

Evaluative Reports of the Departments

Faculty of Science

Department of Anthropology

1. Name of the Department:
ANTHROPOLOGY
2. Year of establishment:
1985
3. Is the Department part of a School/Faculty of the university?:
Faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):
PG and Ph. D.
5. Interdisciplinary programmes and departments involved:
Ph.D. Course work.
6. Courses in collaboration with other universities, industries, foreign institutions, etc:
No
7. Details of programmes discontinued, if any, with reasons:
No
8. Examination System: Annual/ Semester /Trimester/Choice Based Credit System:
Semester
9. Participation of the department in the courses offered by other departments :
a). Abhijit Guha has been teaching the basic statistics in the Department of Remote Sensing & GIS. b). Falguni Chakrabarty is involved in teaching Environmental Science in DDE. c). Kaushik Bose is involved in teaching growth and nutrition in the Department of Biomedical Science & laboratory Technology.

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	1	1
Associate Professors	2	2	3
Asst. Professors	5	3	2
Others (Asst. Professors, Contractual)	Nil	Nil	Nil

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of years of experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Falguni Chakraborty	M.Sc., Ph. D.	Professor	Pre-History & Social-cultural Anthropology	27 years	9 continuing
Abhijit Guha	M.Sc., M.Phil., Ph. D.	Associate Professor	Social- cultural Anthropology	28 years	3 and 3 continuing
Kaushik S. Bose	M.Sc., Ph. D.	Associate Professor	Biological Anthropology	12 years	5 and 8 Continuing
Sudip Dutta Banik (resigned on 03.02.2013)	M.Sc., Ph. D.	Reader	Biological Anthropology	10 years	1
Dipak K. Midya	M.Sc., Ph. D.	Associate Professor	Social -cultural Anthropology	3 years	5 continuing
Amit Kisku (on study leave)	M. Sc., M. Phil.	Assistant Professor	Social -cultural Anthropology	7 years	
Sovanjan Sarkar	M.Sc., Ph. D.	Assistant Professor	Biological Anthropology	2 years	2 continuing

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Sl No.	Period	Name of the faculty	As	Designation
1	2008-2010	Prof. Rajat Kanti Das	Emiratus Fellow	UGC Emiratus Fellow, Department of Anthropology, Vidyasagar University
2	February, 2014	Dr. Subha Ray	UGC Visiting Fellow	Associate Professor, Department of Anthropology University of Calcutta 35, Bullygunge Circular Road Kolkata - 700019

13. Percentage of classes taken by temporary faculty – programme wise information:
No

14. Programme-wise Student Teacher Ratio:	
PG	10:1
Ph D (Course Work)	8:1

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual			
	sanctioned	filled	actual
academic support staff (technical)	Nil		Nil
administrative staff	Nil		1 (Peon) on casual basis.

16. Research thrust areas as recognized by major funding agencies			
Sl. No.	Thrust areas	Funding agencies	PI
1	Anthropology of Rural Handicrafts of West Bengal	Directorate of Cottage and Small-scale Industries, Govt. of West Bengal	Prof. Falguni Chakrabarty
2	Health and Nutritional status of Population	DFID (United Kingdom); Planning Commission (Government of India)	Dr. Kaushik Bose
3	Cardiovascular and hepatic risk factor-related health and nutritional status	ICSSR, New Delhi; DST, Govt. of W.B.	Dr. Sudip Dutta Banik
4	Pulmonary function and lifestyles	UGC (start-up project)	Dr. Sovanjan Sarkar
5	Assessment of development of a PTG in W.B.	ICSSR	Dr. Santanu Panda, ICSSR Post-Doctoral fellow (A. Guha)

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.			
Status	Funding agency	Project title	Total grant received
1.	Directorate of Cottage and Small-scale Industries, Govt. of West Bengal	BACKGROUND RESEARCH, ECONOMIC AND STATUS SURVEY OF TERRACOTTA AND DOKRA CRAFTS OF WEST BENGAL	Rs. 2,40,000/- (Completed in 2010)
2	UGC	PREVALENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AND PULMONARY FUNCTION AND ITS LIFESTYLE CORRELATES AMONG VARIOUS	Rs. 6,00,000/-

		OCCUPATIONAL GROUPS OF MIDNAPORE TOWN, WEST BENGAL, INDIA\	
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18. Inter-institutional collaborative projects and associated grants received

a) National collaboration b) International collaboration

a) National collaboration:

1. Dr. Kaushik Bose has conducted a collaborative project with Dr. P.R. Mondal of the Department of Anthropology, Delhi University (Project amount: Rs. 50,000.00).
2. Dr. Sudip Dutta Banik has conducted a collaborative project funded by Department of Science and Technology, Government of West Bengal, with Dr. P. K. Kundu, School of Tropical medicine, Kolkata (Grant received: Rs. 9,00,000.00)

b) International collaboration :

- 1) Dr. Kaushik Bose conducted a collaborative project with Prof. Stanley Ulijaszek, Director, Unit for Biocultural Variation and Obesity (UBVO), University of Oxford, U.K.
- 2) Dr. Kaushik Bose conducted a collaborative project with Dr. Slawomir Koziel, Director, Institute of Anthropology, Polish Academy of Sciences, Poland.

19. Departmental projects funded by DST FIST; UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.;

total grants received:

No

20. Research facility / centre with

<input type="checkbox"/> state recognition	No
<input type="checkbox"/> national recognition	No
<input type="checkbox"/> international recognition	No

21. Special research laboratories sponsored by / created by industry or corporate bodies :

Nil

22. Publications: (during 2010 – 2013). Separate sheets attached

Annexe-1 List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international) = 108
- Monographs = 02
- Chapters in Books = 31
- Edited Books = 12
- Books with ISBN with details of publishers =
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) =
- Citation Index – range / average =

Research Impact (Google Scholar):

K. Bose: h-Index = 15; i10-Index = 27

A. Guha: h-Index = 5; i10-Index = 2

S. Dutta Banik: h-index - 4; i10 index - 1

Sovanjan Sarkar: h-index: 04

- SNIP =
- SJR =
- Impact Factor – range /
h-index 0 -15; i10-index: 0-27 =
- Average =
- H-index =

23. Details of patents and income generated:

No

24. Areas of consultancy and income generated –

Areas of consultancy	Institute/organization with	Faculty	Income generated
Tribal Land Alienation in West Bengal	Cultural Research Institute, Backward Classes Welfare Department, Govt. of W.B.	Dr. Abhijit Guha (since 2013)	Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

Faculty	Laboratory/ Institute	As
Falguni Chakrabarty	Manipur University	Visiting Professor
	West Bengal State University	Resource person in ICSSR-sponsored Workshop on Research methodology
Abhijit Guha	Department of Sociology, Delhi School of Economics, Delhi University	Visiting Fellow
	North Bengal University Calcutta University Burdwan University	Visiting Fellow and Resource person in Refresher courses
	West Bengal State University,	Resource person in ICSSR-sponsored Workshop on Research methodology
	Center of Advanced Study in Anthropology, Utkal University	Visiting Fellow
Kaushik Bose	North Bengal University	Resource person in Refresher courses

	West Bengal State University	Resource person in ICSSR-sponsored Workshop on Research methodology
Sudip Dutta Banik	El Instituto de Investigaciones Antropológicas (UNAM, Ciudad de Mexico). Mexico.	Workshop participant (April, 2010).
Dipak K Midya	Indian Institute of Advanced Studies, Shimla; Yanajati Charcha Kendra, Rabindra Bharati University	UGC-IUC Associate (2012, 2014) Resource person in workshop
Amit K Kisku	SOAS, University of London	For pursuing Ph.D.

26. Faculty serving in

a) National committees :

1. Abhijit Guha has been nominated as a Member of the Advisory Committee in a study under the Indian Council of Social Science Research (ICSSR)-sponsored Studies Programme entitled 'The Exclusion of Muslim Outcastes in West Bengal: The State-centric Discourse and Emerging Issues' being conducted by Professor Abhijit Dasgupta of the Department of Sociology, Delhi School of Economics, Delhi University, since July 2013.
2. Falguni Chakrabarty has been serving as the Member of the Anthropological Committee of the Asiatic Society and as an expert in various UGC teams.
3. Acted as an Expert in the Standing Committee on Rural Development of the Lok Sabha in connection with the land acquisition amendment bill.

b) International committees :

1. Kaushik Bose has been serving as a Member and Expert of Child Health and Nutrition Knowledge Network (CHNKN) of Child Health and Nutrition Research Initiative (CHNRI) headed by Robert Black of Johns Hopkins Bloomberg School of Public Health, USA, since 2010.
2. Sudip Dutta Banik was selected as an Executive Committee Member in the Commission on the Anthropology of Children, Youth and Childhood, The International Union of Anthropological and Ethnological Sciences (IUAES). November 2012.

c) Editorial Boards :

(A). Editor:

Kaushik Bose has been serving as the Editor of the *Journal of Life Sciences*.

(B). Member of Editorial Board:

1. Abhijit Guha:

- 1). *The Journal of Anthropology* (New York),
- 2). *Anthropological Forum* (Perth);
- 3). *Journal of the Indian Anthropological Society*, Kolkata (Associate Editor)

2. Falguni. Chakrabarty:

- 1). *The Asian Man* — An International Journal (Print ISSN 0974-6366, on line ISSN 0975-6884). Published by the Asian Institute of Human Science and Development

3. Kaushik Bose:

- 1) *Internet Journal of Biological Anthropology*
- 2) *Journal of Anthropology*
- 3) *Food and Nutritional Sciences*
- 4) *Research and Reviews: A Journal of Health Professions*
- 5) *Human Biology Review*
- 6) *Journal of Biomedical Sciences*
- 7) *Asian Journal of Biological and Life Sciences*
- 8) *International Journal of Anthropology and Archeology*
- 9) *South Asian Anthropologist*.

(C). Member of Panel of Reviewers:

Kaushik Bose:

- 1) *Biomedical Central (BMC) Public Health*
- 2) *Homo, Journal of Comparative Human Biology*
- 3) *Maternal and Child Nutrition*
- 4) *Rural and Remote Health*
- 5) *American Journal of Human Biology*
- 6) *Journal of Nutrition for the Elderly*
- 7) *Journal of Chinese Clinical Medicine*,
- 8) *The Anthropologist*,
- 9) *Collegium Antropologicum*,
- 10) *Malaysian Journal of Nutrition*
- 11) *World Journal of Pediatrics*
- 12) *Biomedical Central (BMC) Pediatrics*
- 13) *Asia Pacific Journal of Public Health*
- 14) *Journal of Human Ecology*
- 15) *Food and Nutrition Bulletin*
- 16) *Maternal and Child Health Journal*
- 17) *Translational Biomedicine Journal*
- 18) *Journal of Pediatric Intensive Care*
- 19) *Ecology of Food and Nutrition*
- 20) *Italian Journal of Public Health*
- 21) *Journal of Environmental and Public Health*

- 22) *Evidence-Based Complementary and Alternative Medicine*
- 23) *The Lancet*
- 24) *Journal of Nutrition and Food Sciences*
- 25) *Journal of Public Health*
- 26) *Journal of Community Medicine and Health Education*
- 27) *Journal of Public Health and Epidemiology*
- 28) *Online International Journal of Food Science*
- 29) *Infant, Child and Adolescent Nutrition*
- 30) *Sub-Saharan Journal of Medicine*
- 31) *International Journal of Sociology and Social Policy*
- 32) *Journal of Pediatrics*
- 33) *Anthropological Review*
- 34) *British Journal of Medicine and Medical*
- 35) *PLOS ONE*
- 36) *JMED Research.*

Dipak Midya

- 1) *The Journal of Anthropology*
- a) any other (please specify)

Faculty	Capacity
Kaushik Bose	Advisor, Public Service Commission, West Bengal Government

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

1. Dr. Sudip Dutta Banik has completed UGC-sponsored Refresher Course in Burdwan University, West Bengal 2012.
2. Dr. Sovanjan Sarkar has completed Orientation Programme organized by UGC-ASC, Northeastern Hill University, Shillong, during 4 February, 2013 to 3 March, 2013.

28. Student projects :

☐ percentage of students who have done in-house projects including inter-departmental projects:
100%

☐ percentage of students doing projects in collaboration with other universities / industry / institute :
Nil

29. Awards / recognitions received at the national and international level by

☐ Faculty

1. Dipak Midya is availing for the UGC-IUC (Post-Doctoral) Associateship for 3 years (since 2012) at the Indian Institute of Advanced Studies, Shimla.

2. Amit K Kisku was awarded with Overseas Fellowship in 2011 to pursue Ph.D. at the School of Oriental and African Studies (SOAS), University of London.

3. Sovanjan Sarkar was awarded the “DST travel award” for attending International Conference

☐ Doctoral / post doctoral fellows

Dr. Santanu Panda was offered Post-Doctoral fellowship by the ICSSR.

☐ Students

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

<i>Sl. No.</i>	<i>Date</i>	<i>Event</i>	<i>Source of Funding</i>	<i>Outstanding Participants</i>
1	18-20 January, 2012.	Workshop on “Quality Improvement in Teaching and development of Curricula in Anthropology at the UG Level”	UGC-Unassigned Grant	Prof. Ajit K Danda, FNA (Sc), Ex-Director, Anthropological Survey of India
2	28-29 August, 2012	Seminar on “Anthropologists and Film Makers View Sikkim”	Anthropological survey of India (GoI); UGC-Unassigned Grant	1. Prof. Barun Mukhopadhyay, ISI, Kolkata 2. Dr. Kanchan Mukhopadhyay, AnSI, Kolkata

31. Code of ethics for research followed by the departments:

The department follows UGC and University guidelines for Code of Research ethics

32. Student profile programme-wise:

<i>Name of the Programme (refer to question no. 4)</i>	<i>Applications received</i>	<i>Selected Male Female</i>		<i>Pass percentage Male Female</i>	
M.Sc. 2010	47	7	25	22	78
M.Sc. 2011	43	11	20	35	65
M.Sc. 2012	52	15	16	48	52
M.Sc. 2013	44	10	21	32	68
Ph.D. 2007-08	05	04	01	80	20
Ph.D. 2008-09	04	04	-	-	-
Ph.D. 2009-10	10	06	04	20	-
Ph.D. 2010-11	06	05	01	17	34
Ph.D. 2012-13	13	05	01	17	-

33. Diversity of students:

<i>Name of the Programme (refer to question no. 4)</i>	<i>% of students from the same university</i>	<i>% of students from other universities within the State</i>	<i>% of students from universities outside the State</i>	<i>% of students from other countries</i>
M.Sc. 2010	84	16	Nil	Nil
M.Sc. 2011	81	19	Nil	Nil
M.Sc. 2012	85	15	Nil	Nil
M.Sc. 2013	77	23	Nil	Nil
Ph.D. 2007-08	60	100	Nil	Nil
Ph.D. 2008-09	75	100	Nil	Nil
Ph.D. 2009-10	80	100	Nil	Nil
Ph.D. 2010-11	83	100	Nil	Nil
Ph.D. 2012-13	83	100	Nil	Nil

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

<i>Competitive Exams</i>	<i>No. of students qualified</i>
Civil Service	Nil
Defence Service	Nobody appeared
NET	2010-3 (1JRF); 2011- 2; 2012- 4; 2013- 2(1JRF).
SET	2010- 3; 2011- NA ; 2012-NA ; 2013-NA
GATE	NA

35. Student progression :

<i>Student progression</i>	<i>Percentage against enrolled</i>
UG to PG	2010 – 74 2011 – 50 2012 – 100 2013 – 74
PG to M.Phil.	NA
PG to Ph.D.	2010 - 9 2011 - 12 2012 - 14 2013 - 19

Ph.D. to Post-Doctoral Employed Campus selection Other than campus recruitment Entrepreneur	2013 - 25 Nil 82%
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36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	17%
from other universities within the State	66%
from universities from other States	17%
from universities outside the country	Nil

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

1 (one) [Amit Kisku awarded with M.Phil from SOAS, University of London]

38. Present details of departmental infrastructural facilities with regard to

a) Library	One departmental library
b) Internet facilities for staff and students	LAN and wifi connection to students and faculty members
a) Total number of class	02
b) Class rooms with ICT facility	01
c) Students' laboratories	01
d) Research laboratories	01

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

Sl. No.	Name of the students	status	Year of Award	Name of the Supervisors
1 2 3 4 5 6	Sk. Siraj Ali Mohan Chandra Dolai Bigitendriya Debsharma Raj Kumar Karan Srikumar Ghosh Indraja Bankura	Continuing Continuing Continuing Continuing Continuing Continuing		Prof. F. Chakrabarty
7 8 9 10	Sanatnu Panda Arup Majumdar Subhamoy Kisku Atasi Jana	Awarded Continuing Continuing Continuing	2013	Dr. A. Guha
11 12 13 14 15 16	Bandana Sen Amal K. Bhunia Sadaruddin Biswas Atanu Acharyya Kankana Dey Priyanka Das	Awarded Awarded Awarded Continuing Continuing Continuing	2010 2012 2012	Dr. Kaushik Bose

17	Argina Khatun	Continuing		
18	Mihir Ghosh	Continuing		
19	Tanwi Sukul	Continuing		
20	Pikli Kanra	Continuing		
21	Tamal Pathak	Continuing		Dr. Dipak K Midya
22	Md. Mohidul Islam	Continuing		
23	Biswanath Jana	Continuing		
24	Ashim Das	Continuing		
25	Bithika Adak	Continuing		
26	Samprita Biswal	Continuing		Dr. Sovanjan Sarkar
27	Tanwi Chakraborty	Continuing		

b) from other institutions/universities

Sl. No.	Name of the students	Masters from
1	Ashis K. Das (under A. Guha/A.K. Danda)	Visva-Bharati University
2	Kanchan Mukhopadhyay (under Prof. R.K. Das)	University of Calcutta
3	Ratna Dhar (under A. Guha/ A.K.Danda)	University of Calcutta
4	Raja Chakrabarty (under Dr. K. Bose)	University of Calcutta
5	Gopal C. Mandal (under Dr. K. Bose)	University of Calcutta
6	Binoy Kr. Kuiti (continuing/ Dr. K. Bose)	Utkal University
7	Tanushri Shaw (cont'ing/Prof. F. Chakrabarty)	University of Calcutta
8	Sarmin Begum (cont'ing/ Prof. F. Chakrabarty)	West Bengal State
9	Farhana Sultana (cont'ing/Prof. F. Chakrabarty)	University

40. Number of post graduate students getting financial assistance from the university:

Sl.No.	Name of the students with	
	Full free of Fees	Half free of Fees
2009-10	1.Priyanka Das 2. Krishna Keshab Bera	1.Tamali Chowdhury 2.Sangita Dinda
2010-11	-	1.Sanchita Dinda 2. Suman K. Pradhan 3.Soumi Dutta 4. Sumu Das 5. Parna Giri 6. Subrata Acharya
2011-12		<u>1st Year</u> 1. Anindita Giri 2. Satabdi Jana 3. Moumita Kamila 4. Itusri Dey 5. Nayanmani Das 6. Debsankar Maity 7. Srikrishna Dinda 8. Soma Pal

		<u>2nd Year</u> 9. Sumu Das 10. Sanchita Dinda 11. Sudeshna Giri 12. Parna Giri 13. Sumit Kr. Jana 14. Sanhita Pahari 15. Soma Chakraborty 16. Sudipa Maity
2012-13	<u>1st Year</u> 1. Aparna Das 2. Tutu Bhunia 3. Paramita Maity 4. Monisha Manna 5. Tamasi Laha 6. Susmita Maity 7. Tanmoy Mukherjee <u>2nd Year</u> 8. SriKrishna Dinda 9. Subhankar das 10. Mahua Samanta	

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology

- (i). The matter is first discussed in the Departmental Committee meeting;
- (ii). Then it is discussed with the students, research scholars, the alumni of the department, and the external experts on the subject;
- (iii). The Departmental Committee makes a proposal with due consideration of the feedbacks and suggestions received from, the local needs and job opportunity, and forwards the same to the Board of Studies under the relevant Faculty Council;
- (iv). The Board of Studies, in presence of the External Members and/or External Experts, discusses the matter and resolves the decision which may be forwarded to the Board of Research Studies or the Joint Faculty Council depending on the merit of the issue(s).

42. Does the department obtain feedback from

A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

The Departmental Committee (DC) obtains formal and informal feedback from the faculty and discusses the feedback and may forward it to the Board of Studies which may recommend appropriate change in the curriculum or may recommend for organizing Workshop involving the students, scholars, alumni and the external experts to decide on the

modification(s) required.
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
The students' feedback is received through (i) a schedule entitled "Teachers' Evaluation by the Students" which the students fill up anonymously the various points on teaching-learning process, regularity of the classes, etc. Each teacher obtains the feedback individually, studies the feedback forms given by each and every student of the class, assesses the feedback and identifies the weaknesses and drawbacks, and tries to develop or modify his teaching-learning-evaluation process accordingly. If any faculty feels it necessary to highlight some points in the DC to alert other faculties, he may do so and the points are likely to be discussed in the DC meeting; and (ii) internal assessment of the studied portion of the syllabus.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
Such feedback is obtained, mostly in informal way, at the meetings at various levels, seminars and workshops. The faculty members brief the feedback so obtained in the DC, which the latter takes into consideration.

43. List the distinguished alumni of the department (maximum 10) :

Sl. No.	Name of the Alumni
1	Amit K Kisku, Assistant Professor in Anthropology, Vidyasagar University
2	Suman K. Samanta, Assistant Professor in Anthropology, Mohishadal Girls' College (VU).
3	Dr. Bidhan K. Das, Assistant Professor in Anthropology, Institute of Development Studies, Kolkata.
4	Dr. Amal K. Bhunia, Assistant Registrar, Vidyasagar University
5	Dr. Subal Das, Assistant Professor in Anthropology, Guru Ghasi Das University
6	Sudip Bhui, Assistant Professor in Anthropology, SKB University.
7	Sidhartha Shit, Anthropological Survey of India, Andaman & Nicobar Centre, Government of India.
8	Srikumar Ghosh, Project Co-ordinator, Sarbasiksha Abhijan, Govt. of W.B.
9	Mita Biswas, Assistant Teacher, Bramhamoyee Girls' High school, Contai.
10	Dr. Samiran Bisai, ICMR Consultant (Scientist C), Tribal Research Institute, ICMR, Jabbalpur, Govt. of India.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

UGC merged scheme lectures and seminars are regularly organized by the Department. The list of prominent speakers may be given below:

1. Dr. Slawomir Koziel, Director, Institute of Anthropology, Polish Academy of Sciences, Poland.
2. Prof. Stanley Ulijaszek, Oxford University & Director, Unit for Biocultural Variation &

Obesity, Oxford.

3. Prof. Barun Mukhopadhyay, Biological Anthropology Unit, Indian Statistical Institute, Kolkata.
4. Prof. Gopal Krishna Chakraborty, Department of Anthropology, University of Calcutta.
5. Prof. Kishor Basa, HOD, Department of Anthropology, Utkal University, Bhubaneswar.
6. Dr. Jayanta Sarkar, Ex-Deputy Director, AnSI, Govt. of India.
7. Prof. Premananda Bharati, Biological Anthropology Unit, Indian Statistical Institute, Kolkata.
8. Dr. Subha Ray, Department of Anthropology, University of Calcutta.
9. Dr. Dilip Mahanabis, Director, Society for Applied Studies, Kolkata.
10. Dr. Joydeep Sen, Department of Anthropology, North Bengal University.
11. Dr. Subir Biswas, Department of Anthropology, West Bengal State University, Barasat.
12. Prof. Alasdair Roberts, Suffolk University, USA.
13. Prof. Rene Veron, Lussanne University, Switzerland
14. Prof. Kishan Sharma, Chandigarh University
15. Dr. Oinam Hemlata, Department of Human Ecology, Delhi University
16. Dr. M. ManiBabu, Department of Anthropology, Manipur University, Manipur.

45. List the teaching methods adopted by the faculty for different programmes:

1. Using conventional blackboard
2. ICT technologies
3. Class seminars

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

This is understood through:

1. Studying the feedback from the students, scholars, alumni and the employers;
2. Success rate of the students in NET and other competitive examinations.

47. Highlight the participation of students and faculty in extension activities.

These include the NSS activities and sports organized by the university regularly.

48. Give details of “beyond syllabus scholarly activities” of the department:

These include:

- (i). Publication of Wall Magazines regularly.
- (ii). Organizing cultural programmes on the occasion of Fresher’s welcome and Farewell to the 4th Semester students;
- (iii) Observation of the National days.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

Accredited as the part of accreditation of the university by the NAAC.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

The department is involved with serious research work in the fields of displacement and development, insurgency violence with special reference to the Maoist movement, health and nutritional status of the tribal and marginalized communities, and gerontology.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths	<ul style="list-style-type: none"> (i). faculties working on the region-specific problems with regard to the communities' biological and social-cultural specificities. (ii). collection of empirical data through intensive fieldwork. (iii). high quality publication despite very poor infra-structural facilities. (iv). Catering poor and tribal students, supplemented by the affirmative strategy of the Government. (v). very healthy student-teacher relationship.
Weaknesses	<ul style="list-style-type: none"> (i). absence of any scientific support staff (laboratory assistant or non-teaching staff). (ii). under-staffed faculty. (iii). poor laboratory infrastructure. (iv). paucity of space. (v). unavailability of any grant for dissertation fieldwork.
Opportunities	<ul style="list-style-type: none"> (i). faculties being invited as experts in government-level committees, institutions, UGC, ICSSR and other organizations, and research bodies. (ii). intimate inter-faculties interaction in academic affairs. (iii). Diligent and hardworking students and scholars who are promising field workers. (iv). location being very appropriate for anthropological field that provides opportunities to watch closely the biological as well as sociocultural problems of human society. (v). positive attitude of the university authority towards the department.
Challenges	<ul style="list-style-type: none"> (i). To develop more skills of the students to have more success in NET, WBCS/IAS, and other competitive examinations. (ii). to develop an innovative center of research funded by the UGC. (iii). to fulfill the aspirations of the students coming increasingly from other

	<p>universities.</p> <p>(iv). to have SAP (UGC).</p> <p>(v). to bring more projects on international collaboration.</p>
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52. Future plans of the department.

1. To develop a UGC-sponsored Innovative Centre which may be named as the Centre for Impact Studies (CIS).
2. To get SAP (UGC).

Annexure - I

Publications of the Department of Anthropology (2010-2013)

I. Papers

(i). Kaushik Bose

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III. Chapters in Books

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13. Mandal, G.C. and **K. Bose**. 2013. Measuring Fatness Among Rural Children of Bengalee Ethnicity: An Alternative Way. In: *India: Health and Human Development Aspects*, pp. 437-446. Editor: Joav Merrick. Nova Science Publishers, New York, 2014. ISBN: 978-1-62948-784-7.

(ii). Falguni Chakrabarty

14. Chakrabarty, F. 2013. "Sacred Grove and the Mechanism of Intra-Tribal Unity of the Santals: An Anthropological Perspective". In *Cultural Unity of India*. Edited by Professor Sabyasachi Bhattacharya. pp. 167-181. Kolkata: Ramakrishna Mission Institute of Culture. **ISBN 978-93-81325-20-9**.
15. Chakrabarty, F and Sk. S. Ali. 2013. "Land Reclamation and Crop Rotation on the Ajodhya hills: A Cultural Ecological Perspective". In *Issues in Development and Sustainability*. Edited by Dr. M.D. Shamim Firdous and Dr. M.D. Julfikar Ali. Pp.78-88. Kolkata: S.B. Enterprise. **ISBN 978-93-82420**.
16. Dolai, M. C. and F. Chakrabarty. 2013. "Development and the Changing Condition of the Rural Elderly: A Study in Sundarbans of South 24 Parganas, West Bengal". In *Issues in Development and Sustainability*. Edited by Dr. M. D. Shamim Firdous and Dr. M.D. Julfikar Ali. Pp.18-28. Kolkata: S.B. Enterprise. **ISBN 978-93-82420**.

(iii). Sudip Dutta Banik

17. **Datta Banik S.** 2010. Patterns of sex ratio with age and birth intervals in four endogamous Hindu castes in rural West Bengal. In: *Paradigm in Social Science Research- A New Horizon*. Mangaleswaran R. (Ed). Authorspress (publisher), New Delhi, India. pp. 93-96. (ISBN 978-81-7273-581-4)
18. Acharya S N, Basu S K, Acharya K, Paul S, **Datta Banik S**, Prasad R. **2011**. Fenugreek: A spice, forage and nutraceutical crop. In: *Spices: Elixir of life*. De AK. (Ed.). pp 129-150). Originals, New Delhi, India. (ISBN 13:978-81-8454-103-8; ISBN 10: 81-8454-103-1)

(iv). Abhijit Guha

19. Guha, Abhijit, 2011. "Special economic zones, land acquisition and civil society in West Bengal", chapter 13 in *Resettling Displaced People Policy and Practice in India* (2011), ed. Hari Mohan Mathur. New Delhi: Council for Social Development & Routledge.
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22. Guha, Abhijit, 2012. "The bankruptcy of the ideology of violence" in *Maoism in India: Ideology and Ground Reality* edited by Abhijit Guah, pp. 90-100. INCAA: Jhargram. ISBN.81-903866-6-2.
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24. Guha, Abhijit, 2012. "From Field to Archive and Back to Field: Combining the Domains of Enquiry". In *Plural Nature of Anthropology (Golden Jubilee Lectures)*. (2012). Edited by Danda, A.K., Basa, K., Misra, K.K. Indian Anthropological Society: Kolkata.
25. Guha, Abhijit, 2013. "Land Acquisition Resettlement and Rehabilitation Bill: An Anthropological Perspective". In *Status of Environment in West Bengal*. (2013).

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(iv). Dipak Midya

26. Midya, D.K. 2012. "Introduction" in *Indigenous People in India: Identity, Empowerment and Discontent* edited by D.K. Midya, pp. 1-11. New Delhi: APH Publishing Corporation. ISBN 978-81-313-1439-5.
27. Midya, D.K. 2012. "Assessing the Dying Life: the Lalgurh context" in *Maoism in India: Ideology and Ground Reality* edited by Abhijit Guah, pp. 63-89. INCAA: Jhargram. ISBN.81-903866-6-2.
28. Midya, D.K. 2012 "Ethnicity and its Role in Survival of a Displaced Indigenous People" in *Dimensions of Anthropological Research in India* edited by J. Sarkar, A. Basu and A. K. Singh, pp. 357-380. The Indian Anthropological Society: Kolkata. ISBN: 81-85525-06-4.

(v). Sovanjan Sarkar

29. **Sarkar, Sobhanjan** and Barun Mukhopadhyay. 2010. Seasonal variation in blood pressures and hypertension among the Bhutias of Sikkim, India. In: *Studies on Biomedical Anthropology: Profiles of Health Culture* (Chapter 19). Editors, R. K. Mutatkar, Ajit K. Danda and Vikash Bhatt. Indian National Confederation and Academy of Anthropologists (INCAA), Jhargram, Indira Gandhi Rashtriya Manav Sangrahalaya, Bhopal, **Aryan Books International**, New Delhi. 169-179.
30. **Sarkar, Sovanjan** and Barun Mukhopadhyay. 2010. Urban living and obesity. In: *On Medical Anthropology: India (INCAA occasional papers)*. Editors, Ajit K. Danda and Indu Talwar. Indian National Confederation and Academy of Anthropologists (INCAA), Jhargram, Indira Gandhi National Centre for the Arts, New Delhi. 191-204.
31. Mukhopadhyay, Barun and **Sovanjan Sarkar**. 2014. Cardiovascular risk profile and possibilities for cardiovascular health education in Sikkim, India. In: *Explorations in Anthropology in Northeast India*. Editor: Sarthak Sengupta. Kalpaz Publication. New Delhi. [In press]

IV. Edited Books

1. Bose, K. 2012. *Human Malnutrition: Twin Burdens of Undernutrition and Overnutrition*. New York: Nova Science Publishers. ISBN: 978-1-62417-043-0.
2. Chakrabarty, Falguni. 2012. *Adaptation of the Santals to the Hill-Forest Environment*. APH Publishing Corporation, New Delhi. **ISBN 978-81-313-1501-9**
3. Chakrabarty, Falguni, A.Guha, K. S. Bose. *Panorama of Development: Challenges Ahead*. Concept Publishing Company, New Delhi. **(in press)**
4. Danda, A. K., R.K. Mutatkar and **D.K. Midya**. 2009: *Essays on Cultural Anthropology*. INCAA & IGRMS: Jhargram. ISBN 81-903866-7-0.
5. **Datta Banik S**, Basu S K. 2009. Environmental Challenges of the 21st Century. APH Publishing Corporation. New Delhi. (ISBN: 978-81-313-0660-4).
- 6 and 7. Basu S K, S. **Datta Banik**. 2009. Environment Education – Global Issues and Policies. APH. Publishing Corporation. New Delhi. ISBN: 978-81-313-0492-1. New Delhi. **Vol. 1 and Vol. 2.**

8. **Datta Banik S.** 2010. Research in Physical Anthropology: Essays in Honor of Professor L. S. Penrose. Unas Letras Industria Editorial, Mérida, Yucatán, Mexico. ISBN: 978-607-9054-01-4.
9. Basu S K, S. **Datta Banik, S.** Roy Chowdhury, Chen X. 2011. Green Technology and Environment: Efforts for Building a Sustainable Planet. The Science Association of Bengal. (E-Book). ISBN 978-0-9782833-4-6.
10. Guha, A. 2012. *Maoism in India: Ideology and Ground Reality*. INCAA: Jhargram. ISBN.81-903866-6-2.
11. Midya, D.K. 2012: *Indigenous People in India: Identity, Empowerment and Discontent*. New Delhi: APH Publishing Corporation. ISBN 978-81-313-1439-5.
12. Das, R.K. and **D. K. Midya**. 2012: *Many Faces of Development*. Kolkata: INCAA. ISBN 81-903866-4-6.

Department of Applied Mathematics with Oceanology and Computer Programming

1. Name of the Department:
Applied Mathematics with Oceanology and Computer Programming
2. Year of establishment
1985
3. Is the Department part of a School/Faculty of the university?:
Science Faculty
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
<ul style="list-style-type: none"> • M. Sc. Course in Applied Mathematics in regular mode • Ph. D.
5. Interdisciplinary programmes and departments involved
Nil
6. Courses in collaboration with other universities, industries, foreign institutions, etc
<p>Prof. M.Pal is doing research in collaboration with</p> <p>(i) Islamic Azad University, Tehran, Iran, (ii) University of the Panjab, Lahore, Pakistan,</p> <p>(iii) NIT, Durgapur</p> <p>Prof. R.N.Jana is doing research in collaboration with</p> <p>(i) University of Gour Banga</p> <p>Dr. S.K.Mondal is doing research in collaboration with</p> <p>(i) Prof. Somenath Dutta, India Meteorological Department, Pune, India</p> <p>Dr. S.Roy is doing research in collaboration with</p> <p>(i) Prof. M P Biswal, Dept. of Mathematics, IIT, Kharagpur</p> <p>Dr. Biswajit Sarkar is doing research in collaboration with</p> <p>(i) Prof. W.Yun, Pusan National University, Korea, (ii) Prof. Cardenas Barron, Tecnológico de Monterrey, Colonia Tecnológico, Mexico, (iii) Prof. H.M. Wee, Chung Yuan Christian University, Taiwan, (iv) Prof. I.K. Moon, Seoul National University, Korea, (v) Prof. Gerardo Treviño-Garza, Tecnológico de Monterrey, Colonia Tecnológico, Mexico, (vi) Prof. S. Goyal, Concordia University, Canada, (vii) Prof. K.S. Chaudhuri, Dept. of Mathematics, Jadavpur University, India</p>
7. Details of programmes discontinued, if any, with reasons
Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester
9. Participation of the department in the courses offered by other departments
<p>Prof. M. Pal: Department of Electronics</p> <p>Mr. R.N.Giri: Department of Computer Science, MCA</p>

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	1	2
Associate Professor	2	1	2
Assistant Professor	5	5	3

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Designation	Qualification	Specialization	No. of years of Experience	No. of Ph.D. / M.Phil guided
Dr. R.N.Jana	Professor	M.Sc., DIIT, Ph. D	Magneto-Fluid Dynamics, Visco – elastic, Mass transfer, porous medium	33 years	05 (Awarded, Ph.D.) 02(Submitted, Ph.D.) 04(Ongoing, Ph.D.)
Dr. M. Pal	Professor	M.Sc, Ph. D	Algorithmic Graph Theory, Fuzzy Mathematics	16 years	18 (Awarded, Ph.D.) 1 (Submitted, Ph.D.) 12 (Ongoing, Ph.D.)
Dr.S.K.Mondal	Associate Professor	M.Sc, M.Tech, Ph. D	Operations Research, Meteorology, Fuzzy Set, Soft Set, Soft Computing	14 years	04 (Awarded, Ph.D.) 09 (Ongoing, Ph.D.)
Dr. S. K. Roy	Associate Professor	M.Sc, Ph. D	Operations Research, Fuzzy, Rough and Soft Sets Theory, Lattice in Discrete Mathematics	13 years	02 (Awarded, Ph.D.) 07 (Ongoing, Ph.D.) 02(Awarded, M.Phil.)
Dr. B. Sarkar	Assistant Professor	M.Sc., M.Phil, Ph.D., PDF (PNU, Korea)	Inventory Control, Production Planning, Supply Chain Management, Reliability, Stochastic Inventory Model	4 years	04 (Ongoing, Ph.D)
Mr. G. Ghorai	Assistant Professor	M.Sc,	Functional Analysis	1 year	Nil
Mr. R.. Giri	Assistant Professor	M.Sc M.Tech.	Operations Research, Data Processing	1 year	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

NIL

<i>13. Percentage of classes taken by temporary faculty – programme wise information</i>
<i>M.Sc.: 8.5%</i>
<i>Ph.D.: 15%</i>

<i>14. Programme-wise Student Teacher Ratio:</i>		
Sr.No.	Programme	Ratio (student :teacher)
1	M.Sc. course in Regular	20:1
3	Ph.D. Programme	8:1

<i>15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual</i>
Group D staff: 01

<i>16. Research thrust areas as recognized by major funding agencies</i>
<p>Thrust areas of research will mainly involve</p> <ul style="list-style-type: none"> (a) Optimization and Operations Research (b) Optimization and Graph Algorithms (c) Supply Chain Management, Reliability (d) Fuzzy Decision Making Problems (e) Soft Computing (f) Fluid Dynamics and Magneto Hydrodynamics , Porus Medium, Visco elastic fluid, Mass transfer (g) Meteorology, Soft Set and Risk Analysis, Game theory <p>The funding agencies are UGC, DST, CSIR</p>

<i>17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.</i>

SL. No.	Name of the Faculty	Name of the Project	Funding Agency	Amount Sanctioned.	Starts on
1.	Prof. Madhumangal Pal	L(h,k) labeling on intersection graph	DST	8,71,000	01.04.2011
2.	Dr. Biswajit Sarkar	Production planning and inventory control: A new Approach	UGC (Minor)	1,13,000	01.07.2012
3.	Dr. Shyamal Kr. Mondal	Study of Soft Set theory and its applications	UGC (Minor)	1,70,000	01.04.2013

<i>18. Inter-institutional collaborative projects and associated grants received</i> <i>a)National collaboration b) International collaboration</i>
Nil

19. Departmental projects funded by DST FIST;UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

Nil

20. Research facility / centre with

☐ state recognition

Nil

☐ national recognition

☐ international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies

Nil

22. Publications:

Annexe-1

List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international) =
- Monographs =
- Chapters in Books =
- Edited Books =
- Books with ISBN with details of publishers =
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) =
- Citation Index – range / average =
- SNIP =
- SJR =
- Impact Factor – range / =
- Average =
- H-index =

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated –

Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

Nil

26. Faculty serving in					
SL. No	Name of the Faculty	National Committee	International Committee	Editorial Board	Others
1.	Prof. Madhumangal Pal	Member of the Selection Committee to select Common-Wealth Fellow in Mathematics, 2013.		<p>Editor-in-Chief of the international journal</p> <ol style="list-style-type: none"> 1. <i>Annals of Pure and Applied Mathematics</i> 2. Journal of Physical Sciences, VU <p>Member of the Editorial Board</p> <ol style="list-style-type: none"> 1. Advanced Modeling and Optimization, Romania 2. International Journal of Applications of Fuzzy Sets and Artificial Intelligence, Greece, 3. International Journal of Logic and Computation, Malaysia 4. ISRN Discrete Mathematics, India 5. International Journal of Engineering Science, Advanced Computing and Bio-Technology, India, 6. International Journal of Computer and Information Technology, 7. International Journal of Fuzzy Mathematical Archive, India 8. Mathematics and Informatics, China 	<p>Life member of</p> <ol style="list-style-type: none"> 1. Calcutta Mathematical Society, Kolkata 2. <i>Academy of Discrete Mathematics and Applications</i> (ADMA), Mysore, Karnataka
2.	Dr. Shyamal Kr. Mondal				Life Member in ORSI
3.	Dr. Sankar Kumar Roy			<p>Member of the Editorial Board to the following Journals</p> <ol style="list-style-type: none"> 1. <i>Journal of Mathematical Sciences and Applications</i> 2. American Journal of Modeling and Optimization 3. American Journal of Applied Mathematics 	Senior Member of IEDRC (Hong Kong)
4.	Dr. Biswajit Sarkar			<p>Member of the Editorial Board to the journals</p> <ol style="list-style-type: none"> 1. The Yugoslav Journal of Operations Research, 2. Mathematica Aeterna 3. African Journal of Business Management 4. Annals of Pure and Applied Mathematics 5. Associated Editor in Journal of Business Process Management 	<p>Life Member in</p> <ol style="list-style-type: none"> 1. ORSI 2. Calcutta Mathematical Society, Kolkata

5.	Ganesh Gorai				Life Member of Calcutta Mathematical Society
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27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
Nil

28. Student projects :

<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
Nil
<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
Nil
In the last semester, the students have term end projects and they done This under the in-house faculty members.
10 students were completed term projects funded by UGC infrastructural grant under the guidance of faculty members
29. Awards / recognitions received at the national and international level by
Prof. M.Pal: Bharat Jyoti Award
Dr. B.Sarkar: Attended Post Doctoral Research at Pusan National University, Korea from 2012-2013.

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

Seminar	05	UGC unassigned grant
Workshop	01	UGC unassigned grant
National: a. National seminar entitled “Applied and Computational Mathematics and their Applications” at Department of Applied mathematics, Vidyasagar University, Midnapore, during March 6-7, 2008. b. Three-day national workshop on “Discrete Structure” at Department of Applied mathematics, Vidyasagar University, Midnapore, during March 17-19, 2010. c. National Seminar on “Recent Developments in Applied Mathematics and its Applications” Vidyasagar University, Midnapore, India, March 30 th -31 st , 2011. d. National Seminar on “Emerging Trends in Mathematics” Vidyasagar University, Midnapore, India, December 19 th -20 th , 2012. e. National Seminar on “Recent Aspects in Mathematics and their Applications” Vidyasagar University, Midnapore, India, February 25 th -26 th , 2014. International: International Conference “Recent Trends on Mathematics and its Applications” Vidyasagar University, Midnapore, India, March 20 th -21 st , 2013.		

31. Code of ethics for research followed by the departments:
Yes, as per UGC guidelines and as well as University guidelines.

32. Student profile programme-wise:

Name of Programme	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
M. Sc. In regular mode	1300	255	145	99	100
Ph. D.	125	46	08	100	100

33. Diversity of students:

Name of Programme	% of students from the same university	% of students from the other university within state	% of students from the university outside the state	% of students from the university from other countries
M. Sc. In regular mode	73	27	00	00
Ph. D.	70	30	00	00

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

Civil & Defence	NET	SET	GATE	Other
00	25 approx	00	90 approx	360 approx

35. Student progression :

Student Progression	Percentage against enrolled
UG to PG	10 (% approx.)
PG to M.Phil	NA
PG. to Ph.D.	10 % (approx.)
Ph.D. to Post - Doctoral	Nil
Employed	NA
Campus selection	
Other than campus	
Entrepreneurs	NA

36. Diversity of staff

Percentage of faculty who are graduates	
Of the same university	50 %
From other university within the state	25 %
From university from other state	12.5 %
From university outside the country	0%

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

01 Ph.D.)

38. Present details of departmental infrastructural facilities with regard to

a	Library	1
b	Internet facilities for staff and students	10
c	Total number of Class rooms	4
d	Class rooms with ICT facility	2
e	Students' laboratories	2
f	Research laboratories	0

39. List of doctoral, post-doctoral students and Research Associates

a	From the host institution / university	1. DIPANKAR RANA 2. SHARMILA SAREN 3. SANKAR KR. GUCHHAIT 4. PRABIR PANJA 5. RAGHU NANDAN GIRI 6. ARUNAVA MAJUMDER 7. SRIKANTA SAMANTA 8. RUMA RANI PATRA 9. SUDIPTA MIDYA 10. SUTAPA PRAMANIK 11. SHAKTI NATH MONDAL 12. KARTICK PATRA 13. PRASANTA DAS 14. SATYABRATA PAUL 15. TARASANKAR PRAMANIK 16. SUKHENDU KUILA 17. ANJANA DAS 18. SOVAN LAL MAJI 19. RAJKUMAR PRADHAN 20. BUDDHADEB MONDAL 21. SANJIB MONDAL 22. NABAKUMAR CHAKRABORTY 23. BIBHAS CHANDRA DAS 24. AMALESH KUMAR MANNA
b	From the other institution / university :	1. GURUPADA MAITY 2. MAGFURA PERVIN 3. ASIT DEY 4. HAREKRISHANA MANDAL 5. NILESH PAKHIRA 6. SUSANTA BERA 7. PRASANTA MULA 8. PRADIP GAIN 9. SUSOVAN CHAKRABORTY 10. BIMAL KUMAR SETT 11. SHEIK MIJANUR RAHAMAN

40. Number of post graduate students getting financial assistance from the university:

Half and Full

Free studentship (10% +10% of the students)
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41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology

For introducing new syllabus UGC guidelines are followed and the syllabi of other universities are consulted. Those are intensively discussed among the faculty members in the Departmental Committee meeting. To finalize the syllabus the help of experts of other universities is also taken.
--

42. Does the department obtain feedback from
--

A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, by restructuring curriculum through BOS.

B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, feedback form for the evaluation of teachers by students cover points like curriculum and teaching learning evaluation. After receiving the evaluation report from students, faculty members try to overcome the lacunas in their respective teaching learning methods.
--

C. alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, their suggestions are always utilized.

43. List the distinguished alumni of the department (maximum 10) :
--

- | |
|---|
| <ol style="list-style-type: none"> 1. Madhusudan Rana, Technical Advisor at FedEx Services, Orlando, Florida Area, USA 2. Uttam Pattanayek, Software Division, Qualcomm, California, USA. 3. Dr. Manik Lal Das, Associate Professor, Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, Gujarat, India 4. Dr. Pankaj Dutta, Assistant Professor, Shailesh J. Mehta School of Management, IIT, Bombay, Powai, Mumbai – 400076, India 5. Dr. Manabendra Mondal, Associate Professor, CORAL, IIT Kharagpur, India 6. Dr. Arun Chakraborty, Associate Professor, CORAL, IIT Kharagpur, India 7. Dr. Sudhan Majhi, Assistant Professor, Dept. of Mathematics, IIT, Patna, Bihar 8. Dr. Dilip Maity, Assistant Professor, Dept. of Mathematics, BITS Pillani 9. Dr. Anita Pal, Assistant Professor, Department of Mathematis, NIT Durgapur, India 10. Dr. Ranjan Kumar Jana, Assistant Professor, Dept. of Mathematics, Sardar Vallabhbhai National Institute of Technology, Post Doc in USA. 11. Dr. Sujit Kr. Samanta, Assistant Professor, Department of Mathematics, National Institute of Technology, Raipur - 492010, Chhattisgarh India |
|---|

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

The enrichment of students in knowledge is performed in every year through seminar, conference, workshop and specially some different invited lectures inviting different resource persons from IIT Bombay, IIT Kharagpur, IIT Guwahati, Himachal Pradesh University, Tripura University, University of Calcutta, Jadavpur University, University of Burdwan and Cape Town Peninsula University and Technology, South Africa.

The following teachers/fellows are delivered lecture in our Deptt. under various schemes such as Merged scheme, Seminars etc.

1. Professor Oluwale Daniel Makinde
Senior Professor & Director, Institute for Advanced Research in Mathematical Modelling & Computations, Cape Peninsula University of Technology, South Africa
2. Prof. K.S.Choudhury, Retd. Prof., UGC and AICTE Fellow, Jadavpur University,
3. Professor B.D.Acharya Scientist, DST, New Delhi
4. Dr. Sr. A.Germina, Associate Professor, Central University of Kerala
5. Professor S Safi Professor, Department of Mathematics University of Kashmir, India
6. Professor D K Sinha , Ex. Vice Chancellor, Viswa Bharati University, Rasbehari Prof.
7. Professor K S Chaudhuri, Dept. of Mathematics Retired Prof. Jadavpur University,
8. Professor A Goswami, Dept. of Mathematics, IIT Kharagpur
9. Professor Mihir Baran Banerjee, Bhatnagar Awardee , Dept. of Mathematics, Himachal Pradesh University
10. Prof. N. D. Bairagi, Dept. of Mathematics J.U.
11. Prof. B. N. Mondal, PAMU, I.S.I.
12. Prof. Joydeb Chattopadhyay, I.S.I.
13. Prof. Anjan Mukherjee, Dept. of Mathematics, Tripura University

45. List the teaching methods adopted by the faculty for different programmes:

- i) Display through overhead projectors
- ii) Teaching with the help of LCD projectors
- iii) Computer aided instruction.
- iv) Practical knowledge through meteorological laboratory

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

All most all students are engaged in different jobs. A good number of students have been employed in computer software industries in both INDIA and ABROAD. Many are engaged in doing research in INDIA and Foreign Institutes and Universities. A large number of students have been employed in different universities IIT, NIT, Undergraduate Colleges (General and Engineering), H.S. Schools and Secondary Schools. Some students have been placed in different responsible administrative jobs. There is no formal placement cell in the department but the students are always encouraged and advised for placement by the faculties.

47. Highlight the participation of students and faculty in extension activities.

Teachers:

- (i) NSS program officers,
- (ii) Nodal Officer of All India Survey of Higher Education,
- (iii) Member of the Women's Hostel Inspection Team (funded by UGC),
- (iv) Member of different UG, PG and Ph.D. committees,
- (v) Delivered invited lectures in national/International Conference/seminar,
- (vi) Member of organizing committee in different national/international

<p>conference/seminar</p> <p>(vii) Journal Publication</p> <p>(viii) Resource Person</p> <p>(ix) Chairing the session</p> <p>Students:</p> <p>(i) NSS Activities,</p> <p>(ii) Performing in national level cultural program and sports</p> <p>(iii) Attending seminar/special lectures</p> <p>(iv) Educational Tour,</p> <p>(v) Fresher's Welcome,</p> <p>(vi) Teachers' day celebration,</p> <p>(vii) Quiz Contest and Picnic, etc.</p>

48. Give details of "beyond syllabus scholarly activities" of the department:

The departmental teachers have delivered talk, invited talk, chaired the session, presentation a paper in various university/institutions/college etc.

Prof. M. Pal

1. Delivered an invited lecture on "*An introduction to graph theory*" in the State-Level Workshop "Discrete Mathematics and Mathematical Modelling Introduced in UG Syllabus" held at Raja N.L. Khan Women's College, Midnapore, West Bengal, on 23.04.2008.
2. Delivered an invited lecture on "*Approximation of function*" in the Winter School on "Probability, Statistics and Optimization methods with Applications" held at NIT Durgapur, Durgapur-713209, West Bengal, on 28.01.2009.
3. Delivered an invited lecture on "*Fuzzy correlation and regression*" in the Winter School on "Probability, Statistics and Optimization methods with Applications" held at NIT Durgapur, Durgapur-713209, West Bengal, on 29.01.2009.
4. Delivered an invited lecture on "*An introduction on interval graph*" in the National Seminar on "Mathematics with Special Emphasis on Discrete Mathematics" held at Department of Pure Mathematics, University of Calcutta, Kolkata, on 25.02.2009.
5. Delivered an invited lecture on "*Fuzzy correlation and regression*" in the National Seminar "Uncertainty: A Mathematical Approach" held at Department of Mathematics, M.U.C. Women's College, Burdwan, West Bengal on 27.02.2009.
6. Delivered an invited lecture on "*Colouring of interval graph*" in the International Seminar on "International Conference on Recent Advances in Mathematics & Applications" held at Department of Mathematics, University of Burdwan, Burdwan, on 15.01.2010.
7. Delivered an invited lecture on "*Some applications of graphs*" in the Refresher Course entitled "Mathematical Sciences", held at Academic Staff College, University of Burdwan, Burdwan, on 30.12.2010.
8. Delivered an invited lecture on "*Fuzzy regression analysis*" in the Department of Mathematics, **University of Rajshahi, Rajshahi, Bangladesh** on March 2011.
9. Delivered an invited lecture on "*Fuzzy matrices*" in the Department of Mathematics, **Jagannath University, Dhaka, Bangladesh** on March 2011.
10. Delivered an invited lecture on "Triangular fuzzy matrices" in the national Seminar on "Recent trend in fuzzy set theory, rough set theory and soft set theory", held at Department of Mathematics, Uluberia College, West Bengal, on 23rd September 2011.
11. Delivered an invited lecture on "*Some applications of graphs in daily life problems*" in the Refresher Course entitled "Mathematics", held at Academic Staff College, Department of Pure mathematics, University of Calcutta, Kolkata, on 18.11.2011.
12. Delivered an invited lecture on "*Matrices on triangular fuzzy numbers*" in the Department

- of Mathematics, **University of Rajshahi, Rajshahi, Bangladesh** on 19.02.2012.
13. Delivered an invited lecture on “Graphs and their applications” in the national Seminar on “Recent Development of Mathematics and its Application to Engineering”, held at Department of Mathematics, Bengal College Engineering and Technology, Durgapur, West Bengal, on 16th March 2012.
 14. Delivered an invited lecture on “Introduction to C Programming and its Application” in the Workshop on “C programming and its applications”, held at Department of Mathematics, Kharagpur College, West Bengal, on 28th March 2012.
 15. Delivered an invited lecture on “Introduction to Graph Algorithms” in the National Seminar “Design and Analysis of Graph Algorithms”, held at Department of Mathematics, Raja N.L.Khan Women’s, West Bengal, on 14th August 2012.
 16. Delivered an invited lecture on “L(2,1)-labelling on cactus graphs” in the National Seminar “Current Research and Developments in Mathematics and Computing (CRDMC-2012)”, held at the Department of Mathematics, Aliah University, on 3rd October 2012.
 17. Delivered an invited lecture on “The L(2,1)-labelling on intersection graphs” in the National Conference on “**Recent Trends in Mathematical and Computational Sciences**”, held at the Institute of Advanced Study in Science and Technology, Guwahati, Assam, on 28th November 2012.
 18. Delivered an invited lecture on “The L(h,k)-labelling on graphs” in the National Seminar on “**Mathematics and Mathematical Sciences**”, held at the Dept. of Applied Mathematics and Pure Mathematics, University of Calcutta, Kolkata on 28th December 2012.
 19. Delivered an invited lecture on “Fuzzy correlation and regression” in “**2nd International Conference on Fuzzy Sets, Rough Sets and Soft Computing**”, held at the Dept. of Mathematics, Tripura University, Tripura on 19th January 2013.
 20. Delivered an invited lecture on “An introduction on fuzzy planar graph” in National Seminar to **Commemorate the Sesquicentennial Birth Anniversary of “SIR ASUTOSH MOOKERJEE(1864-1924)” on the occasion of 106th Foundation Day of the Calcutta Mathematical Society** held at the Calcutta Mathematical Society, Kolkata on 8th September 2013.

Dr. Shyamal Kumar Mondal

1. UGC Sponsored State Level Workshop on “Discrete Mathematics and Mathematical Modelling Introduced in U.G. Syllabus” held during April 22-23, **2008** at the Department of Mathematics, Raja N. L. Khan Womens College, Gope Palace, Paschim Medinipur, West Bengal, **2008**.
2. National Seminar on “Recent Trends in Operations Research and Its Computational Challenges” A UGC (SAP) DSA Programme, held during November 17-18, **2009** in the Department of Applied Mathematics, University of Calcutta.
3. International Conference on Computing and Systems – 2010 organized by Department of Computer Science, The University of Burdwan, West Bengal, India held on 19th – 20th November, **2010**.
4. Two day National Seminar on Data Mining and Decision Making System organized by Computer Centre, Vidyasagar University held on 4-5 March, 2010.
5. UGC Sponsored National Seminar on “Emerging Trends in Mathematics” organized by Vidyasagar University, Midnapore, W.B. In collaboration with Calcutta Mathematical Society, W.B. dedicated To Srinivasa Ramanujan held on 19th and 20th December, 2012.
6. International Conference on Frontier of Mathematical sciences with Applications organized by Calcutta Mathematical Society, West Bengal, India held on 07th -09th December 2012.
7. Delivered an invited lecture on “Introduction to C Programming and its Application” in

- the Workshop on “C programming and its applications”, held at Department of Mathematics, Kharagpur College, West Bengal, on 30th March 2012.
8. National Seminar On “Advances in Mathematics & Applications” organized by Department of Mathematics, Under UGC Special Assistance Programme, DSA Phase – I, The University of Burdwan, Burdwan – 713104, West Bengal, India, held on March 6 – 7, 2013.
 9. Theme Meeting on Fuzzy and Interval Based Uncertainty Modeling, organized by Department of Mathematics, NIT, Rourkela, Odisha, India, Board of Research In Nuclear Sciences, Department of Atomic Energy, Mumbai, during 18th to 20th July, 2013.
 10. 2nd International Conference on Rough Sets, Fuzzy Sets and Soft Computing (ICRFSC’ 12) organized by Department of Mathematics, Tripura University in collaboration with Fuzzy And Rough Sets Association (FRSA) held on 17th – 19th January, 2013.
 11. Second International Conference on “Computing and System – 2013”, organized by Department of Computer Science, The University of Burdwan held on 21/09/2013 – 22/09/2013. (Soft Matrix and Its Applications) on Saturdays and Sunday.
 12. 26th International Conference of Jangjeon Mathematical Society, South Korea organized by Acharya Institute of Graduate Studies, Department of Mathematics, Bangalore – 560107 during 01- 04 August, 2013.
 13. International Conference on “ operations research for Data Analytics and Decision Analysis” in conjunction with the 46th Annual Convention of operational research Society of India (ORSI), organized by Department of statistics, University of Kashmir, Srinagar from October 19 – 23, 2013.
 14. Delivered an invited lecture on “National Workshop on Applied Optimization” organized by Department of Basic Science & Humanities, College of Engineering & Management, Kolaghat, held on June 29 – 30, 2013. Lecture of my topics: Optimization and Genetic Algorithms.
 15. Chaired on two technical sessions on 14.02.2013 in 3 – day National Workshop sponsored by UGC on “General Theory of Relativity and Cosmology” organized by Dept. of Physics (UG & PG) and Mathematics held on 12.02.2013-14.02.2013.

