



JADAVPUR UNIVERSITY

[website: jaduniv.edu.in]

SELF-STUDY REPORT

for submission to
the National Assessment & Accreditation Council

VOLUME II PART 2

DEPARTMENTS/SCHOOLS/CENTRES/SPECIAL PROGRAMMES

FACULTY OF ENGINEERING & TECHNOLOGY

JANUARY 2014

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NOTE

This is the second part of the second volume of Jadavpur University's NAAC Self-Study Report.

It contains the profiles of all the departments in the Faculty of Engineering and Technology (FET).

Some additional information, such as detailed lists of publications or seminars and conferences attended by faculty members, has been separately incorporated in a volume of annexures. These annexures will be made available, as per the NAAC guidelines, to the Peer Team on-site when they visit the university.

Department of Adult, Continuing Education and Extension

1. Name of the Department: ADULT, CONTINUING EDUCATION AND EXTENSION
2. Year of establishment: Started in 1983 as Centre, Converted to Department in 2001
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): See Annexure
5. Interdisciplinary programmes being conducted and other departments involved: Continuing Education Courses are conducted with active participation of different departments of the University.
6. Courses in collaboration with other universities, industries, foreign institutions, etc.: See Annexure
7. Details of programmes discontinued, if any, with reasons: Courses are reviewed regularly and discontinued if not suitable in the context.
8. Examination System: Annual & Semester
9. Participation of the department in courses offered by other departments: Teachers act as resource persons in courses of other departments.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	1
Associate Professor	2	1	0
Asst. Professor	2	2	2
Other	-	-	-

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

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D./M.Phil. students, last 4 years
Dr. Tandra Mitra	PhD	Professor	1. Adult Education 2. Continuing Education 3. Special Education 4. Economic Geology	20	1
Dr. P.S. Chakraborty	PhD	Assistant Professor	1. Adult Education 2. Continuing Education 3. Special Education 4. Supply Chain Management	9	1-submitted 1-ongoing
Sri Santwan Chattopadhyay	MA	Assistant Professor	1. Adult Education 2. Continuing Education 3. Mass Communication 4. Public Relations	9	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors, etc.: Guest faculties in Continuing Education Courses
13. Percentage of classes taken by temporary faculty – programme-wise information: -
14. Programme-wise Student Teacher Ratio: 1:10 for PG Diploma and Diploma Courses
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual:
Technical-1; Administrative-6
16. Research thrust areas as recognized by major funding agencies: Special Education, Adult Education.
17. Number and names 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 titles and grants received project-wise.:

- P.S. Chakraborty, "Capture and Analyze: The behavioral abnormalities of children with special needs through skill development programme" (Principal Investigator), Jadavpur University Research Grant (Rs.50,000/-), 2009.
18. Inter-institutional collaborative projects and associated grants received
 - a) National collaboration b) International collaboration: None
 19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. (Give details.): Under UGC –NFE Scheme for XI plan period

Grant of 9 to 6 lacs (Recurring)

Grant of 5 lacs (Non recurring)
 20. Research facility/centre run by the Dept./school/centre which has:
 - state recognition
 - national recognition
 - international recognition

Continuing Education Centres (Extension) recognized by UGC under UGC-NFE Scheme.
 21. Special research laboratories sponsored by / created by industry or corporate bodies: None
 22. Publications: See Annexure
 - * 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: None
 24. Areas of consultancy and income generated: None
 25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad (give details): None
 26. Faculty serving in
 - a) National committees
 - b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

Prof Tandra Mitra acted as a Member of the Consulting team of 'State Resource Centre for Adult Education, West Bengal'
 27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted:

Going to conduct one Refresher course in the month of December 2013.

Workshops are regularly organized for adult education functionaries.
 28. Student projects
 - percentage of students who have done in-house projects including inter-departmental projects: Students of PGD in Mass Communication undertake audio-visual or print

projects in their course work.

- percentage of students doing projects in collaboration with other universities / industry / institute : None

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

- Faculty
- Doctoral / post doctoral fellows
- Students (Give details)

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

See Annexure

31. Code of ethics for research followed by the department: At par with the rest of the university

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted Male Female	Pass (w.r.t. last graduating batch) Male Female
Post Graduate Diploma in Mass Communication	1140	47 75	37 60
Diploma in Fruit Processing and Customised Management	59	31 02	28 02
Diploma in Fruit Processing Nutrition and Health Care	62	35	30
Diploma in Electric al Technician	512	141 x	-
Diploma in Automobile Engineering	742	242 x	-

33. Diversity of students

Name of the Programme (refer to q. no. 4)	% of students from same university	% of students from other universities within State	% of students from universities outside the State	% of students from other countries
Post Graduate Diploma in Mass Communication	6%	92%	2%	x

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

35. Student progression : Continuing Education Courses

Student progression	Percentage against enrolled
UG to PG	
PG to M.Phil.	
PG to Ph.D.	
Ph.D. to Post-Doctoral	
Employed	
• Campus selection	
• Other than campus recruitment	
Entrepreneurs	

Note: We are not offering any PG or M.Phil course, but running many continuing education courses starting from a few weeks' to two years' duration. Each course is designed to cater to a specific segment of society to generate employment opportunities.

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	
from other universities within the State	66.66%
from universities from other States	33.33%
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 (2008 – 2013): One (Ph.D.)
38. Present details of departmental infrastructural facilities with regard to
- Library
Computers with Internet connection: 11
Books: 2000
 - Internet facilities for staff and students: Available
 - Total number of class rooms: Three
 - Class rooms with ICT facility: Three
 - Students' laboratories: One (E-learning lab)
 - Research laboratories: None
39. List of doctoral, post-doctoral students and Research Associates
- from the host institution/university: None
 - from other institutions/universities : One (Doctoral)
40. Number of post graduate students getting financial assistance from the university. (Give details.): NA
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. Regular need analysis is done for offering continuing education courses and organizing extension programmes in consultation with experts from University, other institutions, industry, local bodies & panchayats.
42. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? Yes. Courses are modified or developed on the basis of feedback data.
 - students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? Yes. Modification of curriculum and instruction mode for all continuing education programmes.
 - alumni and employers on the programmes offered and how does the department utilize the feedback? Yes. A regular activity in designing continuing education courses.
43. List the distinguished alumni of the department (maximum 10): --

Distinguished alumni of the department:

S.No.	Name	Course	Profession
1	Dr. Vece Paes	PG Diploma in Sports Medicine	Olympian Hockey player
2	Dr. Debasish Ghosh	PG Diploma in Cardiology	Medical Professional in Canada
3	Sahana Sen Roy	PG Diploma in Mass Communications	Corporate Communicator in USA
4	Annesha Ghosh	PG Diploma in Mass Communications	Journalist
5	Avik Banerjee	B.Ed. in Special Education	Special educator
6	Avisek Banerjee	PG Diploma in Mass Communications	Public Relations professional
7	Sumitra Roy	PG Diploma in Mass Communications	Journalist
8	Diganta Saha	PG Diploma in Mass Communications	Journalist

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

45. List the teaching methods adopted by the faculty for different programmes.
Class lectures in audio-visual mode, extension & field programmes, projects.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?: Regular interaction with students and teachers to assess the outcome.
47. Highlight the participation of students and faculty in extension activities: The Department is running six extension centres in and around Kolkata for non-formal education programme implementation.
48. Give details of “beyond syllabus scholarly activities” of the department.:
Teachers undertake scholarly activities outside regular programmes of the department.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.: UGC, NAAC
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
The department undertakes outreach innovative programmes for the community.
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths

- i) Flexible nature of programme implementation
- ii) Direct interaction with community
- iii) Expertise of the University
- iv) Resource generated from high-end continuing education courses.
- v) Dedication of the staff-teaching/nonteaching

Weaknesses

- i) Insufficient faculty strength
- ii) Insufficient support staff
- iii) Insufficient fund for extension activity
- iv) Insufficient space for conducting classes
- v) Frequent changes in UGC focus

Opportunities & Challenges

- i) Building awareness among the community about non-formal system of education
- ii) Sensitizing the marginalized stakeholders about the causes of their deprivation
- iii) Involving teachers of different departments in the continuing education courses run by the department
- iv) Involving students of the University in extension programmes
- v) Introducing new programmes for the physically challenged
52. Future plans of the department (in as much detail as possible):
 - i) Continuing education courses: Introducing new courses, indentifying new areas as per the changing need of the society, continuing existing courses subject to continuous evaluation.
 - ii) Special education programmes: Expanding the programmes for persons with disabilities, their care-givers, medical professionals and educators.
 - iii) Adult education: Awareness programmes, sensitization programmes, income generating skill development programmes for the marginalized.
 - iv) Material development: Printed texts, ICT material development on health awareness, women's rights, income generating course materials.
 - v) Documentation and dissemination of case studies, success stories and field related data of outreach programmes.
 - vi) Organizing workshops involving adult education functionaries and stake holders.
 - vii) Undertaking research on 'Community development' and 'special education'.

Department of Architecture

1. Name of the Department/School/Centre: ARCHITECTURE
2. Year of establishment: 1964
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): UG, PG , Ph D
5. Interdisciplinary programmes being conducted and other departments involved: Yes
Spatial & cultural studies for Kolkata, in the ETIC Programme run jointly by Jadavpur University's Department of English & Liverpool University
6. Courses in collaboration with other universities, industries, foreign institutions, etc.: Yes
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 courses offered by other departments: Yes
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	4	3	3
Associate Professor	5	4	4
Asst. Professor	6	1	1
Other			

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

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D./M.Phil. students, last 4 years
Tapas Kumar Bhattacharyya	B.Arch, M.Arch. (J.U.)	Professor	Urban Design, Architecture & Urban Design Architectural Acoustics	26	1
Subhrajit Das	B.Arch, M.S.Arch	Professor	Architecture & Education	28	2
Jayita Guha Niyogi	B. Arch., M. T. R.P., PhD	Professor	Town and Regional Planning, Transportation Planning, Integrated Land use and Traffic System	28	2 (Ongoing)
Shivashish Bose	M.Arch.(J.U) Ph.D International Architectural Conservation Course (Italy) Training received in France and Greece with Fellowship from Govt. of France and European Commission.	Associate Professor	Historic Architecture, Urban Design, Conservation, Housing for Poor, Thermal performance and energy use in buildings, Urban Hydrology, Environmental Planning, Sustainable Development	26	4 (Sole Supervisor, National students), 1 (Co-Supervisor, International student)
Madhumita Roy	B.Arch , M.Arch, Ph.D	Associate Professor	Urban Design, Housing, Energy efficient buildings	22	9

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D./M.Phil. students, last 4 years
Suchandra Bardhan	B. Arch., M. Arch. (Landscape), PhD (Engg.)	Associate Professor	Landscape Architecture	22	8
Sanjib Nag	B. Arch., M. Arch. (Urban Design), Ph.D. Eqv.(Arch.), Ph.D. (Urban Design.)	Associate Professor	Architecture, Urban Housing & Urban Design	24	1
Sri Debashish Das	B.Arch,M.Planning	Assistant Professor	Urban building micro-climate, eco-city planning	8	Nil

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

Name	Qualification			Present Occupation	Subject	Work load/ week (periods)
Sri Utpal Mitra	B.E. FIE, C.Engg (I)	-	-	Computer applications	Computer Aided Delineation (Sessional)	3
Sri Dilip Chandra Chatterjee	B.Arch.	MArch	-	Practicing Architect	Professional Practice II (Lecture)	4
Sri Basudev Dey	B.A Economics FIV, MISE (Civil Engg, M.I.C.A)	M.A (Econ.), Master of Valuation		Practicing in the field of Valuation	Entrepreneurship Development	4
Sri Prabal Sengupta	B.A. BFA (A.F.A)			Teacher	Free Hand Drawing	4
Sri Animesh Nayek	B.Arch (SPA)	M.Arch (Cornell)		Practising Teacher	Architectural Design-IV	10
Smt. Sonia Gupta	B.Arch.	M Arch		Practising Architect	Analysis of contemporary works	2
Sri Somen Chakraborty	B.Arch.	Town & Regional planning (CU) M.Stat, M.Arch			Services & Equipment III, Structure for Architects, Elements of Computing	9
Sri Samaresh Mukherjee	B.Arch	M.Arch			Evolution of Architecture II	10
Sri Alokanda Banerjee	B.Arch.	M.Arch in Urban Design				10
Sri Abhijit Paul	B.Arch	M.Arch				4

Sri Ronit Maity	B.Arch	M.Arch				4
Sri Panna Kumar Roy	B.E.(Elec.)					
Sri Deba Prasad Sarkar					Valuation	
Sri Prasad Ranjan Das					Evolution of Architecture I	

Guest Faculty:

	Name	Expertise	Present Occupation	Topic of Lecture
1	Sri Partha Ranjan Das	Architectural Practice and education	Educationist, Practicing Architect	External Guide for Thesis
2	Sri Amitava Deb	Research on Housing & Building materials, Sustainable Architecture,	Consultant-Educationist	External Guide for Thesis
3	Prof. Joydev Sarkar	Architectural Education	Former Faculty Member, Bengal Engineering & Science University, Howrah	External Guide for Thesis
4	Prof. Aditya Banerjee	Architectural Education	Faculty Member, Bengal Engineering & Science University, Howrah	External Guide for Thesis
5	Prof. Prabhat Ranjan Das	Architectural Education, Urban Management, Research on Housing	Educationist, Practicing Architect	External Guide for Thesis
6	Prof. Balkrishna Doshi	Theory and Practice of Architecture	Academician & Practicing Architect	Architecture Education
7	Prof. Christopher C. Benninger	Theory and Practice of Architecture	Academician & Practicing Architect	Projects and Works
8	Prof. Ravi Hazra	Theory and Practice of Architecture	Academician & Practicing Architect	Architecture Education
9	Prof. Rajat Ray	Architecture Conservation	Academician & Practicing Conservation Architect	Context and Architecture
10	Prof. Soumyen Bandyopadhyay	Theory and Practice of Architecture	Professor, Nottingham Trent University	Students Works Nottingham Trent University
11	Dr. Syed Zainol Abidin Idid	Urban Conservation	Professor, Uni. Of Technology, Malaysia	Urban conservation works
12	Prof. Samshul Wares	Theory and Practice of Architecture	Professor, BUET, Dhaka	Students and personal works
13	Rafiq Azam	Architecture Practice	Practicing Architect and visiting teacher, Dhaka	Own Works
14	Animesh Nayak	Urban Design	Practicing Architect and Visiting Teacher	Making of Gurgaon
15	Gita Balakrishnan	Students Architecture Design Competitions	Practicing Architect	Egypt Travel
16	Sonia Gupta	Water Conservation	Practicing Architect and Visiting Teacher	Water Conservation in local Schools

17	Prof. Rahat Choudhury	Theory and Practice of Architecture	Professor, Asia Pacific Uni., Dhaka	Students Works
18	Poulaha Das Gupta	Product Design	Practicing Designer	Design Workshop
19	Debmalya Guha	Urban Design	Practicing Architect and Urban Designer	Architecture and Urban Design
20	Claudia Roselli	Urban Conservation	Doctoral Candidate, SPA Delhi and Uni. Of Florence	Sunderbans
21	Dr. Himadri Guha	Energy Efficient Buildings	Practicing Engineer and Energy Efficiency consultant	Energy Consciousness in the Victoria Memorial
22	Soumitro Ghosh	Architecture Practice	Practicing Architect and Visiting Teacher	Own Works
23	Partho Ranjan Das	Architecture Practice	Practicing Architect and Visiting Teacher	Own Works

13. Percentage of classes taken by temporary faculty – programme-wise information: UG:16; PG: 10
14. Programme-wise Student Teacher Ratio: UG: 19:1 ; PG: 2:1
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual: Administrative staff: 10; Technical staff: 2
16. Research thrust areas as recognized by major funding agencies:
 1. Human settlement studies
 2. Architectural & Urban Conservation
 3. Energy efficient Building studies
 4. Digital Architecture
 5. Designing with Bamboo
 6. Landscape Architecture & Historic Landscape conservation
 7. Computer aided Architectural Design
 8. Urban Hydrology & Environmental Planning
 9. Thermal performance and energy use in buildings
 10. Transportation Planning, Integrated Land use and Traffic System
17. Number and names 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 titles and grants received project-wise.

Name of the faculty member	Funding Agency	Project Title	Duration	Grant received
Jayita Guha Niyogi	DST-PURSE	<i>Study To Develop A Land Use Cum Stochastic Transportation Model For A Better Kolkata</i>	2009-2013	40.34 l
Shivashish Bose	UGC	Search for Appropriate Design and Construction of the Top Floor of Modern Residential Buildings in Kolkata for Comfort and Sustainability	2011-2014	6.938
Madhumita Roy	AICTE	Studies on the Building Design and its Impact on the Eco System	36 months (2005-08)	10.65
	WBHIDCO	ON-LINE system for sanctioning building plans	36 months (2006-10)	65.00
	Howrah Zilla Parishad	ON-LINE system for sanctioning building plans	24 months (2008-09)	25.00
	WBHIDCO	ON-LINE system for sanctioning building plans	12 months (2008-09)	35.00
	Kolkata Municipal Corporation	Formulation of building rules & regulations	12 months (2008-09)	32.00

	<i>Kolkata Metropolitan Development Authority</i>	Socio-Economic Study of Slum Dwellers on thika Tenancy land	24 months (2008-09)	2.8
	<i>NMBA, DST</i>	FEASIBILITY OF BAMBOO STRUCTURE <i>for possible inclusion into NBC & CPWD Schedule</i>	24 months (2009-10)	43.44
	<i>MNRE</i>	BIPV on bamboo building	2012-2014	43
Suchandra Bardhan	Getty Foundation	“Master Conservation Planning (Historic Landscape) of City Palace Complex, Udaipur”	2006-2009	2
	AICTE	“Studies on Environmental Impacts Of Contemporary Urban Multi-Storied Residential Buildings”	2009-2012	10.5
	UGC	“Assessment of embodied water content of contemporary urban buildings”	2011-ongoing	8.268
	DST-PURSE	“Studies On Resource-Consumption Pattern In The Construction Of High-Rise Buildings”	2009-2012	9.9
Debashish Das	DST-PURSE	Principal Investigator for Research project under PURSE, Jadavpur University titled “Developing framework for an integrated approach to Ecocity planning for Megacities-Case Study of Kolkata”	2009-2012	17.0

18. Inter-institutional collaborative projects and associated grants received

b) National collaboration b) International collaboration

Name of the faculty member	Program	Collaboration with	Duration	Grants received
Shivashish Bose	Bilateral Cultural Exchange Programme	Department of Urban and Regional Planning of University of Florence, Italy	2008 to 2013	Accommodation and food for Workshop in Italy of six students – five from PG and one from UG Architecture of Jadavpur University, and the same plus return airfare for the team-leader/coordinator in June-July 2011.

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

20. Research facility/centre run by the Dept./school/centre which has:

- state recognition
- national recognition
- international recognition

Laboratory of Urban Studies set up and run by Dr. Shivashish Bose has given Training and Supervision to many foreign students – Thirteen from Singapore (UG & PG Workshop in 2006), Two from Italy (PG Research in 2006-2007), Six from Belgium (PG Research in 2007-2009), One from Italy (Post-Doctoral Research in 2010-2011), One from Italy (PG Research in 2012) & One from Italy (Doctoral research in 2013).

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

22. Publications:

Data Base	T.K.B	S. DAS	J.G. NIYOGE	S. BOSE	M. ROY	S. BARDHAN	S.NAG	D.DAS
Number of papers published in peer reviewed journals			1	15 (Intl: 8, National 7) (all with ISSN)	19	20	03	
Monographs				10				
Chapters in Books	1			7 (with ISBN), details given in Annexure -I	1	7		
Edited Books								
ISBN with details of publishers								
Numbers listed in International Database								
Citation Index				The paper of Dr. S Bose titled “Restoration of Town Hall in Kolkata for Adaptive Reuse: A Case Study” published in ‘Structural Survey’ Volume 30.3, (ISSN: 0263-080X) pp.280-291, in June 2012, Indexed, of Emerald Group Publishing, UK has been downloaded 195 times in one year.				
Impact Factor								
h-index								

23. Details of patents and income generated:

24. Areas of consultancy and income generated:

Name of the faculty	Consultancy	Fees Amount
Shivashish Bose	Design of Film Studio/Floor with Print Vault for Satyajit Ray Film and Television Institute (SRFTI)	25
Madhumita Roy	As consultant to WBHIDCO	102.48
	As consultant to NKDA	
	Patha Bhavan School	
	Stadium complex at Rajarhat	
	Swimming pool complex at Rajarhat	
	Cyclone shelters for Govt of WB	
S.Bardhan	Residential landscapes, Kolkata, 2008.	59
	Urban environmental projects like Canal bank restoration and Area development Plan for Commercial areas, Kolkata”, 2010.	
	Religious landscape, Orissa, 2011	
	Industrial landscapes, 24 pgns (N), WB’, 2011.	
	Urban Landscape in Kolkata, 2011	
	Riverfront Landscapes, Kolkata, 2012.	
	Historic landscapes, Kolkata, 2013.	
	Institutional landscapes, Kolkata, 2013	

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

Name	Area of work
Tapas Kumar	Member of the Expert committee for accreditation of B. Arch. course of APG School of Architecture at Shimla as in April, 2013

Bhattacharya	Acted as an ExpertMember of the Selection Committee for selection of Teachers inMizoram University in 2013
	Visited the ResearchLaboratory and advised concerning acoustic testing and ProductDevelopment in Armstrong World Industries, USA in the month of June,2013
	Acted as the ZonalCoordinator for National Award Competition for Students with INSDAGtill 2011
Jayita Guha Niyogi	External Expert, Dept. of Arch. T&RP, Bengal Engg. & Sc. Univ., Shibpur, for Ph.D. research work of Prof. H. Bohra, in 2013.
	Expert member in the Review Session for Thesis in the Stage IV for the students of AITP course (Equivalent to Masters in Town Planning) conducted by the Urban Management Centre, ATI, West Bengal in 2010- 2012
	Expert member, Selection process of Chief Town Planner, Public Service Commission, Govt. of West Bengal in 2012
	Expert member, Selection process of Research Assistant for the Integrated Coastal Zone Management (ICZM) Project, West Bengal, at Institute of Environmental Studies & Wetland Management, under State Project Management Unit, Department of Environment, Government of West Bengal in 2012
	Expert member to assess the suitability of candidates for academic assignment at BIT International Centre RAK in 2012
	Expert member in the process of Revision and Finalisation of Course Curriculum Development of 3rd Sem., 4th Sem., 5th Sem., and 6th Sem. of Diploma in Architecture for the Colleges of Orissa organized by National Institute of Technical Teachers' Training & Research (NITTTR), Kolkata
Suchandra Bardhan	Expert member of the Student Research Committee (SRC), 2013 for supervising the doctoral work of Savita S. Raje at School of Planning & Architecture, Bhopal.
Madhumita Roy	Acted as an Expert member of the Task Force to enquire into the incident of fire in the underground market at Satyanarayan Park, Burra Bazar
	Acted as a Member of the three-men committee for developing the Building Rules & Regulations for New Town Development Corporation, Kolkata
	Acted as a paper-setter for the Joint Entrance Examination for admission to JELET-2003
	Acted as a Sports Board member for 9 years
	Acted as a member of the Executive Committee of Research & Development Centre, Vijaygarh Jyotish Ray College
	Acted as Jury member for B.Arch Thesis of 2011 batch for Pilumodi College of Architecture, Cuttack
	Expert for the inspection of college affiliated to West Bengal University of Technology
	Acted as an expert in the e-governance project @ construction of office building project of the Consumer Affairs Department, Govt of West Bengal
	Appointed as an Expert for formulation of the fire rules for the Department of Fire & Emergency Services
	Acted as an 'External expert' on the technical part of 'Bidding Evaluation Committee' for finalization of Architect/Consultant for a project in POWERGRID CORPORATION OF INDIA LIMITED
	Acted as a Consultant in the world bank sponsored project called Integrated Coastal Zone Management Project
	Acted as an 'External expert' on the technical part of 'Bidding Evaluation Committee' for finalization of Architect/Consultant for a project in State Bank of India
	Acted as a Member of the Expert committee for accreditation of B. Arch. course of many schools of Architecture in India appointed by Council of Architecture
	Acted as a Member of the Expert committee for accreditation of B. Arch. course of many schools of Architecture in WB several times appointed by WBUT
	Acted as a member of the syllabus committee of the B.Arch course curriculum by WBUT
	Acted as an Expert member by the Govt of West Bengal for inspecting the CESC Mall at Park Circus.
Sanjib Nag	External Expert, Dept. of Arch. T&RP, Bengal Engg. & Sc. Univ., Shibpur, for Ph.D. research work of Prof. P. Mukhopadhaya, in 2013.
	External Examiner, Dept. of Interior Design, J.D.Birla Institute, Kolkata,for B.Sc. Interior Design Course, in 2010-12.
	External Examiner, The Indian Institute Of Architects, For AIIA Course, since 2008.

	External Examiner, The Indian Institute Of Architects, For AIIA Course, since 2008.
	External Examiner, Dept. of Technical Education & Training, Govt. of W. Bengal, for D.Arch. Course, since 2008.
Shivashish Bose	Supervisor of Post-Doctoral Research of Italian Researcher Dr. Margot Pellegrino (from Politecnico of Turin) under Erasmus Mundus India4EU Scholarship Programme during September 2010 - June 2011 at Jadavpur University
	Co-Supervisor of Master's Thesis Research (on Slums in Kolkata and its Rehabilitation) of Italian Researcher Ms. Francesca Gronchi during October-December 2012 of University of Florence, Italy. Ms. Gronchi stood first (110/110) amongst students of her class in Thesis.
	Supervisor of Doctoral Research of Korean Researcher Ms. Yunmi Lee (from Politecnico of Milan) during April-June 2013 at Jadavpur University; Her Field of Research was 'Slums in Kolkata and a model solution for rehabilitation in urban design perspective'.
	received European Commission (Erasmus Mundus Europe Asia) Scholarship for taking Training and doing Research as Academic Staff at Aristotle University of Thessaloniki in Greece for one month during May 2013. The work is accomplished successfully. A lecture by Dr. Bose was also delivered at the Department of Architecture and Planning of AUT on 29 th May 2013.

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

Teacher	Committee	Organisation	Position held	Duration
Jayita Guha Niyogi	Selection Committee of Design competition for "Vigyan Bhaban", Green building for the Administrative Building of WBEDCL	West Bengal Energy Development Corporation Limited at Bidhan Nagar, Kolkata	Jury member	2010
	Planning Education Sub Committee	Institute of Town Planners, India, West Bengal Chapter	Convener	2011
	National jury Board of selection of Design entries for the Students' Design competition	INSDAG National Students Award	Jury member	2012
	Syllabus Review Committee of Diploma Engg. & Arch. Course	Dept. of Technical Education & Training, Govt. of W. Bengal	Subject Expert Member	2012
	Organizing Committee of 2 day National Conference on Sustainable Development Through Innovative Research in Science and Technology supported by DST PURSE Programme	Jadavpur University on 28-29th September, 2012	Organising member	2012
Suchandra Bardhan	ENVIRONMENT & LANDSCAPE ARCHITECTURE Committee	Indian Institute of Architects	Member	2008-2010
	Campus	BESUS by the Hon'ble Vice-	Member	October

	Beautification Committee	Chancellor of Bengal Engineering & Science University, Shibpur (BESUS)		2009
	Review Committee Competition sections	Agri-Horticultural Society of India	Jury member	October 2009
	Green Belt Development Committee	around Victoria Memorial Hall, Kolkata	Nominated Member	July 2010
	Grand Jury and viva-voce for Final Year B. Arch. Thesis Examination	by Dept. of Arch., College of Engineering, Bhubaneshwar,	External Examiner	September, 2010
	Paper review Committee 8 th All India Peoples' Technology Congress	Forum of Scientists, Engineers & Technologists (FOSET)	Member	
	National Students' Design Competition (NSDC)	School of Planning & Architecture, Bhopal	Invited member	6-8 October, 2012
	Student Research Committee (SRC),	doctoral work of PhD scholar Ms. Savita Subherwal Raje School of Planning & Architecture, Bhopal.	Expert member	
	Technical Committee	Department of Tourism by Government	Member	20.02.13
Sanjib Nag	Doctoral Committee	Dept. of Arch. T&RP, Bengal Engg. & Sc. Univ., Shibpur	Member	2013
	P.G. Syllabus Review Committee	J.D. Birla Institute, Kolkata,	Member	2013
	Selection Committee	Public Service Commission, W. Bengal	Member	2012.
	Board Of Studies	W. Bengal Univ. Of Technology	Member	2011
	Jury Board	INSDAG National Students Award	Member	2009
	Education & Examination Sub Committee	The Indian Institute Of Architects	Member	2008.
	Organizing Committee	The Annual Convention, The Indian Institute Of Architects	Member	2008.
	Organizing Committee	The 15 th . State Sc. Tech. Congress	Member	2008.
Shivashish Bose	Selection Committee for Recruitment of Architects	Public Service Commission, West Bengal	Expert member	2007

b) International committees

Suchandra Bardhan	Sustainability Transition Research Network	Member
	Working Group III Fifth Assessment Report First Order Draft (WGIII AR5 FOD) ,2012.	IPCC Expert Reviewer
Jayita Guha Niyogi	Journal of Architectural Engineering and Design Management', Taylor & Francis	Reviewer of Manuscript

b) Editorial Boards

Suchandra Bardhan	Editorial Advisory Board International Hospitality Students Journal of Hotel and Tourism Management Institute (HTMi), Switzerland, Marientalweg 3, 6174 Sörenberg	Member
	Editorial Board of 'Context- Built, Living and Natural' – a biannual journal of DRONAH, Gurgaon, Haryana (ISSN No. 0973-502X).	IPCC Expert Reviewer

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

Jayita Guha Niyogi	Refresher Course on “Disaster Management” sponsored by UGC, at Dept. of Civil Engineering, Jadavpur University, Kolkata, during March 02-22, 2010	Resource Person
Sanjib Nag	International Workshop On Sustainable Development, Jadavpur University, in 2011.	Participant
	National Symposium On Sustainable Habitat, The ITPI, in 2011.	Participant
	National Colloquium On Urban Design, The IUDI, in 2011.	Author
	International Seminar On Urban & Regional Planning, Jadavpur University, in 2010.	Author
	National Seminar On Urban Design, The CBE, in 2008.	Author
Shivashish Bose	<p>Convened and coordinated Three international workshops, jointly organized – two at the Department of Architecture of Jadavpur University in Kolkata in January 2011 and December 2011, and one at the University of Florence in Italy in June-July 2011, by the Dept. of Architecture of Jadavpur University and the Dept. of Urban & Regional Planning of University of Florence, Italy. Prof. J. G. Niyogi was joint coordinator of workshop held in December 2011.</p> <p>Convened and organized jointly with Prof. T. K. Bhattacharyya an International Workshop with Prof. Cesar Taboada, Director of School of Art & Design of Ourense, Spain at ICCR in Kolkata in 2009.</p> <p>Convened and organized an international workshop on architecture and urban design at the Dept. of Architecture of Jadavpur University with the Dept. of Architecture of national University of Singapore, Singapore in 2006. Assistant Prof. D. Das was assistant coordinator.</p>	

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects
-2009: Final year students carried out works based on proposals submitted under the Services to Community and Economy Scheme of the Technical Education Quality Improvement Programme (TEQIP) of the Govt. of India.
- percentage of students doing projects in collaboration with other universities / industry / institute

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

- Faculty
 - Madhumita Roy: Joint recipient of the Architectural Engineering Division Prize for best paper from The Institute of Engineers.
 - Suchandra Bardhan: Joint recipient of Best Poster Award in the area of ‘PV Deployment’ at the 24th European Photovoltaic Solar Energy Conference and Exhibition (24EUPVSEC), 2009 held in Hamburg, Germany in September 2009.
 - Sanjib Nag: Recipient of Birla White Yuva Ratna Award, Aditya Birla Group Of Industries Ltd., in 2009.
 - Sanjib Nag: recipient of Birla White Yuva Ratna Award, Aditya Birla Group Of Industries Ltd., in 2010.
- Doctoral / post doctoral fellows
- Students (Give details)
 - Since 2010, one student from B. Arch 5th year is granted the Rafiq Azam Travel Bursary Award each year for visit to Dhaka and return covering airfare and living expenses for 2 weeks.

-Each year students (both individually and in groups) win national level student design competitions organized by Institutes (SPA-B), Corporates (Saint Gobain, CII-IGBC) and Industries (Jangipur Mega Food Park).

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

Suchandra Bardhan coordinated a two-day National Training Program on 'Lighting for Heritage Structures' on September 16-17, 2011 at H.L. Roy Auditorium, Jadavpur University Main Campus jointly with Development Research Organization on Nature, Arts and Heritage (DRONAH), Gurgaon, Haryana. Source of funding: Respective Institutes.

31. Code of ethics for research followed by the department: As per the University norms

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted Male Female	Pass percentage (w.r.t. last graduating batch) Male Female
B.ARCH			100
M.ARCH			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.ARCH	50		25	25

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	50-60%
PG to M.Phil.	NA
PG to Ph.D.	Nil
Ph.D. to Post-Doctoral	Nil
Employed	<ul style="list-style-type: none"> • 10%, • 20-30%
Entrepreneurs	10 -20%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	62.5%
from other universities within the State	12.5%
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 (2008 – 2013): 3 (all PhD)

38. Present details of departmental infrastructural facilities with regard to

- Library : Available
- Internet facilities for staff and students : Available but inadequate
- Total number of class rooms : 5
- Class rooms with ICT facility : Yes
- Students' laboratories : Inadequate
- Research laboratories : Available but insufficient

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

a) from the host institution/university

1. Doctoral student - Sri Debashish Das, Assistant Professor, Department of Architecture, Jadavpur University, India. Joint Supervisor: Prof. Santosh Ghosh (President, Centre for Built Environment, Kolkata, India).
2. Doctoral Researcher Sri Somen Sarkar, Project Fellow of Major Research project funded by UGC, under the supervision of Dr. Shivashish Bose at Jadavpur University.

b) from other institutions/universities

Jayita Guha Niyogi	Soumen Mitra	Ongoing
	Sanghamitra Roy,	Ongoing
Madhumita Roy	Asit Kr. Ghosh	submitted
	Uttam Kumar Roy	ongoing
	Arpan Das Gupta	ongoing
	Sangita Kapoor	ongoing
	Rahul Bysack	ongoing
	Sanghamitra Roy	ongoing
	Ishani Chakraborty	ongoing
	Siddhartha Koduru	ongoing
	Runa Das Gupta	ongoing
Suchandra Bardhan	Archana Bhattacharyya	Doctoral
	Tapas Mitra	Doctoral
	Sheuli Mitra	Doctoral
	Swati Dutta (Koduru),	Doctoral
	Indraneel Roy Choudhury	Doctoral
	Parama (Bhattacharya) Mitra	Doctoral
	Krishna Ghosh	Doctoral
Sanjib Nag	Mainak Ghosh	Doctoral
Shivashish Bose	Dr. Goutam Banerjee	Doctoral
	Sanmarga Mitra	Doctoral
	Amitava Sarkar	Doctoral
	Dr. Margot Pellegrino	Post-Doctoral
	Yunmi Lee	Doctoral

40. Number of post graduate students getting financial assistance from the university. (Give details.) 5. General: 4 , SC: 1

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

42. Does the department obtain feedback from

d. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? Yes but nothing formal

e. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? Yes but nothing formal

f. alumni and employers on the programmes offered and how does the department utilize the feedback? Yes but nothing formal

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

1. Ramen De : Faculty , US University
2. Ranabir Sengupta : Faculty , Us University
3. Tapas Das : Faculty, Us University
4. Swati Chattopadhyay : Faculty , US University
5. Ranjit Mitra : Director, SPA, New DELhi
6. Chandra Banerjee : Chief Architect, CPWD
7. Tapan Duari : Chief Architect , Tripura Housing Board
8. Shanta Ghosh : CMD , DCPL

9. Shakuntala Ghosh : Director, Ghosh , Bose & Associates
 10. Manisha Rakshit : Chief Architect , PWD
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
Workshops, seminars & special lectures are organized at regular level in the department. Besides this the department conducts a lecture session titled ‘Thursday open half’ where external experts are invited to deliver lectures twice in a month as a part of student enrichment programme. Teachers also actively coordinate national level architectural design competitions for the students.
 45. List the teaching methods adopted by the faculty for different programmes.
Lectures, PPT presentations, Workshops, Seminars , site visits , Study tours , Involving practicing professionals in various subjects.
 46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
The performance of the students in National & International level examinations like GATE & GRE is one of the indicators of ensuring about achieving the desired objectives. Besides this, a student body both at National & zonal level exists in Architecture called NASA where students get the opportunity to interact and present their works in a national platform. The students regularly participate in academic design competitions in NASA, ZONASA and with many national and international agencies holding design competitions. The students also participate in various competitions like INS DAG, TRANSPARENCE, IGBC, ARCHUMEN etc which are organized by various private agencies. The performance of the students from this department is quite satisfactory.
 47. Highlight the participation of students and faculty in extension activities.
 - Every year the students of the senior years are taken to remote villages of various parts of the state to conduct socio-economic studies along with settlement pattern studies in order to develop an orientation of the vernacular housing typologies of rural areas.
 - Students are taken to the various slum areas to do the similar studies as mentioned above.
 - Students participate in NSS programs and activities
 48. Give details of “beyond syllabus scholarly activities” of the department.
Students participate in various University activities like ARENA, SANSKRITI, etc. Besides this, they also participate in the cultural activities in NASA , ZONASA etc.
 49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. Yes, recognized by Council of Architecture; UGC; NAAC.
 50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
 - The department has successfully completed a structural building with bamboo which has been funded by NMBA, DST as a part of R& D project. The project is being appreciated by many eminent persons namely Dr S. Brahmachari, Director CGCRI and many other eminent persons. The technology applied is first of its kind in the country.
 - The department has developed software for sanctioning of building plans online. The software has been installed and running successfully in New Town Kolkata Development Authority from 2009 onwards. The system is unique and a collaborative effort of JU & WBHIDCO and implemented in an authority NKDA as a part of e-governance project.
 - The department has contributed to evolve curriculum of inter-disciplinary subjects like illumination technology & design course offered as a Masters level program by

Schools of inter-disciplinary studies.

- The department has also contributed to the unique knowledge pool on ‘Archimetrix’ by developing software tool.

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

<i>STRENGTHS</i>	
1.	Renowned faculty with varying specialization and interest areas
2.	Balanced syllabus focusing scientific aspects as well as artistry
3.	Outreach activities
4.	Liasion with Industries and public bodies
5.	Obtaining quality students
<i>WEAKNESSES</i>	
1.	Spatial constraints limiting expansion
2.	Lack of dedicated supporting staff
3.	Poor environment
4.	Lack of funding to continue research activities
5.	Dearth in quality researcher
<i>OPPORTUNITIES</i>	
1.	Shared University facilities and budget
2.	Locational advantage allows teachers to get involved with various programmes without hampering their normal duties
3.	Presence of other three faculties in a single campus
4.	Teachers have the freedom to do consultancy which helps them to acquire practical updated knowledge
5.	Faculties having exposure and direct interaction with other international and national level institutions
<i>CHALLENGES</i>	
1.	Lot of other private institutions are coming up with less facilities but producing quite a huge number of graduates
2.	Quality deterioration in the profession itself
3.	Funding constraints
4.	Insufficient number of faculties reducing the quality time of the present faculties
5.	Space inadequacy and scatterly distribution of spaces in different floors

52. Future plans of the department (in as much detail as possible):

1. To nurture the concept of ‘outreach’ the department has a plan to found a nodal rural extension unit to impart sensitization and capacity building of rural development fundings of the Government and other agencies and help the rural people to ensure systematic built development in the rural area. In later years this unit will act as the coordinating unit for down the line sub-units to be founded in future phases.
2. To enrich the teaching-learning and research activities with such suitable components and processes in such a way as to orient the students to imbibe strong senses of entrepreneurship and become partners in the process of industrialization in areas related to building industry
3. To induce scholars and faculty members of foreign institutions in the teaching process to enhance the process of transfer of technology. This has already been induced to some extent through introduction of guest-lecturing

by foreign academicians and researchers.

4. To encourage foreign students to pursue our courses. Although, in a minor way this has already been put in force.
5. To enhance the over-all get up of the spaces of the department to make it more vibrant.
6. To obtain more teachers in the department to bring down the teacher-student ratio to a more comfortable position.
7. To start two or three PG courses depending on the demand of such specialization in the society

Department of Chemical Engineering

1. Name of the Department/School/Centre: CHEMICAL ENGINEERING
2. Year of establishment: 1921
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): UG, PG, Ph.D.
5. Interdisciplinary programmes being conducted and other departments involved:
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
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 courses offered by other departments:

Name of Teacher	Name of dept. catered to	Course taught
Mr. Nilava Sen	Metallurgical Engineering	Fuel Laboratory
Dr. Debashish Putantunda & Dr. Debashish Roy	Food Technology & Bioprocess Engineering	Chemical Engineering Laboratory
Dr. Chanchal Mondal	Metallurgical Engineering	Fuels and Combustion, Fluid flow and Heat Transfer, Fuel Laboratory

10. Number of teaching posts sanctioned, filled and actual:

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	07	05	07
Associate Professor	11	02	06
Asst. Professor	11	04	04
Other			

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

Name	Designation	Qualification	Specialization	Experience (years)	Ph.D./M.E. guided/submitted	Ph.D./M.E. ongoing
Siddhartha Datta*	Professor & Pro-Vice-Chancellor	Ph.D.	Pollution Control, Membrane Engg.	31	Ph.D.: 07 M. Tech: 12	Ph.D.: 02 M. Tech: 02
Alakananda Mukherjee	Professor	M.S.	Modeling and Simulation	25	Ph.D. 02 M. Tech: 10	Ph.D.: 03 M. Tech: 02
Ranjana Chowdhury	Professor	Ph.D.	Environmental bioprocess Engineering, Non-conventional Energy	20	Ph.D.: 04 M. Tech: 20	Ph.D.: 08 M. Tech: 03
Chiranjib Bhattacharjee	Professor	Ph.D.	Membrane, Waste Water Treatment	22	Ph.D: 09 M.Tech: 15	Ph.D: 07 M.Tech: 02
Avijit Bhowal	Professor	Ph.D.	Liquid membrane, Process Intensification	22	Ph.D: 03 M.Tech: 14	Ph.D: 03 M.Tech: 01
Chandan Guha	Professor	Ph.D.	Transport Phenomena, Computational Fluid dynamics	25	M.Tech: 04	Ph.D: 04
Kajari Kargupta	Professor	Ph. D.	Fuel Cell, Nano-Science	22	Ph.D. : 01 M.Tech: 17	Ph.D: 01 M.Tech: 01
Nilava Sen	Associate Professor	M.Tech	Fluid Mechanics	33		
Prasanta K. Banerjee	Associate Professor	M. Tech	Petroleum Refining	23	M.Tech: 12	M.Tech: 01
Debashish Patutunda	Associate Professor	Ph.D.	Software Engineering	25		

Debashish Roy	Associate Professor	Ph.D.	Bio-Technology, Bio-Chemical Engg.	15		
Ujjaini Sarkar	Associate Professor	Ph.D.	New Materials, Tri-diagonal Forced Choice Olfactometry applications	13	Ph.D: 04 M.Tech: 07	Ph.D: 05 M.Tech: 01
Chanchal Mondal	Associate Professor	Ph.D.	Energy Engineering	15	M.Tech: 04	Ph.D: 03 M.Tech: 01
Rajat Chakraborty	Assistant Professor	Ph.D.	Biodiesel, Freeze drying	14	M.Tech: 14	Ph.D: 05 M.Tech: 03
Mehabub Rahaman	Assistant Professor	Ph.D.	Catalytic & Reaction Engg.	04	M.Tech: 02	
Ratna Datta	Assistant Professor	M.E.	Separation Processes	07	M.Tech: 02	
Parama* Ghoshal	Assistant Professor	M.E.				

See Annexure for details of Ph.D. research guidance

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors:
13. Percentage of classes taken by temporary faculty – programme-wise information:
14. Programme-wise Student Teacher Ratio: (UG + PG)/Teachers = ~23.0
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual:

Technical Staff : 11

Library Staff : 03

Administrative Staff: 08

16. Research thrust areas as recognized by major funding agencies:

- Bioprocess Engineering
- Energy Engineering
- Environmental Engineering
- CFD
- Fuel Cells
- Membrane Technology
- Nano technology
- Process Intensification

17. Number and names 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 titles and grants received project-wise.

National: 24* Total grants received*: Rs 409.92 Lakhs

(*includes Inter-institutional collaborative projects)

Details in Annexure. Not included in the list given in the Annexure are projects being executed by faculty members under UGC –UPE (Phase II) and TEQIP schemes.

18. Inter-institutional collaborative projects and associated grants received

c) National collaboration: 06 projects, International collaboration: 04 projects

Total grant: Rs. 156.97 Lakhs

Detailed in Annexure

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

UGC –SAP (at the level of DRS II)

Total grants: Rs 42.7 Lakhs

20. Research facility/centre run by the Dept./school/centre which has:

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies:
22. Publications: (Detailed in Annexure)
 - * Number of papers published in peer reviewed journals (national / international)
National: 26 International: 170
 - * Monographs: 0
 - * Chapters in Books: 06
 - * Edited Books: 01
 - * Books with ISBN with details of publishers:
Mr. Sanjay Ray Chaudhuri, 'Granthagar O Thathya Bijnan Parikrama' Published by Arpita Prakashani, Kolkata (2012) ISBN 81-86966-61-7.
 - * Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
Scopus: 190
 - * Citation Index – range / average**:
Citation range: 0 – 43; Average citation/paper: 2.46
 - * SNIP range**: 0.011 – 2.539
 - * SJR range**: 0.102 – 2.672
 - * Impact Factor** –
Range: 0.139 – 5.257; Average: 1.66
 - * h-index: 10
***for papers published between 2008-2013*
23. Details of patents and income generated:
Patents filed: 05 Income generated: Not applicable
Detailed in Annexure
24. Areas of consultancy and income generated:
Area: Battery, CFD, Membrane; Income generated: Rs 19.60 Lakhs
Detailed in Annexure VII
25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad (give details):
Dr. Mehabub Rahaman, Assistant Professor, Erasmus Mundus Scholarship for Post-Doctoral Research (European Commission)
26. Faculty serving in
 - a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)
Avijit Bhowal, Editor-in-Chief of Journal of the Institution of Engineers (India): Series E.
27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted:
28. Student projects
 - percentage of students who have done in-house projects including inter-departmental projects: 20%
 - percentage of students doing projects in collaboration with other universities / industry / institute: 8%
29. Awards / recognitions received at the national and international level by
 - Faculty
 - Doctoral / post doctoral fellows
 - Students (Give details)

30. Seminars/Conferences/Workshops organized and the source of funding (national/ international) with brief details (mention any notable features): 08 (Details in Annexure)
31. Code of ethics for research followed by the department: At par with University norms
32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
UG	Through JEE, WB	257	52	98%	
PG	Through admission test	15+	11+	100%	
Ph.D.*	Through interview/ admission test	33	27	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
P.G.	15%	70%	15%	x
Ph.D.	24%	66%	10%	x

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Gate: 94 (2008 – 2013)
35. Student progression

Student progression	Percentage against enrolled
UG to PG	15%
PG to M.Phil.	x
PG to Ph.D.	30%
Ph.D. to Post-Doctoral	Data unavailable
Employed	
• Campus selection	35
• Other than campus recruitment	04
Entrepreneurs	x

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	88%
from other universities within the State	12%
from universities from other States	None
from universities outside the country	None

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period (2008 – 2013): 01 (Ph.D.); Dr. Mehbub Rahaman

38. Present details of departmental infrastructural facilities with regard to

a) Library

Books: 10,985

Journals purchased in 2013 (print copy)

National: 02 International: 10

Bound Journals: 3150 Single Copy: 4500

Services: Xerox Facility, Semester question papers, Internet searching facility, Document search online

b) Internet facilities for staff and students

Teaching staff: 15 computers with internet facility

Non-teaching staff: 06 computers with internet facility

Students: 50 computers with internet facility

d) Total number of class rooms: 10

c) Class rooms with ICT facility: 03

- d) Students' laboratories: 07
- Bio-process Engineering laboratory
 - Computer laboratory
 - DST-Fist Laboratory
 - Fuel Laboratory
 - Process Control laboratory
 - Reaction Engineering Laboratory
 - Unit Operation laboratory
- e) Research laboratories: 07
39. List of doctoral, post-doctoral students and Research Associates
- a) from the host institution/university
- b) from other institutions/universities
- Scholars from host institute: 25%
- Scholars from other institutes: 75%
- (Details in Annexure)
40. Number of post graduate students getting financial assistance from the university. (Give details.)
- Number: 09 (Details in Annexure)
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.
- Yes. Feedback from alumni and other academic institutions.
42. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
- Yes. In modification of curriculum and modernization of laboratories.
- students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
- Yes. Taken up in teachers-student committee and steps taken accordingly.
- alumni and employers on the programmes offered and how does the department utilize the feedback?
- There is committee of alumni where faculty members discuss relevant issues. Infrastructural development and seminars and academic programs are organized on emerging area for students.
43. List the distinguished alumni of the department (maximum 10)
- [1] Mr. Hari Dalmiya, CEO and owner of Dalmiya group of Industries
 - [2] Mr. HIRAK DUTTA, Director, Oil and Industrial Safety Directorate (OSID), GOI
 - [3] Mr. Uttam Basu, former Director of MRPL
 - [4] Mr. Ashit Das, Vice President, R&D RIL
 - [5] Mr. Monojit Chowdhury, Vice President, Linde
 - [6] Mr. Robin Mukherjee, Vice President, Haldia Petrochemicals
 - [7] Mr. Prithviraj Sur, Executive Director, Indian Oil Refineries Limited (Gurajat Refinery)
 - [8] Mr. Indrajit Basu, Executive Director, Marketing, Indian Oil Refineries Limited
 - [9] Mr. Ranjan Nandi, Managing Director of Foster Wheeler (India), Kolkata
 - [10] Mr. Alok Bhadra, Managing Director, Nalco
44. Give details of student enrichment programmes (special lectures/ workshops/seminar) involving external experts.
- Lectures, Workshop and seminar organized: 17 (Details in Annexure)
45. List the teaching methods adopted by the faculty for different programmes.
- Teaching methods in practice other than the lecture method:

- Audio-visual aids have been introduced in selected topics in addition to conventional lecture method.
 - Regular tutorial classes are being conducted in most of the subjects.
 - Experimental project works are regularly offered related to various chemical engineering topics
 - Industrial tours for UG students for acquiring in-plant experience.
 - Seminars delivered by UG and PG students as well as by eminent academicians and industrial engineers.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
Our syllabi are so designed that the students after graduating can serve the industries and also engage in R&D activities. The objective is reflected by the performance of our graduates working in different industries and the high quality of research publications for the later.
47. Highlight the participation of students and faculty in extension activities.
In the department, we have a community development center where faculty members, researchers are engaged to develop eco-friendly herbal products and transfer the technology (developed process) to different villages for the empowerment of marginalized people.
48. Give details of “beyond syllabus scholarly activities” of the department.
The department has in the past organized in collaboration with industries many short term courses for professionals working in different industries in our campus as well as different places and endeavors to do so at present.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. UGC, NAAC, benchmarked by IChemE, UK, 2008.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
- Manufacture of herbal products (colored powder, health drink, cream etc.).
 - Designing efficient pollution control techniques and devices.
 - Development of processes for generation of renewable fuels
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.
- Strengths*
- (a) Glorious heritage (oldest Chemical Engineering department in Asia)
 - (b) Highly qualified faculty members
 - (c) Low average age of faculty members (~46 years)
 - (d) Well equipped UG and research laboratory
 - (e) Brilliant students
- Weaknesses*
- (a) Lack of adequate space
 - (b) Limited number of scholarships available for research.
 - (c) Limited funds for maintenance and operation of laboratory equipment
 - (d) Not always able to attract the best and most talented young faculty
 - (e) Lack of development in adjoining areas related to Chemical Industries
- Opportunities*
- (a) Scope of multi-disciplinary research
 - (b) Scope of collaborative research with other institution, National Laboratories in India/abroad as many senior faculty members in those institutes are alumni of our department
 - (c) Scope of industrial collaboration or industry – institute partnership for R&D

activities as many senior level executives in those corporate houses are originating from Chemical Engineering Department, JU

Challenges

- (a) Modernizing laboratories with the latest available analytical equipment.
- (b) Motivating UG students to do research in the department rather than migrating to other institutes.
- (c) Recruiting brilliant faculties from varied research background.
- (d) Motivating industries to grant projects to department, rather than going for some other institutes, like IITs.

52. Future plans of the department (in as much detail as possible):

- Developing state-of-the-art laboratory facilities for research
- Creation of incubation center for development of technology and transfer of the same to entrepreneurs
- Organization of international and national conferences
- Organization of regular lecture sessions by eminent industrial/ academic personalities
- Up-gradation of existing classrooms through introduction of audio visual aids
- Introducing evening PG course for people working in industries
- Introducing distant mode of learning in specialized fields for industrial people

Department of Civil Engineering

1. Name of the Department/School/Centre: CIVIL ENGINEERING
2. Year of establishment: 1956
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): Bachelor of Civil Engineering, Bachelor of Civil Engineering (Part-time evening course), Master of Civil Engineering, PhD
5. Interdisciplinary programmes being conducted and other departments involved: None
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
7. Details of programmes discontinued, if any, with reasons: Not applicable
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester
9. Participation of the department in courses offered by other departments: UG courses of Department of Architecture and PG courses of departments like Pharmacy, Chemical Engineering, Food Technology, Construction Engineering, M Phil in Environmental Science.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	09	07	09
Associate Professor	15	08	06
Asst. Professor	10	05	05
Other	00	00	00

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

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D./M.Phil. students - last 4 years
Dr.Somnath Ghosh	BE , MTech, PhD,MBA	Professor	Structural Engineering Material	30	4 awarded 3 ongoing
Dr.Sudipto Ghosh	BE,MCE,PhD	Professor	Geotechnical Engineering	28	1 awarded 2 ongoing
Dr.S.N.Mukherjee	PhD IITKGP),MTech(IITKGP), BCE (CU)	Professor	Environmental Engineering	30	3 awarded 1 submitted 6 ongoing
Dr.S.P.Mukherjee	PhD (IITKgp), MCE (JU), BCE (JU)	Professor	Soil Mechanics & Foundation Engg.	29	4 awarded 5 ongoing
Dr. R. B. Sahu	Ph.D., M.C.E., B.C.E.	Professor	Soil Mechanics & Foundation Engineering	25	5 awarded 6 ongoing
Dr. Saroj Mandal	BCE,MCE,Ph.D	Professor & Head	Structural Engineering	22	Complete -1 Ongoing -3
Dr.A.Guha Niogy	BCE,MCE,Ph.D	Professor	Structural Engineering Bridge Engineering, and Transportation Planning	27	1 submitted 1 ongoing
Prof. Sibnath Chakraborty	BCE,MCE	Professor	Environmental Engineering	22 years	1 awarded 1 ongoing

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D./M.Phil. students - last 4 years
Dr.D Chakravorty	PhD,M Tech (IIT) , BCE (JU)	Professor	Structural Engineering	18	2 awarded 3 ongoing
Dr.Partha Bhattacharya	PhD,M Tech (IIT) , BCE (JU)	Associate Professor	Structural Dynamics and Aerodynamics	14	3 ongoing
Dr.Anupam Deb Sarkar	PhD,M Tech (IIT) , BCE (JU)	Associate Professor	Environmental Engineering	14	7 ongoing
Dr.Amit Dutta	PhD,M Tech (IIT) , BCE (JU)	Associate Professor	Environmental Engineering	14	2 ongoing
Dr. G Bhandari	PhD, ME (JU), BE in Civil (B.E. College, CU)	Associate Professor	Geotechnical Engineering & Remote Sensing	13	1 awarded 1 submitted 4 ongoing
Sumit Kumar Biswas	M E (JU) , BCE (BEC)	Assistant Professor	Foundation and Geotechnical Engineering	13	
Subhashish Roy Chowdhury	PhD, MCE (JU), BE (JU)	Assistant Professor	Structural Engineering	6	
Pritam Aitch	MCE (JU), BE (JU)	Associate Professor	Transportation Engineering Geotechnical Engineering & Remote Sensing	10	
Sreyashi Das Pal	MCE (JU), BE (JU)	Assistant Professor	Structural Engineering	8	
Dr.Tumpa Hazra	PhD, MCE (JU), BE (JU)	Assistant Professor	Environmental Engineering	3	4 ongoing

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors, etc.: Prof.M.Bandopadhyay Ex IIT KGP - Emeritus Professors
13. Percentage of classes taken by temporary faculty – programme-wise information: 25 % in UG course and 0% for PG course .
14. Programme-wise Student Teacher Ratio: 24:1 for UG course and 3:1 for PG course.
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual: 25 are in office presently .
16. Research thrust areas as recognized by major funding agencies:
 - Bacterial Concrete : AICTE, DBT, DRDO,DST
 - High Volume fly ash concrete : DST- PURSE
 - Geopolymer concrete : AICTE
 - Assessment of Environmental Consequences for Sustainability of Waste Recycling in Present Urban Agricultural Practices.
 - Phytoremediation Study for Treatment of Community Waste Water and Some Toxic Substances by Aquatic and Wetland Plants.
 - Seismic Hazard Analysis for Kolkata City with Emphasis on Local Site Conditions
 - Numerical and Experimental Study on Active Control of Coupled Structural Acoustic (CSA)
 - Problems Involving Laminated Composite Structures
 - Evaluation of Mechanical, Durability and Microstructural Properties of High volume Fly ash Concrete
 - A Study to Correlate Air and Noise Quality with Urban Traffic Characteristics for Kolkata Metropolis
 - Contaminant Transport (Heavy Metals Pollution)
 - Soil structure interaction

Self-compacting concrete (SCC)

17. Number and names 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 titles and grants received project-wise.

Funding agencies	Project titles	Grants received
Department of Biotechnology	Self Healing Concrete : A Microbial approach to find out an alternative in sustainable Concrete Technology	Rs 42 lacs 2011 to 2013
M/S Intellectual Venture, Singapore	Use of Bioremediase Protein Powder in Practical Construction Technology	Rs 21lacs 2010 to 2011
AICTE	Strength and durability of fly ash based geopolymer concrete Principle Investigator	AICTE Rs 8.8 lacs 2008 to 2010
DST	Seismic Hazard Analysis for Kolkata City with Emphasis on Local Site Conditioning	(For details : RBS, ADS)
J.U. (under research support from J.U. research fund)	Pile Response under lateral load in layered soil	Allotted: Rs.50000/-, Utilized and Received:Rs. 49900/-
J.U.(Under Innovative Research Support from J.U.)	Response of Pile Group under lateral load in layered soil	Allotted: Rs.50000/-, Utilized and Received: Rs. 49700/-
Jadavpur University Research Grant	Decentralised Management of Urban Solid Waste: R. R. Plot Kolkata as a Case Study	Rs 50, 000/-

18. Inter-institutional collaborative projects and associated grants received

e) National collaboration

LAFARGE AGGREGATES & CONCRETE INDIA PVT. LTD Mumbai , 2012

b) International collaboration

BASF Construction Chemicals Ltd., Italy , 2012.

M/S Intellectual Ventures India limited, Singapore , 2010.

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

- Self Healing Concrete : A Microbial approach to find out an alternative in sustainable Concrete Technology Department of Biotechnology Rs 42 lacs 2011 to 2013 Ongoing
- Strength and durability of fly ash based geopolymer concrete AICTE Rs 8.8 lacs; 2008 to 2010 complete
- A land use cum stochastic transportation model for a better Kolkata (DST-PURSE project with Dept. of Architecture) Duration: Three (3) Years; Total cost: Rs. 41,19,600; Procured the following equipment: a) CO- Analyzer b) NO_x Analyzer c) Pulse-oxymeter d) Spirometer
- Numerical and experimental study on active control of coupled structural acoustic (CSA) problems involving laminated composite structures; Total cost: Rs. 21,22,200.00; Equipment procured Random Signal Generator, Speaker with Power Amplifier, Microphone with Preamplifiers (Four Numbers), 4 – Channel CPB analyzer.
- SPECIAL ASSISTANCE PROGRAMME - DRS – 1 for 5 years (2012 – 2017); Total assistance: Rs. 73 lakhs

20. Research facility/centre run by the Dept./school/centre which has: Not applicable

- state recognition
- national recognition

- international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies: Not applicable
 22. Publications: See Annexure for details
 - * 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. Areas of consultancy and income generated: The University earns about Rs. 2 crores per year through Civil Engineering Department .Some salient consultancy services are listed below.

Prof Somnath Ghosh

1. Design of Cricket stadium at Guwahati (Lloyds Insulation for BCCI)
2. Design of an umbrella-type canopy structure (17m cantilever on either side on six columns) at Patna airport (Airports Authority of India, Kolkata, NAAI Project)
3. Repair and Rehabilitation of damaged RCC-framed Assembly buildings due to earthquake at Gangtok (Government of Sikkim Project)
4. Investigation of the failure of Box Prestressed bridge girder (United Insurance Company for National Highway Authority of India)
5. Multistoried Building Project at New Town, Rajarhat, Kolkata 14 15-storied buildings with a shopping complex (NBCC Project)
6. Hilltop 52m tall Buddha Statue Project, Namchi, Sikkim (Govt. of Sikkim)
7. Investigation and Expert opinion on the stability of a tilted building at Lake Gardens, Kolkata (for Executive Engineer, Housing Department, Govt. of West Bengal)
8. 15 cyclone-resistant shelters project in South 24 Parganas, West Bengal (HSCL project)
9. Design of Academic building of Tripura University (HSCL project)
10. Design of SIDBI building with basement car parking at Bhubaneswar (HSCL project)
11. Remnant life assessment of building and structures at New Cossipore Generating Station (for Calcutta Electric Supply Corporation)
12. Repair and Rehabilitation report for rail over-bridge near Purnea Railway Station (for Bihar Rajya Pul Nigam Ltd.)
13. Report on health of fire-damaged RCC structure of decanter for (MCC, PTA, Haldia)

14. Re-strengthening of factory building to accommodate heavier new equipment (for MCC PTA, Haldia)
15. Design of Kendriya Vidyalaya at Bhadrak
16. Stability check of earthquake-damaged BPCL staff quarters at Matigara, Siliguri
17. Design of steel TV tower for Broadcasting Corporation of India

Prof. Dipankar Chakravorty

West Bengal State Electricity Transmission Company Limited (Consultant for Transmission Towers for the Transmission Line between Kakdeep and Kachuberia, West Bengal)

Wapcos Limited (Consultant in Design and Construction of Prestressed Concrete Bridge over River Puntasangchhu in Bhutan)

Lloyd Insulations (India) Ltd. (Consultant in Design of Pre-Engineered Building Warehouse at Balmar Lawrie and Co. Ltd, Kolkata)

Transcend Infrastructure Ltd. (Consultant in Design of Rooftop and Ground Based Towers)

Kolkata Metropolitan Development Authority (Consultant in finite element analysis of five-span continuous RCC curved bridge at Ultadanga, Kolkata; Integrity Investigation of Fishbelly Girders of Road Over Bridge in Dobson Road, Howrah)

Constell Consultants Pvt Ltd. (Consultant in Building Condition Survey Work related to East-West Metro Project, Kolkata, undertaken by Kolkata Metro Rail Corporation)

Equitep Engineers and Associates Pvt Ltd. (Consultant in design of Vivekananda Road Flyover Project, Kolkata)

Konkan Railway Corporation Ltd. (Consultant in Integrity Test of Prestressed Concrete Girders in Road Over Bridge between Stations Ray and Khalari, Jharkhand)

Larsen and Tubro Ltd. (Consultant in Nondestructive and Integrity Test of Concrete Hopper at Koderma and Coal tower in Bhusan Steel site at Angul, Orissa)

Amiya Commerce and Construction Company Pvt Ltd. (Consultant in Structural and Civil Foundations Design of Space Frame for Kolkata Airport Modernization Project, Pre-Engineered Building Structures at Hindustan Aeronautics Ltd Campus, Koraput, Orissa)

Bharat Petroleum Corporation Ltd. (Consultant in Structural Design of LPG Bottling Plant at Patna, Plants at Maldah, Muzaffarpur and Balasore)

Kolkata Port Authority, Haldia, Kolkata. (Consultant in Root Cause Failure and Residual Life Analysis of Stacker-cum-Reclaimer, Grab Unloader, etc)

Jamshedpur Utilities and Services Company Limited. (Consultant in Structural Design of Water Treatment plant at Garden Reach, Kolkata)

Project Management Consultant (PMC) for Common Faculty Centre (CFC) for the Rolling Mill Cluster, Howrah.

Performance Evaluation of Bank Protection works along the banks of river Ganga-Padma and Bhagirathi in districts of West Bengal for Irrigation and Waterways (I & W) Directorate, Govt. of West Bengal

Consultant of Structural Design of 59 MLD Water Treatment plant at Panihati for Thermax Limited.

Design of bridges for railway line doubling project between Tamluk and Rajgoda on behalf of Rail Vikas Nigam Limited

Consultant to probe the Ultadanga bridge collapse that took place on 03/03/2013 in Kolkata, appointed by Kolkata Metropolitan Development Authority

Consultant to review the design of bridges and viaducts to be constructed at Park Circus and Kamalgazi in Kolkata, appointed by Kolkata Metropolitan Development Authority

Consultant to review the design of 140 mld water treatment plant coming up at Madhyamgram

Consultant to review the design of 240 m tall 60-storied tower at 42 Chowringhee Road, Kolkata appointed by M/S Chowringhee Residency Pvt. Ltd.

Assessment of fire-damaged factory of Berger at Howrah, Berger Paints, Kolkata

Structural vetting of Rabindra Tirtha, Rajarhat, Kolkata, Simplex Infrastructure Ltd

Assessment of Concrete of two fly ash silos at Saristhali, West Bengal, Crescent Power Ltd, Asansol, WB

Consultant of Development Consultants Private Ltd. for Tailing Dam Projects of Uranium Corporation Ltd. at Turamdih, Jharkhand and Tummalapalli, Andhra Pradesh, with RB Sahu

Consultant for proof checking of underground Pump house, Jetty and other structures for Mayerghat and Gardenreach Project of Kolkata Municipal Corporation; with RB Sahu & S. Mandal

Soil investigation for cyclone shelters under NCRMP & ICZMP. Disaster Management, Govt of West Bengal

Consultancy for Grouting work at Pump House of Garden Reach Waterworks under Budgebudge Municipality for KMWSA

Consultancy for Geotechnical Investigation for proposed residential buildings and water treatment plant to be built by Tata Steel for M/s. KND Engineering Technologies Ltd, Kolkata

Consultancy for drainage scheme of Digha for ICZMP, Govt. of West Bengal

Consultant for structural assessment ahead of reconstruction of Belvedere House, National Library, Kolkata

Consultant to review the design of 6 rail bridges in South Eastern Railway

Consultant to review the design of 5 rail bridges in South Eastern Railway

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

Prof S.Mandal has visited to the modern laboratory of LAFARGE AGGREGATES & CONCRETE INDIA PVT. LTD Mumbai for the development of bacterial concrete

Prof S.Mandal has visited to the modern laboratory of M/S BASF Limited, Mumbai for the use of bacterial protein in European cements

Dr. Partha Bhattacharya has visited Germany under DAAD Reinvitation Programme, 2012 and DAAD Guide Visit Programme, 2013

Dr. G. Bhandari received the Erasmus Mundus Scholar Award for the Two years International M.Sc. Programme on "Coastal and Marine Engineering and Management" (CoMEM), Offered by European Commission, during 2007-2009. Visited NTNU, Norway during Autumn 2007 as Guest Faculty.

Dr. G. Bhandari received the Erasmus Mundus Mobility Scholarship Award to visit the Centre for Risk Analysis and Management at Lund University (LUCRAM), Sweden in the Academic Staff Mobility, for two months during August 24 to October 25, 2009, in the frame of the Erasmus Mundus External Cooperation Window Lot 15 (EMECW15) as visiting Faculty.

Dr. G. Bhandari received the Erasmus Mundus Mobility Scholarship Award to visit the ITC, Netherlands, in the Academic Staff Mobility, for three months during August 29 to November 26, 2010, in the frame of the Erasmus Mundus External Cooperation Window Lot 13 (EMECW13) as visiting Faculty.

Dr. G. Bhandari received the Erasmus Mundus Mobility Scholarship Award to visit the University of Nice Sophia Antipolis (UNS), Nice, France, in the Academic Staff Mobility, for one month during September 04 to October 05, 2012, in the frame of the Erasmus Mundus EMMA-West, as visiting Faculty.

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

Prof Saroj Mondal acted as the reviewer of the following International Journals

(1) Cement and Concrete Research - (Elsevier Publication)

(2) Indian Concrete Journal - Published by ACC Limited

(3) Materials and Structures - Published by Springer

He is a member of the working group for the Curriculum of Civil Engineering (2010) constituted by All India Council for Technical Education, New Delhi

He is also the reviewer of a book on "Building Material"

Dr. R. B. Sahu

- Member of Foundation Engineering Sub-committee of BIS
- Reviewer of Indian Geotechnical Journal
- UGC Nominee for SAR Project in Civil Engineering Department, Andhra University

Prof. Dipankar Chakravorty is acting as reviewer in a number International Journals including ASCE - E.Mech. He is also the Co-Editor-in-Chief of *International Journal of Management Science and Engineering Management*. He chaired the Session on "Composite Structures" in 2012 in the Third Asian Conference on Mechanics of Functional Materials and Structures, held at the Department of Applied Mechanics, IIT Delhi.

Dr. Partha Bhattacharya is acting as a reviewer for *Journal of the Institution of Engineers* (Series A). He is acting as a technical expert in the state level committee for implementation of the Police Telecommunication Network (POLNET) in the state of West Bengal. He has also chaired the technical session during the 19th West Bengal State Congress on Science and Technology at Ramakrishna Mission, Narendrapur, during February 2011.

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

The department has conducted a 5-day training programme for teachers of the West Bengal State Council of Vocational Education and Training; Dr. Dipankar Chakravorty acted as the co-coordinator.

The department has conducted a 7-day workshop for the civil engineering professionals in the rank of assistant engineers and above on 'National Program on Capacity Building of Engineers in Earthquake Risk Management' (NPCBEERM-12), in collaboration with the Department of Disaster Management, Government of West Bengal, during February 2012.

Dr. G. Bhandari jointly coordinated (with Sri Kalyan K. Mondal) the UGC- sponsored Refresher Course on "Disaster Management", organised by Department of Civil Engineering, Jadavpur University, Kolkata, India, during March 2010.

Dr. G Bhandari jointly coordinated (with Dr. Partha Bhattacharya) the training course on 'Earthquake Disaster Management', for Practicing Engineers, under the 'National Programme for Capacity Building of Engineers in Earthquake Risk Management (NPCBEERM)' scheme of NDMA, Government of India, organized in collaboration

with the Government of West Bengal, during February 2012, at the Department of Civil Engineering, Jadavpur University, Kolkata.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects: 15 % of third and fourth year students
 - percentage of students doing projects in collaboration with other universities / industry / institute: 5 % of third and fourth year students

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

- Faculty

Prof S. Mandal received the finalist award for the Lafarge Innovation Award in 2012

Prof. Dipankar Chakravorty received The John C Gammon Prize Gold Medal for paper "Damped Motions of Cylindrical Shell Roofs by Finite Element", conferred by the Institution of Engineers (India) in 2008.

Dr G Bhandari received the Second Best Paper Award for his paper, "Trend Analysis of River Course Changes Using Historical and Recent Data", in the XXX INCA International Congress held at Dehradun, during November 2010.

Prof. Sibapriya Mukherjee received IGS-Dr. Samsheer Prakash Biennial Prize for Best paper on Soil Dynamics and Vibration Problems in Foundation Engineering for paper entitled "Non-linear behaviour of multilayered soil due to seismically excited liquid storage tanks" published in the proceedings of Asian Regional Conference 2007 held in December 2007 at Kolkata India in IGC 2009 at Guntur, India

Dr. Tumpa Hazra received the Nawab Zain Yar Jung Bahadur Memorial Gold Medal for the paper "Adsorption of Cadmium using Flyash: Equilibrium and Kinetic Study"; published in the Environmental Engineering Journal of The Institute of Engineers (India), Vol. 90, March 2010 Issue
- Doctoral / post doctoral fellows : 22 research scholars
- Students (Give details)

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

The department has conducted a 5-day training program for the teachers of the West Bengal State Council of Vocational Education and Training.

31. Code of ethics for research followed by the department: A set of guidelines are framed as code of practices being followed by the faculty members, research scholars, and other faculty staff in the form of "Code of Ethics" in the research of the department. The guidelines are prepared on the basis of code of ethics as laid down by American Educational Research Education (AERA). The department also refers other codal formulations of international standards such as EPA, NIH, American Association of University Professors, etc. The ultimate goal of each teaching member of the department is to contribute substantially in the field of post-graduate education with a dedication to solve challenging scientific problems of national and international importance for the benefit of the mankind. The following ethical principles are encapsulated in the code of ethics;-

- Honesty
- Objectivity
- Integrity
- Avoidance of any kind of plagiarism
- Innovative and novelty
- Evaluation of dissertation by competent academic persons in national and international reputation
- Publication of papers before submission of thesis

- Regular monitoring of researchers work by the supervisors
- Authentic certification
- Carefulness
- Openness
- Respect to intellectual resources such as publication patent, copyright etc.
- Protecting confidential submission and communication and avoidance of duplicative publication
- Guidance to students for building self acting attitude for undertaking minor research works
- Responsible mentoring
- Social responsibility
- Avoiding any kind of racial, sexual, discrimination, ethnicity and other factors which are not pertaining to research.
- Competence
- Legality
- Avoiding conflict of interest

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to q. no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
UG	State JEE Board and University Authority handle this	90	10	100	100
PG	State JEE Board and University Authority handle this	22	3	100	100
PhD	University Authority handle this	No unified trend			

33. Diversity of students

Name of the Programme (refer to q. 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
UG	100	00	00	00
PG	30	60	09	01
PhD	30	35	35	00

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise. - 25%

35. Student progression

Student progression	Percentage against enrolled
UG to PG	30
PG to M.Phil.	-
PG to Ph.D.	05
Ph.D. to Post-Doctoral	
Employed	
• Campus selection	90
• Other than campus recruitment	10
Entrepreneurs	10

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	80
from other universities within the State	20
from universities from other States	00
from universities outside the country	00

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period (2008 – 2013): 4
38. Present details of departmental infrastructural facilities with regard to
- Library has ample text and reference books, some journals and e-library facility
 - Internet facilities for staff and students: Available to all
 - Total number of class rooms: 5 large rooms (100 capacity), 1 drawing hall (120 capacity), 6 small rooms (20 capacity) and 2 seminar rooms
 - Class rooms with ICT facility: 3
 - Students' laboratories: 11
 - Research laboratories: 3
39. List of doctoral, post-doctoral students and Research Associates
- from the host institution/university: 15
 - from other institutions/universities: 7
40. Number of post graduate students getting financial assistance from the university. (Give details.): 20 GATE candidates.
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.
42. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? To outline teaching methodologies and research areas.
 - students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? To outline teaching methodologies and research areas.
 - 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)
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
45. List the teaching methods adopted by the faculty for different programmes – Normal classroom teaching, teaching with LCD projectors and Internet facilities.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? The departmental Board of Studies has members from the industry and their feedbacks and inputs are considered in formulating the teaching methodology.
47. Highlight the participation of students and faculty in extension activities.
48. Give details of “beyond syllabus scholarly activities” of the department. The students participate in design competitions organized by different institutions like the INSTAG and IIT Kharagpur.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. UGC, NAAC.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

The department is producing a number of doctorates per year who are publishing papers in reputed peer reviewed journals of high impact factors. Moreover the graduates of this department are among the post graduates toppers in the IITs and IISC and in Universities abroad. The reputation of the graduates serving in the industry is also praiseworthy and noteworthy.

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

One of the major *strengths* of the department is that Jadavpur University gets the top ranking students of the state. The University has an excellent academic environment with highly accomplished teachers. The teachers do not only have very good research backgrounds but many of them are eminent consultants in the industry and hence the teaching here is practice-oriented as well. No wonder that the department is a part of a University with potential for excellence.

The *weaknesses* of the department include acute shortage of teaching staff and a shortage of space though the student intake has increased in recent years. More funds are needed to subscribe to good journals, many of which are not subscribed to now. The departmental budget cannot accommodate the registration and travel expenses of the faculty members to attend international conferences.

The opportunity of introducing new subjects in the department like earthquake engineering, water resource engineering, transportation engineering, repair and rehabilitation engineering are in the *vision* of the department.

The *challenge* is to get more space, funds and faculty to give shape to the *opportunities* the department has ahead of it.

52. Future plans of the department (in as much detail as possible):

The department endeavors to improve the quality of teaching even more in terms of teacher student ratio. This calls for sanction of more teaching posts and recruitment of more faculties. The department also looks forward to start new courses like earthquake engineering, water resource engineering, transportation engineering, repair and rehabilitation engineering keeping in view the industrial requirements. The requirements of more advanced computation laboratory, more well-equipped laboratories and libraries cannot be overlooked. Enhanced interaction with other institutes in India and abroad needs more funds which the department plans to explore in the near future.

Department of Computer Science and Engineering

1. Name of the Department/School/Centre: COMPUTER SCIENCE & ENGINEERING
2. Year of establishment: 1988
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters, etc.): UG (BCSE), PG (MCSE), MTech, Integrated PhD, DSc, DLitt, etc. in Computer Technology, MCA, PhD (Engg.)
5. Interdisciplinary programmes being conducted and other departments involved: Natural Language Processing, Digital Humanities, Medical Image Processing
6. Courses in collaboration with other universities, industries, foreign institutions, etc.: None
7. Details of programmes discontinued, if any, with reasons: None
8. Examination System Annual/Semester/Trimester/ChoiceBasedCreditSystem: Semester
9. Participation of the department in courses offered by other departments: Service to the UG Engineering courses offered by the following departments in the University: Food Technology and Bio-Chemical Engineering, Metallurgical and Material Engineering, Printing Engineering, Power Engineering, Construction Engineering, Instrumentation and Electronics Engineering, Information Technology; Service to the UG Science courses offered by the following departments: Physics, Chemistry, Mathematics.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	12	8	13
Associate Professor	17	14	9
Asst. Professor	15	8	8
Other (AICTE Emeritus Professor)	-	-	1

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD/MPhil. students, last 4 years (completed + ongoing)
Anupam Sinha	PhD(Engg.)	Professor	Fault-tolerant Distributed Systems/ Parallel Computing	24	0
Atal Chaudhuri	PhD(Engg.)	Professor	Fault Detection / fault-tolerant/ Parallel & Distributed Computer Architecture	28	2+8
Avijit Kar	PhD(Engg.)	Professor	Image Processing & Computer Vision	29	2+4
Chandan Mazumdar	M.E.	Professor	Distributed Computing/ Information Security/Disaster Management	28	2 +8
Debesh Kumar Das	PhD(Engg.)	Professor	VLSI	27	0+1
Mahantapas Kundu	PhD(Engg.)	Professor	Soft Computing, Pattern Recognition, Bio-informatics, Artificial Intelligence	25	2+1
Mita Nasipuri	PhD(Engg.)	Professor	Bio-medical signal Processing, Image Processing, Pattern Recognition, Soft Computing, Artificial Intelligence	26	9
Nandini Mukhopadhyay	PhD(Engg.)	Professor	Parallel Computing, Grid Computing, Wireless Sensor Networks	22	4+6

Name	Qualification	Designation	Specialization	Years of Experience	PhD/MPhil. students, last 4 years (completed + ongoing)
Shovonlal Kundu	M.E.	Professor	Theory of Computer Science/ Pattern Recognition/ Database	34	0
Sivaji Bandyopadhyay	PhD(Engg.)	Professor	Computer Processing of Indian Languages/Database/Machine Translation	24	5+6
Suranjan Ghose	PhD(Engg.)	Professor	Parallel Algorithm & Architecture/ Interconnection Networks/ Fault-tolerant Systems/Computer graphics/Computational geometry	31	2+0
Swapan Bhattacharya	PhD(Engg.)	Professor	Software Engineering/Distributed Computing	31	
Ujjwal Maulik	PhD(Engg.)	Professor	Pattern Recognition and Data Mining, Soft Computing, Bioinformatics, Distributed System and Computer Networking.	20	5+7
Chitrita Chaudhuri	M. E.	Associate Professor	Data Mining	12	0
Debotosh Bhattacharjee	PhD(Engg.)	Associate Professor	Image Processing / Pattern Recognition /VLSI	16	2+5
Diganta Saha	PhD(Engg.)	Associate Professor	Machine Translation/ Natural Language Processing/ Mobile Computing/ Pattern Classification	15	0
Jamuna Kanta Sing	PhD(Engg.)	Associate Professor	Face recognition, Medical image processing, Computational intelligence.	16	6+1
Kamal Sarkar	PhD(Engg.)	Associate Professor	Machine learning/Text Mining/ Text Summarization/Medical Data Mining/Computer Processing of Indian Languages	12	0
Nirmalya Chowdhury	PhD(Engg.)	Associate Professor	Pattern Recognition, Soft Computing, Text Processing	16	1+5
Sanjoy Kumar Saha	PhD(Engg.)	Associate Professor	Image, Video and Audio Processing	16	1+5
Sarmistha Neogy Lahiri	PhD(Engg.)	Associate Professor	Fault Tolerance, Distributed Systems, Reliability, Mobile Computing Systems	16	3+3
Susmita Ghosh (De)	PhD(Engg.)	Associate Professor	Genetic Algorithms/Neural Networks/ Image Processing/ Pattern Recognition/Soft Computing	16	2+6
Chandreyee Chowdhury	M. E.	Assistant Professor	Mobile Computing, Fault Tolerance, Reliability	7	0
Goutam Paul	PhD(Engg.)	Assistant Professor	Cryptology	9	0
Mridul Sankar Barik	M. E.	Assistant Professor	Distributed Computing, Network Security, Digital Forensics	8	0
Nibaran Das	PhD(Engg.)	Assistant Professor	Optical Character Recognition,	8	0
Ram Sarkar	PhD(Engg.)	Assistant Professor	Image Processing, Pattern Recognition	8	0+1
Sarbani Roy	PhD(Engg.)	Assistant Professor	Distributed Computing, Wireless Sensor Network	12	0+3

Name	Qualification	Designation	Specialization	Years of Experience	PhD/MPhil. students, last 4 years (completed + ongoing)
Subhadip Basu	PhD(Engg.)	Assistant Professor	Pattern Recognition, Image Processing	14	2

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD/MPhil. students, last 4 years
Rana Dattagupta	PhD	Emeritus professor	Switching Circuits/ Computer Architecture and Microprocessor-based System	44	8

13. Percentage of classes taken by temporary faculty – programme-wise information: 11%

Note: Temporary faculties cater to service loads provided by the CSE Department to other departments within the University and management and electronics courses in the department.

14. Programme-wise Student Teacher Ratio: Teachers are not specifically appointed for a specific programme. Hence, overall Student Teacher ratio: 1:21

15. Number of academic support staff (technical) and administrative staff– sanctioned, filled and actual: Support Staff (Technical) – 8 (actual); Administrative Staff – 6 (actual)

16. Research thrust areas as recognized by major funding agencies: Natural Language Processing, Information Security, Image Processing, Distributed and Mobile Computing

17. Number and names 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 titles and grants received project-wise.

Title	Name/s	Funding Agency	National/International	Grants received
Project on Quantum Computing	Debesh Kumar Das	CSIR	National	12 Lakhs
Project on Boolean Functions		UGC	National	10 Lakhs
Erasmus Mundus Mobility with Asia Lot 11, Coordinator: Universite De Nice Sophia Antipolis, France	Debotosh Bhattacharjee (Principal Investigator) along with other Co-investigators	European Commission, Brussels	International	Rs.2,53,780/-2010-2013, 3 years Ongoing
Erasmus Mundus Mobility with Asia Lot 12, Coordinator: Universite De Nice Sophia Antipolis, France		European Commission, Brussels	International	Rs.2, 70,391/- 2011-2014, 3 years Ongoing
Erasmus Mundus Mobility with Asia, Coordinator: Universidade de Evora, Portugal		European Commission, Brussels	International	4000 Euro
Design and Development of Facial Thermogram technology for Biometric Security System	Debotosh Bhattacharjee and Mita Nasipuri	UGC, Govt. of India	National	Rs. 10,76,834/-2010-2013
Development of 3D Face Recognition Techniques Based on Range Images		DIT, MCIT, Govt. of India	National	Rs. 66,21,250/-2012-2015, 3 years, Ongoing
Design and Development of Facial Thermogram technology for Biometric Security System		UGC, Govt. of India	National	Rs. 10,76,834/-2010-2013, 3 years, Ongoing
Intensity Inhomogeneity Correction in Magnetic Resonance Images	Jamuna Kanta Sing	AICTE, New Delhi	National	Rs. 4,00,000.00

Title	Name/s	Funding Agency	National/International	Grants received
Development of robust face recognition systems from video		UGC, New Delhi	National	Rs. 7,28,261.00
Threat and Attack Modeling of Heterogeneous Enterprise Networks	Mridul Sankar Barik	Scientific Analysis Group, DRDO, New Delhi	National	Rs. 2500000/- , 2011-2013 (1.5 years)
Design and Development of a Tool for Enterprise Level Security Metrics		DIT, MCIT, Govt. of India, New Delhi	National	Rs. 13375000/-, 2010-2013 (2 years)
Development of Web-enabled Security Management Framework for Critical Sector Information Infrastructure Protection		DIT, MCIT, Govt. of India, New Delhi	National	Rs. 12611000/-, 2008-2010(2 years)
Development of an Integrated Web Portal for Healthcare Management based on Sensor-grid Technologies	Nandini Mukherjee and Sarbani Roy	NRDMS	National	22 Lakhs for 3 years (2011-2014)
Performance based Resource Management and Load balancing in Cloud Environment		“Mobile Computing and Innovative Applications” under UPE – Phase II	National	
Material Characteristics and Product Characterization	Sanjoy Kumar Saha	Centre of Excellence Program	National	Rs. 5.00 Crore
Identification of Damage Initiation mechanisms in Advanced High Strength Steels (AHSS) Using in-situ Tensile Testing under Scanning Electron Microscope		Tata Steel Ltd., Jamshedpur	National	Rs. 20.00 Lakh
Qt-based Graphical User Interface Server		Adv. Sys. Lab, DRDO	National	Rs. 22.89 Lakh
“JU FOSS Resource Centre”	PI: Sarmistha Neogy Co-I: Sarbani Roy Chandreyee Chowdhury	Institute for Open Technology Application and Applications, Dept. of IT, GoWB	National	Rs. 37,96,835/- (August 2008 – October 2011)
Design of a Secure and Trusted Wireless Sensor Network for border and perimeter tracking	Sarmistha Neogy	UGC UPE Phase II	National	Rs. 4,00,000/- (approx)
“Study and Design of Dependable Mobile Computing Systems”		UGC Major Research Project	National	Rs. 10,36,000/- (2011 – 2013)
Segmentation of the carotid vasculature in human CT angiography	Subhadip Basu	DST FAST-TRACK, Govt. of India	National	Rs. 8,58,000/-,
Design of Multimodal Biometric System for Various Security and Forensic application	SubhadipBasu (PI), Ram Sarkar, Nibaran Das,	UGC Sponsored UPE-II Program under Mobile Computing and Innovative Applications	National	Rs. 13,63,200/-

Title	Name/s	Funding Agency	National/International	Grants received
Development of Efficient Many Objective Optimization Technique with Parallel Computing and Objective Reduction	Ujjwal Maulik	Department of Science and Technology, Govt. Of India	India-Mexico joint project	About 10 lakhs for the year 2010-2013
		PURSE, DST, Govt. of India	National	Rs. 58,05,000/- (Allotted to CSE Dept.)
Design and Development of a System for Querying, clustering and Summarization for Bengali	Kamal Sarkar	SERB(DST)	National	Rs. 31,71,600 (Sanctioned amount)
Foss Based Technology for Smart Handhelds	Chandreyee Chowdhury	UGC UPE Phase II	National	

18. Inter-institutional collaborative projects and associated grants received

f) National collaboration b) International collaboration

Name of the Faculty	Title	National collaboration	International collaboration	Grants received
Sanjoy Kumar Saha	Content Based Video Indexing and Retrieval using Rectilinear Motion	Collaboration With Indian Statistical Institute, Kolkata		8.41 Lakh (ISI, Kolkata funded project)
	Content Based Video Indexing and Retrieval using Visual and Temporal Features (Ph.-II)	Collaboration With Indian Statistical Institute, Kolkata		3.15 Lakh (ISI, Kolkata funded project)
	Video Scene Segmentation and Classification	Collaboration With Indian Statistical Institute, Kolkata		Rs. 11.90 Lacs (ISI, Kolkata funded project)
Ujjwal Maulik	Erasmus Mundus Mobility with Asia (EMMA) (European-Asian mobility program), 2008-2012	Jadavpur University	University of Nice, France	About 5 million Euro
Susmita Ghosh	India-Trento Program for Advanced Research (ITPAR) Project "Advanced Techniques for Remote Sensing Image Processing & Recognition".	Indian Institute of Technology (Bombay), Indian Statistical Institute (Kolkata), Jadavpur University (Kolkata)	University of Trento (Italy)	About Rs. 2 crores
Sivaji Bandyopadhyay	CLIA (Cross Lingual Information Access)	Consortium of 12 Institutions with IIT Bombay as the Consortium Coordinator and		

		funded by DEITY, Government of India		
	Development of English to Indian Languages Machine Translation (E- ILMT) Systems	Consortium of 12 Institutions with CDAC, Pune as the Coordinator and funded by DEITY, Government of India		
	Development of Indian Language to Indian Language Machine Translation System (IL-IL MT)	Consortium of 12 Institutions with IIIT Hyderabad as the Consortium Coordinator and funded by DEITY, Government of India		
	An advanced platform for question answering systems		INSTITUT DE RECHERCHE EN INFORMATIQUE DU TOULOUSE (IRIT), Toulouse, France and funded by Indo-French Centre for Promotion of Advanced Research (IFCPAR)	Rs. 11,92,000/-
	Sentiment Analysis where AI meets psychology		Tokyo Institute of Technology, Tokyo, Japan and funded by DST, Govt of India	Rs. 45,00,000/-
	Answer Validation through Textual Entailment		National Polytechnic Institute, Mexico and funded by DST, Government of India	Rs. 26,00,000/-

Jadavpur University has been selected as the lead institute for multiinstitutional project "Remote Health: A Framework for Healthcare Services using Mobile and Sensor-Cloud Technologies" funded by Information Technology Research Academy (ITRA), Department of Electronics and Information Technology, Govt. of India. Prof. Nandini Mukherjee is the lead Principal Investigator of the project.

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

Title	Funding Agency	Total grants received
"Mobile Computing and Innovative Applications" under UPE – Phase II, 2012-2015	UGC, Govt. of India	
An optical recognition system for handwritten Bangla text and its extension to automatic transcription of pre-formatted form documents, DST PURSE	DST, Government of India	Rs. 58,05,000/-

20. Research facility/centre run by the Dept./school/centre which has:

- state recognition
- national recognition - Computer Aided Design Centre (CAD), Centre for Microprocessor Application for Training, Education and Research (CMATER)
- international recognition – Centre for Distributed Computing (CDC)

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

22. Publications:

- * Number of papers published in peer reviewed journals (national / international)
177 (Details in Annexure)
- * Monographs
3 (Details in Annexure)
- * Chapters in Books 45 (Details in Annexure)
- * Edited Books 4 (Details in Annexure)
- * Books with ISBN with details of publishers 5 (Details in Annexure)
- * 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 - 104 cumulative h-index

23. Details of patents and income generated: 4 (Details in Annexure)

24. Areas of consultancy and income generated:

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

Faculty Name	Purpose of visit	Institution Name	Location	Duration
UjjwalMaulik	Visiting Scientist	IPN CINVESTAV	Mexico City, Mexico	December 2012 for two weeks
	Alexander von Humboldt Visiting Researcher	German Cancer Research Center (DKFZ)	Heidelberg, Germany	April 2012 to June 2012
	Visiting Scientist	IPN CINVESTAV	Mexico City, Mexico	December 2012 for two weeks
	Alexander von Humboldt Visiting Researcher	German Cancer Research Center (DKFZ)	Heidelberg, Germany	April 2011 to June 2011
	Visiting faculty	Institutpolytechnique de Grenoble	Grenoble, INP, France	September 2010
	Alexander von Humboldt Visiting Researcher	German Cancer Research Center (DKFZ)	Heidelberg, Germany	May 2011 to July 2010
	Visiting Professor	University of Heidelberg	Germany	September 2009 to November 2009
	Visiting Professor	Department of Sociology and Communication	Rome University, Italy	May 2008 to June 2008
Jamuna Kanta Sing	Faculty Secondment	Asian Institute of Technology (AIT)	Bangkok, Thailand	January 2010 to May 2010
Debesh K. Das	Collaboration and Lecture	Bremen University,	Germany,	September 2012
	Collaboration and Lecture	Nara Institute of Science Technology,	Nara, Japan	November 2012
	Collaboration	Kyshu Institute of Technology,	Kyshu, Japan	November, 2012

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.): Details in Annexure

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

Faculty Name	Title of the Course	Nature of the course	Sponsoring/ Funding Agency	Duration of the Course
Sarmistha Neogy and Chandreyee Chowdhury	“Security in Wired and Wireless Networks”	Refresher Course	UGC	3-week, July 04- 23, 2011
Sarmistha Neogy and Samiran Chattopdhyay (IT Department, Jadavpur University)	“Recent Advances in Wireless and Mobile Computing and Communications”	Workshop cum Training programme (Winter school)	UGC UPE Phase - II	1-week, Jan. 14 – 19, 2013
Debesh K. Das and Nandini Mukherjee	Free Software Technologies	UGC	Jadavpur University	26 th Nov. to 15 th Dec., 2012

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 – 25%

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

- Faculty
- Doctoral / post doctoral fellows
- Students (Give details)

Name	Name of the Award	Awarded by	Remarks
Ujjwal Maulik	Alexander von Humboldt Fellowship for Experienced Researchers	Germany	Received for 2010, 2011 and 2012
	Senior Associate	International Center for Theoretical Physics (ICTP), Italy	Received in 2012
Debotosh Bhattacharjee	Erasmus Mundus postdoc Fellowship		November 2011 to May 2012.
	Petamedia Grant to attend Summer School at Universitat Koblenz-Landau, Germany		2009.
	Elias grant to attend Winter school at Zinal, Switzerland		2012
Sarvani Roy	Fulbright-Nehru Senior Research Fellowship	USIEF	2013-2014
	UGC RAMAN Postdoctoral Fellowship	UGC	2013-2014
	cLink Postdoctoral Fellowship	Erasmus Mundus Programme of the European Union	2012-2013

Sivaji Bandyopadhyay	Dean	Faculty of Engineering and Technology, Jadavpur University	2013-2016
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30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

Name	Source of Funding	Associated Faculty
ReTIS-11, Jadavpur University, Dec. 21-23, 2011	Industry / Institutional Sponsorship	Professor Mita Nasipuri
ReTIS-08	Industry / Institutional Sponsorship	Professor Mita Nasipuri
ICDCN-2008	Industry / Institutional Sponsorship	Professor Chandan Mazumdar
PRIMA-2010	Industry	Professor Chandan Mazumdar
First International Workshop on Sentiment Analysis where AI meets Psychology (SAAIP), International Joint Conference on Natural Language Processing (IJCNLP), Thailand, November, 2011.	Japan Science and Technology (JST), Government of Japan	Professor Sivaji Bandyopadhyay
Second International Workshop on Sentiment Analysis where AI meets Psychology (SAAIP), International Conference on Computational Linguistics (COLING), Mumbai, India, December, 2012.	Department of Science and Technology, Government of India & Japan Science and Technology (JST), Government of Japan	Professor Sivaji Bandyopadhyay

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

1. *Plagiarism*

Authors who present the words, data, or ideas of others with the implication that they are their own, without attribution in a form appropriate for the medium of presentation, are committing theft of intellectual property and may be guilty of plagiarism and thus of research misconduct.

2. *Data*

- Integrity of Data: It is a primary responsibility of a researcher to avoid either a false statement or an omission that distorts the research record.
- Use and Misuse of Data: Research integrity requires not only that reported conclusions are based on accurately recorded data or observations but that all relevant observations are reported.
- Ownership of and Access to Data: Research data obtained in studies performed at the University and/or by employees of the University are not the property of the researcher who generated or observed them or even of the principal investigator of the research group.

3. Authorship and Other Publication Issues: Publication of research results is important as a means of communicating to the scholarly world so that readers may be informed of research results and other researchers may build on the reported findings.

- Criteria for Authorship: Publication must give appropriate credit to all authors for their roles in the research.
- Order of Authors: Customs regarding the order in which co-authors' names appear vary with the discipline.
- Self-citations: In citing one's own unpublished work, an author must be careful not to imply an unwarranted status of a manuscript.

- d) **Duplicate Publication:** Researchers should not publish the same article in two different places without very good reason to do so, unless appropriate citation is made in the later publication to the earlier one, and unless the editor is explicitly informed.
- e) **Early Release of Information About to be Published:** It is unethical to release to the media scientific information contained in an accepted manuscript prior to the publication.
4. **Interference:** Not only withholding of data but intentional removal of, interference with, or damage to any research related property, including instruments and other equipment, is improper and could be classified as research misconduct.
5. **Obligation to Report**
 - a) **Reporting Suspected Misconduct:** Reporting suspected research misconduct is a shared and serious responsibility of all members of the academic community.
 - b) **Correction of Errors:** If a finding of error, either intentional or inadvertent, or of plagiarism should be made subsequent to publication, the investigator has an obligation to submit a correction or retraction in a form specified by the editor or publisher and, in the case of research misconduct, in a form specified by the University and a sponsoring federal agency.
6. **Conflict of Interest:** There are some circumstances in which conflicts of interest could compromise the integrity of research or even lead to research misconduct, for example, by the distortion of research outcomes as a result of personal financial interests of a researcher.
7. **Responsibilities of a Research Investigator:** An investigator who leads a research group has leadership and supervisory responsibilities with respect to the research performed by members of the group.
8. **Responsibilities to Funding Agencies:** An investigator should be aware that the same standards of accuracy and integrity pertain to grant applications and proposals as to manuscripts submitted for publication.

32. **Student profile programme-wise (in the Current Semester):**

Name of the Programme (refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
Bachelor of Computer Science and Engineering (BCSE)	Admission through West Bengal Joint Entrance Board Examination	52	9	95%	95%
Master of Computer Science and Engineering (MCSE)	318	19	10	95%	95%
Master of Computer Applications (MCA)	Admission through West Bengal Joint Entrance Board Examination	23	12	95%	95%
Master of Technology in Computer Technology (MTCT)	328	20	15	95%	95%

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
Master of Computer Science and Engineering (MCSE)	10	80	10	NIL
Master of Computer Applications (MCA)	20	60	20	NIL

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
Master of Technology in Computer Technology (MTCT)	10	80	10	NIL

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.
50% of the students of the BCSE course clear the GATE Examination on an average

35. Student progression

Student progression	Percentage against enrolled
UG to PG	20
PG to M.Phil.	Not Applicable
PG to Ph.D.	10
Ph.D. to Post-Doctoral	NIL
Employed	
• Campus selection	95
• Other than campus recruitment	5
Entrepreneurs	NIL

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	66
from other universities within the State	0
from universities from other States	34
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 (2008 – 2013): 4 faculty members were awarded PhD during the assessment period

38. Present details of departmental infrastructural facilities with regard to

- Library – 5000 books and 100 journals
- Internet facilities for staff and students – Institutional Email Ids to staff and research students, Internet facilities in the Staff rooms, laboratories (accessible to students) and the library
- Total number of class rooms – 8 Class rooms
- Class rooms with ICT facility – 8 Class rooms
- Students' laboratories – 8 laboratories
- Research laboratories – 5 research laboratories

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

- a) from the host institution/university

Faculty Name	Name of Associate	Category	Year
Ujjwal Maulik	Indrajit Saha	Doctoral	Submitted 2013
	Anasua Sarkar	Doctoral	Submitted 2013
	Debarka Sengupta	Doctoral	Registered 2009
	Debashis Chakraborty	Doctoral	Registered 2010
	Tapas Bhadra	Doctoral	Registered 2011
	Brijish Srivastava	Doctoral	Registered 2012
	Surjadeep Sarkar	doctoral	Registered 2013
Jamuna Kanta Sing	Aninda Jana	Doctoral	2011
Debotosh Bhattacharjee	Shib Sankar Bhowmick	Doctoral	2012
	Pramit Ghosh	Doctoral	2011
	Ayan Seal	Doctoral	2011
	Mrinal Kanti Bhowmik	Doctoral	2010
	Arindam Kar	Doctoral	2010

Sanjoy K Saha	Partha Pratim Mohanta	Doctoral	
	Arijit Ghoshal	Doctoral	
	Debabrata Dutta	Doctoral	
	Siddhartha Banerjee	Doctoral	
	ParthaBasuChaudhuri	Doctoral	
Sar bani Roy	Zeenat Rehana	Doctoral	Registered 2009
	Madhulina Sarkar	Doctoral	Registered 2010
	Suman Sankar Bhunia	Doctoral	Registered 2013
Sarmistha Neogy	Suparna Biswas	Doctoral	2008
	Chandreyee Chowdhury	Doctoral	Submitted 2009
Debesh K. das	Debarati Bhunia	Doctoral	2013
	Arighna Deb	Doctoral	2013

b) from other institutions/universities

Faculty Name	Name	Category	Year	Name of the institution/university
Jamuna Kanta Sing	Dakshina Ranjan Kisku	Doctoral	2008	AsansolEngg. College
	Shiladitya Chowdhury	Doctoral	2009	Techno India
	Sudip Adhikari	Doctoral	2009	Neotia Inst. Tech. Mng& Science, D H Road
	Atanu Bose	Doctoral	2009	IIT KGP
	Abdur Rahaman Sardar	Doctoral	2010	Neotia Inst. Tech. Mng& Science, D H Road
	Subro Santiranjana Thakur	Doctoral	2011	MCKV Engg. College
Ram Sarkar	Samir Malakar	Doctoral	2013	MCKV Institute of Engineering, Howrah

40. Number of post graduate students getting financial assistance from the university. (Give details.) – No post graduate students get financial assistance from the University. However, a total of 50 (25 in each year) post graduate students get GATE scholarship.
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. – No new program was developed during the assessment period.
42. Does the department obtain feedback from
 - faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? Yes, regular curriculum revision
 - students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? Yes
 - alumni and employers on the programmes offered and how does the department utilize the feedback? Not Applicable
43. List the distinguished alumni of the department (maximum 10)
 1. Professor Sivaji Bandyopadhyay, Dean, Faculty of Engineering and Technology, Jadavpur University
 2. Professor Bhaskar Das Gupta, Associate Professor, University of Illinois at Chicago
 3. Professor Sandip Shukla, Professor, Virginia Polytechnic and State University, USA
 4. Professor Subhasish Mitra, Associate Professor, Stanford University, USA
 5. Professor Abhik Roy Choudhury, Vice Dean (Graduate Studies), National University of Singapore
 6. Mr. Joydeep Bose, Managing Director, Corporate Strategy, Cisco, India.
 7. Mr. Kanad Roy, Senior Principal Scientist, Broadcom Corporation, USA

8. Mr. Rajarshi Sengupta, Executive Director, Deloitte & Touche Consulting, India.
9. Mr. Arup Das, Vice President, MphasiS (HP), India.
10. Mr. Tapomoy Dey, Senior Director, Oracle, USA.
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts. – Special Lectures are held regularly in the department involving external experts with support from IEEE and other organizations. External experts as and when they visit the department deliver special lectures and seminars.
45. List the teaching methods adopted by the faculty for different programmes. – Pen and Whiteboard, Power Point Slides and Overhead Projection system
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? – through discussions and deliberations in the Board of Studies, Teacher Student Committee in the department and Faculty Council of faculty of Engineering and Technology in the University
47. Highlight the participation of students and faculty in extension activities. – Students and faculty members take part in various club activities. Students are actively involved in the Union activities and many faculty members are active in faculty associations.
48. Give details of “beyond syllabus scholarly activities” of the department. – Such activities are manifested through research projects in and outside the department as well as outside the University. In many cases, the research areas go beyond syllabus scholarly activities
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. All the UG and PG programs are accredited by AICTE and UGC.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

The broad areas in which department has contributed in generating new knowledge, basic or applied are – Distributed and Mobile Computing, Image Processing, Information Security, Machine Translation, Information Retrieval, Text Analytics, Soft Computing, Distributed Computing,

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

Strengths

1. Student Quality
2. Faculty Research Activities in the state-of-the-art areas
3. Teacher Student Relationship
4. Teaching and Research Laboratories with cutting edge technologies
5. Regular classes

Weaknesses

1. Space Scarcity
2. Cleanliness
3. Small Number of Fulltime Research Fellows
4. Time of operation of the research laboratories
5. Travel support to faculty members and students for attending conferences etc.

Opportunities

1. Government funding
2. More industry / network partners
3. National and International Collaborations and Exchange programs
4. Patenting of research products and research methodologies
5. Communication and Computing Convergence

Challenges

1. Inadequate government fundings during the plan period
2. Obsolescence of resources / technologies

3. To attract bright students as a State University
 4. Employment opportunities for students
 5. Quality Faculty recruitment
52. Future plans of the department (in as much detail as possible): -
1. Introduction of New Courses – MS by Research, Integrated M.Tech.
 2. More focus on Research – to give more emphasis to generation of patents and copyrights out of the research results
 3. Infrastructure Development – both physical and research infrastructure development with the involvement of the alumni of the department
 4. Credit Transfer Scheme – to encourage UG and PG students to spend one or two semesters in institutes like IITs as well as to encourage students from those institutes for visiting CSE Department
 5. National Collaboration and Student Exchange programs with top tier national institutes like IITs
 6. International Collaboration and Exchange programs with internationally acclaimed Universities and encouraging dual degree programs
 7. Industry Collaborations to encourage student support, research infrastructure support and collaborative research

Department of Construction Engineering

1. Name of the Department/School/Centre: CONSTRUCTION ENGINEERING
2. Year of establishment: 1989
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSC, DLitt, etc.): 1. Bachelors Degree in Construction Engineering 2. Masters Degree in Construction Engineering with Specialization in Structural Repair and Retrofit Engineering.
5. Interdisciplinary programmes being conducted and other departments involved:
 - a) Collaborative consultancy for PMGSY roads as state technical Agency with P&RD Dept, Govt. of West Bengal.
 - b) The department has set up
Centre for Corrosion Control Services in collaboration with Association of Corrosion Engineers
Centre for Quality Construction
 - c) Collaborative Training program for skill development of technical personnel with Indian Concrete Institute
 - d) Conducting seminars and workshops in association with Indian Concrete Institute
 - e) Collaborative Study of Earthquake Vulnerability with TATA Steel Company limited.
 - f) Worked as teaching resource person with adult continuing department in their Building Supervisor Course.
 - g) Organized seminar, symposium in association Corrosion of control society.
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
 - a) Joint PhD Supervision with industry personnel.
 - b) Organized seminar, symposium in association with Indian Concrete Institute.
 - c) Organized short term course for skill development of technical personnel with Indian Concrete Institute
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 courses offered by other departments: Yes
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01	-	04
Associate Professor	05	01	01
Asst. Professor	06	03	03
Other	NA	NA	NA

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

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D./ M.Phil. students, last 4 years
Prof. S. Saraswati	PhD(Engg)	Professor	Geotechnical Engineering, Concrete Technology	29	02
Prof. P. P. Biswas	PhD(Engg)	Professor	Geotechnical Engineering, Pavement Engineering	25	02

Prof. D. Bandyopadhyay	PhD(Engg)	Professor	Structural Engineering	25	01
Prof. K. Bandyopadhyay	PhD(Engg)	Professor	Geotechnical Engineering, Pavement Engineering	20	04
Dr. G. C. Mandal	PhD(Engg)	Associate Professor	Environmental Engineering	20	Nil
Dr. P. Ghosh	PhD(Engg)	Asst. Professor	Structural Engineering	8	01
Mr. S. Nandi	BE, MS (Engg)	Asst. Professor	Construction Management	20	Nil
Mr. M. K. Sahis	BE,ME	Asst. Professor	Geotechnical Engineering	4	Nil

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

- Dr. Subrata Chowdhury
Head – Research and Development
Ultratech Cement Ltd. India
INAE Distinguished Visiting Professor
- Mr. Partho Gangopadhyay
Superintending Engineer,
PWD, Govt. of West Bengal
Visiting Professor
- Dr. Arunava Majumdar
Emeritus Professor
School of Water Resource Engineering,
Jadavpur University
Visiting Professor
- Prof. Achyut Ghosh
Technical Adviser (International) – Mageba
SA, Switzerland
Visiting Professor and member of board of studies
- Dr. A. P. Gupta
Professor (Retired)
Civil Engineering Department, IIT, Kharagpur
Visiting Professor and member of board of studies

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

UG :15% and PG:20%

14. Programme-wise Student Teacher Ratio: UG: 1:10 (including the visiting professors)

PG: 1:5 (including the visiting professors)

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

	Sanctioned	Filled	Actual
Support staff (technical)	3	3	3
Administrative staff	5	5	5

16. Research thrust areas as recognized by major funding agencies: Structural Health Monitoring, Earthquake Damage Evaluation, High Performance Concrete, Environmental Geotechnique, Characterization of Layered Surface

17. Number and names 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 titles and grants received project-wise.

Sl.	Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
1	Dr. K. Bandyopadhyay	Studies on the efficacy of low cost adsorbents for the removal of fluoride and cadmium from waste water (2006-2009)	8.74 lacs	Department of Environment, Govt of WB

2	Prof. P.P. Biswas & Prof. S. Saraswati	High Performance Concrete with Blended Cement (2008-2012)	33.8 lacs	Board of Research in Nuclear Science
3	Dr. K. Bandyopadhyay	Feasibility Studies for Removal of Heavy Metals from Water and Wastewater Using a few low-cost Technologies. (2009-2012)	9.96 lacs	Department of Environment, Govt. of WB
4	Dr. K. Bandyopadhyay	Study on the Feasibility of Removal Inorganic Toxic contaminants from water and waste water using coagulation – Flocculation method. (Ongoing)	8.08 lacs	Department of Environment, Govt of WB
5	Dr. D. Bandyopadhyay	Comparative Study on Risk & Vulnerability of Earthquake in Different Cities / Countries	2.24 lacs	Tata Steel Company Limited

18. Inter-institutional collaborative projects and associated grants received

National collaboration

Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
Prof. P.P. Biswas & Prof. S. Saraswati	High Performance Concrete with Blended Cement (2008-2012)	33.8 lacs	Board of Research in Nuclear Science

International collaboration:

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

Heads	MHRD	DST-PURSE	TEQIP	UGC 11 th Plan
Building	-	-	-	-
Equipment	10.0 lakh	16.62 lakh	13.16 lakh	5.5 lakh
Books	-	-	-	3.5 lakh
Supplies and Materials	-	1.16 lakh	-	-
Computing & Networking	-	-	-	-
Facilities	-	-	6.5 lakh	-

Sl. No	Name of the Investigator	Title of the project and duration	Amount sanctioned	Funding Agency
1	Dr. K. Bandyopadhyay	Studies on the efficacy of low cost adsorbents for the removal of fluoride and cadmium from waste water (2006-2009)	8.74 lacs	Department of Environment, Govt of WB
2	Prof. P.P. Biswas & Prof. S. Saraswati	High Performance Concrete with Blended Cement (2008-2012)	33.8 lacs	Board of Research in Nuclear Science
3	Dr. K. Bandyopadhyay	Feasibility Studies for Removal of Heavy Metals from Water and Wastewater Using a few low-cost Technologies. (2009-2012)	9.96 lacs	Department of Environment, Govt. of WB
4	Dr. K. Bandyopadhyay	Study on the Feasibility of Removal Inorganic Toxic contaminants from water and waste water using coagulation – Flocculation method. (Ongoing)	8.08 lacs	Department of Environment, Govt of WB
5	Dr. D. Bandyopadhyay	Comparative Study on Risk & Vulnerability of Earthquake in Different Cities / Countries	2.24 lacs	Tata Steel Company Limited
Total			62.82 lacs	

20. Research facility/centre run by the Dept./school/centre which has:
- state recognition
 - national recognition
 - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies:
22. Publications:
- * 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 : One
Construction Technology
S. Saraswati & S. Sarkar. Oxford University Press.
ISBN-13 : 978-0-19-569483-3; ISBN-10 : 0-19-569483-X
 - * 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: Structural health monitoring
Failure investigation of structures
Design of structures
Retrofitting of structures
Design of Highway pavements

Financial Year	Industrial Testing/Consultancy values
2008-2009	Rs. 169.14 lakh
2009-2010	Rs. 185.42 lakh
2010-2011	Rs. 392.83 lakh
2011-2012	Rs. 435.83 lakh
2012-2013	Rs. 453.33 lakh
Total	Rs. 1636.55 lakh

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

Name of professor	Laboratories / institutions / industries visited
Prof. S. Saraswati	Carlbro laboratory, Denmark for NDT of pavements
Prof. P.P. Biswas	Carlbro laboratory, Denmark for NDT of pavements
Prof. P.P. Biswas	University of Sophia antipolis, Nice, France
Prof. K. Bandyopadhyay	Department of Civil Engineering, Hongkong Polytechnic Institute

26. Faculty serving in National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

- f. Prof. S. Saraswati Vice President 2011 to 2013
Indian Concrete Institute
- g. Prof. K. Bandyopadhyay National Executive Body 2013 to till date
Member of Indian
Geotechnical Society

h. Prof. P.P. Biswas Committee member of 2013 to till date
Performance Evaluation of
SQM of WBSRDA

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted: Young faculty members are encouraged to participate training program and workshop regularly on various emerging areas.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects : Student projects is mandatory for all UG students in their final year syllabus.
- percentage of students doing projects in collaboration with other universities / industry / institute : Nine P.G students of final year (50%) are doing project work under the guidance of experts from industry.

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

- Faculty

	Name of Award	Number of Award	Name of Awardee
National level	-	-	-
International level	Erramus Mundis Fellowship	1	Dr. Partha Pratim Biswas

- Doctoral / post doctoral fellows : Nil
- Students (Give details) : Nil

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

Technical Seminar (National) on Structural Repair and Retrofit Engineering in association with Indian Concrete Institute Seminar Hall of Department of Construction Engineering, Jadavpur University (2011)	ACC Limited BASF Construction Chemicals (India) Pvt. Ltd. Unitech Limited JMC Projects (India) Ltd. S.P.A. Consultants
One Day National Workshop on Fast Track Construction for Housing Sector in India in association with Indian Concrete Institute (2011)	Larsen & Toubro Construction National Buildings Construction Corporation Limited Service Masters Simplex Infrastructures Limited ACC Schnell Wire System Building Materials & Technology Promotion Council Ministry of Housing and Urban Poverty Alleviation, Government of India. UltraTech Cement
Technical Seminar (National) on Corrosion in Civil Engineering Structures-Awareness and Mitigation of corrosion in association with Indian Concrete Institute (2012)	Essar Projects (India) Limited Bridge & Roof Co. (India) Limited
Collaborative Training program for skill development of technical personnel with Indian Concrete Institute (2012)	ACC Limited

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

Plagiarism: Authors who present the words, data, or ideas of others with the implication that they are their own, without attribution in a form appropriate for the medium of presentation, are committing theft of intellectual property and may be guilty of plagiarism and thus of research misconduct.

Data: Integrity of Data: It is a primary responsibility of a researcher to avoid either a false statement or an omission that distorts the research record.

Use and Misuse of Data: Research integrity requires not only that reported conclusions are based on accurately recorded data or observations but that all relevant observations are reported.

Ownership of and Access to Data: Research data obtained in studies performed at the University and/or by employees of the University are not the property of the researcher who generated or observed them or even of the principal investigator of the research group.

Authorship and Other Publication Issues: Publication of research results is important as a means of communicating to the scholarly world so that readers may be informed of research results and other researchers may build on the reported findings.

Criteria for Authorship: Publication must give appropriate credit to all authors for their roles in the research.

Order of Authors: Customs regarding the order in which co-authors' names appear vary with the discipline.

Self-citations: In citing one's own unpublished work, an author must be careful not to imply an unwarranted status of a manuscript.

Duplicate Publication: Researchers should not publish the same article in two different places without very good reason to do so, unless appropriate citation is made in the later publication to the earlier one, and unless the editor is explicitly informed.

Early Release of Information About to be Published: It is unethical to release to the media scientific information contained in an accepted manuscript prior to the publication.

Interference: Not only withholding of data but intentional removal of, interference with, or damage to any research related property, including instruments and other equipment, is improper and could be classified as research misconduct.

Obligation to Report

Reporting Suspected Misconduct: Reporting suspected research misconduct is a shared and serious responsibility of all members of the academic community.

Correction of Errors: If a finding of error, either intentional or inadvertent, or of plagiarism should be made subsequent to publication, the investigator has an obligation to submit a correction or retraction in a form specified by the editor or publisher and, in the case of research misconduct, in a form specified by the University and a sponsoring federal agency.

Conflict of Interest: There are some circumstances in which conflicts of interest could compromise the integrity of research or even lead to research misconduct, for example, by the distortion of research outcomes as a result of personal financial interests of a researcher.

Responsibilities of a Research Investigator: An investigator who leads a research group has leadership and supervisory responsibilities with respect to the research performed by members of the group.

Responsibilities to Funding Agencies: An investigator should be aware that the same standards of accuracy and integrity pertain to grant applications and proposals as to manuscripts submitted for publication.

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
BE in Construction Engineering	NA	30	04	100	100
ME in Construction Engineering	110	17	01	Yet to Pass	

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
BE in Construction Engineering	NA	NA	NA	NA
ME in Construction Engineering	35	65	-	-

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

GATE: 75% qualified in current session

35. Student progression

Student progression	Percentage against enrolled
UG to PG	25%
PG to M.Phil.	NA
PG to Ph.D.	5%
Ph.D. to Post-Doctoral	NA
Employed	
• Campus selection	90%
• Other than campus recruitment	10%
Entrepreneurs	NA

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	25%
from other universities within the State	45%
from universities from other States	15%
from universities outside the country	15%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period (2008 – 2013): 02

38. Present details of departmental infrastructural facilities with regard to

- Library : Total no. of book 3852 & Total no. of journals 13 (11 Foreign, 2 National)
- Internet facilities for staff and students : Available
- Total number of class rooms : Six for UG and two for PG
- Class rooms with ICT facility : All rooms
- Students' laboratories : Seven
- Research laboratories : Three

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

a) from the host institution/university

Faculty Name	Name of Associate	Category	Year
Koushik Bandyopadhyay	Chandrima Goswami	Doctoral	Registered 2008
	Devaleena Chowdhury	Doctoral	Registered 2008
	Sunandya Bhattacharjee	Doctoral	Registered 2008
	Biswajit Thakur	Doctoral	Awarded 2012
P. P. Biswas	Arnab Das	Doctoral	Registered 2012
	Sujata Purokayastha	Doctoral	Registered 2012
	Himadri Guha	Doctoral	Registered 2008
Subhajit Saraswati & P. P. Biswas	Dipesh Majumdar	Doctoral	Submitted 2013
Subhajit Saraswati & Debasish Bandyopadhyay	Basudev Bhatta	Doctoral	Awarded 2011
Debasish Bandyopadhyay & P. P. Biswas	Gopal Deb Karmakar	Doctoral	Registered 2010

Debasish Bandyopadhyay	P. Guha	Doctoral	Registered 2010
	J. S. Ali	Doctoral	Registered 2012
	S. Roy	JRF	Registered 2010
	S. Sengupta	JRF	Registered 2013

b) from other institutions/universities

Faculty Name	Name	Category (doctoral/ post-doctoral/RA)	Year	Name of the institution/university
Partha Ghosh	Suresh Thicksom	Doctoral	2011	Manipur Institute of Technology

40. Number of post graduate students getting financial assistance from the university. (Give details.) : Nil; PG program of this department is sponsored and self supported.

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. : Yes. Such need analysis was done in consultation with the industrial experts and reputed academicians from national as well as international institutions.

42. Does the department obtain feedback from
faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? Yes, regular curriculum revision.
students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? Yes
alumni and employers on the programmes offered and how does the department utilize the feedback? Occasionally feedbacks from alumnis and industries are collected though it is not a regular practice.

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

a.	Parijat Kumar Mondal	Business Head (Q & C), Oriental Structural Engineers
b.	Prodosh Sen	Divisional Manager (Design Q & A), ITI Ltd.
c.	Souvik Sengupta	Deputy Chief Engineer, Eastern Railway HQ
d.	Raja Dutta	Construction Manager, L & T Construction

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

Construction Engineering department is one of the students chapter of Indian Concrete Institute. Special Lectures are held regularly in the department involving external experts with support from Indian Concrete Institute.

45. List the teaching methods adopted by the faculty for different programmes. Audio Visual and conventional black board approach. Industrial visit for onsite training.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? Feedbacks on performance of the students during campus interview by the employers and also the performance in GATE.

47. Highlight the participation of students and faculty in extension activities. Students regularly participate in various programs conducted under NSS scheme.

48. Give details of “beyond syllabus scholarly activities” of the department.: About 20% of the students are getting involved in research activities in UG level and presenting papers in national and international conferences.

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

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

This department is actively involved in industrial need-based research as well as in troubleshooting of various industrial problems. This department has well equipped facilities in the field of characterisation of materials and structural health monitoring and

has active interaction with industry for serving their needs. In the process, the department has contributed to applied knowledge in the field of construction engineering.

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

Strengths

Student Quality

Industry Institute interaction

Teacher-Student Relationship

Regular classes

Weaknesses

Space Scarcity

Small Number of Full time Research Fellows

Time of operation of the research laboratories

Travel support to faculty members and students for attending conferences etc.

Opportunities

Government funding

More Industry-Institute interaction

Challenges

Inadequate government fundings during the Plan period

Obsolescence of resources / technologies

To attract bright students as a State University

Employment opportunities for students

Quality Faculty recruitment

52. Future plans of the department (in as much detail as possible):

Condition and health monitoring of civil engineering structures are gaining more and more importance amongst the field engineers and also to the design engineers. Construction engineering department was established in Jadavpur University separately in spite of existence of its fifty years old Civil engineering Department in order to identify the problems associated with new construction and also to cater the need of repair and retrofitting of inservice structures with damage and distress. The need of comprehensive study in the area of repair is emerging as major area in a developing country like India. The science behind evaluation of damage and durability of structures is yet to be well defined to mitigate different types of disaster. Similarly the characterisation of appropriate materials with suitable methodology is also interlinked with durability study and damage prediction. The future plan of the department is to create Research infrastructure in the department to study the factors associated with prediction of damage and its extent in Indian scenario in concrete and steel structures in order to find out appropriate remedial measures with proper specifications. Meantime, the Department has started its Post Graduate programme in structural repair and retrofit engineering, which is unique in national context. The course has already gained tremendous popularity amongst the practicing engineers. The research infrastructure which will be created shall be used by the Post Graduate students for experimental work. Such experiments are the need of the hour, the outcome of which will lead to research publications. Moreover, creation of such lab infrastructure may be useful to attract research funding from the industries in the area of repair and rehabilitation of industrial structures and infrastructural facilities.

Department of Electrical Engineering

1. Name of the Department/School/Centre: ELECTRICAL ENGINEERING
2. Year of establishment: 1906 (as a department of the National Council of Education);
1955 as a University department
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): BEE, MEE, MCSE, MILLU (Engg.), PhD and BEE(Evening).
5. Interdisciplinary programmes being conducted and other departments involved: ME, M.Sc Ph.D scholars are guided jointly with teachers of other departments: Electronics & Tele-communication Engg., Construction Engg., Instrumentation & Electronics Engg. and Physics.
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
7. Details of programmes discontinued, if any, with reasons:
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester
9. Participation of the department in courses offered by other departments: Teachers of the department regularly take part in courses offered by Civil Engineering Department, Chemical Engineering Department, Computer Science & Engg Department, Electronics & Tele-communication Department, Mechanical Engineering Department, Production Engineering Department, Metallurgical and Material Engineering Department, Food Technology & Bio-chemical Engineering Department.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	13		17
Associate Professor	19		12
Asst. Professor	20		20
Other			

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD/MPhil students, last 4 years
Sujit Kumar Biswas	Ph.D. (Engg)	Professor	Electrical Machines & Drives	26	Ph.D -03 (completed)
Ashoke Kumar Ganguli	Ph.D. (Engg)	Professor	Electrical Machines & Power Electronics	40	Ph.D -04 (completed) Ph.D-02 (ongoing)
Abhijit Mukherjee	Ph.D. (Engg)	Professor	High Voltage Engineering	29	Ph.D-01 (Ongoing)
Nirmal Kumar Deb	M.E.E	Professor	Electrical Machines & Drives	29	Ph.D -01 (completed)
Gourhari Das	Ph.D.	Professor	Control Systems	33	-
Anjan Rakshit	PhD (Engg)	Professor	Digital Instrumentation, Digital Signal Processing, Process Control, Modelling/Simulation, Application of AI, Instrumentation	29	Ph.D - 02 (completed) PhD – 01 (ongoing)

Samar Bhattacharya	Ph.D. (Engg)	Professor	Control Systems, Embedded System, Software Auditing	28	Ph.D - 01 (submitted) PhD – 07 (ongoing)-
Swapan Kumar Goswami	Ph.D(Engg)	Professor	Electrical Power Systems	29	Ph.D -07 (completed)
Sivaji Chakravorti	Ph.D. (Engg)	Professor	High Voltage Engineering	28	PhD - 03 (Completed) PhD - 07 (ongoing)
Subrata Paul	Ph.D(Engg)	Professor	Electrical Power Systems	29	Ph.D -03 (completed)
Kesab Bhattacharya	Ph.D. (Engg)	Professor	High Voltage Engineering	27	Ph.D -02 (completed) Ph.D-03 (ongoing)
Saswati Majumdar	Ph.D. (Engg)	Professor	Illumination Engg.	26	Ph.D- 01 (completed)
Mita Dutta	PhD (Engg)	Professor	Instrumentation, Digital Image, and Signal Processing	28	-
Biswanath Roy	Ph.D. (Engg)	Professor	Illumination Engg.	13	Ph.D- 01 (completed)
Sugata Munshi	MEE	Professor	Signal Processing Applications, Biomedical Signal processing, Sensor Systems	31	Ph.D - 02 (Completed) PhD - 02 (Ongoing)
Suparna Kar Chowdhury	Ph.D(Engg)	Professor	Electrical Machines & Drives	20	Ph.D -01 (completed)
Smita Sadhu (Ghosh)	Ph.D. (Engg)	Professor	Control Systems	14	Ph.D- 01 (completed) Ph.D.- 07 (ongoing)
Madhab Roy	Ph.D(Engg)	Associate Professor	EM Fields, Electrical Machines	17	
Madhubanti Moitra	Ph. D. (Engg.)	Associate Professor	Guidance & Control System Design, AI Software Engg., mobile computing	20	
Arabinda Das	Ph.D. (Tech.)	Associate Professor	Electrical Machines and Drives	15	Ph.D- 01 (completed)
Palash Kumar Kundu	MEE	Associate Professor	Measurements & Instrumentation	25	
Amitava Chatterjee	PhD (Engg)	Associate Professor	Intelligent instrumentation and control, Robotics, Image Processing and Pattern Recognition, Computer Vision, Signal Processing	20	PhD - 3 (completed) PhD – 5 (ongoing)
Nikhil Mondal	M.E.E	Associate Professor	Electrical Machines & Drives	13	
Debashis Chatterjee	Ph.D. (Engg)	Associate Professor	Electrical machines, Drives & Power Electronics	20	Ph.D -04 (completed) Ph.-04 (ongoing)

Ranjit Kumar Barai	Ph.D.	Associate Professor	Control Systems	14	Ph.D- 01 (completed) Ph.D.- 05 (ongoing)
Biswajit Bhattacharyya	MEE	Associate Professor	Electrical Measurements	14	-
Gautam Sarkar	M. Tech.	Assistant Professor	Measurements & Instrumentation	11	-
Sunita Halder nee Dey	Ph.D	Assistant Professor	Electrical Power Systems	12	Ph.D -03
Sovan Dalai	M.E.E.	Assistant Professor	High Voltage Engineering	10	-
P Rajamani	M.E.E.	Assistant Professor	High Voltage Engineering	11	-
Biswendu Chatterjee	Ph.D.	Assistant Professor	High Voltage Engineering	11	Ph.D-01 (Ongoing)
Suddhasatwa Chakraborty	M.E.	Assistant Professor	Illumination Engg.	5	-
Debangshu Dey	Ph.D (Engg)	Assistant Professor	Measurements & Instrumentation	04	Ph.D - 01 (Ongoing)
Arindam Kumar Sil	M.E.E	Assistant Professor	Electrical Machines & Drives	04	-
Susanta Ray	M.E.E	Assistant Professor	Electrical Machines & Drives	04	-
Ayan Kumar Tudu	M.E.E	Assistant Professor	Electrical Power Systems	03	-
Kamalika Ghosh	MEE	Contractual Lecturer	Illumination Engg.		

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

- Prof. Dr. Tapan Kumar Ghoshal – Emeritus Professor
- Prof. Dr. Kalyankumar Dutta – AICTE Emeritus Professor

13. Percentage of classes taken by temporary faculty – programme-wise information: 3%

14. Programme-wise Student Teacher Ratio: UG -13.75:1, PG – 1.8:1

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

	Sanctioned	Filled	Actual
Technical			18
Administrative			15

16. Research thrust areas as recognized by major funding agencies:

- ❖ Condition Monitoring of High Voltage equipment
- ❖ Smart Grid
- ❖ Distributed generation
- ❖ Micro-rid
- ❖ Solar power based LED lighting system
- ❖ Daylight integrated lighting system
- ❖ Road lighting
- ❖ Power quality and Conditioning
- ❖ Sensors and transducers
- ❖ Intelligent Instrumentation and Control
- ❖ Image processing and Artificial Intelligence

17. Number and names 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 titles and grants received project-wise. See Annexure for details

18. Inter-institutional collaborative projects and associated grants received
 - g) National collaboration b) International collaboration
 - Prof. Sivaji Chakravorti actively performing collaborative work with the research group of the Institute of High Voltage Engineering and Electric Power Transmission, Technical University Munich, Germany, led by Prof. W.Boeck, Prof. H.Steinbigler and Prof. J.Kindersberger, from 1995 onwards in the area of numerical computation of mixed fields and also on electric field optimization. This collaboration was supported by Alexander von Humboldt (AvH) Foundation, Germany. This collaborative research has lead to the design and implementation of the field computation software package TWIN incorporating new simulation techniques. TWIN is currently used extensively both at Technical University Munich and at Jadavpur University. To enhance this international collaboration, AvH Foundation has donated a SGI O2 workstation to Electrical Engineering Department of Jadavpur University in 1999 to extend this collaborative research further.
 - Prof. Sivaji Chakravorti is acting as the Liasion Officer on behalf of Jadavpur University in relation to the MOU signed in 2008 between the University of Applied Sciences in Augsburg, Germany, and Jadavpur University for exchanging scholars, students, academic information and materials.
 - Prof. Sivaji Chakravorti is acting as the Liasion Officer on behalf of Jadavpur University in relation to the MOU signed in 2008 between the Technical University of Crete, Greece, and Jadavpur University for exchanging scholars, students, academic information and materials.
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. (Give details.): CAS Phase III 2005-2010
20. Research facility/centre run by the Dept./school/centre which has:
 - state recognition - ISO Certified High Voltage Laboratory
 - national recognition - ISO Certified High Voltage Laboratory
 - international recognition-
21. Special research laboratories sponsored by / created by industry or corporate bodies:
22. Publications:
 - * Number of papers published in peer reviewed journals (national / international)
 - 196
 - * Monographs
 - * Chapters in Books
1. Ilhem Boussaïd, Amitava Chatterjee, Patrick Siarry, and Mohamed Ahmed-Nacer, “A Comparative Study of Modified BBO Variants and Other Metaheuristics for Optimal Power Allocation in Wireless Sensor Networks,” in the book Amitava Chatterjee, Hadi Nobahari, Patrick Siarry (Eds.), *Advances in Heuristic Signal Processing and Applications*, Springer-Verlag Berlin Heidelberg Publishers, pp. 79-110, 2013, DOI: 10.1007/978-3-642-37880-5_5.
2. Saibal Dutta, Amitava Chatterjee, and Sugata Munshi, “Hybrid Correlation-Neural Network Synergy for Gait Signal Classification,” in the book Amitava Chatterjee, Hadi Nobahari, Patrick Siarry (Eds.), *Advances in Heuristic Signal Processing and Applications*, Springer-Verlag Berlin Heidelberg Publishers, pp. 263-285, 2013, DOI: 10.1007/978-3-642-37880-5_12.
3. Ilhem Boussaïd, Amitava Chatterjee, Patrick Siarry, and Mohamed Ahmed-Nacer, “Hybrid BBO-DE algorithms for fuzzy entropy-based thresholding,” in the book Amitava Chatterjee, Patrick Siarry (Eds.), *Computational Intelligence in Image Processing*, Springer-Verlag Berlin Heidelberg Publishers, pp. 37-69, 2013, DOI: 10.1007/978-3-642-30621-1_3.

4. Nandita Sanyal, Amitava Chatterjee, and Sugata Munshi, “Modified bacterial foraging optimization technique for vector quantization-based image compression,” in the book Amitava Chatterjee, Patrick Siarry (Eds.), *Computational Intelligence in Image Processing*, Springer-Verlag Berlin Heidelberg Publishers, pp. 131-152, 2013, DOI: 10.1007/978-3-642-30621-1_7.

5. Amitava Chatterjee, Amine Naït-Ali, and Patrick Siarry, “Neural network approaches for EEG classification,” in the book A. Naït-Ali (Ed.), *Advanced Biosignal Processing*, Springer-Verlag Berlin Heidelberg Publishers, 2009, DOI: 10.1007/978-3-540-89506-0_8.

* Edited Books

Sl.	Book Title	Publisher	Year
1.	Amitava Chatterjee and Patrick Siarry (Eds.), <i>Computational Intelligence in Image Processing</i> ; ISBN: 978-3-642-30620-4 (print) 978-3-642-30621-1 (online)	Springer-Verlag GmbH Heidelberg, Germany, Publishers	2013
2.	Amitava Chatterjee, Hadi Nobahari, and Patrick Siarry (Eds.), <i>Advances in Heuristic Signal Processing and Applications</i> ; ISBN: 978-3-642-37879-9 (print) 978-3-642-37880-5 (online)	Springer-Verlag GmbH Heidelberg, Germany, Publishers	2013
3.	Dr.Biswendu Chatterjee & Dr. Sivaji Chakravorti <i>Proceedings of "CalCon 2011"</i>	IEEE Calcutta Section	2011

* Books with ISBN with details of publishers

Sl.	Book Title	Publisher	Year
1.	Amitava Chatterjee, Anjan Rakshit, and N. Nirmal Singh, <i>Vision Based Autonomous Robot Navigation: Algorithms And Implementations</i> , ISBN: 978-3-642-33964-6 (print) 978-3-642-33965-3 (online)	Springer-Verlag GmbH Heidelberg, Germany, Publishers	2013
2.	S. Chakravorti, D. Dey, B.Chatterjee, “ <i>Recent Trends in Condition monitoring of Transformers: Theory, Implementation and Analysis</i> ”.	Springer-Verlag London; ISBN:978-1-4471-5549-2	2013

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

○ 712 (Source: Scopus and Google Scholar)

* Citation Index – range / average

○ 0-395 / 5.5 (Source : Google Scholar)

* SNIP

* SJR

* Impact Factor – range / average

* h-index

○ 28 (Source: Scopus and Google Scholar)

See Annexure for detailed list of publications

23. Details of patents and income generated:

SL. NO.	PATENT TITLE	INVENTORS	PATENT APPLICATION NO.	STATUS
1.	An Integrated Portable System and Process for Detecting the Condition of Oil-Paper Composite Insulation in Electrical equipment	Sivaji Chakravorti, Biswendu Chatterjee, Debangshu Dey and Sugata Munshi	Indian Patent Application No. 743/KOL/2008	Filed
2.	A process and a system for detecting the partial discharge in electrical insulation of power appliances operating at high voltages	Sivaji Chakravorti, Biswendu Chatterjee, Debangshu Dey and Sugata Munshi	Indian Patent Application No. 2070/KOL/2008	Filed
3.	Remote Monitoring System	Sivaji Chakravorti, Biswendu Chatterjee, Debangshu Dey	Indian Patent Application No. 1065/KOL/2009	Filed

4	Remote Monitoring System	Sivaji Chakravorti, Biswendu Chatterjee, Debangshu Dey	US Patent Application No. 12/568,000 dated 28.09.2009	Granted
5	An instrument for Insulation Condition Assessment	Sivaji Chakravorti, Biswendu Chatterjee, Debangshu Dey	Indian Patent Application No. 998/KOL/2012	Filed

24. Areas of consultancy and income generated:

- Prof. Dr. Swapan Kumar Goswami as joint supervisor involved in Evaluation of solar PV generation to be connected in parallel with existing Grid System for Jharkhand Electric Supply. Through – JU, IIPC. The overall income generated from this consultancy service is Rs 75,000/-
- Faculty members of High Tension Section of Electrical Engineering Department is regularly involving testing of various electrical equipments, viz. transformer, cable, insulator and switches. In an average the overall income generated from this testing service is approximately Rs.8 lakhs/year
- Prof. A.K. Ganguly involved in the Design of Technical Laboratory in Marine Engg. College, Kolkata.
- Electrical and Photometric Testing of Luminaire (Floodlights, Roadlights and Indoor luminaires): Income generated- 3.0L (approx).
- Light design validation; Lighting Survey & Audit; Retrofit lighting solutions; Lighting simulation. Income generated- 4.0L (approx)

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

- Prof. Sivaji Chakravorti has visited University of Applied Sciences, Augsburg and Technical University of Munich, Germany during March 2013.
- Prof. Sivaji Chakravorti has visited University of California, Riverside during 2011.
- Prof. Sivaji Chakravorti has visited Technical University of Munich, Germany and Virginia Tech University, Blacksburg, VA-24061 during 2009.
- Dr. Amitava Chatterjee visited University of Paris XII, France, as an Enseignant-Invité (Invited teacher), during May – June, 2009.
- Dr. Debangshu Dey visited NTPC Ltd., Delhi during June 2008.
- Dr. Biswendu Chatterjee has visited University of Applied Sciences, Augsburg, Germany during March 2009.
- Sri. P Rajamani has visited Technical University of Munich, Germany during February, 2009.
- Dr. Debashis Chatterjee visited Technical University of Braunschweig, Germany as a visiting scientist under TEQIP Programme, Govt. of India.

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)
- *Prof. Sivaji Chakravorti* is serving as the
 - Member of Subject Expert Committee on Engineering Sciences for Fund for Infrastructure in Science & Technology (FIST) program of Department of Science & Technology (DST), Govt. of India.
 - Chairman, Dielectrics & Electrical Insulation Chapter (DEIS) of IEEE Kolkata Section, 2013
 - Convener of the Sectional Committee-IV (Engg. & Tech.) of West

- Bengal Academy of Science & Technology (WAST) - 2013.
 - Chairman of IEEE Calcutta Section - 2011, 2012.
 - Member of the Electrical Engineering Sectional Committee of Indian National Academy of Engineering – 2011, 2012.
 - Member of the Sectional Committee-IV (Engg. & Tech.) of West Bengal Academy of Science & Technology (WAST) - 2011, 2012.
 - Member of the Advisory Board of Assam Don Bosco University - 2011-2012.
 - Member of the Meetings and Conferences Steering Committee of IEEE Power & Energy Society for Region 10 (Asia-Pacific) – 2011
 - Member of the Faculty Council for Post-Graduate & Undergraduate Studies in Engineering & Technology of Bengal Engineering and Science University, Shibpur – 2008-2012.
 - Member of the PhD committee of West Bengal University of Technology - 2007-2008.
 - Member of the Board of Studies of Electrical Engineering Department of North Eastern Regional Institute of Science & Technology (DU), Nirjuli, Arunachal Pradesh, for the year 2006-2008.
 - IEEE Power Engineering Society Region 10 (Asia Pacific) West Chapter Representative – 2008
 - *Sri P Rajamani* had served as the Treasurer of Power & Energy Chapter of IEEE Kolkata Section for the calendar year 2010 to 2011
 - *Dr. Biswendu Chatterjee* is serving as Treasurer of Dielectrics and Electrical Insulation Society Chapter of IEEE Kolkata Section since 2012
 - *Sri P Rajamani* is serving as the Secretary of Power & Energy Chapter of IEEE Kolkata Section since 2012 onwards
 - *Prof. Saswati Mazumdar*, Member, E T23, Bureau of Indian Standard and Member of UGC & AICTE College visit committee.
 - *Prof. Biswanath Ray*, Member, ET24, Bureau of Indian Standard.
 - *Dr. Amitava Chatterjee* is serving/served as the
 - Editor, *IEEE Transactions on Vehicular Technology* (2013 – continuing).
 - Associate Editor, *IEEE Transactions on Vehicular Technology* (2011 – 2013).
 - Associate Editor, *IEEE Transactions on Instrumentation and Measurement* (2013 – continuing).
 - Associate Editor, *IEEE Sensors Journal* (2013 – continuing).
 - Associate Editor, *Control Engineering Practice Journal*, Elsevier Publishers (2012 – continuing).
 - Guest Editor, Special Issue on “Advances In Evolutionary Optimization Based Image Processing,” *Engineering Applications of Artificial Intelligence Journal*, Elsevier Publishers (Expected Date of Publication: Beginning of 2014).
 - Designated Editor, *Control Engineering Practice Journal*, Elsevier Publishers (2011 – 2012).
27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted:
- *Prof. Sivaji Chakravorti* organized Short-Term Course on “Digital Signal Processing” jointly with IEEE Power & Energy Chapter, Kolkata, July 2008.

- *Prof. Sivaji Chakravorti and Dr. Biswendu Chatterjee* organized workshop on ‘LabVIEW’ jointly organized by IEEE HIT student branch, Electrical Engineering Department, HIT and NETWORKING scheme of TEQIP, HIT on January 12-14, 2009.
- *Prof. Sivaji Chakravorti, Prof. Kesab Bhattacharya, Dr. Biswendu Chatterjee, Sri P Rajamani and Sri Sovan Dalai* organized workshop on ‘LabVIEW and PIC Microcontroller Applications’ jointly with Power and Energy Chapter of IEEE Calcutta Section in collaboration with Electrical Engineering Department, Jadavpur University on June 28-July 03, 2010.
- *Dr. Ranjit Barai* conducted (as course coordinator) a three weeks training course with the theme “Art and Science of Mechatronics and its Application in Robotics” in Electrical Engineering Department from June 1, 2009 to June 20, 2009 for the junior teachers of graduate engineering institutes of India.
- *Dr. Ranjit Barai* conducted (as course coordinator) a three weeks training course with the theme “Control Engineering and Information Technology in Mechatronics: Roles Played and Future Potentials” in Electrical Engineering Department from July 2, 2011 to July 22, 2011 for the junior teachers of graduate engineering institutes of India. The course was sponsored by UGC.
- *Gautam Sarkar* organized UGC Sponsored JU-ASC Refresher Course on “Control Engg. and Information Technology in Mechatronics: Roles Played and Future Potentials” organized at Electrical Engg. Deptt., Jadavpur University, Kolkata, India, in July 2011.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects – 35 %
- percentage of students doing projects in collaboration with other universities / industry / institute – 8%

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

- Faculty

Prof. Sivaji Chakravorti is

- Fellow of the *Indian National Academy of Engineering* (INAE).
- Fellow of the *National Academy of Sciences, India* (NASI).
- Fellow of the *West Bengal Academy of Science & Technology* (WAST).
- Senior Member of the *Institute of Electrical and Electronics Engineers (IEEE)*, USA.
- Fellow of *Institution of Engineers* (India).

Prof. Sivaji Chakravorti has been

- Recipient of “Outstanding Small Chapter Award” from IEEE Power & Energy Society as the Chairman of Kolkata Power & Energy Chapter of IEEE in 2010.
- Recipient of “Best Performance Award for Small Chapter” from IEEE Power & Energy Society as the Chairman of Kolkata Power & Energy Chapter of IEEE in 2009.

Sri P Rajamani has

- Received the “Outstanding Small Chapter Award” from IEEE Power & Energy Society Head Quarters, NJ, USA as the Treasurer of Kolkata Power & Energy Chapter in 2010.
- Received the “Best Volunteer Award” from IEEE Kolkata Section (INDIA) for the year of 2011.

Dr. Amitava Chatterjee received Certificate of Appreciation from IEEE Vehicular Technology Society as Top Associate Editor “for outstanding contributions in 2012 to IEEE Transactions on Vehicular Technology”.

Dr. Amitava Chatterjee is a Senior Member of *The Institute of Electrical and Electronics Engineers (IEEE)*, USA.

Dr. Debangshu Dey received the Institution of Engineers (India) Young Engineer Award 2013-2014 in Electrical Engineering.

Prof. Tapan Kumar Ghoshal has been awarded the prestigious DRDO Academy Excellence Award, 2012.

- Doctoral / post doctoral fellows
 - Students (Give details)
30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):
- A half day workshop was organized on “Building Energy Simulation Awareness” on 14th June 2008 under ECO-III Project (Energy Conservation & Commercialization – Phase-III supported by US Department of Energy).
- A seminar was organized on “Development of Illumination Technology to reduce Global Warming” on 1st July, 2008 jointly with Bengal National Chamber of Commerce & Industry.
- A Seminar was organized on jointly with Indian Society of Lighting Engineers (ISLE) “Energy Conservation with special reference to Building Lighting System” on 5th July, 2008.
- A lecture was organized on “Electrical Safety Products” on 12th July, 2008 jointly with ISLE.
- A seminar was organized on “Approach to Energy Efficient Lighting Systems” by M/s. Crompton Greaves Ltd. jointly organized by SISED & Illumination Engg. Section, Electrical Engineering Department.
- One day tutorial on “Gas Insulated Technology” at Jadavpur University on 22nd September, 2008 organized jointly by Electrical Engineering Department and Power and Energy Society, IEEE Calcutta Section.
- One day seminar on “Road map of power sector in India - 2008” at Jadavpur University on 14th November, 2008 organized jointly Electrical Engineering Department and Power and Energy Society, IEEE Calcutta Section.
- One day seminar on “Smart Grid & Alternative Energy Technologies for Promotion of Lighting System” at Jadavpur University on 30th April, 2009 organized jointly by Electrical Engineering Department and IEEE Calcutta Section Power Engineering Society.
- A two-day programme with a seminar on “Laser Technology and its Applications” and “Laser-Live-Animation Extravaganza” by Manick Sorcar CEO-President, Sorcar Engineering Inc., USA and group, in March 2011.
31. Code of ethics for research followed by the department:
- Enhancement of existing knowledge
 - Broadening interdisciplinary approach
 - Empowerment through innovative ideas
 - Catering to the national need
 - Social outreach
 - Strict adherence to moral views

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted Male Female	Pass percentage (w.r.t. last graduating batch) Male Female
4 Year Regular BEE Course			
5 Year BEE Course (Evening)	140	37 3	
2 Year MEE Course	1053	24 1	
2 Year MCSE Course	693	11 3	
2 Year M. Illumination Engg. Course	321	11 7	62 38

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
4 Year Regular BEE Course		82	18	Nil
5 Year BEE Course (Evening)				Nil
2 Year MEE Course	8	45	42	5
2 Year MCSE Course	6	74	20	NIL
2 Year M.Illumination Engg. Course	5	90	5	Nil

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

Examination	2009	2010	2011	2012	2013
GATE	41	49	53	57	61

35. Student progression

Student progression	Percentage against enrolled
UG to PG	24
PG to M.Phil.	-
PG to Ph.D.	32
Ph.D. to Post-Doctoral	10
Employed	
• Campus selection	78
• Other than campus recruitment	22
Entrepreneurs	1

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	81
from other universities within the State	14
from universities from other States	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 (2008 – 2013):

- ✓ Madhab Roy
- ✓ P. Rajamani
- ✓ Biswendu Chatterjee
- ✓ Debangshu Dey

38. Present details of departmental infrastructural facilities with regard to

- a) Library: 21,700 books (approx.) with digital library facilities
- b) Internet facilities for staff and students: Yes, connected with university backbone.
- c) Total number of class rooms: 12
- d) Class rooms with ICT facility: 12
- e) Students' laboratories: 23
- f) Research laboratories: 11

39. List of doctoral, post-doctoral students and Research Associates
- from the host institution/university
Sandip Saha Chowdhury, Santanu Das, N. Nirmal Singh, Gautam Sarkar
 - from other institutions/universities
P. Rajamani, Arijit Baral, Biswendu Chatterjee, S. Banerjee, A. Padhgan, Prithwiraj Das, Nandita Sanyal, Soma Santra, Soumi Chakraborty, Dibyendu Pal, Amitava Sil, Tushar Kanti Gangopadhyay, Ashoke Bose, P. Nagendra, S. Sudhakar Reddy, A.V. Subrahmanyam
40. Number of post graduate students getting financial assistance from the university. (Give details.)
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.
42. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
- Yes, the department takes feedback from faculty on curriculum as well as teaching-learning-evaluation. The comments of the faculty are discussed in various relevant committees of the department, viz. i) syllabus sub-committee, ii) Board-of-Studies etc. The curriculum and syllabus of the various courses run by the department are continuously upgraded taking into consideration the opinion of the faculty and the various committees.
- students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
- Yes, the department takes feedback from students on staff, curriculum and teaching-learning-evaluation. The issues raised by the students are discussed in the teacher-student committee of the department and the recommendations of the committee are deliberated upon and suitable measures are suggested by the Board-of-Studies.
- alumni and employers on the programmes offered and how does the department utilize the feedback?
- Yes, the department takes feedback from alumni and employers on the programmes offered by the department. The Board-of-Studies has representatives from the industry and they take active part in the deliberations of the meeting. Moreover as and when required alumni and employer representatives are invited in the departmental meetings to address relevant issues. The department time to time organizes seminars/workshops where alumni and industry professionals are given importance.
43. List the distinguished alumni of the department (maximum 10)
- Mr. Anirudha Basu – Managing Director, CESC LTD.
Prof. Bikash Chandra Pal – Professor, Electrical Engineering Department, Imperial College, London, UK. Fellow IEEE.
Ms. Sudhesna Mukhopadhyay – Director, PHILIPS Lighting Academy.
Prof.Dr. Subhas Mukhopadhyay – Professor, School of Engineering and Advanced Technology, Massey University, Palmerston North, New Zealand.
Mr. Dipak Chatterjee – DGM, Crompton Greaves Limited
Mr. Ashok Kumbla –Executive Director, Reliance Power
Mr. Abhijit Bose – Executive Director, CESC Limited
Dr. Subir Chowdhuri - Former Director RCI, DRDL, Hyderabad
Mr. Rabin Bhattacharya - Former Director, Systems Division, DRDL, Hyderabad
Dr. Gautam Mitra - Former Professor, Brunel University, UK

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

The Department has organized the following special lectures/ seminars

Sl.	Title	Date	Speaker
1	Energy Efficient Lighting	January 2009	Mr. S. Chakraborti EE Dept., JU
2	Education as Fun – Turning Useful Knowledge to Contemplative Knowledge	October 2009	Prof. Dr. A. Mukherjee EE Dept. JU
3	Power Electronics in Power Factor & VAr Management	August 2011	Prof. Dr. S. Biswas EE Dept., JU
4	Commonly Used Protection System for Generator, Transformer & Transmission Line	October 2011	Mr. Asish Mandal; Sr. Divisional Engg. Engineering & Planning Division of DVC
5	Frontiers and crossroads of advanced research: role of electrical Engineers	January 2012	Dr. Anirban Basu, IBM Research, New York, USA
6	Automatic Verification of Region Stability of Embedded Systems	January 2012	Dr. Sayan Mitra, Assistant Professor of Electrical and Computer Engg. University of Illinois at Urbana-Champaign, USA
7	Some Practical Methods of Implementing Circuit Design	October 2012	Dr. Biswendu Chatterjee EE Dept. JU.
8	Distributed Camera Networks – The Integration of Computer Vision and Control Theory	December 2012	Dr. Amit K Roy Chowdhury, Associate Professor of Electrical Engineering, University of California, Riverside, USA.
9	Magnetic Separation Method for Oil Spill Cleanup	January 2013	Prof. Markus Zahn Thomas and Gerd Perkins Professor Department of Electrical Engineering and Computer Sc., Massachusetts Institute of Technology, USA
10	The research works at the University of Applied Sciences, Augsburg, Germany	January 2013	Dipl. Ing. (FH) Anton Gerblinger, Research Assistant, Faculty of Electrical Engg. (Electrical Energy Systems); University of Applied Sciences, Augsburg, Germany
11	Modern Trends in Design of HT / LT Power Distribution Network of large Thermal Power Plant	February 2013	Mr. Jiban Kr. Choudhury Director, DCPL

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

Lectures using ICT, Assignments, Computations, Projects, Seminars, Industrial Tours, Peer interactions

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

The assessment methodology followed by the department in its continuous evaluation system is aimed at identifying the strengths and weaknesses of the students.

The department encourages its faculties to follow multiple assessment techniques to balance the strengths and weaknesses of the students.

The experiments performed by the students of the department are designed to test their ability to analyze the data.

The projects and sessionals of the department are designed to meet the needs of the students within realistic constraints such as economic, environmental, social and safety requirements.

Students are encouraged to take extra-curricular assignments to increase their

ability to function in multi-disciplinary team.

Students are encouraged to interact with various sections of industry and society to understand the impact of engineering solutions in economic, environmental, societal context.

47. Highlight the participation of students and faculty in extension activities.
Blood Donation camp is organized yearly by the department involving students and faculty.
48. Give details of “beyond syllabus scholarly activities” of the department.
The department houses the one year certificate course in Japanese under the School of Languages and Linguistics as the school suffers from acute space shortage and Prof. Abhijit Mukherjee, the Jt. Director of the school is in charge of the Japanese course.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. AICTE, UGC, NAAC
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
 - Developed an Integrated Portable System and Process for Detecting the Condition of Oil-Paper Composite Insulation in Electrical equipment.
 - Developed A process and a system for detecting the partial discharge in electrical insulation of power appliances operating at high voltages.
 - Remote Monitoring System.
 - Developed an instrument for Insulation Condition Assessment.
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths

Outstanding students

Qualified faculty

Well-equipped laboratories

Strong off the class teaching learning environment

Innovative research output

Weaknesses

Inadequate sponsored projects

Absence of national character of faculty

Inadequate research scholars

Limitations of space

Inadequate soft skill development programs

Inadequacy in monitoring program objective fulfillment

Opportunities

Increasing industry liaison through alumni network

Neighboring agencies interested in offering soft skill programs

Having interested resources implementing ICT based facilities

Availability of expertise in neighbouring departments for interdisciplinary research

Outreach programme with social science departments of the university

Challenges

To bring in quality faculty

To keep quality faculty in position

Possibility of offering incentive for academic excellence

Implementing project based teaching

Putting in place a system for outcome based program implementation

52. Future plans of the department (in as much detail as possible):

Energy Efficient, Eco-Friendly, Reliable Electrical Systems

For years, electricity has played a major role in the development of human civilization. With the rapid growth in civilization, the demand for electrical power is increasing by leaps and bounds. Conventionally, major part of the required electrical power is produced by fossil fuel based generation. One serious drawback of fossil based power plants is that these plants are major source of environmental pollution. Recent concern on ecology has imposed severe limitations on installation of new plants. Moreover, alarming level of depletion of the fossil resources has put up an additional constraint. As a result, engineers and researchers from utility have been on a continuous quest over the last decade for alternative energy sources for generating electricity to compensate for the above mentioned limitations. Many research works have been reported and available in the literature on this subject. Renewable energy sources like solar, wind have been identified as the most potential options. Many development works on Solar PV based and wind turbine based electricity generations have been published in various research journals. Still a lot of investigations are required on their operation, control and connection to the utility grid. Generations based on alternative energy or renewable energy sources are usually of small capacity, dispersed in nature and connected to distribution level preferably close to the consumers to derive several benefits. Such small capacity generators are called dispersed or distributed generation. Distributed generation has at present become a topical area for research in power system.

Following this recent trend, the Electrical Engineering Department of Jadavpur University has already initiated a project in the year 2010-11 on “Smart Grid” sponsored by DST under PURSE scheme. A 10kW solar PV setup has already been installed and tested. A 2kW wind turbine installation is almost complete and necessary testing is going on. At present the setup is developed to operate in stand-alone mode to supply a part of the load in the Electrical Engineering Department. This portion of the load has been modified as controllable load to support future program on efficient demand side management with a view to development of energy efficient system. Installation and testing of PLCC based communication and controller arrangements are on the verge of completion.

In continuation with the present research emphasis of the department on “Smart Grid”, the department has set its future research goal on development of energy efficient, eco-friendly electrical system. To achieve this goal, following has been envisaged:

Development of efficient demand side management that will be coupled with the “Smart Grid” set up to make it an energy efficient system

Development of condition monitoring facilities. For efficient and reliable operation of power system, condition monitoring of the overall network as well as the critical equipments is extremely necessary. DGs have high potential for providing benefits leading to more energy efficient systems without adversely affecting the ecology. However, to derive those benefits to full extent proper condition monitoring is highly desirable. DGs along with proper condition monitoring arrangements can result in a highly reliable, energy-efficient, eco-friendly power system.

Interfacing the “Smart Grid” set up with utility grid to allow efficient export and import of power.

The future direction of research of this department will be towards extending the presently developed set up of “Smart Grid” with the above mentioned facilities to develop a prototype energy-efficient, eco-friendly, reliable electrical system.

Department of Electronics and Telecommunication Engineering

1. Name of the Department: **ELECTRONICS & TELECOMMUNICATION ENGINEERING**
2. Year of establishment: 1956
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.):
 - a. Bachelor of Engineering in Electronics & Telecommunication Engineering
 - b. Master of Engineering in Electronics & Telecommunication Engineering
 - c. Master of Technology in VLSI Design & Microelectronics Technology
 - d. Master of Technology in Intelligent Automation & Robotics
 - e. Ph.D. in Engineering
5. Interdisciplinary programmes being conducted and other departments involved:
 - School of Mobile Computing and Communication.
 - Centre for Nano-Science and Technology.
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 courses offered by other departments:
Mechanical Engg, Electrical Engg, Civil Engg, School of Nano science, Chemical Engg, Production Engg, Instrumentation Engg, Food Tech, Metallurgy Engg.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	7	7	8
Associate Professor	14	6	
Asst. Professor	7	3	
Other			

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Chandan Kumar Sarkar	PhD	Professor	Electronic Device	22	9
Salil Kumar Sanyal	PhD	Professor	Digital Comm./ Digital Signal Processing/ VLSI Circuit Design/ Tunable Microstrip Antenna	31	2
Bhaskar Gupta	PhD	Professor	Microwave Engg.	28	13
Amit Konar	PhD	Professor	Control Engg	28	5
Mrinal Kanti Naskar	PhD	Professor	Computer Engg	15	5
Subir Kumar. Sarkar	PhD	Professor	Nanodevices and Low power VLSI circuits, Ad-hoc Networks, Wireless Sensor Networks, Mobile Communications, RFID and its Applications, Digital Watermarking and Data security.	32	15

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Kalyan Kumar Mallik	ME	Professor	Communication, Microwave Engg.	31	
Iti Saha Misra	PhD	Professor	Communication, Microwave Engg.	18	5
P.Venkateswaran	PhD	Associate Professor	Control, Communication Engg.	23	
Chayanika Bose	PhD	Associate Professor	Electronic Device	14	2
Sheli Sinha Chaudhuri	PhD	Associate Professor	ME (computer) Robotics & Image processing	14	
Ananda Shankar Chowdhury	PhD	Associate Professor	Computer Engg	5	
Monotosh Biswas	PhD	Associate Professor	Microwave Engg	10	
Sudhabindu Ray	PhD	Associate Professor	Microwave Engg	12	
Sudipta Chattopadhyay	PhD	Assistant Professor	Communication Engg	7	
Samir Biswas	ME	Assistant Professor	Computer Engg.	5	
Sayan Chatterjee	ME	Assistant Professor	Microwave Engg	3	

12. List of senior Visiting Fellows, Adjunct Faculty, Emeritus Professors, Visiting Professors, etc.:

- Prof. Anup Kr. Bandyopadhyay
- Prof. Rabindranath Nandi
- Prof Ajit Kr. Mondal
- Prof. Asim Kar
- Dr. Anupam Karmakar
- Dr. Amlan Chakraborty
- Mr. Somnath Maity
- Mr. Avishek Basu.
- Mr. Sanjoy Banerjee.

13. Percentage of classes taken by temporary faculty – programme-wise information:
U.G= 5% ; P.G=15%

14. Programme-wise Student Teacher Ratio -- > 13:1 per year

15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual: Sanctioned: 40; Filled: 33; Actual: 38

16. Research thrust areas as recognized by major funding agencies:

- Brain Computer Interfaces
- Rehabilitative Robotics
- Cognitive Neuroscience
- Machine Intelligence
- Radiation effects
- MEMS
- Software defined radio
- Sensor array
- Low Power VLSI circuits.
- NANO device modeling.
- Broadband Wireless Communication.

17. Number and names 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 titles and grants received project-wise.
Prof. Iti Saha Misra: "Call Admission Control for the Optimization of Resource Utilization" funded by UPE II, UGC, Total budget: 7 lakhs, duration: 2 years, national, Ongoing.
Prof. Iti Saha Misra: "Designing a SDR based Cognitive Radio Networking test-bed involving multiple WARP boards" funded by Mobile Computing project, UPE II, UGC, Total budget: 8 lakhs, national, Ongoing.
Dr. Chayanika Bose: "Modelling optoelectronic and transport characteristics of semiconductor nanostructures," funded by UPE II, UGC, 6.11 lakhs, 2 years, national, Ongoing.
Prof. Bhaskar Gupta:
"Study and Optimization of Microstrip Antenna System to Receive Satellite Link from Moving Trains," sponsored by ISRO– Rs. 10.93 lakhs, national, ongoing.
Establishment of New National MEMS Design Centers sponsored by National Program on Micro and Smart Sensors (Aeronautical Development Agency) - Rs. 11.16 lakhs, national, ongoing
"Design and Fabrication of Two Movable Plate Miniaturized RF MEMS Switched Capacitor and Phase Shifter," sponsored by National Program on Micro and Smart Sensors (Aeronautical Development Agency) - Rs. 33.88 lakhs, national, ongoing.
Prof Chandan Kumar Sarkar
Development of Graphene-Based Hydrogen Sensor, 14.28 Lakhs, Three Years, CSIR, national, ongoing.
Study of Structurally and Operationally Diverse Advanced Double Gate MOSFETs for CMOS Applications in Nano Regim 21 Lakhs, Three Years, DST. Submitted
Prof Subir Kumar Sarkar
"Design and simulation of logic circuits with hybrid architectures of single electron transistors and conventional MOS devices," CSIR 7.25 lakhs + JRF, national, ongoing.
"Modelling and simulation of Nano scale SON MOSFET suitable for ultra-dense and low power VLSI circuit". DRDO, 14.88 Lakhs, national, ongoing.
"Low Power ASIC-VLSI Implementation of Secure and Authentication Algorithms for Defence Application," UGC UPE Phase-II, 7.82 Lakhs, national, On going
"RFID in Avian influenza hazards- A Case study for design and implementation of a processor for early bird flu detection and cost effective poultry management". CSIR, 8.64 Lakhs, national, ongoing.
"Nano Single Electron and Spintronic devices as ASIC VLSI chips for medical and space applications". UGC UPE Phase-II, 7.32 Lakhs, national, Ongoing.
"Modelling of low power consuming ultra-dense VLSI chip using Nano and single electron devices for space vehicles and defence application," DRDO, Govt. of India, 10 lakhs, completed.
"Development of an ASIC-VLSI multi-chip zigbee RFID network processor for the realization of power efficient smart industries/homes," UGC, 9.66 Lakhs, completed.
"Development of highly secured and authenticated algorithm and its low power ASIC-VLSI implementation suitable for defence application," DRDO, Govt. of India, 14.98 lakhs, completed.

18. Inter-institutional collaborative projects and associated grants received
- h) National collaboration b) International collaboration
- Prof. Bhaskar Gupta:*
- 'Infrastructural Communication Technologies Supporting Fully Ubiquitous Information Society' sponsored by Govt. of Japan (Indo – Jap Collaborative Project) (Completed) – Jap Yen 30 millions/year for 3 years.
 - Development of RF MEMS Capacitive Shunt Switch in Application as Phase Shifters for Satellite Communication Systems sponsored by ISRO – Rs. 4.7975 lakhs [in collaboration with IIT KGP], national, ongoing.
 - Design and Development of High Speed Miniaturized RF MEMS Switched Capacitor sponsored by ISRO –Rs. 19.70 lakhs [in collaboration with IIT KGP], national, ongoing.
 - DST sanctioned Indo - Tunisian Project “Development of Wearable Antenna for Body Centric Application and Studies on their Physiological Effects” - Rs. 14,49,000/-, International collaborative, ongoing.
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. (Give details.)
- Prof. Salil Kumar Sanyal and Prof. Iti Saha Misra:* DST FIST (Rs.89.60 lakhs) and DST PURSE Projects (Rs. 8,00,000/- + 5 Research Scholars), ETCE Department funded by DST, Govt. of India, (DST-FIST 2007, DST-PURSE 2010).
- Prof. Amit Konar:* UGC-SAP/CAS : Rs.35 lakhs (UGC-University Potential for Excellence Program in Cognitive Science, Phase-2)
- Prof. Bhaskar Gupta:* Radio Frequency Communication System Design, Fabrication and Measurement Technique – Sponsored by UGC under Special Assistance Programme (SAP) at the level of DRS I- 59.0 Lakhs.
- Prof. Chandan Kumar Sarkar:*
- RF Performance Trends of Nano-Scale MOS Devices, 8 Lakhs, Three Years, AICTE, ongoing.
- Scaling of MOSFETs in the Nano Regime, 8.5 Lakhs, 2005-08, AICTE, Completed
20. Research facility/centre run by the Dept./school/centre which has:
- State recognition.
 - National recognition Cognitive Robotics, IC center.
 - International recognition.
21. Special research laboratories sponsored by / created by industry or corporate bodies:
- Microcontroller lab: funded by Texas instruments
22. Publications:
- Number of papers published in peer reviewed journals (national / international): 300 (See Annexure for details)
- Monographs /Chapters in Books: 19 (See Annexure for details)
- Edited Books: 15 (See Annexure for details)
23. Details of patents and income generated:
- Areas of consultancy and income Indian patent no. 200050 on ‘A Novel Dual Frequency Microstrip Antenna’ granted on 01 December 2006, by Prof. Bhaskar Gupta, Ratnajit Bhattacharaya, Pinaki Mukherjee.
 - One patent has been filed with Indian patent no. 669/KOL/2013 on ‘Work Function engineering binary metal alloy gate strained Silicon-SOI/ SON MOSFET Device” on 5th June 2013, by Prof. Subir Kumar Sarkar, Bibhas Manna, Saheli Sarkhel, Nurul Islam, and Souvik Sarkar.
 - One patent has been filed with Indian patent no. 90/KOL/2013 on “A Radio Frequency MEMS unit cell Miniature-size Switched Capacitor Based Phase

Shifter Device” by Amrita Chakraborty, Prof. Bhaskar Gupta and Binay Kumar Sarkar.

24. Areas of consultancy and income generated:

- Prof. Subir Kumar Sarkar was with an investigating team for investigation in a plant of General Power Corporation after some complain against Wessman Pvt. Ltd.
- Prof. Bhaskar Gupta has advised M/s Turkcell, Republic of Turkey on chip antenna design.

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

Anada Shankar Chowdhury worked as Visiting Professor, Institute for Computer Science, Department of Mathematics and Computer Science, University of Münster, Germany. (June 2013 – July 2013).

Prof. Iti Saha Misra invited to visit, University of Indonesia, EE Department and to present a public Lecture on the Research of Wireless Communication at BWA Lab, ETCE, Jadavpur University.

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

(a) National committees

Subir Kumar Sarkar

- i. Member of the Board of Studies-PG at West Bengal State Council of Higher Education from 7.1.13.
- ii. Member of advisory committee for TEQIP-II seminar on “Advances in Information and Communication Technology: Emerging Trends and challenges,” Organised on 24th to 28th July, 2012 at RCCIIT.
- iii. Member of the Court, Jadavpur University, Kolkata.
- iv. Member of Executive Council, Jadavpur University.
- v. Member of the Governing body of Dinabandhu Andrews Institute of Technology and Management, Kolkata.
- vi. Member of the Board of Studies in the Department of Electronics and Communication Engineering, National Institute of Technology, Durgapur
- vii. Member of the Board of Studies in the Department of Electronics and Communication Engineering, KIIT University, Bhubaneswar, Orissa
- viii. Adjunct faculty in the Department of Electronics and Communication Engineering, Manipal Institute of Technology, Manipal, Karnataka.

Kalyan Kumar Mallik

Conference Chair of the Annual IEEE India conference INDICON in 2010 at Jadavpur University, Kolkata.

Member of the advisory committee of the Annual IEEE India conference INDICON in 2011, BITS Pilani Campus, Hyderabad.

(b) International committees

Ananda Shankar Chowdhury

International Workshop on Computational Spine Imaging (CSI), Nagoya, Japan, 2013

International Conference on Pattern Recognition and Machine Intelligence (PREMI), Kolkata, India, 2013

IEEE International Conference on Natural Computation (ICNC), IEEE International Conference on Fuzzy Systems and Knowledge Discovery

(FSKD), Shanghai, China, 2011
 IEEE Sponsored International Conference on Computer and Communication Technology (ICCCT), Allahabad, India, 2010
 International Conference on Image Processing, Computer Vision and Pattern Recognition (IPCV), Las Vegas, USA, 2010.

b. Editorial Boards

Amit Konar

- i. -IEEE Transactions on Systems, Man and Cybernetics : Systems
- ii. -IEEE Transactions on Fuzzy Systems
- iii. -Neurocomputing, Elsevier
- iv. -Intelligent Decision Support Systems, IOS Press

Ananda Shankar Chowdhury serves as publication chair in IEEE Sponsored International Conference on Communications, Devices and Intelligent Systems (CODIS), Kolkata, India, 2012.

Chayanika Bose served as technical programme chair in IEEE sponsored International conference on communications, devices and Intelligent Systems (CODIS 2012).

Iti Saha Misra served as Technical Program Committee in Communication, Circuits and Systems (iC3S-2012). Served as Organizing member of INDICON-2010, CALCON-2008, and CALCON-2011, member of editorial board of International Journal of RF and Microwave Computer-Aided Engineering, John Wiley.

Subir Kumar Sarkar

- i. General Chair in International conference on communications, devices and Intelligent Systems (CODIS 2012).
- ii. Editor-In-Chief of International Journal of Nano Electronics, Circuits and Systems.
- iii. Editorial board member of the Journal of Engineering, computing & Architecture.
- iv. Organizing secretary in 2nd National Conference on Recent Trends in Information Systems (ReTIS-08), February 7-9, 2008, Organised by CMATER, SRUVM project, CSE Department (TEQIP), Jadavpur University, IEEE GOLD Affinity Group, IEEE Calcutta Section and Computer Jagat.

Chandan Kumar Sarkar is in the Editorial Board of IEEE Transactions on Electron Devices

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

Prof. Iti Saha Misra in cooperation with *Prof. Salil Kumar Sanyal* organized the three-week-long UGC Sponsored Refresher Course on “Broadband Wireless Communication”, in the Department of ETCE under the auspices of Academic Staff College, Jadavpur University, in June-July 2009.

Prof. Subir Kumar Sarkar organized a week-long workshop on “Image Processing and its Application in VLSI Circuits” at the Dept. of ETCE, UGC-ASC Jadavpur University, Kolkata from 22-26, February 2010.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects 99%
- percentage of students doing projects in collaboration with other universities / industry / institute 1%

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

- Faculty:

- *Amit Konar* has been appointed as an Associate Editor, IEEE Transaction on Fuzzy Systems.
- *Amit Konar* has been selected as the Program Chair of IEEE sponsored prestigious Fuzz-IEEE conference.
- *Bhaskar Gupta* has been selected as Part Time Non Official Director, Direct Freight Corridor Corporation Ltd., Government of India.
- *Bhaskar Gupta* has been appointed as Non official Part Time Director, RailTel Corporation of India Ltd., Government of India.
- *Bhaskar Gupta* has been appointed as Chairman, West Bengal Joint Entrance Examination Board.
- *Bhaskar Gupta* has received Best paper award in International Conference on Information and Electronics Engineering, IPCSIT, Bangkok, 2011
- *Bhaskar Gupta* has obtained Best Paper Award in ICMARS 2011, Jodhpur, Rajasthan
- *Salil Kumar Sanyal* has been appointed as Chairman, Circuits and Systems Society Chapter of IEEE Calcutta Section.
- *Salil Kumar Sanyal* has been selected as Member National Advisory Committee, AICTE Sponsored National Conference on Energy System Planning, Implementation and Operation (ESPIO-2011) organized by JIS College of Engineering, Kalyani, August 2011.
- *Salil Kumar Sanyal* has been selected as Member National Advisory Committee, National Conference on Computing, Communication and Sensor network (CCSN-11) organized by The Institution of Engineers (India), Rourkela Local Centre & Purushottam Institute of Engineering and Technology, Rourkela, October 2011.
- *Salil Kumar Sanyal* has been selected as Organizing Chairman, National Conference on Electrical, Electronics and Computer Engineering (CALCON 2011), organized by IEEE Calcutta Section, Kolkata, November 2011.
- *Salil Kumar Sanyal* has attended the AICTE Meeting of Heads of Institutions to discuss changes in the Approval Process for the academic year 2012-13 as a representative from Jadavpur University on 29th November, 2011 at University of Calcutta.
- *Salil Kumar Sanyal* has been selected as Member, International Program Committee, 14th IEEE International Conference on Computer and Information Technology (ICCIT 2011) organized by American International University, December, 2011, Dhaka, Bangladesh.
- *Iti Saha Misra* has been appointed as Secretary, IEEE Kolkata Section.
- *Subir Kumar Sarkar* has been selected as the chair to organize an IEEE-sponsored International conference CODIS-12 by the Department.
- *Subir Kumar Sarkar* acted as judge in a technical session on simulation and modeling in International conference on Sustainable energy and intelligent system (SEISCON 2011), 21 July 2011, Dr. M.G.R University, Chennai, Tamil Nadu.
- *A.S. Chowdhury* acted as a member of the screening committee for Ph.D. applications from India to USA under Fulbright Scheme (organized by United States Education Foundation in India (USEFI)).
- *Sudhabindu Ray* has been appointed as member of technical subcommittee ,West Bengal Jointentrance Board

- *Sudhabindu Ray* has been appointed as academic member of School of Nuclear Studies and Application.
- *Rabindra Nath Nandi* has been awarded AICTE Emeritus Fellow.
- *Amit Konar* has been appointed as an Associate Editor of the IEEE Trans. on Systems, Man and Cybernetics, Part-A in April, 2010.
- *Amit Konar* served as an Editor-in-Chief for the Int.J. of AI and Soft Computing, Inderscience, UK for the year 2010.
- *Amit Konar* served as an Editor of Neurocomputing Journal, Elsevier.
- *Amit Konar* has been selected as the Liaison Chair for the International Conf. Intelligent Information and Engineering Systems, Kaiserslautern, Germany, Dec. 2010.
- *Amit Konar* is a member of the Program Committee of the Int. Conf. on Information Systems to be held in Kolkata, Dec. 2010.
- *Anup Kumar Bandhyopadhyaya* has been appointed as non-official part time Director on the Board of RAILTEL CORPORATION OF INDIA LTD. for three years or until further orders, whichever is earlier.
- *A. S. Chowdhury* has been awarded a Travel Stipend from the IEEE Signal Processing Society (SPS) for presenting a paper in the Seventeenth International Conference on Image Processing (ICIP) at Hong Kong, 2010.
- *A. S. Chowdhury* has been awarded a Travel Stipend from the International Association for Pattern Recognition (IAPR) for presenting a paper in the Twentieth International Conference on Pattern Recognition (ICPR) at Istanbul, Turkey, 2010.
- *A.S. Chowdhury* has been selected as the Program Committee Member in the International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV), Las Vegas, Nevada, USA, July 2010.
- *A.S. Chowdhury* has been selected as the Program Committee Member in the International Conference on Computer and Communication Technology (ICCCT), Allahabad, India, September 2010.
- *Bhaskar Gupta* has been nominated as External Member of Board of Directors for Dedicated Freight Corridor Development Corporation, Govt. of India.
- *Bhaskar Gupta* has advised M/s Turkcell, Republic of Turkey on chip antenna design.
- *D.R. Poddar* has been awarded AICTE Emeritus Fellow vide grant no. 1-51/RID/EF (04)/2009-10 dated 06.01.2010.
- *Iti Saha Misra* has been elected as a TPC Member: AICT –2010, Greece, ICCCT-2010, Allahabad, India.
- *Iti Saha Misra* implemented VoIP over wireless LAN/ OPNET and Qualnet simulators from DST FIST 2007 project at the Dept. of ETCE, JU.
- *P. Venkateswaran*, Secretary, IEEE Communications Society Calcutta Chapter: This Chapter has been selected as a winner for 2010 Communications Society Chapter Achievement Award (CAA) by the IEEE COMSOC HQ.
- *Salil Kumar Sanyal* has been selected as the Organizing Committee Member in All India Seminar on “Wireless Networks and Social Development” organized by ET Division of The Institution of Engineers (I), January, 2010.
- *Salil Kumar Sanyal* has been selected as the International Programme Committee Member in 13th IEEE International Conference on Computer and Information Technology (ICCIT 2010), December, 2010 Dhaka, Bangladesh.

- *Salil Kumar Sanyal* has been selected as the Organizing Committee Member of the IEEE National Conference on Microwave and Communication, NCMicroCom 2010, at BIET, Suri, February 19-20, 2010.
- *Salil Kumar Sanyal* has been selected as the Reviewer of International Journal of Electronics, UK.
- *Iti Saha Mishra* Obtained best paper award titled “Tamal Chakraborty, Iti Saha Misra and Salil K. Sanyal, “Design and study of VoIP model in cognitive radio network under different simulation platforms,” CUBE 2012 International Information Technology Conference and Exhibition, ACM, PUNE, Maharashtra, India, 3-5 Sep 2012.
- *Iti Saha Mishra* was Selected as the Coordinator of IEEE SIGHT (Special Interest Group for Humanitarian Technology), Obtained the fund from IEEE HQ, USA, for doing project on “Low Cost Low Bandwidth Remote Virtual Educational Platform for underserved” and successfully completed the project under SIGHT, attended as an invited delegate of SIGHT IEEE Kolkata Section for the R10 WIE/GOLD/Student Congress on 11-14 July 2013.
- *Salil Kumar Sanyal* has been elected as the Co-ordinator, Central Selection Committee (Engineering & Technology).
- *Salil Kumar Sanyal* was given Certificate of Appreciation for 10-Year Membership extended by the Communications Society of IEEE for contributing to the growth of Communications Industry and the Society as a loyal Communications Society Member, January 2010.
- *Salil Kumar Sanyal* was appreciated by IEEE Calcutta Section for notable services and significant contributions towards the advancement of IEEE and the Engineering Profession, January 2010.
- *Subir Kumar Sarkar* has been nominated as Editor-In-Chief of the Journal, International Journal of Nano Electronics, Circuits and Systems
- *Subir Kumar Sarkar* has been nominated as Editorial Board Member of the Journal of Engineering, computing & Architecture
- *Swagatam Das* has been selected as the Founding Editor-in-Chief, Swarm and Evolutionary Computing, an Elsevier Journal in 2010.
- *Swagatam Das* has been selected as the Associate Editor, Information Sciences, Journal Elsevier, (ISI Impact Factor 3.291) 2009.
- *Swagatam Das* has been selected as the Guest Editor, Special Issue of IEEE Transactions on Systems, Man and Cybernetics, Part-C.
- *Swagatam Das* has been selected as the Co-Chairperson of symposium on Differential Evolution. Under IEEE Symposium Series on Computational Intelligence (SSCI) 2011, April 11-15, 2011 Halle aux Farines, Paris, France.
- *Swagatam Das* has been selected as the Program Co-Chairperson of Eighth International Conference on Simulated Evolution and Learning (SEAL) 2010, 1 – 4 Dec., 2010, Indian Institute of technology (IIT) Kanpur.
- *Swagatam Das* has been selected as the Program Co-Chairperson of International Conference on Swarm, Evolutionary, and Memetic Computing (SEMCCO), 2010, 16 – 19 Dec, 2010, Chennai, India.
- *Amit Konar* has been appointed as the Editor-in-Chief of IJAISC, 2009.
- *Amit Konar* has been appointed as an Editor of Neurocomputing, Elsevier, Journal of Intelligent Decision Technologies, IOS Press, The Netherlands.
- *Bhaskar Gupta*’s name has been Included in Marquis 2009 Edition of Who's Who in the World.

- *Bhaskar Gupta* obtained the Best Paper award in oral section for the paper “Performance improvement of RF MEMS switch with two movable plates” at *International Conference ICMEMS 2009* at IIT Madras, Chennai which was received by co-author Sri A. Kundu.
- *Bhaskar Gupta* acted as Judge for the Best Paper award in 4th *International Conference on Electromagnetic Near Field Characterization and Imaging* at Taipei.
- *Iti Saha Misra* obtained IEEE ADCOM 2008 best paper award.
- *Salil Kumar Sanyal* has been elected as Member of the Technical Committee for the installation of DSA System at Bangur Institute of Neurosciences, Govt. of West Bengal.
- *Salil Kumar Sanyal* has been elected as Member of the International Program Committee of 12th International Conference on Computer and Information Technology (ICCIT 2009) organized by Independent University, Bangladesh and Military Institute of Science & Technology, Bangladesh , December, 2009.
- *Subir Kumar Sarkar* has been nominated as Editor-In-Chief of the Journal, International Journal of Nano Electronics, Circuits and Systems
- *Subir Kumar Sarkar* has been nominated as Editorial Board Member of the Journal of Engineering, computing & Architecture
- *Swagatam Das* has been selected as the Guest Editor, Special Issue of IEEE Transactions on Evolutionary Computation on Differential Evolution, 2009.
- *Swagatam Das* has been selected as the Guest Editor, Special Issue of ACM Transactions on Autonomous and Adaptive Systems (TAAS) on Foraging Theory based Optimization Techniques, 2009.
- *Swagatam Das* has been selected as the Guest Editor, Special Issue of International Journal of Swarm Intelligence Research (IJSIR), IGI Global on Application of Foraging Theory Based Optimization Algorithms to Power Systems Engineering, 2009.
- *Swagatam Das* has been selected as the Technical Committee Member for Task Force on Memetic Computing, IEEE Computational Intelligence Society.
- *Swagatam Das* has been selected as the International Program Committee member of IEEE Congress on Evolutionary Computation (CEC), Trondheim, Norway during May 18-21 (Monday - Thursday), 2009.
- *Swagatam Das* has been selected as the International Program Committee member of 2009 IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology, Milano, Italy, September 15-18, 2009.
- *Swagatam Das* has been selected as the International Program Committee member of 8th International Conference on Computer Information Systems and Industrial Management Applications (CISIM 2009) during December 09-11, 2009 in Coimbatore, India.
- *Swagatam Das* has been selected as the International Program Committee member of International Conference on Soft Computing and Pattern Recognition (SoCPaR 2009) during December 04-07, 2009 in Malacca, Malaysia.
- *Swagatam Das* has been selected as the International Program Committee member of IEEE World Congress on Nature & Biologically Inspired Computing (NaBIC 2009), December 9-11, 2009, Coimbatore, INDIA.
- *Swagatam Das* has been selected as the International Program Committee member of International Workshop on Advances in Peer to Peer Technology (IWAP2PT'09), December 9-11, 2009, Bangalore, India.

- *Swagatam Das* has been selected as the International Program Committee member of ANTS 2010, Seventh International Conference on Swarm Intelligence, Brussels, Belgium, 2010.
- *Subir Kumar Sarkar* organized 2nd National Conference on Recent Trends in Information Systems (ReTIS-08), February 7-9, 2008, as Organising Secretary, Organised by CMATER, SRUVM project, CSE Department (TEQIP), Jadavpur University, IEEE GOLD Affinity Group, IEEE Calcutta Section and Computer Jagat.
- *Chandan Kumar Sarkar* has been selected as an IEEE Distinguished Lecturer.
- Doctoral / post doctoral fellows
 - S. Sankaralingam, student of Prof. Bhaskar Gupta was Awarded Third Prize on the proposal titled “FullyFabric Wearable Antenna for WLAN Applications,” at ‘Electromagnetic Sensors and Devices Contest’ organized by IGCAR, Kalpakkam and IITM, Chennai.
 - Awarded Second prize to Sayantan Dhar in M.V. Chauhan Student Paper Contest. Sayantan Dhar is student of Prof. Bhaskar Gupta.
 - Tamal Chakraborty, Phd Student under the supervision of Prof. Iti Saha Misra, ETCE Department has been awarded Best Paper award for the paper entitled “Design and Study of VoIP model in cognitive radio network under different simulation platforms,” networks track in CUBE 2012: ACM International IT conference & exhibition, Pune, Maharashtra, 2-5 Sep 2012.
 - Sanghmitra De (Dasgupta) Ph.D. student was awarded Research Project entitled “Optimal Design of Active Antennas and Arrays for Improved Gain, Bandwidth and Impedance Performance to Be Used in Mobile Computing and Communication” under Women Scientist Scheme, Dept. of Sc. & Technology, and Govt. of India Under the supervision of Prof. Bhaskar Gupta.
 - Sudipta Maity, student of Prof. Bhaskar Gupta has obtained Best Paper Award in ICMARS 2011, Jodhpur, Rajasthan.
 - Obtained Best Student Paper Award by Sudipta Maity in Student Paper Contest in IAW 2011, Kolkata, India. Sudipta Maity is student of Prof. Bhaskar Gupta.
- Students (give details):
 - Priyanka Saha, M.Tech student, bagged the best paper award on the paper, “Comparative study and analysis of 32 nm FD-SOI/SON and CNFET based 4X4 SRAM cell Array” in International Conference on Circuits, Power and Computing Technologies, 2013, Under the supervision of Prof. Subir Kumar Sarkar. Held at Noorul Islam University, 21-22 March, 2013, Tamilnadu.
 - Bindita Chaudhuri (2nd Year student) has been awarded Best Student(Supriya Basu Scholarship) from Faculty of Engineering, Jadavpur University, Kolkata, India.
 - LAP Lambert Academic Publishing house has agreed to publish M.Tech Thesis written by B. Pradhan in the form of Book. Thesis is guided by Prof. B.Gupta.
 - Avijit Sahana, M.Tech. Student, SMCC, J.U obtained best paper award in NISS-2010, Chennai, March 2010 on the topic of Implementation of RSA algorithm on sensor network,” Under the supervision of Prof. Iti Saha Misra.
 - Anindita Kundu, M.Tech. Student, SMCC, J.U obtained best paper award in Communication group in NCMicroCom-2010, BIET, Suri, February 19-20. 2010, on the topic of “Study of OPNET and Performance evaluation of WIMAX Network under various terrain conditions in OPNET” ,” Under the supervision of Prof. Iti Saha Misra.

- Sudip Kumar Murmu, MeTelE Student, ETCE, JU, obtained best paper award in Microwave group in NCMicroCom-2010, BIET, Suri, Feb. 19-20, 2010, on the topic of “Dual-band Microstrip Antenna for Wireless Communication” ,” Under the supervision of Prof. Iti Saha Misra.
 - Bitan Banerjee, UG, III rd year:
 - 5th in 8th United Insurance & United Leasing International Masters Chess Championship.
 - 5th in 3rd Chess for Youth Championship.
 - Achieved 1st International Master Norm in 1st SCS International Open GM chess Tournament.
 - Achieved 2nd International Master Norm in 9thUnited Insurance & United Leasing Grandmasters Chess Championship.
 - Champion in State Junior Chess Championship.
 - 2nd in 4th Chess for Youth Championship.
 - 11th in National Junior Chess Championship.
 - 8th in National U-17 Chess Championship.
 - Champion in 5th Chess for Youth Championship.
 - Participated in Commonwealth Chess Championship.
 - 4th in Chess for Youth Chess Championship.
 - 3rd in Mayor’s Cup Team Championship.
 - Gold Medallist in National Inter-University Chess Championship.
 - Achieved 3rd and final International Master Norm in National Premier Chess Championship.
 - 7th in National Challenger’s Chess Championship.
 - Silver Medallist in National Inter-University Chess Championship.
30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):
1. IEEE CASCOP Post Graduate Student Paper Conference (PGSPC) 2010
Date: 27 Nov. 2010; Dr. K. P. Basu Memorial Hall, Jadavpur University, Kolkata –700 032, Funding: IEEE ComSoc Chapter
 2. 2012 International Conference on Communications, Devices and Intelligent Systems (CODIS) Date: 28 & 29, Dec. 2012; TEQIP Building, Jadavpur University, Kolkata – 700 0032. Funding: Department of ETCE
 3. “IEEE National Student Paper and Circuit Design Contest-2012” on October 04, 2012 at Dept. of Electronics & Telecommunication Engineering, Jadavpur University, Funding: IEEE CAS Chapter
 4. Jointly organized with IEEE EDS Chapter Calcutta section and Synopsys, EDA software private ltd. “Workshop – Technophil -2013, a workshop on CMOS and beyond CMOS circuits and system design” from 18th to 21st March, 2013 in SMDP LAB , Dept. of Electronics & Telecommunication Engineering, Jadavpur University., Funding : IEEE EDS Chapter
31. Code of ethics for research followed by the department: The Department follows existing university ethics

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted Year-Total (Male+ Female)	Pass percentage (w.r.t. last graduating batch) Male Female
Under Graduate (BE Tel E)	As per WB-JEE ~ 70,000 candidates have aPplied	2008-47 (44+3) 2009-51 (49+2) 2010-45 (39+5) 2011-45 (44+1) 2012-54 (45+9)	100%-100% 100%-100% 100%-100% 100%-100% 100%-100%
Post Graduate (ME Tel E)	608 769 935 737 942	2008-23 (22+1) 2009-24 (22+2) 2010-23 (22+1) 2011-25 (23+2) 2012-25 (23+2)	100%-100% 100%-100% 100%-100% 100%-100% 100%-100%
Post Graduate (M. Tech in Intelligent Automation and Robotics)	207 230 420 659 695	2008-17(15+2) 2009-17(13+4) 2010-17 (15+2) 2011-17 (15+2) 2012-17(14+3)	100%-100% 100%-100% 100%-100% 100%-100% 100%-100%
Post Graduate (M. Tech in VLSI Design & Microelectronics Technology)	307 330 520 759 795	2008-17(15+2) 2009-17(14+3) 2010-17 (15+2) 2011-17 (11+6) 2012-17(14+3)	100%-100% 100%-100% 100%-100% 100%-100% 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 State	% of students from other countries
Under Graduate (BE Tel E)		88%	10%	2%
Post Graduate (ME Tel E)	3%	66%	30%	1%
Post Graduate (M.Tech in Intelligent Automation and Robotics)	0%	97%	3%	0%
Post Graduate (M.Tech in VLSI & Microelectronics)	0%	94%	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.

GATE: 90%; Others : 50%

35. Student progression

Student progression	Percentage against enrolled
UG to PG	~50% including M.E., M.Tech, MBA, M.S., MS-PhD
PG to M.Phil.	NA
PG to Ph.D.	33%
Ph.D. to Post-Doctoral	NA
Employed	
• Campus selection	90%
• Other than campus recruitment	10%
Entrepreneurs	Nil

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	41%
from other universities within the State	53%
from universities from other States	6%
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 (2008 – 2012): PhD : 2
38. Present details of departmental infrastructural facilities with regard to
- Library: Departmental library of 13,558 books, approximately 100 distinct international journals, Thesis copy, reports.
 - Internet facilities for staff and students: All Staff and student have the internet facility and faculty also have Wi-fi access.
 - Total number of class rooms: 5
 - Class rooms with ICT facility: 3
 - Students' laboratories: 16
 - Research laboratories: 6
39. List of doctoral, post-doctoral students and Research Associates
- from the host institution/university / b) from other institutions/universities

2012

Sl.	Candidate's Name	Supervisor	Thesis Title	Year
1.	Sudipta Maity	Dr. Bhaskar Gupta	Theoretical and Experimental Investigations on Different Triangular Shaped Radiators	Registered in 2012
2.	Ayona Sarkar	Dr. Bhaskar Gupta	Study and Optimization of Antenna on Moving Platform for Satellite Link Operation	Registered in 2012
3.	Tridib Chakraborty	Dr. Bhaskar Gupta	Towards Development of Uniform Engineering Curricula	Registered in 2012
4.	L. Lolit Kumar Singh	Dr. Bhaskar Gupta (jointly with Dr. P.P. Sarkar)	Effects of Ground Plane and Perturbations Therein on Microstrip Antenna Performance	Submitted in 2012
5.	Biswa Binayak Mangaraj	Dr. Iti Saha Misra	Design, Analysis, and Optimization of Some Wire Antennas and their Arrays using Numerical Technique and Soft Computing Tools	Awarded in Dec 2012
6.	Nitul Dutta	Dr. Iti Saha Misra	Studies of Hierarchical Mobile IPv6 based Mobility Model in Search of Optimal Performance for Next Generation Networks.	Awarded in Dec 2012
7.	Kalpana Saha Roy	Dr. Iti Saha Misra	Some Studies on Call Admission Control Protocol with QoS Provisioning in Next Generation Cellular Networks	Awarded in Dec 2012
8.	Dulal Mondal	. Dr. Iti Saha Misra	Feasibility study for cost effective detection and analysis techniques of non-invasive heart sound using digital processing	Registered in August 2012
9.	Tamal Chakraborty	Dr. Iti Saha Misra	Studies for the design of Cognitive Radio Network for QoS guaranteed VOIP communication	Registered in March 2012
10.	S. Dogra	Dr. Subir Kumar Sarkar	Some studies on mobile communication	Awarded 2012
11.	Sanjoy Deb	Dr. Subir Kumar Sarkar	An overview of nano electronic devices and their applications	Awarded 2012
12.	Koushik Majumder	Dr. Subir Kumar Sarkar	Design and Performance study of routing protocols for mobile Ad hoc Network	Awarded 2012
13.	Bijoy Kantho	Dr. Subir Kumar Sarkar	To study some Aspects of Low Dimensional Devices including MEMS based Gas Sensors	Registered in 2012

14.	Kousik Naskar	Dr. Subir Kumar Sarkar	To Study Power Efficient Low Dimensional Devices and VLSI Circuits Suitable for Wireless Mobile Communication	Registered in 2012
15.	Sanjay K. Kuanar:	Dr Ananda Shankar Chowdhury	Video Summarization for Multimedia Systems	Registered in August 2012
16.	Gautam Bhattacharyya	Dr Ananda Shankar Chowdhury	Theoretical variations of the kNN algorithm	Registered: in August 2012
17.	Soumik Das	Dr. P. Venkateswaran	Some Studies on Analog Signal Processing Function Circuits using	Registered: in 2012
18.	Swarup Kumar Mitra	Dr. Mrinal Kanti Naskar	Studies on Data Gathering Schemes in Wireless Sensor Networks	Awarded in 2012

2011

Sl.	Candidate's Name	Supervisor	Thesis Title	Year
1.	Nayan R. Samal	Dr. Amit Konar	Stability Analysis of Swarm Dynamics Using Control Theory	Awarded in 2011
2.	Indrani Chakraborty	Dr. Amit Konar	Swarm Algorithms for Multi-agent Robotics	Awarded in 2011
3.	S. Sankaralingam	Dr. Bhaskar Guta	Investigations on Antennas for Wearable Applications	Awarded in 2011
4.	Sayantana Dhar	Dr. Bhaskar Guta	Investigation on Multifrequency and Reconfigurable Antennas for Wireless Applications	Registered in 2011
5.	Arindam Deb	Dr. Bhaskar Guta	Application of Differential Evolution Techniques to the Optimal Design of Microstrip Antennas	Registered in 2011
6.	Chandi Pani (Banerjee)	Dr. Iti Saha Misra	Some Studies of MIP/MPLS Based Integrated Framework for Next Generation Networks.	Awarded in 2011
7.	Anindita Kundu	Under Prof Iti Saha Misra and Prof S. K. Sanyal	Design and analysis of OFDMA based distributed cognitive radio framework for efficient wireless resource management	Registered in 2011
8.	Sanjib Sil	Dr. Subir Kumar Sarkar	Design, Simulation and Implementation of a Fourth Generation Mobile Communication Systems	Awarded in 2011
9.	Abhishekh Basu	Dr. Subir Kumar Sarkar	Some studies on system design for visual information hiding	Registered in 2011
10.	Anindya Jana	Dr. Subir Kumar Sarkar	Modeling of Nano scale Devices and Exploring their Applications.	Registered in 2011
11.	Anirban Mandal	Dr. Manotosh Biswas	On some aspects of Triangular Microstrip Patch Antenna	Registered in 2011
12.	Jishan Mehedi	Dr. Mrinal Kanti Naskar	Some Studies on Fuzzy Based Algorithms for Connectivity Maintenance in Mobile Ad-Hoc Networks	Registered in 2011
13.	Shaik Sahil Babu	Dr. Mrinal Kanti Naskar	Design and Implementation of Trust Management Algorithms for Wireless Sensor Networks	Registered in 2011

Post-Doctoral Fellows

Dr. Chaitali Chakraborty joined as UGC Post Doctoral Fellow in the department of Electronics and Telecommunication Engineering in 2011, under the supervision of Chayanika Bose.

2010

Sl.	Candidate's Name	Supervisor	Thesis Title	Year
1.	Manidipa Bhattacharya	Dr. Bhaskar Gupta	Optimal Design Of Waveguide Filter Using Artificial Intelligence Techniques	Registered in 2010
2.	Sriparna Mitra	Dr. Bhaskar Gupta	Modeling and Optimization of Dielectric Resonator Antennas	Registered in 2010
3.	Madan Gopal Tiary	Dr. Bhaskar Gupta (jointly with Prof. A.K.Aditya)	Some Investigations on Interconnects in VLSI	Registered in 2010
4.	Prasun Chowdhury	Dr. Iti Saha Misra	Studies of some call admission control and packet scheduling algorithms for QoS support in broadband WiMAX networks	Registered in 2010
5.	Souvik Sarkar	Dr. Subir Kumar Sarkar	Application of Soft Computing Tools for better Nano device Modeling and Their Application in Digital Circuit.	Awarded in 2010
6.	Somnath Maiti	Dr. Subir Kumar Sarkar	Some studies on Embedded systems in real time multimedia communication and control applications	Registered in 2010
7.	Swanirbhar Majumder	Dr. Subir Kumar Sarkar	Some studies on identification and protection of multimedia information	Registered in 2010
8.	Tirthankar Datta	Dr. Subir Kumar Sarkar	To study some Aspects on Electronics Devices and Application based on new Physical concepts in Novel Nanometer – Scale Structures.	Awarded in 2010
9.	Gopal Chandra Manna	Dr. Subir Kumar Sarkar	Propagation Studies for GSM and CDMA Technology Based Wireless Communication.	Awarded in 2010
10.	Ankush Ghosh	Dr. Subir Kumar Sarkar	To study some aspects of Semiconductor nano devices including spintronics devices and explore some of their applications	Awarded in 2010
11.	Giriprakash H D	Dr. Subir Kumar Sarkar	Some studies on devices beyond CMOS	Awarded in 2010
12.	S. R. Biradar	Dr. Subir Kumar Sarkar	Performance comparison of protocols (transport, network and medium access control) for mobile ad hoc networks	Awarded in 2010
13.	Gowrishankar S	Dr. Subir Kumar Sarkar	To study and Optimize the performance of routing Protocols in wireless Ad hoc and Sensor Networks.	Awarded in 2010
14.	Malabika Sengupta	Dr. Chayanika Bose	Some studies on light path management protocols for WDM optical networks	Awarded in 2010
15.	Dalu Surendrakumar Shrikrushnarao	Dr. Mrinal Kanti Naskar	Design and Implementation of Topology Management Algorithms for Mobile Ad-Hoc Networks	Awarded in 2010
16.	Samir Sadhu Khan	Dr. Chayanika Bose	Some studies on the topological design aspects of Mobile Cellular Networks.	Registered in 2010
17.	Aniruddha Chandra	Dr. Chayanika Bose	Performance analysis of diversity combining techniques for digital signals in wireless fading channel.	Awarded in 2010

2009

Sl.	Candidate's Name	Supervisor	Thesis Title	Year
1.	Sunandan Bhunia	Dr. Bhaskar Gupta (with Dr. P.P. Sarkar)	Some Studies on Compact Microstrip Patch Antennas	Registered in 2009
2.	Sanghamitra (De) Dasgupta	Dr. Bhaskar Gupta	Optimal Design of Active Antennas and Arrays for End Used Applications	Registered in 2009

3.	Milind Thomas Themalil	Dr. Bhaskar Gupta	Design of Microstrip Antennas for Wireless Local Area Network	Registered in 2009
4.	Rajendra Prosad Ghosh	Dr. Bhaskar Gupta	Development of Novel Printed Dipole Antennas for Optimal Performance	Registered in 2009
5.	Malay Gangopadhyaya	Dr. Bhaskar Gupta	Design Optimization of Microstrip Antennas Using Particle Swarm Optimization Technique	Registered in 2009
6.	Samik Chakraborty	Dr. Bhaskar Gupta	Investigation on Dielectric Antennas	Awarded 2009
7.	Sibaram Khara	Dr. Iti Saha Misra	Some Studies on 3G/WLAN Integration Architecture for Next Generation Wireless Networks	Awarded 2009
8.	Budhaditya Bhattacharya	Under Prof Iti Saha Misra and Prof S. K. Sanyal	Studies on some signal processing aspects of OFDM based next generation broadband wireless communication system.	Registered 2009
9.	Satya Sopan Mahato	Dr. Subir Kumar Sarkar	Modeling of Silicon heterostructure Field-Effect Transistors for RF Applications	Awarded in 2009
10.	T. S. Das	Dr. Subir Kumar Sarkar	Study on Data Hiding & data Communication including Multimedia Communication	Awarded in 2009
11.	Sudhansu SekharSingh	Dr. Subir Kumar Sarkar	Problems Associated with Mobile Communication and Partial Solutions through some Experimental and Theoretical Studies.	Awarded in 2009
12.	Tapas Kumar Maiti	Dr. Subir Kumar Sarkar	Process induced stress engineering CMOS technology	Awarded in 2009
13.	Vijay H. Mankar	Dr. Subir Kumar Sarkar	To study some aspects of data hiding and data security for multimedia communication	Awarded in 2009

2008

Sl.	Candidate's Name	Supervisor	Thesis Title	Year
1.	Swagatam Das	Dr. Amit Konar	Pattern Clustering by Differential Evolution Algorithm	Awarded in 2008
2.	Kuntal Biswas	Dr. Bhaskar Gupta	Investigation on the Transmission Characteristics of Microstrip Lines and Its Variants	Awarded in 2008
3.	P. C. Pradhan	Dr. Subir Kumar Sarkar	To study some aspects of Carrier transport in single electronics and quantum electronics regime	Awarded in 2008
5.	T.G.Basavaraju	Dr. Subir Kumar Sarkar	Some Studies on Ad-hoc Networks	Awarded in 2008
6.	B. Maji	Dr. Subir Kumar Sarkar	To Study the transport phenomena in nano and single electron devices and their Applications	Awarded in 2008
7.	Utpal Biswas	Dr. Mrinal Kanti Naskar	Some studies on wavelength establishment algorithms for all optical networks	Awarded In 2008
8.	Shounak Dasgupta	Dr. Chayanika Bose	Design and simulation of optical signal processing blocks using photonic crystals.	Registered in 2008
9.	Indrajit Bhattacharyya	Dr. Bhaskar Gupta (jointly with Prof. A.K.Bandyopadhyay)	Use of Genetic algorithm to Find Irregularities on the Surface of a Parabolic Reflector from Its Radiation Patterns	Awarded in 2008

40. Number of post graduate students getting financial assistance from the university. (Give details.):
Through Gate: 15, SC/ST/OBC: 5, Total=20/ per year.
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology: During this period no new course has been initiated.
- Identify the need for a new course and its benefits
 - Percentage of renovation of existing infrastructure
 - Student – teacher ratio – load sharing
 - Part of the new course is already involved or not
 - Curriculum depending on already existing same type of course in any other university, state level and national level.
 - Identifying course coordinator.
 - Resolution of BOS for its long term existence.
 - Admission procedure
42. Does the department obtain feedback from
- Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
Department evaluates the total points of each section and try to improve the less scored sections.
Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
Department evaluates the laboratory sessional programmes and involvement of staffs for the development of same.
Alumni and employers on the programmes offered and how does the department utilize the feedback?
Expert comments are utilized on infrastructure developments, arranging lectures on different industry related topics delivered by alumni.
43. List the distinguished alumni of the department (maximum 10)
- Mr. Subir Raha, Ex-Chairman, ONGC.
 - Prof. Bhaskar Gupta, Chairman, Joint Entrance Board, West Bengal.
 - Mr. Ashoke Sen, Ex Director, DEAL
 - Mr. Sudip Mukherjee, Chief Signalling Officer, Eastern Railway.
 - Mr. Partha Roy, Singapore Siemens- Incharge of SE-Asia.
 - Mr. Susanta Sarkar, Director Signal, RDSO, Kolkata.
 - Mr. Kushal Nandi, Chief Technology Officer, West Bengal, Vodafone.
 - Dr. K.S. Dasgupta, Director, IISpace Science & Tech, Ahmedabad.
 - Dr. A.L. Das, Director, SAMEER.
 - Dr. Debanjan Sarkar, Outstanding Scientist, BARC
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
- Department continuously organizes special lecture meetings, independently or jointly with professional organizations like IEEE, involving eminent professors, researchers, experts from industries, and alumni. Also organizes Industrial visits from time to time. Department of ETCE organised a one day visit to the “Fibre optics laboratory” ,” sensor hub facilities” at Central glass and ceramics research institute for the 2nd year B.E. student on 21st may,2013.
45. List the teaching methods adopted by the faculty for different programmes.
Chalk and duster, white board, OHP system,
46. How does the department ensure that programme objectives are constantly met and

learning outcomes are monitored?

The department gets feedback through Grand Viva-voce examination, besides sessional viva-voce examinations. Department also monitors the students' semester results. Faculties of the Department closely monitor Students' seminar presentation at the final year, involvement in quality project leading towards publication- provide small assignments and tests, as a part of examination system. At the same time students are also encouraged to do in house/ collaborative projects and internship in industry, research laboratories even abroad. Department also encourages student feedback in written and also through interaction. Finally, the department monitors program objectives through discussions and deliberations in the Board of Studies, Teacher Student Committee in the department and Faculty Council of faculty of Engineering and Technology.

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

The Faculty members of ETCE Department are highly involved in various professional activities through IEEE Kolkata Sections and IEEE India Council in different fields of Electro-Technology. Women Faculty members are also associated with Women In Engineering Affinity Group of IEEE to encourage promotion of scientific and technological awareness among the girl students and also to enhance the women visibility in the profession. In addition to that IEEE Special Interest Group on Humanitarian Technology (SIGHT) has been formed involving the faculties of this Department to produce innovative Low Cost Technology for the upliftment of the underserved people of the society.

This Department supports different extension activities through IC Centre over a long period to promote academic/ entrepreneurship programs Battery Powered Van Richaw, Solar Lantern, Solar Cells in rural areas. This centre also runs short terms certificate courses in VLSI/ Micro Electronics and device fabrication.

Faculty is involved as the coordinator of an International program "Sun Pendulum Time-Eye Project" in which Jadavpur University being one of the twelve Institutions spread all over the world, Institute of Computer Graphics and Algorithms/Viena University of Technology, and sponsored by Govt. of Austria.

Both the faculty and students of this department actively participated in the RF field measurement from cellular Base stations in and around Kolkata city which created profound interest among the common people to know the actual scenario in the city.

The areas in which our students excel outside the academic curricula include cultural performance, commitment to society, sports (Cricket, football, Chess) and quiz activities, dance and drama performance. Further, our students are also associated with different clubs of university such as music, chess, science, photography.

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

Throughout the year, faculties are regularly arranged for special technical lecture meetings/ round table discussions bringing eminent professors, scientist, technologist from abroad and other states from country for the advancement of knowledge in new cutting edge technology research.

One Faculty Member of this ETCE department is in the Editorial Board of IEEE Electron Device Society and also an IEEE Distinguished Lecturer. The other Faculty members are also in the editorial board of different journals.

Faculty members are associated with different International/National Conferences of repute through Tutorial presentation, research paper presentation and also through chairing various specialized technical sessions.

The Department was highly involved in organizing INDOCON-2010, the flagship conference of IEEE in India. The Department also organized International Conference on

Communications, Devices and Intelligent Systems (CODIS) in 2012 where International Personalities actively participated. Also Department regularly organized Short Term and UGC Refreshers Courses in various advanced fields. Faculty Members are also engaged in the activities of spreading science education among the masses, particularly for school children of West Bengal and regularly engaged in interdisciplinary research.

Faculty members are involved in collaborative work in the School of Nuclear Engineering, Biomedical Engg, School of Nanoscience & Technology, School of Mobile Computing and Communication etc.

Some faculty members are also extended collaborative activities with foreign research laboratories in Japan, Tunisia, Germany, Sweden, Indonesia, and Bangladesh. This department has been recognized as QIP centre for both Master's and PhD programmes.

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

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

During the last few years the department created new research fields and domain knowledge in major thrust areas like "Cognitive Radio Networks", Voice Over IP in Wireless Media, RF Systems, MOS technology, FPGA, Image Processing, Biomedical Imaging, Robotics, Nano Technology, Computational Intelligence, Microstrip Antennas, among others.

The Department has established new Laboratory in the area of Broadband Wireless Communication with support from DST FIST and DST PURSE projects where experimental test bed for VOIP over WLAN, Software Defined Radio (WARP) based Cognitive Radio Network supported with advanced Simulation Environment have been created. Another new laboratory in the area of RF Systems is under development with the support from UGC SAP program.

This department has developed expertise in custom embeded processor design in the Advanced Digital and Embeded Systems Laboratory, nano device simulation laboratory encompasses, optimizing the performance of advanced double gate MOSFET (DGFET) architecture and high-k spacer DGFET by exhaustive TCAD simulation, models for III-V devices have also been developed by the faculty of our department. Research is also established in MEMS based metal oxide sensor for methane and VOC detection.

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

Strengths

- Best Quality Students from the State/North East States, J & K, Neighbouring Nations
- Internatinal Student enrolment in Post Graduate Curriculam
- The infrastructure and equipment available at IC design and fabrication centre with clean bench, Annealing furnace, Photolithographic set up including mask aligner and vacuum spinner, E-beam evaporation unit, Gold bonder, Dip coater, Gas measurement set-up etc.
- Peer reviewed quality publication
- Development of state of the art laboratory from different funded projects
- Organizing international conference, workshop, seminar
- Pearforming different research projects for commercial and defense application in collaboration with different national and international research laboratory
- Student placement quality

- Involvement with professional societies

Weaknesses

- No Institutional Fellowship for PhD Program
- Insufficient Research Fund for PhD Students
- Lack of space
- Lack of funding for advancement of existing laboratory infrastructure
- Poor Teacher-Student Ratio
- Non residential University
- Insufficient trained technical assistant for the advanced laboratories
- Insufficient funding for research paper publication and attending conferences

Opportunities

- Government funding (DST, DRDO, ISRO, UGC, AICTE etc)
- Alumni funding
- National and International Collaborations and Exchange programs
- Utilization of Lab facilities for Industrial Consultancy
- Patenting of research products and research methodologies
- Consultancy projects.

Challenges

- Creation of quality Infrastructure for increased student enrollment
- Removal of obsolescence of resources / technologies
- Improving placement facilities in the core engineering
- Quality Faculty recruitment
- International faculty recruitment
- International faculty Guest House
- Emergency medical services

52. Future plans of the department (in as much detail as possible):

- To develop a center of advance study and centre of excellence in the areas of research, teaching and industrial collaboration
- Re-orientation of existing specializations in the post graduate curriculum in light of developed expertise in the department
- National Collaboration and Student Exchange programs with top tier national institutes like IITs
- Young faculty exchange program with foreign laboratories
- Upgradation of existing syllabus in light of newer technological development
- Credit Transfer Scheme – to encourage UG and PG students to spend one or two semesters in institutes like IITs as well as to encourage students from those institutes for visiting the Department
- More funding from Govt and Industry for encouraging student involvement in the research, to present research paper in the conference and also for collaborative resea

Department of Food Technology and Bio-Chemical Engineering

1. Name of the Department/School/Centre: FOOD TECHNOLOGY AND BIOCHEMICAL ENGINEERING
2. Year of establishment: 1964
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, D.Litt, etc.): B.E, M.Tech, Ph.D. and Integrated Ph.D.
5. Interdisciplinary programmes being conducted and other departments involved:
 - Major R&D projects on food freezing, biosensor development, nutraceuticals and herbal foods are conducted in the Centre for Medicinal Food & Applied Nutrition, JU with University of Connecticut, USA.
 - A major R&D project entitled 'Ultra high temperature processing of liquid beverages and semi solid food products by microwave and electrical energy heating' in collaboration with Departments of Chemical Engineering, Electrical Engineering and Mechanical Engineering of Jadavpur University.
 - A major R&D project for Irradiation Unit assisting (i) Food Processing Industries (ii) R & D in new areas of Irradiated Food (iii) Training Centre for Food Irradiation especially for Eastern & North Eastern Region in collaboration with Dept of Civil Engineering JU, BARC, Mumbai and AERB, New Delhi.
 - Dept. of FTBE and School of Natural Products conduct interdisciplinary R&D projects under 'University with Potential for Excellence' - Phase II.
6. Courses in collaboration with other universities, industries, foreign institutions, etc.: Nil
7. Details of programmes discontinued, if any, with reasons: 3 yr-B.Tech course, since it is not recognized by AICTE since 2011
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester
9. Participation of the department in courses offered by other departments:
Department caters to Adult Continuing Education Courses through School of Adult Continuing Education, JU; All faculty members are regular experts and evaluators of semester examinations in various disciplines such as Food Science and Nutrition, Microbiology, Biotechnology and Chemical Engineering in various institutes and organizations. Faculties are regularly involved as reviewers and experts of Ph.D. thesis evaluation in various institutes and organizations.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	3	2 + 1 (CAS)	3
Associate Professor	5	2	2
Asst. Professor	7	2	2
Other	-	-	-

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

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D. students, last 4 years
Prof. Utpal Raychaudhuri	M-Tech	Professor	Food Engineering & Bioprocess Technology	28	4(awarded) 8(ongoing)
Prof. Runu Chakraborty	Ph.D.	Professor	Food Engineering, Herbal Food, Nutraceuticals	22	4 (awarded) 8 (ongoing)

Name	Qualification	Designation	Specialization	Years of Experience	Ph.D. students, last 4 years
Prof. Lalitagauri Ray	Ph.D.	Professor	Microbial Tech & Biochemical Engineering	26	7 (awarded) 9 (ongoing)
Dr. Uma Ghosh	Ph.D.	Associate Professor	Microbial Technology	8	1 (awarded) 7 (ongoing)
Dr. Paramita Bhattacharjee	Ph.D.	Assistant Professor	Food Engineering & Bioprocess Technology	12	8 (ongoing)
Dr. Dipankar Haldar	Ph.D	Assistant Professor	Nanoscience & Technology	8	5 (ongoing)

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

Sl.	Name and Address
1	Prof. D.C. Sen Senior Professor, West Bengal University of Animal & Fishery Sciences
2	Mr. Alok Basu Director, Institute of Engineers (India)
3	Prof. Parimal Chattopadhyay Ex-Professor, Dept. of FTBE, JU
4	Prof. A.K. Guha Ex-Senior Professor and Head, Department of Biological Chemistry, Indian Association for the Cultivation of Science
5	Prof. A.K. Ghosh Ex-Professor, Dept. of FTBE, JU
6	Prof. Uttam Raychaudhuri Dept. of Chemical Technology (Petroleum), University of Calcutta
7	Mr. P. Misra Dept. of Food Technology, Techno India
8	Mr. Raju Halder Dept. of Mathematics, Jadavpur University
9	Dr. Gour Krishna Das Mahapatra, sponsored by Dept. of Chemistry, JU
10	Dr. Tapasi Samanta, sponsored by Dept. of Chemistry, JU
11	Dr. Anamika Das, sponsored by Dept. of Chemistry, JU
12	Dr. Tapan Kumar Si, sponsored by Dept. of Chemistry, JU

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

14. Programme-wise Student Teacher Ratio: 15:1

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

16. Research thrust areas as recognized by major funding agencies:

Nutraceuticals and Herbal Food Processing,
Green Technologies of Extraction and Green Product Design,
Biosensors,
Fermentation Technology and Bioremediation

17. Number and names 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 titles and grants received project-wise.

Faculty Person	Project title	National funding agencies	Total grant (Rs)
Prof. Lalitagauri Ray	Production, purification and immobilization of beta-galactosidase enzyme from an isolated bacterial strain	F.P.I &H., Govt. of West Bengal 2006-2009.	3,69,000
	Survey on the potentially toxic element in fruits & vegetables	F.P.I &H., Govt. of West Bengal. 2006-2009	5,37,000
	Studies on Biosorption of heavy metals and textile dyes from their aqueous solution by microbial biomass	Rajiv Gandhi National Fellowship Scheme. 2007-2012.	2,73,400/yr
	Production and purification of industrially important enzymes for starch, cellulose and hemicellulose hydrolysis to sugar for alcohol fermentation.	IFB Agro Industries Ltd, Noorpur, 24 Pgs(S), W.Bengal. 2008-2011.	
	Removal of toxic pollutants from water using nanotechnology based approach	DST, Govt. of west Bengal. 2009-2012.	8,40,800
	Survey on the heavy metal contamination in fish collected from River Ganges, Lakes and other Rivers in West Bengal.	UGC.2011-2014.Ongoing.	8,48,300
	Studies on the biosorption of textile dye using selected microbial biomass (Inspire fellowship)	DST, Govt. of India. 2011-2016. Ongoing.	2,73,200/yr
	Studies on the removal of nickel from simulated waste water by <i>Bacillus cereus</i> M ¹ ₁₆ using Packed bed column reactor.	Rajiv Gandhi National Fellowship	2,61,600/yr
Dr. Paramita Bhattacharjee	Enzyme assisted supercritical carbon dioxide extraction of black pepper and cardamom constituents for use as food and therapeutic supplements	Department of Science and Technology, Govt. of West Bengal. 2012-2015	9,98,960
	Design of Novel Functional Food Supplements using Supercritical Carbon dioxide Extraction and Encapsulation Technologies	Ministry of Food Processing Industries, Govt. of India, New-Delhi. 2012-2014	3,301,468
	Liquid and Supercritical Carbon dioxide Extraction of Natural Botanicals for Use as Therapeutic and Food Preservative Agents	UGC-Major Research Grant. 2011-2014	11,69,800
	Studies on Citric-acid Based Antioxidants for Food Storage	Jadavpur University 2010-2011.	50,000

18. Inter-institutional collaborative projects and associated grants received

(a) National collaboration (b) International collaboration

Faculty Person	National collaboration	International collaboration
Prof. Utpal Raychaudhuri	Nil	University of Connecticut, USA
Dr. Paramita Bhattacharjee	CDAC, Kolkata	
	BARC, Mumbai and AERB, New Delhi	

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

Funding agency	Faculty (PI)	Project Title	Year
DST-FIST	Prof. Lalitagauri Ray	Removal of toxic pollutants from water using nanotechnology based approach.	2009
		Studies on the biosorption of textile dye using selected microbial biomass (Inspire fellowship).	2011
	Dr. Paramita Bhattacharjee	Enzyme assisted supercritical carbon dioxide extraction of black pepper and cardamom constituents for use as food and therapeutic supplements	2012
UGC-SAP/CAS	Prof. Lalitagauri Ray	Survey on the heavy metal contamination in fish collected from River Ganges, Lakes and other Rivers in West Bengal.	2011
	Dr. Paramita Bhattacharjee (UGC-MRP)	Liquid and Supercritical Carbon dioxide Extraction of Natural Botanicals for Use as Therapeutic and Food Preservative Agents	2011

20. Research facility/centre run by the Dept./school/centre which has:
- state recognition
 - national recognition:
Centre for Medicinal Food & Applied Nutrition; Food Irradiation Laboratory
 - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies:
Food Quality Control laboratory funded by Ministry of Food Processing Industries (MoFPI), Govt. of India
22. Publications:
- * Number of papers published in peer reviewed journals (national/international) = 66
 - * Monographs = 3
 - * Chapters in Books = 6
 - * Edited Books = Nil
 - * Books with ISBN with details of publishers = 1
 - * 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 = 110 (average)
 - * SNIP
 - * SJR
 - * Impact Factor – range / average = 0.3-4.5 (range)
 - * *h*-index = 6 (average)

23. Details of patents and income generated: No income has been generated from patents.

Faculty	Details of Patents
Prof. Utpal Raychaudhuri	Title: A Process for Preparing Sea Food Application no. 563/KOL/2009 A – India , Date of filing of Application: 31/03/2009, Publication Date: 01/05/2009
Prof. Lalitagauri Ray	Culture Deposited under Indian Patent Deposit International Depository Authority - MTCC Institute of Microbial Technology, Sector -39A, Chandigarh -160036, India Strain designation M ¹ ₁₆ Name : <i>Bacillus cereus</i> MTCC NO 5521
Dr. Paramita Bhattacharjee	Paramita Bhattacharjee and Dipan Chatterjee, Applied for patent entitled 'Natural colorant from peels of egg plants'- applied for patent to the Govt. of India, The Patent Office, Intellectual Property Building, CP-2, Sector V, Salt Lake, Kolkata 700 091, Application No. 217/KOL/2012, March 2, 2012; published online on April 20, 2012, Journal No. 16/2012.

24. Areas of consultancy and income generated:

Entrepreneurship Development Programs are held and Adult-Continuing Education schemes are regularly conducted which has fetched Rs. 10 lakhs in this 5-year period.

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

• Abroad:

Dipan Chatterjee, SRF of Dr. Paramita Bhattacharjee had an oral presentation on Phytochemical analyses and food applications on clove bud extracts obtained by liquid and supercritical carbon dioxide extraction technologies in International Conference on Engineering & Applied Science, Beijing, China, July 24-27, 2012.

• India:

Dr. Paramita Bhattacharjee Visited National Laboratory: Completed special training Programme in 'Flavour & Fragrance Creation, Extraction and Quality Assessment' at MSME-Technology Development Centre, Fragrance and Flavour Development Centre (FFDC), A Govt. of India Autonomous Body, Ministry of Micro, Small & Medium Enterprises, Kanauj- 209729, UP, March 19-March 26, 2012.

26. Faculty serving in

a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

Faculty person	National/ international visits to laboratories / institutions / industries
Prof. Utpal Raychaudhuri	<ul style="list-style-type: none"> Nominated as a member of the Board of Directors , West Bengal State Food Processing & Horticulture Industries and has developed some products for small scale industries including organizing Entrepreneurship Development Program jointly with the industries and state govt. departments Nominated as a Task Force member of the Midday Meal Programme for the schoolchildren of the state.
Prof. Runu Chakraborty	<ul style="list-style-type: none"> Worked as an active Task Force Member for 'Curriculum development of 4-year B.Tech course for National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Ministry of Food Processing Industries, Govt. of India (MoFPI), New Delhi.
Prof. Lalitagauri Ray	<ul style="list-style-type: none"> Member of the advisory monitoring committee (AMC) for the project on 'Development of biotechnology based process for waste reduction in potato processing (Bioprocess and Bioproducts program)" TIFAC,DST,Govt. of India. I.I.T. Kharagpur, Agricultural & Food Engineering Dept. President, Biotechnology Research Society of India, Kolkata Chapter, since 2009 Member of the State Food Processing Development Council. External member, Ph.D committee, Dept. of Chemical Technology,

	<p>University of Calcutta.</p> <ul style="list-style-type: none"> • External member, Ph.D committee, Dept. of Home Science, University of Calcutta. • Member of Editorial Board J. Environmental Chemistry & Ecotoxicology
Dr. Paramita Bhattacharjee	<ul style="list-style-type: none"> • Worked as an active Task Force Member for ‘Curriculum development of 4-year B.Tech course for National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Ministry of Food Processing Industries, Govt. of India (MoFPI), New Delhi. ▪ Invited as Expert for Short-term training program on ‘Development of Engineering Laboratory for Effective Implementation of Curriculum for Diploma Courses of West Bengal’, NITTTR, Kolkata, April 7, 2010. ▪ Active member coordinator of ‘TIFAC-CORE’ (Technology Information Forecasting and Assessment Council) program under DST, for the Dept. of Food Technology, Techno India (affiliated to WBUT), Kolkata; January 2008-October 2008.

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

Faculty person	UGC, ASC, Refresher /Orientation courses/ etc. conducted
Dr. Paramita Bhattacharjee, Prof. Utpal Raychaudhuri & Prof. Runu Chakraborty	<ul style="list-style-type: none"> ▪ Coordinated a 2-day UGC-sponsored Short Term Course on ‘Health Foods using Traditional Herbs and Spices’ in the Dept. of FTBE, JU, March 25-26, 2013. ▪ Coordinated a 21-day UGC-sponsored Refresher Course on ‘Process Control and Analytical Techniques in Food Processing and Quality Evaluation’ in the Dept. of FTBE, JU, June 12-July 2, 2012. ▪ Joint Convener of Two-Day National Seminar on ‘Current Technological Challenges in Food Processing Specially Emphasizing Food Irradiation’, organized by the Dept. of FTBE, JU, Triguna Sen Auditorium, JU, June 25-26, 2011. ▪ Convened three-day Seminar-cum-Talk Show on ‘Frontiers of Biochemical Engineering and Biotechnology in Value Addition of Traditional Sweetmeat and Beverages with Nutraceuticals Promising for Better Business Opportunity’ organized by Dept. of FTBE, JU, under CAS-I, Dept. of FTBE, JU, March 15-17, 2011. ▪ Convener for two-day seminar-cum-workshop on ‘Modeling and Simulation Techniques for Processing, Design and Quality Evaluation of Herbal Food Products’ and STATISTICA AGR Training’, organized by Dept. of FTBE, JU under UGC CAS-I, Dept. of FTBE, JU, August 17-18, 2010. ▪ Convenor for ‘A.N.Bose Memorial Lecture (2nd year)’ at IICE, Jadapur University Campus, organized by Dept. of FTBE, JU and AFST, Kolkata chapter on October 30, 2009.
Prof. Lalitagauri Ray	<ul style="list-style-type: none"> • Refresher courses for college and University Teachers. • Enzyme Technology – The Technology of 21st Century. June 2008. • Recent Advances in Fermentation Technology. June 15 – July 05, 2010. • Biotechnology in Food and Fermentation. July 01 – July 21, 2011. • Organized popular lecture on Biotechnology, BRSI, Kolkata Chapter. April 25, 2011, Indian Institute of Chemical Biology.
Dr. Uma Ghosh	<ul style="list-style-type: none"> ▪ Coordinated a 21-day UGC-ASC sponsored Refresher Course on ‘Advances of biotechnology in food and fermentation’ in the Dept. of FTBE, JU, July 01-July 21, 2011. ▪ Coordinated a 21-day UGC-ASC sponsored Refresher Course on ‘Recent advances in fermentation technology’ June 15-July 05, 2010.
Dr. Dipankar Halder, Dr. Uma Ghosh & Prof. Lalitagauri Ray	<ul style="list-style-type: none"> ▪ Coordinated a 21-day UGC-sponsored Refresher Course on ‘Interdisciplinary Research towards the Development of Modern Food and Bioprocess Technology’ in the Dept. of FTBE, JU, June-July, 2013.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects: 100% as a part of course 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
- Faculty
 - Dr. Paramita Bhattacharjee (2)
 - Best paper (Food Science) award in 2011 from AFST (I), DSIR-CFTRI campus, Mysore, India for the research paper entitled Comparative study of the profile of volatile organic compounds associated with Salmonella contamination of packaged aged and fresh beef by HS-SPME/GC-MS', by Paramita Bhattacharjee, Suranjan Panigrahi, Dongqing Lin, Catherine M. Logue, Julie S. Sherwood, Curt Doetkott and Marty Marchello, published in *Journal of Food Science and Technology*, 48: 1-13, 2011.
 - Best paper in the area of 'Animal products' for the poster entitled *Determination of volatile organic compounds using SPME-GC/MS: application for meat safety*, 6th International Food Convention, December 2008, CFTRI, Mysore, India.
 - Doctoral / post doctoral fellows:
 - Students (Give details) = 2 (Probir Kumar Ghosh, M-tech), 1 (Satyabrata Ghosh)
 - Second Best poster in the area of 'Food Engineering' for the poster entitled Quality assessment of fried potato wedges by fuzzy logic and texture analyses, XXII Indian Convention of Food Scientists and Technologists (ICFOST-XXII) on SAFEST (Safety Assurance of Foods through Emerging Science & Technology) INNOVATIONS, December 6-7, 2012, CFTRI, Mysore, India
 - Consolation prize for the poster entitled Extraction of color from peels of egg plant for use as food colorant, Nikhil T. Jadhav, Probir Kumar Ghosh and Paramita Bhattacharjee, at International Conference on Innovations in Food Processing and Ingredients towards Healthy India, Mumbai; Organized by ICT, Mumbai and AFST (I), Mumbai Chapter, January 4-5, 2011.
 - Erasmus Mundus Ph.D. Scholarship for Sri. Satyabrata Ghosh, UGC Fellow under Prof. Utpal Raychaudhuri
30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):
- | |
|--|
| <ul style="list-style-type: none"> A 2-day UGC-sponsored Short Term Course on 'Health Foods using Traditional Herbs and Spices' in the Dept. of FTBE, JU, and March 25-26, 2013. A 21-day UGC-sponsored Refresher Course on 'Process Control and Analytical Techniques in Food Processing and Quality Evaluation' in the Dept. of FTBE, JU, June 12-July 2, 2012. Prof. Lalitagauri Ray was a member of the Advisory Board National Conference on Recent Trends in Research of Nutrition Science. Organized by Dept of Food Sc. Barrackpore Rastraguru Surendranath College jointly with West Bengal State University. Feb 22-23, 2012. A 'Career Counselling Talk' by Prof. Smita S Lele, Head, Department of Food Engineering & Technology, ICT, Mumbai at Dept. of FTBE, JU, January 9, 2012. Two-Day National Seminar on 'Current Technological Challenges in Food Processing Specially Emphasizing Food Irradiation', organized by the Dept. of FTBE, JU, Triguna Sen Auditorium, JU, June 25-26, 2011. Three-day Seminar-cum-Talk Show on 'Frontiers of Biochemical Engineering and Biotechnology in Value Addition of Traditional Sweetmeat and Beverages with Nutraceuticals Promising for Better Business Opportunity' organized by Dept. of FTBE, JU, under CAS-I, Dept. of FTBE, JU, March 15-17, 2011. Display of three innovative food products in FTBE Department stall of Horti-Food |
|--|

Fest 2011, organized by the Department of Food Processing Industries & Horticulture (Govt. of West Bengal), Netaji Indoor Stadium, Kolkata, February 2-6, 2011.

- Special Seminar on Modification of Atherosclerosis, Congestive Heart Failure and Arrhythmias by Antiplatelet Agents in the new seminar hall of FTBE Dept, J.U. with invited guest Prof. Nirajan S. Dhali, CM, FRCS, Ph.D., Distinguished Professor & Senior Fellow, Centre of Advanced Medicine, University of Manitoba, Canada, on December 9, 2010.
- Seminar organized on the eve of A. N. Bose Memorial Lecture Programme on Nutrigenomics, GM & Organic Foods and Fortification of Foods in the Institute of Chemical Engineers, Jadavpur University Campus, Kolkata on October 30, 2010.
- Seminar organized on Good Nutrition-Foundation for Healthy Life to celebrate the National Nutrition Week, jointly with Nutrition Society of India, Kolkata Chapter on September 5, 2010.
- Two-day seminar-cum-workshop on 'Modeling and Simulation Techniques for Processing, Design and Quality Evaluation of Herbal Food Products' and STATISTICA AGR Training', organized by Dept. of FTBE, JU under UGC CAS-I, Dept. of FTBE, JU, August 17-18, 2010.
- Seminar organized on Food Processing & Nutraceuticals Derived from Natural Sources for Wellness of Heart in the auditorium of Indian Institute of Chemical Engineers, Jadavpur University Campus, Kolkata on July 6, 2010.
- One-day seminar on 'Technology Challenges for Producing Premium Value Food Products: Nutraceuticals' organized by Dept. of FTBE, JU and AFST, Kolkata Chapter under CAS-I, Dept. of FTBE, JU, March 31, 2010.
- Workshop on Visiting Fellow scheme of CAS-I, UGC on 'production of Nutraceuticals by using Process Control Techniques of Biochemical Engineering' in the Dept. of FTBE on February 24 - March 4, 2010.
- Inauguration of 'Food Irradiation Laboratory' at NIL, Jadavpur organized by Dept. of FTBE, JU on March 2, 2010.
- Workshop on 'Nutraceuticals as the follow up supplements for the benefit of cancer patients undergoing chemotherapy and radiation treatment' in the Dept. of FTBE on February 10, 2010. The visiting expert was Dr. G Maulik, Harvard Medical School, Boston, USA.
- One-day seminar on 'Nutraceutical Potential of Flavor and Fragrance Compounds', organized by Dept. of FTBE, JU, under CAS-I, Dept. of FTBE, JU, February 2, 2010.
- One year Diploma in 'Food processing, nutrition & healthcare' under Adult Continuing Education and Extension, JU on August, 2010.
- 'A.N.Bose Memorial Lecture (2nd year)' at IICE, Jadavpur University Campus, organized by Dept. of FTBE, JU and AFST, Kolkata chapter on October 30, 2009.
- Six month vocational training programme of State Council of W B through Centre for Rural & Cryogenic Technology, JU on September, 2009.
- Organized a workshop for EDP in Food Processing with a voluntary organization of Moyrabandh Gram Bikash Kendra, Bankura, West Bengal on July, 2009.
- One year Diploma in 'Food processing & customized management' under Adult Continuing Education and Extension, JU on June, 2009.
- Organized training in West Bengal Public Health Laboratory for B.Tech. students on Food Quality Control on March 25, 2009.
- Organized a State Level Awareness Programme on Agro-Based Food Processing Industries in collaboration with Khadi & Village Industries Commission, March 2009
- Invited Lecture by Dr. Gautam Maulik, Harvard Medical School, Boston, USA on "Natural Antioxidants and Occupational Toxicology", February 2009.

- Organized a two-day Seminar on “Herbal Sources of Future Food ingredients” at the campus of Durgapur Society of Management Science on February 11-12, 2009.
- Organized a session in a CII Seminar on Accelerating Agribusiness at Hyatt, Kolkata on February 11, 2009.
- Organized a Seminar on Job Opportunities in Food Entrepreneurship and Rural Market Development at Jadavpur University Campus on January 29, 2009.
- Organized a National Conference on “Rural Food Processing & Entrepreneurship in the coming age of consumerism”, at J.U.Campus, Kolkata on January 17-18, 2009.
- Organized a Lecture Programme on Exchanging Imaginations & Innovations in Dairy Products as Nutraceuticals by the invited speaker Prof. Nagendra P. Saha, Dept. of Food Science & Technology, Victoria University, Australia on January 12, 2009.
- Organized a National Seminar jointly with NIT, Durgapur on “Future of Food Biotechnology in India” at Durgapur, on January 8-9, 2009.
- Organized One day Special Lecture & Interaction Programme on “Nutrition and Healthy Heart” by invited speaker Prof. Dipak .K. Das, USA on January 7, 2009.
- Organized a joint seminar session on Modern Agriculture, Fishery and Food processing at the site of Silpa Baniya Mela, South 24 Pgs, Baruipur, W.B. under the support of Cottage & Small Scale Industries Association, 24 Pgs.(S) & BNCCI, Kolkata on January 5, 2009.
- Organized a Vocational Education & Training on Manufacture of Jam, Jelly & Pickle in collaboration centre for Rural & Cryogenic Technologies, JU in January 2009.
- Organized Annual Seminar, for UGC Research Fellows of FTBE, on December 2008
- Organized a training programme on EDP in Food processing at Ramkrishna Mission Samaj Sevak Sikshan Mandir, Belur Math, West Bengal on November 29, 2008.
- Organized a session workshop on Processed Food Technologies, Food Chemicals & Flavours and Packaging at Netaji Indoor Stadium, Kolkata under the support of Food Tech India organizer on November 7-10, 2008.
- Organized a workshop on shooting with ETV-Network’s Career and education show Yuva Bharat on November 5, 2008.
- Organized a workshop on HIV/AIDS Awareness Programme by the support of Pepsico India Holdings Pvt.Ltd., Fritolay Division, Kolkata on September 27, 2008.
- Meetings of organizing committee arranged for All India Seminar on “Recent Trends in Processing and Marketing of Fishery and Horticulture Products” with industries and entrepreneurs in connection of the seminar held under the support of The Institution of Engineers (I), Kolkata, on September 19-20, 2008.
- Organized a lecture programme on Herbal and Functional Foods at Guru Nanak Institute of Technology on August 18, 2008.
- Organized a workshop on Post Graduate Syllabus Development for Food & Nutrition at Rashtraguru Surendranath College, Barrackpore on August 7, 2008.
- Organized one day A.N.Bose Memorial Lecture cum workshop on Food Nutrients on August 4, 2008.
- Organized a session workshop on Food processing & Preservation Course at Khadi & Village Industries Commission, Multi Disciplinary Training Centre, Birati on August 3, 2008
- One day Workshop for An Interactive Session on “The Future of Food & Agriculture” speaker Dr. Bruce Chassy, Biotechnology Centre, University of Illinois, USA under the support of USA Consulate, Kolkata on July 28, 2008.
- Organized a workshop for rendering technical support to run Food Processing Unit of the NGO Vivekananda Loksiksha Niketan, Purba Medinipur, West Bengal July 2008.
- Organized a workshop with the farmers and exporters on a theme of Growing Mango

for Export at Birla Institute of Technological Museum, Kolkata under the support of Food Processing Industries, Govt. of West Bengal on June 26, 2008.

- Organized a workshop for syllabus development on “Rural Development & Management” of University of Kalyani, W.B. on June, 2008.
- 4-week Refresher Course on “Enzyme Technology-the technology of the 21st Century” in the FTBE Dept. by the financial support of UGC on June, 2008.
- One day Workshop on Food processing & Nutrition Science Practical Lessons in collaboration with Dr. Subhas Mukherjee Memorial Reproductive Biology Research Centre, Kolkata on June 9, 2008.
- Organized a Seminar on Innovation Food Processing Technologies by invited speaker Dr. Jasim Ahmed, Scientist, Polymer Source Inc., Quebec, Canada, May 2008.
- A Technical Support Programme organized for Entrepreneurship Training for the NGO Baranagar Baghajatin Social Welfare Organisation, April, 2008.
- Workshop organized for framing curriculum and syllabus for a 3-year Degree (Graduate) Course on Food Science & Nutrition Management at J.D. Birla Institute, Kolkata on April 9, 2008.
- A meeting organized at Lake Club, Kolkata with MIC of Food Processing Industry, Govt. of W.B. regarding Development of Milkmaid Sweetmeat Industry by industrial support on March 25, 2008.
- A seminar cum demonstration programme organized at Aahara at Pragati Maidan, New Delhi, on Food Processing Equipment by industrial support, March 2008.

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

- The regulations leading to award of Ph.D degrees are in accordance to UGC regulations, newly implemented and modified since July 11, 2009.
- Basic principles of human ethics are emphasized.
- Scientific conduct is well maintained.
- No misconduct in plagiarism and authorship issues is practiced.

32. Student profile programme-wise (in the Current Semester):

33. Diversity of students:

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.
5-6 students out of 15 clear GATE exam every year.

35. Student progression: 40%

Student progression	Percentage against enrolled
UG to PG	20%
PG to M.Phil.	NA
PG to Ph.D.	1%
Ph.D. to Post-Doctoral	Nil
Employed	
• Campus selection	95%
• Other than campus recruitment	1%
Entrepreneurs	NA

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	100%
from other universities within the State	Nil
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 (2008 – 2013):
Dr. Dipankar Halder in 2011

38. Present details of departmental infrastructural facilities with regard to
- Library
 - Total no. of books purchased and received as gifts from alumni = 850
 - Total no. of journal titles = 20
 - Total no. of journals (single issue) of the above titles = 722
 - Non-book materials, CD, Pamphlets and miscellaneous Micro documents = 110
 - Online book and journal access are provided from Central Library Database through Digital Library
 - New computer facilities have been created.
 - Infrastructure development of library.
 - Internet facilities for staff and students: 100%
 - Total number of class rooms: 5
 - Class rooms with ICT facility: All
 - Students' laboratories:

Food Processing Labs (2), Food Chemistry Lab, Food Analysis and Quality Control Lab, Microbial Technology Lab, Biochemical Engineering Lab, Computer Lab and Centralized Instrumentation Lab of the Dept.: Total = 8
 - Research laboratories: Food Freezing Lab, Biosensor Lab, Nutraceutical and Herbal Food Lab, Fermentation Technology Lab, Green Technology Lab I and II, Nano Tech Lab I and II, Food Research Lab and Bioprocess Technology Lab; Total= 10
39. List of doctoral, post-doctoral students and Research Associates
- from the host institution/university = 6
 - from other institutions/universities = 27
40. Number of post graduate students getting financial assistance from the university. (Give details.) 4 GATE qualified students out of total seat of 8 every year in M.Tech programme Does the department obtain feedback from
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.
- A workshop on revision of syllabus was organized by the Dept. in 2010 for upgradation of the 3-year B.Tech course to a 4-year B.Tech course.
42. Does the department obtain feedback from
- faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
- This feedback is received through Faculty Council Meetings, held once very month at the University level.
- students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
- The feedback from students is received through teacher-student committee meetings; since the staff is not under the purview of the department, it is taken care of by the Registrar.
- alumni and employers on the programmes offered and how does the department utilize the feedback?
- Alumni annually contributes to Departmental Library funds and in National Seminar arranged very two years for the purpose of reunion and interaction
43. List the distinguished alumni of the department (maximum 10):
- Prof. Dipti Kumar Chattoraj, INSA Fellow
44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts.
- Participation of students in four seminars, annually conducted on an average through Association of Food Scientists and Technologists (India) and Alumni association of the

Department; Summer training programmes in food and fermentation industries and academic institutes; Educational visits to factories and industries; Guest lectures from industry and academia (national and international) and Involvement in outreach activities.

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

- Classical board teaching
- LCD for audio-visual learning
- Demonstration of different equipments and instruments
- Individual tests and assessment programs
- Seminar presentations by students on current state-of-the-art technologies
- Visit to plant

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

This is achieved by conducting class test, semester examinations, laboratory viva-voce and a grand viva examination.

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

Students and faculty participate in outreach programmes in EDP (Entrepreneurship Development Programmes), Survey projects are conducted on heavy metal accumulation in the food chain; A mid-day meal quality control survey is being conducted in schools of West Bengal, under Dept. of Education, Govt. of West Bengal.

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

Students regularly participate and win prizes in posters and model building competitions organized by IIT-Kharagpur and in other engineering institutes in the State.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.: CAS-II for 2013-2018 by UGC, NAAC

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

The Department conducts several interdisciplinary research and teaching programs on nutrition, environment and biodiversity; Guest lectures are regularly conducted annually from institutes and academia (both national and international).

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

Strengths

1. New areas in research are explored.
2. Homogenous faculty composition, all aligned to the mainstream subjects with their qualifications and expertise
3. CAS-II has been awarded by UGC in 2013 until 2018.
4. Outreach activities are regularly conducted under Entrepreneurship Development Programmes.

Weaknesses

1. Faculty places are not filled.
2. Paucity of space in class rooms and research laboratories
3. Fund shortage for infrastructure development.
4. Promotion schemes for faculty are thwarted which is demotivating.
5. Location of Department in campus map is not prominent.

Opportunities

1. New Food formulations are being designed.
2. Novel green product designs are being implemented.
3. Bioenergetics is being investigated for design of value added foods.
4. Electronic nose and related technologies are being integrated into food analytical

technologies.

5. Creation of pilot plant scale extraction for scale-up studies in natural extracts.

Challenges

1. New faculty recruitment must be expedited.

2. Promotional avenues for existing faculty must be created at the earliest.

3. Space crunch should be resolved by expansion of the Department.

4. New food processing equipment design may be included with participation from other Departments on campus.

5. Creation of a food informatics database.

52. Future plans of the department (in as much detail as possible):

a. Design of medicinal foods and realization of their market value for revenue generation.

b. Epigenetics may be explored in design of novel foods.

c. Food professional enrichment schemes would be launched through workshops from personnel of both industry and academia alike for hand-on experience in a and b.

Department of Information Technology

1. Name of the department: INFORMATION TECHNOLOGY
2. Year of establishment: 2001
3. Faculty to which the department is attached: FET
4. Names of the programme offered: Bachelors in Information Technology, Masters in Software Engineering, PhD.
5. Interdisciplinary programmes being conducted and other departments involved:
6. Courses in collaboration with other universities, industries, foreign institutions involved:
 - a. Masters in Software Engineering in collaboration with Tata Consultancy Services
 - b. Ph.D. Programmes in collaboration with
 - i. Indian Statistical Institute, Kolkata
 - ii. Calcutta University
 - iii. Bengal Engineering and Science University
 - iv. Indian Institute of Technology, Kharagpur
 - v. Indian Institute of Management, Kolkata
 - vi. Bengal Engineering and Science University
7. Details of programmes discontinued, if any, with reasons:
8. Examination System: Semester
9. Participation of the department in courses offered by other department: Department of Instrumentation and Electronics Engineering
10. Number of teaching posts sanctioned, filled, and actual

	Sanctioned	Filled	Actual (including CAS and MPS)
Professor	1	1	1
Associate Professor	1	0	0
Asst. Professor	5	4	4
Others(Adjunct)	5	2	2

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

Name	Qualification	Designation	Specialization	Years of experience	PhD students, last 5 years
Samiran Chattopadhyay	PhD	Professor	Algorithms, Distributed Object Computing, Wireless Computing, Security, Bio-informatics	24	6
Bibhas Chandra Dhara	PhD	Assistant Professor	Image processing, Video Processing, Audio Processing, Pattern Recognition	11	2
Uttam Kumar Roy	PhD	Assistant Professor	Audio Processing, Bio Informatics, RFID, Machine Learning	11	2
Parama Bhaumik	PhD	Assistant Professor	Opportunistic Networks, Distribute Database, Nano Communication	11	3
Bhaskar Sardar	PhD	Assistant Professor	Network Architecture, Routing Protocols	10	2
Utpal Kumar Ray	M. Tech	Assistant Professor	Network Security, Parallel Processing	10	1
Munmun Das	M.E.	Assistant Professor	Mobile Ad hoc Networks, Multicasting in MANET, Web based applications	4	

12. List of senior visiting fellows, adjunct faculty, emeritus professors, visiting professors:

13. Percentage of classes taken by temporary faculty-Programme-wise information:

BE: 25%; ME: 10%

14. Programme-wise student-teacher ratio: BE & ME : 1:26

15. Number of academic support staff(technical and administrative staff)

	Sanctioned	Filled	Actual
Technical staff	5	5	5
Administrative staff	2	2	2

16. Research thrust areas as recognized by major funding agencies:

- Networks
- Algorithms
- Bio-Informatics
- Image Processing
- Video Processing
- Pattern Recognition
- Distributed Computing

17. Number and names of faculty with ongoing projects from a) National b) International funding agencies and c) Total grants received. Give the names of funding agencies, Project titles and grant received project wise.

Name of the project	PI/Co-PI	Funding Agency	Amount (Rs. Lacs)	Duration
DST-PURSE	Head of the Department	DST, GoI	60	3 years
Identification of Damage Initiation Mechanisms in advanced High-strength Steels Using In-SITU Stensil Testing Under Scanning Electron Microscope	Bibhas Chandra Dhara	Tata Steel	20	March 2012 to March 2013
Design and Development of a Multimodal Biometric - System	Bibhas Chandra Dhara	Indian Statistical Institute	12.01	April 2012 to March 2015
Content Based Video Indexing and Retrieval using Rectilinear Motion	Bibhas Chandra Dhara	Indian Statistical Institute	Phase I - 8.41 Phase – II 3.15	April 2007 to March 2010 April 2011 to March 2013
Mobile Computing and innovative Applications	Prof. Samiran Chattopadhyay & Munmun Das	Central Govt.	200	June 2012 – March 2014
Studies in Wireless and Mobile Networks: Aspects of Multicasting, Optimization and Security	Prof. Samiran Chattopadhyay & Munmun Das	Interra Systems (I) Pvt. Ltd.	3.59	July 2010 – June 2011
Leveraging Wireless & Mobile Technology in Web Based Education	Prof. Samiran Chattopadhyay	State Govt.	10	June 2012 – March 2014

18. Inter-institutional collaborative projects and associated grants received

Name of Faculty	Name of the project	Collaborating institution
Bibhas Chandra Dhara	Content Based Video Indexing and Retrieval using Rectilinear Motion	Indian Statistical Institute
Bibhas Chandra Dhara	Identification of Damage Initiation Mechanisms in advanced High-strength Steels Using In-SITU Stensil Testing Under Scanning Electron Microscope	Tata Steel
Bibhas Chandra Dhara	Design and Development of a Multimodal Biometric System	Indian Statistical Institute

19. Departmental projects funded by DST-FIST, UGC, AICTEetc.: DST-PURSE, Rs. 60 Lacs.

20. Research facility/centre run by the Dept./school/centre which has:

- state recognition
- national recognition
- international recognition

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

22. Publication: (See Annexure for details)

- Number of papers published in peer reviewed journals (national / international): 26
- Monographs : None
- Chapters in Books : 60
- Edited Books : None
- Books with ISBN with details of publishers: 3
- Number listed in International Database (For. e.g Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Science Directory, EBSCO host, etc.)
- Citation Index – range / average
- SNIP
- SJR
- Impact Factor – range / average
- h-index

23. Details of patents and income generated:

24. Areas of consultancy and income generated:

Consultancy Type	Consultancy Title	Client Name	Amount	Remarks
Research	Part Time Technical Consultant	Interra Systems Pvt. Ltd. Kolkata	62 Lacs	Jointly with Industry

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

Name	Organisation	Place
Dr. Bibhas Chandra Dhara	Department of Advanced Technologies, Alcorn State University, USA as a visiting scientist	Alcorn State University, USA
Prof. Samiran Chattopadhyay	Department of Computer Science and Digital Technology of Northumbria University as a visiting fellow	Northumbria University, New Castles, England

26. Faculty serving in

- a. National Committees
 - b. International Committees
 - c. Editorial Boards
 - d. Any other (please specify and give details including the name of the committee/s, positions/s held, duration, etc.)
- i. Professor Samiran Chattopadhyay served as a member of the Technical Committee for West Bengal State Data Centre formed by Department of Information, Government of West Bengal.
 - ii. Professor Samiran Chattopadhyay served as a member for several committees in connection with State e-Governance Mission under National e-Governance Plan.
 - iii. Professor Samiran Chattopadhyay has served as a member of several committees in connection with e-Governance of the Directorate of Forests, Government of West Bengal.

- iv. Professor Samiran Chattopadhyay served as a member of Board of Studies in the Department of Computer Science and Engineering, West Bengal University of Technology
 - v. Professor Samiran Chattopadhyay served as a member of Board of Studies in the Department of Computer Science and Engineering, Assam University
 - vi. Professor Samiran Chattopadhyay served as a member of Board of Studies in the Mizoram University
 - vii. Professor Samiran Chattopadhyay served as a member of the Ph.D Committee of the A.K.Chaudhuri School of Information Technology, University of Calcutta
 - viii. Professor Samiran Chattopadhyay served as a member of many selection committee at Indian Statistical Institute, Calcutta
 - ix. Professor Samiran Chattopadhyay served as a member of selection committee in the department of Information Technology, National Institute of Technology, Durgapur
 - x. Professor Samiran Chattopadhyay served as a member of selection committee in the Department of Computer Science, University of Calcutta
 - xi. Professor Samiran Chattopadhyay served as a member of the Technical Expert Committee for short listing programmes under UGC UKIERI Scheme, 2013.
 - xii. Professor Samiran Chattopadhyay served as a member of the Technical Expert Committee for short listing programmes under Innovative Programme Scheme of UGC, 2011, 2012..
 - xiii. Professor Samiran Chattopadhyay served as a member of the Expert Committee for inclusion of IIT Delhi University under Section 12(B) of University Act 1956, 2012.
 - xiv. Professor Samiran Chattopadhyay served as a Chairman of an expert committee to evaluate the performance and academic attainments for the Conferment of fresh Autonomous Status to Virudhunagar Hindu Nadars' Senthikumara Nadar College, Virudhunagar-626001, Tamil Nadu affiliated to Madurai Kamraj University, Madurai.
 - xv. Professor Samiran Chattopadhyay served as a Reviewer of papers in several renowned journals including IEEE Communication Letters, Security and Communication Networks (Wiley), IJAHUC (Inder Science), Security and Communication Networks (Springer), International Journal of Physical Sciences etc.
27. Faculty recharging strategies (UGC, ASC, Refresher / Orientation programs, workshops, training programs and similar programs) conducted:
28. Student projects
- Percentage of students who have done in-house projects including inter departmental projects: 90-100%
 - Percentage of students doing projects in collaboration with other universities / industry /institute: 5-10%
29. Awards /recognitions received at the national and international level by
- Faculty
 - Doctoral / Post doctoral Fellows
 - Students (Give details)
30. Seminars / Conferences / Workshops organized and the source of funding national / international) with brief details (mention any notable features):
31. Code of ethics for research followed by the department: As per university norms
32. Student profile programme-wise (in the current semester)

Name of the programme	Applications received	Admitted		Pass Percentage w.r.t. last graduating batch	
		Male	Female	Male	Female
BE	Through state entrance board	80%	20%	98%	100%
ME	360	70%	30%	99%	100%

33. Diversity of Students

Name of the Programme	% of student from the university	% of students from other universities/institution within the state	% of students universities outside the state	% of students from other countries
BE	Not applicable	Not applicable	Not applicable	
ME	2%	83%	15%	

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

Name of the Examination	%Students Qualified
NET	5-10%
GATE	95-100%
Others	-

35. Student Progression

Student Progression	Percentage against enrolled
UG to PG	20%
PG to M Phil	Not Applicable
PG to PhD	15%
Ph D to Post Doctoral	NIL
Employed	
Campus Selection	95%
Other than campus recruitment	4%
Entrepreneurs	5%

36. Diversity of staff

Percentage of faculty who are graduated	
From the same university	10%
From other university within the state	90%
From universities from other state	
From universities outside the country	

37. Number of faculty who are awarded M. Phil., Ph. D., D. Sc. And D. Lit during the assessment period (2008-2013): 4

38. Present details of infrastructural facilities with regard to

- Library: There is no departmental library. Sufficient text books, reference books and journals, etc. are available in the central library of the Salt Lake campus.
- Internet facilities for staff and students: 24/7 LAN and Wi-Fi enabled campus with internet connectivity of 10 Mbps
- Total number of class rooms: 6
- Class rooms with ICT facility: all
- Students Laboratories: 7
- Research Laboratories: 2

39. List of doctoral, post-doctoral and research associates

- From host institution/university: 2
Sujit Das, Rayan Saptarshi Ray
- From other institution/universities: 3
Diptangshu Pandit, Susmita Ghosh Chattopadhyay, Kathakali Dutta

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

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

42. Does department obtain feedback from

- Faculty on curriculum as well as teaching-learning evaluation? If yes, how does the department unlike the feedback: Yes, to upgrade the curricula of the courses and also for better teaching.

- b. Students on staff, curriculum and teaching-learning evaluation and how does the department utilize the feedback: Yes, for better development of the academic activity of the department
 - c. Alumni and employers on the programs offered and how does the department utilize the feedback.: Yes, department utilizes such feedback for better placement
43. List distinguished alumni of the department (maximum 10)
44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts.
45. List teaching methods adopted by the faculty for different programmes.
- a. Class room teaching with black board/ power point presentation
 - b. Special care for the weaker student beyond the class schedule
 - c. Seminar presentation by the students
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
- a. Placement of the students (especially where they are placed)
 - b. Where students getting chances for higher study
 - c. Results in GATE/CAT etc. exam
 - d. To maintain the quality, department gives the importance on the continuous evaluation of the students like class tests, mid-term evaluation of the sessionals.
47. Highlight the participation of students and faculty in extension activities.
- a. Damini Nenawati got full-financed scholarship award “Erasmus Mundus Europe Asia” from the University of Milan, Italy.
 - b. Dr. Bibhas Chandra Dhara delivered lecture on “Image Secret Sharing” in 42nd Orientation Program, Academic Staff College, Jadavpur University.
 - c. Dr. Bibhas Chandra Dhara delivered lecture on “Segmentation of the Mammogram Images”, Department of Advanced Technologies, Alcorn State University, USA, March, 2010.
 - d. Dr. Bibhas Chandra Dhara delivered lecture on “Image and Video Compression using Block Truncation Coding and Pattern Fitting for Fast Decoding”, Indian Statistical Institute, Kolkata 2008.
 - e. Prof. Samiran Chattopadhyay Chaired a Session on “Mobile Computing” in third International Conference on Emerging Applications of Information Technology (EAIT 2012) Nov 29- Dec-01, Kolkata, India.
 - f. Prof. Samiran Chattopadhyay served as a Member of the Technical Program Committee of EAIT, 2012
 - g. Prof. Samiran Chattopadhyay served as a Member of the Technical Program Committee of ICISS 2011
 - h. Prof. Samiran Chattopadhyay served as a Member of the Technical Program Committee of Second International Conference on Emerging Applications of Information Technology (EAIT 2011) during February, 2011.
 - i. Prof. Samiran Chattopadhyay served as a Tutorial Co-Chair of the ICDCN, 2010.
 - j. Prof. Samiran Chattopadhyay served as a Organizing Chair of 5th ICISS 2009.
 - k. Prof. Samiran Chattopadhyay served as a Member of the Technical Program Committee of IEEE Conference on IP Multimedia Subsystem Architecture and Applications -2009 (IMSAA-2009)
 - l. Prof. Samiran Chattopadhyay served as a Member of the Organizing Committee of the ICDCN, 2008.
 - m. Prof. Samiran Chattopadhyay served as a Member of the Technical Program Committee of IEEE Conference on IP Multimedia Subsystem Architecture and Applications -2008 (IMSAA-2008)

- n. Prof. Samiran Chattopadhyay served as a Program Chair of the First Workshop on Mobile Systems (WoMS) 2008.
- o. Dr. Bibhas Chandra Dhara Chaired a Session on “Image Processing- I” in second International Conference on Emerging Applications of Information Technology (EAIT 2011) February 19-20, 2011, Kolkata, India.
- p. Dr. Bibhas Chandra Dhara acted as member in a panel of judges to select a set of papers for the award of Special Mention Category of Papers presented in EAIT 2012
- q. Departmental faculties acted as member of program committee of different national/international conference/workshop etc.
- r. Dr. Bibhas Chandra Dhara has participated in A Two-day Workshop on Support Vector Machines and Kernel Learning, organized by Electronics and Communication Sciences Unit, Indian Statistical Institute, Kolkata, 22nd March – 23rd March 2011.
- s. Dr. Bibhas Chandra Dhara has participated in One day Workshop on Computational Intelligence in Brain-Computer Interface and Context-Aware Service Management, organized by Kolkata Chapter of IEEE CIS and Indian Statistical Institute, 14th March, 2011.
- t. Departmental faculties served as referee to different international journals (IEEE, Elsevier, ACM, Hindwai, etc.)
- u. Dr. Bibhas Chandra Dhara has participated in A Two-day Workshop on Digital Restoration of Heritage Paintings and Artifacts, organized by Electronics and Communication Sciences Unit, Indian Statistical Institute, Kolkata, 13th Aug. 2013 – 14th Aug. 2013.
- v. Prof. Samiran Chattopadhyay delivered a lecture on “Wireless Ad Hoc Networks: An Experience with Graph and Game Theoretic Applications” at Northumbria University, UK on May 01, 2013.
- w. Prof. Samiran Chattopadhyay delivered a lecture on “Energy Aware Algorithms for Wireless Sensor Networks” at a Plenary Session at 99th Indian Science Congress on January 6, 2012 held at KIIT University.
- x. Prof. Samiran Chattopadhyay delivered a lecture on “Key Management” at the UGC sponsored refresher course on “Security in Wired and Wireless Networks” on July 15, 2011.
- y. Prof. Samiran Chattopadhyay delivered a lecture on “Some Energy Aware Routing Protocols for Wireless Ad Hoc Networks: A Graph Theoretic Approach” on 15th September, 2010, Engineer’s day, at Indian Statistical Institute, Calcutta. The talk was organized by Indian National Academy of Engineers, Kolkata Chapter.
- z. Prof. Samiran Chattopadhyay delivered a lecture on “Some Energy Aware Routing Protocols for Wireless Ad Hoc Networks” at National University of Singapore on March 02, 2010.
- aa. Prof. Samiran Chattopadhyay delivered a lecture on “Application of Mobile Computing & Information Technology in Disaster Management” at the UGC sponsored refresher course on “**Disaster Management**” on March 16, 2010.
- bb. Prof. Samiran Chattopadhyay delivered a lecture on “STUDY OF ENERGY-AWARE MULTICASTING FOR WIRELESS AD HOC NETWORKS” at the UGC sponsored refresher course on “Wireless and Mobile Ad Hoc Networks” on January 19, 2010.
- cc. Prof. Samiran Chattopadhyay delivered a lecture on “Open Source Software: Security Issues” at the seminar on “Free and Open Source Software in Computer

Education” organized by IEEE Computer Society Calcutta Chapter at Kolkata on December 22, 2009.

48. Give details of “beyond syllabus scholarly activities” of the department.
- Bi-annual reunion of present and past students.
 - Freshers’ welcome programs are organized.
 - Football/Cricket/Table Tennis/Carrom tournaments are organized.
 - Blood donation camps, tree plantation programs, Campus cleaning programs are regularly arranged.
 - Awareness programs against Ragging are organized.
49. State whether the programme/ department is accredited/ graded by other agencies. If yes, give details. AICTE, UGC, NAAC
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Research Areas of the department

- Image processing, Video Processing, Pattern Recognition, Signal Processing
 - Distributed Object Computing, Middleware
 - Middleware in Mobile Computing, Mobile Ad hoc Networks
 - Artificial Intelligence, Machine Learning
 - Network Architecture, Routing Protocols
 - Parallel Processing, Cryptography
51. Detail five major Strengths, Weaknesses, Opportunities and Threats (SWOT) of the department.

Strengths

Building up a brand at state and at national level

- Students study at IITs, IISc, and at abroad
- Students are placed at all renowned technology MNCs.

Several Collaborations from Institutes and Industry

Research Oriented, Dedicated set of Young, Energetic faculty members

Excellent, participatory students

A good combination of young energetic and experienced faculty members.

Modern class room with projector facilities.

Research activities in various fields.

Good relationship among teachers, staffs and students

Weaknesses

Shortage of permanent faculty members

A significant part of the academic activity depends on the guest faculties.

Opportunities

Good placement

Challenges

Maintaining good academic activity considering the shortage of permanent faculty

52. Future detail of the department (in as much detail as possible):

- Enhancing quality of research
 - More Ph.D students
 - Journal Publication
- Enhancing Physical Infrastructure
- Strengthening Laboratory Teaching
 - Case Study Based Experiments
- Participation in several UGC and other Governmental Schemes

Department of Instrumentation and Electronics Engineering

1. Name of the Department: INSTRUMENTATION & ELECTRONICS ENGINEERING
2. Year of establishment: 1966
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): UG-BIIE, B.Tech.; PG-M.Tech.; Ph.D.
5. Interdisciplinary programmes being conducted and other departments involved:
Dept. of Electrical Engg., IIT, Kharagpur - DRDL sponsored research project on estimation and tracking, DST sponsored research project on CPE
Dept. of Computer Sc. & Engg., JU - ISRO sponsored research work on voice encryption, DRDL sponsored research work on fault tolerant clock.
CDAC, Kolkata – Development of Electronic Nose for tea aroma classification.
Dept. of Power Engg. JU – BRNS sponsored research project on network controller in Nuclear power plant, BRNS sponsored research project on fractional order controller in Nuclear power plant.
CGCRI -Kolkata, CDAC, Kolkata, Calcutta University, Bengal Engineering & Science University - Commercialization of indigenously developed sensors
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
Ph.D. Programs in collaboration with the followings:
 - CDAC, Kolkata
 - Dept. of Aerospace Engg., IISc, Bangalore
 - Dept. of Electrical Engg., IIT, Kharagpur
 - ECSU, ISI, Kolkata
 - Dept. of Applied Physics, CU, Kolkata
 - Dept. of Computer Sc. & Engg., JU
 - Dept. of Power Engg. JU
 - Karlsruhe Institute of Technology, Germany
 - St. Petersburg University, Russia
 - Dept. of Chemistry, IIT, Kharagpur
 - Dept. of Physics, Delhi University
 - Dept. of Electronics and Communication Engineering, Tezpur University
 - TRA, Tocklai, Assam
 - NEERI, Nagpur
7. Details of programmes discontinued, if any, with reasons: Not Applicable
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester
9. Participation of the department in courses offered by other departments:
 - Mr. Prolay Sharma attended the refresher course on “Frontiers in Power Engineering and Energy Sustainability” organized by dept. of Power Engineering, Jadavpur University Salt Lake Campus. From 8th June to 27th June, 2009.
 - Prof. Rajib Bandyopadhyay delivered a lecture on “Electronic Nose and Tongue” in the refresher course organized by School of Biomedical Engg., in 2012
 - Prof. Kumardeb Banerjee delivered a lecture on “Signal Processing in Measurement Systems” in the refresher course organized by School of Biomedical Engg., in 2012
 - Prof. R. Bandyopadhyay delivered a lecture on “Data analysis techniques for electronic olfaction” in the Refresher Course organized by the Department of Instrumentation Science, Jadavpur University on “Recent Developments in Analytical Instrumentation” in the month of June 2012

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	2	1	4
Associate Professor	8	3	6
Asst. Professor	7	2	2
Other			

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Kalyankumar Ray	Ph.D.	Professor	Power Electronics	Retired 2012	1
Subhankar Bandyopadhyay	Ph.D.	Professor	Sensor design	27	
Ardhendu Ghoshal	Ph.D.	Professor	Digital Signal Processing	26	
Rajib Bandyopadhyay	Ph.D.	Professor	Electronic Olfaction	23	3
Bivas Dam	Ph.D.	Professor	Digital system design using FPGA/DSP	22	1
Kalyan Majumder	M.Tech.	Associate Professor	Intelligent Instrumentation Systems	22	
Rajanikanta Mudi	Ph.D.	Associate Professor	Fuzzy and Neuro-fuzzy Control, Process control	20	2
Kumardeb Banerjee	Ph.D.	Associate Professor	Microprocessors and microcontrollers	19	
Bhaswati Goswami	Ph.D.	Associate Professor	Biomedical instrumentation	17	2
Ratna Ghosh	Ph.D.	Associate Professor	Robust control and estimation	15	1
Bipan Tudu	Ph.D.	Associate Professor	Electronic Olfaction	12	
Runu Banerjee	M.Tech.	Assistant Professor	Electronic Olfaction	7	
Prolay Sharma	M.Tech.	Assistant Professor	Sensor array signal processing	4	

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Dr. Anutosh Chatterjee	PhD	Advisor in Research Project funded by DeitY	Analytical Instrumentation	52	-
Prof. Panchanan Pramanik	PhD.	Co-Investigator in Research Project funded by CSIR	Sensor Materials	47	7

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

BE-20%; BTech-10%; M.Tech-12%

14. Programme-wise Student Teacher Ratio:

BE- 16:1; B.Tech-10:1; M.Tech-4:1

15. Number of academic support staff (technical) and administrative staff - sanctioned,

filled and actual:

a) