

14. Details of Fil.D. a	warded (2017-10).	
Name of the Ph.D.	Title of the Ph.D. thesis	Guide
Scholars		
Anjana Moyee	A study of Mortality Situation in Guwahati city during last Quarter	Prof. L. Choudhury
Saikia	Century (1986–2011)	
Tandrima	Epidemic Processes of Infectious Diseases: Discrete Time Models	Prof. Dilip C. Nath
Chakraborty		
Sahana	Circular Statistics: An Application to Atmospheric And Health	Prof. Kishore K. Das
Bhattacharjee	Sciences	1101. Kishole K. Das
Soma Dhar	A Study on Queue Process on Incoming Patients in Public Hospitals	Prof. Kishore K. Das
Dibyajyoti Bora	Proximate Determinants of Mental Disorders in Assam	Prof. Kishore K. Das
Nijara Rajbongshi	An Epidemiological study on the incidence of cancers in the North-	Prof. Dilip C. Nath
Nijara Rajbongsin	East India with special reference to cervical and breast cancer	1101. Dilip C. Ivadi
Alpana Deka	Application of Image Processing and Pattern Recognition for	Dr. Lipi B. Mahanta
Alpana Deka	analysis of Handwritten Signatures	Di. Lipi D. Mananta

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): Nil

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

	Sl.No.	Name of the	Name of the Seminar/Summer School/	Date	Sponsorship	
	S1.1NO.	Co-ordinator	Workshop/ Refresher Course	Date	Sponsorship	
Ī	1	Dr.Pallabi Medhi	Statistical Data Analysis using Python Programming Language	26 <sup>th</sup> - 27 <sup>th</sup> March,	Gauhati University	
L		Medili	Frogramming Language	2016		

18. Honours/Awards/Fellowship (with National/International repute) earned by the Faculty members (2017-18): Nil

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

19. Visit abroad by the Faculty members (2017-18): Nil

 7. Visit dolodd by the 1 dedity members (2017-10): 1111				
Name of the Faculty	Institute visited	Purpose	Period	

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

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

Ms. Paramita Roy	A study on the pattern of Household Consumption Expenditure in India with special reference to Post-Reforms period	Gauhati University	3 years	Rs. 1.5 lakh
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21. Academic distinction earned by the students during (2017-18):Nil

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

22. Distinguish visitors to the Department during the period 2017-18: Nil

Name of visitors	Address & Designation	Purpose of visit
Dr. R.B. Barman	Chairman, National statistical Commission, India	To deliver lecture to the students and
		research scholars of the department

- 35. Creation/Increase in infrastructural facilities in the Department/Centre during the period 2016-17: Nil
- 36. Provisions for (a) computer access (b) internet access and (c) training to teachers, non-teaching staff and students of the Department/Centre:

Computer  $\hat{\&}$  internet access is available to all teachers, research scholars, and students. Non teaching staff also use computer and internet.

- 25. Technology upgradation in the Department/Centre during the period 2017-18: Nil
- 26. Linkages developed with National/International/Academic/Research Bodies: Nil
- 27. Academic activities of Faculty members during the period of report (2017-18):

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

Name of the faculty(s)	No. of Seminar	No. of Workshops
Dr. Sahana Bhattacharjee	Presented a paper in an International Conference	-

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

Name of the faculty member: Dr. Sahana Bhattacharjee

Name of the programme: 7 day training course in innovative research dimensions and data analysis in R

No. of lectures delivered: 2

Programme conducted by: Department of Statistics, Assam university, Silchar

**Duration of the programme:** 16.01.2018 to 22.01.2018

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

- 7	/		
	Name of the faculty	Refresher Course	Orientation Course
	Ms. Paramita Roy	-	OP-114 conducted by UGC-HRDC, Gauhati University
	Dr.Pallabi Medhi	1	29.05.17-24.06.17 conducted by UGC-HRDC, Gauhati University

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

· 1 1 1	retails of paper published in the Keretred Journals during the period .		
Name of the faculty	Title of the paper	Name of the journal with Vol. No. &	
		Date	
Dhruba Das and <b>Hemanta K.</b>	Imprecise vector: The case of	National Academy Science Letters,	
Baruah	Subnormality	Vol. 40, Issue 6, pp.455-460	
		, , , , , , , , , , , , , , , , , , ,	
Dhruba Das and Hemanta K.	Imprecise vector: The case of	National Academy Science Letters,	
Baruah	Subnormality	Vol. 40, Issue 6, pp.455-460	
Dur umi	- Succionality	, on 10, 13540 0, pp. 100	
Dilip C. Nath and Jagriti	Modeling of claim severity through	Thailand Statistician, Vol. 15, Issue 2,	
Das	the mixture of exponential	pp.128-148	
	distribution and computation of its	FF	
	probability of ultimate ruin		
	probability of utilinate fulli		
Verma, V., Nath, D. C.&	Bayesian bounds for population	Communications in Statistics-	
Das, R.	proportion under ranked set sampling	Simulation and Computation, DOI:	
245, 74.	proportion under rainted set sampling	https://doi.org/10.1080/03610918.201	
		7.1387659	
Dos D. Vormo V. 9-No41-	Davissian Estimation of M1		
Das, R., Verma, V. &Nath,	Bayesian Estimation of Measles	STATISTICS IN TRANSITION new	
D. C.	Vaccination Coverage under Ranked	series, Vol. 18, Issue 4, pp.589-608	
	Set Sampling		
Sikdar, M.&Sarmah, P.	Pattern recognition in language model	International Journal of Innovative	
l '	with special reference to children	research and advanced studies, Vol.	

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1.1		
	stories	4, Issue 3, pp.397-406
Sikdar, M.&Sarmah, P.	Statistical pattern classification of	International journal of applied
	direct speeches in children stories	mathematics and statistical sciences,
		vol.6, Issue 5,pp.7-18
Sharma, M, Choudhury, L.	Dynamic life tables for India and	Journal of Population and Social
and Sarma, R.	some of its major states	Studies, Vol. 25, Issue 4, pp.343-357
L. Choudhury & Nabanita	Decomposition of Crude Death Rates	Indian Journal of Public Health
Saikia	for India and its Selected States-1971	Research & Development. July 2017,
	and 2011	Vol (8), Issue-3
L. Choudhury, Mompi	Dynamic Life Table for Guwahati	Indian Journal of Public Health
Sharma and Anjana Moyee	City: An Urban Set Up of North	Research & Development, July 2017,
Saikia	Eastern India	Vol (8), Issue -3
Dhar, S., Das, K.K. and	An infinite server queueing model	International journal of Pure and
Mahanta, L.B.	with varying arrival and departure	Applied Mathematics, Vol. 113, Issue
	rates for healthcare system	5, pp.583-593
	•	•
Dibyajyoti Bora and Kishore	Statistical models for age on onset of	International journal of scientific and
K Das	mental disorders	engineering research, vol.8, issue 10,
		pp.852-859
	MODELING CUSTOMERS'	
Dr.Pallabi Medhi	IMPATIENCE IN	Jounal of Assam Sc. Society, Vol. 57,
2112 MINOT IVICAIN	M/M/1 QUEUE UNDER GENERAL	No.1&2
	RENEGING DISTRIBUTION	

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

Name of the faculty	Title of the paper	Name of the Journals with
Traine of the factory	Time of the paper	Vol. No. & Date
		V 01. 1 (0. & Butc

f) Details of book published during the period : Nil

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. No
- 31. Departmental Library:

a)	No. of Books as on 31.03.2018	1480
b)	New Books procured during the period	53
c)	No. of Journals as on 31.03.2018	33
d)	New Journals procured during the period	0
e)	No. of users during the period :	75

- 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:
- 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:
  - I. Sessional exams are held on time.
  - II. Attendance of students are monitored.
  - III. Friendly teacher-student relationship.
  - IV. All students and research scholars have access to academic databases and statistical software.
  - V.Students and research scholars are allowed to take print out of the research papers in the laboratory.
- 39. Detail the plans of the Department/Centre/Institute for the next year :

# ANNUAL REPORT: DEPARTMENT OF ZOOLOGY GAUHATI UNIVERSITY(FOR THE PERIOD APRIL 2017 TO MARCH 2018)

1. a. Name of the Department : Zoology b. Year of establishment : 1963

2. Head of the Department : Prof. Jatin Kalita

3. Details of Academic Staff (Zoology):-

Sl.	Name	Qualification	Specialisation	Sex	Caste	Carrier	Full/part
No						status	time
1	Prof.K.Dutta	M.Sc,Ph.D	Cell & Molecular Biology	Female	General	Professor	Full time
2	Prof.R.K.Bhola	M.Sc,Ph.D	Entomology	Male	General	Professor	Full time
3	Prof.J.Kalita	M.Sc,Ph.D	Biodiversity & Conservation Biology	Male	General	Professor	Full time
3	Prof.P.K.Saikia	M.Sc,Ph.D	Animal Ecology & Wildlife Biology	Male	General	Professor	Full time
4	Prof.J.C.Kalita	M.Sc,Ph.D	Physiology	Male	General	Professor	Full time
5	Dr.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	No. Admitted	SC	ST(P)	ST(H)	OBC/MOBC
		Capacity					

Zoology			M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
M.Sc	1st	40	7	31	40	2	1	3	2	2	4	0	2	2	1	9	10
	2nd	40	9	31	40	2	1	3	2	5	7				1	9	10
	3rd	40	6	34	40	0	3	3	0	6	6	0	2	2	1	7	8
	4th	40	6	34	40	0	3	3	0	6	6	0	2	2	1	7	8
Animal Ecology &	1st	20	6	11	20	0	0	0							2	5	7
Wildlife Biology	2nd	20	9	11	20	0	0	0							2	5	7
Pre-Ph.d course		NA	2	9	11	1	1	2	1	0	1	0	0	0	0	3	3

## 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 2017-2018

Course	Theoretical	Practical
M.Sc 1st Semester	200	162
M.Sc 2nd Semester	220	164
M.Sc 3rd Semester	212	12
M.Sc 4th Semester	185	157
AEWB 1st Semester	145	67
AEWB 2nd Semester	150	79
Pre-Ph.D Course (Zoology)	118	Not applicable

9. Particulars of working days during the session Aug., 2017-July, 2018

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 2017-18

(a). No. Appeared

 · /	_																	
Subject	Total			tal SC					ST(P)			ST(H)			C	P		
	Appeared																	
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 Animal Ecology & Wildlife Biology

(a). No. Appeared

Subject	Total Appeared			SC			ST (P)			ST (H)			OBC/ MOBC			PH		
AEWB	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

(0). 110. 1	assea																																			
Subject	Total Passed		Total Passed		Total Passed		<b>Total Passed</b>		Total Passed		Total Passed		<b>Total Passed</b>		t Total Passed		<b>Total Passed</b>		<b>Total Passed</b>		Total Passed		SC		5	ST (P	)	5	<b>ST (H</b>	()	•	OBC/			PH	
													N	10B(	C																					
AEWB	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			SC		:	ST (P)		ST (H)		OBC/			PH				
		A	ppear	ed										N	IOBC	•			
Г	Zoology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
		1	10	11	0	1	1	0	3	3	0	0	0	1	2	3			

## (b). No. Passed

Subject	Tot	al Pas	ssed		SC		,	ST (P	)		ST (H	)		OBC MOB			PH	
Zoology	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
	1	10	11	0	1	1	0	3	3	0	0	0	1	2	3			

## 11. Details of Ph.D. awarded during 2017-18

Sl.No	Name of Ph.D. Student	Name of Guide
1	Sarmistha Brahma	Prof.D.K.Sharma
2	Tandra Phukan	Prof.M.M.Goswami
3	M.Suresh Singh	Dr.Binode Kr. Baruah
4	Pradip Kr. Sahoo	Prof.P.C.Bhattacharjee
5	Mousumi Saikia	Dr.Dipali Devi
6	Prabhat Ch. Sarma	Prof.P.K.Saikia
7	Himangshu Kr. Kalita	Prof.Dandadhar Sarma
8	Rupak Nath	Prof.Dandadhar Sarma
9	W.Subhadra Singh	Prof.Jatin Kalita
10	Y.Rumbai Devi	Prof.Jatin Kalita
11	Biman Kr.Sarma	Dr.Binode Kr. Baruah
12	Kakali Talukdar	Dr.Ratul Ch.Rajkhowa
13	Alakesh Barman	Dr.Binode Kr. Baruah
14	Habibullah Qaiser	Prof.D.K.Sharma
15	Kaushik Mishra	Prof.J.C.Kalita
16	Parthana Mudai	Prof.Jatin Kalita
17	Rahul Sarma	Dr.Rajlakshmi Devi
18	Bhanita Deka	Prof.P.K.Saikia
19	Bhabesh Nath	Prof.D.K.Sharma
20	Dipika Kalita	Prof.Jatin Kalita
21	Arpan Kr. Das	Dr.Bulbuli Khanikor
22	Snigdha Chakraborty	Prof.M.M.Goswami
23	Gitartha Kaushik	Dr.Sabitry C. Bordoloi
24	Sima Kumari	Dr.Rajlakshmi Devi
25	Paramita Choudhury	Dr.Rita Mahanta
26	Sudem Basumatary	Prof.Dandadhar Sarma
27	Mayurakshi Deka	Dr.Uma Dutta
28	Fariha Jabeen	Prof.Dandadhar Sarma
29	Imdadul Islam Khan	Dr.Arup Hazarika
30	Moni Kankana Kalita	Dr.Dipali Devi
31	Mitali Deori	Dr.Dipali Devi
		Dr.Rajlakshmi Devi
32	Himadri Kalita	Dr.Rajlakshmi Devi
33	Jayanta Kr.Das	Dr.Arup Hazarika
34	Kokila Patowary	Dr.Mamata Goswami
35	Daud Ch. Boro	Dr. Subrata Sharma
36	Tarun Ch. Taid	Dr.Ratul Ch.Rajkhowa

## 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,Bhimta 1	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	2018-2021	1.27,44,000.00

14. Academic distinction earned by the students during 2016-17

		Name of students	Position Held
Α	In the PG level examination		
В	No. of students passed UGC-CSIR NET	2	
C	No. of students passed GATE	1	
D	No. of students passed Indian Civil Service	No information	
	Examination		
Е	No. of students passed GRE	No information	
F	No. of students passed TOEFL	No information	
G	No. of students passed GMAT	No information	
Н	Any other (specify) SLET	8	

16. Development of the Department during 2017-18

16. Development of the Department du	ring 2017-18					
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 2016-17:					
	⇒ By organizing <b>short term training courses</b> in Bioinformatics&					
	proteomics application in Teaching and Research through BIF					
	⇒ By organizing <b>popular lecture</b> 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.					
	scientist DB1, GOI, New Denn.					
ii. Infrastructure Development	<ul> <li>⇒ 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.</li> <li>⇒ The department has also successfully completed UGC (SAP) phase –II (DRS-II) in March/2013</li> </ul>					

#### 17. Academic activities of Faculty Members:

**Publication of Faculty Members (Academic Session 2017-18)** 

#### 1. Prof.P.K.Saikia, HoD Zoology

Ananda Boro, Prasanta Kumar Saikia & Uttam Saikia (2018). New records of bats (Mammalia:Chiroptera) from Assam, northeastern India with a distributional list of bat fauna of the state. Journal of Threatened Taxa | www.threatenedtaxa.org | 26 April 2018 | 10(5): 11606–11612 10.11609/jott.3871.10.5.11606-11612.

- K Yadav, S Dhiman, B Rabha, D Goswami, PK Saikia, V Veer (2017). <u>Disappearance of An. minimus and An. dirus</u> from certain malaria endemic areas of Assam, <u>India</u>. Journal of Arthropod-Borne Diseases 11(1): 27-35.
- 3. Chakraborty, A and Saikia P. K. (2017). An unusual food plant species consumed (*Cyathea gigantia*, A tree fern) by a Globally Endangered and endemic Primate species of Assam Trachypethecus gee Khajuria, 1956: A prospective new adaptive ray towards Anthropogenic forest disturbances in kakoijana Reserve forest, Bongaigoan, Assam, India. Journal of Global Biosciences, 6(2): 4814-4822. Impact factor: 1.115.

#### 2. Prof.D.Sarma

- Basumatary S, Choudhury H, Talukdar, B, Sarma D. Length-weight relationships (LWRs) of four freshwater fish species from the Brahmaputra and Barak River basins, northeast India. *J Appl Ichthyol.* 2017;00:1–2. https://doi.org/10.1111/jai.13536 (**IF: 0.845**)
- Saikia D. J., Chattapadhyay P, Banerjee G & Sarma D, (2017) Identification and Pathogenicity of Pseudomonas aeruginosaDJ1990 on Tail and Fin Rot Disease in Spotted Snakehead. Journal of the World Aquaculture Society doi: 10.1111/jwas.12476 (IF: 1.015)
- Choudhury H., D. K. B. Mukhim, S. Basumatary, D. P. Warbah & D. Sarma (2017) Schistura larketensis, a new cavernicolous fish (Teleostei: Nemacheilidae) from Meghalaya, Northeast India. Zootaxa http://dx.doi.org/10.11646/zootaxa.4353.1.5 (IF: 0.972)
- Choudhury H, S. Mili, S Basumatary, A Mazumdar & **D. Sarma** (2017) Length-weight relationships of *Badis dibruensis* Geetakumari and Vishwanath, 2010 (Badidae) and *Lepidocephalichthys arunachalensis* (Datta and Barman, 1984) (Cobitidae) from Subansiri River (Brahmaputra basin), Northeast India. *J Appl Ichthyol*. 2017; 00:1–2. <a href="https://doi.org/10.1111/jai.13505">https://doi.org/10.1111/jai.13505</a>) (**IF: 0.845**)
- Talukdar, B. H. K. Kalita, R. A. Baishya. S. Basumatary, D. J. Saikia & Sarma. D (2017) Cytotoxic and genotoxic effects of acid mine drainage on fish Channa punctata (Bloch). Ecotoxicology and Environmental Safety144 (2017) 72–78 (IF: 3.13)
- Talukdar B, Jabeen F, Kalita HK, Basumatary S, Choudhury H, Sarma D. (2017) Length-weight relationships of two Nemacheilid fish species [Schistura fasciata Lokeshwor and Vishwanath, 2011 and Schistura reticulofasciata (Singh and Bănărescu, 1982)] from Simsang River, Meghalaya, India. J Appl Ichthyol.; 00:1–2.https://doi.org/10.1111/jai.13410 (IF: 0.845)
- Basumatary S, Jabeen F, Dey A, Choudhury H., Kalita H. K., Talukdar B & Sarma.D (2017) Length-weight relationships of *Garra birostris* Nebeshwar & Vishwanath, 2013, *Garra annandalei* (Hora, 1921), *Johnius coitor* (Hamilton, 1822) and *Raiamas bola* (Hamilton, 1822) from the Brahmaputra River basin, Northeast India. *J Appl Ichthyol.*; 2017; 00:1–2. https://doi.org/10.1111/jai.13440 (IF: 0.845)
- Talukdar, B. S. Basumatary, H. K. Kalita, R. A. Baishya. A.Dutta, S. K. Srivastava & Sarma.D (2017) Effects of Acid Mine Drainage of coal mines on some haematological parameters of *Channa punctatus* (Bloch). *Natl. Acad. Sci. Lett.* (Springer) (IF: 0.34)
- Basumatary S., Choudhury H. & Sarma.D (2017) Length-weight relationships of *Hara hara* (Hamilton, 1822), *Pangio pangia* (Hamilton, 1822) and *Setipinna brevifilis* (Valenciennes, 1848) from the Lower Brahmaputra River, Northeast India. *J Appl Ichthyol* 2017;00:1–2. https://doi.org/10.1111/jai.13481 (IF: 0.845)
- Saikia D. J., Chattapadhyay P, Banerjee G & Sarma D, (2017)Time and Dose Dependent Effect of Pseudomonas aeruginosa Infection on the Scales of Channa punctate (Bloch) Through Light and Electron Microscopy. Turk. J. Fish. Aquat.Sci. 17: 871-876 (IF: 0. 566)
- Dey, A & Sarma, D (2018) Diversity, distribution and conservational approach of hillstream ornamental fishes in Manas river, India: An eastern hotspot region 1(1) 104-112
- Kalita M, Choudhury H, Saikia A, Sarma D. (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*. 2018;00:1–2. https://doi.org/10.1111/jai.13804(IF: 0.845)
- Kalita C, Choudhury H, Sarma D. (2018) Length-weight relationships of three fish species from the lower

Choudhury H, Thaosen S, Dey A, Basumatary S, Sarma D(2018) Length-weight relationships of three fish

- species from the Jatinga River (Barak drainage) in Assam, India. *J Appl Ichthyol*. 2018;00:1–2. https://doi.org/10.1111/jai.13727 (**IF: 0.845**)
- Dey A, Choudhury H, Basumatary S, Bharali R.C & Sarma D.(2018) Length—weight relationships of three freshwater fish species from the Kameng River (Brahmaputra basin) in Arunachal Pradesh, northeast India. *J Appl Ichthyol.* 00:1–2. https://doi.org/10.1111/jai.13635 (IF: 0.845).
- 4. Manas Das Asst. Professor
  - Mazumder P. M. And Das S. Das M. K. 2017. ISOLATION, CHARACTERIZATION AND ANTIOXIDANT ACTIVITY OF THE ISOLATED COMPOUND OBTAINED FROM METHANOL EXTRACT OF BUTEA MONOSPERMA (LAM.) KUNTZE, NDIAN DRUGS:54(6) 37-42.
- 5. Dr. Malabika kakati saikia, Asst. Professor
  - 1. Saikia, M. K. 2017. ENDEMIC VERTEBRATE FAUNA OF NORTHEAST INDIA WITH SPECIAL REFERENCE TO HERPETOFAUNA, AVIAN AND MAMMALIAN FAUNA: A PRILIMINARY REVIEW, Book, REFLECTION: 81-98. HRDC, GU.

Head, Deptt. of Zoology