Dr. Sankar Kumar Roy

1. UGC Sponsored State Level Workshop on “Discrete Mathematics and Mathematical Modelling Introduced in U.G. Syllabus” held during April 22-23, **2008** at the Department of Mathematics, Raja N. L. Khan Womens College, Gope Palace, Paschim Medinipur, West Bengal, **2008**.
2. Participated and presented in “International Conference on Frontier of Mathematics and Applications”, The University of Burdwan, Burdwan, India 16-18th January, 2008.
3. Participated and presented in International Seminar on “ Modern Trends in Biological Sciences” (ISBN 978-81-89339-40-1), Raja N L Khan Women’s College, Vidyasagar University, Midnapore, India, 24th October, pp 82-86, 2009.
4. Participated and presented in National Seminar on “ Emerging Trends and Challenges in Operations Research”, University of Calcutta, Kolkata, India, 17-18th November, 2009.
5. Participated and presented in “International Conference on Recent Advances in Mathematics and Applications”, The University of Burdwan, Burdwan, India 13-15th January, India, 2010
6. Participated and presented in International Conference on Frontiers in Applied

- Mathematics and its Computational Aspects (ICFAMCA-2011), 15th -17th March 2011, University of Calcutta, Calcutta, West Bengal, INDIA.
7. Participated and presented in National Conference on Recent Developments in Mathematics and Its Applications (NCRDMA-2011), 31st January -1st February 2011 (ISBN 978-93-80697-54-3) pp- 17-26, SRM University, Chennai, INDIA.
 8. Participated and presented in National Seminar on “National Seminar on Rough Set, Fuzzy and Soft Computing”, Tripura University, Tripura, India, 11st – 12nd November, 2011
 9. Participated and presented in International Conference on Frontiers of Mathematical Science and its Applications”, (ICFMSA-2012), Calcutta Mathematical Society, Kolkata, India, 7th – 9th December, 2012
 10. Participated and presented in International Conference on Rough Set, Fuzzy and Soft Computing”, Tripura University, Tripura, India, 17th – 19th January, 2013
 11. Participated and presented in 2nd World Conference on Applied Sciences, Engineering & Technology”, Gitam University, Hyderabad, India, 8th – 9th March, 2013
 12. Participated and presented in International Conference on Operations Research on Data Analytics & Decision Analysis, Dept. of Statistics, University of Kashmir, Srinagar, J&K. India, October 21-23, 2013
 13. Participated and presented in International Conference on Facets of Uncertainties and Applications, ORSI, Calcutta Chapter & Dept. of Applied Mathematics, University of Calcutta, Kolkata, December 5-7, 2013

Dr. Biswajit Sarkar

1. Attended Post Doctoral Research at Pusan National University, Korea from 2012-2013.
2. Dr. Sarkar is selected for Visiting Researcher at Seoul National University, Korea from 2013-2014.
3. Delivered an Invited Talk on “A Mathematical Approach to the Inventory Model” at Dept. of Industrial Engineering, Pusan National University, Korea on 26.02.2013.
4. Delivered an Invited Talk at Vidyasagar Women’s College, University of Calcutta, on “An inventory model with reliability in an imperfect production process” on 03.12.2011.
5. Delivered an Invited Talk at The Engineering Faculty, Trunojoyo University Madura (UTM), Indonesia on “How To Write And Publish In International Journals” on 23.08.2013.
6. Delivered an Invited Talk at Ubaya University, Surabaya, Indonesia on “How to Write and Publish Research Articles in International Journals” on 23.08.2013.

The teachers are also engaged with the students of the Department of Applied Mathematics in following activities :

- (i) NSS Activities
- (ii) Fresher’s Welcome
- (iii) Extempo Talk
- (iv) Teachers’ day celebration
- (v) Quiz Contest and
- (vi) Picnic

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department was accredited previously by NAAC as part of accreditation of the university in 2008.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Faculty members are actively engaged in research and development activities in the current fields of Applied Mathematics, viz. fuzzy mathematics, soft computing, supply chain management, computational fluid mechanics, meteorology, optimization theory, crisp and fuzzy network, etc. A large number of research articles are published by our faculty members in each year in different internationally reputed high impact factor journals.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

- (i) Quality research by the faculty members. Researches papers are being published in different international/national reputed journals.
- (ii) All most all students are engaged in different services and research institute either in India or Abroad.
- (iii) Overall Success of the students at the PG exam is praise worthy. Approximately 98% students obtained 1st class in PG exam.
- (iv) Department is publishing an international journal “Journal of Physical Sciences” since last 17 years.
- (v) Departmental faculties are engaged in editorial boards of different national and international journals.

Weaknesses:

- (i) Inadequate number of faculty.
- (ii) Inadequate number of group-C and group-D staff.
- (iii) Inadequate space.
- (iv) There is no room for research scholars.
- (v) There is no high performance computational lab.

52. Future plans of the department.

- i)** To establish a separate well equipped research lab.
- ii)** To get additional sanction for strengthening the department library.
- iii)** To offer M. Tech. in computational OR.
- iv)** To increase the numbers of special papers.
- v)** To organize short term course / winter school / summer school etc.
- vi)** To increase the number of faculty members
- vii)** As the Bay-of-Bengal is very near to this university, the department plans to take some project works on Ocean Studies and Meteorology.
- viii)** To establish a soft computing laboratory.

Annexure - I

List of Publications by Prof. Rabindra Nath Jana (2008-2013)

2008

1. B. K. Das, M. Guria and **Rabindra Nath Jana**, Unsteady Couette flow in a rotating system, *Meccanica*, Springer-Verlag, **I.F: 1.056**, Vol.43, 517-521, **2008**.
2. M. Guria, B. K. Das, **Rabindra Nath Jana** and C. Erdem Imrak, Hydromagnetic flow between two porous disks rotating about non-coincident axes, *Acta Mechanica Sinica*, Springer, **I.F: 0.688**, Vol. 24(5), 489-496, 2008.
3. S. Das, M. Jana, M. Guria and **Rabindra Nath Jana**, Unsteady viscous incompressible flow due to an oscillating plate in a rotating fluid, *Journal of Physical Sciences*, Vol. 12, 51-64, **2008**.
4. M. Guria, **Rabindra Nath Jana** and S. K. Ghosh, Effects of wall conductance on MHD Couette flow and heat transfer in a rotating system, *International Journal of Applied Mechanics and Engineering*, Vol. 13(1), 75-90, **2008**.
5. G. Manna, S. L. Maji, M. Guria and **Rabindra Nath Jana**, Unsteady hydrodynamic flow between two disks with non-coincident parallel axes of rotation, *International Journal of Applied Mechanics and Engineering*, Vol. 13(4), 967-978, **2008**.

2009

6. M. Guria, **Rabindra Nath Jana**, S. K. Ghosh and I. Pop: Three dimensional free convection flow in a vertical channel filled with a porous medium, *Journal of Porous Media*, Vol. 12(10), 85-995, **2009**.
7. M. Guria, S. Das, **Rabindra Nath Jana** and S. K. Ghosh, Oscillatory Couette flow in the presence of an inclined magnetic field, *Meccanica*, Springer-Verlag, **I.F: 1.056**, Vol. 44, 555-564, **2009**.
8. S. L. Maji, M. Guria, G. Manna and **Rabindra Nath Jana**, Hydrodynamic flow through porous medium between two porous disks rotating about non-coincident axes, *International Journal of Applied Mechanics and Engineering*, Vol. 14(1), 239-250, **2009**.
9. S. L. Maji, A. K. Kanch, M. Guria and **Rabindra Nath Jana**, Hall effects on hydromagnetic flow on an oscillating porous plate, *Applied Mathematics and Mechanics*, Vol. 34(4), 503-512, **2009**.
10. S. Das, M. Guria and **Rabindra Nath Jana**, Unsteady hydromagnetic flow induced by a porous plate in a rotating system, *International Journal of Fluid Mechanics Research*, Begell House, Vol. 36(4), 289-299, **2009**.
11. S. Das, S. L. Maji and **Rabindra Nath Jana**, Unsteady MHD Couette flow in a rotating system, *Mathematical Computations Modelling*, Elsevier, **I.F: 1.351**, Vol. 30, 1211-1217, **2009**.
12. S. L. Maji, N. Ghara, **Rabindra Nath Jana** and S. Das, Unsteady MHD flow between two eccentric rotating disks, *Journal of Physical Sciences*, Vol. 13, 87-96, **2009**.

2010

13. M. Guria, A.K. Kanch, S. Das and **Rabindra Nath Jana**, Effects of Hall current and slip condition on unsteady flow of a viscous fluid due to non-coaxial rotation of a

- porous disk and a fluid at infinity, *Meccanica*, Springer-Verlag, **I.F: 1.056**, Vol. 45, 23-32, **2010**.
14. S. L. Maji, G. Manna, M. Guria and **Rabindra Nath Jana**, Unsteady flow due to non-coaxial rotation of a porous disk and a fluid at infinity through porous medium, *Chemical Engineering Communication*, Taylor & Francis, **I.F:1.052**, Vol. 6, 791-803, **2010**.
 15. S. Das, S. L. Maji, M. Guria and **Rabindra Nath Jana**, Hall effects on unsteady MHD flow between two disks with non-coincident parallel axes of rotation, *International Journal of Applied Mechanics and Engineering*, Vol. 15(1), 5-18, **2010**.
 16. M. Guria, G. Manna and **Rabindra Nath Jana**, Flow and heat transfer along an infinite horizontal porous plate through a porous medium in a rotating system, *Journal of Porous Media*, Begell House, **I.F:0.707**, Vol. 13(4), 387-393, **2010**.
 17. M. Jana, S. L. Maji, S. Das and **Rabindra Nath Jana**, Unsteady flow of viscous fluid through porous medium bounded by a porous plate in a rotating system, *Journal of Porous Media*, Begell House, **I.F:0.707**, Vol. 13(7), 645-654, **2010**.
 18. R. R. Patra, S. L. Maji, S. Das and **Rabindra Nath Jana**, Oscillatory MHD Couette flow in a rotating system, *International Journal of Fluid Mechanics Research*, Vol. 37(3), 251-266, **2010**.
 19. M. Guria, N. Ghara and **Rabindra Nath Jana**, Three dimensional MHD free convection flow and heat transfer through a vertical channel, *International Journal of Applied Mechanics and Engineering*, Vol. 15(4), 1047-1063, **2010**.
 20. M. Guria, N. Ghara and **Rabindra Nath Jana**, Radiation effect on three dimensional vertical channel flow, *International Journal of Applied Mechanics and Engineering*, Vol. 15(4), 1065-1081, **2010**.
 21. N. Ghara, S. L. Maji, S. Das and **Rabindra Nath Jana**, Radiative heat transfer to MHD Couette flow with variable wall temperature and general magnetic boundary conditions, *Journal of Physical Sciences*, Vol. 14, 31- 44, **2010**.

2011

22. M. Guria, B.K.Das, **Rabindra Nath Jana** and S. K. Ghosh, Magnetohydrodynamics flow with reference to non-coaxial rotation of a porous disk and a fluid at infinity, *International Journal of Dynamics of Fluids*, Vol. 7(1), 24-34, **2011**.
23. A.S. Gupta, M. Guria and **Rabindra Nath Jana**, Hall effects on the magnetohydrodynamic shear flow past an infinite porous flat plate subjected to uniform suction or blowing, *International Journal of Non-Linear Mechanics*, Elsevier, **I.F: 1.543**, Vol. 46, 1057-1064, **2011**.
24. **Rabindra Nath Jana** and S. K. Ghosh, Radiative heat transfer of an optically thick gray gas in the presence of indirect natural convection, *World Journal of Mechanics*, Vol. 1, 64-69, **2011**.
25. **Rabindra Nath Jana**, M. Jana, S. Das, S. L. Maji and S. K. Ghosh, Hydrodynamic flow between two non-coincident rotating disks embedded in porous media, *World Journal of Mechanics*, Vol.1, 50-56, **2011**.
26. S. K. Guchhait, S. Das, **Rabindra Nath Jana** and S. K. Ghosh: Combined effects of Hall current and rotation on unsteady Couette flow in a porous channel, *World Journal of Mechanics*, Vol. 1, 87-99, **2011**.
27. C. Mandal, S. L. Maji, S. Das and **Rabindra Nath Jana**, Effects of radiation and heat transfer on flow past an exponentially accelerated vertical plate with constant heat flux, *Advances in Theoretical and Applied Mathematics*, Vol. 6(5), 579-590, **2011**.
28. S. Das, S.K. Guchhait and **Rabindra Nath Jana**, Unsteady MHD flow and heat transfer past a porous flat plate in a rotating system, *International Journal of Computer*

Applications, Vol. 33(2), 7-26, 2011.

29. S. Das, N. Ghara and **Rabindra Nath Jana**, MHD free convection between vertical walls, *International Journal of Mathematical Archive*, Vol. 2(11), 2429-2439, 2011.
30. S. Das, M.Jana and R. N. Jana: Couette flow through porous medium in a rotating system, *International Journal of Mathematical Archive*, Vol. 2(11), 2318-2326, 2011.
31. S Das, M Jana and **Rabindra Nath Jana**, Effects of radiation on free convection flow in a vertical channel embedded in porous media, *International Journal of Computer Applications*, **I.F:0.825**, Vol. 35(6), 38-44, 2011.
32. S. Das, C. Mandal and **Rabindra Nath Jana**, Magnetohydrodynamic Free Convection in a Vertical Slot, *International Journal of Computer Applications*, **I.F:0.835** Vol. 35(3), 1-6, 2011.
33. S.Das, M. Jana and **Rabindra Nath Jana**, Radiation effect on natural convection near a vertical plate embedded in porous medium with ramped wall temperature, *Open Journal of Fluid Dynamics*, Vol. 1, 1-11, 2011.
34. S.Das, B. C. Sarkar and **Rabindra Nath Jana**, Hall Effects on MHD Couette Flow in a Rotating System, *International Journal of Computer Applications*, **I.F:0.835**, Vol. 35(13), 22-30, 2011.
35. M. Jana, S. L. Maji, S. Das and **Rabindra Nath Jana**, Convection of radiating gas in a vertical channel through porous media, *World Journal of Mechanics*, Vol. 1, 275-282, 2011.

2012

36. N. Ghara, M. Guria and **Rabindra Nath Jana**, Hall effects on oscillating flow due to eccentrically rotating porous disk and a fluid at infinity, *Meccanica*, Springer-Verlag, **I.F: 1.056**, Vol. 47, 557-571, 2012.
37. S. Das, S. K. Guchhait and **Rabindra Nath Jana**, Radiation effects on unsteady MHD free convective Couette flow of heat generation/absorbing fluid, *International Journal of Computer Applications*, **I.F: 0.835**, Vol. 39(3), 42 – 51, 2012.
38. S. Das, S. K. Guchhait and **Rabindra Nath Jana**, Effects of radiation on free convection MHD Couette flow with variable wall temperature in presence of heat generation, *Advanced in Theoretical and Applied Mathematics*, Vol. 7(2), 171-190, 2012.
39. S. Das, C. Mandal and **Rabindra Nath Jana**, Effects of radiation on unsteady Couette flow between two vertical parallel plates with ramped wall temperature, *International Journal of Computer Applications* **I.F:0.835**, Vol. 39(4), 37- 42, 2012.
40. S. Das, C. Mandal and **Rabindra Nath Jana**, Radiation effects on unsteady free convection flow past a vertical plate with Newtonian heating, *International Journal of Computer Applications*, **I.F: 0.835**, Vol. 41(13), 36- 41, 2012.
41. S. Das, B. C. Sarkar and **Rabindra Nath Jana**, Radiation effects on free convection MHD Couette flow started exponentially with variable wall temperature in presence of heat generation, *Open Journal of Fluid Dynamics*, Vol. 2, 14 – 27, 2012.
42. N. Ghara, S. L. Maji, S. Das, **Rabindra Nath Jana** and S.K. Ghosh, Effects of Hall current and ion-slip on unsteady MHD Couette flow, *Open Journal of Fluid Dynamics*, Vol. 2, 1-13, 2012.
43. C. Mandal, S. Das and **Rabindra Nath Jana**, Effect of radiation on transient natural convection flow between two vertical walls, *International Journal of Applied Information System*, Vol. 2(2), 49-56, 2012.
44. R.R. Patra, S. Das, **Rabindra Nath Jana** and S.K. Ghosh: Transient approach to radiative heat transfer free convection flow with ramped wall temperature, *Journal of Applied Fluid Mechanics*, Vol. 5(2), 9 -13, 2012.

45. M. Jana, S. Das, S. L. Maji, **Rabindra Nath Jana** and S.K. Ghosh: Natural convection boundary layer flow past a flat plate of finite dimensions, *Journal of Porous Media*, Begell House, **I.F: 0.707**, Vol. 15 (6), 585 – 593, **2012**.
46. S. Das, S. L. Maji, N. Ghara and **Rabindra Nath Jana**, Combined effects of Hall currents and slip condition on steady flow of a viscous fluid due to non-coaxial rotation of a porous disk and a fluid at infinity, *Journal of Mechanical Engineering Research*, Vol. 4(5), 175 -184, **2012**.
47. M. Jana, S. Das and **Rabindra Nath Jana**, Effects of rotation and radiation on the hydrodynamic flow past an impulsively started vertical plate with ramped plate temperature, *International Journal of Applied Information Systems*, Vol. 3(4), 39-51, **2012**.
48. S. K. Guchhait, S. Das and **Rabindra Nath Jana**, Unsteady free convection flow past a moving vertical porous plate with Newtonian heating, *International Journal of Engineering Science and Technology*, Vol.4(07), 3237- 3246, **2012**.
49. S. K. Guchhait, S. Das and **Rabindra Nath Jana**, Combined effects of Hall current and rotation on MHD mixed convection oscillating flow in a rotating vertical channel, *International Journal of Computer Applications*, **I.F: 0.835**, Vol. 49(13), 1-11, **2012**.
50. B. C. Sarkar, S. Das and **Rabindra Nath Jana**, Effects of radiation on MHD free convective Couette flow in a rotating system, *International Journal of Engineering Research and Applications*, Vol.2(4), 2346-2359, **2012**.
51. M. Jana, S. Das and **Rabindra Nath Jana**, Unsteady MHD flow induced by a porous flat plate in rotating system, *International Journal of Engineering Research and Applications*, Vol.2(4) , 2360 – 2367, **2012**.
52. M. Jana, S. Das and **Rabindra Nath Jana**, Radiation effects on unsteady MHD free convective flow past an exponentially accelerated vertical plate with viscous and Joule dissipations, *International Journal of Engineering Research and Applications*, Vol. 2(5), 270-278, **2012**.
53. B. C. Sarkar, S. Das and **Rabindra Nath Jana**, Transient MHD natural convection between two vertical walls heated/cooled asymmetrically, *International Journal of Computer Applications*, **I.F: 0.835**, Vol. 52(3), 27- 34, **2012**.
54. M. Jana, S. Das and **Rabindra Nath Jana**, Effects of radiation on MHD natural convection near a vertical plate with oscillatory ramped plate temperature, *International Journal of Engineering Innovation and Research*, Vol.1(4), 366-375, **2012**.
55. B. C. Sarkar, S. Das and **Rabindra Nath Jana**, Effects of Hall currents and radiation on MHD free convective flow past an oscillating vertical plate with oscillatory plate temperature in a porous medium, *Bulletin of Society for Mathematical Services and Standards*, Vol. 1(3), 06-32, **2012**.
56. S. Das, B.C. Sarkar and **Rabindra Nath Jana**, MHD natural convection between vertical parallel plates with oscillatory wall temperature, *Journal of Computer and Mathematical Science*, Vol.3(4), 426 – 438, **2012**.
57. B. C. Sarkar, S. Das and **Rabindra Nath Jana**, Effects of radiation on transient MHD free convective Couette flow in a rotating system, *Advances in Applied Science Research*, Vol.3 (5), 3291-3310, **2012**.
58. B. C. Sarkar, S. Das and **Rabindra Nath Jana**, Oscillatory MHD free convective flow between two vertical walls in a rotating system, *Advances in Applied Science Research*, Vol.3(5), 3311-3325, **2012**.
59. S. Das, S. L. Maji, **Rabindra Nath Jana** and G. S. Seth, Flow induced by torsional oscillations of a disk in a rotating visco-elastic fluid, *International Journal of Computer Applications*, **I.F: 0.835**, Vol. 58(6), 18-21, **2012**.

60. S. Das, S.L Maji and **Rabindra Nath Jana**, Hall effects on unsteady hydromagnetic flow induced by a porous plate, *International Journal of Computer Applications*, **I.F: 0.835**, Vol. 57(18), 37- 44, **2012**.
61. N. Ghara, S. Das, S.L. Maji and **Rabindra Nath Jana**, Effect of radiation on MHD free convection flow past an impulsively moving vertical plate with ramped wall temperature, *American Journal of Scientific and Industrial Research*, **I.F: 0.59**, Vol. 3(6), 376-386, **2012**.
62. S.S. Manna, S. Das and **Rabindra Nath Jana**, Effects of radiation on unsteady MHD free convective flow past an oscillating vertical porous plate embedded in a porous medium with oscillatory heat flux, *Advances in Applied Science Research*, Vol. 3(6), 3722-3736, **2012**.
63. B. C. Sarkar, S. Das and **Rabindra Nath Jana**, Combined effects of Hall currents and radiation on MHD free convective Couette flow in a rotating system, *Advances in Applied Science Research*, Vol. 3(6), 3766-3787, **2012**.
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16. S. Mandal, A.K.Maity, K.Maity, **S.K.Mondal**, M.Maiti, “Multi-Period Optimal defective Production Problem With Variable Preparation Time”, *OPSEARCH*, September 2012, Volume 49, Issue 3, pp 237-252
17. Pricing Model for petrol / diesel and inventory control under permissible delay. ”, *International Journal of Operations Research*, 2012 ,Vol.15, No.4, pp.424 - 447.
18. T.Mitra Basu, N.K.Mahapatra, S.Kumar Mondal, “On some properties of fuzzy soft sets and intuitionistic Fuzzy soft sets”, *IJMRA*, *International Journal of Physical and Social Sciences(IJPSS)*, Vol 2, Issue 5, Page no. 240-270, May-2012.
19. T.Mitra Basu, N.K.Mahapatra, S.Kumar Mondal, “On Some New Operations in Fuzzy Soft Set And Intuitionistic Fuzzy Soft Set Theory”, *IRACST, International Journal of Computer Science and Information Technology & Security (IJCSITS)*, ISSN: 2249-9555, Vol 2, No. 2, Page no. 408-417, April-2012.
20. T.Mitra Basu, N.K.Mahapatra, S.Kumar Mondal, “A Balanced Solution of a Fuzzy Set Based Decision Making Problem in Medical Science”, *Applied Soft Computing*, Volume 12, Issue 10, October 2012, Pages 3260 – 3275.(**IF: 2.612**)
21. Kartik Patra and Shyamal Kumar Mondal, “Risk analysis in Diabetes prediction based on a new approach of ranking of generalized trapezoidal fuzzy numbers”, *Cybernetics and Systems: An International Journal*, Volume 43:8, Pages 623 – 650.(**IF: 1.182**)
22. Bibhas Chandra Das, Barun Das, Shyamal Kumar Mondal, "An integrated inventory model with delay in payment for deteriorating item under Weibull distribution and advertisement cum price-dependent demand.", *International Journal of Operational Research*, Accepted on 26/11/2012

2013

23. A. Guria, B. Das, S. Mondal, M. Maiti, “Inventory policy for an item with inflation induced purchasing price, selling price and demand with immediate part payment” *Applied Mathematical Modelling*, Volume 37, Issues 1–2, Pages 240–257, January 2013.
24. Biswapati Jana, Debasis Giri, Shymal Kumar Mondal, Pabitra Pal, “IMAGE STEGANOGRAPHY BASED ON CELLULAR AUTOMATA”. *International Journal of Pure and Applied Mathematics*, Volume 83 No. 5 2013, 701-715
25. Bibhas Chandra Das, Barun Das, **Shyamal Kumar Mondal**. Integrated supply chain model for a deteriorating item with procurement cost dependent credit period.

- Computers & Industrial Engineering, Volume 64, Issue 3, March 2013, Pages 788–796 (**IF: 1.589**)
26. Prasanta Das, **Shyamal Kumar Mondal** and Somenath Dutta. “Asymptotic solution for 3D Lee waves across Assam-Burma hills”. MAUSAM, 64, 3 (July 2013), 501-516. (**IF:0.170**)
 27. Anupam Ojha, Barun Das, **Shyamal Kumar Mondal**, Manoranjan Maiti. “A multi-item transportation problem with fuzzy tolerance”. Applied Soft Computing 13 (2013) 3703–3712
 28. N.Chakraborty, **S.Mondal**, M.Maiti. **A Deteriorating Multi-item Inventory Model with Price Discount and Variable Demands Via Fuzzy logic Under Resource Constraints**, Computers & Industrial Engineering Volume 66, Issue 4, December 2013, Pages 976–987
 29. Anupam Ojha, Barun Das, Shyamal Kumar Mondal, Manoranjan Maiti . **A transportation problem with fuzzy-stochastic cost**. Applied Mathematical Modelling. Available online 22 August 2013.

List of Publications by **Dr. Sankar Kr. Roy** (2008-2013)

2008

1. **Sankar Kumar Roy**, Fuzzy Programming with Piecewise Linear Membership Functions for Stackelberg Games, “*The Journal of Fuzzy Mathematics*”, USA, 16(2), 419-430, **2008**

2009

2. **Sankar Kumar Roy** and Chandan Bikash Das, Genetic Algorithm Approach to Entropy Matrix Game via Fuzzy Programming, *Advanced Modeling and Optimization*, Vol.11(4), 349-365, **2009**
3. **Sankar Kumar Roy** and Chandan Bikash Das, Fuzzy Based GA to Multicriteria Entropy Matrix Goal Game, *Journal of Uncertain Syst.*, (**Indexed in Scopus**), Vol.3(3), 201-209, **2009**
4. Chandan Bikash Das and **Sankar Kumar Roy**, An Approach to Solve Two-person Matrix Game via Entropy, *Advanced Modeling and Optimization*, Vol. 11(4), 557-570, **2009**
5. Chandan Bikash Das and **Sankar Kumar Roy**, Genetic Algorithm Approach to Entropy Matrix Goal Game via Fuzzy Programming Tech., *Journal of Physical Sciences*, Vol. 13, 161-174, **2009**

2010

6. D. R. Mahapatra, **Sankar Kumar Roy** and M. P. Biswal, Stochastic Based on Multi-objective Transportation Problems Involving Normal Randomness, *AMO-Advanced Modeling and Optimization*, ROMANIA, Vol. 12(2), 205-223, **2010**
7. Chandan Bikash Das and **Sankar Kumar Roy**, Fuzzy Based GA to Multicriteria Entropy Matrix Game, *The Journal of Fuzzy Mathematics*, USA, Vol. 18(3), 567-582, **2010**
8. Chandan Bikash Das and **Sankar Kumar Roy**, Fuzzy Based GA to Entropy Bimatrix Goal Game, *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, I. F.: 1.120, Vol. 18(6), 779-799, **2010**

9. D. R. Mahapatra, **Sankar Kumar Roy** and M. P. Biswal, Multi-objective Stochastic Transportation Problems Involving Log-Normal Randomness, *Journal of Physical Sciences*, Vol. 14, 63-76, **2010**
10. D. R. Mahapatra, **Sankar Kumar Roy** and M. P. Biswal, Multi-objective Stochastic Transportation Problems Involving Log-Normal Randomness, *Journal of Physical Sciences*, Vol. 14, 63-76, **2010**

2011

11. Dipankar Rana and **Sankar Kumar Roy**, Rough Set Approach on Lattice, *Journal of Uncertain Systems, (Indexed in Scopus)*, UK, Vol. 5 (1), 72-80, **2011**.
12. **Sankar Kumar Roy**, Prasanta Mula and Shakti Mondal, A New Solution Concept in Credibilistic Game, *CiiT International Journal of Fuzzy Systems*, I. F.:441, Vol. 3(3), 115-120, 2011.
13. D.R. Mahapatra, **Sankar Kumar Roy** and M. P. Biswal, Computation of Multi-objective Stochastic Transportation Problems Involving Normal Distribution with Joint Constraints, *The Journal of Fuzzy Mathematics*, USA, Vol. 19(4), 865-876, **2011**
14. Chandan Bikash Das and **Sankar Kumar Roy**, Entropy Optimization Model on Bimatrix Game, *Journal of Physical Sciences*, Vol. 15, 161-174, **2011**
15. **Sankar Kumar Roy**, and D. R. Mahapatra, Multi-objective Interval-Valued Transportation Probabilistic Problem Involving Log-Normal. *International Journal of Mathematics and Scientific Computing (ISBN No. 2231-5330)*, Vol. 1(2), 14-21, **2011**

2012

16. Prasanta Mula and **Sankar Kumar Roy**, Credibilistic Bi-matrix Game, *Journal of Uncertain Systems, (Indexed in Scopus)*, Vol. 6 (1), 71-80, **2012**.
17. **Sankar Kumar Roy**, D. R. Mahapatra and M. P. Biswal Multi-choice Stochastic Transportation Problem with Exponential Distribution, *Journal of Uncertain Systems, (Indexed in Scopus)*, Vol. 6 (3), 200-213, **2012**.
18. D. R. Mahapatra, **Sankar Kumar Roy** and M. P. Biswal, An Exponential Distribution Framework on Multi-objective Transportation Problem, *Bulletin of Calcutta Mathematical Society*, 104(3), 255-268, **2012**.
19. **Sankar Kumar Roy** and Chandan Bikash Das, A Real Coded Genetic Algorithm to Entropy Bimatrix Game: Fuzzy Programming Technique, *“International Journal of Computing and Information Sciences”*, World Academic, UK, Vol. 7 (4), 243-252, **2012**.

2013

20. D.R. Mahapatra, **Sankar Kumar Roy** and M. P. Biswal, Multi-choice Stochastic Transportation Problem involving Extreme Value Distribution, *Applied Mathematical Modeling, Elsevier*, I. F: 1.706, Vol. 37, 2230-2240, **2013**.
21. Chandan Bikash Das and **Sankar Kumar Roy**, Fuzzy Based GA to Multi-Objective Entropy Bimatrix Game, *Opsearch, Springer*, Vol. 50 (1), 125-140, **2013**.
22. **Sankar Kumar Roy** and Prasanta Mula, Bifuzzy Matrix Game, *CiiT International Journal of Fuzzy Systems, Impact Factor: .441*, Vol. 5(1), 10-18, **2013**.
23. **Sankar Kumar Roy** and Chandan Bikash Das, Multicriteria Entropy Bimatrix Goal Game: A Fuzzy Programming, *Journal of Uncertain Systems, (Indexed in Scopus)*, Vol-7 (2), 108-117, **2013**.
24. Shakti Mondal and **Sankar Kumar Roy**, A Solution Concept of Matrix Game with Random Fuzzy Payoffs. *CiiT International Journal of Fuzzy Systems*, I. F: .441, Vol 5(2), 161-164, **2013**.

25. **Sankar Kumar Roy**, Multi-Choice Stochastic Transportation Problem Involving Weibull Distribution, *International Journal of Operational Research, Inderscience*, Forthcoming, 2013.
26. **Sankar Kumar Roy** and Prasanta Mula, Rough Set Approach to Bimatrix Game, *International Journal of Operational Research, Inderscience*, Forthcoming, 2013.
27. **Sankar Kumar Roy** and Prasanta Mula, Bimatrix Game in Bifuzzy Environment, *Journal of Uncertainty Analysis and Applications, Springer*, 1(1), 1-17, 2013.
28. Susanta Bera and **Sankar Kumar Roy**, Rough Modular Lattice, *Journal of Uncertain Systems, (Indexed in Scopus), UK*, 7(4), 289-293, 2013
29. Dipankar Rana and **Sankar Kumar Roy**, Lattice for Covering Rough Approximation, *Malaya Journal of Mathematik*, Accepted for Publication, 2013
30. Dipankar Rana and **Sankar Kumar Roy**, Lattice for Rough Intervals, *Journal of New Results in Science*, 2, 39-46, 2013.

Book Published:

Game Theory under MCDM and Fuzzy Set Theory, Published by Verlag Dr. Müller (VDM), Germany, USA, UK, ISBN-13: 978-3639262544, 2010.

List of Publications by **Dr. Biswajit Sarkar** (2010-2013)

2010

1. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, A finite replenishment model with increasing demand under inflation, *International Journal of Mathematics in Operational Research*, Vol. 2(3), pp. 347-385, 2010.
2. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, Optimal reliability, production lotsize and safety stock: An economic manufacturing quantity model, *International Journal of Management Science and Engineering Management*, Vol. 5(3), pp. 192-202, 2010.
3. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, Optimal reliability, production lotsize and safety stock in an imperfect production system, *International Journal of Mathematics in Operational Research*, Vol 2(4), pp. 467-490, 2010.
4. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, A stock-dependent inventory model in an imperfect production process, *International Journal of Procurement Management*, Vol. 3(4), pp. 361-378, 2010.

2011

5. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, An imperfect production process for time varying demand with inflation and time value of money –An EMQ model, *Expert Systems with Applications, Elsevier, I.F. 2.9*, Vol. 38, pp. 13543-13548, 2012.
6. **B. Sarkar**, I. K. Moon, An EPQ model with inflation in an imperfect production system, *Applied Mathematics and Computation, Elsevier, I.F. 1.3*, Vol. 217, pp. 6159-6167, 2011.
7. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, An Economic production quantity model with stochastic demand in an imperfect production system, *International Journal of Services and Operations Management*, Vol. 9(3), pp. 259–283, 2011.
8. U. Adak, **B. Sarkar**, Existing theorems and necessary conditions for general formulation of linear bounded phase co-ordinate control problems in 2-Banach space, *Journal of The Assam Academy of Mathematics (JAAM)*, Vol. 4, pp.25-36, 2011.

2012

9. **B. Sarkar**, An inventory model with reliability in an imperfect production process, *Applied Mathematics and Computation*, **Elsevier, I.F. 1.349**, Vol. 218, pp. 4881–4891, 2012.
10. **B. Sarkar**, An EOQ model with delay-in-payments and time-varying deterioration rate, *Mathematical and Computer Modelling*, **Elsevier, I.F. 1.2**, Vol. 55, pp. 367–377, 2012.
11. **B. Sarkar**, An EOQ model with delay in payments and stock dependent demand in the presence of imperfect production, *Applied Mathematics and Computation*, **Elsevier, I.F. 1.349**, Vol. 218, pp. 8295-8308, 2012.
12. B. K. Sett, **B. Sarkar**, A. Goswami, A two-warehouse inventory model with increasing demand and time varying deterioration, *Scientia Iranica, Transaction E: Industrial Engineering*, **Elsevier, I.F. 0.354**, Vol. 19, pp. 306-310, 2012.

2013

13. **B. Sarkar**, A production-inventory model with probabilistic deterioration in two-echelon supply chain management, *Applied Mathematical Modelling*, **Elsevier, I.F. 1.706**, Vol. 37, pp. 3138-3151, 2013.
14. **B. Sarkar**, I. Moon, Improved quality, setup cost reduction, and variable backorder costs in an imperfect production process, *International Journal of Production Economics*, **Elsevier, I.F. 2.12**, -Accepted, 2013.
15. L. E. Cárdenas-Barrón, **B. Sarkar**, G. Treviño-Garza, An improved solution to the replenishment policy for the EMQ model with rework and multiple shipments, *Applied Mathematical Modelling*, **Elsevier, I.F. 1.706**, Vol. 37, pp. 5549-5554, 2013.
16. **B. Sarkar**, S. Saren and H.M.We, An inventory model with variable demand, component cost and selling price for deteriorating items, *Economic Modelling*, **Elsevier, I.F. 0.775**, Vol. 30, pp. 306-310, 2013.
17. **B. Sarkar**, A. Majumder, A study on three different dimensional facility location problems, *Economic Modelling*, **Elsevier, I.F. 0.775**, Vol. 30, pp. 879-887, 2013.
18. **B. Sarkar**, A. Majumder, Integrated vendor-buyer supply chain model with vendors setup cost reduction, *Applied Mathematics and Computation*, **Elsevier, I.F. 1.349**, Vol. 224, 2013, pp. 362–371, 2013.
19. **B. Sarkar**, S. Sarkar, An improved inventory model with partial backlogging, time varying deterioration and stock-dependent demand, *Economic Modelling*, **Elsevier, I.F. 0.775**, Vol. 30, pp. 924-932, 2013.
20. **B. Sarkar**, S. Sarkar, Variable deterioration and demand-An inventory model, *Economic Modelling*, **Elsevier, I.F. 0.775**, Vol. 31, pp. 548-556, 2013.
21. M. Sarkar, **B. Sarkar**, An economic manufacturing quantity model with probabilistic deterioration in a production system, *Economic Modelling*, Vol. 31, pp. 245-252, 2013.
22. **B. Sarkar**, S. S. Sana, K. S. Chaudhuri, Inventory model with finite replenishment rate, trade credit policy and price-discount offer, *Journal of Industrial Engineering*, Vol. 2013, Article ID 672504, pp. 01-18, 2013.
23. L. E. Cárdenas-Barrón, **B. Sarkar**, G. Treviño-Garza, Easy and improved algorithms to joint determination of the replenishment lot size and number of shipments for an EPQ model with rework, *Mathematical and Computational Applications*, Vol. 18, pp. 3138-3151, 2013.
24. S. Khanra, B. Mandal, **B. Sarkar**, An inventory model with time dependent demand and shortages under trade credit policy, *Economic Modelling*, **Elsevier, I.F. 0.775**, Vol. 35, pp. 349-355, 2013.

Book Published:

Modelling on Production Planning and Inventory Management, Published by LAP Lambert Academic Publishing, USA, UK, Germany, ISBN 978-8433-6334-1, 2010

Details of the Seminars, conference attended by the Faculty during last 5 years:

Prof. R. N. Jana

National

1. Participated in the seminar "*Applied and Computational Mathematics and their Applications*", Vidyasagar University, Midnapore, India, 06th -07th March, 2008.
2. Participated in the seminar "*Recent Developments in Applied Mathematics and its Applications*" Vidyasagar University, Midnapore, India, 30th -31st March, 2011.
3. Participated in National Seminar on *Emerging Trends in Mathematics*", Vidyasagar University, Midnapore, India, 19th -20th December, 2012.

International

4. Participated in "*1st International Conferences on Recent Trends in Mathematics and its Applications*", Vidyasagar University, Midnapore, West Bengal, India, 20th – 21st March, 2013

Prof. M. Pal

National

1. Attended a 5-day workshop on "*Recent Research Direction on Graph Theory*" org. by Department of IIT Kharagpur, during May 26-30, 2008.
2. National Seminar on "*Emerging Trends in Mathematics*" Vidyasagar University, Midnapore, India, December 19th -20th, 2012.

International

3. Attended an international conference *Frontier of Mathematics and Applications*, Org. by Department of Mathematics, University of Burdwan, West Bengal, during 16-18 January, 2008.
4. Attended an international conference on *Mathematics and Computer Science*, Org. by Department of Mathematics, Loyola College, Chennai-600034, during 5-6 January, 2009.
5. Participated "*International Congress of Mathematicians (ICM 2010)*", Hyderabad, India, during 19-27 August, 2010, presented the paper "*L(2,1)-labelling of cactus graph*".
6. Participated in *The 2010 International Conference on E-Business Intelligence*, **Org. by Tsinghua University, Kunming, China**, during 19-21 December 2010, and presented the paper, Orthogonality of Imprecise Matrices. Also **Chaired** the session "**Fuzzy Logic and Soft Computing**".
7. Participated in International Conference on Frontiers of Mathematical Sciences with Applications, 7-9 December 2012, Org. by Calcutta Mathematical Society, Kolkata, India.
8. Participated in International Conference "*Recent Trends on Mathematics and its Applications*" Vidyasagar University, Midnapore, India, March 20th -21st, 2013.

Delivered Invited Lectures

1. Delivered an invited lecture on "*An introduction to graph theory*" in the State-Level Work-Shop "*Discrete Mathematics and Mathematical Modelling Introduced in UG Syllabus*" held at Raja N.L. Khan Women's College, Midnapore, West Bengal, on 23.04.2008.

2. Delivered an invited lecture on “*Approximation of function*” in the Winter School on “Probability, Statistics and Optimization methods with Applications” held at NIT Durgapur, Durgapur-713209, West Bengal, on 28.01.2009.
3. Delivered an invited lecture on “*Fuzzy correlation and regression*” in the Winter School on “Probability, Statistics and Optimization methods with Applications” held at NIT Durgapur, Durgapur-713209, West Bengal, on 29.01.2009.
4. Delivered an invited lecture on “*An introduction on interval graph*” in the National Seminar on “Mathematics with Special Emphasis on Discrete Mathematics” held at Department of Pure Mathematics, University of Calcutta, Kolkata, on 25.02.2009.
5. Delivered an invited lecture on “*Fuzzy correlation and regression*” in the National Seminar “Uncertainty: A Mathematical Approach ” held at Department of Mathematics, M.U.C. Women’s College, Burdwan, West Bengal on 27.02.2009.
6. Delivered an invited lecture on “*Some applications of graphs*” in the **Refresher Course** entitled “Mathematical Sciences”, held at Academic Staff College, University of Burdwan, Burdwan, on 30.12.2010.
7. Delivered an invited lecture on “Triangular fuzzy matrices” in the national Seminar on “Recent trend in fuzzy set theory, rough set theory and soft set theory”, held at Department of Mathematics, Uluberia College, West Bengal, on 23rd September 2011.
8. Delivered an invited lecture on “*Some applications of graphs in daily life problems*” in the **Refresher Course** entitled “Mathematics”, held at Academic Staff College, Department of Pure mathematics, University of Calcutta, Kolkata, on 18.11.2011.
9. Delivered an invited lecture on “Graphs and their applications” in the national Seminar on “Recent Development of Mathematics and its Application to Engineering”, held at Department of Mathematics, Bengal College Engineering and Technology, Durgapur, West Bengal, on 16th March 2012.
10. Delivered an invited lecture on “Introduction to C Programming and its Application” in the Workshop on “C programming and its applications”, held at Department of Mathematics, Kharagpur College, West Bengal, on 28th March 2012.
11. Delivered an invited lecture on “Introduction to Graph Algorithms” in the National Seminar “Design and Analysis of Graph Algorithms”, held at Department of Mathematics, Raja N.L.Khan Women’s, West Bengal, on 14th August 2012.
12. Delivered an invited lecture on “L(2,1)-labelling on cactus graphs” in the National Seminar “Current Research and Developments in Mathematics and Computing (CRDMC-2012)”, held at the Department of Mathematics, Aliah University, on 3rd October 2012.
13. Delivered an invited lecture on “The L(2,1)-labelling on intersection graphs” in the National Conference on “**Recent Trends in Mathematical and Computational Sciences**”, held at the Institute of Advanced Study in Science and Technology, Guwahati, Assam, on 28th November 2012.
14. Delivered an invited lecture on “The L(h,k)-labelling on graphs” in the National Seminar on “**Mathematics and Mathematical Sciences**”, held at the Dept. of Applied Mathematics and Pure Mathematics, University of Calcutta, Kolkata on 28th December 2012.
15. Delivered an invited lecture on “An introduction on fuzzy planar graph” in National Seminar to **Commemorate the Sesquicentennial Birth Anniversary of “SIR ASUTOSH MOOKERJEE(1864-1924)”on the occasion of 106th Foundation Day of the Calcutta Mathematical Society** held at the Calcutta Mathematical Society, Kolkata on 8th September 2013.

International

16. Delivered an invited lecture on “*Colouring of interval graph*” in the International Seminar on “International Conference on Recent Advances in Mathematics & Applications” held at Department of Mathematics, University of Burdwan, Burdwan, on 15.01.2010.
17. Delivered an invited lecture on “*Fuzzy regression analysis*” in the Department of Mathematics, **University of Rajshahi, Rajshahi, Bangladesh** on March 2011.
18. Delivered an invited lecture on “*Fuzzy matrices*” in the Department of Mathematics, **Jagannath University, Dhaka, Bangladesh** on March 2011.
19. Delivered an invited lecture on “*Matrices on triangular fuzzy numbers*” in the Department of Mathematics, **University of Rajshahi, Rajshahi, Bangladesh** on 19.02.2012.
20. Delivered an invited lecture on “Fuzzy correlation and regression” in “**2nd International Conference on Fuzzy Sets, Rough Sets and Soft Computing**”, held at the Dept. of Mathematics, Tripura University, Tripura on 19th January 2013.

Chaired in the session

1. **Chaired** the session “**Fuzzy Logic and Soft Computing**” in *The 2010 International Conference on E-Business Intelligence*, **Org. by Tsinghua University, Kunming, China**, during 19-21 December 2010.
2. State-Level Work-Shop “Discrete Mathematics and Mathematical Modelling Introduced in UG Syllabus” held at Raja N.L. Khan Women’s College, Midnapore, West Bengal, on 23.04.2008.
3. National Seminar on “Mathematics with Special Emphasis on Discrete Mathematics” held at Department of Pure Mathematics, University of Calcutta, Kolkata, on 25.02.2009.
4. National Seminar “Uncertainty: A Mathematical Approach ” held at Department of Mathematics, M.U.C. Women’s College, Burdwan, West Bengal on 27.02.2009.
5. National Seminar on “Recent trend in fuzzy set theory, rough set theory and soft set theory”, held at Department of Mathematics, Uluberia College, West Bengal, on 23rd September 2011.
6. Workshop on “C programming and its applications”, held at Department of Mathematics, Kharagpur College, West Bengal, on 28th March 2012.
7. National Seminar “Current Research and Developments in Mathematics and Computing (CRDMC-2012)”, held at the Department of Mathematics, Aliah University, on 3rd October 2012.
8. National Seminar on “**Mathematics and Mathematical Sciences**”, held at the Dept. of Applied Mathematics and Pure Mathematics, University of Calcutta, Kolkata on 28th December 2012.

Dr. Shyamal Kumar Mondal

National

1. UGC Sponsored State Level Workshop on “Discrete Mathematics and Mathematical Modelling Introduced in U.G. Syllabus” held during April 22-23, **2008** at the Department of Mathematics, Raja N. L. Khan Womens College, Gope Palace, Paschim Medinipur, West Bengal, **2008**.
2. Workshop on “Proposals for the Restructuring of U.G. Courses and Evaluation System Reforms” organized by Vidyasagar University, Midnapore, in collaboration

- with VUTA, Purba and Paschim Medinipur District Committee, WBCUTA, on March 20, **2009** at DDE Hall Vidyasagar University.
3. National Seminar on “Image Classification and Pattern Recognition” sponsored by UGC, held on March 26-27, **2009** in the Department of Computer Science, Vidyasagar University.
 4. National Seminar on “Recent Trends in Operations Research and Its Computational Challenges” A UGC (SAP) DSA Programme, held during November 17-18, **2009** in the Department of Applied Mathematics, University of Calcutta.
 5. National Seminar & Biennial Conference, 2010 organized by University District Committee, WBCUTA, in collaboration with Vidyasagar University Teachers’ association held on February 12, 2010 at Vidyasagar University, Paschim Midnapore, 2010.
 6. Three day National Workshop on Discrete Structures, organized by Department of Mathematics with Oceanology and Computer Programming, Vidyasagar University, Midnapore -721102, West Bengal held on 17 -19 March, 2010.
 7. Two day National Seminar on Data Mining and Decision Making System organized by Computer Centre, Vidyasagar University held on 4-5 March, 2010.
 8. UGC Sponsored National Seminar on “Emerging Trends in Mathematics” organized by Vidyasagar University, Midnapore, W.B. In collaboration with Calcutta Mathematical Society, W.B. dedicated To Srinivasa Ramanujan held on 19th and 20th December, 2012.
 9. National Seminar On “Advances in Mathematics & Applications” organized by Department of Mathematics, Under UGC Special Assistance Programme, DSA Phase – I, The University of Burdwan, Burdwan – 713104, West Bengal, India, held on March 6 – 7, 2013.
 10. Theme Meeting on Fuzzy and Interval Based Uncertainty Modeling, organized by Department of Mathematics, NIT, Rourkela, Odisha, India, Board of Research In Nuclear Sciences, Department of Atomic Energy, Mumbai, during 18th to 20th July, 2013.

International

1. International Conference on Computing and Systems – 2010 organized by Department of Computer Science, The University of Burdwan, West Bengal, India held on 19th – 20th November, **2010**.
2. International Conference on Frontier of Mathematical sciences with Applications organized by Calcutta Mathematical Society, West Bengal, India held on 07th -09th December 2012.
3. 2nd International Conference on Rough Sets, Fuzzy Sets and Soft Computing (ICRFSC’ 12) organized by Department of Mathematics, Tripura University in collaboration with Fuzzy And Rough Sets Association (FRSA) held on 17th – 19th January, 2013.
4. Second International Conference on “Computing and System – 2013”, organized by Department of Computer Science, The University of Burdwan held on 21/09/2013 – 22/09/2013. **(Soft Matrix and Its Applications) on Saturdays and Sunday.**
5. 26th International Conference of Jangjeon Mathematical Society, South Korea organized by Acharya Institute of Graduate Studies, Department of Mathematics, Bangalore – 560107 during 01- 04 August, 2013.
6. International Conference on “ operations research for Data Analytics and Decision Analysis” in conjunction with the 46th Annual Convention of operational research

Society of India (ORSI), organized by Department of statistics, University of Kashmir, Srinagar from October 19 – 23, 2013.

Invited Talk by Dr. Shyamal Kumar Mondal

National

- 1. Delivered an invited lecture on** “Introduction to C Programming and its Application” in the Workshop on “C programming and its applications”, held at Department of Mathematics, Kharagpur College, West Bengal, on 30th March 2012.
- 2. Delivered an invited lecture on** “National Workshop on Applied Optimization” organized by Department of Basic Science & Humanities, College of Engineering & Management, Kolaghat, held on June 29 – 30, 2013. **Lecture of my topics: Optimization and Genetic Algorithms**

National

Chaired by Dr. Shyamal Kumar Mondal

- 1.** Chaired on two technical sessions on 14.02.2013 in 3 – day National Workshop sponsored by UGC on “General Theory of Relativity and Cosmology” organized by Dept. of Physics (UG & PG) and Mathematics held on 12.02.2013-14.02.2013.

Dr. Sankar Kumar Roy

National

- 1.** UGC Sponsored State Level Workshop on “Discrete Mathematics and Mathematical Modelling Introduced in U.G. Syllabus” held during April 22-23, **2008** at the Department of Mathematics, Raja N. L. Khan Womens College, Gope Palace, Paschim Medinipur, West Bengal, **2008**.
- 2.** Participated and presented in Seminar on “Applied and Computational Mathematics and their Applications” Vidyasagar University, Midnapore, India, 06th -07th March, **2008**.
- 3.** Workshop on “Proposals for the Restructuring of U.G. Courses and Evaluation System Reforms” organized by Vidyasagar University, Midnapore, in collaboration with VUTA, Purba and Paschim Medinipur District Committee, WBCUTA, on March 20, **2009** at DDE Hall Vidyasagar University.
- 4.** Participated and presented in National Seminar on “Emerging Trends and Challenges in Operations Research”, University of Calcutta, Kolkata, India, 17-18th November, **2009**.
- 5.** Participated and presented in National Conference on Recent Developments in Mathematics and Its Applications (NCRDMA-2011), 31st January -1st February **2011** (ISBN 978-93-80697-54-3) pp- 17-26, SRM University, Chennai, INDIA.
- 6.** Participated and presented in National Seminar on “Recent Developments in Applied Mathematics and its Applications” Vidyasagar University, Midnapore, India, 30th -31st March, **2011**

7. Participated and presented in National Seminar on “National Seminar on Rough Set, Fuzzy and Soft Computing”, Tripura University, Tripura, India, 11st – 12nd November, **2011**
8. Participated and presented in National Seminar on Emerging Trends in Mathematics”, Vidyasagar University, Midnapore, India, 19^h – 20th December, **2012**
9. Participated and presented in National Seminar on Emerging Trends in Mathematics”, Vidyasagar University, Midnapore, India, 19^h – 20th December, **2012**

International

1. Participated and presented in “International Conference on Frontier of Mathematics and Applications”, The University of Burdwan, Burdwan, India 16-18th January, **2008**.
2. Participated and presented in International Seminar on “Modern Trends in Biological Sciences” (ISBN 978-81-89339-40-1), Raja N L Khan Women’s College, Vidyasagar University, Midnapore, India, 24th October, pp 82-86, **2009**.
3. Participated and presented in “International Conference on Recent Advances in Mathematics and Applications”, The University of Burdwan, Burdwan, India 13-15th January, India, **2010**
4. Participated and presented in International Conference on Frontiers in Applied Mathematics and its Computational Aspects (ICFAMCA-2011), 15th -17th March **2011**, University of Calcutta, Calcutta, West Bengal, INDIA.
5. Participated and presented in International Conference on Frontiers of Mathematical Science and its Applications”, (ICFMSA-2012), Calcutta Mathematical Society, Kolkata, India, 7th – 9th December, **2012**
6. Participated and presented in International Conference on Rough Set, Fuzzy and Soft Computing”, Tripura University, Tripura, India, 17th – 19th January, **2013**
7. Participated and presented in 2nd World Conference on Applied Sciences, Engineering & Technology”, Gitam University, Hyderabad, India, 8th – 9th March, **2013**
8. Participated and presented in 1st International Conferences on Recent Trends in Mathematics and its Applications”, Vidyasagar University, Midnapore, West Bengal, India, 20th – 21st March, **2013**
9. Participated and presented in International Conference on Operations Research on Data Analytics & Decision Analysis, Dept. of Statistics, University of Kashmir, Srinagar, J&K. India, October 21-23, **2013**
10. Participated and presented in International Conference on Facets of Uncertainties and Applications, ORSI, Calcutta Chapter & Dept. of Applied Mathematics, University of Calcutta, Kolkata, December 5-7, **2013**

Dr. Biswajit Sarkar

National

1. Participated and presented paper in National Conference on Mathematical Sciences and Applications: State of Art organized by the Dept. of Mathematics, Jadavpur University from 14.01.10. – 16. 01.10.

2. Participated in National workshop organized by the Dept. of Mathematics, Vidyasagar University from 17.03.10. – 19. 03. 10
3. Participated in National Seminar on Frontiers of Mathematics and Mathematical Science, organized by Calcutta Mathematical Society on 06.09.2010.
4. Participated in Prof. P.K. Ghosh Memorial Lecture, organized by Department of Applied mathematics, Calcutta University on 22.09.10.
5. Participated in Quality Assurance in Reaccredited Institution organized by the Internal Quality Assurance Cell, Vidyasagar University from 27.09.10. – 28. 09. 10
6. Participated in National Conference on Mathematics and its Applications organized by the Dept. of Mathematics, Jadavpur University from 13.01.11-14.01.11
7. Participated in Recent Development in Applied Mathematics and its Applications organized by the Dept. of Mathematics, Vidyasagar University from 30.03.11-31.03.11
8. Participated in National Seminar on Modern Trends in Higher Education organized by Vidyasagar University Teachers' Association, Vidyasagar University on 13.04.2011
9. Participated and presented paper in National Seminar on Analysis and its Applications, organized by Calcutta Mathematical Society from 06.09.2011-07.09.2011.

International

1. Participated and presented paper in The 2nd International Conference on Industrial Engineering and Service Science (IESS 2013) at Surabaya, Indonesia and organized by Dept. of Industrial Engineering and Service Science, ITS, Indonesia and Dept. of Decision and Information Sciences at the Charlton College of Business, University of Massachusetts Dartmouth (USA) from 20.08.2013 to 22.08.2013.

Invited Talk by Dr. Biswajit Sarkar

National

1. Delivered an Invited Talk at **Vidyasagar Women's College, University of Calcutta**, on "An inventory model with reliability in an imperfect production process" on **03.12.2011**.

International

1. Delivered an Invited Talk at **The Engineering Faculty, Trunojoyo University Madura (UTM), Indonesia** on "How To Write And Publish In International Journals" on **23.08.2013**.
2. Delivered an Invited Talk at **Udaya University**, Surabaya, Indonesia on "How to Write and Publish Research Articles in International Journals" on **23.08.2013**.
3. Delivered an Invited Talk at Department of Industrial Engineering, **Pusan National University, Busan, Korea** on "A Mathematical Approach to the Inventory Model" on **26.02.2013**.

Mr. G.Ghorai

National

1. National Seminar on "Emerging Trends in Mathematics" Vidyasagar University, Midnapore, India, December 19th -20th, 2012.

2. National Seminar on “The National Mission on Education Through ICT(NMEICT)”
Central Library, Vidyasagar University, Midnapore, India, February 26- March 8,
2013

International

3. International Conference “Recent Trends on Mathematics and its Applications”
Vidyasagar University, Midnapore, India, March 20th-21st, 2013.

Mr. R.N.Giri

National

1. National Seminar on “Emerging Trends in Mathematics” Vidyasagar University,
Midnapore, India, December 19th-20th, 2012.

International

2. International Conference “Recent Trends on Mathematics and its Applications”
Vidyasagar University, Midnapore, India, March 20th-21st, 2013.

Department of Aquaculture Management and Technology

1. Name of the Department:
Aquaculture Management & Technology
2. Year of establishment
2003
3. Is the Department part of a School/Faculty of the university?:
Under the faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
The Department offers 2 years Post Graduate and Ph. D. programmes.
5. Interdisciplinary programmes and departments involved
The department has organized training program for SHG in collaboration with WBCADC/ Department of Fisheries, Government of West Bengal.
The PG programme is taught by the Faculties of Zoology, Microbiology, Mathematics, Economics, and Remote Sensing etc.
6. Courses in collaboration with other universities, industries, foreign institutions, etc
Nil
7. Details of programmes discontinued, if any, with reasons
Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester system (Choice Based Credit System is under process)
9. Participation of the department in the courses offered by other departments
No

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	NIL	NIL	NA
Associate Professors	NIL	NIL	NA
Asst. Professors	02	01	
Others (Asst. Professors, Contractual)	02	02	
XIth Plan (Assistant Professor)			02 roposed

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance					
Name	Qualification	Designation	Specialization	No. of Years of Experience	No.ofPh.D./M.Phil.studentsguided for thelast 4 years
Dr. Bidhan	M.Sc.,	Professor&	Fish nutrition	23 years+	12

Chandra Patra	Ph. D.	In-Charge			
Dr. Joydev Maity	M.Sc., B.Ed. Ph.D.	Asst. Professor (Cont.)	Aquaculture Nutrition	9 years	08
Dr. Basudev Mandal	M.Sc., B.Ed Ph.D.	Asst. Professor (Cont.)	Aquaculture productivity	8 years	07
Dr. Manoj Kumar Pati	M.Sc., Ph.D.	Asst. Professor	Fish Physiology	2 years	-

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Sl No.	Name of the faculty	Designation
1	Dr. P. K. Mukhopadhyay	Principal Scientist, Central Institute of Freshwater Aquaculture (ICAR), Rahara, Kolkata
2	Dr. K. C. Dora	Professor and Dean, Faculty of Fisheries, WBUAFS, Kolkata 94
3	Dr. S. P. Biswas	Professor, Department of Zoology, Dibrugarh University.
4	Dr. Asim Chakraborty	Professor, Department of Zoology, North Bengal University

13. Percentage of classes taken by temporary faculty – programme wise information

PG	
SEMESTER – I	20%
SEMESTER – II	15%
SEMESTER – III	20%
SEMESTER – IV	10%
Ph D (Course Work)	

14. Programme-wise Student Teacher Ratio:

PG	16 : 1
Ph D (Course Work)	
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)	01		
administrative staff			

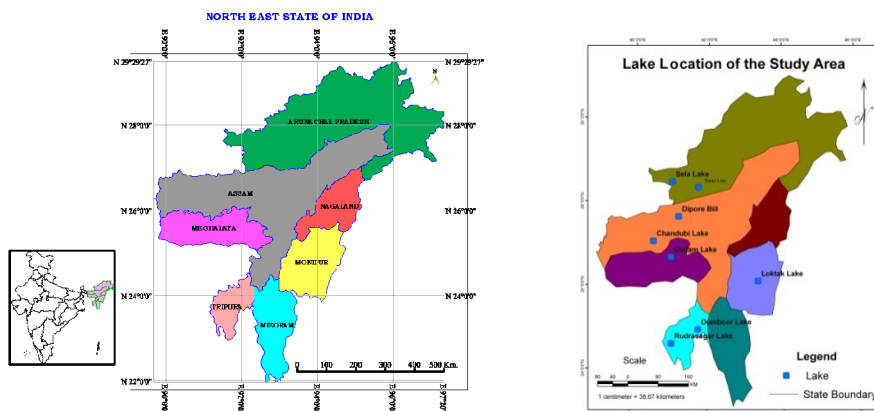
16. Research thrust areas as recognized by major funding agencies

- Geoinformation of Fish Germplasm resource of North-East, West Bengal & Sikkim, Live gene bank and rural development.
- Development of ecofriendly feed for IMC.
- Production of live fish feed for freshwater ornamental fish.
- Standardization of Hatchery technology for Riverine prawn *Macrobrachium malcomsoni*

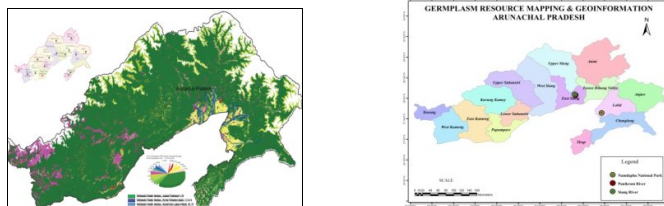
17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Professor Bidhan Chandra Patra

1. GERMPLASM RESOURCE MAPPING AND CONSERVATION OF INDIGENOUS ORNAMENTAL FISHES OF NORTH-EAST REGION THROUGH REMOTE SENSING & GIS AND LIVE GENE BANK FOR RURAL DEVELOPMENT [Funded by DBT, Government of India, ONGOING 75.01 lakh]



2. RESOURCE MAPPING, CONSERVATION & ARTIFICIAL PROPAGATION OF FISH GERMPLASM IN ARUNACHAL PRADESH WITH EMPHASIS ON PROMOTION OF AQUARIUM FISH TRADE [Funded by The DBT, Government of India Ongoing 56.61 lakh]



Dr. Joydev Maity

Title of the project	Duration	Amount sanctioned (Rs.)	Funded by
DEVELOPMENT OF ECO-FRIENDLY GROWER FEEDS FOR INDIAN MAJOR CARPS USING NON-CONVENTIONAL FEED INGREDIENTS OF WEST BENGAL. Principal Investigator	2 Yrs. (2008 – 2010)	1,00,000/-	UGC New Delhi (completed - 2010)

Dr. Basudev Mandal

Title of the project	Duration	Amount sanctioned (Rs.)	Funded by
Development of live fishfood to promote growth and production of freshwater ornamental fishes. Principal Investigator	2 Yrs.	1,45,000/-	UGC New Delhi (completed - 2012)
Development of a model for sustainable backward poultry farm (Integrated farming) Co-Principal Investigator	3 Yrs.	1,76,00,100/-	RKVY (Rastriya Krishi Vikash Yoyona), Govt. of India and Deptt. of Animal Resource Development, Govt. of WB(on going)

Dr. Manoj Kr. Pati

Title of the project	Duration	Amount sanctioned (Rs.)	Funded by
Development of viable larval diet for striped murrel, <i>Channa striatus</i>	2 years (ongoing)	Rs. 6 Lakh	UGC

18. Inter-institutional collaborative projects and associated grants received a) National collaboration b) International collaboration
a) National collaboration: Yes
<ul style="list-style-type: none"> • Dibrugarh university and • Rajiv Gandhi Central University • NBFGR, ICAR, Lucknow
b) International collaboration -
a. Nil

19. Departmental projects funded by DST FIST; UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received
Nil

20. Research facility / centre with	
<input type="checkbox"/> state recognition	Nil
<input type="checkbox"/> national recognition	Nil
<input type="checkbox"/> international recognition	Nil

21. Special research laboratories sponsored by / created by industry or corporate bodies
Nil

22. Publications:

Annexure-I
List of Publications in last five (5) years

Number of papers published in peer reviewed journals (national / international)

Monographs -- Nil

Chapters in Books - Nil

Edited Books -- Nil

Books with ISBN with details of publishers -- NA

Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

Citation Index – range / average ☐

Google Scholar Citation

SJR ☐ Impact Factor – range / average ☐

h-index



PROFESSOR BIDHAN C. PATRA
2009-2013

23. Details of patents and income generated
Nil

24. Areas of consultancy and income generated –
Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Nil

26. Faculty serving in	
a) National committees :	Nil
b) International committees :	Nil
c) Editorial Boards :	Nil

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
Nil

28. Student projects :
<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
Less than 10%

<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
90%

29. Awards / recognitions received at the national and international level by
--

Faculty	
Professor Bidhan C. Patra	<ul style="list-style-type: none"> Acted as Chairperson of the Session, Freshwater Fish Nutrition in the Aquaculture America 2008 at Orlando, Florida, USA, 2008, sponsored by Department of Biotechnology and Indian National Science Academy, Government of India. Reviewer of the International Journal of Applied Aquaculture from June 2008, USA.
Dr. Joydev Maity	<ul style="list-style-type: none"> Awarded "Junior Scientist of the Year, 2005" from the National Environmental Science Academy, New Delhi, India.
Dr. Basudev Mandal	<ul style="list-style-type: none"> Received as Fellow Awards 2011 from Society for Applied Biotechnology, 1/115, Puliur, Krishnagiri, Tamil Nadu – 635201, India.
Dr. Manoj Kumar Pati	<ul style="list-style-type: none"> Received Young Scientist Award, 2012 from Society of Biological Sciences and Rural Development (SBSRD), New Jhansi, Allahabad, India.
Doctoral / post doctoral fellows	
Nil	
Students	
Nil	

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

- International Seminar on “Coastal Aquafarming for rural development utilizing biotechnological tools”. Funded by -- (1) UGC, (2) DBT, (3) DST, (4) CSIR
- Organised National level WORKSHOP on West Bengal Aquaculture GIS, during 16- 17 January, 2013 at Mandarmoni, Purba Medinipur, West Bengal. Funded by – NRDMS, DST
- Organised National level WORKSHOP on West Bengal Marine GIS, during 7-8 September, 2013 at Digha, Purba Medinipur, West Bengal. Funded by – NRDMS(NSDI), DST.

31. Code of ethics for research followed by the departments:

Transparent, original data/findings, exchange of ideas & protocol

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected Male Female	Pass percentage Male Female
PG – 2009-10	41	16 / 08	100%
PG – 2010-11	43	08 / 02	100%
PG – 2011-12	44	07 / 03	100%
PG – 2012-13	47	14 / 08	100%

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
2009 – 2010	30	70	-	-
2010 – 2011	60	40	-	-
2011 – 2012	70	30	-	-
2012 – 2013	50	50	-	-

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

NIL

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	50
PG to M.Phil.	NA
PG to Ph.D.	10-15

Ph.D. to Post-Doctoral Employed. Campus selection Other than campus recruitment Entrepreneur	2% 70-80%
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36. Diversity of staff	
Percentage of faculty who are graduates	
of the same university	50%
from other universities within the State	25%
from universities from other States	25%
from universities outside the country	Nil

37.Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period
Nil

38.Present details of departmental infrastructural facilities with regard to	
c) Library	Nil
d) Internet facilities for staff and students	Internet facilities for teachers
e) Total number of class	02
f) Class rooms with ICT facility	Nil
g) Students' laboratories	01
h) Research laboratories	Nil

39.List of doctoral, post-doctoral students and Research Associates		
i)	from the host institution/university:	
j)	from other institutions/universities	
	. Name of The Ph. D. Student	Home University/Others
	Monjit Paul	Home University
	Mukti Chanda	Home University
	Indradeep Chakraborty	Other University
	Joydeep Kundu	Home University
	Ananya Bhowmik Ray	Other University
	Sampurna Roy Choudhury	Other University
	Mirza Masum Beg	Home University
	Nonalisa Pal	Home University
	Debajit Chakraborty	Home University
	Chanchal Samanta	Other University
	Surya Kanta Sau	Other University
	Subhranshu Biswas	Home University
	Subasish Mukherjee	Home University
	Utsab Maiti	Other University
	Arunima Shil	Home University
	Arabinda Ray	Other University
	Ankita Pradhan	Other University
	Manotosh Das	Other University
	Puspalata Moharana	Other University

Sk. Naser Uddin	Home University
Pijush Payra	Home University
Manojit Nandi	Other University
Puja Singh	Home University

40. Number of post graduate students getting financial assistance from the university:
04

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
For introducing new syllabus we follow the UGC guidelines, consult the syllabus of other universities. We discuss intensively among the faculty members in the Departmental Committee meeting. We make the final syllabus with the help of experts of other universities.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
Feedbacks are regularly taken from the faculty including guest teachers. Feedbacks are discussed in the meeting of Department Committee to improve the teaching-learning.
B. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
The evaluation of teachers by the students has been initiated. The feedbacks are also taken from the students during teacher –student meeting, The teachers always consider inputs received from the students during teaching learning process.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
Nil

43. List the distinguished alumni of the department (maximum 10) :

Name of the student	Present position
Pijush Payra	DST Inspires fellow, Govt of India
Debjit Chakraborty	SRF, DBT, Govt of India, WBUAFS
Monjit Paul	Whole time Contractual teacher, Asutosh College
Sk. Shahina	Agriculture Field Officer, State Bank of India
Isita Sarkar	Agriculture Field Officer, State Bank of India
Dipannita Dasgupta	Agriculture Field Officer, HDFC Bank
Maman Siddiky	Fishery Officer, Govt of Bangladesh
Bhaskar Ghosh	Regional Officer (W. B.), VIRBAC, Japan
Dhrubajyoti Sen	Fishery Field Assistant, Govt. of West Bengal
Arunima Shil	Fishery Field Assistant, Govt. of West Bengal

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts
Regularly organize special lecture/ workshops / seminar for the benefit of the student. Lectures are also arranged under the UGC Merge scheme.

45. List the teaching methods adopted by the faculty for different programmes:
Lecture Method, Audio-visual mode, Hands on training programme

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
Face to face discussion between Faculties & Programme wise students

47. Highlight the participation of students and faculty in extension activities.
Various aspects of Aquafarming-- i. Food fish; ii. Ornamental fishes With SHG's , rural farmers and rural youth etc.

48. Give details of “beyond syllabus scholarly activities” of the department:
A. Prof. Bidhan Patra a) has given lecture on ‘Environmental Toxicology’ in the Refreshers’ course organized by the Department of Aquaculture, Utkal University, Orissa, 2009 . b) was invited to deliver an Invited Lead Lecture in the Animal, Veterinary and Fisheries Sciences Section in the Indian Science Congress symposium on “Environment and health management for sustainable animal and fish production” during January 4-7, 2013 and the title of the talk was “Sustainable Aquaculture: A Global Perspective”. B. Students involved in collection of different data relating to fishery activity for data base development. C. 4 th semester students done mini research work (Dissertation work)

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.
The department had been accredited previously by NAAC as part of accreditation of the university in 2008.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied
Through Group discussion, Faculty/ Student lecture and Field survey.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.	
Strengths:	Students have keen interests on the subjects, 100% Job opportunity, Financial assistance, good library, Computer Lab.
Weaknesses:	Space, Fund for field work, Dissertation work, Faculty & Lab.
Opportunities:	Work for better production, train poorer people for aquaculture,

	Development of market network, supply of seed, huge resource.
Challenges:	Development of Training centre, Regular fund flow, Micro financing, resource management & conservation.

52. Future plans of the department.

1. Development of a “Centre for Bio-prospecting”
2. Assessment and management of regional fish faunal resources.
3. Socio-economic and livelihood development for SC/ST and weaker section of the region through Aquaculture technology.
4. Participatory development of indigenous technology in Aquaculture for employment generation and self empowerment, especially rural women.
5. To provide advisory and consultancy services
6. To take up projects in collaboration with other Institutes and Universities from ICAR, CSIR, DBT, NABARD, Department of Environment and Forest etc.
7. To plan commencement of training programmes in different groups for faculty of affiliated Colleges / other Universities / Departments of Govt./ professional bodies / NGO's and more specifically Women, SC/ & ST population and Weaker section of the society.
8. To develop database for the development and planning authorities through our field-based project reports
9. To organize workshops, trainings and seminars for exchange of ideas on sustainable solutions with the farmers and self-help groups.
10. To seek major projects from DST, DBT, UGC, ICAR, Govt. of India; DST, Department of Environment, Pollution Control Board, Department of Forest, Govt. of West Bengal; NABARD, Govt. of India for sustainable aquaculture development.

Annexure I

List of Publications

Professor Bidhan Chandra Patra :

1. Tewary, A. and **Patra, B. C.** 2008. Use of Vitamin C as an immunostimulant on growth, nutritional quality and immune response of *Labeo rohita* (Ham.). *Fish Physiology and Fish Biochemistry*. 34 (3); 251-259.
2. Maity, J. and **Patra, B. C.** 2008. Effect of replacement of fishmeal by Azolla leaf meal on growth, food utilization, pancreatic protease activity and RNA/DNA ratio in the fingerlings of *Labeo rohita* (Ham.). *Canadian J. Pure & Applied Sciences* , 2(2) : 323-333.
3. Bhattacharya M., Bhattacharya P. and **Patra B.C.** 2010. Study of village tourism in Sikkim; Problem and Prospects. *Journal of Geography and Environment Management*.
4. Datta R.K., Sengupta M., Das P., **Patra B. C.** and Mandal D.R. 2008. A simple device for sampling of benthic fauna in shallow water body. *Zoological Research in Human Welfare*. 49 : 467-472.
5. Mandal B., **Patra B.C.**, and Chand B.K. 2008. Possibilities of sustainable aquaculture practice in abandoned China clay mines of West Bengal, India. *Research Journal of Fisheries and Hydrobiology*. 3(2): 36-40.
6. Nanda P.K., Swain P., Nayak S.K, Das S., Routray P., Swain S.K. and **Patra B.C.** 2008. Goat serum as an alternative to establish cell culture from Indian major carp, *Cirrhinus mrigala*. *In Vitro Cell. Dev. Biol. – Animal*. DOI 10.1007/s11626-008-9160-7.
7. Patnaik P., Jha B.C., **Patra B.C.** 2009. Seasonal influence on sectoral variation in macro-benthic profiles of chilika lake. *E-planet*. 7(1) : 10-19.
8. Mandal, B. , Chakraborty, T., **Patra, B.C.** and Banerjee, B. (2009). Control of *Eichhornia crassipes* through application of gramoxone 24% s.l. paraquat-dichloride and its impact on fish. *Indian Journal of Biological Science* [ISSN NO. 0972-8503], 15: 12 – 17.
9. Mandal, B., **Patra, B. C.** and Chand B. K. 2009. Restoration of soil and water quality of abandoned china clay mines of West Bengal for fish production. *Proceedings of the International Conference*. Published by Agriculture and Food Engineering Deptt. IIT, Kharagpur, West Bengal, India; SFA : pp. 11-18.
10. Mandal B., **Patra B.C.** and Chand B.K. 2010. Comparative studies on biochemical composition and organoleptic quality of Indian Major Carps reared in newly developed China clay mines: a breakthrough. *International Journal of Current Research*. 5 : 001-005.
11. Monjit Paul, Mukti Chanda, Joydev Maity, Supriya Sen Gupta, **Bidhan Chandra Patra**, Gadadhar Dash, 2010. Parasitic prevalences in Fresh Water Prawn *Macrobrachium rosenbergii* in North & South 24 Parganas Districts of West Bengal. *Chronicles of Young Scientists*, 1(8) : 48 – 50.
12. Saha, J. K. , Hassan, M. R., Ali, M. M., Habib, M. A. B., Sarder, M. R. I., Patra, S., Das, R., and **Patra, B. C.** 2010. Studies on Biodiversity and Abundance of Fishes in Floodplain Beels of Bangladesh. *Journal of Mountain Res.*, 5: 51-72.
13. Chand, B. K., Mandal, B. and **Patra, B. C.** 2010. Application of “Participatory Rural Appraisal” technique for critical analysis of micro-farming situations in traditional

pond fishery of a selected village in West Midnapore district . *Indian Journal of Biological Science*. [IJBS/30/10] .

14. Tewary, Arup and **Patra, Bidhan C.** 2011.Oral administration of baker's yeast (*Saccharomyces cerevisiae*) acts as a growth promoter and immunomodulator in *Labeo rohita* (Ham.). *Journal of Aquatic Research & Development*. 2(1): 1-7.
15. Monjit Paul, Mukti Chanda, Joydev Maity, Supriya Sen Gupta, **Bidhan Chandra Patra**, Gadadhar Dash, 2011. The use of antibiotics and disinfectants in the freshwater prawn (*Macrobrachium rosenbergii*) farms of north and south 24 Parganas districts of West Bengal. *Chronicles of Young Scientists*, 2(1) : 55-58.
16. Joydev Maity, Joydeep Kundu, Atanu Pramanik and **Bidhan C. Patra**, 2011. Effect of Cellulolytic Gut Bacteria as a Feed Supplement on the Growth Performance and Nutrient Digestibility of Asian Seabass (*Lates calcarifer*, Bloch). *International Journal of Aquatic Sciences*, 2 (1) : 3-15.
17. Mukti Chanda, Monjit Paul, Joydev Maity, Supriya Sen Gupta, **Bidhan Chandra Patra**, Gadadhar Dash, 2011. Ornamental fish goldfish, *Carassius auratus* and related parasites in three districts of West Bengal, India. *Chronicles of Young Scientists*, 2(1) : 51-54.
18. Ghorai, Mrinmoy, Sar, Utpal K. and **Patra, Bidhan C.** 2011.Seasonal catch diversity of marine fishes in the coastal belt of Purba Medinipur district of West Bengal, India. *J. Environ. & Sociobiology*. 8(1): 149-154.
19. Das, R., Mandal, B., Prtihar, S., Kundu, J. K., Patra, S. and **Patra, B. C.** 2011. Locally Endangered fish species of Paschim Medinipur district, West Bengal, India. *Wesleyan Journal of Research*. 4 (1) : 44-49.
20. **Patra, B. C.** 2011. Nutritional Energetics of an Indian Major Carp *Labeo Rohita* (Ham.), Family Cyprinidae. *International Journal of Current Research*. 3(11): 259-263.
21. **Patra, B. C.** 2011. Bioenergetics, Amino Acid Absorption And In Vivo Protein Biosynthesis In A Siluroid Fish, *Clarias Batrachus* (Linn.), *International Journal of Current Research* Vol. 3, Issue, 12, pp.069-075, December, 2011.
22. Sau, S. K.; Sar, U. K.; **Patra, B. C.** 2012. Constraints faced by the fishermen cooperative societies of Kharagpur sub-division of Paschim Medinipur district West Bengal. *Environment and Ecology* 2012 Vol. 30 No. 3 pp. 501-504. (ISSN 0970-0420).
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Dr. Joydev Maity

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Dr. Basudev Mandal

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Dr. Manoj Kumar Pati

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2. De, H.K., Sahu, B.B., **Pati, M.K.**, Pradhan, J.K., Sarangi, N., 2006. Involvement of women in common carp breeding. *Indian Journal of Extension Education*, 41(3 & 4), 82-83.
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Department of Bio-Medical Laboratory Science and Management

1.Name of the Department:
Bio-Medical Laboratory Science and Management
2. Year of establishment :
2005
3. Is the Department part of a School/Faculty of the university?:
Science Faculty of the university
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
Post Graduate:
1. M. Sc. in Bio-Medical Laboratory Science and Management
2. M.Sc. in Clinical Nutrition and Dietetics
5. Interdisciplinary programmes and departments involved
Innovative Programme –
1. M. Sc. in Bio-Medical Laboratory Science and Management: 2005-2010
2. M. Sc in Clinical Nutrition and Dietetics: 2012-2017
<ul style="list-style-type: none"> • Bio-Medical Laboratory Science and Management (Nodal Dept) • Anthropology • Mathematics • Computer Science • Microbiology • Chemistry
6. Courses in collaboration with other universities, industries, foreign institutions, etc
Ph.D. Programmes:
Industries: Pharmaceutical Industries, Southern Health Improvement Society (SHIS), 24-Parganas (South), West Bengal India.
Foreign institutions: University of Sousse, Tunisia.
7. Details of programmes discontinued, if any, with reasons
No
8.Examination System: Annual/ Semester /Trimester/Choice Based Credit System:
Semester from inception
9.Participation of the department in the courses offered by other departments
AS Guest teacher in other department
1. Dept. of Human Physiology with Community Health
2. Anthropology
3. Microbiology

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	One	One	1
Associate Professors	One (Innovative Programme)	Not Filled	-
Asst. Professors	Three	TwoNotFilled(One)	3
Others			

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No.of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Prof. Debidads Ghosh	M.Sc., M.Phil., Ph.D.	Professor and Head	Reproductive Endocrinology, Nutrigenomics, Molecular Drug Development	23 years	11 (Ph.D. Awarded) 8 (Registered)
Dr. Sandip Chattopadhyay	M.Sc., Ph.D.	Assistant Professor (Senior Grade)	Cellular andMolecular Basis of Environmental Toxicology and its Nutritional and Therapeutic Management	7 years	3(Registered)
Dr. Somasri Dam	M.Sc., Ph.D.	Assistant Professor	Biochemistry, Microbiology and Molecular Biology,	1 year	--

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Visiting Fellows

1. Dr. A. Biswas, Former Reader, Presidency University
2. Prof. .K.Hati, Former Director, School of Tropical Medicine, Kolkata
3. Dr. S. Mitra, Reader, Midnapur College.
4. Prof. Minati Sen, Dept. of Nutrition, University of Calcutta

Eminent Guest faculty

1. Dr. S. S. Das, Medical Officer, Vidyasagar University
2. Dr. Debdulal Banerjee, Assistant Professor, Dept. of Botany, Vidyasagar University
3. Dr. Pradeep Das Mahapatra, Assistant Professor , Dept. of Microbiology, VU
4. Dr. Kaushik Sankar Bose, Associate Professor, Dept. of Anthropology, Vidyasagar University
5. Mr. Sunil Mallick, Director, Computer Centre, Vidyasagar University

6. Dr. Saymal Kumar Mondal, Assistant Professor, Dept. of Mathematics, Vidyasagar University
7. Dr. Nikhilesh Barik, Assistant Controller, Vidyasagar University
8. Dr. Abdur Rahim, Secretary, Faculty Council for Post Graduate Studies, Vidyasagar University

13. Percentage of classes taken by temporary faculty – programme wise information

PG	
Bio-Medical Laboratory Science and Management	20%
Clinical Nutrition and Dietetics	35%
Ph D (Course Work)	25%

14. Programme-wise Student Teacher Ratio:

PG	35:1
Ph D (Course Work)	5:1
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
A. Academic support staff (technical)			
Laboratory Attendant	1	1	2 1 (Contractual)
Technical Assistant	-	-	1 (Contractual)
B. Administrative staff:			
Nil	Nil	Nil	Nil

16. Research thrust areas as recognized by major funding agencies

Reproductive Biomedicine (ICMR)
 Nutrigenomics (DST Govt. of India)
 Molecular Drug Development / Nano Particles against Diabetes Mellitus (UGC, DST Govt. of India)
 Nutritional Management of Environmental Toxicological aspects (UGC)
 Genomic and proteomic studies in parasitology and cell biology (UGC)

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

A. Ongoing National Research Project of Prof. D. Ghosh (2013)
TOTAL: 4

Sl. No.	Title of the Project	Name of the Funding Agency	Duration	Amount (In Rs.)
1.	Possible antihyperglycemic and	ICMR	2011-2013	8,24,700/

	antihyperlipidemic effects on active ingredient (s) present in effective extract of endosperm of <i>Swietenia mahagony</i> in STZ induced diabetic rat			-
2.	Proteomic and Genomic study of testicular tissue in streptozotocin-induced diabetic rat: role of Dimethyl 4,4' oxybis (3,5,dihydroxy benzoate) and 4,4' oxybis (3,5 dihydroxy benzoic acid) collected from seed of <i>Eugenia jambolana</i> as anti apoptotic phytomolecule for germ cell	DST Govt. of India	2011-2014	51, 62, 000/-
3.	Evaluation of antifertility activity of seed of <i>Cuminum cyminum</i> (Jeera) in male albino rat: An approach through genomics and proteomics	DST Govt. of India	2013-2018	11,56,00 0/-
4.	Effect of NANO-DAB (nano particle tagged herbal product) on reproductive disorder in streptozotocin-induced diabetic rat	DST Govt. of India	2013-2016	20,02,00 0/-

B. Completed National Research Project of Prof. D. Ghosh (2008-2012)

TOTAL: 6

Sl. No.	Title of the Project	Name of the Funding Agency	Duration	Amount (In Rs.)
1	Formulation of health awareness package and knowledge dissemination following “Child-to-Child” and “Child-to-family members” strategy after monitoring and health education status at secondary school education system of rural sectors of Paschim Midnapore district, West Bengal	NCERT	2008-2009	2, 00, 550/-
2	Testicular germ cell apoptosis in diabetic albinor rat and its correction by a formulated herbal drug; MTEC	DST Govt. of India	2008-2011	20,41,00 0/-
3	Formulation and implementation of awareness package against occupational health hazards of working women at rural based small scale industries of Midnapore, West Bengal	DST Govt. of India	2008-2010	3, 29, 000/-
4	Consultancy with Herbal drug Industry	SHIS	2008-2011	5, 80, 000/-
5	Remedial effect of ingredients from flower of <i>Salmaria malabarica</i> in STZ-induced diabetic rats	UGC	2009-2012	9,25,300/-
6	Possible antihyperglycemic effects of	ICMR	2009-2012	11,48,00

	active ingredients present in the effective extract of seed of <i>Tamarindus indica</i> in STZ-induced diabetic rats and its chemical characterization			0/-
--	--	--	--	-----

C. Completed International Research Project of Prof. D. Ghosh (2008-2012)

TOTAL: 1

Sl. No.	Title of the Project	Name of the Funding Agency	Duration	Amount (In Rs.)
	Development of herbal spermicide from <i>Stephania hernandifolia</i> , <i>Achyranthus aspera</i> and <i>Cestrum parqui</i> using rat and human sperm	DST Govt. of India	2010-2012	5, 10,000/-

A. Ongoing Projects of Dr. Sandip Chattopadhyay (2013)

TOTAL: 1

Sl. No.	Title of the Project	Name of the Funding Agency	Duration	Amount (In Rs.)
1.	Studies on the cellular and molecular basis of vitamin B ₁₂ and Folic acid on arsenic induced female reproductive disorder (Principal Investigator)	DST (Approved for funding in near future)	3 yrs	Exact amount of fund is yet to be informed by DST

B. Research Projects Completed by Dr. Sandip Chattopadhyay(2008-2012)

TOTAL: 1

Sl. No.	Title of the Project	Name of the Funding Agency	Duration	Amount (In Rs.)
2.	Evaluation of hepatoprotective activity of the fruit extract of <i>Solanum nigrum</i> (Makoy) against dimethyl nitrosamine induced hepatotoxicity in experimental male albino rat: an approach through antihepatic fibrosis	UGC (Minor)	2009-2011	Rs.1,00,000

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration b) International collaboration

a) National collaboration:

Department of Reproductive Biomedicine, National Institute of Health and Family Welfare, New Delhi, India.

b) International collaboration:

Indo-Tunisia Bilateral Research Project; entitled “Development of herbal spermicide from *Stephania hernandifolia*, *Achyranthus aspera* and *Cestrum parqui* using rat and human sperm” Rs. 5, 00, 000/- for travel and contingency purpose.

19. Departmental projects funded by DST FIST;UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

Sl. No.	Title of the Project	Name of the Funding Agency	Duration	Amount (In Rs.)
1.	Innovative Programme under XI th – 5 Years Plan (Co-ordinator: Prof. Debidas Ghosh Deputy Co-ordinator: Dr. Sandip Chattopadhyay)	UGC	2012-2017	1, 30, 00,000/- (Including One Associate and One Assistant Professor for Five Years)

20. Research facility / centre with :

<input type="checkbox"/> state recognition	NIL
<input type="checkbox"/> national recognition	
<input type="checkbox"/> international recognition	

21. Special research laboratories sponsored by / created by industry or corporate bodies

NIL

22. Publications:

Annexe-1
List of Publications in last five (5) years

☐ Number of papers published in peer reviewed journals (national / international) =
 Monographs =
 Chapters in Books =
 Edited Books =
 Books with ISBN with details of publishers =
 Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) =
 Citation Index – range / average =
 SNIP
 SJR
 Impact Factor – range / average=
 h-index =

23. Details of patents and income generated

Name of the Faculty	Topic	Patent Registration No.
Prof. D. Ghosh	Method for obtaining novel dihydroxy oxybis compounds (Antidiabetic)	248596 Dt. 27 th July, 2011

24. Areas of consultancy and income generated –

NIL

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

Professor Debidads Ghosh :

Department of Histo- embryology, University of Sousse, Tunisia.

Department of Physiology, Tripura University, Tripura.

26. Faculty serving in

National Committee :

1. Professor Debidads Ghosh:

Executive Editor: Journal Community Nutrition and HealthMember of Editorial Board*International Journals*

European Journal of Pharmacology

Journal of Medicinal Food

BMC Complementary and Alternative Medicine

Evidence Based Complementary and Alternative Medicine

Asian Journal of Andrology

Reproductive Toxicology

Food and Chemical Toxicology

Pancreas

Iranian Journal of Pharmacology and Therapeutics

World Journal of Gastroenterology

Open Journal of Bio-Active Substances

National JournalsJournal of Community Nutrition and Health (*Executive Editor*)

Life Science

The Anthropologist

Indian Journal of Biological Science

Faculty serving in National Committees

Member of project evaluation committee in Dept. of Science & Technology, Govt. of India.

Member of project evaluation committee in Indian Council of Medical Research, Govt. of India.

2. Dr. Sandip Chattopadhyay:

a) National Committee:

Member, Paschimbanga Vigyan Mancha

ADJUDICATOR of project Evaluation Committee, CSIR Project Funding, INDIA

b) International Committee (as Adjudicator / Member and Reviewer):

INVITED ADJUDICATOR of National Commission for Scientific and Technological Development (CONICYT), Chilean government for 2012, National Research Funding Competition.

Evidence-Based Complementary and Alternative Medicine (Hindawi Publishing Corporation)

Reproductive Biology and Endocrinology Research (Bio Med Central)

Reviews on Recent Clinical Trials (Publisher Bentham Science)

International Journal of Psychology and Counseling (Academic press journals)

African Journal of Biochemistry Research (Academic press journals)

Journal of Medicine and Medical Sciences (Interscience Journal)

African Journal Biochemistry Research (Academic press journals)

African Journal of Food Science (Academic press journals)

Food & Chemical Toxicology, ELSEVIER

Journal of Ethnopharmacology, ELSEVIER

c) Editorial Boards:

1. EDITORIAL BOARD MEMBER, African Journal of Food Science, Academic Journal.

2. EDITORIAL BOARD MEMBER, Asian Pacific Journal of Reproduction.

3. EDITORIAL BOARD MEMBER, International Journal of Innovative Technology & Adaptive Management.

d) Others:

1. CHAIRPERSON AND RECORDER OF SEPARATE SESSIONS, PHYSICON 2011 XXIII National Conference of Physiological Society of India, NRI Medical College, Vijayawada, Guntur. 2011.

2. Courses completed

Sl. No.	Programme	Duration	Organized by
1.	Sakhsham IT Champion Training Programme	26.02.2013-08.03.2013	Jointly by Microsoft and Vidyasagar University
2.	Orientation Programme	22.11.2010-20.11.2010	ASC, Jadavpur University
3.	Refresher Course	08.03.2010-31.03.2010	Dept. of Microbiology, Vidyasagar University

3. Dr. Somasri Dam: Not Applicable

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
<p>UGC Refresher course</p> <p>a. Prof D. Ghosh presented his lecture as resource person in North Bengal University in Refresher course, 2011.</p> <p>b. Prof D. Ghosh as Director and Dr. Sandip Chattopadhyay as Co-ordinator conducted DST approved 2days workshop in house in the field of Modern Techniques in the field of Biomedical Laboratory Science, 2010.</p> <p>c. Dr. Sandip Chattopadhyay presented his Lecture in Weekend Seminar on Quality Control and Biosafety as resource person in Haldia 2012, 2013.</p>

28. Student projects :

<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
100 percent
<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
NA

29. Awards / recognitions received at the national and international level by faculty

Professor Debidas Ghosh : Presented Sukuntala Dasgupta Memorial Lecture, Organized by PSI in Section of Medical Sciences and Physiology, Science Congress, Bhubaneswar-2010.

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:				
Name of the Seminar	(national / international)	source of funding	Duration	No. of participants
1.Advanced Technique in Bio-Medical Sciences	National	DST, ICMR, UGC	5 – Days (2010)	200
2.Community Nutrition Management	National (In collaboration with Mahisadal Girls College)	UGC	2 – Days (2012)	168
3.Food Fortification	National (In collaboration with Mahisadal Girls College)	UGC	2 – Days (2014)	197

31. Code of ethics for research followed by the departments:

As per approved Institutional Ethics Committee.

Name of the Programme (refer to question No.=4)	Application Received	Selected Male/ Female	Pass percentage Male/Female
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32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected Male Female	Pass percentage Male Female
M. Sc.			
Ph. D.Course Work			

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
Bio-Medical Laboratory Science & Management	2013- 90 % (19)	10 % (2)	Nil	Nil
	2012- 83 % (15)	17 % (3)	Nil	Nil
	2011- 43 % (7)	37 % (4)	10 % (1)	Nil
	2010- 67 % (6)	23 % (2)	Nil	Nil
	2009- 55 % (6)	45 % (5)		
Clinical Nutrition & Dietetics	2013 - 90 % (27)	10 % (3)	Nil	Nil
	2012- 100% (25)	Nil	Nil	Nil
Nutrition & Dietetics	2011- 100 % (25)	Nil	Nil	Nil
	2010- 96 % (24)	4 % (1)	Nil	Nil

M.Sc. in Bio-Medical Laboratory Science & Management			
Year -2008	22	Male - 2 Female - 7	100%
Year -2009	20	Male - 3 Female -8	100%
Year -2010	25	Male - 5 Female -6	100%
Year -2011	30	Male -9 Female -2	100%
Year -2012	31	Male - 10 Female -2	100%
Year -2013	32	Male -9 Female -2	100%
M.Sc. in Nutrition & Dietetics			
Year -2010	90	Male - 00 Female - 24	100%
Year -2011	120	Male - 01 Female -21	100%
M.Sc. in Clinical Nutrition & Dietetics			
Year -2012	170	Male - 03 Female - 22	Pursuing 3 rd Sem
Year -2013	183	Male - 02 Female - 28	Pursuing 1 st Sem

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

NET, SET, GATE: Nil

School Service Commission: Four Students from the year of 2012 till now.

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	18%
PG to M.Phil.	Nil
PG to Ph.D.	20%
Ph.D. to Post-Doctoral Employed	20%
Campus selection Other than campus recruitment Entrepreneur	80%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	33%

from other universities within the State	66%
from universities from other States	--
from universities outside the country	--

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

Nil

38. Present details of departmental infrastructural facilities with regard to

a. Library	Students use Central Library
b. Internet facilities for staff and students	YES
c. Total number of class	04 (Four)
d. Class rooms with ICT facility	02 (Two)
e. Students' laboratories	05 (Five)
f. Research laboratories	02 (Two)

39. List of doctoral, post-doctoral students and Research Associates

a. from the host institution/university:

List of Doctoral Awardees Under the guidance of Prof. Debidas Ghosh (2008-2013) number :-11

Sl. No.	Name	Year
1.	Dr. Dilip Panda	2010
2.	Dr. Debanka Shekhar Misra	2010
3.	Dr. Chhanda Mallick	2010
4.	Dr. Sohini Roy	2012
5.	Dr. Rekha Meena	2012
6.	Dr. Uttam Kumar Das	2013
7.	Dr. Daniel Paul	2013
8.	Dr. Kausik Chatterjee	2013
9.	Dr. Debasis De	2013
10.	Dr. Upanandan Mandal	2013
11.	Dr. Kazi Monjur Ali	2013

List of Post doctoral fellow under the guidance of Prof. Debidas Ghosh (2008-2013) number:-1

Sl. No.	Name	Year
1	Dr. Chhanda Mallick	2013

b. from other institutions/universities	
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<p><u>40. Number of post graduate students getting financial assistance from the university:</u></p> <p><u>Merit cum Means Scholarship</u> Nutrition and Dietetics: 8 (2010-2011) Nutrition and Dietetics: 14 (2011-2012) Clinical Nutrition and Dietetics: 6 (2012-2013) Bio-Medical Laboratory Science and Management: 1(2012-2013) <u>Indira Gandhi Single Girl Child Scholarship</u> Nutrition and Dietetics: 2 (2011-2012)</p>

<p><u>41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology</u></p> <p>Before starting the M.Sc. course in Bio-Medical Laboratory Science& Management we have started 1 year and then 2 years postgraduate diploma course in the name of postgraduate Diploma in Laboratory Technology (PGDLT), Laboratory Medicine to find out the demand of man power in our state and country. After noting their successful employment in maximum level, the present non-professional M.Sc. course in Bio-Medical Laboratory Science and Management has been started under UGC Innovative Programme (Xth Plain). To start M.Sc. course in Clinical Nutrition and Dietetics, we have started M.Sc. in Nutrition and Dietetics in regular course and M.Sc. in Dietetics and Community Nutrition Management through Distance mode. Looking their employment opportunity in formal education system and health sector as well as feedback from health sector for improving the clinical part of this course, the present postgraduate course in Clinical Nutrition and Dietetics has been implemented under UGC Innovative Programme (XIIth Plain).</p>
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<p><u>42. Does the department obtain feedback from</u></p> <p><u>A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?</u></p> <p>Department input feedback from faculties especially from guest faculties and Visiting Professors and Fellows about the development of curriculum. All the feedback inputs are discussed in Departmental Committee (DC) meeting and finally these inputs are discussed in “Board of Studies” of the subject where external expert members are also present. After constructive criticism, the curriculum is developed which have done about our two courses i.e.</p> <p>From postgraduate diploma in Laboratory Technology (PGDLT) to M.Sc. in Bio-Medical Laboratory Science and Management. From Nutrition and Dietetics to M.Sc. in Clinical Nutrition and Dietetics. Regarding Teaching, Learning and Evaluation, the department also received the feedback from the speakers in special field and visiting Fellows and Professors. After the discussion in Departmental Committee (DC) and Board of Studies, the relevant matters are introduced. For this purpose the following the following feedbacks are adopted:- Two seminar delivery by the students in each semester. Two class test on each paper in each semester. Group discussion on the specific topic.</p>

Evaluation of the faculties by the students(at least one in each semester)
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Feedback inputs from students are also collected by the discussion after class hours sometimes in 'formal' and 'informal' way. After receiving the 'inputs' all the matters are discussed in Departmental Committee (DC) meeting and drives are taken for correction in the specific concern.
c. alumni and employers on the programmes offered and how does the department utilize the feedback?
Though there is no formal 'Department Alumni' in this concern, in spite of that, we received information from our previous students who are employed in health sectors and other NGO especially on practical syllabus. They actually identify the lacuna. Between practical content of syllabus and techniques require at present to run the laboratory the necessary corrections are made. On that basis the department has changed the curriculum in 2013 and New Syllabus will be introduced in 2014 i.e. coming session

43. List the distinguished alumni of the department (maximum 10) :
<ol style="list-style-type: none"> 1. Sandipnarayan Chakraborty: Postdoc Fellow, Texas University, USA. 2. Dr. Debasis De: Faculty, Durgapur Paramedical College, Durgapur. 3. Mr. Sumanta Bera: Laboratory Technician, ESIC Hospital, Govt. of India, Joka, Kolkatta. 4. Mr. Gurapada Majee: Laboratory Technician, ESIC Hospital, Govt. of India, Joka, Kolkatta. 5. Preeti Prasanya Maiti: Doctoral Fellow' IIT, Kharagpur. 6. Sourav Das: Laboratory Superintendent, Bose Institute, Kolkata. 7. Athai Bhadhuri: Quality Control Manager, Tata Fundamental Research Institute, Bombay. 8. Bikash Mondal: Laboratory Technologist, Bankura Medical College, Bankura. 9. Bimal Deb: Laboratory Technologist, Midnapore Medical College, Midnapore. 10. Ishita De: Laboratory Technician, ESIC Hospital, Govt. of India, Joka, Kolkatta.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts
<p>. Special Lecture:</p> <ol style="list-style-type: none"> 1. Prof. B.D. Banerjee; Professor and Head, Dept. of Biochemistry, GTB College of Medical Sciences, Delhi University 2. Prof. K. Madhavan Nair, Scientist-E, Deputy Director, National Institute of Nutrition, Hyderabad 3. Prof. T. J. Srivastava, National Institute of Health and Family Welfare, New Delhi, India. 4. Prof. M. M. Misro, National Institute of Health and Family Welfare, New Delhi, India. 5. Prof. R. Mukhopadhyaya, Scientist-G and Principal Investigator, ACTREC, Tata Memorial Centre, Kharghar, Navi Mumbai, India 6. Prof. A Gomes, Dept. of Physiology, Calcutta University 7. Prof. B. Singh Bhau, Senior Scientist, Herbal Plant Genomics, NEIST, Assam 8. Prof. J. Bhattacharya, Scientist- E, National Institute of Virology, Pune 9. Prof. R. Bhadra, Scientist- E, Indian Institute of Chemical Biology, Kolkata 10. Prof. S. Chatterjee, Scientist- D, Indian Institute of Chemical Biology, Kolkata <p>Extension Lecture: 1. Prof. Antony Gomes, Professor, Calcutta University 2. Prof. Avay Manna, Professor, Presidency University, Kolkata</p>

3. Prof. Md. Mounur Trabelsi, University of Sousse, Tunisia
 4. Prof. Tania Das, Scientist –E, Bose Institute, Kolkata

SEMINAR:

Name of the Seminar	(national / international)	source of funding	Duration	No. of participants
1. Advanced Technique in Bio-Medical Sciences	National	DST, ICMR, UGC	5 – Days (2010)	200
2. Community Nutrition Management	National (In collaboration with Mahisadal Girls College)	UGC	2 – Days (2012)	168
3. Food Fortification	National (In collaboration with Mahisadal Girls College)	UGC	2 – Days (2014)	197

45. List the teaching methods adopted by the faculty for different programmes:

Lecture delivery method with ICT
 Demonstration method
 Assignment method
 Survey method
 Group discussion
 Seminar delivery method
 Practical experiment conduction method
 Project method

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Percentage of successful candidates in each semester.
 Percentage of successful candidates in state level competitive examination like School Service Commission.
 Number of successful candidate who obtained job in Govt. sectors, non-Govt. Sectors, Research Institute, etc.
 Percentage of successful candidate who cleared NET/GATE
 Number of students who are engaged in Doctoral Programme.
 Number of students who established their own laboratory for diagnosis purpose.

47. Highlight the participation of students and faculty in extension activities.

Students and faculties participated to conduct different Institutional activities like Birth Day celebration of Nobel Person, foundation day of the Institute, Fresher's well come, University level Sports and Cultural Events, Wall Magazine etc.

48. Give details of “beyond syllabus scholarly activities” of the department:

Resource Person: North Bengal University in Refresh Course
 Kanyali University in Post Graduate Classes

Tripura University as Visiting Fellow

Educational tour is conducted sometimes which beyond their syllabus, where academic activities of the students of other University or Institute are focused. How they conduct the project work with co-ordination is also focused.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

Department is accredited by UGC as Innovative Funded Department. It is also act as Nodal department to run the Bio- Medical courses at U.G. level and to run M.Sc. in D.C.N.M. through distance mode in our University.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Laboratory Medicine was not considered as important discipline in Paramedical Field in our state. Our Department first took the initiative to spread the course in UG level throughout the state taking the permission of Higher Education Council. Simultaneously the PG Level including Doctoral Level has been initiated here. This is also applicable in Clinical Nutrition and Dietetics. Manpower in molecular diagnosis in our state is very limited. In this field the Department took the drive to develop the practical knowledge both in PG and Doctoral level. Nutrigenomics, which is advanced part of Nutritional Science, has been selected by the Department and for generation of knowledge in this newly immersed field. The content has been incorporated in the PG level and Doctoral level by conducting Ph.D project in this line.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

Departmental instrumental facilities are up to the mark ICT facilities & Internet facilities, e-journal are available in the Dept.

Faculties are from different disciplines, which fulfill the motto of the ongoing interdisciplinary courses.

Significant portions of the practical syllabi of the Post Graduate courses are projected towards the research programme which is going on in our laboratories.

Students are trained about GLP and the Quality Control Assessment via Total Quality Management (TQM) system.

Teachers-Staff- Students relationships closely and efficiently maintained by a good hierarchy of upward, downward and sideways communication system.

Weaknesses:

Faculty strength is not upto the mark (This is covered by guest faculty and by arrangement of special lecture).

No Departmental Library (Covered by e-book & e- journal facility).

Space is not sufficient as per student strength.

No staff for official work of the department which is shared by faculties and nonteaching staff.

No seminar room with all facilities. No separate or centralized room for non-human experimental research models.

Opportunities:

- 1) Courses are self employment oriented and most of students are engaged in different non Govt. sector beside Govt sectors as Lab. Technologist, Faculty in different Paramedical Colleges etc.
- 2) As both the courses are linked to health sectors so the students are exposed to Medical Institutes in their training programme which helps them to learn the techniques in project field.
- 3) The department acts a nodal centre to run the paramedical courses and Nutrition courses in different UG colleges not only in the jurisdiction of this University but also of other University. Therefore there is a great opportunity for selection of meritorious students in both Courses.
- 4) Both the running courses are under Innovative Programme of UGC and therefore at the starting phase of the course, the department received a financial support & Faculty strength from UGC that helps the Department to start with a great spirit.
- 5) Both courses are interdisciplinary and therefore the teaching learning process can be done by so many linked domains.

Challenges:

- 1) Both the M. Sc Courses are running as the only course in our state and therefore the development of the courses in our state is a challenge to the department.
- 2) Both the courses are Nontraditional and therefore to familiar the course among UG student community is also a challenge to the department.
- 3) To focus the importance of the courses and eligibility of our students in different Govt sector is another challengeable part of our Dept.
- 4) Vertical expansion of the course (Clinical Nutrition & Dietetics especially) in Doctoral level is another challenge of the Dept.
- 5) As both the courses are cross disciplinary, so involvement of Medical persons as resource persons in the course is also another challenge.

52. Future plans of the department.

The department like to start two programmes in future:

One year post M.Sc course in Advance Molecular diagnostic techniques.

One year post M.Sc course in Nutrigenomics and Nutriproteomics.

Annexure-I

List of Publications

* Total Number of papers published in peer reviewed journals from the department

A. National:- 13 (2008-2013)

B. International): 75 (2008-2013)

List of Published Papers (International) of Prof. D.Ghosh (2008-2013), Total: 68

Sl. No.	Name of all authors as they appear	Title of the paper	Name of the Journal	Year of publication	Volume	Page No.	Impact Factor
1.	Mandal S, Barik B, Mallick C, De D, Ghosh D	Therapeutic effect of ferulic acid, an ethereal fraction of ethanolic extract of seed of <i>Syzyum cumini</i> against streptozotocin-induced diabetes in male rat.	Methods & Findings of Clinical Pharmacology	2008	30	121-128	1.10
2.	Ghosh D, Ghosh S, Mallick C	Effect of methanolic composite extract of <i>Allium sativum</i> (Garlic) and <i>Commiphora mukul</i> (Guggul)in composite manner on lipid profile in experimental hyperlipidemic mature albino rat	Journal of Dietary Supplement	2008	17	35-39	0.79
3.	Mallick C, De D, Ghosh D	Correction of protein metabolic disorder by composite extract of <i>Musa paradisiaca</i> and <i>Coccinia india</i> in STZ induced diabetic albino rat: An approach through pancreas.	Journal of Pancreas	2009	38	322-329	2.19
4.	Roy S, Ghosh D, Guha SK	Polyelectrolite polymer properties in relation to male contraceptive RISUG action.	Colloids and surfaces B: Biointerfaces	2009	69	77-84	2.66

5.	Chatterjee K, Ali KM, Mallick C, Ghosh D	Antihyperglycaemic, antioxidative activities of a formulated polyherbal drug MTEC (Modified) in streptozotocin-induced diabetic rat.	Journal of Medicinal Plant Research	2009	3	468-480.	0.59
6.	Misra DS, Maiti R, Ghosh D	Protection of swimming-induced oxidative stress in some vital organs by the treatment of composite extract of <i>Withania somnifera</i> , <i>Ocimum sanctum</i> and <i>Zingiber officinalis</i> in male rat.	African Journal of Traditional Complementary Alternative Medicine	2009	6	534-543	0.66
7.	Guria M, De D, Bera TK, Ghosh D	Awareness level of family planning practices in school going adolescent girls of different socio-economic groups in rural sectors, West Bengal.	Journal of Human Ecology	2009	27	101-104	1.01
8.	Ali KM, Chatterjee K, De D, Bera TK, Ghosh D	Efficacy of aqueous extract of seed of <i>Holarrhena antidysenterica</i> for the management of diabetes in experimental model rat: A correlative study with antihyperlipidemic activity.	Journal Applied Research in Natural Product	2009	2	13-21.	0.63
9.	Mandal U, De D, Nandi DK, Biswas A, Ghosh D	Antihypochlorhydric and antilipidperoxidative effect of composite extract of whole plant of <i>Fumaria vaillatii</i> and ripe fruit of <i>Benincasa hispida</i> on aged male albino rat.	Pharmacology online	2009	1	573-587	0.59
10.	Ali KM,	Attenuation of	International	2009	1	1205-	0.59

	Bera TK, Mandal S, Barik BR, Ghosh D	diabetic disorders in experimentally induced diabetic rat by methanol extract of seed of <i>Holarrhena antidysenterica</i> .	Journal of PharmTech Research			1211	
11.	Ghosh D , Bera TK, Chatterjee K, Ali KM, De D	Antidiabetic and antioxidative effects of aqueous extract of seed of <i>Psoralea corylifolia</i> (somraji) and seed of <i>Trigonella foenum-graecum</i> L. (methi) in separate and composite manner in streptozotocin-induced diabetic male albino rat.	International Journal of Pharmaceutical Research and Development	2009	7	1-10	0.79
12.	Das UK, De D, Chatterjee K, Mallick C, Bera TK, Ghosh D	Antigonadal effect induced by hydro-methanolic extract of leaf of <i>Aegle marmelos</i> in male rats: effect of hCG co-administration.	Journal of Medicinal Plant Research	2009	3(10)	728-735.	0.59
13.	Chatterjee K, Ali KM, De D, Mallick C, Ghosh D .	Induction of Chemosterilization by single intratesticular calcium chloroid injection in stray dogs.	Research Journal of Animal and Veterinary Science	2009	4	22-29.	0.89
14.	Mandal U, Nandi DK, Chatterjee K, Biswas A, Ghosh D	Remedial effect of aqueous extract of whole plant of <i>Fumaria vaillantii</i> and ripe fruit of <i>Benincasa hispida</i> on ranitidine induced-hypochlorhydria in male rat.	International Journal Applied Research in Natural Product	2009	1	573-587	0.63
15.	Paul D, De D, Ali KM, Chatterjee K, Nandi DK, Ghosh D	Comparative study on spermicidal activity of organic solvent fraction from hydro-ethanolic extract of <i>Achyranthes aspera</i> and <i>Stephania hernandifolia</i> on human and rat sperm.	Contraception	2009	81	355-361.	3.21

16.	Ali KM, Chatterjee K, De D, Bera TK, Mallick C, Ghosh D	Hypoglycemic, antioxidant and antihyperlipidemic effects of aqueous extract of sepals of <i>Salmaaliala malabarica</i> in Streptozotocin-induced diabetic rat.	Ethiopian Pharmaceutical Journal	2009	27	1-15	0.73
17.	Panda DK, Ghosh D , Bhat B, Talwar SK, Jaggi M, Mukherjee R	Diabetic therapeutic effects of ethyl acetate fractions from the roots of <i>Musa paradisiaca</i> and seeds of <i>Eugenia jambolana</i> in streptozotocin-induced male diabetic rats.	Methods Findings Experimental Clinical Pharmacology	2009	31 (9)	571-584	1.10
18.	Das K, Tulsian T, Ghosh D , Nandi DK	New experimental design: Dehydration induced uremia and oxidative stress on male albino rats, innovative approach to researchers for further study on kidney disease.	Pharmacology online	2009	3	882-892	0.59
	Paul D, Mallick C, Ali KM, Nandi DK, Ghosh D .	Duration dependent effect of hydro-ethanolic extract of leaf of <i>S.hernandifolia</i> and root of <i>A. aspera</i> on testicular androgenic and gametogenic activity: An approach for male herbal contraceptive development.	International Journal Applied Research in Natural Product	2010	2(4)	1-10	0.63
19.	De D, Chatterjee K, Ali KM, Mandal S, Barik B, Ghosh D .	Antidiabetic and antioxidative effects of hydro-methanolic extract of sepals of <i>Salmaaliala malabarica</i> in streptozotocin induced diabetic rats.	Journal of Applied Biomedicine	2010	8	19-27	1.66
20.	Chattopadhyay S, Ghosh D	Role of dietary GSH in the amelioration of sodium arsenite-induced ovarian and uterine disorders.	Reproductive Toxicology	2010	30	481-488	4.25
21.	Chattopadhyay S, Maity S, Maji G,	Protective role of Moringa oleifera (Sajina) seed on Arsenic-induced	Biological Trace Element Research.	(2010).	142	8761-7.	3.29

	Deb B, Pan B, Ghosh D.	hepatocellular degeneration in female albino rats.					
22.	Chattopadhyay S, Ghosh D.	The involvement of hypophyseal-gonadal and hypophyseal-adrenal axes in arsenic-mediated ovarian and uterine toxicity: Modulation by hCG.	Journal of Biochemistry and Molecular Toxicology.	2010	24(1)	29-41.	2.98
23.	Jana K, Chatterjee K, Bera TK, Maiti S, De D, Ali, KM, Ghosh D	Antihyperglycemic and antihyperlipidemic effects of hydro-methanolic extract of seed of <i>Caesalpinia bonduie</i> in streptozotocin induced diabetic male albino rat.	International Journal of PharmTech Research	2010	2(4)	2234-2242	0.59
24.	Das K, Chakraborty PP, Ghosh D , Nandi DK	Protective effect of aqueous extract of <i>Terminalia arjuna</i> against dehydration induced oxidative stress and uremia in male rat.	Iranian Journal of pharmaceutical Research	2010	9(2)	153-161	0.53
25.	Maity S, Chattopadhyay S, Deb B, Samanta T, Maji G, Pan B, Ghosh A, Ghosh D.	Antioxidant and metabolic impairment result in DNA damage in arsenic-exposed individuals with severe dermatological manifestations in eastern India.	Environmental Toxicology	2010	25(5)	422-428	1.93
26.	Mallick C, Bera TK, Ali KM, Chatterjee K, Ghosh D.	Diabetes-induced testicular disorders vis-à-vis germ cell apoptosis in albino rat: remedial effect of hexane fraction of root of <i>Musa paradisiaca</i> and leaf of <i>Coccinia indica</i> .	Journal of Health Science	2010	56(6)	1-14	1.10
27.	Bera TK, De D, Chatterjee K, Ali KM, Ghosh D	Effect of Diashis, a polyherbal formulation, in streptozotocin-induced diabetic male albino rats.	International Journal of Ayurveda Research	2010	1(1)	18-24	1.00

28.	De D, Chatterjee K, Ali KM, Bera TK, Ghosh D	Antidiabetic potentiality of the aqueous-methanolic extract of seed of <i>Swietenia mahogany</i> (L.) Jacq. in streptozotocin-induced diabetic male albino rats: A correlative and evidence-based approach with antioxidative and antihyperlipidemic activities.	Evidence Based Complementary and Alternative Medicine.	2011	8	1-11	4.12
29.	Ali KM, Chatterjee K, Bera TK, De D, Jana K, Bera TK, Ghosh D	Inhibitory effect of hydro-methanolic extract of seed of <i>Holarrhena antidysenterica</i> on alpha – glucosidase activity and post prandial blood glucose level in normoglycaemic rat	Journal Ethnopharmacology.	2011	135	194-196	3.32
30.	Chenni H, Ghosh D , Ali KM, Chatterjee K, Trabelsi MM	Spermicidal Effects of Methanolic Extract of <i>Cestrum parqui</i> Leaves on Human Spermatozoa: A View Through DNA Breakage And Disruption of Membrane Ultrastructure.	Journal of Reproduction and Contraception	2011	22(4)	223-232	1.14
31.	Bisai S, Bose K, Ghosh D , De K .	Growth pattern and prevalence of underweight and stunting among rural adolescents.	Journal of Nepal Paediatric Society	2011	31(1)	17-24	0.51
32.	Bera S, Chatterjee K, De D, Ali KM, Ghosh D	Effect of the hydro-methanolic (2:3) extract of the bark of <i>Tectona grandis</i> L. on the management of hyperglycemia and oxidative stress in streptozotocin-induced diabetes in rats	Journal of Natural Pharmaceutical	2011	2(4)	196-202	0.50
33.	Ali KM, Jana K, Bera TK, De D,	<i>In-Vitro</i> Testing Of Antioxidant Efficacy Of The Methanol Extract Of Seed Of	Journal of Herbal Medicine and Toxicology	2012	6 (1)	123-131	0.61

	Chatterjee K, Ghosh A, Maiti S, Ghosh D	<i>Holarrhena Antidysenterica</i> : A Correlative Study With In-Vivo Bioactivity On Oxidative Stress In Streptozotocin Induced Diabetic Wistar Rat					
34.	Maiti R, De D, Ali KM, Chatterjee K, Misra DS, Ghosh D	Antioxidant Potency of Aqueous Methanol Extract of Seed of <i>Tamarindus indica</i> for the Management of Streptozotocin-induced Diabetes Mellitus in Rat	International Journal of Research in Pharmaceutical and Biomedical Sciences	2012	3 (1)	368-381	0.55
35.	Chatterjee K, Ali KM, De D, Panda D, Ghosh D	Anti diabetic and anti oxidative potencies study of ethyl acetate fraction of hydromethanolic (40:60) extract of seed of <i>Eugenia jambolana</i> Linn and its chromatographic purification	Journal of Pharmacy Research	2012	5 (1)	696-703	2.14
36.	Chatterjee K, Ali KM, De D, Bera TK, Maiti S, Mandal U, Ghosh D	Diabetic therapeutic efficacy of n-hexane fraction of hydro methanolic (40:60) extract of leaf of <i>Coccinia indica</i> Wight & Arn: Study by In-Vivo and In-Vitro methods	International Journal of PharmTech Research	2012	4(1)	112-124	0.59
37.	Chatterjee K, Ali KM, De D, Bera TK, Maiti S, Mandal U, Ghosh D	Antidiabetic and Antioxidative activity of Ethyl acetate Fraction of Hydromethanolic Extract of Seed of <i>Eugenia jambolana</i> Linn Through <i>In-Vivo</i> and <i>In-Vitro</i> Study and its Chromatographic Purification	Free Radicals Antioxidant	2012	2(1)	21-30	1.10
	Bera TK, Chatterjee K, Jana K, Ali KM, De D, Maiti S,	Antihepatotoxic effect of "Livshis," a polyherbal formulation against carbon tetrachloride-induced	Journal of Natural Pharmaceuticals	2012	3(1)	30-37	0.50

	Ghosh D	hepatotoxicity in male albino rat					
38.	Bera TK, Chatterjee K, De D, Ali KM, Jana K, Maiti S, Ghosh D	Hepato protective activity of Livshis, a polyherbal formulation in CCl ₄ -induced hepatotoxic male Wistar rats: A toxicity screening approach	Genomic Medicine, Biomarkers, and Health Sciences	2012	3	103-110	1.23
39.	Ali KM, Chatterjee K, De D, Bera TK, Ghosh D	In vitro testing of antioxidant activity of methanol extract of seed of <i>Holarrhena antidysenterica</i> : A correlative study with In vivo bioactivity on oxidative stress in streptozotocin induced diabetic wistar rat	Journal of Herbal Medicine and Toxicology	2012	6(1)	123-131	0.61
40.	Das B, Ali KM, Majumder P, De D, Chatterjee K, Ghosh D.	Prevalence rate of urinary tract infection in rural sector of Singur, West Bengal, India: A comparative study between diabetic male and female patients.	International journal of Current Research and Review	2012	4	49-52	0.53
41.	Maiti S, Ghosh D , Paul S	Determinants of nutritional status among tribal adolescent in girls Paschim Medinipur district of West Bengal.	International Journal of Preventive Medicine	2012	3	298-299	0.51
42.	Das B, De D, Mukhopadhyay S, Ali KM, Chatterjee K, Ghosh D	Bacterial effect of phenol solution use in the Dots clinic of Hoogly and Burdwan district, West Bengal, India	International Journal of Current Research	2012	4	6-8	0.50
43.	Meena R, Misro MM, Ghosh D , Nandan D	Extended intervention time and evaluation of sperm suppression by dienogest plus testosterone undecanoate in male rat	Contraception	2012	85	113-121	3.21

44.	Bera TK, Chatterjee K, Ali KM, De D, Ghosh D	Antihyperglycemic and antihyperlipidemic effects of 'Diashis' a polyherbal formulation in streptozotocin-induced diabetic male albino rat	Iranian Journal of Pharmaceutical Research	2012	In press		0.53
45.	Ali KM, Chatterjee K, Bera TK, De D, Mallick C, Ghosh D.	Therapeutic activity of aqueous extract of seed of <i>Holarrhena antidysenterica</i> in streptozotocin-induced diabetic male rat: an approach through antioxidative activity study	African Journal of Traditional Complimentary and Alternative Medicine (In press)	2012	In press		0.66
46.	Maiti S, Ghosh D, Paul S	Prevalence of thinness among early adolescent in rural school girls of Paschim Medinipur, West Bengal, India	Journal of Tropical Pediatrics	2012	In press		1.01
47.	Chenni H, Hernández JC, Bermejo J, Brouard I, Estévez F, Cascante M, Torres JL, Ali KM, Ghosh D, Trabelsi MM	Apoptosis inducing activity of two phytomolecules having anticancer activity in <i>Cestrum parqui</i> leaves: A study on HL-60 cell line	Life Sciences	2012	In press		2.71
48.	Jana K, Chatterjee K, Ali KM, De D, Bera TK, Ghosh D	Antihyperglycemic and antioxidative effects of the hydro-methanolic extract of the seeds of <i>Caesalpinia bonduc</i> on streptozotocin induced diabetes in male rats.	Pharmacognosy Research.	2012	4(1)	57-62	
49.	Chatterjee K, Ali KM, De D, Bera TK, Jana K, Maiti S, Ghosh A, Ghosh D	Hyperglycemia induced oxidative stress mediated alteration in reproductive profile and its amelioration by polyherbal formulation MTEC (modified) in	International Journal of Diabetes Mellitus	2012	In press		

		streptozotocin induced diabetic albino rat					
50.	Meena R, Misro MM, Ghosh D , Nandan D	Complete sperm suppression induced by dienogest plus testosterone undecanoate is associated with down-regulation in the expression of upstream steroidogenic enzyme genes in rat testis	Contraception	2012	86	163-171	3.21
51.	Chatterjee K, Ali KM, De D, Bera TK, Jana K, Maiti S, Ghosh A, Samanta R, Ghosh D	Diabetes induced testicular dysfunction amelioration by ethyl acetate fraction of hydro methanolic extract of root of <i>Musa paradisiaca</i> L in streptozotocin-induced diabetic rat	Asian Pacific Journal of Tropical Biomedicine	2012		S233-S241	1.10
52.	Meena R, Misro MM, Ghosh D , Nandan D	Extended intervention time and evaluation of sperm suppression by dienogest plus testosterone undecanoate in male rat	Contraception	2012	85	113-121	3.21
53.	Bera TK, Chatterjee K, K Jana, Ali KM, De D, Maiti S, Ghosh D	Antihepatotoxic effect of 'Livshis' a polyherbal formulation against carbon tetrachloride induced hepatotoxicity in male albino rat	Journal of Natural Pharmaceuticals	2012	3	30-37	0.51
54.	De D, Ali KM, Chatterjee K, Bera TK, Ghosh D	Antihyperglycemic and antihyperlipidemic effects of n-Hexane fraction from the hydro-methanolic extract of sepals of <i>Salvia malabarica</i> in streptozotocin-induced diabetic rats.	Journal of Complementary and Integrative Medicine	2012	9(1)	18	0.59

55.	Bera TK Chatterjee K, K Jana, Ali KM, De D, Maiti S, Ghosh D	Antihyperglycemic and antioxidative effects of hydro-methanolic (2:3) extract of seed of <i>Swietenia mahagony</i> in streptozotocin-induced diabetic male albino rat: An approach through pancreas	Genomics Medicine Biomarkers and Health Science	2013	4	107-117	1.23
56.	Chatterjee K, Ali KM, De D, Bera TK, Jana K, Maiti S, Ghosh A, Ghosh D	Hyperglycemia-induced alteration in reproductive profile and its amelioration by the polyherbal formulation MTEC (modified) in streptozotocin-induced diabetic albino rats.	Genomics Medicine Biomarkers and Health Sciences	2013	5	54-66	1.23
57.	A. Ghosh, K. Jana, K. M. Ali, D. De, K. Chatterjee, D. Ghosh	Corrective role of <i>Eugenia jambolana</i> on testicular impairment in streptozotocin-induced diabetic male albino rat: An approach through genomic and proteomic study	Andrologia	2013	In Press		1.748
58.	Ray S, Chatterjee K, De D, Ghosh D	Bioefficacy of hydromethanolic extract of tuber of <i>Chlorophytum borivilianum</i> (Safed Musli) for the management of male infertility in cyproterone acetate treated albino rat	Andrologia	2013	In Press		1.748
59.	Mandal U, Ali KM, Chatterjee K, De D, Ghosh D	Management of experimental hypochlorhydria with iron deficiency by the composite extract of <i>Fumaria vaillantii</i> L. and <i>Benincasa hispida</i> T. in rat	Journal of Natural Science, Biology and Medicine	2013	In Press		0.56
60.	Maiti S, Kazi M Ali, Jana K, Chatterjee K, De	Ameliorating effect of mother tincture of <i>Syzygium jambolanum</i> on carbohydrate and lipid metabolic	Journal of Natural Science, Biology and Medicine	2013	4(1)	68-73	0.56

	D, D Ghosh	disorders in streptozotocin-induced diabetic rat: Homeopathic remedy					
61.	Bera TK, Ali KM, Jana K, Ghosh A, Ghosh D	Protective effect of aqueous extract of seed of <i>Psoralea corylifolia</i> (Somraji) and seed of <i>Trigonella foenum-graecum</i> L. (Methi) in streptozotocin-induced diabetic rat: A comparative evaluation	Pharmacognosy Research	2013	5(4)	277-285	0.61
62.	De D, Bera TK, Ali KM, Mandal S, Barik BK, Ghosh D	Inhibitory effects of n-hexane fraction from hydro-methanolic (2:3) extract on α -amylase and α -glucosidase activities of sepal of <i>Salvia malabarica</i> : An approach through <i>in vitro</i> study	Genomics Medicine Biomarkers and Health Sciences	2013	5(1)	48-53	1.23
63.	Bera TK, Chatterjee K, Ghosh D	Alpha glucosidase inhibitory activity of hydro-methanolic (2:3) extract of seed of <i>Swietenia mahagoni</i> (L.) Jacq.	Pharmacognosy Journal	2013	In Press		1.05
64.	De D, Chatterjee K, Jana K, Ali KM, Bera TK, Samanta R, Ghosh D	Searching for antihyperglycemic phytomolecules through bioassay-guided solvent fractionation and subfractionation from hydromethanolic (2:3) extract of <i>Tamarindus indica</i> Linn. seeds in streptozotocin-induced diabetic rat.	Genomics Medicine Biomarkers and Health Sciences	2013	5	164-174	1.23
65.	Bera TK, Chatterjee K, Ghosh	Remedial hypoglycemic activity of n-hexane fraction of hydro-	Journal of Herbs Spices and Medicinal	2013	In Press		1.14

	D	methanol extracts of seed of <i>Swietenia mahagoni</i> (L.) jacq. in streptozotocin induced diabetic rat: a comparative evaluation	Plants				
66.	Bera TK, Chatterjee K, Ghosh D	In-vitro antioxidant properties of hydro-methanolic extract of seed of <i>Swietenia mahagoni</i> (L.) Jacq.	Biomarkers and Genomics Medicine	2013	In Press		1.23

List of Published Papers (National) of Prof. D. Ghosh Total:13

Sl. No	Name of all authors as they appear	Title of the paper	Name of the Journal	Year of publication	Volume	Page No.
1	Maiti S, Ali KM, Dash SS, Ghosh D	Impact of 'Child-to-Family' Strategy for Health Awareness Improvement at Rural Sectors of Paschim Medinipur District, West Bengal.	Online J Health Allied Sci	2010	9(2)	2-3
2	Manna PK, De D, Bera TK, Chatterjee K, Ghosh D	Anthropometric assessment of physical growth and nutritional status among school children of North Bengal.	Anthropology	2011	4(4)	289-292
3	Maiti S, Chatterjee K, Ali KM, Jana K, Bera TK, Ghosh D	Evaluation of the Health Awareness Package for the Improvement of Knowledge, Attitudes and Practices (KAP) of Secondary School Students at Rural Areas	Indian Journal of Public Health Research & Development	2011	2(2)	47-52

		of Paschim Medinipur, West Bengal.				
4	Maiti S, Chatterjee K, Ali KM, Paul S, Ghosh D	Assessment of Nutritional Status of Rural Early Adolescent School Girls in Dantan- II Block, Paschim Medinipur district, West Bengal.	National Journal of Community Medicine	2011	2(1)	14-18
5	Maiti S, Chatterjee K, Ali KM, De D, Bera TK, Jana K, Ghosh D	The Impact of Nutritional Awareness Package (NAP) on Secondary School Students for the Improvement of Knowledge, Attitudes and Practices (KAP) at Rural Areas of West Medinipur, West Bengal	Asian Journal of Medical Sciences	2011	2	87-92
6	Maiti S, De D, Chatterjee K, Jana K, Ghosh D , Paul S	Prevalence of stunting and thinness among early adolescent school girls of Paschim Medinipur district, West Bengal	International Journal of Biological & Medical Research	2011	2(3)	781- 783
7	Maiti S, Chatterjee K, Ali KM, Bera TK, Ghosh D	A study of anthropometric variables on growth and nutritional status of rural adolescent school girls in Paschim Medinipur, West Bengal	International Journal of Current Research	2011	3(7)	36-40
8	Maiti S, Chatterjee K, KM Ali, Ghosh A, Ghosh D , Paul S	Overweight and Obesity among Urban Bengalee Early Adolescent School Girls of Kharagpur, West Bengal, India	Iranian Journal of Paediatrics	2012	In press	

9	Chatterjee K, Mallick C, Bera A, Ghosh D	Assessment of semen quality in diabetic patient in relation to oxidative stress	Indian Journal of Medical Research ISSRF	2012	In press	
10	Mallick C, Chatterjee K, Mandal U, Ghosh D	Ameliorative effect of methanolic extract of <i>musa paradisiaca</i> and <i>coccinia indica</i> in composite manner on glycaemic index and testicular dysfunctions in streptozotocin-induced diabetic albino rat.	Indian Journal of Medical Research ISSRF	2012	In press	
11	Manna PK, De D, Bera TK, Mallick C, Ghosh D	Physical growth vis-a-vis nutritional status analysis of the children of North Bengal : Anthropometric Approach.	Journal of Human Ecology	2012	In press	
12	Das B, Ali KM, Koley D, Ghosh D	Estimation of plasma glucose levels from NaF + Pot. Oxalate specimen and EDTA specimen: A comparative study to point out the any variation on delayed examination.	Journal of Community Nutrition and Health	2012	1	47-50
13	Manna PK, Ghosh D	Prevalence of anemia among adolescent girls and adult women of tea garden areas of Darjelling and Jalpaiguri District of West Bengal	Journal of Life Sciences	2013	In press	-

List of Published Papers (International) of Dr. Sandip Chattopadhyay, Total: 6

SL. NO.	Title with page no.	Journal	ISSN/IS BN No.	Whether Peer reviewed, Impact factor, if any	No. of Co-author	Whether you are the main author/ corresponding/ co-author
1	Chattopadhyay S, Ghosh D. Role of dietary GSH in the amelioration of sodium arsenite-induced ovarian and uterine disorders (2010). <i>Reprod Toxicol</i> ; 30: 481-488.	Reprod Toxicol	ISSN: 0890-6238	3.940	1	1 st and main and coresponding
2	Chattopadhyay S, Ghosh D. The involvement of hypophyseal-gonadal and hypophyseal-adrenal axes in arsenic-mediated ovarian and uterine toxicity: modulation by hCG (2010); 24: 29-41.	J Biochem Mol Toxicol	ISSN: 1095-6670	2.04	1	1 st and main and coresponding
3	Chattopadhyay S, Maiti S, Maji G, Deb B, Pan B, Ghosh A, Ghosh D. Protective Role of <i>Moringa oleifera</i> (Sajina) Seed on Arsenic-Induced Hepatocellular Degeneration in Female Albino Rats (2011); 142:200-212.	Biol Trace Elem Res	ISSN: 0163-4984	1.307	5	1 st and main and coresponding
4	Maiti S, Chattopadhyay S, Samanta T, Maji G, Deb B, Pan B, Ghosh D. Antioxidant and metabolic impairment result in DNA damage in arsenic-exposed individuals with severe dermatological manifestation. (2012). 27:342-350.	Environ Toxicol	ISSN: 1522-7278	2.708	6	2nd
5	Chattopadhyay S, Deb B, Maiti S. Effect of vitamin B12 and folic acid on hepatocellular degeneration (2012), 35: 81-88.	Drug & Chem Toxicol	ISSN: 0148-0545	1.293	2	1 st and main and coresponding
6	Maiti S, Chattopadhyay S, Acharyya N, Deb B. <i>Emblia officinalis</i> (amla) ameliorates arsenic-induced liver damage via DNA protection by antioxidant systems (2012). (IN PRESS).	Mol Cell Tox	ISSN: 1738-642X	1.201	4	2nd

List of Published Papers (International) of Dr. Somasri Dam, Total: 1

1. Dam B, **Dam S**, Liesack W. (Equal contribution with first author) (2013) Genome analysis coupled with physiological studies reveals, among other traits, a diverse nitrogen metabolism in *Methylocystis* sp. strain SC2. **PlosOne**. 8(10): e74767. (Impact factor: **4.09**)

Department of Botany and Forestry

1. Name of the Department:
Botany and Forestry
2. Year of establishment
1990
3. Is the Department part of a School/Faculty of the university?:
Faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
a. M.Sc. b. Ph.D.
5. Interdisciplinary programmes and departments involved
Interdisciplinary research with Zoology and Anthropology.
6. Courses in collaboration with other universities, industries, foreign institutions, etc
No
7. Details of programmes discontinued, if any, with reasons
NA
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester system
9. Participation of the department in the courses offered by other departments
No

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	0	0	01- CAS
Associate Professors			03 (02 CAS)
Asst. Professors	06	05	03
Others (Asst. Professors, Contractual)	02	02	0

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Prof. N. K. Verma	M.Sc, Ph.D	Professor	Mycorrhizal Biology	29	3
Mr. R. K. Bhakat	M.Sc, M.Phil	Associate Professor & Head	Ecology, Biodiversity, Ethnobotany & Taxonomy	20	8

Dr. A. K. Mondal	M.Sc, Ph.D	Associate Professor	Plant Taxonomy, Biosystematics and Molecular Taxonomy	16	11
Dr. Asis Kumar Nandi	M.Sc, Ph.D	Associate Professor	Cytogenetics, Molecular Biology	15	8
Dr. P. Karmakar	M.Sc, Ph.D	Asst. Professor	Paleobotany and Palynology	10	6
Dr. D. Banerjee	M.Sc, Ph.D	Asst. Professor	Microbiology, Fermentation Technology and Biotechnology	10	11
Dr. N. Banerjee	M.Sc, Ph.D	Asst. Professor	Plant Physiology, Biochemistry and Molecular Biology	2	0

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Nil

13. Percentage of classes taken by temporary faculty – programme wise information

PG	M.Sc. 10% (Guest Faculty are permanent faculty members of other institutions)
Ph D (Course Work)	Ph.D. 30% (Guest Faculty are permanent faculty members of other department)

14. Programme-wise Student Teacher Ratio:

PG	16:1
Ph D (Course Work)	2.5:1
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)	2	2	2
administrative staff	0	0	1 (Casual)

16. Research thrust areas as recognized by major funding agencies

Medicinal Plants, Biosystematics, Dye yielding plants, Biodiversity Conservation, Molecular Taxonomy (ITS region)
 Exopolysaccharide research
 Endophyte Biology
 Sacred Groves
 Biodiversity and Floristics

17. Number of faculty with ongoing projects from a) national b) international funding

agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.			
Status	Funding agency	Project title	Total grant received
National	UGC	Production of exopolysaccharide from endophytic fungi	5 lakh
National	UGC	Diversity of ant plant interactions: Protective efficacy in species with extra floral nectarines (EFNs) in the Flora of Midnapore, West Bengal	14 lakh

18. Inter-institutional collaborative projects and associated grants received a) National collaboration b) International collaboration
a) National collaboration:
Nil
b) International collaboration -
Nil

19. Departmental projects funded by DST FIST;UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received
Total grants received. 1.2 crore (appox) UGC SAP project :Conservation, management and sustainable utilization of endangered medicinal plants (According to IUCN) from the tribal areas (Natural forests) of South West Bengal, with Special Reference to their methods of propagation, Identification and characterization of their active principles. - 45 lakh

20. Research facility / centre with	
<input type="checkbox"/> state recognition	
<input type="checkbox"/> national recognition	Herbarium (VUH)
<input type="checkbox"/> international recognition	

21. Special research laboratories sponsored by / created by industry or corporate bodies
Nil

22. Publications:

Annexe-1
List of Publications in last five (5) years

- Number of papers published in peer reviewed

journals (national / international)	= 58
Monographs	= 0
• Chapters in Books	= 3
• Edited Books	=
• Books with ISBN with details of publishers	=
• Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	=
• Citation Index – range / average	= 0-18/3
• SNIP	=
• SJR	=
• Impact Factor – range /	= 0-3.64/0.4
• Average	=
• H-index	= 10

23. Details of patents and income generated
Nil

24. Areas of consultancy and income generated –
Forest Development Agency (FDA) : Rs. 40,000

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Dr. Amal Kumar Mondal visited Victoria International Hebarium, Melbourne, Australia Dr. D. Banerjee to Montana State University, USA as a BOYSCAST fellow. Dr. P. Karmakar to University of Agricultural Sciences, Bangalore as a Summer Fellow.

26. Faculty serving in
a) National committees: Prof. N. K. Verma, Expert committee member on Major Research Project Evaluation. Mr. R. K. Bhakat, member West Bengal Biodiversity Board, Govt of West Bengal
b) International committees: Mr. R. K. Bhakat: Indian Journal of Biological Science (ISSN :...); Journal of Social Biology and Environmental Research (ISSN :.....) Dr. D. Banerjee: Microbiology insights (ISSN: 1178-6361); Research Journal of Microbiology (ISSN: 1816-4935), Biotechnology (ISSN: 1682-2978), International journal of Botany (ISSN:1811-9719), Asian journal of Biotechnology (ISSN: 1996-0700), Microbiology journal (ISSN: 2153-0718) Dr. A. K. Mondal: Journal ARANYA -(Nature and Wildlife Conservation Society)
c) Editorial Boards : Mr. R. K. Bhakat: Indian Journal of Biological Science (ISSN:....); Journal of Social Biology and Environmental Research (ISSN:.....) Dr. D. Banerjee: Microbiology insights (ISSN: 1178-6361); Research Journal of Microbiology (ISSN: 1816-4935), Biotechnology (ISSN: 1682-2978), International journal of Botany (ISSN:1811-9719), Asian journal of Biotechnology (ISSN: 1996-0700), Microbiology

journal (ISSN: 2153-0718)
Dr. A. K. Mondal: Journal ARANYA -(Nature and Wildlife Conservation Society)
d) any other (please specify)
Reviewer of the African Journal of Agricultural Research (AJAR)-Academic Journal
Reviewer of the International Journal of FLORA- (Germany)-Academic Journal (Impact Factor 1.439)
Reviewer of African Journal of Biochemistry Research (AJBR)- Academic Journal
Reviewer of an International Journal of Biological and Chemical Sciences (IJBCS)-Academic Journal
Reviewer of an International Journal of Medicinal Plants Research (JMPR)- Academic Journal
Reviewer of an International Journal of Plant Science (IJPS)- Academic Journal
Reviewer of Journals of Plant Breeding and Crop Science (JPBCS)- Academic Journal.
Reviewer of an International Journal of Biodiversity and Conservation (IJBC)- Academic Journal.
Reviewer of an African Journal of Biotechnology (AJB)- Academic Journal.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
Faculty members attended UGC, ASC Refresher Courses, Workshop, Training programmes.

28. Student projects :

<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
100 %
<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
Nil

29. Awards / recognitions received at the national and international level by

<input type="checkbox"/> Faculty
<ul style="list-style-type: none"> • Dr. A. K. Mondal: Fellow of Linnean Society (FLS), London; • Siksha Ratna award from India International Friendship Society, New Delhi, • Fellow of Indian Association for Angiosperm Taxonomy (FIAAT), • Plenary Lecture at International Botanical Congress (IBC) and International Code of Botanical Nomenclature (ICBN), Melbourne, Australia (Melbourne Code-2011). • Prof. P.M. Bhaduri Memorial Award for Best Lecture in the National Conference, Botany Department, The University of Burdwan (2005) <p>Best Lecture Award in the State Science Congress, Fishery and Animal Husbandry University, Kolkata (2010).</p> <p>Dr. Debdulal Banerjee: BOYSCAST fellowship to attend post doctoral training programme at USA</p>
<input type="checkbox"/> Doctoral / post doctoral fellows: Rajib Gandhi Fellowship to Mr. Gopal Chandra Mondal,

Inspire Fellowship to Sk. Md. Ismail Al Amin

- Students : Indira Gandhi Single Daughter Child Fellowship to M.Sc. student Dipanwita Das.

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

National: 2008: UGC and SPWD/ National Seminar on “Plants, Microbes and Forestry Research for Sustainable Development”
2011: UGC and WBBB/ Plant Diversity: Aspects and Prospects.
2012: Departmental resource/ Biodiversity conservation and sustainable Development.

31. Code of ethics for research followed by the departments:

The department follows the UGC and university guidelines for code of research ethics.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Sc. (Last year)	285	24	31	100	100
Ph.D.	56	8	7	100	100

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from other universities outside the State	% of students from other countries
M.Sc.	60	38	2	0
Ph.D.	70	24	6	0

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

In last four years: **Civil Service and Defence Service Exam: 0**

NET: 1; SET: 0; GATE: 1; other (School Service Commission): 120

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	25
PG to M.Phil.	

PG to Ph.D.	5
Ph.D. to Post-Doctoral Employed	
Campus selection	0
Other than campus recruitment	75
Entrepreneur	Information not available

36. Diversity of staff	
Percentage of faculty who are graduates	
of the same university	14%
from other universities within the State	70%
from universities from other States	14%
from universities outside the country	0

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period
One Faculty have been awarded Ph.D. (Dr. P. Karmakar)

38. Present details of departmental infrastructural facilities with regard to	
a) Library	Library for SAP is there and other books are kept at central library.
b) Internet facilities for staff and students	Yes, to all members
c) Total number of class	Two
d) Class rooms with ICT facility	One (Partial)
e) Students' laboratories	Two
f) Research laboratories	Eight (one central and seven for individual faculties).

39. List of doctoral, post-doctoral students and Research Associates	
a) from the host institution/university:	<ul style="list-style-type: none"> • Uday Kumar Sen • Tapas Das • Swarnendu Chandra • Pompi Ghosh • Sudhanshu Samanta • Pijush Kanti Das • Asim Mondal • Tamal Chakraborty • Babulal Sasmal • Sourav Dewari • Sanjit Sinha • Sk. Abu Imam Saddi • Debasish Bhunia • Sakti Prasad Panda • Sourav Kundu • Gopal Dev Mondal • Abhiram Choudhury

	<ul style="list-style-type: none"> • Anirban Mukherjee • Md. Sk. Ismail Al Amin • Ujjal Layak • Biplab Bagchi • Durba Chatterjee • Manika Das • Mahmudul Haque • Anushree Dolui • Aparna Maity • Debarati Dey • Samiran Pandey • Debasis Bhunia • Arijit Kundu • Subir Kumar Pattanayak • Amal Kanta Maji • Arundhuti Ghosh • Tripti Nandi
b) from other institutions/universities	Jayangshu Sengupta

40. Number of post graduate students getting financial assistance from the university:
5-10 students per year (half and full free studentship)

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
Syllabus modified after thorough discussion and expert opinion.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
Yes through discussion during DC meeting.
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Feedback is taken from the students and actions are taken accordingly.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
Yes, discussion during regular reunion.

43. List the distinguished alumni of the department (maximum 10) :
<p>Dr. Debashree Sengupta, Assistant Professor, Raja N. L. Khan Women's College.</p> <p>Dr. Somdutta Ghosh, Assistant Professor, Midnapore College</p> <p>Dr. Dulal Dey, Assistant Professor, Midnapore College</p> <p>Mr. Sudhanshu Samanta, Assistant Professor, Sabang College</p> <p>Dr. Partha Pratim Maity, Assistant Professor, Midnapore College</p> <p>Mr. Souvik Ghorai, Deputy Director, West Bengal State Council of Higher Secondary Education, GOWB.</p> <p>Dr. Debdulal Banerjee, Assistant Professor, Vidyasagar University</p> <p>Dr. Ramaprasad Bhattachariya, Assistant DPI, Govt of West Bengal</p>

Dr. Sanjay Kar, Assistant Professor, Midnapore College
Dr. Asish Kumar Mondal, Assistant Professor, Ramananda College

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

UGC merged scheme special lectures are arranged regularly.

As UGC-merged scheme resource person:
Dr G. G. Maity, Retd. Prof, Kalyani University
Dr P. K. Pal, Prof., Burdwan University
Dr. A. Bhattacharjee, Prof., Burdwan University
Dr. P. K. Mukherjee, Prof, Calcutta University
Dr. A. Mukherjee, Prof., Burdwan University
Dr. R. Mukherjee, Prof., Burdwan University
Dr. S. Chattopadhyay, Scientist, NCCS
Dr. S. Sinha, Prof., Tripura University
Dr. A. B. Das, Associate Prof., OUAT
Dr. A. Pramanick, Deputy Director, BSI
Dr. R. Kar, Scientist, BSIP
Dr. S. P. Adhikary, Prof., Visba-Bharati
Dr. S. Giri, Additional Director, BSI
Dr. N. Bhattachariya, Principal, Panskura Banamali College

45. List the teaching methods adopted by the faculty for different programmes:

LCD, Over head, and traditional chalk and talk method, Practical and also Field visits or institutions visit.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Through regular internal monitoring, evaluation, assessment and final examination and also through students regular feedback

47. Highlight the participation of students and faculty in extension activities.

Teaching in Distance courses, consultancy, member of Governmental committees, NSS Programme. Teachers are also involved in different statutory bodies of university.

48. Give details of “beyond syllabus scholarly activities” of the department:

Teachers, Students and research scholars regularly update and disseminate through seminar symposium, workshop etc.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

Accredited centrally by NAAC

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Through interdisciplinary research.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths: It is located nearer to forest, relevant to subject.

Average age of the faculty members is less than 45 years.

Unity among the all faculty members and stuff.

Weaknesses: Limited space

Limited research facilities.

Shortage of manpower (faculty and staff).

Distance from city (Kolkata)

Opportunities: Location of university near forest.

Challenges: Students from low income family.

Situated in an under developed tribal people dominated area.

52. Future plans of the department.

- To develop separate laboratories in each theme area.
- Introduction of new course on Ethnobotanical, rural and tribal development.
- To develop a centre for germplasm conservation of plants of southern West Bengal.
- Introduction of P. G. Diploma course in Forestry.

Department of Chemistry and Chemical Technology

1. Name of the Department:
Chemistry and Chemical Technology
2. Year of establishment:
1989
3. Is the Department part of a School/Faculty of the university?:
Science Faculty of the university
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):
M.Sc, Ph.D
5. Interdisciplinary programmes and departments involved:
<p>Ph.D research works carried out by our students under the faculty members are mostly interdisciplinary in nature. Interdisciplinary research programs presently undergoing in the department are nanoscience, renewable materials, drug development, material science, theoretical chemistry etc.</p> <p>(i) Nano science: Department has collaboration with the department of Botany, Microbiology, Physiology and Physics.</p> <p>(ii) Renewable materials: Department has collaboration with the department of Physiology.</p> <p>(iii) Drug development: Department has collaboration with the department of Physiology and Microbiology</p> <p>(iv) Material Science: Department has collaboration with the department of Physics.</p> <p>(v) Theoretical Chemistry: Department has collaboration with the department of Physics.</p>
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
Nil
7. Details of programmes discontinued, if any, with reasons:
Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester
9. Participation of the department in the courses offered by other departments
<p>PhD Programmes:</p> <p>Our faculty members take classes of Ph. D course work organized by the University where students from other science departments are also enrolled their names.</p>

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	2
Associate Professors	2	1	1
Asst. Professors	5	4	4
Others (Asst. Professors, Contractual)	Nil	Nil	Nil

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D/M.Phil. students guided for the last 4 years
Prof. S.S.Islam	Ph.D	Professor	Organic Chemistry	32	26
Prof. B.G.Bag	Ph.D	Professor	Organic Chemistry	13	9
Dr. A. Mishra	Ph.D	Reader, Head	Physical Chemistry	8	11
Dr. S. Dalai	Ph.D	Assist Prof.	Inorganic Chemistry	12	5
Dr. S.Roy	Ph.D	Assist Prof.	Physical Chemistry	8	3
Dr. S.C.Manna	Ph.D	Assist Prof.	Inorganic Chemistry	6	1
Dr. M. Hossain	Ph.D	Assist Prof.	Inorganic Chemistry	1.5	0

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Sl No.	Name of the faculty	Designation
1.	Prof. Santanu Bhattacharyya	IISc Bangalore
2.	Prof. Sanjib Ghosh	Presidency University, Kolkata
3.	Prof. Partha sarathi Mukherjee	IISc Bangalore
4.	Dr. Manas Santra	Cancer research Institute, Pune
5.	Prof. Arabinda Chowdhury	IICT, Hyderabad
6.	C.V.Yelamggad	CSMCRI, Bangalore

13. Percentage of classes taken by temporary faculty – programme wise information

PG	25%
Ph D (Course Work)	10%

14. Programme-wise Student Teacher Ratio:

PG	15:1
Ph D (Course Work)	5:1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

	sanctioned	filled	actual
academic support staff (technical)	02	01	
administrative staff	01	01	

16. Research thrust areas as recognized by major funding agencies

The Thrust Area(s) of research of the department:

- (i) Isolation, purification and characterization of Immunomodulatory and antitumor drugs from edible mushrooms. (CSIR)
- (ii) Synthesis, Characterization and theoretical studies on renewable organic nano-particles and inorganic nano-materials. (iii) Organoboron in organized molecular systems **(DRDO, CSIR)**
- (iv) Synthesis, Characterization and Photophysical study on functionalized inorganic and organic nano/micro materials. (CSIR)
- (v) Theoretical study on ground and excited proton transfer on biologically interesting molecules. Computational studies on local and global reactivity parameters of some biologically interesting molecules. (CSIR)
- (vi) Synthesis, characterization and molecular properties of mono-, bi- and poly-nuclear metal complexes. (DST, CSIR)
- (vii) Structure-property co-relation of coordination compounds. (DST)
- (viii) Synthesis and characterization of functional Metal Organic Frameworks (MOFs). (DST, CSIR)
- (ix) Interaction of bioactive alkaloids with nucleic acids and serum proteins. (UGC)

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Name of PI	Title of the Project	Duration of the project	Funding agency	Amount of grant received (Rs. in lakhs)
Prof. Syed Sirazul Islam	Open source Drug Discovery	2011-	CSIR	18
Prof. Braga Gopal Bag	An Investigation on the Detection of Electron Deficient Aromatic Compounds: Design, Synthesis and Study	2008-2010	DRDO	5.686
	Visual Detection of Electron Deficient Aromatic Compounds	2011-2013	DRDO	16.636
	Study of the Self-assembly of Renewable Nano-sized Triterpenoids	2013-2016	CSIR	22
Dr. Ajay Kumar Misra	Fabrication of a fluorimeter coupled with a phase sensitive detection system to study magnetic field effect on exciplex luminescence.	2006-2009	DST	8.22
	Synthesis of Noble metal nanoparticles having higher aspect ratio through seed mediated growth processes and their functionalization with organic fluorophore.	2011-2014	CSIR	7.50
Dr. Sudipta Dalai	Design, synthesis and characterization of coordination polymers with flexible /rigid N- and /or O- donor ligands and their application as luminescent materials	2012-2015	CSIR	12
	Linker based luminescent MOFs (metal organic frameworks) of zinc(II) and	2011-2013	UGC	1.1
	cadmium(II): Syntheses, structure			

	and luminescence study			
	Engineering of transition metal – organic coordination polymers using azide and dicarboxylate bridging ligands, towards application in molecular magnetism: An experiment - theory correlation	2007-2010	DST	17
Dr. Sumita Roy	Organoboron in organized molecular systems: synthesis and self –organization studies of selected pyridinyl-boronic acid surfactants and their salts in water	2009-2012	DST	18.81
Dr. Subal Chandra Manna	Fluorescent and magnetic inorganic-organic hybrid compounds: synthesis, structure, property and non-covalent interactions in the crystal structure	2013-2016	CSIR	7.17
	Synthesis, characterization and study of the magnetic, photoluminescence, electrochemical properties of polynuclear (homo / hetero-metallic) complexes	2012-2015	DST	26.3
Dr. M. Hossain	Interaction of single strand and double strand RNA with phenothiazinium dyes: A comparative spectroscopic and thermodynamic study.	2013-2014	UGC	6

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration b) International collaboration

a) National collaboration:

- National research collaborations of Professor Syed Sirajul Islam:

Research Project Submitted to DBT on “Network programme on Prospecting on Fungi for Industrial important products” in August, 2013, entitled:

- “Structural and immune modulatory functional characterization of glucans from various fungi from West Bengal region.” (Rs. 1,38,08,000/- only) in collaboration with Department of Biotechnology, IIT, KGP.
- "Evaluation of Bioactive Polysaccharides for studying antitumor and immuno-modulatory activity from wild edible Mushrooms found in Odisha." (Rs. 1,26,00,000/- only) in collaboration with Regional Plant Resource Centre (RPRC), Forest & Environment Department, Govt. of Odisha, Nayapalli, Bhubaneswar-751015, Odisha.

b) International collaboration -

- International research collaborations of Professor Braja Gopal Bag:

- Professor Richard G. Weiss, Gerogetown University, USA,
- Professor Guenter von Kiedrowski, Ruhr University Bochum, Germany,

iii) Professor Michel Laguerre, IECB, Bordeaux, France

19. Departmental projects funded by DST FIST;UGC/SAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

Funding agency	Programme	Duration of Project	Amount of grant received (lakhs Rs.)
DST	DST-FIST	2004-2009	60
UGC	UGC-SAP	2008-2011	64
DST	DST-FIST	2012-2017	240
UGC	UGC-DSR	2012-2017	20

20. Research facility / centre with

<input type="checkbox"/> State recognition	UV-Vis, FTIR, Polarimeter, pH-meter.
<input type="checkbox"/> National recognition	GC-MS, DSC-TGDTA, Computer lab, Quantum mechanical software: Gaussian-03, Gaussview-4
<input type="checkbox"/> International recognition	NMR, SEM

21. Special research laboratories sponsored by / created by industry or corporate bodies

Nil

22. Publications:

Annexe-1

List of Publications in last five (5) years

Name	Publications				
	2009	2010	2011	2012	2013
Prof. S.S.Islam	10	06	09	14	20
Prof. B.G.Bag	02	00	01	05	12
Dr. A. Mishra	05	04	07	05	05
Dr. S. Dalai	01	06	06	06	05
Dr. S.Roy	00	00	00	01	02
Dr. S.C.Manna	01	00	00	01	05
Dr. M. Hossain	03	04	03	08	07

- Number of papers published in peer reviewed

journals (national / international)	= 164
• Monographs	=
• Chapters in Books	= 01
• Edited Books	=
• Books with ISBN with details of publishers	=
• Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	= 164
• Citation Index – range / average	=
• SNIP	=
• SJR	=
• Impact Factor – range /	= 6.1 to 0.4
• Average	= 2.0
• H-index	= Prof. S. S. Islam: 17 Prof. S. Dalai: 14 Dr. M.Hossain: 10

23. [Details of patents and income generated-](#)
Nil

24. [Areas of consultancy and income generated –](#)
Nil

25. [Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:](#)

- Visit by Professor Braja Gopal Bag to laboratories of (i) Professor Guenter von Kiedrowski, Ruhr University Bochum, Germany, (ii) Professor Michel Laguerre, University of Bordeaux, IECB, France.

26. [Faculty serving in](#)

<i>Name of Faculty</i>	<i>Journal</i>	<i>Position</i>
Professor Braja Gopal Bag	International Journal of Research in Chemistry and Environment	Editorial Board Member
Professor Braja Gopal Bag	Internatinal Journal of Applied Chemistry	Editorial Board Member
Professor Braja Gopal Bag	World Journal of Organic Chemistry	Editorial Board Member
Professor Syed Sirajul Islam	Bioactive Carbohydrates and Dietary Fibers (Elsevier)	Editorial Board Member
Dr. Sudipta Dalai	Indian Journal of Material Science (Hindwai)	Editorial Board Member

27. [Faculty recharging strategies \(UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs\).](#)

<i>Name of the faculty</i>	<i>Course attended</i>	<i>Duration</i>
Dr. Sumita Roy	Refresher course organized by the dept of Chemistry, Jadavpur	2 nd Jan-28 th Jan 2014

	University, Kolkata	
Dr. Subal Manna	Refresher course organized by the dept of Chemistry, Jadavpur University, Kolkata	2 nd Jan-28 th Jan 2014

Participation in national/International conferences by Professor Syed Sirajul Islam		
Topic	Symposium/Place	Type of Conference /presentation /Year
1. Mushroom Polysaccharides - New Drug in Cancer Therapy	Department of Botany, Vidyasagar University	National 9 th March, 2011
2. Isolation, purification and characterization of carbohydrate polymers (mushroom polysaccharides): Future drug for Immunomodulation and cancer therapy	Department of Chemistry, Garhbeta College, West Bengal, India.	National 17 th Nov, 2011
3. Mushroom Polysaccharides: Future Drug for Immunomodulation and Cancer Therapy	XXVI Carbohydrate Conference held in IICB, Kolkata	International 23-26 Nov, 2011
4. Mushroom polysaccharides: Structural Characterization and search for new drugs	Department of Chemistry, Panskura Banamali College, West Bengal, India.	National 17 Jan, 2012
5. Mushroom polysaccharides: Structural Characterization and search for new drugs for immunomodulation and cancer therapy	Department of Chemistry, Hijli College, West Bengal, India	National 3 rd Feb, 2012
6. Synthesis of nanocatalyst using glucan from edible mushroom and gum polysaccharide	Department of Chemistry, Contai P. K. College, West Bengal, India.	National 23 rd March, 2013
7. New drug from Mushroom Polysaccharides	Department of Chemistry, Haldia Govt. College, West Bengal, India.	National May, 2011
8. Mushroom polysaccharides: Structural Characterization and search for new drugs for immunomodulation and cancer therapy	Department of Chemistry, Egra College, West Bengal, India	National 14 th March, 2012

Participation in national/International conferences by Professor Braja Gopal Bag		
Topic	Symposium/Place	Type of Conference /presentation /Year
9. Nano Architectures by Spontaneous Self-Assembly of Renewable Nano-Sized Triterpenoids	Polymer for Advanced Technologies, Berlin, Germany	International September, 2013
10. Nano Architectures from Renewable Nano-Sized Triterpenoids	ICAPM-2013, Kochi, Kerala	International Oct., 2013
11. Nano Architectures by Spontaneous Self-assembly of Renewable Nano-Sized Triterpenoids	Ruhr University, Bochum, Germany	Invited Lecture, Sept. 2013
12. <i>Spontaneous Self-assembly of Renewable Nano-sized Triterpenoids: Formation of Fibers, Spheres and Vesicles</i>	ISCBC-2013, Udaipur	International, March, 2013
13. Natural Triterpenoids as Renewable Nanos: Spontaneous Self-Assembly yielding Spheres, Vesicles and Helical Fibers	FCS-2013, Vidyasagar University	National, March, 2013
14. Natural Triterpenoids as Renewable Nanos:	PACCON 2013, Chon Buri,	International

Spontaneous Self-Assembly affording Spheres, Vesicles and Helical Fibers	Thailand	January, 2013
15. Natural Triterpenoids as Renewable Nanos: Formation of Helical Nano-Fibers, Nano-Vesicles, Nano-Spheres and Dynamic Soft-Materials	POC-2012, Qatar	International January, 2012
16. Renewable Nanos as Carriers for Anticancer Drug	ICFBR-2012, Vidyasagar University	International, Feb. 2012
17. Plant Resources as Renewable Gold Mines for a Sustainable Future	DST-Inspire lecture, RNLK College	National Dec., 2012
18. Natural Triterpenoids as Renewable Nanos	IUPAC-CHEMRAWN XIX, Kuala Lumpur, Malaysia	International, Sept., 2011
19. Triterpenoids as Renewable Nanos: Current Status and Future Prospects	Indo-US bilateral workshop, Trivandrum	International Jan., 2011
20. Triterpenoids as Renewable Nanos: Current Status and Future Prospects	Haldia Govt College, Haldia	National March, 2011
21. A Green and Renewable Approach towards Supramolecular Polymer	Garhbeta College, Garhbeta	National Nov., 2011
22. Natural Triterpenoids as Renewable Nanos: Current Status and Future Prospects	AvH Kolleg on Earth Resources for Future Sustenance, Salem	International Sept, 2011
23. <i>Visual Detection of Aromatic Explosives</i>	NCSTM-10, CFES, New Delhi	Oct. 27 – 28, 2010
24. <i>Natural Triterpenoids as Renewable Nano-sized Building Blocks: Current Status and Future Prospects</i>	IECB, France	July, 2010
25. <i>Natural Triterpenoids as Renewable Nano-sized Building Blocks: Current Status and Future Prospects</i>	ISBOMC-10, Ruhr University Bochum, Germany	July, 2010
26. <i>Natural Triterpenoids and Renewable Nanos</i>	6 th Singapore International Chemical Conference SICC-6, Singapore	Dec 14 – 18, 2009

Participation in national/International conferences by Dr. Ajay Kumar Misra		
Topic	Symposium/Place	Type of Conference /presentation /Year
1 . Synthesis of functionalized metal nanoparticles and their use as ultra sensor for heavy metal ions.	International Conference on Frontiers in Biological Research (ICFBR)-2012) Vidyasagar University.	International 26-27 th Feb 2012 at
2. Use of functionalized metal nanoparticles as sensor for the detection of heavy metal ions in water.	Dimond Jubilee symposium on recent trends in chemistry (DJSRTC-2011): IIT, Kharagpur	International October 21-23 2011
3. Synthesis of anisotropic metal nanoparticles and their photo-physical properties.	Chemical Research Society of India (Kolkata Chapter) sponsored symposium, Viswa-Bharati University, Santiniketan.	National 26 th August 2011
4. Green synthesis of metal nanoparticles.	One day seminar on Chemistry Educators meet 2011, on the Occasion of	National 24 th Sept. 2011

	International Year of Chemistry (Organized by Association of Chemistry Teachers (Eastern Zone) & Science Centre, Midnapore College.	
5. Green synthesis of metal nanoparticles.	National Seminar on Green Chemistry: Solution to Environmental Crisis. Dept. of Chemistry; Berhampur University, Odisha	National Oct. 13-14, 2012.

28. Student projects :

<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
In-house project: 100%; Inter-departmental project: Nil
<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
Nil

29. Awards / recognitions received at the national and international level by

--

☐ Faculty

- Prof. Braja Gopal Bag has been offered Alexandervon Humboldt travel grant 2013 for lecture presentation in PAT 2013 held at Berlin, Germany.
- Prof. Braja Gopal Bag has been offered Alexandervon Humboldt travel grant 2010 for lecture presentation in ISBOMC 2010 held at Bochum, Germany."
- Dr. M. Hossain received IUPAB (International Union for Pure and applied Biophysics) young scientist travel award in the 17th international biophysics congress (17th IBC) Oct.30-Nov.3 , 2011 in Beijing, China.
- Dr. M. Hossain received Prof. G.N. Ramachandran Young Scientist Travel award By Indian Biophysical Society (2011).

☐ Doctoral / post doctoral fellows

- Ms. Rakhi Majumder has been awarded International Travel Fellowship for presentation of a poster in IUPAC conference POC 2012 held at Qatar

☐ Students

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

Name of Symposium	Convener	National/International
Frontier in Chemical Science 2013	Dr. Ajay Kr. Misra	National
Frontier in Chemical Science 2012	Professor Braja Gopal Bag	International
Frontier in Chemical Science 2011	Professor Braja Gopal Bag	National
Frontier in Chemical Science 2010	Professor Braja Gopal Bag	National
Frontiers in Chemical Sciences 2009	Professor Braja Gopal Bag	National

31. Code of ethics for research followed by the departments:

Research projects before submitting to the funding agencies are placed before the Ethics committee of University for approval.

32. Student profile programme-wise:

Name of the Program (refer to question no. 4)	Year	Applications received	Selected		Pass percentage	
			Male	Female	Male	Female
M.Sc, Ph.D	2009		M.Sc:81 Ph.D:05	M.Sc:09 Ph.D:00	100%	100%
	2010		M.Sc:73 Ph.D:08	M.Sc: 17 Ph.D:01	100%	100%
	2011		M.Sc:56 Ph.D:06	M.Sc:39 Ph.D:03	100%	100%
	2012		M.Sc:58 Ph.D:19	M.Sc:45 Ph.D:03	100%	100%
	2013		M.Sc:80 Ph.D:09	M.Sc:26 Ph.D:04	100%	100%

33. Diversity of students:

Name of the Program (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Sc	2009: 95%	2009: 4%	2009: 1%	2009: 0%
	2010: 95%	2010: 4%	2010: 1%	2010: 0%

	2011: 95%	2011: 5%	2011: 0%	2011: 0%
	2012: 90%	2012: 8%	2012: 2%	2012: 0%
	2013: 96%	2013: 4%	2013: 0%	2013: 0%
Ph.D	2009: 90%	2009: 0%	2009: 10%	2009: 0%
	2010: 95%	2010: 0%	2010: 5%	2010: 0%
	2011: 92%	2011: 0%	2011: 8%	2011: 0%
	2012: 98%	2012: 0%	2012: 2%	2012: 0%
	2013: 85%	2013: 0%	2013: 15%	2013: 0%

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

- Year wise list of Students qualifies in NET exam :

<i>YEAR</i>	<i>NET-QUALIFIED</i>
2010	30
2011	20
2012	12
2013	11

35. Student progression :

<i>Student progression</i>	<i>Percentage against enrolled</i>
UG to PG	20%
PG to M.Phil.	N/A
PG to Ph.D.	10%
Ph.D. to Post-Doctoral	5%
Employed <ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	
Entrepreneurs	

36. Diversity of staff

<i>Percentage of faculty who are graduates</i>	
of the same university	43%

from other universities within the State	57%
from universities from other States	0%
from universities outside the country	0%

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

Nil

38. Present details of departmental infrastructural facilities with regard to

k) Library	Dept. has one library funded by DST FIST. Library contains mostly ref. book covering different specialized area of chemistry. One of our faculty member Dr. Sumita Roy act as librarian. Book are issued and collected once in a week (Thursday) to the faculty members.
l) Internet facilities for staff and students	Seventeen computer of the dept. have internet facilities which are being used by the staff and students.
m) Total number of class	4
n) Class rooms with ICT facility	1
o) Students' laboratories	3
p) Research laboratories	7

39. List of doctoral, post-doctoral students and Research Associates

of doctoral, post-doctoral students and Research Associates: 71

a) From the host institution/university :

➤ Doctoral students:

Ph. D awarded:

1. Tanmoy kr. Ghorai, 2. Dilip Kr. Bera, 3. Kaushik Ghosh, 4. Gopal Ch. Maity, 5. Subhas Ranjan Pramanick, 6. Umasankar Senapati, 7. Sk. Samad Hossain, 8. Debsankar Das, 9. Uttam Das, 10. Soumitra Mondal, 11. Priyanka Sarkar, 12. Proгна Pratik Das, 13. Sadhan Kr. Roy, 14. Dinesha Bhuia, 15. Krishnendu Chandra, 16. Saisab Kr. Dinda, 17. Subhas Mondal, 18. Arnab kanti Ojha, 19. Santanu Pyne, 20. Ramsankar Sarkar, 21. Partha Pratim De, 22. Harekrishna Bar, 23. Isita Kar (Mondal), 24. Biswajit De, 25. Sankar Prasad De, 26. Pradip Patra, 27. Sankar Chandra Bhuia.

Registered for Ph.D:

1. Gobinda Prasad Sahoo, 2. Dipak kr. Bhui, 3. Sankarlal Ash, 4. Hasibul Beg, 5. Prativa Majumder, 6. Sadhan Samanta, 7. Debashis Das, 8. Madhusudan Bera, 9. Durga Sankar Chowdhury, 10. Abhinandan Rana, 11. Swapan Kr. Jana, 12. Debduti De, 13. Aparna Roy, 14. Monali Maiti, 15. Soumen Mistri, 16. Rakhi Majumdar, 17. Shibsankar Dash, 18. Kaushik Paul, 19. Subhajit Das, 20.

Saikat Maity, 21. Praloy Kumar Maiti, 22. Ipsita Kumar Sen, 24. Bibhas Kumar Panda, 25. Kaushik Maity, 26. Sanjoy Kr. Bhuia, 27. Chanchal Kr. Nandan, 28. Sunil kr. Bhanja, 29. Kankan Kumar Maity, 30. Sukhesh Patra, 31. Prasenjit Maity, 32. Surajit Samanta, 33. Asish Kr. Nandi, 34. Manabendra Pattanayak.

➤ Post-doctoral students/Research associates: 01

1. Sayanti Datta

b) From other institutions/universities :

➤ Doctoral students:

Ph. D awarded:

1. Manoj kr. Gupta, 2. Prabhat Kr. Roy, 3. A. Prabhakar, 4. P. Radhika, 5. M. Sujankumar, 6. Joydeep Dutta, 7. Rabin Kr. Mondal, 8. B. Srinivas, 9. Subhasish Niyogi.

➤ Post-doctoral students/Research associates: Nil

<p>40. Number of post graduate students getting financial assistance from the university: 50 (Full and Half free-studentship)</p>
--

<p>41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology</p>
--

<p>We recently revised the syllabus of our PG course. We stressed the following points while framing the syllabus.</p>
--

- | |
|--|
| <p>(i) UGC guide lines related to PG syllabus of Chemistry were followed.</p> <p>(ii) We consulted the syllabus of other University of our state and also outside of our state while framing the syllabus of our department.</p> <p>(iii) Some frontier areas of chemistry were included in the syllabus.</p> <p>(iv) We consulted UGC-CSIR NET syllabus and most of the portion had been included in the revised version of the syllabus.</p> |
|--|

<p>42. Does the department obtain feedback from</p>

<p>A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?</p>
--

<p>Yes, Internal Assessment (IA) exam are being taken by the faculty members at the end of each course unit. Evaluated answer scripts are shown to the student. While showing the answer scripts, faculty members talk to each student to discuss their lacunas in understanding the subject matter and also discuss any specific questions arises among the students related to the subject.</p>

B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Feedback form for the evaluation of teachers by students cover points like curriculum and teaching learning evaluation. After receiving the evaluation report from students, faculty members try to rectify the possible lacunas in their respective teaching learning method.

C. alumni and employers on the programmes offered and how does the department utilize the feedback?

Feedback is taken from alumni during re-union and conferences.

43. List the distinguished alumni of the department (maximum 10) :

- i) Sumita Roy, VU
- ii) Subal Manna, VU
- iii) Sudipta Dalai, VU
- iv) Santanu Dhara, IIT KGP
- v) Manas Santra, Cencer Research Centre Pune.
- vi) Ranjan Jana, IICB
- vii) Sibaprasad Mitra, NEHU
- viii) Bidhan Bag, BVU
- ix) Chandan Mondal, JU
- x) Sagar Pal, ISM Dhanbad

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

<i>Speaker</i>	<i>Title of lectures</i>	<i>Date</i>
Prof. Animesh Pramanick, Dept. of Chemistry, University of Calcutta	Nanomaterials through Self- Assembly of Peptides	June 22, 2011
Professor B. Sreedhar IICT, Hyderabad	Surface Characterization- Nanomaterials for Catalysis	October 15, 2009
Professor Sk Asraf Ali King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia	Nitrone Cycloaddition and Diallyl Ammonium Polymerization: An Overview	September 13, 2010
Dr. Ranjan Jana, USA	Symbiotic collaboration Between Chemistry and Chemical Technology	December 3, 2009

Professor Sulabha Kulkarni Pro Vice Chancellor ; Banasthali University; Rajasthan.	Small is Beautiful: Basics of Nanoscience and Nanotechnology	January 25, 2011
Dr. Subhrangsu Sekhar Mandal Assistant Professor Department of Chemistry and Biochemistry The University of Texas at Arlington Arlington, TX-76019, USA	Mixed Lineage Leukemias in Steroid Signalling, Disease and Metallo-salen Mediated Drug Discovery	May 27, 2010
Prof. Sanjib Ghosh, Dept. of Chemistry, Presidency University, Kolkata.	Spectroscopy of molecular triplet state:	May 25, 2012
Dr. MANAS KUMAR SANTRA; Scientist 'D'; National Centre for Cell Science; NCCS Complex, Pune University Campus, Ganeshkhind, PUNE- 411 007, INDIA	A journey from chemistry to cancer biology: FBXO31 functions as a novel checkpoint protein in genotoxic stress induced genome instability	Dec. 17, 2012
Dr. Buddhadeb Chattopadhyay; Department of Chemistry; Michigan State University; East Lansing, Michigan, USA	Transition Metal-Catalyzed C-H Activation Reactions and Transannulation of 1,2,3- Triazoles	Feb.1, 2013
	Frontiers in Chemical Sciences 2013. (Two days National Symposium) Convener: Dr. Ajay Kumar Misra	March 25-26, 2013
	Frontiers in Chemical Sciences 2012. (Two days National Symposium) Convener: Prof. Braga Gopa Bag	March 2012
	Frontiers in Chemical Sciences 2011. (Two days National Symposium) Convener: Prof. Braga Gopa Bag	March 2011
	Frontiers in Chemical Sciences 2010. (Two days National Symposium) Convener: Prof. Braga Gopa Bag	March 2010
	Frontiers in Chemical Sciences 2009. (Two days National Symposium)	March 2009

	Convener: Prof. Braga Gopa Bag	
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45. List the teaching methods adopted by the faculty for different programmes:

(i) LCD projector and internet facilities are being used by the faculty members to make the teaching more interesting to students, (ii) Tutorial classes, (iii) Field works for exploring plants and natural resources surrounding us as renewable.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

At the end of each course unit, 1A exams are taken by the faculty members. Evaluated 1A exam answer scripts are shown to the student. Answers are discussed before the student. Students are also allowed to interact with the faculty members to clarify the understanding of the subject beyond the class hours.

47. Highlight the participation of students and faculty in extension activities.

Students (extension activity)

- (i) Participation of students in different state and national level cultural meets.
- (ii) Active participation of students in the symposium organized by the dept.

Faculty (extension)

- (i) Faculty members used to teach M.Sc in chemistry through distance mode.
- (ii) Faculty members used to give invited talk in different seminar/symposium in national or international science forum.

48. Give details of “beyond syllabus scholarly activities” of the department:

(i) Special lectures relating to the frontier areas of Chemistry are organized by the department on regular interval, where faculties/scientists from different University and research labs are invited for giving lectures.

(iii) Both our faculty members and students participate in the Industrial visit organized by the department in each year. Faculty members and students interact with industry personals engaged in chemical plants and it gives them exposure that, how the basic knowledge of chemistry are used in chemical industry.

(iv) Departmental students participate in different community service organized by the NSS cell of Vidyasagar University.

(v) Wall magazine is published by the department in each year where mainly students write articles, poem etc and it reflects creative thinking of our students.

(vi) Students organize cultural programme like fresher’s welcome, teachers day, farewell ceremony and they actively participate on those programme.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department had been accredited previously by NAAC as part of accreditation of the university in 2008.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Faculty members are actively engaged in research and development activities in the frontiers field of chemical sciences e.g. Nano chemistry, Renewable novel materials, Drug development, Green synthesis, Theoretical chemistry. On an average forty research articles are published by our faculty members in each year in different internationally reputed high impact factor journals.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

- (vi) Quality research by the faculty members. Researches papers are being published in different internationally reputed journals with high impact factor.
- (vii) Success of the students in the national level exam. More than 50% students of each academic session used to qualify in the UGC-CSIR conducted NET exam.
- (viii) Overall Success of the students at the PG exam is praise worthy. All the students obtained 1st class in their M.Sc final exam.
- (ix) Dept. has been recognized by DST through FIST level-1 program and sanctioned Rs. 2.40 cr for procuring NMR spectrophotometer, Scanning electron microscope (SEM) and computer lab.
- (x) Dept. has been recognized by UGC through UGC-SAP, DRS program and sanctioned Rs.60 L for GC-MS and DSC-TGDTA.

Weaknesses:

- (vi) Inadequate number of faculty for a traditionally heterogeneous subject like chemistry.
- (vii) Inadequate number of technical and group-D staff.
- (viii) General Lab spaces are not adequate enough to accommodate the students.
- (ix) There is no departmental seminar room.
- (x) There is no audio visual Teaching learning facility for Organic, Inorganic and Physical Special Classes.

Opportunities:

Challenges:

52. Future plans of the department.

- (i) To develop a field of research activity blends with Basic and applied; where all the faculty

members will contribute.

(ii) To develop the infrastructure for research i.e more lab space, sophisticated instrument facilities in the department.

(iii) Modernization of infrastructures of general laboratories.

(iv) To develop required infrastructure for departmental seminar room.

(v) To develop required infrastructure for 400MHz NMR and SEM instruments funded by DST through FIST level-1 program.

(vi) To develop required infrastructure for computer lab funded by DST through FIST level-1 program.

(vii) To develop required infrastructures for PG project labs.

(viii) To develop required infrastructures for audio visual Teaching learning facility for Organic, Inorganic and Physical special Classes.

Annexure -1

• Professor Syed Sirajul Islam

Publication -2013

1. Structural characterization of a biologically active glucan isolated from a hybrid mushroom strain *pflv* of *Pleurotus florida* and *Lentinula edodes*, Praloy K. Maji, Ipsita K. Sen, Sanjana P. Devi, Tapas K. Maiti, Samir R. Sikdar, **Syed S. Islam***, doi.org/10.1016/j.bcdf.2013.09.002 **Bioactive Carbohydrates and Dietary Fibre**, 2013.
2. Antioxidant and immunostimulant β -glucan from edible mushroom *Russula albonigra* (Krombh.) Fr., Ashis K. Nandi, Surajit Samanta, Saikat Maity, Ipsita K. Sen, Somanjana Khatua, K. Sanjana P. Devi, Krishnendu Acharya, Tapas K. Maiti, **Syed S. Islam***, **Carbohydrate Polymers**, 2014, 99, 774–782
3. Structural characterization of an immunoenhancing glucan isolated from a mushroom *Macrolepiota dolichaula*, Surajit Samanta, Ashis K. Nandi, Ipsita K. Sen, Praloy K. Maji, K. Sanjana P. Devi, Tapas K. Maiti, Syed S. Islam*, **International Journal of Biological Macromolecules**, 2013, 61, 89–96. **(Impact factor: 2.453)**.
4. Structural elucidation and immunological activity of a glucan from the fruiting body of *Ramaria botrytis* K. Ex. S. F. Gray, Sunil K. Bhanja, Dilip Rout, Pradip Patra, Chanchal K. Nandan, Birendra Behera, Tapas K. Maiti, and **Syed S. Islam***, **Carbohydrate Research**, 2013, 10.1016/j.carres.2013.023. **(Impact factor: 2.332)**.
5. Characterization and lectin microarray of an immunomodulatory heteroglucan from *Pleurotus ostreatus* mycelia, K. Sanjana P. Devi, Bibhas Roy, Pradip Patra, Banalata Sahoo, **Syed S. Islam**, Tapas K. Maiti, **Carbohydrate Polymers**, 2013, 94, 857-865. **(Impact factor: 3.628)**.
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7. Structural characterization of an immunoenhancing heteroglycan of a hybrid mushroom (*pfls1h*) of *Pleurotus florida* and *Lentinus squarrosulus* (Mont.) Singer, Ipsita K. Sen, Praloy K. Maji, Birendra Behera, Pijush Mallick, Tapas K. Maiti, Samir R. Sikdar, **Syed S. Islam***, **Carbohydrate Research**, 2013, 371, 45-51. **(Impact factor: 2.332)**.
8. Structural study of an immunoenhancing polysaccharide isolated from an edible hybrid mushroom of *Pleurotus florida* and *Lentinula edodes*, Saikat Maity, Eshita Kar Mandal, Kousik Maity, Sanjoy K. Bhunia, Birendra Behera, Tapas K. Maiti, Pijush Mallick, Samir R. Sikdar, **Syed S. Islam***, **Bioactive Carbohydrates and Dietary Fibre**, 2013: 10.1016/j.bcdf.2013.01.003 (Recently launched journal, 2013).
9. A β -glucan from the alkaline extract of a somatic hybrid (*PfloVv5FB*) of *Pleurotus florida* and *Volvariella volvacea*: structural characterization and study of immunoactivation, Kankan K. Maity, Sukesh Patra, Biswajit Dey, Sanjoy K. Bhunia, Soumitra Mandal, Birendra Bahera, Tapas K. Maiti, Samir R. Sikdar, and **Syed S. Islam***, **Carbohydrate Research**, 2013, 370, 13-18. **(Impact factor: 2.332)**.
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13. An immunostimulating water insoluble β -glucan of an edible hybrid mushroom: Isolation and characterization, Kousik Maity, Surajit Samanta, Sunil K. Bhanja, Saikat Maity, Ipsita K. Sen, Swatilekha Maiti b, Birendra Behera, Tapas K. Maiti, Samir R. Sikdar, **Syed S. Islam**, *Fitoterapia*, **2013**, 84, 15-21. **(Impact factor: 1.848)**.
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 16. Salt-independent thermophilic α -amylase from *Bacillus megaterium* VUMB109: An efficacy testing for preparation of maltooligosaccharides, Malabendu Jana, Chiranjit Maity, Saptadip Samanta, Bikas Ranjan Pati, **Syed Sirajul Islam**, Pradeep K. Das Mohapatra, Keshab Chandra Mondal*, *Industrial Crops and Products*, **2013**, 41, 386– 391. **(Impact factor: 2.469)**.
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- Publication -2012
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 22. Glucan from hot aqueous extract of an ectomycorrhizal edible mushroom, *Russula albonigra* (Krombh.) Fr.: structural characterization and study of immunoenhancing properties, Ashis K. Nandi, Ipsita K. Sen, Surajit Samanta, Kousik Maity, K. Sanjana P. Devi, Shreemoyee Mukherjee, Tapas K. Maiti, Krishnendu Acharya, and **Syed S. Islam***, *Carbohydrate Research*, **2012**, 363, 43-50. **(Impact factor: 2.332)**.
 23. Structural Studies of an Antioxidant, Immunoenhancing Polysaccharide Isolated from the Kernel of *Trapa bispinosa* Fruit, Ramsankar Sarkar, Chanchal K. Nandan, Ipsita K. Sen, Sanjoy K. Bhunia, Birendra Behera, Tapas K. Maiti, **Syed S. Islam***, *Journal of Carbohydrate Chemistry*, **2012**, 31, 686–701. **(Impact factor: 0.631)**.
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27. Structural characterization and study of immunoenhancing properties of a glucan isolated from a hybrid mushroom of *Pleurotus florida* and *Lentinula edodes*, Praloy K. Maji, Ipsita K. Sen, Birendra Behera, Tapas K. Maiti, Pijush Mallick, Samir R. Sikdar, **Syed S. Islam*, Carbohydrate Research, 2012, 358, 110–115. (Impact factor: 2.332).**
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32. Glucans from alkaline extract of a hybrid mushroom (backcross mating) between (PfloVv12 and *Volvariella volvacea*): structural characterization and study of immunoenhancing and antioxidant properties, Ramsankar Sarkar, Chanchal K. Nandan, Sanjoy K. Bhunia, Swatilekha Maiti, Tapas K. Maiti, Samir R. Sikdar, **Syed S Islam*, Carbohydrate Research, 2012, 347, 107-113. (Impact factor: 2.332).**
33. Chemical analysis of an immunostimulating (1→4)-, (1→6)-branched glucan from an edible mushroom, *Calocybe indica*, Eshita Kar Mandal, Kousik Maity, Saikat Maity, Sanjoy K. Gantait, Birendra Behera, Tapas K. Maiti, Samir R. Sikdar, Syed S. Islam, **Carbohydrate Research, 2012, 347, 172-177. (Impact factor: 2.332).**
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Publication -2011
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37. Structural characterization of an immunoenhancing cytotoxic heteroglycan isolated from an edible mushroom *Calocybe indica* var. APK2, Eshita Kar Mandal, Kousik Maity, Saikat Maity, Sanjoy K Gantait, Swatilekha Maiti, Tapas K Maiti, Samir R Sikdar, **Syed S Islam*, Carbohydrate Research, 2011, 346, 2237-2243. (Impact factor: 2.332).**
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39. Chemical analysis and study of immunoenhancing and antioxidant property of a glucan isolated from an alkaline extract of a somatic hybrid mushroom of *Pleurotus florida* and *Calocybe indica* variety APK2, Kousik Maity, Eshita Kar Mandal, Saikat Maity, Sanjoy K Gantait, Debsankar

Das, Swatilekha Maiti, Tapas K Maiti, Samir R Sikdar, **Syed S. Islam**,* *International Journal of Biological Macromolecules*, 2011, 49, 555-560. (Impact factor: 2.453).

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Publication -2010

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Publication -2009

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➤ **Highlights in Nature India 2012-2013**

- In 2013, the research work published in *Carbohydrate Research* entitled “Structural elucidation and immunological activity of a glucan from the fruiting body of *Ramaria botrytis* K. Ex. S. F. Gray.” doi: 10.1038/nindia.2013.65 was highlighted in ‘**Nature India**’.
- In 2012, the research work published in *Carbohydrate Polymers* entitled “Structure elucidation of an immunoenhancing pectic polysaccharide isolated from aqueous extract of pods of green bean (*Phaseolus vulgaris* L.)” doi:10.1038/nindia.2012.0 was highlighted in ‘**Nature India**’.
- In 2012, another work published in *Carbohydrate Research* entitled “Isolation and characterization of the immunostimulating β -glucans of an edible mushroom *Termitomyces robustus* var.” doi:10.1038/nindia.2012.76 was highlighted in ‘**Nature India**’.

- **Prof. Braja Gopal Bag**

- B.G. Bag, R. Majumdar, S.K. Dinda, P.P. Dey, G.C. Maity, A.V. Mallia, R.G. Weiss, Self-assembly of ketals of arjunolic acid into vesicles and fibers yielding gel-like dispersions, *Langmuir*, 29, 1766 (2013). Impact factor 4.2
- B.G. Bag, R. Majumdar, S.S. Dash, K. Paul, *Nano-Architectures by Spontaneous Self-Assembly of Renewable Nano-Sized Triterpenoids*, Polym. Adv. Tech. 24, PAT 2013 special issue (2013). Impact factor 1.6
- R. Majumdar, B.G. Bag, S. Rana, *Azadirachta indica* (Neem) bark Extract Mediated Rapid Synthesis of Gold Nanoparticles and Study of its Catalytic Activity, *Int. J. Res. Chem. Env.* 3, 144-152 (2013). Impact factor 0.42
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• **Dr. S. Dalai**

2009

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D.S. Chowdhuri, A. Rana, M. Bera, E. Zangrando and S. Dalai
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S. Dalai
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M. Bera, A. Rana, D.S. Chowdhuri, D. Hazari, S.K. Jana, H. Puschmann, S. Dalai
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M. Bera, A. Rana, D.S. Chowdhuri, D. Hazari, S.K. Jana, H. Puschmann, S. Dalai
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A. Rana, M. Bera, D. S. Chowdhuri, D. Hazari, S.K. Jana, E. Zangrando, S. Dalai
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A. Rana, S.K. Jana, S Datta, R.J. Butcher, E. Zangrando, S. Dalai
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22. Two new coordination polymers of manganese(II) with O/O- and N/O-donor ligands: Synthesis, structure, luminescence study and thermal behavior
M. Bera, S. K. Jana, A. Rana, D.S. Chowdhuri, D. Hazari, C.-M. Liu, E. Zangrando, S. Dalai
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DOI: 10.1007/s10904-013-9840-y
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A. Rana, S.K. Jana, M. Bera, D. Hazari, D.S. Chowdhuri, E. Zangrando, S. Dalai
J Solid State Chemistry, 2013, 197, 46-52

- **Dr. Sumita Roy**

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- 2. *Journal of Materials Chemistry B*, 2013, 1 (41) 5588-5601.
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- **Dr. Subal Chandra Manna**

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Polyhedron, 2009, 28, 3065-3077
2. A rare supramolecular assembly involving ion pairs of coordination complexes with a host–guest relationship: synthesis, crystal structure, photoluminescence and thermal study
CrystEngComm, 2012, 14, 7415-7422.
3. Tetracarboxylato-bridged copper(II) complexes with ancillary N-chelating ligands: Syntheses, crystal structures and effect of aromatic compounds on the fluorescence property
Polyhedron, 2013, 49, 252–258.
4. Fluorescent bis-chelated-1,10-phenanthroline-azido-copper(II) complex for selective sensing of aniline
Polyhedron, 2013, 50, 333–338.
5. A 3D coordination polymer of Sm(III) using inorganic sulphate and organic succinate building blocks :*Acta Chimica Slovenica*, 2013, 60, 5–9.
6. Cu(II) complexes of pyridine-2,6-dicarboxylate and N-donor neutral ligands: Synthesis, crystal structure, thermal behavior, DFT calculation and effect of aromatic compounds on their fluorescence
Inorg. Chim. Acta, 2013, 405, 331–338.

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- **Dr. Maidul Hossain**

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- Characterization of DNA Binding Property of the HIV-1 Host Factor and Tumor Suppressor Protein Integrase Interactor 1 (INI1/hSNF5); *PLoS ONE*.(2013) 8(7), e66581
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- Binding of plant alkaloids berberine and palmatine to serum albumins: A thermodynamic investigation. *Mol. Biol. Rep.* (2013) 40, 553-566.
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- Intercalation and induction of strand breaks by adriamycin and daunomycin: A study with human genomic DNA; *DNA Cell Biol.*(2012) 31,377–386.
- Effect of the 13 position substitution of the anticancer alkaloid berberine on its DNA binding: spectroscopic and calorimetric approach; *J. Phys. Chem. B* (2012)116, 2314-2324.
- Study on the thermodynamics of the binding of iminium and alkanolamine forms of the anticancer agent sanguinarine to human serum albumin. *J. Chem. Thermodyn.* (2012) 47, 90–99
- Binding of the phenothiazinium dye methylene blue with single stranded polyriboadenylic acid. *Dyes Pigments* (2012) 92, 1376-1383.
- Calorimetric and thermal analysis studies on the binding of phenothiazinium dye thionine with DNA polynucleotides. *J. Chem. Thermodyn.*(2011) 43, 1036-1043.
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- **Sequence selective binding of phenazinium dyes, phenosafranin and safranin O to guanine-cytosine deoxyribopolynucleotides: Spectroscopic and thermodynamic studies. *J. Phys. Chem. B* (2010) 114, 15278-15287**

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- Thermodynamic profiles of the DNA binding of benzophenanthridines sanguinarine and ethidium: A comparative study with sequence specific polynucleotides J. Chem. Thermodyn. (2010) 42, 1273-1280.
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- DNA intercalation of methylene blue and quinacrine: New insights into base and sequence specificity from structural and thermodynamic studies with polynucleotides. Mol. Biosystems (2009) 5, 1311-1322
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- DNA binding of benzophenanthridine compounds sanguinarine versus ethidium: Comparative binding and thermodynamic profile of intercalation. J. Chem. Thermodyn.(2009) 41, 764-774.

Department of Computer Science

1. Name of the Department:			
Computer Science			
2. Year of establishment			
1998			
3. Is the Department part of a School/Faculty of the university?:			
Science Faculty			
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)			
<ul style="list-style-type: none"> M. Sc. Course in Computer Science Master of Computer Application (MCA) Ph. D. in Computer Science 			
5. Interdisciplinary programmes and departments involved			
NA			
6. Courses in collaboration with other universities, industries, foreign institutions, etc			
NA			
7. Details of programmes discontinued, if any, with reasons			
NA			
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:			
Semester in regular mode			
9. Participation of the department in the courses offered by other departments			
Mr. B. Jana: Chemistry, Botany			
Mr. P. Singh: MBA, Remote Sensing, Aquaculture Mgmt. & Technology			
Mr. S. Das: Remote Sensing			
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	Nil	Nil	Nil
Associate Professors	Nil	Nil	Nil
Assistant Professors	9	5	5

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Designation	Qualification	Specialization	No. of years of Experience	No. of Ph.D. / M.Phil guided
Mr. B. Jana	Assistant Professor	B.Tech, M.Tech	Image Processing, Visual Cryptography & Steganography	12 years	Nil
Mrs.S. Pramanik	Assistant Professor	M.Sc, M.Tech	Cryptography, DNA Computing	11 years	Nil
Mrs. P Guria	Assistant Professor	M.Sc	Soft Computing	04 years	Nil
Mr. P. Singh	Assistant Professor	MCA	Soft Computing, Web Scripting	03 years	Nil
Mr. S. Das	Assistant Professor	MCA	Networking,	03 years	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors
NA

13. Percentage of classes taken by temporary faculty – programme wise information

PG	20%
Ph D (Course Work)	100%

14. Programme-wise Student Teacher Ratio:

Sr.No.	Programme	Ratio (teacher: student)
1	M.Sc. course in Regular	1:15
2	MCA	1:30
3	Ph.D. Programme	No departmental faculty involved

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

academic support staff (technical)	03
administrative staff	03

16. Research thrust areas as recognized by major funding agencies

Nil

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Nil

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration b) International collaboration

Nil

19. Departmental projects funded by DST FIST; UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

Nil

20. Research facility / centre with

Nil

21. Special research laboratories sponsored by / created by industry or corporate bodies

Nil

22. Publications:

Annexe-1

List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international)

= 19

- Monographs =
- Chapters in Books =
- Edited Books =
- Books with ISBN with details of publishers =
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) =
- Citation Index – range / average =
- SNIP =
- SJR =
- Impact Factor – range / =
- Average =
- H-index =

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated –

Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

Nil

26. Faculty serving in

Nil

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Nil

28. Student projects :

☐ percentage of students who have done in-house projects including inter-departmental projects

10% in our University

☐ percentage of students doing projects in collaboration with other universities / industry / institute

90% from other Institutes

29. Awards / recognitions received at the national and international level by

Nil

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

Number Organized				
	National Organized	International Participated/ Attended	Source of funding Organized Participated/Atte nded	
Conferences				
Seminar	03	10	4	UGC unassigned grant
Workshop	02	4		UGC unassigned grant
Summer Institutes				
Refresher Courses	nil	2		

31. Code of ethics for research followed by the departments:

The Department follow the UGC Rule in principle and practice.

32. Student profile programme-wise:

Name of Programme	Application s received	Selected		Pass Percentage	
		Male	Female	Male	Female
M. Sc.	359	194	165	100%	100%
M. C.A	nil	421	96	100%	100%
Ph. D.	75	10	01		

33. Diversity of students:

Name of Programme	% of students from the same university	% of students from the other university within state	% of students from the university outside the state	% of students from the university from other countries
M. Sc.	70	30	00	00
M. C.A.	10	90	00	00
Ph. D.	70	30	00	00

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

Civil & Defence	NET	SET	GATE	Other
10	05	00	10	100

35. Student progression :

Student Progression	Percentage against enrolled
UG to PG	60%
PG to M.Phil	NA
PG. to Ph.D.	10 %
Ph.D. to Post - Doctoral	Nil
Employed Campus selection Other than campus	NA
Entrepreneurs	NA

36. Diversity of staff

Percentage of faculty who are graduates	
Of the same university	50 %
From other university within the state	25 %
From university from other state	12.5 %
From university outside the country	0%

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period
Nil

38. Present details of departmental infrastructural facilities with regard to

a	Library	1
b	Internet facilities for staff and students	200
c	Total number of Class rooms	6
d	Class rooms with ICT facility	4
e	Students' laboratories	4
f	Research laboratories	1

39. List of doctoral, post-doctoral students and Research Associates

a	From the host institution / university	16 (working)
b	From the other institution / university	NIL

40. Number of post graduate students getting financial assistance from the university:
05 (Half Free Ship) Every Year

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology

Generally, we do take feedback from Alumni group members for the programmes related to the welfare of the students for ex: campusing, new technology skill orientation programme. There

are also some computer science experts, to whom we consult regarding the academic growth and implementation of programme. BOS members help regarding the syllabus and content implementation of the programme.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
In the DC meeting, we take the points and discuss the matter regarding improving the teaching learning ability
B. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Teachers individually see their feedback and takes necessary steps for improvement.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
This is of great important to us. We every year organize Alumni meet and take note of their point and discuss in DC meeting, and then forwards to the Authority for further implementation process.

43. List the distinguished alumni of the department (maximum 10) :

1. Mr. Nilay Mustafi, IBM
2. Mr. Susanta Dutta, Project Lead, IBM
3. Mr. Niladari Sekhar Roy, Software Engineer II, Ixia
4. Mr. Sutirtha Gayen, Sr. System Engineer, IBM
5. Mr. Soumik Biswas, Wipro Infotech
6. Mr. Partha Acharya, Principal Engineer, Logitech
7. Mr. Sandip Sil, CTS
8. Mr. Sourav Pal, TCS
9. Mr. Narayan Pandey, Solution Integrator, Ericsson
10. Mr. Tanmoy Mandal, Module Lead, Mindteck

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts
The enrichment of students in knowledge is performed in every year through seminar, conference, workshop and especially some different invited lectures inviting different resource persons from IIT Kharagpur, NIT Durgapur, University of Calcutta, Jadavpur University, and University of Burdwan.
Course : MCA (Under UGC Merged Scheme)
Special Interactive Lecture
<ol style="list-style-type: none"> 1. Resource Person : Mr. Bodhisatya Bhattacharjee Institutional Affiliation: Naresh Kumar Co. & Pvt. Ltd. Brief CV : Manager, SAP Professional Date of Lectures: 19.02.2012, 03.03.2012 Topic of Lecture: SAP (System Analysis and Program Development) 2. Resource Person : Dr. Sanjay Kumar Saha Institutional Affiliation: Jadavpur University

Brief CV : Sanjoy Kumar Saha has received his Be and ME degree in 1990 and 1992 respectively from Electronics and Tele-Communication Department of Jadavpur University. He completed his Phd in 2006 from Bengal Engineering and Science University, Shibpur, Howrah. In his teaching career of around fifteen years, he has worked as faculty member in CST dept. of BESU and currently working as Associate Professor in CSE dept. of Jadavpur University. He has published around forty paper in various international and journals of Springer, Elsevier, World Scientific and IEEE Transaction. His research interest includes image, video and audio processing and retrieval.

Date of Lectures: 16.03.2012

Topic of Lecture: Image Processing

3. Resource Person : Prof. Swapan Bhattacharyya

Institutional Affiliation: Jadavpur University

Brief CV : Head, Dept. Of Computer Sc. & Engineering, Former Director,
NIT, Durgapur

Date of Lectures: 17.03.2012

Topic of Lecture: Cloud Computing

4. Resource Person : Prof. Sankar Kumar Pal

Institutional Affiliation: ISI, Kolkata

Brief CV : Distinguished Scientist, Former Director ISI, Kolkata

Date of Lectures: 16.03.2012

Topic of Lecture: Hybrid System (Image Fuzzy)

5. Resource Person : Prof. C.A. Murthy

Institutional Affiliation: ISI, Kolkata

Brief CV : Professor, Machine Intelligence Unit, Indian Statistical Institute

Date of Lectures: 16.03.2012

Topic of Lecture: Data Mining

6. Resource Person : Dr. Asoke Kumar Bhunia

Institutional Affiliation: Burdawan University

Brief CV : M.Sc.,Ph.D. Areas of Research Interest: Genetic Algorithms and
Applications, Interval Analysis and Applications in Operations Research
Inventory Control

Date of Lectures: 17.03.2012

Topic of Lecture: Hybrid Computing

Visiting Professor / Associate Professor

1. Resource Person : Prof. Jyotsna Kumar Mondal

Institutional Affiliation: University of Kalyani

Brief CV : Professor of Computer Science & Engineering & Dean,
Faculty of Engineering, Technology & Management

Date of Lectures: 01.03.2012 to 04.03.2012, 31.03.2012

Topic of Lecture: Advanced Networking

2. Resource Person : Debasish Ghosh

Institutional Affiliation: GNIT, Sodepur, Kolkata
 Brief CV : 20 years of experience in India & abroad in several areas like Product Development, Project Management, Software Architect, System Analysis, Design, Development of system & application software.
 3 years of working experience in US and Europe.
 Date of Lectures: 21.02.2012, 27.02.2012, 13.03.2012, 20.03.2012, 27.03.2012
 Topic of Lecture: Advance Algorithm

3. Resource Person : Prof. Debasis Giri
 Institutional Affiliation: HIT, Haldia
 Brief CV :
 Date of Lectures: 13.02.2012, 14.02.2012, 03.03.2012, 04.03.2012, 26.03.2012
 Topic of Lecture: Algorithm & Cryptography

Course : M. Sc in Computer Science (Under UGC Merged Scheme)

Special Interactive Lecture

1. Resource Person : Mr. Bodhisatya Bhattacharjee
 Institutional Affiliation: Naresh Kumar Co. & Pvt. Ltd.
 Brief CV : Manager, SAP Professional
 Date of Lectures: 18.03.2012, 31.03.2012
 Topic of Lecture: SAP (System Analysis and Program Development)
2. Resource Person : Shuvransu Banerjee
 Institutional Affiliation: USHACOMM Pvt. Ltd.
 Brief CV : Manager (Product Development Group) USHACOMM INDIA PVT. LTD.
 Date of Lectures: 19.02.2012
 Topic of Lecture: Software Cycle & Software Company Process

Visiting Professor / Associate Professor

1. Resource Person : Prof. T. K Pal
 Institutional Affiliation: Vidyasagar University
 Brief CV : Retd. Professor of Dept. Of Applied Mathematics with Oceanology & Computer Programming
 Date of Lectures: 09.02.2012, 14.02.2012, 23.02.2012, 24.02.2012, 29.02.2012
 Topic of Lecture: Fuzzy set Theory
2. Resource Person : Prof. Debasis Giri
 Institutional Affiliation: HIT, Haldia
 Brief CV :
 Date of Lectures: 18.02.2012, 19.02.2012, 25.02.2012, 27.03.2012
 Topic of Lecture: Algorithm & Cryptography
3. Resource Person : Prof. Arup Bhaumik
 Institutional Affiliation: GNIT, Sodepur, Kolkata
 Brief CV : Principal, GNIT

Date of Lectures: 27.02.2012, 29.03.2012, 30.03.2012
 Topic of Lecture: Database Management system

45. List the teaching methods adopted by the faculty for different programmes:

- v) Display through overhead projectors
 - vi) Teaching with the help of LCD projectors
 - vii) Computer aided instruction.
- Practical knowledge through hardware laboratory

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- i. Internal Assessment (IA) exams are taken by the faculty members. Evaluated IA exam answer scripts are shown to the student. Answers are discussed before the student. Students are also allowed to interact with the faculty members to clarify the understanding of the subject beyond the class hours.
- ii. All most all students are engaged in different jobs. A good number of students have been employed in computer software industries in both INDIA and ABROAD. Some are engaged in doing research in INDIA and Foreign Institutes and Universities. A large number of students have been employed in different IT companies, H.S. Schools and Secondary Schools. Some students have been placed in different responsible administrative jobs. There is a new formal placement cell in the department which looks after the campus selection of the students. Feed back is taken from the alumni regarding the teaching –learning process and discussed in the Departmental committee.

47. Highlight the participation of students and faculty in extension activities.

- (i) NSS Activities, (ii) Educational Tour, (iii) Fresher's Welcome (ULLAS), (iv) Teachers' day celebration, (v) Quiz Contest and Picnic, (vi) Alumni (PHIREPAWA) , (vii) Farewell (SAYONARA)

48. Give details of "beyond syllabus scholarly activities" of the department:

- (i) NSS Activities, (ii) Fresher's Welcome, (iii) Extempore Talk(iv) Teachers' day celebration, (v) Quiz Contest and Picnic

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department had been accredited previously by NAAC as part of accreditation of the university in 2008.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

- i) All faculties are involved in different research programme.
- ii) Programme organized by all faculties sponsored by IOTA to teach computer skill to the Primary and High School teachers.
- iii) Special discussion session held with students.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

<p>Strength: Mixed group of faculties mentoring students both on career, academic and personal issues Three Software Lab and one Hardware Lab with good infrastructure Internet facility to all students Approximately 80% students get jobs before final year examination Curricular and Co-curricular Programmes of the department (Campussing, Freshers, Reunion)</p>
<p>Weaknesses: Few Publications Very few faculties Very few on campus placement Lack of Infrastructure Lack of journal Subscription</p>
<p>Opportunities: Scope to do lots of work in the department Learning new technology skills Academic Autonomy - As the faculty now design their own syllabi and assessments Collaboration with institutes and industries that have a similar interest Interdisciplinary work</p>
<p>Challenges: Doing good research work Providing 100% placements to the students Aware of current technologies and imparting the same to the students Bringing sponsored Projects in the department Open B.Tech & M.tech</p>

52. Future plans of the department.

<ul style="list-style-type: none"> i) To establish a separate well equipped research lab. ii) To get additional sanction for strengthening the department library. iii) To offer M. Tech. in Computer Science. iv) To increase the numbers of special papers. v) To organize short term course / winter school / summer school etc. vi) To increase the number of faculty members vii) To establish a soft computing laboratory.
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Annexure - I

List of Publications by Mr. Biswapati Jana

Summary:

The papers presented within this timespan generally from the fields of Image Processing, Cyptography & Steganography (cheating Prevention), wireless sensor networks.

Paper Published:

Total: 18

International: 8

National : 10

List of Paper Publication:

International Journal:

1. Biswapati Jana, Soamdeep Singha and Sharmistha Jana “**KEY DISTRIBUTION IN WIRELESS SENSOR NETWORKS USING QUANTUM CRYPTOGRAPHY**” International Journal of Mobile & Adhoc Network, Volume-3 Issue- 4, November 2013.
2. Biswapati Jana, Debasis Giri, Shyamal Kumar Mondal, and Pabitra Pal “**IMAGE STEGANOGRAPHY BASED ON CELLULAR AUTOMATA**” International Journal of Pure and Applied Mathematics, Volume 83, No. 5, 701-715, 2013. h-Index-1
3. Biswapati Jana, Pabitra Pal and Jaydeb Bhaumik “**NEW IMAGE NOISE REDUCTION SCHEMES BASED ON CELLULAR AUTOMATA**” International Journal of Soft Computing and Engineering, Volume-2, Issue-2, May 2012. h-Index-1

International Conferences/Seminar:

1. Biswapati Jana, Sharmistha Jana, Shyamal Kumar Mondal and Debasis Giri “**CHEATING PREVENTION IN VISUAL CRYPTOGRAPHIC SCHEMES USING MESSAGE EMBEDDING: A HARDWARE BASED PRACTICAL APPROACH**”, International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT-2014), technically sponsored by IEEE Delhi Section & IEEE-CIS(Delhi Section), which is scheduled to be held, at Krishna Institute of Engineering & Technology, Ghaziabad, India, February 07-08, 2014.
2. Biswapati Jana, Partha Chowdhuri, Madhumita Mallick and Shyamal Kumar Mondal “**CHEATING PREVENTION IN VISUAL CRYPTOGRAPHIC USING STEGANOGRAPHIC SYSTEM**”, International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT-2014), technically sponsored by IEEE Delhi Section & IEEE-CIS(Delhi Section), which is scheduled to be held, at Krishna Institute of Engineering & Technology, Ghaziabad, India, February 07-08, 2014
3. Tanima Dutta, Debi Prosad Dogra and Biswapati Jana “**OBJECT EXTRACTION USING NOVEL REGION MERGING AND MULTIDIMENSIONAL FEATURES**” The 4th Pacific-Rim Symposium on Image and Video Technology (PSIVT 2010) held at Nanyang Executive Center (NEC), Nanyang Technological University (NTU), Singapore, November 14 – 17, 2010.

4. Debasis Giri, Prithayan Barua, P. D. Srivastava and Biswapati Jana “**A CRYPTOSYSTEM FOR ENCRYPTION AND DECRYPTION OF LONG CONFIDENTIAL MESSAGES**” The International Conference on Information Security and Assurance [ISA-2010] held at Sheraton Grande Ocean Resort, Miyazaki, Japan , June 23 - 25, 2010, h-Index-1
5. Biswapati Jana, Jaya Sil and Arup kumar Bhaumik, “**RECOGNITION OF PARTIALLY OCCLUDED, EXPRESSION VARIANT FACES USING ELASTIC BUNCH GRAPH MATCHING**” 1st IEEE-International Conference on Signal and Image Processing (IEEE-ICSIP-06), Organized by B V Bhoomaraddi College of Engineering and Technology, Hubli, Karnataka, India in association with IEEE Bangalore section, December 7 – 9 2006.

National Conferences/Seminar:

1. Biswapati Jana, Soamdeep Singha and Sharmistha Jana “**QUANTUM CRYPTOGRAPHY IN WIRELESS SENSOR NETWORKS**” Two days Zonal Seminar on ICT in Present Wireless Revolution: Challenges and Issues”(ICTWR-2013), Organized by The IETE, Kolkata Centre, Saltlake, on 30th -31st , August, 2013. ISBN No. 978-93-5126-699-0 Pages 10-18.
2. Biswapati Jana, Debasis Giri, Shyamal Kumar Mondal and Pabitra Pal “ **PARITY BASED IMAGE STEGANOGRAPHY USING CELLULAR AUTOMATA**” UGC Sponsored National Seminar on Emerging Trends in Mathematics Organised by Vidyasagar University In collaboration with Calcutta Mathematical society, Midnapore-721102, West Bengal, December 19-20, 2012.
3. Biswapati Jana, Debasis Giri, Shyamal Kumar Mondal and Pabitra Pal “ **IMAGE STEGANOGRAPHY BASED ON CELLULAR AUTOMATA**” National Conference on Recent Trends in Mathematical Sciences and Their Applications(NCRTMSA-2012) Organised by Faculty of Engineering & Technology, Mody Institute of Technology & Science, Lakshmangarh-332311, Sikar, Rajasthan, November 5-6, 2012.
4. Biswapati Jana, Samir Maity and Arindam Roy “**AUTOMATIC PITMAN SHORTHAND SCRIPT RECOGNITION USING FUZZY RULE BASED TECHNIQUE**” National Seminar On Recent Trends in Advanced Computing Organized by the Department of Computer Science Vidyasagar University, 16th – 17th March 2012.
5. Biswapati Jana and Pabitra Pal “**CELLULAR AUTOMATA FOR IMAGE NOISE REDUCTION USING NEIGHBOR PIXEL**” National Conference on Advanced Communication Systems and Design Techniques (NCACD) Organized By Department of Electronics and Communication Engineering HALDIA INSTITUTE OF TECHNOLOGY, Haldia, Purba Medinipur, West Bengal PIN: 721657, India , November 5-6, 2011.
6. Biswapati Jana, Sanasam Ranbir Singh, Bidyut Kr. Patra and Debasis Giri “**TEXT CLASSIFIERS AND PERFORMANCE ISSUES**” National Seminar on Data Mining & Decision Support Organized by Computer Centre, Vidyasagar University, March 4-5, 2010.
7. Biswapati Jana and Arup Kumar Bhaumik “**EXPRESSION AND POSE VARIANT FACE IMAGE IDENTIFICATION UNDER DIFFERENT ILLUMINATION CONDITION USING EBGM**” Two days National Conference on “Ubiquitous Computing 2009”, Organized by R&D Cell of GURU NANAK INSTITUTE OF

TECHNOLOGY(GNIT), 157/F, NILGUNJ ROAD PANIHATI, SODEPUR, KOLKATA-700114, September 22-23, 2009.

8. Biswapati Jana and Bidyut Kr. Patra “**AN EXTENSION OF NAVE BAYES CLASSIFIER USING FREQUENT CLOSED ITEMSETS**” Two days National Conference on “Ubiquitous Computing 2009”, Organized by R&D Cell of GURU NANAK INSTITUTE OF TECHNOLOGY(GNIT), 157/F, NILGUNJ ROAD PANIHATI, SODEPUR, KOLKATA-700114, September 22-23, 2009.
9. Biswapati Jana, Ujjal Marjit and Bidyut Kumar Patra, “**A SCHEME TO IMPROVE THE SECURITY USING DIFFIE-HELLMANN,S KEY DISTRIBUTION SCHEME COUPLING WITH RSA ALGORITHM**” National Conference on Broad Band Integrated Digital Systems And Networks -2005, NIEC, Shatri Park, New Delhi-110053, March, 18-19, 2005.
10. Biswapati Jana, Jaya Sil and Arup Bhaumik, “**A HYBRID SYSTEM FOR MOOD RECOGNITION OF FACE IMAGES USING DS THEORY AND FUZZY LOGIC**”- Proceedings of the Workshop on Multimedia System & Communication, ISM, Dhanbad, December 20-24, 2004.

Workshop/Seminar/ Conference Attended:

International:

1. International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT-2014), technically sponsored by IEEE Delhi Section & IEEE-CIS(Delhi Section), which is scheduled to be held, at Krishna Institute of Engineering & Technology, Ghaziabad, India, February 07-08, 2014. **Participated and Presented Technical Paper.**
2. International Conference on Mathematics and Computing(ICMC – 2013), Organized by Haldia Institute of Technology ICARE Complex, HIT Campus, Hatiberia, Haldia Purba Medinipur, West Bengal – 721657, India, December 26-29, 2013, **Attended as a Participant**
3. The International Conference on Information Security and Assurance [ISA-2010] held at Sheraton Grande Ocean Resort, Miyazaki, Japan , June 23 - 25, 2010. **Participated and Presented Technical Paper.**
4. 1st IEEE-International Conference on Signal and Image Processing (IEEE-ICSIP-06), 7 – 9 December 2006, Organized by B V Bhoomaraddi College of Engineering and Technology, Hubli, Karnataka, India in association with IEEE Bangalore section. **Participated and Presented Technical Paper**
5. International Workshop on Distributed Computing, December 2001, Organized by The Department of Computer Science & Engineering , Calcutta University. **Attended as a Participant.**

National:

1. UGC Sponsored National Seminar on Emerging Trends in Mathematics Organised by Vidyasagar University In collaboration with Calcutta Mathematical Society, Midnapore-721102, West Bengal, December 19-20, 2012, **Participated and Presented Technical Paper.**
2. National Conference on Recent Trends in Mathematical Sciences and Their Applications(NCRTMSA-2012) Organised by Faculty of Engineering &

Technology, Mody Institute of Technology & Science, Lakshmangarh-332311, Sikar, Rajasthan, November 5-6, 2012, **Participated and Presented Technical Paper**

3. National Conference on Advanced Communication Systems and Design Techniques (NCACD) Organized by the Department of Electronics and Communication Engineering HALDIA INSTITUTE OF TECHNOLOGY, Haldia, Purba Medinipur, West Bengal PIN: 721657, India, November 5-6, 2011. **Attended as a participant.**
4. National Seminar on Data Mining & Decision Support Organized by Computer Centre, Vidyasagar University, March 4-5, 2010. **Attended as a Participant and Organizing Committee Member.**

5. National Conference on "Ubiquitous Computing 2009" Organized by R&D Cell of GURU NANAK INSTITUTE OF TECHNOLOGY (GNIT), 157/F, NILGUNJ ROAD PANIHATI, SODEPUR, KOLKATA-700114 dated September 22-23, 2009. **Participated and Presented Technical Paper.**
6. Workshop on "Researching Distance and Online Learning" October 03-05, 2007 Organized by IGNOU Regional Centre, Bhubaneswar & STRIDE, IGNOU, New Delhi. At IGNOU Regional Centre, Bhubaneswar. Attended as a Participant.

State level/Others:

1. Two days Zonal Seminar on "ICT in Present Wireless Revolution: Challenges and Issues", Organized by The IETE, Kolkata Centre, Saltlake, 30-31, August, 2013. **Participated and Presented Technical Paper.**
2. Three days State Level Work Shop on "C Language and its Applications", Organized by the Department of Mathematics, Kharagpur College, Inda, Kharagpur, Paschim Medinipur, West Bengal, India. 27-29, March, 2012. **Attended as a Resource Person.**
3. Two-Day NACC Sponsored National Seminar On ROLE OF IQAC ON QUALITY ENHANCEMENT & QUALITY SUSTENANCE IN HIGHER EDUCATION, Organized by Midnapore College, March 7th & 8th, 2009. **Attended as a Participant**
4. State Level Seminar on "Call Admission Control in Mobile Cellular Network", 15th January, 2009, Organized by Department of Computer Science, Vivekananda Mission Mahavidyalaya, Chaitanyapur, Purba Medinipur, Pin-721645 West Bengal. **Attended as Invited Speaker**
5. Eastern Regional Student's Convention, CSI-2002, Organized by Computer Society of India (CSI), Kolkata Chapter. **Attended as a judge of students paper contest.**

Course Attended:

- Participation in the **Refresher Course on Control Engineering and Information Technology in Mechatronics: Roles played and Future Potentials** organized by Academic Staff College, Jadavpur University from July 02 to 22, 2011.
- Participation in the **Refresher Course on ICT Application (MD)** organized by Academic Staff College, University of Burdwan from March 09 to 29, 2010.
- Participated in the **Orientation Program [OP-75]** organized by the Academic Staff College, University of Calcutta from August 18 to –Sept 9, 2008.

Workshop /Seminar/Conference Organized:

- UGC Sponsored National Seminar on Emerging Trends in Mathematics Organised by Vidyasagar University In collaboration with Calcutta Mathematical Society, Midnapore-721102, West Bengal, December 19-20, 2012, **Member of Organizing Committee.**

- National Seminar On Recent Trends in Advanced Computing Organized by Department of Computer Science, Vidyasagar University, 16th – 17th March 2012, **Organizing Secretary.**
- National Seminar On Next Generation Computing Organized by Department of Computer Science, Vidyasagar University, March 30-31st, 2010. **Joint secretary.**
- National Seminar on Data Mining & Decision Support Organized by Computer Centre, Vidyasagar University, March 4-5, 2010. **Member of Organizing Committee.**
- Workshop on .(DOT) Net Technology Organized by Department of Computer Science, Vidyasagar University, February 15-19, 2010, **Joint Secretary.**
- National Seminar on Image Classification & Pattern Recognition Organized by Department of Computer Science, Vidyasagar University, 26-27th March, 2009, **Organizing Secretary.**

List of Publications by MS. Sabari Pramanik

Summary:

The papers presented within this timespan generally from the fields of Image Processing, Cryptography & Steganography (cheating Prevention), wireless sensor networks.

Paper Published:

Total: 1

International: 1

National : 0

International Conference:

1. Sabari Pramanik “ DNA rypography”, International conference on Electrical and Computer Engineering (ICECE-2012), held at Dhaka, Bangladesh, dec-2013.

Department of Electronics

1. Name of the Department:
Electronics
2. Year of establishment:
In the year 2001 as a unit within the Department of Physics and as a Department in the year 2004
3. Is the Department part of a School/Faculty of the university? :
Under the faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):
PG & Ph.D
5. Interdisciplinary programmes and departments involved:
Nil
6. Courses in collaboration with other universities, industries, foreign institutions, etc:
Nil
7. Details of programmes discontinued, if any, with reasons:
NA
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester system
9. Participation of the department in the courses offered by other departments : Faculty members of the department are involved in PG teaching and examination in the departments Physics, Computer Science, MCA, Remote Sensing and GIS, and Geography.

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	Nil	Nil	Nil
Associate Professors	Nil	Nil	Nil
Asst. Professors	04	04	04
Others (Asst. Professors, Contractual)	02	02	02

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance					
Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr. S. C. Saha	M.Sc., Ph.D.	Assist. Prof.		9	03
Mr. S. Dutta	M.Sc., M.E.	Assist. Prof.		8	Nil

Ms. S. Bala	B.Tech., M.Tech	Assist. Prof.		1	Nil
Mr. R. P. Ghosh	M.Sc.	Assist. Prof.		1	Nil
Mr. A. K. Mallick	M.Sc.	Assist. Prof. (On Contract)		7	Nil
Ms. S. Pramanik	M.Sc.	Assist. Prof. (On Contract)		1	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Sl No.	Name of the faculty	Designation
1	Prof. D. Ray Chaudhuri, Calcutta University	Proffessor
2	Prof. S. Mukhopadhyay, Burdwan University	Proffessor

13. Percentage of classes taken by temporary faculty – programme wise information

PG	2008-10.42%,2009-20.43%,2010-37.50%,2011-45.83%,2012-45.83%,2013-20.83%
Ph D (Course Work)	2013-87.5%

14. Programme-wise Student Teacher Ratio:

PG	9:1
Ph D (Course Work)	3:5
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)	01	01	01
administrative staff	01	01	01

16. Research thrust areas as recognized by major funding agencies

Nil

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Status	Funding agency	Project title	Total grant received
National	Nil		

**18. Inter-institutional collaborative projects and associated grants received
a) National collaboration b) International collaboration**

a) National collaboration:
Nil
b) International collaboration :
Nil

19. Departmental projects funded by DST FIST;UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received
Nil

20. Research facility / centre with	
<input type="checkbox"/> state recognition	Nil
<input type="checkbox"/> national recognition	Nil
<input type="checkbox"/> international recognition	Nil

21. Special research laboratories sponsored by / created by industry or corporate bodies
Nil

22. Publications:

Annexe-1
List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international) = 12
- Monographs = Nil
- Chapters in Books = Nil
- Edited Books = Nil
- Books with ISBN with details of publishers = Nil
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) = Nil
- Citation Index – range / average =
- SNIP =
- SJR =
- Impact Factor – range / =
- Average =
- H-index =

23. Details of patents and income generated
Nil

24. Areas of consultancy and income generated –
Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Nil

26. Faculty serving in
a) National committees :
b) International committees :
c) Editorial Boards :
Dr. S. C. Saha, Secretary, Solar Energy Society of India (ER Chapter).

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Refresher Course/ Orientation Program:

Dr. S. C. Saha

i) Refresher course in the subject Physics at the Academic Staff College, University of Calcutta, Kolkata- 700 009, West Bengal, India, July 05-24, 2010.

ii) Three-day UGC-sponsored National Level Orientation Programme on “Perspective on Women Studies: Contemporary issues and Curriculum Development”, organized by Women’s Studies Centre, Vidyasagar University, Midnapore- 721 102, West Bengal, India, March 28-30, 2011.

iii) UGC-Sponsored Orientation Program at the Academic Staff College, University of Calcutta, Kolkata- 700 009, West Bengal, India, March 03-31, 2008.

Mr. S. Dutta

i) UGC sponsored orientation program from August 18 to September 13, 2008 at Academic Staff College, University of Calcutta, Kolkata- 700009, West Bengal.

ii) UGC sponsored refresher course in Information Communication Technology from 9th March to 29th March, 2010 from Academic Staff College, University of Burdwan.

Workshops:

Dr. S. C. Saha

i) National Workshop: “Solar Power Engineering”, organized by Jadavpur University, Kolkata- 700 032, West Bengal, India, May 02-05, 2012.

ii) National Workshop on “Quantum Perspective of Advanced Materials (QPAM-11)”, sponsored by Theoretical Physics Seminar Circuit of S. N. Bose National Centre for Basic Sciences, Kolkata and UGC, organized by the department of Physics and Technophysics, Vidyasagar University, Midnapore- 721 102, West Bengal, India, March 23-25, 2011.

iii) Two-day National Workshop on “Quality Assurance in Reaccredited Institution”, organized by Internal Quality Assurance Cell, Vidyasagar University.

Midnapore- 721 102, West Bengal, India, September 27-28, 2010.

iv) UGC sponsored National Workshop on “Electron Dynamics in Quantum Systems”, organized by the department of Physics and Technophysics, in collaboration with Theoretical Physics Seminar Circuit of S. N. Bose National Centre for Basic Sciences, Kolkata, at Science Centre, New Digha, 721 463, West Bengal, India, February 17-19, 2010.

v) Two-day International Workshop on “Photonics to Nanophotonics”, organized by IEEE Photonics Society formerly LEOS, IEEE Photonics Society, Calcutta Chapter, at the Institute of Radio Physics & Electronics, University of Calcutta, Kolkata- 700 009, West Bengal, India, June 12-13, 2009.

vi) Workshop on “Proposal for the Restructuring of U.G. Courses and Evaluation System Reforms”, organized by Vidyasagar University, in collaboration with V.U.T.A. Purba Medinipur & Paschim Medinipur District Committee, W.B.C.U.T.A, at DDE Hall, Vidyasagar University, Midnapore- 721 102, West Bengal, India, March 20, 2009.

vii) “7th All India Peoples’ Technology Congress”, organized by Forum of Scientists, Engineers & Technologists (FOSET), Science City Kolkata & Energy Education Park, Kolkata, Kolkata- 700 046, West Bengal, India, February 06-07, 2009.

viii) Two-day National Workshop on “Sharing of e-Resources, Digital Data and their Security-Technology Aspects”, organized by Vidyasagar University, in collaboration with INFLIBNET Centre, Ahmedabad, at Vidyasagar University Midnapore- 721 102, West Bengal, India, January 24-25, 2008.

Conference:

1. “18th International Photovoltaic Science and Engineering Conference & Exhibition”, organized by 18th International Photovoltaic Science and Engineering organization committee, co-organized by Indian Association for the Cultivation of Science and West Bengal Renewable Energy Development Agency, at Science City Convention Centre, Kolkata-700 046, West Bengal, India, January 19-23 2009.
2. National Conference on “Nanotechnology & Regulatory Issues”, organized by the University of Calcutta and The Energy and Resource Institute (TERI), at Salt Lake City, Kolkata- 700 098, January 09-10, 2009.

Mr. S. Dutta

- i) National workshop on Quantum Perspective of Advanced materials (QPAM-11) sponsored by theoretical Physics Seminar Circuit of S. N. Bose National Centre for Basic Sciences, Kolkata and UGC at Vidyasagar University, Midnapore.

- ii) Two-day National workshop on Quality Assurance in Reaccredited Institution from

27th September-28th September, 2010 organized by International Quality Assurance Cell at Vidyasagar University.

iii) National workshop on “Electron Dynamics in Quantum Systems” sponsored by Theoretical Physics Seminar Circuit of S. N. Bose National Centre for Basic Sciences Kolkata and UGC at Science Centre, Digha on February 17-19, 2010.

Ms. S. Pramanik

i) INDO-JAPAN international workshop on “*SPECIALTY OPTICAL FIBER, NANO-PHOTONICS AND DEVICES*”, organized by CSIR-Central Glass & Ceramic Research Institute, 196 Raja S. C. Mallick road, Kolkata-32 from 06/01/2012 to 07/01/2012.

ii) Two-day international workshop on “*PHOTONICS TO NANOPHOTONICS*”, organized by IEEE Photonics Society, Calcutta Chapter from 12/06/2009 to 13/06/2009.

Training Programs:

Mr. S. Dutta

i) 2-Weeks Course, titled, “Training Program on Agri-Electronics” conducted by Centre for Development of Advanced Computing (C-DAC), Kolkata under “Application of Electronics in Agriculture and Environment (eAgriEn)”, a National Program of DeitY, Govt. of India from 4th to 15th March, 2013 at C-DAC, Kolkata.

Short term course:

Dr. S. C. Saha

i) Short term course on “VLSI Signal Processing”, organized by Indian Institute of Technology, Kharagpur- 721 302, West Bengal, India December 19-23, 2010.

Ms. S. Pramanik

i) Short-term course on “Micro & Nano Fabrication-2013” conducted at Indian Institute of Technology Kanpur, Kanpur from 18/02/2013 to 22/02/2013.

ii) Course on “*WHAT IS LIGHT & FUNDAMENTALS OF QUANTUM MECHANICS*” delivered by Prof. Ajoy Kumar Ghatak, organized by SPIE Chapter, University of Calcutta, Kolkata from 29/12/2009 to 31/12/2009.

ii) QIP Short Term Course on “*FIBER OPTICS: TECHNOLOGY, COMPONENTS AND APPLICATIONS*”, IIT- Guwahati from 03/12/2007 to 07/12/2007.

28. Student projects :

☐ percentage of students who have done in-house projects including inter-departmental projects
25%
☐ percentage of students doing projects in collaboration with other universities / industry / institute
75 %

29. Awards / recognitions received at the national and international level by

- ☐ Faculty : **Nil**
- ☐ Doctoral / post doctoral fellows : **Nil**
- ☐ Students : **Nil**

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

Seminar: Electronics for the 21st Century, 2009, funded by UGC un-assignment grant.

31. Code of ethics for research followed by the departments:

Department follows the rule and regulations 2009 led by the UGC and the university code of conduct and ethics like thrust on original contribution, anti plagiarism etc.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected Male Female	Pass percentage Male Female
PG Course	2008-09	22 19	100 100
	2009-10	20 13	100 100
	2010-11	20 13	100 100
	2011-12	20 16	100 100
	2012-13	20 13	100 100
Ph.D. Course	2011-12	01	
	2012-13	02	

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries

2008-09	79.4	20.51	0	0
2009-10	78.78	21.21	0	0
2010-11	65.62	34.37	0	0
2011-12	75	25	0	0
2012-13	79.41	20.58	0	0
2013-14	79	21	0	0

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

NET: 04
SET: 01
INSPIRE Programme: 02

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	NA
PG to M. Phil.	NA
PG to Ph.D.	50
Ph.D. to Post-Doctoral	50
Employed	1.5
Campus selection	35
Other than campus recruitment	05
Entrepreneur	

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	33.33
from other universities within the State	66.67
from universities from other States	Nil
from universities outside the country	Nil

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

Nil

38. Present details of departmental infrastructural facilities with regard to

a. Library	Departmental Library (35 text books)
b. Internet facilities for staff and students	05 (Faculty) ,04 (Student), 01 (Office)
c. Total number of class	02
d. Class rooms with ICT facility	The department has an arrangement of Projection system for the classroom
e. Students' laboratories	07 (in 04 rooms)
f. Research laboratories	Nil

39. List of doctoral, post-doctoral students and Research Associates	
a. from the host institution/university:	03 (Doctoral) 1. Asima Bose 2. Tilak Narayan Ghosh 3. Amit Manna
b. from other institutions/universities	Nil

40. Number of post graduate students getting financial assistance from the university:
10 (Free Studentship)

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
The syllabus of the course is generally framed up considering the local needs and the departmental expertise by the departmental committee and then it is placed before the post graduate board of studies for necessary advice and suggestions and after getting approved it is send to the Faculty council before finalization.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
The departmental faculty members and experts of PG BOS and Ph. D. Committee continuously monitor for the necessary up-gradation.
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
The evaluation of teachers by the students has been initiated. The feedbacks are also taken from the students during teacher –student meeting , The teachers always considered inputs received from the students during teaching learning process.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
The departmental students organize in almost regular manner a re-union program to get feedback from the pass out students. The employer encourages and motivates for quality teaching and research works. The department also arrange interaction lecture of the established alumni among the present students during their visit to the department

43. List the distinguished alumni of the department (maximum 10) :
<ul style="list-style-type: none"> i) Mr. Aswini Kumar Mallick, Assistant Professor, Vidyasagar University ii) Ms. Sanchita Pramanik, Assistant Professor, Vidyasagar University iii) Mr. Ayan Kanti Pradhan, Assistant Professor, APC College, New Barrackpore iv) Mr. Madhusudan Maiti, Assistant Professor, Bengal Institute of Technology and Management, Bolpur, WB. v) Mr. Dibyendu Chowdhury, Assistant Professor, Haldia Institute of Technology, Haldia vi) Ms. Samayeeta Banerjee, Megatherm Electronics, Salt Lake, Sector V vii) Mr. Partha Pratim Samanta, NEC Technologies viii) Mr. Soumendra Singh, Bose Institute ix) Mr. Samrat Ghosh, Idea Mobile x) Mr. Souvik Chatterjee, kemppi India Pvt. Ltd.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

Special Lectures:

- i) “ISFETTOLOGY TO BIOFETTOLOGY: what happened in the past and what may happen in the next”- By Prof. Jiten Ch. Dutta, Tezpur University.
- ii) “Nanostructured silicon thin films for application in next generation solar cells”- By Prof. Swati Ray, Indian Association for the Cultivation of Science, Jadavpur, Kolkata.
- iii) “Embedded system for biomedical instrumentation”- By Prof. Swapna Banerjee, IIT, Kharagpur.
- iv) “Design challenges in low power VLSI circuits”- By Prof. Subir Sarkar, Jadavpur University.
- v) “Computer Networking”- By Prof. Joyotsna Kumar Mandal, Kalyani University.
- vi) “Digital Electronics” – By Prof. Diptiman Ray Chaudhuri, Calcutta University and Mr. Syamaprasad Bhaduri, Ex-GM (Electronics & Telecom.), Eastern Coalfields Ltd., Burdwan.
- vii) “Microwave devices and circuits”- By Ex-Prof. Santi Kumar Ray, Burdwan University.
- viii) “Optical communication and information processing”- By Prof. Somenath Sarkar, Calcutta University.

a.) Ph.D. Course Work:

- i) Prof. S. Mukhopadhyay, Burdwan University
- ii) Dr. S. Saha, Vidyasagar University
- iii) Prof. J. P. Banerjee, Calcutta University
- iv) Prof. B. Ghosh, Jadavpur University
- v) Prof. B. C. Sarkar, Burdwan University
- vi) Dr. A. Bhattacharya, IIT-KGP
- vii) Prof. S. K. Saha, IACS, Kolkata
- viii) Dr. S. C. Saha, Vidyasagar University

b.) Guest Faculty

- i) Prof. P. C. Jana, Vidyasagar University
- ii) Prof. R. R. Pal, Vidyasagar University
- iii) Prof. M. Pal, Vidyasagar University
- iv) Dr. N.K. Mandal, Vidyasagar University
- v) Dr. S. K. Mondal, Vidyasagar University
- vi) Dr. S. K. Roy, Vidyasagar University
- vii) Dr. G. Maity, CIT, Uluberia

- viii) Dr. R. P. Mishra, Ex-Prof., P K College, Cantai
- ix) Mr. B. Jana, Vidyasagar University
- x) Mr. A. Bhattacharya, Vidyasagar University
- xi) Mr. P. S. Das, Vidyasagar University
- xii) Dr. S. Gangopadhyay, CIT, Uluberia
- xiii) Dr. S. Saha, Vidyasagar University
- xiv) Dr. U. Nandi, Scottish Church College, Kolkata
- xv) Dr. D. Jana, Calcutta University.

Seminar: “Electronics for the 21st Century”, 2009

45. List the teaching methods adopted by the faculty for different programmes:

- * Interactive classroom lectures
- * Hands on practical
- * Class taken with ICT facility
- * Assignments
- * Internal examination and final semester examination
- * Students interaction
- * Students feedback

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Students are perusing research works in different reputed institutes in India and abroad.
- Students are getting chances for higher studies in M.Tech. course.
- Students are getting jobs in different academic institutions and multinational companies.
- Students are qualifying for the NET examination and also achieving different scholarships.

47. Highlight the participation of students and faculty in extension activities.

1. Special classes for backward students
2. Departmental seminars and cultural events
3. Participations of students and faculty members in sports, seminar, symposia and cultural events organized by the university
4. Examination duties of other Universities
5. Academic support to government organizations
6. Contribution in little / wall magazine etc.

48. Give details of “beyond syllabus scholarly activities” of the department:

- ★ Arrangement of special lectures
- ★ Organization of seminar and talks

- ★ Remedial coaching for the backward students
- ★ Tutorial classes for the NET/SET examinations
- ★ Preparatory classes for different competitive job related examinations
- ★ Delivering invited talk

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department had been accredited by NAAC as part of accreditation of the university in 2008

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

The faculty members are deeply involved in frontier research areas and publish the new knowledge in peer reviewed journals.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

- ☆ Strengths:
- i) Individual care to all students
 - ii) Regular class lecture
 - iii) Special classes for backward students
 - iv) Collaborative research work
 - v) Completion of syllabus in due time

- ☆ Weaknesses:
- i) Shortage of faculty
 - ii) No technical and clerical staff members
 - iii) Inadequate infrastructure and space
 - iv) Shortage of quality journals
 - v) High course fee.

- ☆ Opportunities:
- i) The scopes for the rural students to learn a modern subject

Electronics.

- ii) First generation learners are getting chances to pursue research

work in frontier area of Electronics.

- iii) Developing of manpower with technical and scientific

knowledge of Electronics.

- iv) Job perspective of the students is increased in

	<p>multinational companies.</p> <p>v) Opening up chances for the students doing research work in different reputed institutes in India and abroad.</p>
<p>☆ Challenges:</p>	<p>i) To build up the department as a leading learning centre for Electronics.</p> <p>ii) To enhance collaborative research activities with premier institutes.</p> <p>iii) To set up a university- industry partnership programme.</p> <p>iv) To start an integrated M.Sc. course in Electronics</p> <p>v) To open up an M.Tech. course in Electronics and Telecomm-unication Engineering.</p>

<p><u>52. Future plans of the department.</u></p>
<ul style="list-style-type: none"> ❖ To offer an M.Tech. course in Electronics and Telecommunication Engineering. ❖ To start an Integrated M.Sc. course in Electronics. ❖ M.Sc. in Electronics in Distance Mode.

Annexure I

List of Publications in national/International Journals

Dr. S. C. Saha:

1. “A simple method of prediction of fractional modal power guided inside the core, excitation efficiency of the mode by uniform light source and Petermann I and II spot sizes: All for first higher order mode in graded index fibers”- Ashima Bose, S. Gangopadhyay and S. C. Saha, Optik 122, 215 (2011).
2. “A simple technique for evaluation of transmission coefficient at the splice with angular offset and transverse offset for first higher mode propagation in graded index fibers”- Ashima Bose, S. Gangopadhyay and S. C. Saha, Optik 122, 1680 (2011).
3. “Laser diode to single mode circular core graded index fiber excitation via hemispherical microlens on the fiber tip: identification of suitable refractive index profile for maximum efficiency with consideration for allowable aperture”- Ashima Bose, S. Gangopadhyay and S. C. Saha, J. Opt. Commun. 33, 15 (2012).
4. “A simple but accurate technique of predicting radial variation of pump and signal intensities in erbium-doped graded index fiber amplifier for propagation of first higher order mode”- Ashima Bose, S. Gangopadhyay and S. C. Saha, Optik 123, 377 (2012).
5. “Scaling description of non-ohmic transport in manganities”- T. N. Ghosh, U. N. Nandi, S. Chattopadhyay, D. Jana and S. C. Saha, Solid State Commun. 152, 1595 (2012).
6. “Simple method for study of single-mode dispersion-shifted and dispersion-flattened fibers”- J. Opt. Commun. 33, 253 (2012).
7. “Mismatch consideration in circular core mono-mode graded index fiber of triangular refractive index profile excitation via hemispherical microlens on the fiber tip”- J. Opt. Commun. 33, 321 (2012).
8. “A simple technique of prediction of far-field pattern for first order (LP₁₁) mode in graded index fibers”- Ashima Bose, S. Gangopadhyay and S. C. Saha, Optik 124, 183 (2013).

Mr. S. Dutta:

1. P. Chottopadhyay and S. Dutta, “Saturated velocity model of MESFET in the presence of interface states and interfacial layer at the gate contact”, Indian Journal of Pure and Applied Physics, Vol . 50 2012, Page 265.
2. S. Dutta, T. Kamilya and S. K. Samanta, “A simple method to measure the depletion capacitance of a Schottky Junction Diode”, Journal of Physical Sciences, Vol. 17, 2013, page. 197-200.

International Conferences:

1. S. Dutta, “Cut off frequency of a GaN MESFET using two region model approach”, International conference on Laser, Material Science and communication, (ICLMSC-2011) December 07-09, 2011, page 245.

2. S. Dutta, “A theoretical approach to study the temperature dependent performance of a SiC MESFET in sensor application”, 1st International Symposium on Physics and Technology of Sensors (ISPTS-1, 2012), 8-10th March, 2012, page284.

Ms. S. Pramanik:

- (1) S. Pramanik and S. N. Sarkar, “Step index profile coming out as the best choice for the inner core in fiber Raman gain amplifier under fixed phase matching condition”, Optics & Laser Technology, Elsevier, 48, 206-209, (2013).
 - (2) S. Pramanik, G. Das and S. N. Sarkar, “Comparative Study of The Influence of Aspect Ratio in Trapezoidal Index Profile on Fiber Raman Amplifier Performance”, Optical Engineering, 49(5), 055001 (May 2010).
- International Conferences:

- (1) D. Kundu, S. Pramanik and S. N. Sarkar, “Simple and Complete Formulation of Propagation Constants of Photonic Crystal Fibers and Equivalence of Two Available Methods”, 541_OFT_PC_Kundu_D_1(full length paper), PHOTONICS 2010.
- (2) P. Roy Chowdhury, S. Pramanik, S. Chakraborty and S. N. Sarkar, “A Simple Method for Raman Gain Amplifier Performance Near Pump Wavelength Region with Gaussian Approximation”, 448_OFWD_FA_Roy Chowdhury_P_1_full, PHOTONICS 2010.
- (3) S. Pramanik and S. N. Sarkar, “Achievement of Broad Band and Higher Effective Raman Gain Fiber Raman Amplifier With Multiple Pump Wavelength Sources”, CODEC 2009
- (4) P. K. bandopadhyay, A. K. Mallick, S. Pramanik and S. N. Sarkar, “Lorentzian Approximation of the Fundamental Mode Single Mode Step-Index Linear and Non-linear Fiber”, PM70, PHOTONICS 2008.
- (5) S. Pramanik, G. Das and S. N. Sarkar, “Comparative Study of the Influence of Aspect Ratio in Trapezoidal Index Profile on Fiber Raman Amplifier Performance”, FWB1_C3_Pramanik, PHOTONICS 2008.

Department of Geography and Environment Management

1. Name of the Department:
Geography and Environment Management
2. Year of establishment:
1996-97
3. Is the Department part of a School/Faculty of the university?:
Faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):
P.G. and Ph.D.
5. Interdisciplinary programmes and departments involved:
<ul style="list-style-type: none"> Research Project with Dept of Zoology and Botany; Ph.D. Programmes with Dept of RS & GIS
6. Courses in collaboration with other universities, industries, foreign institutions, etc:
Nil
7. Details of programmes discontinued, if any, with reasons:
Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester System
9. Participation of the department in the courses offered by other departments:
Faculty Members act as guest faculty in the following dept. <ul style="list-style-type: none"> Dept of Sociology Dept of Remote Sensing and GIS Dept of MBA PG Courses in Geography under Distance Education mode PG Courses in Environmental Science under Distance Education mode

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	NIL		
Associate Professors	2	1	2
Asst. Professors	5	5	4
Others (Asst. Professors, Contractual)			

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr. A.K.Paul	M.A., Ph.D	Associate Professor	Geomorphology	23 Years	Ph.D Students <ul style="list-style-type: none"> • Awarded-6 • Submitted-2 • Registered-2
Dr. R. K. Maiti	M.Sc., Ph.D	Associate Professor	Advanced Geomorphology	13 years	Ph.D Students <ul style="list-style-type: none"> • Awarded-5 • Submitted-nil • Registered-06
Dr. S. Chatterjee	M.Sc., Ph.D	Assistant Professor	Pedology	13 years	Ph.D Students <ul style="list-style-type: none"> • Awarded- • Submitted- • Registered-
Dr. N. Das Chatterjee	M.A., Ph.D	Assistant Professor	Environmental Issues in Geography	12 years	Ph.D Students <ul style="list-style-type: none"> • Registered-03
Dr. U. Roy	M.A., Ph.D	Assistant Professor	Coastal Management	10 years	Nil
Mr. K. Ghosh	M.A., M. Phil	Assistant Professor	Remote Sensing & GIS	2years	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

- **Prof. Rabindranath Chattopadhyay;** Emeritus fellow, UGC, Dept. of Architecture and regional Planning, IIT, Kharagpur.
- **Dr. Partha sarathi Chakraborty,** Former Chief Scientist, Govt of West Bengal.
- **Dr. Gopinath Saha,** Former Director, National Atlas and Thematic Mapping Organisation (NATMO).

13. Percentage of classes taken by temporary faculty – programme wise information

PG	12. 2%
Ph D (Course Work)	25%

14. Programme-wise Student Teacher Ratio:

PG	1:11
Ph D (Course Work)	1:8
special	-

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

	sanctioned	filled	actual
academic support staff (technical)	3	3	
administrative staff			

16. Research thrust areas as recognized by major funding agencies

SI No	Thrust Areas	Supporting Funding Agency
1	Embankment Breaching and associated coastal Flood	Indian Council for Social Science Research (ICSSR)
2	Slope Instability	University Grants Commission (UGC)
3	Urban Morphology	University Grants Commission (UGC)
4	Women Studies	Vidyasagar University
5	Man-Animal Conflict	Indian Council for Social Science Research (ICSSR)

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Name	Title of the project	Duration	Funding Agency	Amount Sanctioned
Dr. A.K.Paul (Co-Principal Investigator)	Hydro-Biology and Geomorphology of Subarnarekha and Kasai River Basin and their Interfluvies".	(2010-2012).	Central Pollution Board, Calcutta. V	Rs 42,000,00
Dr. A.K.Paul (Co-Principal Investigator)	Hydrogeological study of subsurface water flow/storage characteristic for creation of sustainable source on rain fed river for semi-arid and fluoride affected blocks in connection with comprehensive water security plan under Purulia, Bankura and Birbhum districts'.	2011-12	Funded by Government of West Bengal, Directorate of Public Health Engineering, office of the superintending engineer; Planning Circle-I; 18-Brabourne Road; 4 th floor; Kolkata-700001.	Rs 25,000,00

Dr. R. K. Maiti	A Prototype Experiment on Process-Response System leading to Embankment Breaching at North East Sundarbans, West Bengal-Through Constructing Breach Prediction Model by Generating Geo-Information using Remote Sensing and GIS.	2 Years (Date: 1st March, 2009-Feb,2011)	Indian Council For Social Science Research (ICSSR)	Sanctioned Amount Rs. 5,93,000/- (F NO. RP02/0099/2008/RP Dated 17.03.2009)	
Dr. S. Chatterjee					
Dr. N. Das Chatterjee	Nature of Man – Elephant Conflict in Panchet Forest Division, Bankura, West Bengal: An Interdisciplinary Approach	2 years (Date: 1 st April, 2012-1 st April, 2014)	Indian Council For Social Science Research (ICSSR)	6.47 (Rs.inLakh) ICSSR Project	
Dr. U. Roy	A Critical Analysis of Migration, Construction and land alteration		UGC	1,00,000/-	

18. Inter-institutional collaborative projects and associated grants received
a) National collaboration b) International collaboration

Nil

19. Departmental projects funded by DST FIST; UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

20. Research facility / centre with	
<input type="checkbox"/> state recognition	NIL
<input type="checkbox"/> national recognition	NIL
<input type="checkbox"/> international recognition	NIL

21. Special research laboratories sponsored by / created by industry or corporate bodies
NIL

22. Publications:

Annexe-1
List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international)

- Monographs
- Chapters in Books
- Edited Books
- Books with ISBN with details of publishers
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Citation Index – range / average - NIL
- SNIP- NIL
- SJR - NIL
- Impact Factor – range / Average- NIL
- H-index - NIL

23. Details of patents and income generated
NIL

24. Areas of consultancy and income generated –
Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Nil

26. Faculty serving in
a) National committees :
<ul style="list-style-type: none"> • Dr A.K.Paul-Vice President of Indian Institute of Geomorphologists • Dr R.K.Maiti- E.C. Member of Indian Institute of Geomorphologists • Dr S.C.Chatterjee- E.C. Member of Indian Institute of Geomorphologists
b) International committees : Nil
a)Editorial Boards :
<ul style="list-style-type: none"> • Dr A.K.Paul-Editor, Indian Journal of Geography and Environment • Member, Editorial Board, Journal of Coastal Science • Dr R.K.Maiti- Associate Editor, Indian Journal of Geography and Environment • Dr. S. Chatterjee- Member, Editorial Board, Indian Journal of Geography and Environment • Dr.NdasChatterjee- Member, Editorial Board, Indian Journal of Geography and Environment • Dr.U.Roy Member, Editorial Board, Indian Journal of Geography and Environment

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

28. Student projects :

☐ percentage of students who have done in-house projects including inter-departmental projects

100%

☐ percentage of students doing projects in collaboration with other universities / industry / institute

Nil

29. Awards / recognitions received at the national and international level by

☐ Faculty

• Mr. Koushik Ghosh	Best Poster Award for Younger Geographer	From Dept. Of Geography, BHU during 18-20 Feb, 2010
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☐ Doctoral / post doctoral fellows

☐ Students

Gour Dolai	Young Scientist Award	Netaji Institute of Asian Studies	of 2011
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30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

	Name of Seminar	Funding Agency	Duration and Dates
1.	National Seminar on Regional Environmental Problems and Societal Development	UGC	Two Days- 24-25 th Feb, 2010
2.	National Seminar on 'Resource Assessment Sharing and Management-Crisis and Conflict'	UGC	Two days 19 th and 20 th March, 2012

31. Code of ethics for research followed by the departments:

University guideline is followed as code of ethics for research in the department.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected Male	Selected Female	Pass percentage Male	Pass percentage Female
PG	1200	68%	32%	100%	100%
Ph D	120	60%	40%	100%	100%

33. Diversity of students:

Name of the Programme	% of students	% of students from other	% of students from	% of students
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(refer to question no. 4)	from the same university	universities within the State	universities outside the State	from other countries
P.G.	60%	40%	Nil	Nil
Ph D	50%	50%	Nil	Nil

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

	UGC-NET	CSIR-NET	SET	Defence/Civil Service
2009				
2010	03			
2011	07	02	01	01 (IAS)
2012	23	02		
2013	09	01		

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	3%
PG to M.Phil.	5%
PG to Ph.D.	
Ph.D. to Post-Doctoral	10%
Employed	100%
Campus selection Other than campus recruitment	
Entrepreneur	NIL

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	14%
from other universities within the State	72%
from universities from other States	14%
from universities outside the country	NIL

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period
<ul style="list-style-type: none"> • Dr. N. Das Chatterjee - Ph.D • Dr. U. Roy –Ph.D • Mr. K. Ghosh – M.Phil

38. Present details of departmental infrastructural facilities with regard to	
a. Library	Dept has one seminar library with almost 250 books to cater the on demand need of students and faculty members.
b. Internet facilities for staff and students	All faculty members are supplied with internet facilities in their chambers. 12 units of internet points are provided in the digital laboratory for the use of students.
c. Total number of class	04
d. Class rooms with ICT facility	03 LCD projectors in the department for class lectures and departmental seminars.
e. Students' laboratories	03 (One Digital Lab; one Cartographic Lab; one soil lab)
f. Research laboratories	02 (One Physical lab and one Digital lab)

39. List of doctoral, post-doctoral students and Research Associates						
a. from the host institution/university:	Sl. No	Name	Qualification and Designation	Research Topic	Name of Guide	
	1	Sri Nilay Kanti Barman,	assistant professor in Geography Hijli College, V.U.	Assessment of coastal morphodynamics, ecological diversity, resource uses and hazards in Balasore shoreline from Burahbolong river mouth section to Talsari coastal sector, Orissa".	Dr. A.K.Paul	
	2	Sri Ratnadip Ray,	Guest Lecturer in RS & GIS, Vidyasagar University.	Spatio-temporal changes of forest and forest fringe areas of sundarban (West Bengal) - an assessment and identification using remote sensing and GIS techniques".		
	3	Subrata Jana.		Hydrogeomorphology of Subarnarekha River System"		
	4	Sumanta Prakash Shee	M.A. (V.U) NET	Impact of Industrialization at Salboni block, West Bengal and imaging opportunities for rural development	Dr R.K.Maiti	

		5	Swapan Kr Maiti	M.A. (V.U) NET JRF	Cognition of interworking of processes leading to sedimentation at the lower reach of the Rupnarayan river		
			Prasenjit Bhunia	M.A. (V.U) NET JRF	Management of water resource in Jaipanda river basin – A Cognitive approach		
		6	Abhijit Manna	M.A. (V.U) NET JRF	Mining and Its Consequences – A Study on Raniganj Coalfield		
		7	Suman Bera	M.A. (V.U) NET JRF	Cross Boundary Water Conflict – A Study on River Ganga		
b. from other institutions/universities	Sl. No	Name	Qualification and Designation	Research Topic	Parent University/Institute	Name of guide	
	1.	Sonam Lama	M.Sc. (N.B.U) NET, Assistant Professor, Darjeeling Govt. College	Channel Dynamics in the Himalayan Piedmont Zone - A Case Study on Chel River	North Bengal University	Dr. R.K.Maiti	
	2	Mrs. Lila Mahato	Assistant Professor, Presidency University.	“Assessment of livelihood support system in the landscape of Dulung River basin with integrated river basin management approach”.	University of Calcutta	Dr. A.K.Paul	
	3	Sri Satyajit Dhara, Assistant	Prof. AGC Bose College, Kolkata.	Assessment of coastal hazards and community vulnerability in the coastal zone of High-Saptamukhi estuarine delta complex, W.B, India	University of Calcutta		
	4	Sri Kanailal Das,	Assistant teacher in Geography, Baruipur.	“Assessment of hazards and risks in the deltaic reclaimed portion of Sundarban- a case study at Gosaba and Basanti blocks, W.B., India.	University of Calcutta		
	5	Sri Suman Soren,.	Assistant teacher in Geography, Paschim Medinipur	Changing spectrum of history and geography of Midnapur litoral tract and Sundarban coastal tract”.	GGU, Bilaspur		
	6	Soumita Guha.		“Coastal tourism of Odisha”	University of Calcutta		

40. Number of post graduate students getting financial assistance from the university:

Students get free studentship (full free 10% and half free 10%) and different scholarships from other funding agencies.

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology:

For introducing new syllabus UGC guidelines are followed and the syllabi of other universities

are consulted. Those are intensively discussed among the faculty members in the Departmental Committee meeting. To finalize the syllabus the help of experts of other universities is also taken.

42. Does the department obtain feedback from

A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, Discussion among teachers and guest faculties from outside of Universities.

B. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, Students' feedback is sought and is used by the faculty members for betterment of teaching-learning processes.

C. alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, It is offered on the programmes (workshops and conferences) organized by the department in every year.

43. List the distinguished alumni of the department (maximum 10) :

Sl No	Name of Alumni	Year of passing	Present Position
1	Dr. Utpal Roy	1998	Assistant Professor, Dept of Geography, VU
2	Mr. Nanda Dulal Das	2005	IAS
3.	Mr. Mafijul Haque	2004	Assistant Professor, Dept of Geography, Alia University
4	Dr. Pragna Bhattacharya	2004	Assistant Professor, Dept of Geography, Palpara Yogada Satsangha Mahavidyalaya.
5	Mr Gouranga Gaonia	2005	Assistant Professor, Dept of Geography, Vivekananda Mahavidyalaya
6	Mr. Jyotirmoy Pandit	2005	Assistant Professor, Dept of Geography, Ramnagar College
7	Mr. Niloy Kanti Barman	2006	Assistant Professor, Dept of Geography, Hijli College
8	Dr. Pravat Kr. Shit	2005	Technical Assistant, Dept of Geography, VU
9.	Mr Dipankar Mondal	2008	Cartographer, Dept of Geography, VU
10	Mr. Debprakash Pahari	1999	Scientific Officer, Dept of Geography, Burdwan University

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts:

Name of the visiting professor	Topic	Lecture delivery date
Prof. Malay Mukhopadhyay, Visva-Bharati	New perspectives of hazard management	27.02.2013
Dr. Partha Sarathi Chakraborty Former Chief-Scientist, DST,	Application of Remote Sensing & GIS	21.01.2013

Kolkata		
Prof. Mamata Desai Netaji Institute for Asians Studies, Kolkata	Socio-Economic Environment and Development	22.02.2013
Prof. R.N.Chattopadhyay IIT,KGP	Socio-Economic Development theories	04.03.2013
Dr. Kalyan Rudra Former Principal Habra Srichaitanya College & River Scientist, Member of Ganga River Action Plan	River Bank Erosion – Ganga	07.03.2013
Prof Sunanda Bandyopadhyay University of Calcutta	Coastal monitoring & Mapping through RS GPS and GIS	21.01.2013
Prof. Srikumar Chattopadhyay Scientist(G), Centre for Earth Science Studies, Kerala	Methodologies in Modern Geographical Research	21.02.2012
Dr. D.Debraj, Principal of Kamalam College of Art & Science, Pallachi, Coimbatore	Man and Environment Relationship	13.03.2012
Prof. Prafulla Kumar Sahoo Dept. Of Chemistry, Utkal University	Resource Conservation and Environmental Protection	27.02.2012
Prof. Ajit Kumar Banthia IIT, KGP	Resource use and Management	27.2012012
Dr. Dipendranath Das JNU, Delhi	Population dynamic in India	17.02.2012
Prof. D. Sengupta IIT, KGP	Modern techniques in monitoring Environmental Hazards	10.1.2012
Prof. Sudipto Adhikary Former Vice- Chancellor,Patna University	Modern dimensions of Political Geography History of the Geographical thought	29.2.2012- and 01.02.2012
Prof.D.P. Satpathy Ranchi University	Geomorphology of Chhotonagpur Plates	23.01.2012

45. List the teaching methods adopted by the faculty for different programmes:

- Teaching with Power point;
 - Out-door classes with direct Field visit;
 - Teaching with field videographs,
 - Group Discussions
 - Academic Counseling
 - One to one Interaction
 - Assignment presentation
 - Learning usage of modern survey instruments for precise data generation
- Learning Soft ware operation system and data base management system (RS/GIS)

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Faculty Members regularly monitor the progress the students through

- **Formal and informal examinations**
- **Group Discussions**
- **Academic Counseling**
- **One to one Interaction**
- **Internal assessment test in each semester**

47. Highlight the participation of students and faculty in extension activities.

- Participation of students in NSS activities (One NSS cell has been constituted of the students of this department)
- Organisation of Societal activities through '*Students Geographical Association*'.
- Societal interaction through field works
- Participation of students in awareness generation and in direct relief works in their own hazard-prone localities.
- Maintaining Indoor Garden
- Organising Cultural Programmes, Debates and Group Discussion

48. Give details of "beyond syllabus scholarly activities" of the department:

- Publication and updating of Wall Magazine
- Publication of Scholarly publication –Prabaha (A periodical published by Students Geographical Association)

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department had been accredited previously by NAAC as part of accreditation of the university in 2008.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Contribution of the department in generating new knowledge is based on applied research on different geo-environmental issues in spatio-temporal analysis.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

- I. **Updated and Quality Teaching by hard-working young faculty members**
- II. **Updated curriculum with maximum scope for exposure to current issues**
- III. **Advanced Research Environment**
- IV. **Healthy Teacher-Student relation**
- V. **Cooperation building through united participation**

Weaknesses:	<p>I. Lack of Sufficient Teaching Staff</p>
	<p>II. Lack of Sophisticated Laboratory instrument</p>
	<p>III. Lack of student's quality (as most of them are 1st generation learners)</p>
Opportunities:	
	<p>IV. Hard working and obedient students are potential for better learning and research</p>
	<p>V. Efficient, talented and young faculty members are putting their best effort in teaching learning and research activities</p>
	<p>VI. Enough scope of research on local and regional issues</p>
Challenges:	
	<p>VII. Backward Location</p>
	<p>VIII. Challenge to upgrade quality of student to make them fit to required standard</p>
	<p>IX. Maintaining quality of teaching and research with limited faculty strength and infrastructural limitation</p>

<p>52. Future plans of the department.</p>
<ul style="list-style-type: none"> • Making Department as an important centre for Intensive study and advanced research • Orienting curriculum of teaching-learning and research towards addressing regional problems

Annexure - I

Summary of publication.

Name	2009	2010	2011	2012	2013	Total
Dr A.K.Paul	National - 4	National - 2	0	National - 1	National - 3	National-10
Dr. R.K.Maiti	National-2	National-6	National-5	National-6 International-7	National-3 International-2	National-22 International-9
Dr. S Chatterjee						
Dr. N.Das Chatterjee	International-3	National-7 International-5	National-5 International-2	National-4 International-2	International-3 National-2	National-17 International-15
Dr. U. Roy						National- International-
Mr Koushik Ghosh	National-01					
Total						

	2009	2010	2011	2012	2013	Total
Dr A.K.Paul						
Dr. R.K.Maiti	01	-	-	-	-	01
Dr. S Chatterjee						
Dr. N.Das Chatterjee						
Dr. U. Roy						
Mr. K. Ghosh		01				01
Total						

Monograph

	2009	2010	2011	2012	2013	Total
Dr. R.K.Ma iti	-	-	-	1. Rill Gully Erosion in Badland Topography – Field Measurement and Monitoring (A case study on western part of West Bengal, India). (ISBN: 978-3-659-27662-0). LAP LAMBERT Academic Publication, Germany. 2012.	1.Management techniques of Rill-Gully Erosion in Badland Topography (Experimental Research at Laboratory, Plot and Catchments Scale) (ISBN: 978-3-659-32409-3). LAP LAMBERT Academic Publication, Germany. 2013.	International-02

Edited books

Books with ISBN with details of publishers

Department of Human Physiology with Community Health

1.Name of the Department:
Human Physiology with Community Health
2. Year of establishment
1990
3. Is the Department part of a School/Faculty of the university?:
Faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
P.G.: M. Sc. in Human Physiology Ph.D.
5. Interdisciplinary programmes and departments involved
Nil
6.Courses in collaboration with other universities, industries, foreign institutions, etc
Nil
7. Details of programmes discontinued, if any, with reasons
NA
8.Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester system
9.Participation of the department in the courses offered by other departments

	2009	2010	2011	2012	2013	Total
Dr A.K.Paul	2	0	1	1	2	06
Dr. R.K.Maiti	01	-	3	4	-	08
Dr. S. Chatterjee						
Dr. N.Das Chatterjee						
Dr. U. Roy						
Mr. K. Ghosh		01		01		02
Total						
Dept. of Botany, Dept. of Biochemistry Dept. of Biotechnology Dept. of Zoology						

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01		03
Associate Professors	02	01	01
Asst. Professors	05	02	02
Others (Asst. Professors, Contractual)			

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr. Somenath Roy	M.Sc. Ph. D	Professor	Biochemistry	27 years	08
Dr. Prakash Chandra Dhara	M.Sc. Ph. D	Professor	Ergonomics & Sports Physiology	26 years	08
Dr. Chandradipa Ghosh	M.Sc. Ph. D	Associate Professor	Biochemistry	17 years	08
Dr. Sujata Maiti (Chowdhury)	M.Sc. M. Phil. Ph. D	Associate Professor	Biochemistry	23 years	07
Dr. Sandip Kr. Sinha	M.Sc. Ph. D	Assistant Professor	Biophysics	5 years	
Dr. Sumana Sarkhal	M.Sc. Ph. D	Assistant Professor	Biophysics	1 year	

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Senior Visiting Fellows:			
Sl No.	Name of the faculty	Designation	Year
1.	Prof. Bithi Sircar	Ex. Prof. Tripura University and Vidyasagar University, Ex Principle of Srishikshyatan College, Kolkata	2008 2009 2010

13. Percentage of classes taken by temporary faculty – programme-wise information

Year	1 st Sem.	2 nd Sem.	3 rd Sem.	4 th Sem.
2013	10.7%	8.0%	18.9%	19.8%
2012	11.9%	8.1%	20.8%	20.3%
2011	10.4%	10.1%	21.2%	19.7%
2010	10.3%	11%	9.8%	21.6%
2009	29.4%	10.5%	35%	23.3%

14. Programme-wise Student Teacher Ratio:

PG	: 6.6 : 1
Ph D (Course Work)	5:1

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)	02	02	02
administrative staff	01	01	01

16. Research thrust areas as recognized by major funding agencies

- Agricultural ergonomics
- Industrial ergonomics
- Defense and safety
- Reproductive toxicology
- Traditional medicine.
- A molecular study for monitoring multi-drug resistant against Plasmodium falciparum in West Bengal.
- Nano-particle based drug delivery against cancer, drug resistant bacteria and malaria.
- Cholerrhoea and its control through genomic research.
- Anti-nicotinic (smoking and smokeless tobacco) activities through herbal treatment.

Funding agency: DRDO, DST, DBT, ICMR, CSIR and UGC

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.:

SL. No.	Name of the Faculty	Name of the Project	Funding Agency (National)	Amount Sanctioned.
1	Prof. S. Roy	Molecular and Proteomic approach for monitoring drug resistant malaria parasite in the malaria endemic zone in West Bengal.	DST	Rs. 19,22,600.00 2008 to 2011
2	Prof. S. Roy	Application of nano particles for delivery of drug to drug resistant bacteria and oral squamous carcinoma cell line	DBT	Rs. 40, 24, 000.00 2008 to till date
3	Prof. S. Roy	To study the effect of hexavalentchromium ions on mitochondria from liver and lungs origin: Role of Andrographics paniculata nees.	UGC, Govt. of India	Rs. 9,43,300.00 2010 to till date
4	Prof. P. C. Dhara	Evaluation of occupational health hazards of women agricultural workers engaged in rice and vegetable cultivation, application of Ergonomic check points and redesigning of small Hand Tools	DST	17.0 lakhs 2009 to 2011
5	Prof. P. C. Dhara	Investigation on Directional Control Response Stereotype and Hand Arm Strength of the Population in Eastern	LSRB	15 lakhs 2010 to till date

		India		
6	Prof. P. C. Dhara	Evaluation of Work Related Health Hazards of Rural Women Performing Agricultural Activities and Application of Ergonomic Check Points for Reducing Job Related Drudgery	ICMR	19.35 lakhs 2011 to till date
7	Prof. P. C. Dhara	Evaluation of Occupational Stress of Brick Kiln Workers and Ergonomic Design of Brick Dice.	CSIR	Project cost: 19.1 lakh 2012 to till date
8	Prof. Chandradipa Ghosh	Task Force Project, Entitled: National Hospital Based Rotavirus Surveillance Program - Peripheral site at Medinipur.	ICMR	Rs.45.00 lacs Since February 01, 2013
9	Prof. Chandradipa Ghosh	'Identification of Quorum Sensing Regulation on Flagellum-Dependent Signal Transduction Pathway Controlling Biofilm Formation and Virulence Gene Expression in <i>Vibrio cholerae</i> '.	DST	~ 22.00 Lacs 2007 - 2010
10	Dr. Sujata Maiti (Choudhury)	Assessment of the toxic effects of synthetic pyrethroid Cypermethrin on biochemical, hormonal and oxidative stress parameters of reproductive system and its alleviation through supplementation of zinc and α - lipoic acid in animal.	UGC, Major	Total cost Rs. 12,99,800/- 2012-2015
11	Dr. Sumana Sarkhel	UGC –BSR Research Start-up-Grant (2012-2013) implemented from 22/3/2013.	UGC	Rs 5,40,000/- 2013 to 2015

18. Inter-institutional collaborative projects and associated grants received a) National collaboration b) International collaboration	
National collaboration:	
1. Prof. Prakash Chandra Dhara: ROHC, Kolkata, National Institute of Industrial Engineering, Mumbai	
2. Prof. Somenath Roy: National Center for Cell Sciences (NCCS), Pune	
b) International collaboration -	
Prof. Somenath Roy: M.D Anderson Cancer Research Center, Houston, Texas, USA	
19. Departmental projects funded by DST FIST; UGC SAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received	
1. UGC infrastructure grant: Rs. 10 Lacs, 2009	
2. UGC infrastructure grant: Rs. 10 Lacs, 2011	

20. Research facility / centre with	
<input type="checkbox"/> state recognition	Nil
<input type="checkbox"/> national recognition	

□ international recognition	
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21. Special research laboratories sponsored by / created by industry or corporate bodies
Nil

22. Publications:

- Number of papers published in peer reviewed journals (national / international) = 135
- Monographs = Nil
- Chapters in Books = 4
- Edited Books = Nil
- Books with ISBN with details of publishers = 5
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) = Nil
- Citation Index – range / average = 2-75 / 27.25
- SNIP
- SJR
- Impact Factor – range / average = 0.23- 6.2 / 2.514
- h-index =

- Number of papers published in peer reviewed journals (national / international)

Year	Name of faculty	Number of Papers
2012-2013	Prof Somnath Roy	15
	Prof Prakash C Dhara	39
	Dr Chandradipa Ghosh	3
	Dr Sujata Maiti Chaudhury	2
	Dr Sumana Sarkhel	1
2011-2012	Prof Somnath Roy	25
	Prof Prakash C Dhara	8
	Dr Chandradipa Ghosh	1
	Dr Sujata Maiti Chaudhury	2
	Dr Sumana Sarkhel	1
2010-2011	Prof Somnath Roy	8
	Prof Prakash C Dhara	7
	Dr Chandradipa Ghosh	3

	Dr Sujata Maiti Chaudhury	1
2009-2010	Prof Somnath Roy	12
	Prof Prakash C Dhara	5
	Dr Chandradipa Ghosh	1
	Dr Sujata Maiti Chaudhury	1

List of Publications in Annexure-1

23. Details of patents and income generated :		
Year	Name	Patent details
2009	Prof Somnath Roy	Patent Title: A Nano Drug Carrier and Also To A Process of Preparation Thereof Patent File No: IPR/4.19.5/08089/2009
2011	Prof Somnath Roy	Patent Title: Chitosan Based Nanoparticles And Processes For Preparing Them Patent File No: IPR/FA/11029-L/2011

24. Areas of consultancy and income generated –
NA

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Prof. Prakash C. Dhara attended international seminar on ‘Occupational Health and Ergonomics’ at Arizona. Tempe, USA, 10-12 June, 2010

26. Faculty serving in		
1.	Prof Somnath Roy	Member of the editorial board of “ <i>Al Ameen Journal of Medical Sciences</i> ” Become the member of Ergonomics Sectional Committee, PGD 15 , Bureau of Indian Standards, New Delhi.
2.	Prof. Prakash Chandra Dhara	

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs). Faculty Members attended Refresher /Orientation courses.				
Year	Name of the Faculty	Topic of the Refresher/ orientation course	Duration	Organised by
2012	Dr Sujata Maiti Choudhury	Attended a DST-sponsored training programme on ' <i>Communication and presentation skills</i> ' for women	6 days	Bhubaneswar, Orissa from 16 th - 21 st Nov., 2009.
2012	Dr Sujata Maiti Choudhury	Current perspectives in Life Sciences' with the focus on 'Computational Biology'	7 days	UGC-Academic Staff College and the Department of Physiology, C.U. during March 13-19, 2012.
2012	Dr Sujata Maiti Choudhury	'International Workshop on Applications of Flow Cytometry and Imaging in Cell Biology and Nanobiotechnology 2012'	8 days	11 th -18 th August 2012,
2013	Dr. Sujata Maiti (Choudhury)	'SAKSHAM-IT Champion Training Program' by NME-ICT	26 th Feb-08 March, 2013.	Vidyasagar University
2012	Dr. Sujata Maiti (Choudhury)	Pre-Conference Workshop and Symposium on " <i>Physiology Teaching</i> "	7 th -8 th November, 2012.	Organized by South Asian Association of Physiologists and Pre-Conference Workshop and Symposium organizing Com., held at Colombo, Sri Lanka on
2012	Dr. Sujata Maiti (Choudhury)	Workshop on " <i>Clinical Neurophysiological techniques</i> "	10th November, 2012	Organized by South Asian Association of Physiologists and Post-Congress workshop organizing Com., held at the University of Peradeniya, Sri Lanka on 10th November, 2012
2011	Dr. Sujata Maiti (Choudhury)	Perspectives on <i>Women Studies: Contemporary issues and Curriculum Development</i>	28-30th March, 2011.	Organized by Women's Studies Centre, Vidyasagar University
2012	Dr. Sandip Kr. Sinha	35 th Orientation Programme	24 days	Academic Staff College, Jadavpur University
2013	Dr. Sandip Kr. Sinha	Environmental Studies(Multi	March 06 to March	University of Calcutta.

		Disciplinary)	23,2013	
2012	Dr. Sandip Kr. Sinha	Application of Research Techniques in Reproductive Biomedicine	29 th Oct. to 9 th Nov. 2012	National Institute of Health and Family Welfare, New Delhi.

28. Student projects :

<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
100%
<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
NA

29. Awards / recognitions received at the national and international level by

Faculty		
SL. No.	Name of the Faculty Members	Organization
1.	Prof Somenath Roy	a) Fellow (2013) West Bengal Academy of Science Tech. Field: Drug Development Section VIII: Medical and Veterinary Sciences b) Smt. Sakuntala Dasgupta Memorial Oration Award 2009 by PSI
2.	Prof. Prakash Chandra Dhara	a) Gold medal award for Prof. S. R. Maitra Memorial Oration – awarded by the Physiological Society of India, Kolkata, 2009. b) Become the member of Ergonomics Sectional Committee, PGD 1, Bureau of Indian Standards, and New Delhi.
3.	Dr. Sujata Maiti (Choudhury)	Fellow Award 2012 by Society for Applied Biotechnology
4.	Dr. Sujata Maiti (Choudhury)	‘Shiksha Rattan Puraskar’ by India International Friendship Society, New Delhi-110001
Students:		
SL. No.	Name of the Students	Organization
1.	Debojyoti Pal (1 st) Sandip Kr. Dash (3 rd)	National Seminar on “ <i>Emerging Issues in Physiology and Allied Sciences</i> ” dated 26 th March, 2010 at Vidyasagar University National Seminar on Health. (Best poster presentation)

2.	Subhankari Chakraborti (1st) Prasad	International Conferences on Frontier in Biological research (ICFBR- 26, 27 th Feb.2012). (Best poster presentation)
Doctoral / post doctoral fellows: NA		
Students : NA		

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Name of the Seminar/ Symposium	Duration	Funding Agency	
International conference on Ergonomics and Human Factors “ Ergo 2013: Ergonomics for Rural Developmenmt”	3 DAYS (04 – 06 December 2013)	UGC, ICMR,CSIR,D RDO, DST	Prof. Verna Blewett. (Central Queensland University, Australia)
International Conferences on Frontier in Biological research (ICFBR- 2012)	2days (26, 27 th Feb.,2012)	UGC	1. Dr. T. Suzuki, NIHS, Japan 2. Dr. M. Khan, National University of Singapore, Singapore.
National Seminar on “ <i>Emerging Issues in Physiology and Allied Sciences</i> ” dated 26 th March, 2010 at Vidyasagar University National Seminar on Health.	1 day(26 th March, 2010)	UGC	
“ <i>Current Trends of Researches in Health and Diseases</i> ” dated 30 th -31 st March, 2009 at Vidyasagar University organized by the Dept of Human Physiology with Community	1 day (30 th -31 st March, 2009)	UGC	

31. Code of ethics for research followed by the departments:					
<ul style="list-style-type: none"> • Institutional ethical clearance for human experiments • Institutional ethical clearance for animal experiments • As per approved Institutional Ethics Committee. 					
32. Student profile programme-wise:					
Name of the Programme (refer to question no. 4)		Applications received	Selected Male Female		Pass percentage Male Female
Year -2009		58	23	17	100%
Year -2010		39	23	13	100%
Year -2011		47	18	22	100%
Year -2012		45	16	24	100%
Year -2013		86	20	20	100%

33. Diversity of students:					
Name of the Programme (refer to question no. 4)		% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.sc	2009	100%	-	Nil	Nil
	2010	88%	12%	Nil	Nil
	2011	92.5%	7.5%	Nil	Nil
	2012	95%	5%	Nil	Nil
	2013	77.5%	22.5%	Nil	Nil
Ph.D	2009	25%	Nil	Nil	Nil
	2010	28%	Nil	Nil	Nil
	2012	41.6%	33.33%	Nil	Nil
	2013	Nil	41.6%	Nil	Nil

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

Category	Numbers
1. NET	03
2. SLET	04
3. GATE	06
4. Others	
➤ School Service Commission:	30
➤ School Inspector:	04
➤ West Bengal Police and Calcutta Police:	12
➤ LICI Officer:	03

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	56%(VU), 2013
PG to M.Phil.	NA
PG to Ph.D.	30%
Ph.D. to Post-Doctoral	NA
Employed	NA
Campus selection	School Service Commission:
Other than campus recruitment	35%
Entrepreneur	School Inspector:
	10%
	West Bengal and Calcutta Police:
	15%
	LICI Officer:
	8%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	NIL
from other universities within the State	100%
from universities from other States	NIL
from universities outside the country	NIL

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

Dr. Sumana Sarkhel (Ph.D Awarded 2009)

38. Present details of departmental infrastructural facilities with regard to	
a. Library	Preparing for establishing departmental library
b. Internet facilities for staff and students	1. Internet facility in the chamber / laboratory of each faculty member 2. Internet facility in computer laboratory for research scholars and students 3. Internet facility in the office of the department
c. Total number of class	02
d. Class rooms with ICT facility	02
e. Students' laboratories	General laboratory: 4, Special paper laboratory: 3
f. Research laboratories	03

39. List of doctoral, post-doctoral students and Research Associates

Doctoral: Registration

Year	Male	Female	Total
2008 – 09	06	02	08
2009 - 2010	02	05	07
2010 – 2011	10	04	14
2012 – 2013	09	02	11

Awardees:

Year	Male	Female	Total
2008 – 09	03	-	03
2009 - 2010	02	-	02
2010 – 2011	03	01	04
2011 – 2012	02	-	02
2012 – 2013	04	04	08

Doctoral: Registration		
2009-10	2010 - 11	2012 - 13
Sritikana Biswas	Sourav Chottopadhyay	Satyajit Tripathy
Prithiraj Mukherjee	Sabyasachi Das	Sandeep Kumar Dash
Tuhina Das	Amal Kumar Pari	Debasis Mandal
Rini Ghosh	Subrata Dutta.	Prasanta Deb
	Mrs. Sujaya De.	Anurag Pramanik
	Miss. Piyali Sengupta	Pralay Maity
	Amitava Pal	Madhubanti Bepari
	Sujata Goswami	Dipbendhu Bhowmik
	Payel Maity	Amit Karmakar
	Roan Mukherjee	Parimal Dua
	Sourav Manna	Balaram Das
	Supriya Misra	Dr. Durgapada Dalui
	Sougata Bhunia	Mukesh Kumar Jha
		Benzir Pervin

a. From the host institution/university:		
Doctoral		
List of Doctoral Awardees Under the guidance of Prof Somenath Roy (2008-2013)		
Sl. No.	Name	Year
1.	Subhasis Das	2008
2.	Basab Mandal	2009
3.	Santanu KarMahapatra	2010
4.	Subhankari Prasad Chakraborty	2012
5.	Sandip Narayan Chakraborty <i>Doctoral fellow,</i> MD Anderson, Texas, USA	2012

List of Doctoral Awardees Under the guidance of Prof.Prakash Chandra Dhara (2008-2013)		
Sl. No.	Name	Year
1.	Indranil Manna	2009
2.	Soudeep Kr. Sau	2009
3.	Annu Veergase	2010
4.	Deepti Majumdar	2012
5.	Amrita DasGupta	2012
6.	Amal Kumar Pari	2012
Post-doctoral students: nil		

b) From other institutions/universities and Research Associates -nil		
Doctoral		
List of Doctoral Awardees Under the guidance of Prof Somenath Roy (2008-2013)		
Sl. No.	Name	Year
1.	Uddipan Sarma	2012
2.	Srijit Khan	2012
3.	Shyamdas Bandhyopadhyay	2013
4.	Md. Mumtaz Nayer	2013
5.	Debendra Sathwane	2013
6.	Sangeeta Kumari	2013

List of Doctoral Awardees Under the guidance of Prof.Prakash Chandra Dhara (2008-2013)		
Sl. No.	Name	Year
1.	Deepti Majumdar	2012
2.	Amrita DasGupta	2012
3.	Madhusudan Pal	2013
Research Associates –nil		

40. Number of post graduate students getting financial assistance from the university:
10%

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
The need assessment exercise was first undertaken in the Departmental Committee meetings with individual inputs from all the faculty members. The resolutions of all such meeting were then placed before the Postgraduate Board of Studies in the presence of external experts from other universities. The decision of the Board of Studies was conveyed to the faculty Council meeting for acceptance.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
Department take the feedback from the guest teachers, the visiting professors and fellows about the curriculum and teaching-learning evaluation. All these inputs are discussed in the Departmental Committee and BOS. After proper discussion, the syllabus is prepared and the decision on the teaching-learning evaluation has been taken
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Feedback inputs are collected from students. Taking these feedback discussions is done in the Departmental Committee and necessary actions are taken accordingly.
c. alumni and employers on the programmes offered and how does the department utilize the feedback?
Feedbacks are usually taken from the alumni during conference , reunion programmes etc and those are discussed in the departmental committee

43. List the distinguished alumni of the department (maximum 10) :
<ol style="list-style-type: none"> 1. Dr. Sk. Saijuddin, John Hopkins University, USA 2. Dr. Biswadeb Bisai, CU 3. Dr. Kesab Ch. Mandal, VU 4. Dr. Sandip Chaki, USA 5. Dr. Projjal Sinha, USA 6. Dr. Debasis Maity, TU 7. Dr. Subhasish Das, Chikago, USA 8. Dr. Rina Maiti, IIS, Bangalore 9. Dr. Panchanan Maity, USA 10. Dr. Prasanta Maity, Imgenex India, Bhubaneswar

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts:		
Year	Name	(special lectures / workshops / seminar) involving external experts:
	Prof. Debajyoti Das	Retired Professor Presidency College, Kolkata

2009 Extension lecture	Dr. Subrata Majumder	Senior Scientist, Bose Institute, Kolkata.
	Dr. S. N. Kabir	Senior Scientist, Indian Institute of Chemical Biology, 4, Raja Sc Mullick Road Jadavpur, Calcutta, Pin - 700 032.
2010 Extension lecture	Prof. Ananta Kumar Ghosh.	Dept. of Biotechnology, IIT, Kharagpur.
	Dr. Dhurjati Mazumder,	DIPAS, Delhi
	Prof Arun Roy	Bose Institute, Kolkata
2011 Extension lecture	Dr. Tushar Kanti Ghosh.	Professor, Dept of Physiology, University of Calcutta.
	Dr. S. N. Kabir	Senior Scientist, Indian Institute of Chemical Biology, 4, Raja Sc Mullick Road Jadavpur, Calcutta, Pin - 700 032.
2012 UGC Merged Scheme	Dr. Bhaskar Saha,	National Institute of Cell Science, Pune. (Bhatnagar awardee).
	Dr. Kousik Bharati	Scientist-III(P) National Institute of Immunology Aruna Asaf Ali Marg, J.N.U. Complex, New Dehli - 110067
	Dr. Debiprasad Sarkar	Delhi University (Bhatnagar awardee).
	Dr. T. Suzuki	Scientist, Div. Cellular & Gene Therapy Products, National Institute of Health Sciences, Tokyo, Japan
	Dr. Matiullah Khan	Scientist, Cancer Science Institute and Departments of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Singapore 117456
	Dr. Mausumi Bharadwaj	Deputy Director, Immune regulation and Immunodiagnostics Division of Molecular Genetics & Biochemistry, Institute of Cytology & Preventive Oncology (ICMR), I-7, Sector 39, Noida. Department of Health Research (DHR), Ministry of Health & Family Welfare, Govt. of India
	Dr. Sekhar Chakrabarti	Director, Division of Virology, NICED, ICMR, Kolkata
	Dr. Manoj Chakraborty	Deputy Director, National Institute of Cholera and Enteric Diseases, Kolkata
	Dr. Rathindranath Baral	Senior scientific officer, Immunoregulation and Immunodiagnostics Chittaranjan National Cancer Institute 37, S. P. Mukherjee Road, Kolkata - 700026
	Dr. Deb kumar Chakrabarti	Professor, Dept. of Design, IIT Gwahati, Assam, INDIA
	Dr. Dhurjati Majumdar	Additional Director, Deference Institute of Physiology and Allied Science
	Dr. Gour Gopal Ray	Professor, Dept. of Design, IIT, Bombay, India
	Dr. Sibsankar Roy	Senior Scientist, Cell Biology and Physiology Division, Indian Institute of Chemical Biology,

		Kolkata
	Dr. S. N. Kabir	Deputy Director, Indian Institute of Chemical Biology, Kolkata
	Prof. Bithi Sircar	Ex- Professor of Tripura University, Vidyasagar University and Ex-principal of Srisikshayatan College, Kolkata
	Dr. K. Nandagopal	Senior Scientist, Monobikash Kendra, Kolkata
2013 Extension lecture	Prof. Debasish Sen	Presidency University, Kolkata
	Prof. Ananta Kumar Ghosh.	Dept. of Biotechnology, IIT, Kharagpur.
2013 Special lectures	Dr. Panchanan Maiti	Dept. of Neurology and Medicine, David Geffen School of Medicine, University of California at Los Angeles (UCLA), & Veteran Administrative Hospital, Los Angeles, USA Title: “Protein misfolding and neurodegeneration caused by amyloid oligomers: role of molecular chaperones”.

45. List the teaching methods adopted by the faculty for different programmes:

- Lecture delivery method with ICT
- Practical experiment conduction method
- Demonstration method
- Seminar delivery method
- Assignment method
- Survey method
- Group discussion
- Project method - Group project & individual project
- Laboratory training,
- Visit to the laboratories of National repute

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- a. % of successful students in each semester
- b. No. of successful students who cleared NET/SET/GATE
- c. No. of students who are engaged in Ph.D. programme
- d. % of successful candidates in S.S.C. and C.S.C.
- e. No. of successful candidates in Govt. and Non-Govt. service.

47. Highlight the participation of students and faculty in extension activities.

Students and faculties participate in University level sports and cultural activities, Wall magazine preparation, celebration of birthday and centenary of great persons and in different social activities.

<p>48. Give details of “beyond syllabus scholarly activities” of the department:</p> <ol style="list-style-type: none"> Arrangement of Ronald Ross oration lecture regularly Arrangement of field survey every year for the students of 2nd semester on the basis of community health, environmental pollution and nutritional status across the country. Gold jubilee Celebration of teaching of Dr. Debojyoti Das, an eminent teacher and scholar.
<p>49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.</p> <p>The department has been evaluated as a part of accreditation of the university by NAAC</p>
<p>50. Briefly highlight the contributions of the department in generating new knowledge basic or applied</p> <p>Introduction of more human related studies / components has been made in the curriculum. The department is involved in human welfare by arranging awareness and training program for the local people. The departmental faculties involved in research which has direct relationship with human health. The department has contributed to the society by making ergonomic design of hand tools for the workers , filing patent of some method related to immunological research, making some advancement in cancer research et.</p>
<p>51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.</p> <p>Strengths:</p> <ol style="list-style-type: none"> Facilities of our department are from different specialization which helps to train the student for the different areas of physiology. ICT and Internet facilities and e-journal facility in the department. Departmental Instrumental facilities for teaching and research are gradually improving. Theory and Practical syllabus has been modified according to NET, SLET, GATE syllabus. Teacher, Staff and Student relationship are good which help for smooth running of the department. <p>Weaknesses:</p> <ol style="list-style-type: none"> Space is insufficient for running of a full department. No space for research of individual faculty but a large number of research student are registered for PH. D. under the department. Number of faculties is not sufficient. Strength of non-teaching staffs is not also sufficient. No well equipped seminar room. No standard departmental centralized room for nonhuman experimental research models. No departmental library. No sufficient instruments for modern research. <p>Opportunities:</p> <ol style="list-style-type: none"> Physiology subject is linked to eligible health sector. So, the students are used to be recruited in different medical linked job, e.g. in the service of medical representative. After post graduate & Ph. D student can be recruited in colleges, universities as well as medical college as a faculty member. After postgraduation in the subject the students can get access in the R & D of different

life science related subjects e.g. Biotechnology, Bioinformatics, Genetics, Molecular biology, Medical microbiology, Ergonomics etc.

d. The students can be absorbed in different industrial sectors as ergonomic counselor, industrial microbiologists, environmental health counselor.

Challenges:

i. Getting more funds funding agencies for infrastructure development as well as for improving research facilities in the department

i. Collaborative research with national and international laboratories

i. Getting recognition of MCI so that the students can be absorbed in faculty positions in all Govt. medical colleges.

i. Special training of the student to improve the success rate in NET/SET/GATE Exam.

i. To spread Physiology 'as a basic Life Science subject' in other states and private universities like West Bengal.

i. Steps to be taken for establishing 'Physiological Survey of India' in the national level.

52. Future plans of the department.

➤ Modernization of the syllabus.

➤ Improvement of general, special paper and research Laboratories

➤ Co-ordinated Research on Community Health

➤ To intensify research which will be more related to the development of Rural Community Health

➤ To arrange training program for the rural workers to improve need based technology especially for women

➤ Introduction of some new innovative programmes

➤ Introduction of New Special Papers

➤ To arrange awareness program about the community health (especially for the immunization program and family planning) among the people in the selected rural areas.

➤ To arrange training programme of humanization of industrial work for industrial personals (in collaboration with India society of Ergonomics).

➤ To generate comprehensive data base for health status of the population (area wise).

Annexure I

List of Publications

Books with ISBN with details of publishers

SL . No .	Name of the Faculty	Names of authors of the Books	Name of Publisher	ISBN No.	Year of Publication
1.	Prof Somnath Roy and others.	Basic concept in Immunology	Allied Book Agency, Kolkata	Applied	February 2014
2.	Prof Somnath Roy	Managing Developments in Developing Countries Somnath Roy and Subhankari Prasad Chakraborty: Nanoconjugated vancomycin-A new approach to kill drug resistant bacteria.	Vidyasagar University, Directorate of Distance Education, Paschim Medinipur, WB	ISBN : 978-93-5142-162-7	September 2013
3.	Prof Somnath Roy	Impact of climate change on human Physiology vis-à-vis human health: Ed. By Prof G. K. Saha, chapter XIX- Climate Change: Man and Environment - S. Roy.	Daya Publishing House, New Delhi	ISBN : 978 – 81 – 7035 – 771 - 1	2012
4.	Prof. Prakash C. Dhara	Pal A., De S., Sengupta P. , Maity P., Banerjee M.: Nutritional Status and Blood Pressure Among Bengalee Female Cultivators. In: Human Malnutrition: Twin Burdens of Undernutrition and Overnutrition, K. Bose (ed.).	Nova Biomedical, USA	ISBN : 978-1-62417-043-0, pp. 213-226,	2012
5.	Prof. Prakash C. Dhara	Assessment of nutritional status of Tripuri and Uchai tribal students based on anthropometric measurements in South Tripura, India. In: Capacity Building of students in higher education with special reference to tribal students in Tripura, A. Chakraborty (Ed.) ,	Tribal Research and Cultural Institute, Govt. of Tripura	pp 146-153,	2012

Number of papers published in peer reviewed journals (national / international)

SL No.	Name of the Faculty	Title of the Research paper	Name of Journal	Nation al/ Intern ational	Impact Factor	Citat ion Inde x
2012 – 13						
1.	Prof. Somenath Roy	Das, S., Chakraborty, S. P., Hati, A. K., Roy, S. Malaria treatment fails with novel mutation in <i>Plasmodium falciparum</i> dihydrofolate reductase (<i>pfdhfr</i>) gene in Kolkata, West Bengal, India.	International Journal of Antimicrobial Agents. 41(5): 447-451. 2013.	International	4.128	
2.	Prof. Somenath Roy	Chattopadhyay S, Dash SK, Kar Mahapatra S, Tripathy S, Ghosh T, Das B, Das D, Pramanik P, Roy S. Chitosan modified cobalt oxide nanoparticles stimulate TNF- α mediated apoptosis in human leukemic cells.	Journal of Biological Inorganic Chemistry. (in Press) (2013).	International	3.353	
3.	Prof. Somenath Roy	Tripathy S, Das S, Roy S. Effective role of chitosan-tripolyphosphate conjugated chloroquine on <i>Plasmodium berghei</i> induced oxidative stress in kidney in mice.	Asian Pacific Journal of Tropical Medicine. (In press). 2013	International	0.50	
4.	Prof. Somenath Roy	Chattopadhyay S, Dash SK, Ghosh T, Das S, Tripathy S, Mandal D, Das D, Pramanik P, Roy S. Anticancer and immunostimulatory role of encapsulated tumor antigen containing cobalt oxide nanoparticles.	Journal of Biological Inorganic Chemistry. DOI: 10.1007/s00775-013-1044-y. 2013	International	3.353	
5.	Prof. Somenath Roy	Dash SK, Chattopadhyay S, Ghosh T, Tripathy S, Das S, Das D, Roy S. Anti-leukemic efficacy of monomeric Manganese based metal complex on KG-1A and K562 cell lines.	ISRN Oncology. Article ID 70926. 2013	International		
6.	Prof. Somenath Roy	Tripathy S, Kar Mahapatra S, Chattopadhyay S, Das S, Dash SK, Majumder S, Pramanik P, Roy S. A novel chitosan based antimalarial drug delivery against <i>Plasmodium berghei</i> infection.	Acta Tropica. DOI: 10.1016/j.acta tropica.2013.07.011 2013.	International	2.787	
7.	Prof. Somenath Roy	Chattopadhyay, S., Dash, S. K., Ghosh, T., Das, D., Pramanik, P., Roy, S. Surface modification of	Cancer Nanotechnology. 4; 103-	International		

		cobalt oxide nanoparticles using phosphonomethyl iminodiacetic acid followed by folic acid: a biocompatible vehicle for targeted anticancer drug delivery.	116. 2013			
8.	Prof. Somenath Roy	Tripathy S, Das S, Dash SK, Chattopadhyay S, Roy S. The impact of nanochloroquine on restoration of hepatic and splenic mitochondrial damage against rodent malaria.	<i>Journal of Nanoparticles</i> . Article ID 106152 , 9 Pages, doi: 10.1155/2013/106152. 2013	International		
9.	Prof. Somenath Roy	Chakraborty, S. P., Sahu, S. K., Pramanik, P., Roy, S. <i>In vitro</i> antimicrobial activity of nanoconjugated vancomycin against drug resistant <i>Staphylococcus aureus</i> .	International Journal of Pharmaceutics. 436(1-2): 659-676. 2012	International	3.350	
10.	Prof. Somenath Roy	Naiyer M. M., Saha, S., Hemke, V., Roy, S. , Singh, S., Musti, K. V., Saha, B. Identification and characterization of a human IL-10 receptor antagonist	Human Immunology. 74(1): 28-31. 2012	International	2.837	
11.	Prof. Somenath Roy	Devendra, S., Karat, R.S., Halder, S., Roy, S. , Swamy, R., Patel, R., Saha, B. Monocyte CD-40 expression in head and neck squamous cell carcinoma.	Human Immunology. 74(1):1-5. 2013	International	2.837	
12.	Prof. Somenath Roy	Chakraborty, S. P., Roy, S. <i>In vitro Staphylococcus aureus</i> -induced oxidative stress in mice murine peritoneal macrophages: A dose-dependent approach. ,	Asian Pacific J of Tropical Biomedicine (In press)	International		
13.	Prof. Somenath Roy	Das, S., Chakraborty, S. P., Tripathy, S., Hati, A. K., Roy, S. The novel quadruple mutations in dihydropteroate synthase genes of <i>Plasmodium falciparum</i> in West Bengal, India.	Tropical Medicine & International Health, 17(11): 1329-1334. 2012	International	2.795	
14.	Prof. Somenath Roy	Chakraborty, S. P., Gautam, N., Kundu, P. K., Roy, S. Age associated oxidative damage in RBC and serum of humans.	Asian Pacific J of Tropical Biomedicine, 2 (1): S268-S274. 2012	International		
15.	Prof. Somenath Roy	Das, S., Chakraborty, S. P., Hati, A. K., Roy, S. Association between prevalence of chloroquine resistance and unusual mutation in <i>pfmdr-1</i> and <i>pfcr1</i> gene in India.	American Journal of Tropical Medicine & Hygiene, 88(5): 828-834. 2012	International	2.592	
16.	Prof. Prakash C. Dhara	Manna I., Khanna G.L, and Dhara P.C.: Effect of training on	J. of Sports Science and	International		

		morphological, physiological and biochemical variables of Under 23 years soccer players.	Engineering, 7(1):51-59. 2013			
17.	Prof. Prakash C. Dhara	Mukherjee R and Dhara P.C. : Daily Physical Activity: The Link to Physical Fitness, Cognition and Academic Performance in Bengali (Indian) Adolescents of Rural and Urban Areas.	J. Biol. Chem. Research. 30(2): 748-763. 2013	National		
18.	Prof. Prakash C. Dhara	Pal A., De S., Sengupta P., Maity P. and Dhara P.C. : Relationship of body compositional and nutritional parameters with blood pressure in adults.	J Hum Nutr Diet. (DOI:10.1111/jhn.12180). 2013	National	1.972	
19.	Prof. Prakash C. Dhara	Pal A., De S., Sengupta P., Maity P., Dhara P.C. : An investigation on prevalence of anemia in relation to BMI and nutrient intake among adult rural population of West Bengal, India.	Epidemiology, Biostatistics and Public Health. (DOI: 10.2427/8915) . 2013	National		
20.	Prof. Prakash C. Dhara	Mukherjee R. and Dhara P. C. : Blood pressure of healthy rural and urban Bengali (Indian) adolescent females: impact of daily life physical activity and association with adiposity.	Journal of Universal Pharmacy and Life Sciences 3(4):1-17, 2013	International		
21.	Prof. Prakash C. Dhara	Pal A., De S., Sengupta P., Maity P., Goswami S., Dhara P.C. : Re-evaluation of WHO-defined BMI cutoff value for defining overweight and obesity in the Bengalee (Indian) population.	Mediterr J Nutr Metab, 6:31-37. 2013	National		
22.	Prof. Prakash C. Dhara	Deb P. and Dhara P. C. : Anthropometric measurements and undernutrition: a case on school children of south Tripura, India.	Journal of Life Sciences. 5(1):47 -51, 2013.	National		
23.	Prof. Prakash C. Dhara	Dhara P. C. , De S., Sengupta P., Maity P., Pal A.: An Ergonomic Approach for Designing Indian Traditional Vegetable Cutter.	Accepted for publication in Work journal (In press)	National		
24.	Prof. Prakash C. Dhara	Dutta S and Dhara P. C. : Evaluation of Nutritional Status of Rural Bengalee Primary School Boys (6-9 Years) in Comparison to Indian Children.	Journal of Child Health and Nutrition for 2: 131-142, 2013	International		
25.	Prof. Prakash C.	Pal A., Goswami S., Maity P.,	HWWE-	Interna		

	Dhara	Dhara P. C.: Evaluation of Postural and Physiological Stresses of the Women Workers Engaged in Rice Cultivation in West Bengal, India. International Conference on Ergonomics and Human Factors,	2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, 4-6 December, 2013	tional		
26.	Prof. Prakash C. Dhara	Manna s. and Dhara P. C. : An evaluation of cognitive skill of primary school children in relation to age and sex. International Conference on Ergonomics and Human Factors,	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, 4-6 December, 2013	International		
27.	Prof. Prakash C. Dhara	Maity P. , Pal a. and Dhara P. C. : Evaluation of work related musculoskeletal disorder and postural stress of brick kiln workers during performing brick making tasks. International Conference on Ergonomics and Human Factors,	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, 4-6 December, 2013	International		
28.	Prof. Prakash C. Dhara	Banejee M., Sengupta P., Dhara P. C.: Variation of direction of motion stereotype between male and female in Bengalee (Indian) population for common control-displays. International Conference on Ergonomics and Human Factors,	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University,	International		

			Midnapore, 4–6 December, 2013			
29.	Prof. Prakash C. Dhara	Parvin B. , Chatterjee M. and Dhara P. C.: Relationship of body compositional parameters with different age related changes in preadolescent girls in High Madrasha. International Conference on Ergonomics and Human Factors.	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, 4–6 December, 2013	International		
30.	Prof. Prakash C. Dhara	Chatterjee M. , Maity A., Parvin B. , and Dhara P. C.: Evaluation of center of gravity of adult Bengali population in relation to gender and age. International Conference on Ergonomics and Human Factors.	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, 4–6 December. 2013	International		
31.	Prof. Prakash C. Dhara	Mahata H. , Sinha, M. ,De S., and Dhara P. C.: Effect of radiofrequency radiation emitted by a mobile phone on human cardiovascular system. International Conference on Ergonomics and Human Factors.	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, 4–6 December. 2013	International		
32.	Prof. Prakash C. Dhara	1. Mukherjee R. and Dhara P. C. : Does daily life physical activity influence body fat percentage and mediate changes in academic performance of adolescents? International	HWWE-2013, organized by Department of Human Physiology	International		

		Conference on Ergonomics and Human Factors.	with Community Health, Vidyasagar University, Midnapore, 4-6 December. 2013			
33.	Prof. Prakash C. Dhara	Dhara P. C.: An ergonomics study on design consideration of brick dice. Silver Jubilee Conference of the Physiological Society of India (PHYSICON-2013),	Organised by Kamineni Institute of Medical Sciences, Narketpally (AP), 9-11 Dec. 2013 (Silver Jubilee lecture).	National		
34.	Prof. Prakash C. Dhara	Goswami S., Pal A., Dhara P.C.: Evaluation of work related musculoskeletal disorder and postural stress among female cultivators engaged in post harvesting tasks.	Indian Journal of Biological Sciences, 12: 16-25. 2012	National		
35.	Prof. Prakash C. Dhara	Maity P., Pal A., Dhara P. C.: Evaluation of Work Related Musculoskeletal Disorder and Postural Stress of Brick Kiln Workers during Performing Different Brick Making Tasks. International Conference on Ergonomics and Human Factors.	HWWE-2013, organized by Department of Human Physiology with Community Health, Vidyasagar University, Midnapore, West Bengal, on 4th-6th December, pp-103.2013	International		
36.	Prof. Prakash C. Dhara	Dutta S and Dhara P. C. Evaluation of Different Sitting Postures of Rural Primary School Boys in the Classroom.	Journal of Ergonomics, 2: 1-7. 2012	National		
37.	Prof. Prakash C. Dhara	Dhara P. C., Josef a. B., Ghosh, A. K.: Biomechanical approaches for assessing the occupational stress of coal mine workers. (Invited lecture).	100th session of Indian science Congress, (Section: Medical Sciences	National		

			including Physiology), Calcutta University, Kolkata, Jan. 2013			
38.	Prof. Prakash C. Dhara	Dhara P. C.: Food as a killer as well as healer (Invited lecture). Seminar on 'science for shaping the future of India',	Organized by Indian Science Congress Association (Kolkata Chapter) and Ramnagar College, Ramnagar, March. 2013	National		
39.	Prof. Prakash C. Dhara	Manna I., Khanna G.L, and Dhara P.C.: Effect of Training on body composition, lipid and lipoprotein profile of young Soccer Players.	100th session of Indian science Congress, (Section: Medical Sciences including Physiology), Calcutta University, Kolkata, Jan. 2013	National		
40.	Prof. Prakash C. Dhara	Maity P., Pal A., and Dhara P. C: Comparative evaluation of musculoskeletal disorders among the postures adopted by the female workers engaged in craft work.	100th session of Indian science Congress, (Section: Medical Sciences including Physiology), Calcutta University, Kolkata, Jan. 2013	National		
41.	Prof. Prakash C. Dhara	Banerjee M., Sengupta P., Mahata H., and Dhara P.: Impact of handedness on motion stereotypic response of Bengalee (Indian) population.	100th session of Indian science Congress, (Section: Medical Sciences including Physiology), Calcutta University, Kolkata, Jan.	National		

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42.	Prof. Prakash C. Dhara	Sengupta P. , De S., Parvin B., and Dhara P. C: Variation of range of motion among the population of eastern India.	100th session of Indian science Congress, (Section: Medical Sciences including Physiology), Calcutta University, Kolkata, Jan. 2013	National		
43.	Prof. Prakash C. Dhara	Pal A., Maity P. , Goswami S. and Dhara P. C: Evaluation of work related musculoskeletal disorder and postural stress of female workers during performing different rice cultivation tasks.	100th session of Indian science Congress, (Section: Medical Sciences including Physiology), Calcutta University, Kolkata, Jan. 2013	National		
44.	Prof. Prakash C. Dhara	Chatterjee M. , Manna S., Banerjee M., Sengupta P. , and Dhara P. C: Assessment of noise pollution during festival time in a municipal town: a case study.	100th session of Indian science Congress, (Section: Medical Sciences including Physiology), Calcutta University, Kolkata, Jan. 2013	National		
45.	Prof. Prakash C. Dhara	Goswami S., Pal A., Dhara P.C. Evaluation of work related musculoskeletal disorder and postural stress among female cultivators engaged in post harvesting tasks.	Indian Journal of Biological Sciences, 12:16-25. 2012	National		
46.	Prof. Prakash C. Dhara	Dhara P. C.: Manual material handling and ergonomic issues. Workshop on the application of ergonomics on the underground miners Health.	Organized by Bengal Engineering and Science University, Shibpur, Dec	National		

			12. 2012			
47.	Prof. Prakash C. Dhara	Dhara P. C.: An Ergonomic approach for designing crowbar. (Invited lead lecture) International conference on Humanizing the work and work environment,	Organized by G. B. Pant University of Agriculture and Technology, Pantnagar, 6 - 8 Dec. 2012	National		
48.	Prof. Prakash C. Dhara	Maity P., De S., Sengupta P., Banerjee M., Mahata H., Parvin B., and Dhara P. C: Evaluation of musculoskeletal disorder and postural stress of female golden thread (Jori) workers during adopting different sitting posture. International conference on Humanizing the work and work environment.	Organized by G. B. Pant University of Agriculture and Technology, Pantnagar, 6 - 8 Dec. 2012	National		
49.	Prof. Prakash C. Dhara	Sengupta P., De S., Maity P., Pal A., Banerjee M., Chatterjee M. and Dhara P. C: A comparative study of hand grip strength and body composition among the population of eastern India. International conference on Humanizing the work and work environment.	Organized by G. B. Pant University of Agriculture and Technology, Pantnagar, 6 - 8 Dec, 2012.	National		
50.	Prof. Prakash C. Dhara	Manna I., Khanna G.L, and Dhara P.C.: Effect of Training on lipid and lipoprotein profile of Indian field hockey Players of selected age groups.	International conference on Humanizing the work and work environment, Organized by G. B. Pant University of Agriculture and Technology, Pantnagar, 6 - 8 Dec. 2012	International		
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52.	Prof. Prakash C. Dhara	Dutta S. and Dhara P.C.: Evaluation of different sitting postures of rural primary school boys in the class room.	J. of Ergonomics, 2(3):1-7,2012	International		

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55.	Dr. Chandradipa Ghosh	Biswas S., P. Mukherjee, S. Kar, and C. Ghosh*. Identification of the Role of LuxS in the Regulation of Motility & the Expression of the Flagellar Structural & Functional Regulators in <i>Vibrio cholerae</i> .	Global Journal of Medical Research 12 (4):9-13. 2012	International		
56.	Dr. Chandradipa Ghosh	Mukherjee, P., S. Biswas, A. Karmakar, S. De, S. De and C. Ghosh*. Analysis of Virulence Potentials of Community Acquired <i>Staphylococcus aureus</i> , Isolated from a Slum Population of West Bengal, India.	IOSR Journal of Pharmacy. 2: 5-12. 2012	International		
57.	Dr. Chandradipa Ghosh	D Bhowmick and C Ghosh. Environmental consciousness level of school students in pataspur block, purba medinipur, west bengal.	International Journal of Social Science & Interdisciplinary Research Vol.1 Issue 7, July 2012,	International		
58.	Dr. Sujata Maiti (Choudhury)	Das S, De KK, Dey G, Pal I, Majumder A, Maiti (Choudhury) S , Kundu SC, and Mandal M. (2012) Antineoplastic and apoptotic potential of traditional medicines thymoquinone and diosgenin in squamous cell carcinoma.	PLoS ONE 7(10): e46641. doi:10.1371/journal.pone.0046641	International	4.41	
59.	Dr. Sujata Maiti (Choudhury)	Das S, De KK, Bharti R, Maiti Choudhury S , Maiti S, Mandal M. PKI 166 induced redox signalling and apoptosis through activation of p53, MAP Kinase and caspase pathway in epidermoid carcinoma.	J Exp Ther Oncol, J Exp Ther Oncol. 10(2):139-53. 2012	International		
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<u>2011 – 12</u>							
61.	Prof. Somenath Roy	Sarma U, Sareen A, Maiti M, Kamat V, Sudan R, Pahari S, Srivastava N, Roy S , Sinha S, Ghosh I, Chande G A, Mukhopadhyaya R, Saha B. Modelling and experimental analyses reveals signaling plasticity in a bi-modular assembly of CD40 receptor activated kinases.	PLoS ONE 7(7): e39898. Doi: 10.1371.	International	4.08		
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66.	Prof. Somenath Roy	Chakraborty SP, Pramanik P, Roy S . <i>Staphylococcus aureus</i> Infection Induced Oxidative Imbalance in Neutrophils: Possible Protective Role of Nanoconjugated Vancomycin.	ISRN Pharmacology. 435214, 11 pages doi:10.5402/2012/435214. 2012	International			
67.	Prof. Somenath Roy	Chakraborty, S. P., Kar Mahapatra, S., Roy, S . In vitro time dependent vancomycin resistant <i>Staphylococcus aureus</i> induced free radical generation and status of antioxidant enzymes	Toxicology Mechanisms and Methods, Vol. 22, No. 1: 9–22. 2012	International	1.033		

		in murine peritoneal macrophage.				
68.	Prof. Somenath Roy	Chakraborty, SP, Das, S, Chattopadhyay, S, Tripathy, S, Dash, SK., Pramanik, P, Roy, S. <i>Staphylococcus aureus</i> infection induced redox signaling and DNA fragmentation in T-lymphocytes: possible ameliorative role of nanoconjugated vancomycin.	Toxicology Mechanisms and Methods, 22(3): 193-204. 2012	International	1.033	
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70.	Prof. Somenath Roy	Chakraborty, S. P., Roy, S. Assessment of the quality and potability of drinking water of midnapore town and pidraloha, paschim medinipur.	International Journal of Life Sciences Biotechnology and Pharma Research, 1(1): 2250-3137. 2012	International		
71.	Prof. Somenath Roy	Chakraborty, S. P., Pramanik P., Roy, S. Protective role of nanoconjugated vancomycin against vancomycin sensitive <i>Staphylococcus aureus</i> induced oxidative stress and DNA damage.	International Journal of Pharmaceutical Sciences and Research, 3(2): 405-415. 2012	International		
72.	Prof. Somenath Roy	Das S, Chakraborty SP, Tripathy S, Hati AK, Roy S. Association between prevalence of pyrimethamine resistance and double mutation in <i>pfhfr</i> gene in West Bengal, India.	Asian Pacific Journal of Tropical Disease, 2 (1), 31–35. 2012	International		
73.	Prof. Somenath Roy	Kar Mahapatra S, Chakraborty SP, Das S, Hati AK, Roy S. Prevalence of severe chloroquine resistance associates the point mutation in <i>pfcr</i> and <i>pfmdrI</i> gene in eastern India.	Asian Pacific Journal of Tropical Disease, 1(4), 263-269. 2011	International		
74.	Prof. Somenath Roy	Bhattacharya D, Chakraborty SP, Pramanik A, Baksi A, Roy S, Maiti TK, Ghosh SK, Pramanik P. Detection of total count of <i>Staphylococcus aureus</i> using anti-toxin antibody labelled gold magnetite nanocomposites: a novel tool for capture, detection and bacterial separation.	Journal of Materials Chemistry, 21, 17273-17282 2011	International	5.099	

75.	Prof. Somenath Roy	Kar Mahapatra, S., Chakraborty, S. P., Roy, S. Immunomodulatory role of <i>Ocimum gratissimum</i> and ascorbic acid against nicotine-induced murine peritoneal macrophages <i>in vitro</i> .	Oxidative Medicine and Cellular Longevity , doi:10.1155/2011/734319. 2011	International	2.841	
76.	Prof. Somenath Roy	Chakraborty, S. P., KarMahapatra, S., Sahu, S. K., Das, S., Tripathy, S., Dash, S., Pramanik, P., Roy, S. Internalization of <i>Staphylococcus aureus</i> in lymphocytes induces oxidative stress and DNA fragmentation: possible ameliorative role of nanoconjugated vancomycin.	Oxidative Medicine and Cellular Longevity , Article ID 942123, 15 pages, doi:10.1155/2011/942123. 2011	International		
77.	Prof. Somenath Roy	Gautam, N., Chakraborty, S. P., Das, S., Kundu, P. K., Roy, S. Age associated changes in antioxidant and antioxidative enzymes in human neutrophil of different aged people.	Asian Pacific J of Tropical Biomedicine , Suppl(1): S423-S428. 2012	International		
78.	Prof. Somenath Roy	Chakraborty, S. P., Pramanik, P., Roy, S. A review on- emergence of antibiotic resistant <i>Staphylococcus aureus</i> and role of chitosan nanoparticle in drug delivery.	International Journal of Life Science and Pharma Research , 2(1): L96-L115. 2011	International		
79.	Prof. Somenath Roy	Dash, S. K., Chakraborty, S. P., Mandal, D., Roy, S. Isolation and characterization of multi drug resistant uropathogenic <i>Escherichia coli</i> from urine sample of urinary tract infected patients.	International Journal of Life Science and Pharma Research , 2(1): L25-L39. 2011	International		
80.	Prof. Somenath Roy	Chakraborty, S. P., Das, S., Pramanik, P., Roy, S. Vancomycin resistant <i>Staphylococcus aureus</i> induced oxidative stress in liver and kidney: protective role of nanoconjugated vancomycin..	Journal of Life Science and Pharma Research , 1, 60-74. 2011	International		
81.	Prof. Somenath Roy	Chakraborty, S. P., Pramanik, P., Roy, S. In vitro antibacterial activity of nanoconjugated vancomycin against plasmid mediated intraspecies and interspecies transfer of vancomycin resistance.	Journal of Basic and Clinical Physiology and Pharmacology , 22(4): 121-129. 2011	International		
82.	Prof. Somenath Roy	Chakraborty, S. P., Sahu, S. K., Pramanik, P., Roy, S. Biocompatibility of folate-	Asian Pacific J of Tropical Biomedicine ,	International		

		modified chitosan nanoparticles.	2(3), 215-219 2011			
83.	Prof. Somenath Roy	Chakraborty, S. P., KarMahapatra, S., Sahu, S. K., Pramanik, P., Roy, S. Amelioratory effect of nanoconjugated vancomycin on spleen during VRSA induced oxidative stress.	Pathology Research International, Article ID 420198, 10. 2011	International		
84.	Prof. Somenath Roy	Chakraborty, S. P., Kar Mahapatra, S., Das S., Roy, S. Alteration of some cellular function in amikacin resistant <i>Pseudomonas aeruginosa</i> transfected macrophages-a time dependent approach.	Asian Pacific Journal of Tropical Biomedicine, 1(4), 482-487. 2011	International		
85.	Prof. Somenath Roy	Tripathy S, Chakraborty SP, Roy S. <i>Superoxide radical generation mediated Plasmodium berghei infection in Swiss mice.</i>	Al Ameen Journal of Medical Sciences, 5(1), 69-81. 2011	National		
86.	Prof. P.C. Dhara	De S., Sengupta P., Maity P., Pal A., and Dhara P. C.: Age and sex variations of the index finger flexion and extension strength in adult Bengalee population.	Isokinetics and Exercise Science. 19,265-272, 2011.	National	0.609	
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90.	Prof. P.C. Dhara	Manna I., Khanna G.L, and Dhara P.C.: Morphological, Physiological and Biochemical characteristics of Indian field hockey players of selected age groups.	Al Ameen J Med Sci 4(4):323 - 333, 2011.	National		

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2010 – 11						
98.	Prof. Somenath Roy	Chakraborty, S. P., Kar Mahapatra, S., Das S., Roy, S. Alteration of some cellular function in amikacin resistant <i>Pseudomonas aeruginosa</i> transfected macrophages-a time dependent approach.	Asian Pacific Journal of Tropical Biomedicine, 1(4), 482-487. 2011	International		
99.	Prof. Somenath Roy	Chakraborty, S. P., Kar Mahapatra, S., Roy, S. Biochemical characters and antibiotic susceptibility of <i>Staphylococcus aureus</i> isolates.	Asian Pacific Journal of Tropical Biomedicine, 1(3), 212-216. 2011	International		
100.	Prof. Somenath Roy	Kar Mahapatra, S., Bhattacharjee S., Chakraborty S. P., Majumdar S., Roy S. Alteration of immune functions and Th1/Th2 cytokines balance in nicotine-induced murine macrophages: Immunomodulatory role of eugenol and <i>N</i> -acetylcysteine.	International Immunopharmacology, 11(4), 485-495. 2010	International		
101.	Prof. Somenath Roy	Chakraborty, S. P., Kar Mahapatra, S., Sahu, S. K., Chattopadhyay, S., Pramanik, P., Roy, S. Antioxidative effect of folate-modified chitosan nanoparticles	Asian Pacific J of Tropical Biomedicine, 1(2), 105-112. 2011	International		
102.	Prof. Somenath Roy	Chakraborty, S. P., Kar Mahapatra, S., Sahu, S. K., Pramanik, P., Roy, S. Antioxidative effect of folate-modified chitosan nanoparticles.	Asian Pacific J of Tropical Biomedicine, 1(1), 29-38. 2011	International	0.230	
103.	Prof. Somenath Roy	Kar Mahapatra, S., Chakraborty, S. P., Roy, S. (Aqueous extract of <i>Ocimum gratissimum</i> Linn and ascorbic acid ameliorate nicotine-induced cellular damage in murine peritoneal macrophage.	Asian Pacific Journal of Tropical Medicine, 10, 775-782. 2011	International		
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110.	Prof. P.C. Dhara	Comparative study of pulmonary function test in dust exposed working groups..	The Indian Journal of Bio Research 79 (1):17-23, 2010.	National		
111.	Prof. P.C. Dhara	Variation in age and training on selected biochemical variables of Indian hockey players	Al Ameen Journal of Medical Sciences 3(2): 128-139, 2010	National	1.033	
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		pathogenic and bioremediating <i>Pseudomonas sp.</i> Bacteria from soil.	Sciences, 64 (4): 165-74.2010			
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<u>2009 - 10</u>						
117.	Prof. Somenath Roy	Chakraborty, S. P., Sahu, S. K., Kar Mahapatra, S., Santra, S., Bal, M., Roy, S. , and Pramanik, P. Nanoconjugated vancomycin: new opportunities for the development of anti-VRSA agents.	Nanotechnology, 21, 105103. 2010	International	3. 979	
118.	Prof. Somenath Roy	Gautam N, Das S, Kar Mahapatra S, Chakraborty SP, Kundu PK, Roy S. Age associated oxidative damage in lymphocytes.	Oxidative Medicine and Cellular Longevity, 3(4), 275-282. 2010	International	2.841	
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131.	Prof. P.C. Dhara	Manna I., Khanna G.L, and Dhara P.C.: Effect of training on physiological and biochemical variables of soccer players of different age groups.	Asian Journal of Sports Medicine, 1:5- 22, 2010.	International		
132.	Prof. P.C. Dhara	Dhara P.C , De S., Pal A. , Sengupta P. and Roy S.: Assessment of hand grip strength of orthopedically challenged persons affected with upper extremity.	Journal of Life Sciences. 1(2):121-127. 2009	National		
133.	Prof. P.C. Dhara	Deb P, Deb S. K., Dhara P.C.: Evaluation of anthropometric characteristics and cardiopulmonary functions of college students in Tripura.	Indian Journal of Physiology and Allied Sciences, 63(4):101-106. 2009	National		
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135.	Dr. Sujata Maiti (Choudhury)	Antineoplastic activities of MT81 and its structural analogue in Ehrlich ascites carcinoma-bearing swiss albino mice. Sujata Maiti Choudhury , Malaya Gupta and Upal Kanti Majumder	Oxidative Medicine and Cellular Longevity 3:1, 61-70; January/February. 2010	International	2.841	

Department of Microbiology

1. Name of the Department:
MICROBIOLOGY
2. Year of establishment
2004
3. Is the Department part of a School/Faculty of the university?:
YES (SCIENCE)
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
M. Sc., Ph. D., PG-DIPLOMA
5. Interdisciplinary programmes and departments involved
i. PG-Diploma course on 'Quality control and assurance in microbial technology' is an interdisciplinary course among different departments like Botany, Physiology, Nutrition, etc.
ii. Both Microbiology & Physiology dept. applied for DBT-IPLSC programme
6. Courses in collaboration with other universities, industries, foreign institutions, etc
PG-DIPLOMA ON QUALITY CONTROL AND ASSURANCE IN MICROBIAL TECHNOLOGY
7. Details of programmes discontinued, if any, with reasons
NA
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
SEMESTER
9. Participation of the department in the courses offered by other departments
DIFFERENT DISTANCE EDUCATION COURSES

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01	01	01
Associate Professors	NIL	NIL	01
Asst. Professors	03	01	NIL
Others (Asst. Professors, Contractual)	4	01	01

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of	No. of Ph.D./M.Phil.

				Experience	students guided for the last 4 years
Prof. B. R. Pati	M. Sc., Ph. D	Professor	Agric. Microbiology	34 yrs	05/01
Dr. K. C. Mondal	M. Sc., Ph. D	Associate Professor	Medical Microbiology	16 yrs	03/03
Dr. P.K. Das Mohapatra	M. Sc., Ph. D	Assistant Professor	Industrial Microbiology	5 yrs	

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

NIL

13. Percentage of classes taken by temporary faculty – programme wise information

PG	40%
Ph D (Course Work)	

14. Programme-wise Student Teacher Ratio:

PG	7:1
Ph D (Course Work)	
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)	01	Nil	Nil
administrative staff	01	01	01

16. Research thrust areas as recognized by major funding agencies

- Microbial Enzyme
- Bioinformatics
- Fermented food
- Probiotics
- Microbial ecology

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Faculty Name	Project title	Funding agency	Amount (Rs.)
Prof. B. R. Pati	Effect of hypobaric and hyperbaric	DIPAS , DRDO [TC/288/TASK-	7.508

	environment on gastrointestinal microflora.	112(KCM)/DIPAS/2006	
	Study on the functional intestinal flora of human at high altitude	DIPAS , DRDO TC/336/TASK-160(KCM)/DIPAS/2009 dt. 09.09.09	9.93
	Production of chitinase and chitosans from shells of crustacean through bacterial fermentation	UGC, Govt. of India F.No.33-218/2007(SR) dt.06.03.2008	8.56
Dr. K. C. Mondal	Effect of hypobaric and hyperbaric environment on gastrointestinal microflora.	DIPAS , DRDO [TC/288/TASK-112(KCM)/DIPAS/2006	7.508
	Study on the functional intestinal flora of human at high altitude	DIPAS , DRDO TC/336/TASK-160(KCM)/DIPAS/2009 dt. 09.09.09	9.93
	Production of chitinase and chitosans from shells of crustacean through bacterial fermentation	UGC, Govt. of India F.No.33-218/2007(SR) dt.06.03.2008	8.56
	Biobleaching of industrial kraft pulp by xylanase from both free and immobilized bacterial cells	CSIR Ref. 38 (1234)/09/EMR –II dt. 01.12.2009	11.87
	Studies on the microbial profile and antimicrobial characteristics of Haria, a rice based fermented beverage	UGC F. No. 40 – 124 / 2011 (SR) dt. 04.07.2011	8.99
	Assessment of efficiency and antimicrobial activity of Biostadt aqua products	Biostadt India Ltd. Mumbai (Industrial project)	4.34
	Fermented foods of Ladakh region:Standardization of process	DST, CODER [Just sanctioned]	~50.0

	parameters for hygienic and quality food preparation related to the Economic development of the high altitude societies		
Dr. P. K. Das Mohapatra	Production of microbial tannase and its application in detannification of foodstuff	UGC, Govt. of India	5.67
	Assessment of efficiency and antimicrobial activity of Biostadt aqua products	Biostadt India Ltd.	4.34
DEPARTMENTAL PROJECT	Establishment of BIF center and support for research work	DBT, Govt. of India D.O. BT/BI/04/055/2001 dt. 22.09.2006	78.0
	PG Diploma in Quality Control and Assurance in Microbial Technology	UGC No. F. 14-14(B)/2012 (Inno/ASIST)	60.0 + salary for two faculties
	Support to establish DBT IPLS for Advance Research and Education	DBT BT/IPLS/02/2010	385.0 Under consideration
	Infrastructure Development Grant (NON-SAP)	UGC	20.0

Special assistance from UGC (Non-SAP) was received for *completion of 10 PhDs* within 10 years : **Rs. 20.0 Lac** and 6 RFSMS fellowships (Between 2009-12)

18. Inter-institutional collaborative projects and associated grants received			
a. National collaboration			
Faculty Name	Project title	Funding agency	Amount (Rs.)
Dr. K. C. Mondal, V.U. with Dr. S. N. Singh	Fermented foods of Ladakh region: Standardization of process parameters for hygienic and quality food	DST Govt. of India	50 lakh

DIPAS, New Delhi and Techo India University	preparation related to the Economic development of the high altitude societies		
b) International collaboration			

19. Departmental projects funded by DST FIST;UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

AICTE : 11 Lakh
UGC: 20 Lakh (Non-SAP)
DBT: 75 Lakh
Total : 106 Lakh

20. Research facility / centre with

<input type="checkbox"/> state recognition	One time grant in each year ranging from 2 to 10 Lakhs
<input type="checkbox"/> national recognition	Bioinformatics Infrastructure Facility Center (BIF)
<input type="checkbox"/> international recognition	

21. Special research laboratories sponsored by / created by industry or corporate bodies

NA

22. Publications:

Annexe-1
List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international) = 68
- Monographs
- Chapters in Books = 02
- Edited Books
- Books with ISBN with details of publishers
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
- Citation Index – range / average = 3.21
- SNIP
- SJR
- Impact Factor – range /
- Average
- H-index = 29.27

23. Details of patents and income generated
5.0 Lakh through consultancy and supervision of research projects

24. Areas of consultancy and income generated –
Bio-fertilizer, Quality Assurance of Pharmaceutical products, Fish probiotics

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:
Dr. K. C. Mondal selected for Indo-Hungarian Educational Exchange Programme

26. Faculty serving in	
a) National committees	
Faculty	National committees
Prof. B. R. Pati	UGC expert for evaluation and recommendation Major Research Project
b) International committees	
c) Editorial Boards	
Faculty	Editorial Boards
Prof. B. R. Pati	Journal of Pure and Applied Microbiology Brazilian Journal of Pharmaceutical Sciences
Dr. P. K. Das Mohapatra	Journal of Cereals and Oilseeds International Journal of genuine traditional medicine
d) any other (please specify)	

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
<ul style="list-style-type: none"> Dr. P. K. Das Mohapatra completed 21 days refresher course in Bioinformatics on Modern Biology in the year 2010. Dr. P. K. Das Mohapatra completed Saksham-IT champion training program through NME-ICT, Govt. of India in the year 2013.

28. Student projects :

<input type="checkbox"/> percentage of students who have done in-house projects including inter-departmental projects
25%
<input type="checkbox"/> percentage of students doing projects in collaboration with other universities / industry / institute
80%

29. Awards / recognitions received at the national and international level by
<ul style="list-style-type: none"> Faculty
Dr. P. K. Das Mohapatra awarded as Junior scientist in the year 2008 by National Environmental Science Academy, New Delhi – 110 019.
Dr. P. K. Das Mohapatra awarded as Environmental in the year 2009 by National

Environmental Science Academy, New Delhi – 110 019.				
Dr. P. K. Das Mohapatra awarded as Fellow of the Society for Applied Biotechnology (FSAB), India from 2011.				
• Doctoral / post doctoral fellows				
Serial No.	Name	Funding agency	Fellowship	Year
1.	Arpan Das	UGC, Govt. of India	Research Fellowship of Science for meritorious Student (RFSMS)	2009
2.	Subhadeep Mohapatra	UGC, Govt. of India	Research Fellowship of Science for meritorious Student (RFSMS)	2009
3.	Suman K. Halder	DST, Govt. India	Inspire Fellowship	2010
4.	Atanu Adak	DST, New Delhi, India	Inspire Fellowship	2010
5.	Arpita Mandal	DST, New Delhi, India	Inspire Fellowship	2010
6.	Arijit Jana	UGC, New Delhi, India	Research Fellowship of Science for meritorious Student (RFSMS)	2011
7.	Surhid R. Dutta	UGC, New Delhi, India	Research Fellowship of Science for meritorious Student (RFSMS)	2011
8.	Tanmay Paul	UGC, New Delhi, India	Research Fellowship of Science for meritorious Student (RFSMS)	2012
9.	Amrita Banerjee	UGC, New Delhi, India	Research Fellowship of Science for meritorious Student (RFSMS)	2012
Mrs. Arpita Mandal awarded First poster presentation award in International conference on Industrial Biotechnology (ICIB), 2012, organized by Panjabi University, Patiala, Punjab, India.				
Mr. Atanu Adak awarded First poster presentation award in International conference on Advances in Biotechnology and Bioinformatics (ICABB), 2013, organized by Dr. D.Y. Patil Vidyapeeth, Pune, India.				
• Students				

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:				
Sl. No.	Title of Workshops	Date	Funding Agency	No. of Participants
1	Computational Biology	6 th -7 th January 2009	Department of Biotechnology, Govt. of India	22
2	Genome Proteome Analysis	12 th -13 th January, 2009	Do	20
3	Genomics and Proteomics	2 nd -4 th September, 2009	Do	21
4	Computational and Structural Bioinformatics	8 th -10 th September, 2009	Do	30
5	Application of Bioinformatics on Modern Biology – Refresher Course	8 th -21 st March, 2010	Do	26
6	Basics on Bioinformatics	5 th -6 th October, 2010	do	-
7	Application of Support Vector Machine in Biological Science	1 st -2 nd November, 2010	do	-
8	Basics of Bioinformatics	25 th -26 th August, 2011	do	-
9	Application of R in Bioinformatics	19 th -20 th December, 2011	do	-
10	Introduction to Bioinformatics	12 th -13 th September, 2012	do	30
11	Current Trends of Biological Research at Crossroads of Science	17 th -23 rd , 2012	do	40

31. Code of ethics for research followed by the departments:

The department always followed the rules and regulation regarding the research work sanctioned by Institutional Animal Ethical Committee (Ministry of Social Justice & Empowerment Notification, 15th December 1998)

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
PG	80	30 (M:F= 11:19)		100%	
Ph.D.	31	11 (M:F= 8:3)		100%	
PG-Diploma	18	6 (M:F=5:1)		Ongoing	

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
PG	60	40	10	0
Ph.D.	80	20	0	0
PG-Diploma	100	0	0	0

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

35. Student progression :	
Student progression	Percentage against enrolled
UG to PG	90
PG to M.Phil.	10
PG to Ph.D.	20
Ph.D. to Post-Doctoral	2
Employed	
Campus selection	0
Other than campus recruitment	70
Entrepreneur	10

36. Diversity of staff	
Percentage of faculty who are graduates	
of the same university	1
from other universities within the State	2
from universities from other States	1
from universities outside the country	0

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period
NA

38. Present details of departmental infrastructural facilities with regard to	
a. Library	A good number of books (900) on Microbiology including a few journals are present in Central Library. Student can access these in the library (12 h in week days and 6 h in holidays). Apart from central library there is a mini departmental library containing essential 100 books for daily uses of the students and faculty members
b. Internet facilities for staff and students	24h Internet facility has been provided to the department by the university authority. Bioinformatics Infrastructural Facility Centre is also present in the department (DBT, Govt. of India). There is also WiFi facility in the department

a)	Total number of class	10 (ten).
b)	Class rooms with ICT facility	ICT facility is available in each room
c)	Students' laboratories	4(four)
d)	Research laboratories	4(four)

39. List of doctoral, post-doctoral students and Research Associates		
A. from the host institution/university:		
	Sl.No.	Name of the Doctoral Students
	1.	Barun Kumar Dey
	2.	Arpita Mondal
	3.	Suman Kumar Halder
	4.	Atanu Adak
	5.	Akhil Pandey
	6.	Sudipta Ray
	7.	Arijit Jana
	8.	Dipak Kumar Sahoo
	9.	Suhid Ranjan Dutta
	10.	Partha Sarathi Das
	11.	Arpan Das
	12.	Kuntal Ghosh
	13.	Amrita Banerjee
	14.	Tanmay Paul
	15.	Monami Chakraborty
	16.	Kanishendra Nath Sarkar
	17.	Suchismita Roy
	18.	Arpita Patra
	19.	Tithi Adhya
	20.	Prasenjit Barman
	21.	Bidhan Chandra De
	22.	Mithu Jana
	23.	Mousumi Ray
	24.	Arindam Ganguly
B. from other institutions/universities		
Nil		

40. Number of post graduate students getting financial assistance from the university:
Nil

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
<ul style="list-style-type: none"> Require number of faculty members to cover-up semester based syllabus in time. Infrastructural facilities are required for both students and teachers. Advancement of the laboratory for frontier research.

- A few sophisticated instruments are required for research.

42. Does the department obtain feedback from

A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, Department always taking the feedback, from the faculties for developing curriculum as well as teaching learning evaluation systems through appointing specialized Guest Teachers according to the curriculum and development of learning system through introduction of unit test and seminar by the students. Special coaching is provided for the academically weak students.

B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, feedbacks from the students are taken confidentially through a sheet prepared by the University authority. Different suggestions (appreciation and weakness) marked by the students are rectified through consultation among faculty members. If necessary more unit test are taken for improvement of the writing skill of the students.

C. alumni and employers on the programmes offered and how does the department utilize the feedback?

43. List the distinguished alumni of the department (maximum 10)

Sl.No.	Name	DESIGNATION	ADDRESS
1.	Subhasis Das	Scientist	The Energy and Resources Institute, Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi - 110 003,
2.	Dipak Bhargava	Assistant Professor	National Medical College, Post Box No. 78, Birgunj, Nepal
3.	Arnab Pramanik	PDF	Jadavpur University, Kolkata 700032
4.	Samiran Sona Gauri	PDF	IIT Kharagpur, Kharagpur, Paschim Midnapur, West Bengal 721302
5.	Pinaki Mandal	PDF	National Brain Research Centre, Gurgaon Dist. Haryana-122 051, India
6.	Chiranjit Maity	PDF	Jawaharlal Nehru University, JNU New Campus, JNU Ring Rd, New Delhi- 110067
7.	Amal Maji	Manager R&D	Ulysses Pharmaceuticals Pvt. Ltd, Kolkata-700029
8.	Subrata Pandit	Scientist	Olive Life sciences Pvt. Ltd, Bangalore-560 092
9.	Bidush Kanti Das	SRF	IIT Kharagpur, Kharagpur, Paschim Midnapur, West Bengal 721302
10.	Suman Kumar Halder	SRF	Department of Microbiology, Vidyasagar University

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

- Special lecture delivered by the eminent Scholar/Professors of both national and international repute.
- Students are prepared for participation in workshop (Poster and Abstract writing). Each and every students have to give seminars in presence of two external experts on different modern aspects (20 marks has been allotted)

45. List the teaching methods adopted by the faculty for different programmes:

- Classes taken through dust free board wok, overhead and LCD projector.
- Seminars through power point projection.
- Putting objective questions.
- Group discussion.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Showing the performance of the students during preparation of poster for workshop, individual seminar, performance in unit test.

47. Highlight the participation of students and faculty in extension activities.

The faculty members, research scholars and students of the Department have been devoting their tireless effort to create an environmental awareness regarding different contagious diseases to the local people in a regular interval of time. Recently, a severe diarrheal outbreak occurred in Tebagaria and Jamuria villages in the PS. Keshpur, District of Paschim Midnapore, West Bengal during July, 2013. About 300 villagers were hospitalized with diarrheal symptoms. The water samples were collected from the disease affected area and overall quality including microbial load (total bacteria, coliform and selective identification) BOD and antibiotics sensitivity test were carried out, and the result conveyed to the medical team for better treatment of the infected patient as well as an initial preventive measure advised to the villagers by the department. [Ref: BRSI News Letter Vol. 10 (4) October 2013].

48. Give details of “beyond syllabus scholarly activities” of the department:

- Organization of seminars on advanced topic. by the students
- Arrangement of Extension/special lectures by distinguished Scientists and Professors.
- Visit to Industry and research institute to gain practical knowledge and interest..

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

NA

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Department of Microbiology, Vidyasagar University has continuously taking the effort to contribute both in basic and applied areas of Microbiology. Among the different areas of research, the remarkable contribution of the department are on microbial enzymes (amylase, tannase, xylanase, chitinase, cellulase, keratinase, alkaline protease), intestinal

microbial ecology, probiotics, fermented foods, bioinformatics and nanotechnology. A few particular new findings are i. High titer tannase from Gram positive bacteria *Bacillus subtilis*, ii. Cadmium and lead bioremediation by microbial consortium, iii. Mosquitocidal chitinase from *Aeromonas hydrophila*, iv. Poultry feather lysate as plants growth promoting agent, v. Cellulosic bioethanol, vi. Gut microbial diversity of hypo and hyperbaric habitat etc. (www.newsrx.com).

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Sl.No	Strengths	Weaknesses	Opportunities and Challenges
1.	Persuasion of advanced research in Industrial enzymes like amylase, xylanase, tannase, cellulase, proteases, chitinase etc.	Rural area	Large scale production of different industrially important enzymes through gene cloning.
2.	Analytical and Microbial study of Fermented foods.	Faculty Strength	Lab to land and industry
3.	Research on intestinal microflora.	Shortage of space area	Environmental awareness to the society against microbial contaminations.
4.	Initiation of Bioinformatics research work	Inadequate Infrastructural facility	Development of traditional low cost health drinks.
5.	PG-Diploma on Quality control and assurance in microbial technology	Quality of students	Good infrastructure development for both teaching and research.

52. Future plans of the department.

- To organize Refresher Course for college & University teachers on 'Bioinformatics & New horizon in Biology'.
- Expansion of molecular biology laboratory
- Plan for obtaining DRS from UGC and FIST from DST.
- Expansion of our consultancy support to different industries

Annexure I
List of Publication

YEA R	AUTHORS	WORK	JOURNAL/ BOOK	ISSN/ ISBN NO.	H- INDEX	IMPACT FACTOR	CITATION INDEX
2008	Mandal A, Kar S, Das Mohapatra PK, Maity C, Pati BR & Modal KC.	Xylanase production under submerged fermentation by newly isolated <i>Bacillus cereus</i> BSA1: Parametric optimization of cultural conditions.	J. Pure Appl. Microbiol., 2: 155-160.	0973-7510	4	0.1	
	Kar S, Mandal A, Das Mohapatra PK, Samanta S, Pati BR & Modal KC.	Production of xylanase by immobilized <i>Trichoderma reesei</i> SAF3 in Ca-alginate beads.	J. Ind. Microbiol. Biotechnol., 35: 245-249	1367-5435	62	2.416	17
	Mandal SM, Ghosh AK, Pati BR & Das AK	Detection of trivalent arsenic [As (III)] complex with DNA: a	Toxicological & Environmental Chemistry 91: 1-5	02772248	20	0.66	4

		spectroscopic investigation					
	Mandal SM, Pati BR, Das AK & Ghosh AK	Characterization of a symbiotically effective Rhizobium resistant to arsenic: isolated from the root nodules of Vigna mungo (L.) Hepper grown in an arsenic contaminated field	Journal of General and Applied Microbiology. 54:93-99	00221260	32	0.82	11
2009	Bandopadhyay P & Das Mohapatra PK.	Effect of a probiotic bacterium <i>Bacillus circulans</i> PB7 in the formulated diets: on growth, nutritional quality and immunity of Catla catla (Ham.).	Fish Physiol Biochem., 35: 467 – 478.	0920-1742	47	1.607	21
	Samanta S, Kar S, Jana M, Maity C, Das Mohapatra PK, Pati BR & Modal KC.	Study of the potentialities of immobilized bacterial α -amylase on coconut coir, a smart carrier for biocatalysts.	Biocat. Biotrans., 27: 131-135.	1024-2422	29	0.895	4
	Maity C, Das Mohapatra PK, Pati BR & Modal KC.	A simple gel detection method of microbial tannin acyl hydrolase (EC. 3.1.1.20).	World J. Microbiol. Biotechnol., 25: 733-735.	0959-3993	44	1.214	2
	Das Mohapatra PK, Mondal KC & Pati BR.	Effect of amino acids on tannase biosynthesis by <i>Bacillus licheniformis</i> KBR6.	J. Microbiol. Immunol. Infec., 42: 172 – 175.	1684-1182	34	1.411	3
	Das Mohapatra PK, Maity C, Rao RS, Mondal KC & Pati BR.	Tannase production by <i>Bacillus licheniformis</i> KBR6: Optimization of submerged culture conditions by Taguchi DOE methodology.	Food Res. Inter., 42: 430 – 435.	0963-9969	67	2.899	32
	Maity, C., Rana, S., Pati, B. R., and Mondal, K. C.	Effect of graded hyperbaric atmospheric pressure on the quantity and composition of fecal flora.	Microbial Ecology in Health and Disease. 21 (2), 104-108	1651-2235			2
	Gauri, S. S., Mandal, S. M., Mondal, K. C., Dey, S., and Pati, B. R.	Enhanced production and partial characterization of an extracellular polysaccharide from newly isolated <i>Azotobacter</i> sp. SSB81.	Bioresource Technology, 100 (18), 4240-4243	0960-8524	128	4.750	24
2010	Mandal B, Dasgupta D, Das Mohapatra PK & Deb B.	Quality assurance of fish finger with special emphasis on its microbial effect.	Asian J. Sci. Tech., 3: 55-60.	0976-3376			

	Maji S, Dandapat P, Ojha D, Maity C, Halder SK, Das Mohapatra PK, Pati BR, Samanta A & Mondal KC.	In vitro antimicrobial potentialities of different solvent extracts of ethnomedicinal plants against clinically isolated human pathogens.	J. Phytol., 2: 57-64.	2075-6240.			11
	Das Mohapatra PK, Pati BR & Modal KC.	Diversity of tannase producing bacteria in the forest soil of <i>Shorea robusta</i> Gaertn.f., Paschim medinipur, W.B., India.	Ind. J. Bio. Sci. 17: 56-59.	0972-8503.			
	Bhargava, D., Shakya, B., Mondal, K. C., and Rijal, B. P.	Emergence of penicillin resistant <i>Neisseria gonorrhoeae</i> .	Journal of Institute of Medicine, 32 (1), 15 – 18.	1993-2979			
	Maiti, S., Patra, S., Nandi, D., Bandyopadhyay, B., Mondal, K. C., and Pati, B. R.	Tuberculosis: Studies on role of gender, age and drug addiction in eastern part of india.	SAARC Journal of Tuberculosis, Lung Diseases & HIV/AIDS, VII(2), 1 –9.	1815-7920			1
2011	Patil DB, Das SK, Das Mohapatra PK & Nag A.	Physico-chemical studies and optimization of gallic acid production from the seed coat of <i>Terminalia belerica</i> roxb.	Ann. Microbiol., 61: 649-654.	1590-4261	18	1.549	1
	Mandal A, Kar S, Das Mohapatra PK, Maity C, Pati BR & Modal KC.	Purification and Characterization of an Endoxylanase from the Culture Broth of <i>Bacillus Cereus</i> BSA1	Appl. Biochem. Microbiol., 47: 250-255.	0003-6838	17	0.689	4
	Maity C, Samanta S, Halder SK, Das Mohapatra PK, Pati BR, Jana M & Mondal KC.	Isozymes of α -amylases from newly isolated <i>Bacillus thuringiensis</i> CKB 19: Production from immobilized cells.	Biotechnology and Bioprocess Engineering., 16: 312-319.	1976-3816	24	1.277	5
	Barman P, Banerjee A, Bandyopadhyay P, Mondal KC & Das Mohapatra PK.	Isolation, identification and molecular characterization of potential probiotic bacterium, <i>Bacillus subtilis</i> PPP 13 from <i>Penaeus monodon</i> .	Biotechnology, Bioinformatics and Bioengineering. 1(4):473-482.	2249-9075.			
	Bhargava, D., Kar, S., Shivapuri, J. N., Shakya, B.,	Screening of antigonorrhoeal activity of some medicinal	International Journal of Pharma and Bio Sciences, 2 (1), B	0975-6299		0.67	

	Maity, C., and Mondal, K. C.	plants in Nepal.	204 – 212.				
	Gauri, S. S., Archana, S., Mondal, K. C., Pati, B. R., Mandal, S. M., and Dey, S.,	Removal of arsenic from aqueous solution using pottery granules coated with cyst of <i>Azotobacter</i> and portland cement: Characterization, kinetics and modeling.	Bioresource Technology, 102 (10), 6308-6312.	0960-8524	128	4.750	4
	Mandal, S. M., Gauri, S. S., Dey, S., Mondal, K. C., and Pati, B. R.,	Effect of Arsenic on nodulation and nitrogen fixation of Blackgram (<i>Vigna mungo</i>).	Indian Journal of Microbiology, 51 (1), 44 – 47.	1976-3794	17	0.457	1
2012	Mondal A, Kar S, Das Mohapatra PK, Maity C, Pati BR & Mondal KC.	Regulation of xylanase biosynthesis in <i>Bacillus cereus</i> BSA1.	Applied Biochem and Biotechnol. 167:1052-1060.	0273-2289	56	1.879	2
	Sahoo DK, Das A, Thatoi HN, Mondal KC & Das Mohapatra PK.	Keratinase production and biodegradation of whole chicken feather keratin by newly isolated bacterium under submerged fermentation.	Applied Biochem and Biotechnol. 167:1040-1451.	0273-2289	56	1.879	7
	Das A, Ghosh U, Das Mohapatra PK, Pati BR, Mondal KC.	Study on thermodynamics and adsorption kinetics of purified endoglucanase (CMCase) from <i>Penicillium notatum</i> NCIM NO-923 produced under mixed solid-state fermentation of waste cabbage and Bagasse.	Brazilian Journal of Microbiology. 43: 1103-1111.	1517-8382	27	0.684	3
	Pati F, Datta P, Adhikari B, Dhara S, Ghosh K & Das Mohapatra PK.	Collagen scaffold derived from fresh water fish origin and their biocompatibility.	Biomedical Materials Research: Part A., 100A: 1068-1079.	1552-4965	78	3.044	8
	Jana A, Maity C, Halder SK, Das Mohapatra PK, Pati BR & Mondal KC.	Rapid screening of tannase producing microbes by using natural tannin.	Brazilian Journal of Microbiology. 1080-1083.	1517-8382	27	0.684	
	Maity C, Ghosh K, Halder SK, Jana A, Adak A, Das Mohapatra PK, Pati BR & Mondal KC.	Xylanase isozymes from the newly isolated <i>Bacillus</i> sp. CKBx1D and optimization of its deinking potentiality	Applied Biochemistry and Biotechnology. 167:1208-1219.	0273-2289	56	1.879	4

Jana A, Maity C, Halder SK, Mondal KC, Pati BR & Das Mohapatra PK.	Tannase production by <i>Penicillium purpurogenum</i> PAF 6 in solid state fermentation of tannin rich plant residues following OVAT and RSM.	Applied Biochemistry and Biotechnology. 167:1254-1269.	0273-2289	56	1.879	3
Banerjee A, Jana A, Pati BR, Mondal KC & Das Mohapatra PK.	Characterization of Tannase Protein Sequences of Bacteria and Fungi - an In Silico Study.	The Protein Journal., 31(4):306-327.	1572-3887	36	1.101	2
Das A, Paul T, Halder SK, Maity C, Das Mohapatra PK, Pati BR & Mondal KC.	Study on regulation of growth and biosynthesis of cellulolytic enzymes from newly isolated <i>Aspergillus fumigatus</i> ABK9.	Pol. J. Microbiol., 62(1):31-43.	1733-1331	15	0.839	
Paul T, Halder SK, Das A, Bera S, Maity C, Mandal A, Das PS, Das Mohapatra PK, Pati BR & Mondal KC.	Exploitation of chicken feather waste as a plant growth promoting agent using keratinase producing novel isolate <i>Paenibacillus woosongensis</i> TKB2.	Biocatalysis and Agricultural Biotechnology., 2: 50-57.	1878-8181	3		5
Kar S, Sonagouri S, Das A, Jana A, Maity C, Mandal A, Mohapatra PK, Pati BR & Mondal KC.	Process optimization of xylanase production using cheap solid substrate by <i>Trichoderma reesei</i> SAF3 and study on the alteration of behavioral properties of enzyme obtained from SSF and SmF.	Bioprocess and Biosystems Engineering. 36:57-68.	1615-7591	38	1.869	10
Datta P, Ghosh P, Ghosh K, Maity P, Samanta SK, Ghosh SK, Das Mohapatra PK, Chatterjee J & Dhara S.	In vitro ALP and osteocalcin gene expression analysis and in vivo biocompatibility evaluation of N-methylene phosphonic chitosan nanofibers for bone regeneration.	Journal of Biomedical Nanotechnology., 9: 870-879.	15507033	27	5.256	
Halder, S.K., Maity, C., Jana, A., Pati, B.R., and Mondal, K. C.,	Chitinolytic enzymes from the newly isolated <i>Aeromonas hydrophila</i> SBK1: Study of mosquitocidal activity.	BioControl, 57 (3):441-449	1573-8248	35	2.215	5
Maity, C., Adak, A., Pathak, T.K., Pati, B.R.,	Study of the cultivable microflora of the large intestine of the rat	J. of Microbiol Immunol and Infection, 45, 281 - 286	1684-1182	34	1.6	5

	Mondal, K.C.,	under varied environmental hyperbaric pressures.					
	Bhargava D, Shivapuri J N, Kar S, Pandit BR, Sidhiqie A, Upadhyay A, Thakur Shikha, Mondal K C	Evaluation of antigonorrhoeal activity of saponins extract of Sapindus Mukorossi Gaertn.	Research Journal of Pharmaceutical, Biological and Chemical Sciences, 3 (2), 459-470.	0975-8585	5	0.35	
	Mondal, K. C., Bhargava, D., Shivapuri, J. N., Kar, S.	In vitro Antigonorrhoeal Activity and Extraction of Chemical Constituents from the Leaves of Chromolaena odorata (Lin.) Locally Known as 'BANMARA'.	International Journal of Chemical and Analytical Science. 3(7), 1487-1495.	0976-1209			
2013							
	Das A, Paul T, Halder SK, Jana A, Maity C, Das Mohapatra PK, Pati BR & Mondal KC.	Production of cellulolytic enzymes by <i>Aspergillus fumigatus</i> ABK9 in wheat bran-rice straw mixed substrate and use of cocktail enzymes for deinking of waste office paper pulp.	Bioresource Technology., 128: 290-296.	0960-85224	128	4.98	2
	Jana M, Maity C, Samanta S, Pati BR, Islam SS, Das Mohapatra PK & Mondal KC.	Salt-independent thermophilic α -amylase from <i>Bacillus megaterium</i> VUMB 109: an efficacy testing for preparation of maltooligosaccharides.	Industrial Crops and Products., 41: 386-391.	09266690	51	2.64	3
	Halder SK, Maity C, Jana A, Das A, Paul T, Das Mohapatra PK, Pati BR & Mondal KC.	Proficient biodegradation of shrimp shell waste by <i>Aeromonas hydrophila</i> SBK1 for the concomitant production of antifungal chitinase and antioxidant chitosaccharides.	International Biodeterioration and Biodegradation., 79:88-97.	0964-8305	51	2.059	2
	Paul T, Das A, Mandal A, Jana A, Maity C, Adak A, Halder SK, Das Mohapatra PK, Pati BR & Mondal KC.	Effective dehairing properties of keratinase from <i>Paenibacillus woosongensis</i> TKB2 obtained under solid state fermentation	Waste Biomass Valor.	1877-2641	7	1.9	4
	Das A, Paul T,	Bioconversion of rice	Industrial Crops and				

Jana A, Halder SK, Ghosh K, Maity C, Das Mohapatra PK, Pati BR & Mondal KC.	straw to sugar using multienzyme complex of fungal origin and subsequent production of bioethanol by mixed fermentation of <i>Saccharomyces cerevisiae</i> MTCC 173 and <i>Zymomonas mobilis</i> MTCC 2428.	Products., 46: 217-225.	09266690	51	2.64	1
Ghosh K, Maity C, Adak A, Halder SK, Jana A, Das A, Parua S, Das Mohapatra PK, Pati BR & Mondal KC.	Ethnic preparation of a rice based fermented beverage Haria in the province of lateritic West Bengal, India.	Ethnobotany Research and Applications., Accepted.	1547-3465	11	2.64	
Halder S.K., Adak A., Maity C., Jana A., Das A., Paul T., Ghosh K., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Exploitation of fermented shrimp-shell hydrolysate as functional food: Assessment of antioxidant, hypocholesterolemic and prebiotic activities.	Ind. J. of Experimental Biology., Accepted.	0975-1009	44	1.295	
Das A., Paul T., Halder S.K., Jana A., Ghosh K., Maity C., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Low cost single-step purification of endoglucanase from <i>Aspergillus fumigatus</i> ABK9.	Ind. J. of Experimental Biology., Accepted.	0975-1009	44	1.295	
Maity C., Adak A., Halder S.K., Jana A., Ghosh K., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Analysis of alteration of gut microbial population under the exposure of graded hyperbaric pressures: Application of metagenomic approach.	Ind. J. of Experimental Biology., Accepted.	0975-1009	44	1.295	
Adak A., Parua S., Maity C., Ghosh K., Halder S.K., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Potentialities of two newly isolated <i>Lactobacillus</i> sp. for curd preparation and a comparative study of its physico-chemical parameters with other marketed curds.	Ind. J. of Experimental Biology., Accepted.	0975-1009	44	1.295	
Hossein S.M., Das Mohapatra P.K.	DNA compression and security techniques based on palindrome searching.	Ind. J. of Applied Research., 3: 107-110.	2249-555X		0.8215	
Hossein S.M., Das Mohapatra P.K., De D.	DNA Compression algorithm based on R ² techniques.	J. of Bioinformatics and Intelligent Control., Accepted,	2326-7496			

Jana A., Maity C., Halder S.K., Das A., Pati B.R., Mondal K.C., Das Mohapatra P.K.	Structural characterization of thermostable, solvent tolerant, cytosafe tannase from <i>Bacillus subtilis</i> PAB2.	Biochemical Engineering Journal., 77:161-170,	1369-703X		2.89	
Das A., Jana A., Paul T., Halder S. K., Ghosh K., Maity C., Das Mohapatra P. K., Pati B. R., Mondal K. C.	Thermodynamics and kinetic properties of halostable endoglucanase from <i>Aspergillus fumigatus</i> ABK9.	Journal of Basic Microbiology., 53: 1-10.	1521-4028	29	1.198	
Jana A., Maity C., Halder S.K., Mondal K.C., Pati B.R., Das Mohapatra P.K.	Enhanced tannase production by <i>Bacillus subtilis</i> PAB2 with concomitant antioxidant production.	Biocatalysis and Agricultural Biotechnology., Accepted.	1878-8181.	3		
Paul T., Das A., Mandal A., Halder S.K., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Production and purification of keratinase using chicken feather bioconversion by a newly isolated <i>Aspergillus fumigatus</i> TKF1: Detection of valuable metabolites.	Biomass Conversion and Biorefinery., Accepted	2190-6815.			1
Halder S.K., Maity C., Jana A., Ghosh K., Das Mohapatra P.K., Pati B.R., Mondal K.C. (2013).	Chitinases biosynthesis by immobilized <i>Aeromonas hydrophila</i> SBK1 by prawn shells valorization and application of enzyme cocktail for fungal protoplast preparation.	Journal of Bioscience and Bioengineering., Accepted	1389-1723	64	1.737	
Hossein S.M., De D., Das Mohapatra P.K.	DNA compression & security based on reverse technique.	Journal of Bionanoscience., Accepted.	1557-7910		0.351	
Adhikari A., Sarker K., De Roy M., Bhattacharya I., Mandal T., Das Mohapatra P.K., Dutta S.	Siderophore mediated antagonism of fluorescent <i>Pseudomonads</i> against soil borne plant pathogens, West Bengal, India.	African Journal of Microbiology Research., 7(39): 4689-4700.	1996-0808	7	0.613	

Paul T., Das A., Mandal A., Halder S. K., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Biochemical and structural characterization of a detergent stable alkaline serine keratinase from <i>Paenibacillus woosongensis</i> TKB2: A potential additive for laundry detergent.	Waste Biomass Valor.,	1877-2641	7	1.9	1
Paul T., Das A., Mandal A., Halder S. K., Das Mohapatra P.K., Pati B.R., Mondal K.C.	Valorization of chicken feather waste for concomitant production of keratinase, oligopeptides and essential amino acids under submerged fermentation by <i>Paenibacillus woosongensis</i> TKB2	Waste Biomass Valor.,	1877-2641	7	1.9	2
Hossein SM, De D & Das Mohapatra PK.	DNA compression algorithm based on complement sequences.	Int. J. of Computer Engg. & Application, Accepted.	2321-3469		2.849	
Paul T, Das A, Mandal A, Halder SK, Jana A, Maity C, Das Mohapatra PK, Pati BR & Mondal KC.	An efficient cloth cleaning properties of a crude keratinase combined with detergent: towards industrial viewpoint.	J. of Cleaner Production. Accepted.	0959-6526	59	3.87	
Mandal A., Das K., Roy S., Mondal K.C., Nandi D.K.	In vivo assessment of bacteriotherapy on acetaminophen induced uremic rats	Journal of Nephrology.26(01), 228-236	1121-8428	45	2.04	
Maji S, Maity C., Halder S. K., Paul T., Kundu P. K., Mondal K. C.	Studies on drug sensitivity and bacterial prevalence of UTI in tribal population of Paschim Medinipur.	Jundishapur Journal of Microbiology, 6 (1), 42-46	20083645	4	0.5	
Mandal A., Paul T., Roy S., Mandal S., Pradhan S., Mondal K. C. and Nandi D. K.	Effect of newly isolated <i>Lactobacillus ingluviei</i> ADK10, from chicken intestinal tract on acetaminophen induced oxidative stress in Wistar rats.	Indian Journal of Experimental Biology, 51, 174 – 180	0975-1009	44	1.295	1
Adak A., Maity C., Ghosh K., Pati BR., Mondal K. C.	Dynamics of predominant microflora in human gastrointestinal tract and change in the luminal enzymes and immunoglobulin	Folia Microbiologica 58:523–528	00155632	27	0.791	

		profile during high altitude adaptation.					
	Mandal A., Mandal S., Roy S., Patra A., Pradhan S., Das K., Paul T., Mondal K C., Nandi DK.	Assessment of efficacy of a potential probiotic strain and its antiuremic and antioxidative activities.	e-SPEN J. [Eur. Society for Clinical Nut. and Metabol.], 8, e155-163				
	Jana HK., Zaman S., Shankhadeep C., Prosenjit P., Mondal KC., Mitra A.	Spatio-temporal variation of stored carbon in <i>Porteresia Coarctata</i> along the East and West coasts of India.	J. of Eng. and Management Sci. 4(3)				

BOOK CHAPTER - 2

1. Das Mohapatra P.K., Mondal K.C. and Pati B.R. **(2012).** Application of immobilized microbial cells for enzyme production with special reference to tannase. In: Thatoi H.N. and Mishra B.B. (ed) *Microbial Biotechnology: Methods and Applications*, Narosa, pp 20-32. ISBN: 978-81-8487-131-9.

2. Das Mohapatra P.K., Mondal K.C. and Pati B.R. **(2013).** Tannin – an effective agent against HIV–1. In: Thatoi H.N. and Mishra B.B. (ed) *Advances in Biotechnology*, Studium Press LLC, pp 419-428. ISBN:1-626990-13-1.

Department of Physics and Technophysics

1. Name of the Department:			
Physics & Technophysics			
2. Year of establishment			
1989			
3. Is the Department part of a School/Faculty of the university?:			
Science Faculty			
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)			
M.Sc., Ph.D.			
5. Interdisciplinary programmes and departments involved			
Nil			
6. Courses in collaboration with other universities, industries, foreign institutions, etc			
Nil			
7. Details of programmes discontinued, if any, with reasons			
Special Paper 'Opto-Electronics' is not offered since 2006 due to insufficient teaching staff.			
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:			
Semester System			
9. Participation of the department in the courses offered by other departments			
<p>Dr. S. Saha delivered lectures in PhD course work offered by electronics department of Vidyasagar University. Dr. S. Saha and Dr. K. Chattejee also take classes in Chemistry department of Vidyasagar University. Prof. P.C. Jana takes classes in Electronics department of Vidyasagar University almost in each semester.</p> <p>Students participate in the Spoken English programme run by the Department of English of this University. Students also participate in the computer training programme organized by computer science center of Vidyasagar University.</p>			
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	02	02	03(01- CAS)
Associate Professors	00	00	00
Asst. Professors.	04	02	02
Others (Asst. Professors, Contractual)	01	01	01

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Prof. P. K. Mahapatra	M.Sc, Ph.D	Professor	Solid State Physics	28yrs	6
Prof. P. C. Jana	M.Sc, Ph.D	Professor	Solid State Physics	22 yrs	3
Prof. R. R. Pal	M.Sc, Ph.D	Professor	Electronics	18yrs	4
Dr. S. Saha	M.Sc, Ph.D	Reader & Head	Solid State Physics	16 yrs	6
Dr. S. Ghosh	M.Sc, Ph.D	Asst. Professor	Solid State Physics	8yrs	3
Dr. K. Chatterjee	M.Sc, Ph.D	Asst. Professor	Nanomaterials and nanoscience		3

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Nil

13. Percentage of classes taken by temporary faculty – programme wise information

PG	20%
Ph D (Course Work)	20%

14. Programme-wise Student Teacher Ratio:

PG	110 : 6
Ph D (Course Work)	18 : 6
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)	2	2	3
administrative staff	Nil	Nil	Nil

16. Research thrust areas as recognized by major funding agencies

Funding Agency	Research Thrust Area
UGC	Nano Technology
DST	Condensed Matter Physics Electronics

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Funding Agency	Project Title	Number of Faculty with ongoing projects	Grants received
National	1. Core Shell Nanoparticles and Nanowires – the Novel Materials for Future Technology.	Dr. K. Chatterjee	17.76 Lacs (DST)
	2. Synthesis, characterization and optical properties of metal-metal and metal-dielectric core shell nanoparticles.	Dr. K. Chatterjee	2 Lacs (UGC)
	3. Blood plasma protein inorganic material /nanoparticles interaction and bio-conjugate formation	Dr. S. Saha	2 Lacs (UGC)
	4. Development of Graphene-Quantum Dot Nano Composites for Optoelectronic Applications.	Dr.S.Ghosh	19.44Lacs (DST)
International	Nil	Nil	Nil
Total Grants received :41.20 Lacs			

18. Inter-institutional collaborative projects and associated grants received
a) National collaboration b) International collaboration

2. a) National collaboration:

Nil

3. b) International collaboration -

Nil

19. Departmental projects funded by DST FIST; UGC SAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

- a. DST-FIST – 60L (2006-2009)
- b. UGC SAP – 57.8L (2009-2014)
- c. UGC Infrastructure Development Grant –
 - 1. 10Lacs - 2008
 - 2. 20Lacs - 2009
 - 3. 20Lacs - 2011

20. Research facility / centre with

<input type="checkbox"/> state recognition	XRD Facility which is available in the Department is fully utilized not only by the Department but also the departments of other Universities/Institutions of the State.
<input type="checkbox"/> national recognition	NA
<input type="checkbox"/> international recognition	NA

21. Special research laboratories sponsored by / created by industry or corporate bodies

NA

22. Publications:

Annexe-1**List of Publications in last five (5) years**

- Number of papers published in peer reviewed journals (national / international) =
- Monographs = NA
- Chapters in Books = NA
- Edited Books = NA
- Books with ISBN with details of publishers = NA
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) = NA
- Citation Index – range / average =
- SNIP =
- SJR =
- Impact Factor – range / Average = 2.5
- H-index =

23. Details of patents and income generated

NA

24. Areas of consultancy and income generated –

NA

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

Name of the Faculty	Name of the laboratories / institutions / industries	Year of visit	Duration
Dr. Surajit Ghosh	NanoScience Technology Center, University of Central Florida, Orlando, Florida.	2008	1 Year
Dr. Kuntal Chatterjee	Surface and Nano Science Division, Institute of Physics, Academia Sinica, Taiwan	2009 2012	2 months 2 months
Dr. Satyajit Saha	Integrated Optoelectronics Laboratory, IIT Madras	2012	7 days
Dr. P. K. Mahapatra	WBUT	2010	2 Year

26. Faculty serving in

Name of faculty	Serving in Editorial Boards / any other
Pof. R. R. Pal	Member of Editorial Board : Lecture Notes on Photonics and Optoelectronics (LNPO, ISSN 2301-3753) Foreign Countries visited : (1) Worked as Conference Chair and presented paper in the <i>1st International Conference on Microelectronics, Optoelectronics and Nanoelectronics (ICMON 2012), IPCSIT, Shanghai, China</i> during August 25-26, 2012. (2) Worked as Programme Chair and presented paper in the <i>2nd International Conference on Microelectronics, Optoelectronics and Nanoelectronics (ICMON 2013), IPCSIT, Beijing, China</i> during Sept. 01-02, 2013.
Dr.K.Chatterjee	Reviewrs Committee ; Elsevier Journal Doctoral Commiittee: VITS University, Vellore, Tamilnadu
Dr. S. Saha	Presented Paper in the International IEEE Conference SOPO, 2012, held at Sanghai, China

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

1. Dr S. Saha attended the refresher course “Recent Development in Nanoscience and Technology” (13 September – 4 October, 2010) organized by UGC Academic staff College, Jadavpur University, Kolkata
2. Dr K.Chatterjee attended the orientation programs (11June-9July, 2011) organized by Calcutta University.
3. Dr S. Saha visited Integrated Optics Laboratory, IIT Madras for field work (24-31January, 2012) under UGC-SAP Programme.
4. Dr. S. Ghosh attended “Science and Technology for Rural Societies” training programme (20-31August, 2012) organized by Lal Bahadur Shastri National Academy of Administration, Mussoorie, Uttarakhand.
5. Dr. K. Chatterjee attended the refresher course “Perspective of physics” (3-21December,2012) organized by Jadavpur University, Jadavpur, Kolkata

28. Student projects :

☐ percentage of students who have done in-house projects including inter-departmental projects

85%

☐ percentage of students doing projects in collaboration with other universities / industry / institute

15%

29. Awards / recognitions received at the national and international level by	
Faculty	1 BOYSCAST Fellowship Award to Dr. S. Ghosh in 2008
Doctoral / post doctoral fellows	
Students	

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

Seminar	Year	Funding Agency
Workshop on Physics (Hons) Practical Syllabus	2009	UGC
Special Lectures on Relativistic Quantum Mechanics by Prof. A.K. Roy, Visvabharati University,	2010	UGC
National Workshop on Electron Dynamics in Quantum Systems (NWEDQS)	2010	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
One day seminar on “Nano Science and Technology”	2010	UGC
National Workshop on Quantum Perspective of Advanced Materials (QPAM-11),	2011	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
National Seminar on Recent Trends on Novel Materials (RTNM-11),	2011	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
National Workshop on Physics of Quantum and Nano Systems (PQNS-12)	2012	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
National Workshop on Electron Dynamics in Magnetic Materials (EDMM-2013)	2013	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
Workshop on Learner Support System in Distance Education	2013	DEC, N. Delhi
Eminent Speakers: Prof. P.N.GHOSH, Prof. A.TARAFDAR, Prof. S.K.ROY		

31. Code of ethics for research followed by the departments:
Yes, as per UGC (ethics for research)

32. Student profile programme-wise:					
Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Sc (regular)	500	40	15	13	7.5
M.Sc (Distance)	160	60	40	40	25

Ph.D.	44	10	02	23	5
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33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Sc. (regular)	80%	18%	2%	Nil
M.Sc. (D.D.E)	50%	45%	5%	Nil
Ph.D.	80%	18%	2%	Nil

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

NET	GATE	SET	Civil Service Exam	Defense Service Exam
25	35	2	Nil	Nil

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	10%
PG to M.Phil.	--
PG to Ph.D.	25%
Ph.D. to Post-Doctoral Employed	15%
Campus selection	1%
Other than campus recruitment	50%
Entrepreneur	1%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	16.5%
from other universities within the State	67%
from universities from other States	16.5%
from universities outside the country	NIL

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

Nil

38. Present details of departmental infrastructural facilities with regard to	
a. Library	A Departmental Library was developed with the financial support of DST- FIST and UGC- SAP. Nearly thousands of books were procured for this library. Reading room facility is also available there. The book selves and Photo copy machine were procured under the grant of UGC Infrastructure Development Grant – 2008 and 2009.
b. Internet facilities for staff and students	Internet facility is also established for students and as well as for the research scholars of the department . The internet facility in the computer lab was established under Linux operating system, to minimize the network virus problem. Department has also been procured a licensed Red Hat Linux operating system under the grant of UGC Infrastructure Development Grant – 2008 and 2009. The department was the first in the University where a wireless network was established under the grant of UGC Infrastructure Development Grant – 2008. All computers of the department under wireless networking system and under restricted Wi-Fi facility.
c. Total number of class	05
d. Class rooms with ICT facility	Three class room were equipped with ICT facility using UGC Infrastructure Development Grant – 2008, 2009,2011. Satyendranath Bose Seminar Hall is one of them. All room is equipped with ceiling mount LCD Projector, automatic screen etc. One interactive LCD projector and sound system was installed in one class room. Prof. Satyndranath Bose Seminar Hall was equipped with digital podium with computer sound system and interactive white board.
e. Students' laboratories	The Laboratories for the students is as follows: <ul style="list-style-type: none"> i. One electronics Laboratory for First – Second semester students of 30ft X 20ft with air-conditioning. ii. Two Advanced Laboratories for First – Second semester students of 09ft X 20ft. iii. Two electronics Laboratories for Third - Fourth semester students(electronics special) of 09ft X 20ft. iv. Two Solid State Laboratories for Third - Fourth semester students(Solid State special) of 10ft X 20ft. v. One Computer Laboratory with wireless networking system and internet facility.
f. Research laboratories	i. A material research laboratory was

	<p>established under UGC Infrastructure Development Grant – 2009 with wi-fi internet facility and wireless networking system and air conditioning.</p> <p>ii. A XRD laboratory was established under UGC Infrastructure Development Grant – 2009. Later on the laboratory was more furnished under UGC Infrastructure Development Grant – 2011</p> <p>iii. A chemical analysis laboratory was established under UGC Infrastructure Development Grant – 2011 with most updated double distilled water plant, fume chamber and oven.</p> <p>iv. Prof. R. R. Pal , Dr. S. Saha, Dr. S. Ghosh and Dr. K. Chatterjee are also running research laboratory in their own sitting room.</p>
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39. List of doctoral, post-doctoral students and Research Associates			
a. from the host institution/university:			
b. from other institutions/universities			
Doctoral student		Post doctoral student	Research Associate
Home University	Other University	Nil	Nil
Sankalpita Chakrabarty	Arnab Pal		
Saikat Maity			
Tusar Kanti Jana			
Koushik Chakraborty			
Poulomi Das			
Amit Kumar Bhunia			
Kamal Bera			
Swadesh Ranjan Bera			
Rahul Bhattacharya			
Rajib Pradhan			
Gopal Hait			
Sandip Giri			
Tapas Ghosh			
Tapan Kumar Das			

40. Number of post graduate students getting financial assistance from the university:
30 (Half and Full free studentship)

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
<p>Physics department was the first to start Semester System in Vidyasagar University. Syllabus was adjusted according to the new system. For introducing new syllabus we follow the UGC guidelines, consult the syllabus of other universities. We discuss intensively among the faculty members in the Departmental Committee meeting. We make the final syllabus with the help of experts of other universities.</p>

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
Feedbacks are regularly taken from the faculty including guest teachers. Feedbacks are discussed in the meeting of Department Committee to improve the teaching-learning.
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Students' feedback is regularly taken regarding these matters and always their problems are considered seriously.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
Their suggestions are always utilized.

43. List the distinguished alumni of the department (maximum 10) :
<ol style="list-style-type: none"> 1. Dr. Dilip Kumar Jana Scientist, CERN Project , <u>Switzerland</u> 2. Dr. Surojit Ghosh Assistant professor Vidyasagar University 3. Dr. Sk. Sayed Ali Assistant professor Dept. of Physics Jadavpur University 4. Dr. Sourav Giri Associate Professor Department of Solid State Physics Indian association for the Cultivation of Science 5. Dr. Bijoy Krishna Das Assistant Professor ESB 332A Department of Electrical Engineering IIT Madras, 6. Dr. Sourav Sil Assistant Professor Dept. of Earth, Ocean and Climate Sciences <u>IIT Bhubaneswar</u> 7. Dr. Arun Kumar Mukhopadhyay Assistant Professor CORAL Indian Institute of Technology Kharagpur, Kharagpur - 721302, INDIA 8. Dr. Siddheswar Maikap Assistant Professor Department of Electronic Engineering Chang Gung University, Tao-Yuan Taiwan 333, Republic of China 9. Dr. Uttam Bhunia

<p>Scientist Variable Energy Cyclotron Centre 1/AF, Bidhan Nagar Kolkata – 700064, India</p> <p>10. Lakshmikanta Bera Research Scientist at Institute for Infocomm Research Singapore</p> <p>11. Dr. Sutanu Mangal Kalinga Institute of Industrial Technology, Chandrasekharapur, Bhubaneswar, Orissa 751024</p>
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44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

Special lectures

Prof. D. P. Duari, Director M P Birla planetarium
 Prof. K. L. Jadav, IIT, Roorkee
 Prof. T.K. Nath, IIT, Kharagpur
 Prof. Anup K. Ghosh, Varanasi Hindu University
 Prof. Bijoy K. Das, IIT Chennai
 Prof. U. Pal of BUPA, Mexico.
 Prof. A. Chakrabarty, Kalyani University
 Prof. A. Taraphder, Mentor Mandi IIT
 Prof. D. P. Bhattacharya, Jadavpur University
 Prof. S. Mukhopadhyaya, Burdwan University

Seminar	Year	Funding Agency
Workshop on Physics (Hons) Practical Syllabus	2009	UGC
Special Lectures on “Relativistic Quantum Mechanics” by Prof. A.K. Roy, Visvabharati University,	2010	UGC
One day seminar on “ Nano Science and Technology ”	2010	UGC
Special Lecture by Dr. D. P. Duari on “Mysteries of Universe”	2011	UGC
Special Lectures by Prof. U. Pal, Instituto de Fisica, Mexico on “ZnO nano structure and their defect studies”	2012	UGC
Special Lectures by Prof. Bijoy Kumar Das, IIT Madras, on “Optical wave guide devices based on Si”	2013	UGC
Workshop on Learner Support System in Distance Education	2013	DEC, N. Delhi

45. List the teaching methods adopted by the faculty for different programmes:

- The department has adopted the modern teaching methods in lieu of the conventional chalk-duster system. Every class room and seminar room was equipped with LCD Projector with automatic screen, interactive white board.
- Most of the faculty uses the LCD projector for classes.
- Students have to submit a project to complete their studies with the help of interactive LCD projectors.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Through Internal Assessments and Seminars students' performance are constantly monitored and necessary remedial measures are advised.

47. Highlight the participation of students and faculty in extension activities.

*** Participation in NSS, Seminars and Workshops by students.**

Seminars/workshops	Year	Funding Agency
Special Lectures on Relativistic Quantum Mechanics by Prof. A.K. Roy, Viswabharati University,	2010	UGC
National Workshop on Electron Dynamics in Quantum Systems (NWEDQS)	2010	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
One day seminar on “ Nano Science and Technology ”	2010	UGC
National Workshop on Quantum Perspective of Advanced Materials (QPAM-11) ,	2011	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
National Seminar on Recent Trends on Novel Materials (RTNM-11) ,	2011	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
National Workshop on Physics of Quantum and Nano Systems (PQNS-12)	2012	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC
National Workshop on Electron Dynamics in Magnetic Materials (EDMM-2013)	2013	S. N. Bose National Centre for Basic Sciences; Centre of Theoretical Studies, IIT, Kharagpur; UGC

Students also fully participate in NSS programme regularly.

*** Participation of Faculty in Seminars and Workshops as resource persons.**

Name of Faculty	Seminar / Workshop	Year
Dr. S. Saha	“Workshop on Proposal for the restructuring of U.G. Courses” at V.U.	2009
	ICFANT-2010, at J.U.	2010
	National Seminar on “Modern Trends in Higher Education” at V.U.	2011
	SOPO 2012 at Sanghai, China	2012
	“National Conference on Condensed Matter Physics” at NIT Rourkela.	2013

48. Give details of “beyond syllabus scholarly activities” of the department:

(1) Worked as Conference Chair in the *1st International Conference on Microelectronics*,

Optoelectronics and Nanoelectronics (ICMON 2012), IPCSIT, Shanghai, China during August 25-26, 2012.

(2) Worked as Programme Chair in *2nd International Conference on Microelectronics, Optoelectronics and Nanoelectronics (ICMON 2013), IPCSIT, Beijing, China during Sept. 01-02, 2013.*

(3) Prof. P .K. Mahapatra and Dr. S. Saha were invited speakers in the conference entitled ‘Concept of Nanoscience and Biotechnology in college levels’ organized by Narajole Raj College, Narajole.

(4) Prof. P. K. Mahapatra delivered lectures on ‘Quantum theory of light and spontaneous emission’ in NIT Silchar during 27-28 December, 2013.

(5) Dr. K. Chatterjee delivered lectures on ‘The new perspective of Materials Science’ in Kharagpur college on 24th November 2013.

(6) Prof.P.C.Jana delivered lectures on ‘Perspective of Nanotechnology’ in Tamralipta Mahavidyalaya, Tamluk on March-2013.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department was evaluated as a part of accreditation of the university in 2008.

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Significant works are going on in the Department, specially in the fields of 1. Nano Technology, 2. Condensed Matter Physics

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:	<ul style="list-style-type: none"> • Coherent effort for the development of the Department • Good relation between Faculty and Non-teaching Staff • Good relation between Faculty and Students • Good relation between Students and Non-teaching Staff • Modern XRD Facility for material characterization
Weaknesses:	<ul style="list-style-type: none"> • Insufficient Faculty Strength • Insufficient Non-teaching Staff • Insufficient Space Students laboratory • Insufficient Space research laboratory • Insufficient Instrumental Facility
Opportunities:	<ul style="list-style-type: none"> • To organize the Department more efficiently • To develop the laboratory • To arrange special lectures by eminent scholars more frequently • To organize seminars and workshops more regularly • To collaborate with IIT KGP which is very close to the University
Challenges:	<ul style="list-style-type: none"> • To run the department smoothly with insufficient faculty and non-teaching staff • To run the classes and laboratory with larger number of students

	<p>and insufficient space</p> <ul style="list-style-type: none"> • To improve the research laboratory facilities • To enable students to qualify more national level exams like NET • To motivate students to do research work and PhD scholars to do post doc.
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52. Future plans of the department.
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- | |
|---|
| <p>a. To start M. Phil program.</p> <p>b. A refreshers course</p> |
|---|

Annexure-I

List of Publications

Type of Journals	Number of papers published
International Journals	85
National Journals	15
Total: 100	

Department of Remote Sensing and GIS

1. Name of the Department:
Department of Remote Sensing and GIS
2. Year of establishment
2003
3. Is the Department part of a School/Faculty of the university?:
Faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)
PG and Ph. D.
5. Interdisciplinary programmes and departments involved
No
6. Courses in collaboration with other universities, industries, foreign institutions, etc
Nil
7. Details of programmes discontinued, if any, with reasons
Nil
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester
9. Participation of the department in the courses offered by other departments
No

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	Nil	Nil	Nil
Associate Professors	Nil	Nil	Nil
Asst. Professors	2	2	2
Others (Asst. Professors, Contractual)	2	1	1

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years

Dr. Asish Kr. Paul	M. A., Ph. D.	Professor	Physical Geography	23	10
Dr. Jatisankar Bandyopadhyay	M. Sc., M. Phil, Ph. D.	Asst. Professors	Remote Sensing and GIS	7	7
Dipanwita Dutta	M. Sc.	Asst. Professors	Remote Sensing and GIS	1	Nil
Dr. Abhisek Chakrabarty	M. Sc., Ph. D.	Asst. Professors (Contractual)	Remote Sensing and GIS	8	8

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Nil

13. Percentage of classes taken by temporary faculty – programme wise information

PG	30%
Ph D (Course Work)	40%

14. Programme-wise Student Teacher Ratio:

PG	1 : 15
Ph D (Course Work)	1 : 8
special	

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual

	sanctioned	filled	actual
academic support staff (technical)		01 (Contractual)	
administrative staff			

16. Research thrust areas as recognized by major funding agencies

Nil

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Name	Title of the project	Duration	Funding Agency	Amount Sanctioned (Rs.)
Dr. A. K. Paul & Dr. J. Bandyopadhyay (Co-Principal Investigator)	Hydro-Biology and Geomorphology of Subarnarekha and Kasai River Basin and their Interfluves”.	(2010-2012).	Central Pollution Board, Calcutta. V	42,000,00
Dr. A.K.Paul & Dr. J. Bandyopadhyay (Co-	Hydrogeological study of subsurface water	2011-12	Funded by Government	25,000,00

Principal Investigator)	flow/storage characteristic for creation of sustainable source on rain fed river for semi-arid and fluoride affected blocks in connection with comprehensive water security plan under Purulia, Bankura and Birbhum districts’.		of West Bengal, Directorate of Public Health Engineering, office of the superintending engineer; Planning Circle-I; 18-Brabourne Road; 4 th floor; Kolkata-700001.	
Dr. J. Bandyopadhyay (Co-Principal Investigator)	Germplasm resource mapping and conservation of indigenous ornamental fishes of north-east region through remote sensing & GIS and live gene bank for rural development	2012-15	DBT	75,01,000.00
Dr. J. Bandyopadhyay (Co-Principal Investigator)	Resource Mapping, Conservation & Artificial Propagation of Fish Germplasm In Arunachal Pradesh With Emphasis on Promotion of Aquarium Fish Trade	2013-16	DBT NER TWINING PROGRAMME	118,80,234.00
Dr. Abhisek Chakrabarty	“Ecotourism Development and Poverty Alleviation: A Peaceful effort to Combat Anarchism in Jungle Mahals of West Bengal.”	2010-12	UGC Sponsored Minor Research Project	Rs. 1,85,000/-

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration b) International collaboration

a. a) National collaboration:

No

b. b) International collaboration -

No

19. Departmental projects funded by DST FIST; UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received

No

20. Research facility / centre with	
<input type="checkbox"/> state recognition	Nil
<input type="checkbox"/> national recognition	Nil
<input type="checkbox"/> international recognition	Nil

21. Special research laboratories sponsored by / created by industry or corporate bodies
Nil

22. Publications:

Annexure-I
List of Publications in last five (5) years

- Number of papers published in peer reviewed journals (national / international) =
- Monographs =
- Chapters in Books =
- Edited Books =
- Books with ISBN with details of publishers =
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) =
- Citation Index – range / average =
- SNIP =
- SJR =
- Impact Factor – range / =
- Average =
- H-index =

23. Details of patents and income generated
Nil

24. Areas of consultancy and income generated –
Public Health Engineering, Pollution Control Board, Govt. of West Bengal (Rs. 6,20,000/-)

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

26. Faculty serving in

a) National committees :	Dr A.K.Paul-Vice President of Indian Institute of Geomorphologists
b) International committees :	Nil
c) Editorial Boards :	Nil

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Name	Refresher	Orientation	Workshops	Training Programs
Dr. Asish Kr. Paul	1	Nil	Nil	Nil
Dr. Jatisankar Bandyopadhyay	1	1	Nil	Nil
Dipanwita Dutta	Nil	Nil	Nil	1
Dr. Abhisek Chakrabarty	1	1	2	1

28. Student projects :

☐ percentage of students who have done in-house projects including inter-departmental projects

☐ percentage of students doing projects in collaboration with other universities / industry / institute

Year	percentage of students who have done in-house projects including inter-departmental projects	percentage of students doing projects in collaboration with other universities / industry / institute
2008-09	65	35
2009-10	69	31
2010-11	68	32
2011-12	73	27
2012-13	81	19

29. Awards / recognitions received at the national and international level by

<input type="checkbox"/> Faculty		
<input type="checkbox"/> Doctoral / post doctoral fellows		
<input type="checkbox"/> Students		
Name Of the Student	National Award	International Award

Ismail Mondal	Nil	Special consolation Prize - student category at XXXIII INCA International Congress, held at Jodhpur, Rajasthan during 19-21 September, 2013.
Kartic Bera	Best paper presentation certificate, Wadia Memorial Award in Earth System Science section in the 101st Indian Science Congress held at University of Jammu, Jammu from February 3 to 7, 2014	Nil

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

Nil

31. Code of ethics for research followed by the departments:

Follows the UGC regulation and institutional ethics of research .

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Year	Applications received	Selected Male	Selected Female	Pass percentage Male	Pass percentage Female
M.Sc.	2008-09	134	28	16	100	100
	2009-10	149	29	15	100	100
	2010-11	132	21	20	100	100
	2011-12	144	24	13	100	100
	2012-13	151	28	12	100	100

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
2008-09	60	33	7	0

2009-10	60	32	8	0
2010-11	60	32	8	0
2011-12	60	33	7	0
2012-13	60	30	10	0

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

Serial No.	Name of the student	Category (ST/ SC/OBC/Gen)
1	Mr. Tanmoy Karan	Gen
2	Mr Amit Ghosh	Gen
3	Mr Rajdip Maity	Gen
4	Mr. Pulakesh Das	Gen

35. Student progression :

Student progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil.	NA
PG to Ph.D.	5%
Ph.D. to Post-Doctoral Employed	76%
Campus selection Other than campus recruitment Entrepreneur	

36. Diversity of staff

Percentage of faculty who are graduates of the same university	Nil
from other universities within the State	66.67
from universities from other States	33.33
from universities outside the country	Nil

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period

One (Dr. Abhisek Chakrabarty)

38. Present details of departmental infrastructural facilities with regard to

a. Library	No
b. Internet facilities for staff and students	Yes
c. Total number of class	Three
d. Class rooms with ICT facility	Two

e.	Students' laboratories	Two
f.	Research laboratories	One

39. List of doctoral, post-doctoral students and Research Associates

a.	from the host institution/university:		
	Serial no.	Name of the Student	
	1	Animesh Majee	
	2	Chhanda Day	
	3	Joyita Sinha	
	4	Kartic Bera (Regular)	
	5	Sohini Paral (Regular)	
	6	Sonali Saha (Regular)	
	7	Swati Ghosh	
	8	Swagata Bera	
	9	Dipanjan Das Majumdar	
	10	Sk. Majharul Islam (Regular)	
	11	Soma Karmakar	
	12	Ismail Mondal (Regular)	
b.	from other institutions/universities		
	Serial no.	Name of the Student	Name of the institutions/universities
	1	Md. Rajaul Gain	Institute of Ecology and Wetland Management. Govt. of W.B
	2	Bodhadyuti Khanra	Dept. of Fisheries, Govt. of W.B
	3	Srikanta Bhaya	Dept. Science and Technology, Govt. of W.B
	4	Sanjoy Mondal	Dept. Science and Technology, Govt. of W.B
	5	Somenath Maity	Jharkhand Space Application Center, ISRO, Govt. of India.
	6	Ramprasad Kundu	RRSC, Kolkata, ISRO, Govt. of India.
	7	Santanu Pani	DST, Kolkata, Govt. of W.B
	8	Atanu Ojha	Dept. of Fisheries, Govt. of W.B
	9	Priyadarshini Dutta	DST, Kolkata, Govt. of W.B
	10	Sanghamitra ghosh	Annova India, Hyderabad
	11	Pousali Talapatra	Rolta India, Mumbai
	12	Debabrata Ghorai	Airbus Industry, Hyderabad

40. Number of post graduate students getting financial assistance from the university:

0.05%

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology

The need assessment exercise was first made in the Departmental Committee meetings. The resolutions of all such meeting were then placed before the Postgraduate Board of Studies in the presence of external experts from other universities. The decision of the Board of Studies was placed in faculty Council for further discussion. It was finally placed in the Executive Council meeting for approval.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
The department utilizes the feedback to revise, upgrade and change the curriculum at regular intervals. The methods of teaching and evaluation are also changed from time to time depending on the feedback of the faculty members.
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Yes After getting the feedback the faculty members organize their lecture according to the needs.
C. alumni and employers on the programmes offered and how does the department utilize the feedback?
No

43. List the distinguished alumni of the department (maximum 10) :			
	SL NO.	Name of the student	Name of the organization
	1	Mr. Manik Mahapatra	ISRO
	2	Mr. Srikanta Bhaya	DST-Kolkata
	3	Mr. Pulakesh Das	IIT-KGP
	4	Mr. Debabrata Ghorai	ANNOVA
	5	Mr. Krishanu Achariya	ROLTA
	6	Mr. Atonu Ojha	FISHERIS

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts		
Special lecture:		
Sl No.	Name of the faculty	Designation
1	Prof. Ananda Deb Mukhopadhyay	Former Vice Chancellor, Vidyasagar University., UGC Member
2	Dr. Gopinath Saha	Retd. Director, NATMO, Govt of India.
3	Dr. Parthasarathi Chakrabarti	Retd. Chief Scientist, DST, Govt. of West Bengal.
5	Mr. Sikhendra Kisor De	Retd. Director, Geological Survey Of India, Govt of India.
6	Dr. Rabi Narayan Sahoo	Senior Scientist, Indian Agricultural Research Institute, PUSA, New Delhi.
7	Dr. Barendra Purkaisto	Former Director, GSI (Geological Survey of India)
8	Prof. Gopal Krishna Panda	Professor, Dpt. of Geographi, Utkal University, Bhubaneswar.
9	Prof. Dhrubajyoti	Retd. Professor,

	Mukhopadhyay	Dept. of Geology, Calcutta University	
10	Dr. Saroj Kr. Maity	Scientist G, Space Application Centre, ISRO, Ahmedabad	
UGC Merge Scheme			
SL NO.	Name of the resource Person/ Speaker & Designation	Date of Lecture	Topic
1.	Prof. Gopal Krishna Professor, Dept. of Geography, Utkal University, Bhubaneswar.	4th & 5th March, 2013	Application of RS & C
2.	Dr. Parthasarathi Chakrabarti Former Chief Scientist, DST, Kolkata	6th & 7th March, 2013	Application of RS & C Earth Science
3.	Dr. Barendra Purkaisto Former Director, GSI, India	19th & 20th March, 2013	Application of RS & C Sedimentology
4.	Dr. Rabi Narayan Sahoo Senior Scientist, Indian Agricultural Research Institute, PUSA, New Delhi	19th March, 2013	Application of RS & C Agriculture(Crop Ma & Modeling)
5.	Prof. Gopinath Saha Former Director General, NATMO Govt. of India	21th & 22th March, 2013	Geoinformatics Cartographic Design
6.	Prof. Ananda Deb Mukhopadhyay Former Vice Chancellor, Vidyasagar University	26th March, 2013	Application of RS & C Environment Managen

45. List the teaching methods adopted by the faculty for different programmes:

- Teaching with Power point;
- Out-door classes with direct Field visit;
- Group Discussions
- Academic Counseling
- Assignment presentation
- Learning Soft ware operation system and data base management system (RS/GIS)

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Formal and informal examinations
- Group Discussions
- Academic Counseling

47. Highlight the participation of students and faculty in extension activities.

The students participate in extension activities on regular basis through NSS. They are

actively involved in activities like, plantation, blood donation camp, awareness programs etc. The department possesses a NSS unit and we have adopted a village (name – Phulpahari) for different social activities..

48. Give details of “beyond syllabus scholarly activities” of the department:

The teachers of the department participated in different seminars and workshops. The students perform different activities like publication of wall magazine, organization of fresher’s welcome etc.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The Department was evaluated as a part of accreditation of the institute by the NAAC

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

Basically we are emphasizing the applied aspect of the natural science through upgrading the laboratory with modern equipments, introducing applied course on RS & GIS, Visiting costal area, dry land, flood plain of India for the better understanding of the nature and related problems for benefit of the research activates of the students.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:	<ul style="list-style-type: none"> • Students • Innovative Subject • Updated and Quality Teaching • Employment of Students • Student-Teacher Cooperation
Weaknesses:	<ul style="list-style-type: none"> • Student-Teacher Ratio • Lack of Well equipped laboratory • Inadequate number of software • Lack of instrument like Spectroradiometer, Leaf Area Index meter etc. • Lack of non-teaching staff
Opportunities:	<ul style="list-style-type: none"> • Efficient faculty members • Job prospect • Hard working and obedient students • Only department in West Bengal imparting regular M.Sc. degree in Remote Sensing & GIS <p>High scope of research</p>
Challenges:	<ul style="list-style-type: none"> • Faculty Strength • Collection of grant • To enhance the quality of student • Infrastructural improvement • Departmental Books and Journals Library

52. Future plans of the department.
<ul style="list-style-type: none">• Centre of Excellence• Collaboration with Indian Space Research Organization, Govt. of India• International level research and development centre

Annexure I

List of Publications

Name	Article Publication		Mono-graphs	Chapters in Books	Edited Books	Books	Books with ISBN	published	No. listed in International Database	Citation Index	SNIP	SJR	Impact Factor
	National	International											
Dr. Asish Kr. Paul	10	1	1	Nil	6	Nil	Nil						
Dr. Jatisankar Bandyopadhyay	14	1	Nil	3	Nil	Nil	Nil	acb, Prayag Pushtakalaya, DDE (VU)					
Dipanwita Dutta	Nil	5	Nil	Nil	Nil	Nil	Nil	Taylor & Francis					0.575
Dr. Abhisek Chakrabarty	12	3	Nil	3		Nil	Nil	ELSEVIER Publication	International Social Sciences Directory				0.323

Department of Zoology

1.Name of the Department:			
Department of Zoology			
2. Year of establishment			
1991			
3. Is the Department part of a School/Faculty of the university?:			
Faculty of Science			
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)			
PG, and Ph.D.			
5. Interdisciplinary programmes and departments involved			
N.A.			
6. Courses in collaboration with other universities, industries, foreign institutions, etc			
i) Faculties and Scientists from different institutions have contributed their services towards completion of syllabi of the department science the inception of the department.			
ii) Besides several collaborations have been undertaken with scientists in connection with Ph.D. program which resulted in joint publication of respective research articles.			
7. 7. Details of programmes discontinued, if any, with reasons			
N/A			
8.Examination System: Annual/Semester/Trimester/Choice Based Credit System:			
Previously annual system, but upgraded to Semester system since 2009			
9.Participation of the department in the courses offered by other departments			
Mostly in the Postgraduate department of Aquaculture, MBA, and Physiology the Departmental faculties take part in teaching.			
In the Ph.D. and consultancy program other Departments also shared their expertise.			

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)			
	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	1	4 (including CAS)
Associate Professors	2	1	(Vacant - 1)
Asst. Professors	5	5	3

Others (Asst. Professors, Contractual)	-	-	-
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11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr. Susanta Kr. Chakraborty	M.Sc., M.Phil, Ph.D., FZS (Cal).	Professor & Head	Ecology, Waste Management and Coastal Biodiversity	25 years	4
Dr. Bidhan Chandra Patra	M.Sc., Ph.D., FZS, FIFSI, FISES.	Professor	Fish Nutrition and Aquaculture	23 years	7
Dr. Jayanta Kr. Kundu	M.Sc., Ph.D.	Professor	Genetics & Molecular biology	17 years	4
Dr.Subrata Kr. De	M.Sc., M.Phil, Ph.D., FZSEI	Professor	Fisheries and Histochemistry and Ultrastructure	14 years	3
Mr.Biplab Mandal	M.Sc.	Assistant Professor	Parasitology and Immunology	12 years	0
Mrs.Priyanka Halder	M.Sc.	Assistant Professor	Freshwater Ecology, Neurobiology	11 years	0
Dr. Sagar Acharya	M.Sc., Ph.D.	Assistant Professor	Genetics, Molecular biology & Molecular Immunology	1 ½ years	0
Associate Professor		1 (vacant)			

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Sl No.	Name of the faculty	Designation
1.	Professor Jagat Ray, Banaras	Hindu University
2.	Professor U. C. Goswami,	Gwuhati University
3.	Professor S.G. Pal,	Calcutta University



13. Percentage of classes taken by temporary faculty – programme wise information	
PG	5%
Ph D (Course Work)	20%

14. Programme-wise Student Teacher Ratio:	
PG	13:1(for the general course)
Ph D (Course Work)	4:1
special	8:1

15. Number of academic support staff (technical) and administrative staff: sanctioned filled and actual			
	sanctioned	filled	actual
academic support staff (technical)	4	3	3
administrative staff	1	1	1

16. Research thrust areas as recognized by major funding agencies
Biodiversity assessment and conservation Biology: Environmental monitoring and environmental management; aquaculture development; Drosophila genetics; Molecular Immunology; Bioorganic studies.

17. Number of faculty with ongoing projects from a) national (Three) b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.		
Ongoing project titles	a. National funding agencies	b) Grants received (in Rs.)
Dr. S.K. Chakraborty:		
Impact of vermicompost produced by indigenous vermitechnology on aquaculture.	UGC, GOI	9,76,600/-
Water quality monitoring of five rivers of West Bengal viz. Kansai, Dwarkeswar, Subarnarekha, Shilabati and Rupnarayan.	WBPCB, Kolkata	38,03,000/-
Hydrobiological and geomorphological studies of Subarnarekha and Kansai river basins and their interflaves (Purulia, Bankura, Purba and Paschim Midnapore districts) with special reference to environmental management	WBPCB, Kolkata	16,01,600/-

Compilation, analysis and interpretation of water quality parameters of last five years during 2004-2010 of five rivers of West Bengal viz. Shilaboti, Rupnarayan, Subarnarekha, Dwarkeswar & Kansai	WBPCB, Kolkata	10,00,00/-
Dr. B.C. Patra		
Germplasm conservation of Endangered fish species of South – West , West Bengal	Dept of Env., WB	5,90,000/-
Germplasm resource mapping and conservation of endemic freshwater fishes of West Bengal and Sikkim through Geoinformation	DST, GOI  	39,84,000/-
Dr. S K De		
Fine structural demonstration of olfactory neuroepithelium of <i>Pseudapocryptes lanceolatus</i> (bloch and schneider) with special reference to electron enzymology and x-ray microanalysis.	UGC Major Research Project	11,41,800/-
Dr. S Acharya		
Delineating signal cascades induced by colonization factor CFA/I of enterotoxigenic <i>Escherichia coli</i> .	UGC Startup grant	6,00,000/-

18. Inter-institutional collaborative projects and associated grants received a) National collaboration b) International collaboration	
b) National collaboration:	
Dr. S.K. Chakraborty - Collaboration with Saha Institute of Nuclear Physics, Zoological Survey of India, Wetland Research Institute	
c) International collaboration -NA	

19. Departmental projects funded by DST FIST; UGCSAP/CAS, DPE; DBT ICSSR, AICTE, etc.; total grants received	
DST-FIST:	Rs. 27 lakhs

20. Research facility / centre with	
<input type="checkbox"/> state recognition	Nil
<input type="checkbox"/> national recognition	Nil
<input type="checkbox"/> international recognition	Nil

21. Special research laboratories sponsored by / created by industry or corporate bodies
Nil

22. Publications:

Annexe-1**List of Publications in last five (5) years**

- * Number of papers published in peer reviewed journals (national / international) = **69**
- * Monographs = Nil
- * Chapters in Books = **25**
- * Edited Books = **12**
- * Books with ISBN with details of publishers = Nil
- * Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) = 02
- * Citation Index – range / average * SNIP
- * SJR
- * Impact Factor – range / average * h-index

List of Publications in Annex-1

23. Details of patents and income generated
N/A

24. Areas of consultancy and income generated –PHE-9 lakhs

Consultancy Projects of Dr. S.K. Chakraborty:		
Name of the Projects	Funding Agencies	Amount (Rs. in lacs)
Environmental Impact Assessment (EIA) report of Times Ferro Alloy Limited at Borjora, Bankura, West Bengal	Octagon Consultancy Pvt. Ltd. Kolkata, W.B.	3,00,000 /-
Environmental Impact Assessment (EIA) report of Golden Casting and Ispat pvt. Ltd at Borjora, Bankura, West Bengal	Octagon Consultancy Pvt. Ltd. Kolkata, West Bengal	3,25,000/-
Environmental Impact Assessment (EIA) report of Salanpur Ferro Alloy Limited at	S. H. Engineering Pvt. Ltd. Kolkata, West	3,50,000/-

Salanpur, Bardwan, West Bengal	Bengal	
Environmental Impact Assessment (EIA) report of Himshila Ferro Alloy Private Limited at Mirjapur, Bardwan, West Bengal	S. H. Engineering Pvt. Ltd. Kolkata, West Bengal	3,00,000/-
“Hydrobiological study of sub-surface water flow/storage water characteristics for creation of sustainable source of rain fed river for semi-arid and fluoride effected Blocks in connection with comprehensive water security plant under Purulia, Bankura and Birbhum districts”.	Public Health Engineering Department, Govt. of West Bengal.	42,20,000/-

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad:

Nil

26. Faculty serving in

a) National committees b) International committees c) Editorial Boards d) any other (please specify):

Dr. S.K. Chakraborty:

National committees:

UGC project evaluation Committee
ICAR Selection Committee
UPSC Examination Committee
College Service Commission Selection Committee

Dr. B.C. Patra:

Diamond Hourbar Woman's University Executive Council Member

Dr. J.K Kundu:
member

Editorial Boards: VU journal of Science Editorial board

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Mr. B. Mandal:

UGC sponsored 2nd Refresher course in Biochemical Science at UGC Academic Staff College, University of Burdwan, with grade-A during Aug.16 to Sept.05, 2008.

Three days National Workshop on Implementation and Management of Secured Computer Network in a higher academic Institution, Org. by Computer Center, Vidyasagar University,

Midnapore. during March 22-24, 2011.

Attended Two Weeks Training course on Application of Research in Reproductive Biomedicine held at National Institute of Health and family Welfare (NIHFW), New Delhi during Oct.29-Nov.09, 2012.

7 days workshop on Current Trends of Biological Research at Crossroads of Science. Org. by Bioinformatics Infrastructure Facility (BIF) Center, Vidyasagar University, during March 17-23, 2013.

Mrs. P. Halder:

Participated in the SAM Workshop under UGC sponsored scheme entitled 'Capacity Building for Women Managers in Higher education' organised by Vidyasagar University from March 23rd to 27th, 2009.

Participated in the training programme on "Communication & Presentation skills" for women scientists, sponsored by DST at Xavier Institute of Management, Bhubaneswar during 16th-21st November 2009.

Participated in the UGC sponsored 'Training of Trainers' workshop organized by University of Kalyani during 2-9 December 2009.

Participated in MHRD sponsored 3rd Science Conclave 'A congregation of Nobel laureates' organized by IIT, Allahabad during 8th-14th December, 2010.

Attended National Seminar on 'Application of advance techniques in Biomedical laboratory science' organized by Vidyasagar University during 25th-29th March, 2011.

Attended DBT sponsored 7-day National workshop on 'Current trends of Biological Research at Crossroads of Science' organized by Bioinformatics Infrastructure Facility Center, Department of Microbiology, Vidyasagar University, during 17th-23rd May, 2013.

Completed Refresher course in Life Science organized by ASC- Calcutta University at Dept. of Zoology, CU during 22nd Nov, 2013 to 13th Dec 2013.

28. **Student projects :**

☐ percentage of students who have done in-house projects including inter-departmental projects

100%

Each year the special paper students are assigned the responsibility to complete one project in the respective spliced area as a part of their curriculum.

☐ percentage of students doing projects in collaboration with other universities / industry / institute

Nil

29. Awards / recognitions received at the national and international level by

NA

☐ Faculty

National level	Dr. S.K. Chakraborty	Identified as an expert of Environment, by the Ministry of Environment and Forest. (2008), Govt. of India.
	Mrs. P. Halder	Awarded the R.K. Sur Memorial Medal 2011 in Young Scientist category for unpublished original piece of research work in Animal Science, conferred by the Zoological Society, Kolkata.

☐ Doctoral / post doctoral fellows☐ Students

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants if any:

7 day vocational training on 'Vermitechnology and its applicability to Aquaculture, Horticulture and Sericulture' organized by D.D.E, V.U. sponsored by Distance Education Council, New Delhi, 18th to 24th March, 2013.

31. Code of ethics for research followed by the departments:

The major thrust of the research has been oriented to cater to the need of the local marginalized sectors of the society with regard to their resource utilization, environment and health management. Special emphasis has been laid not to disturb the local biodiversity resources, in the form of academic excursion, experimental studies, and lab practical works.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
PG (2008-09)		1:1.5		100%	100%
PG (2009-10)		1:2		100%	100%
PG (2010-11)		1:1.5		100%	100%
PG (2011-12)		1:1		100%	100%
PG (2012-13)	360	1:1		100%	100%
Ph.D. (2013)	35	4:1			

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from other universities outside the State	% of students from other countries
PG (2013-14)	86.7%	13.3%	-	-

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

Joint CSIR-UGC NET: 2

SSC (School Service Examination): 16

Others (Banking): 5

35. Student progression :	
Student progression	Percentage against enrolled
UG to PG	29% (2012-13)
PG to M.Phil.	Dept. does not provide M. Phil. Degree
PG to Ph.D.	33% (2012-13)
Ph.D. to Post-Doctoral Employed Campus selection Other than campus recruitment	Nil <ul style="list-style-type: none">• Nil• 40% approximately
Entrepreneur	
36. Diversity of staff	
Percentage of faculty who are graduates	
of the same university	Nil
from other universities within the State	100
from universities from other States	Nil
from universities outside the country	Nil

37. Number of faculty who were awarded M.Phil.Ph.D.D.Sc. and D.Litt. during the assessment period
NIL

38. Present details of departmental infrastructural facilities with regard to	
a. Library	Department library and central library
b. Internet facilities for staff and students	One computer lab having 600 sq ft areas with 10 PCs
c. Total number of class	Theoretical lecture room 4
d. Class rooms with ICT facility	
e. Students' laboratories	2 general, 3 special, 1 central instrumental
f. Research laboratories	7 sitting cum research laboratories

39. List of doctoral, post-doctoral students and Research Associates	
a.	from the host institution/university:
b.	from other institutions/universities

40. Number of post graduate students getting financial assistance from the university:
40% of the students were financially assisted with concession and received scholarship from the University.

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so highlight the methodology
The syllabus has been designed blending the classical with modern approach of the subject. Main emphasis is to acquaint the students with the ongoing developmental aspects of the subject so that they can be competent in extending teaching, research and social requirement.

42. Does the department obtain feedback from
A. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
In the Departmental committee meetings, thread bare discussion are being made among the faculties with regard to the status of completion of the syllabus.
B .students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
All through the session, close interactions are being made among teachers, non-teachers and students are being made in order o identify the problems relating to academic and research requirements of the department and also to find out the ways and means to overcome those constraints.
c. alumni and employers on the programmes offered and how does the department utilize the feedback?
Different alumni working in the different parts of the world keep touch with faculties and exchange their views and experience in order to academic and research standard of the dept.

43. List the distinguished alumni of the department (maximum 10) :
<ol style="list-style-type: none"> 1. Nandan Bhattacharya (Academic Staff College, Jadavpur University) 2. Chiranjib Chakraborty, (Noida) 3. Nataraj Krishnan (Associate Prof., Mississippi State University), 4. Mukti Ray (IISc, Bangalore), 5. Arup Datta, 6. Priti Pahari (Asst. Prof., Tamluk College)

7. Angshuman Chanda,
8. Ranjit Khalua, Sudipta Doloi,
9. Tapan Kr. Datta. (Panskura B,Ed. College)
10. Sujit Kisku (Asst. Prof., P.S.C.)

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts

Merged scheme of UGC has been used to involve a considerable number of leading academicians/ researchers of India for interactive sessions with the students of the department. Leading academicians was invited as visiting Professor and Guest faculties to enrich academic standard of the department.

Marge Scheme Lecturs:

Professor Ranga Reddy, Nagarjuna University
 Dr. Khetish C Majumder, CCMB, Hyderabad
 Professor Ashim Chakraborty, North Bengal University
 Dr. J.K Patterson Edward, Director, SD Marine Research Institute, Tirunelveli, Tamilnadu
 Professor Samiran Chakraborty, Kalyani University
 Professor S.K. Pramanik, Former Div. Deserter Management Officer
 Professor N.R. Chatterjee, WBUAFS, Kolkata
 Professor Hari Sankar Sharma, Pathology, ICR, Netherlands
 Professor S.D. Tripathi, Former Director CIFE
 Dr. Ramdas Chatterjee, Former Head, Dept. of VAHC, CNCI, Kolkata
 Dr. A.K Sanyal, Scientist F, ZSI, India
 Professor A.K. Duttagupta, Calcutta University
 Professor Gautam Chandra, Burdwan University
 Professor G. D. Sharma, Pro-Vice Chancellor, Shilchar University
 Professor Ananda Mukherjee, North Bengal University
 Professor Tanmay Bhattacharya, Ex Head, Vidyasagar University
 Professor Sushil Dutta, IISc, Bangalore
 Professor D Roy Chaudhuri, Calcutta University

45. List the teaching methods adopted by the faculty for different programmes:

Emphasis has been laid on laboratory and field studies alongside theoretical classroom lectures with the help of modern audio visual aids.

46.How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

The department used to conduct internal assessment examinations at certain intervals along

with rigidly adhering to the academic calendars prepared far behind the admission of the students, in order to monitor and assess the academic standard and excellence of the students teaching –learning process.

47. Highlight the participation of students and faculty in extension activities.

Several research projects have been completed after being sanctioned by National, International, Regional sponsoring agencies which have successfully involved the marginalized local people for the fruitful execution, implementation and dissemination of knowledge and technology from the University to grass root levels of the society.

48. Give details of “beyond syllabus scholarly activities” of the department:

Faculties of the department used to participate and deliver keynote address, lead lectures and Oral Presentations in different National International and other seminars and conferences. Senior faculties render services of chairing different sessions. By participating in the NSS programs and by organizing social/cultural programs, the students used to contribute and render valuable services for the social and cultural development of the area.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes give details.

The department has been evaluated as a part of accreditation of the university the the NAAC in 2008

50. Briefly highlight the contributions of the department in generating new knowledge basic or applied

By successfully completing the syllabus and curricular at the PG level and also imparting active leaders help in the completion of the UG course and curricula, the dept. is supposed to have been able to generate new knowledge- both basic and applied about the local resource based, in general and its judicious utilization involving the local people in particular.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths: Integrity among faculty, students, and non-teaching staff and officers

Weaknesses: Infrastructure facilities in respect of space, staff and research materials

Opportunities: to cater to nthe need of the society by integrating different rural biotech tools along with modern biological research development

Challenges: to make the dept as good other leading departments belonging several well estd Univs in course of time.

52. Future plans of the department.

To earn the confidence of the Intl. and National sponsoring agencies in order to develop more and more research ventures which will not only fulfill the thirst of the academic inquisitiveness of the faculty but also to develop a proper infrastructural facilities to undertake more challenging research problems in tune of the demand of the society as well as students.

Annexe-1

List of Publications in last five (5) years

Dr. Susanta Kr. Chakraborty
A. Research papers published in the Journals:
1. Hossain, M. Y. Ahmed, F. Z. Ohtomi, J. Ibrahim, A. H. Mel-kady, M. A. H. Fulanda, B and Chakraborty, S. K. (2008). Threatened fishes of the world: <i>Wallago attu</i> (Bloch and Schneider, 1801)(Siluriformes: Siluridae). <i>Journal of Environmental Biology of Fish.</i> 82 : 277-278.
2. Pradhan, P and Chakraborty, S. K. (2008). Ecological study of rotifera and its application for biomonitoring freshwater riverine environment. <i>Zoological Research in Human Welfare.</i> Paper- 31 : 289-306.
3. Bhunia, G., Pradhan, P., Chanda, G. and Chakraborty, S.K. (2008). Comparative studies of water quality parameters and plankton production after the application of different fertilizers in cemented aquaculture tank and natural water bodies in Paschim Medinipur, West Bengal. <i>Zoological Research in Human Welfare.</i> Paper- 45 : 421-432.
4. Khalua, R. K., Chakravorty, G. and Chakraborty, S. K. (2008). Community Structure of macrobenthic molluscs of three contrasting intertidal belts of Midnapore Coastal belt, West Bengal. <i>Zoological Research in Human Welfare.</i> Paper- 6 : 47-55.
5. Dey, M. K., Hazra, A. K. and Chakraborty, S.K. (2008). Diversity of microarthropods and their role in the plant litter decomposition in the Coastal tract of East Midnapore District, West Bengal, India. <i>Zoological Research in Human Welfare.</i> Paper- 20 : 189-211.
6. Halder, P., Bhunia, G., Pradhan, P., Banerjee, S. and Chakraborty, S. K. (2007). Ecological gradients determining the diversity of Zooplanktons in the wetlands in lateritic tracts of South-West Bengal. <i>Zoological Research in Human Welfare.</i> Paper- 5 : 37-46.
7. Nath, J., Banerjee, K. B. and Chakraborty, S. K. (2008). Efficacy of infeed treatment with Ivermectin (Arguclean) for eradication of <i>Argulus</i> sp in <i>Labeo rohita</i> (Hamilton). <i>Fishing Chimes.</i> 28 (2) : 17 -27.
8. Giri, S., Pradhan, P and Chakraborty, S.K (2008) .Studies on hydrobiological status of Kansai and Dwarkeswar river in West Bengal, India. <i>Journal of Indian Fisheries Society of India</i> , 40 (1) :59-64,2008
9. Pradhan, P. Giri, S and Chakraborty, S.K (2008). Zooplanktonic rotifers in river Kansai, West Bengal, India. <i>Journal of Indian Fisheries Society of India.</i> 39(2) : 43-47,2007
10. Chanda A and Chakraborty, S.K. (2008). Distribution, population and community ecology of macrobenthic intertidal polychaetes in the coastal tract of Midnapore, West Bengal, India. <i>Journal of Marine Biological Association.</i> 50 (1) : 7-16.
11. Chakraborty, B., Chanda, A.K. and Chakraborty S. K. (2008). Effect of integrated nutrient supply on growth, leaf yield and field performance of Mulberry (<i>Morus alba</i>) under semi-irrigated laterite soil condition of West Midnapore District, West Bengal. <i>Journal of Environment and Society.</i> 5(2) : 221-226.
12. Dey, M.K.; Hazra, A. K. and Chakraborty, S.K. (2008). Soil microarthropods populations in alluvial and coastal soil in Midnapore District with special reference to relative abundance. <i>Records of Zoological Survey of India.</i> 106 (part 4):13-19

13.	Mishra S.S., Acharjee S.K. and Chakraborty S.K. (2009). Development of tools for assessing conservation categories of siluroid fishes of fresh water and brackish water wetlands of South West Bengal, India. <i>Journal of Environmental Biology of Fishes</i> . 84 :395-407.
14.	Chkraborty S.K., Giri S., Chakravarty G. and Bhattacharya, N. (2009). Impact of eco-restoration on the biodiversity of Sundarbans Mangrove Ecosystem, India. <i>Water Air Soil Pollut: Focus</i> . 9 :303–320.
15.	Chakraborty, S.K. (2009) Coastal environment of Midnapore (East), West Bengal – Potential, threats and management. <i>Jour. Coast. Env.</i> 1(1) : 27-40.
16.	Dey M.K., Hazra A.K., and Chakraborty S.K. (2010). Functional role of microarthropods in nutrient cycling of mangrove-estuarine ecosystem of Midnapore coast of West Bengal, India. <i>International Journal of Environmental Technology and Management</i> . 12 (1) : 67-84.
17.	Chanda G. K., Bhunia G. and Chakraborty S.K. (2010). Evaluation of nutrient status of different organic wastes along with environmental quality in the different phases of vermicomposting by <i>Perionyx excavatus</i> Perrier. <i>Management of Environmental Quality: An International Journal</i> . 21 (3) : 368-378.
18.	Chakraborty S.K. (2010). Coastal environment of Midnapore, West Bengal: <i>Potential threats and Management</i> . <i>Journal of Coastal Environment</i> . 1(1) : 27-40.
19.	Chanda G. K., Bhunia G. and Chakraborty S.K. (2011). The effect of vermicompost and other fertilizers on cultivation of tomato plants. <i>Journal of Horticulture and Forestry</i> . 3(2) : 42-45.
B. Research papers published in edited books:	
1.	Chakraborty, C., Chatterjee, T.K. and Chakraborty, S.K. (1999). Development of indigenous larval rearing technology for the production of freshwater prawn <i>Macrobrachium rosenbergii</i> (de Man). In: Waste Recycling and Resource Management in the developing world, Edt by B.B. Jana, R.D. Banerjee, B. Guterstam and J.Heeb; (Publ. by University of Kalyani, India and International Ecological Engineering Society, Switzerland): 149-155.
2.	Bhattacharya, N. and Chakraborty, S.K. (2001) Distributional pattern of some heavy metals in the structural components of two contrasting wetlands in the vicinity of a iron extraction factory of Midnapore District, West Bengal, India. In : Ecology of Polluted Waters Edt. by A. Kumar (Publ. by Ashish Publishing Corporation, New Delhi): 287-294.
3.	Mishra, S.S., Pradhan, P., Giri, S. and Chakraborty, S.K. (2002). Environmental perturbation with regard to water quality and fishery resources of river Rupnarayan : a potential threat from a thermal power plant, West Bengal, India. In : Sustainable Development and Cold Water Fish Genetic Resources Edt. by P. Das, S.R.Verma, J.R. Dhanze and D. S. Malik; (Publ. by Natcon publication): 155-172.
4.	Pradhan, P., Mishra, S.S., Majumder, R & Chakraborty, S.K. (2003). Environmental monitoring with special emphasis on bio-monitoring-- a prerequisite for sustainable environmental management: A case study in Darkeswar river of South West Bengal, India. In: Environment Pollution and Management. Edt. by A. Kumar, C.Bhora and L.K.Sing. (Publ. by Ashish Publishing Corporation, New Delhi): 87-103.
5.	Chakraborty, S.K. (2003). Biodiversity and Conservation. In: Perspectives and Issues in Environmental Studies Edt.by A.D.Mukhopadhyay, (Publ. by Vidyasagar University): 267-286.

6. Chakravarty, G., Giri, S., Giri, S and Chakraborty, S. K. (2004). Distribution of coliform bacteria in different estuaries of West Bengal Coast, India. <i>In: Protected Habitats and Biodiversity</i> . Edt. by A. Kumar, J. R. Dhanze, A.K. Chopra and D.S. Malik, (Publ. by Natcon publication): 395-402.
7. Bhakat, R.K. Chakravarty, G., Giri, S and Chakraborty, S. K. (2004). Invasive species in Sundarbans Mangrove Ecosystem, India. <i>In: Fish Diversity in Protected Habitats</i> , Edts. by S. Ayyappan, D.S. Malik, R. Dhanze and R.S. Chauhan, (Publ. by Natcon publication): 219-240.
8. Giri, S., Chakravarty, G., Majumdar, R. and Chakraborty, S. K. (2004). Ecological Status of Jamboo Island- A Vergin Mangrove Island in South East Sundarbans, West Bengal, India. <i>In: Protected Habitats and Biodiversity</i> . Edt. By A.Kumar, J.R.Dhanze, A.K.Chopra and D.S.Malik, (Publ. by Natcon publication): 403-408.
9. Mishra, S. S., Pradhan, P. and Chakraborty, S. K. (2006). Rural development through participatory bio-resource management - case study from Midnapore District. <i>In: Perspectives of Rural Development Problems and Prospects</i> . Edt. By Rajatkanti Das et al.(Publ. Indian Anthropological Society and Department of Anthropology, Vidyasagar University).150-160.
10. Chanda, G.K., S.K. Chakraborty & B.R. Pati. (2006).Vermicomposting A new Vista in Rural Development. <i>In Perspectives of Rural Development Problems and Prospects</i> . Edt. By Rajatkanti Das et al.(Publ. by Indian Anthropological Society and Department of Anthropology, Vidyasagar University).188-194.
11. Chakraborty, S. K. (2006). Biodiversity Conservation: Issues on local faunal diversity. <i>In: Extension Strategy on Natural Resource Management</i> . Edt. by Dr. Sankar Acharya, Department of Agriculture, Bidhan Chakdra Krishi Viswavidyalaya. 523-539.
12. Chakraborty, S.K. (2011). Mangrove Ecosystem of Sundarbans, India: Biodiversity, Ecology, Threats and Conservation. <i>In. Mangroves: Ecology, Biology and Taxonomy</i> . Edt. by James N. Metras (Publ. by NOVA publishers, USA): 83-112.
C. Research papers published in proceedings:
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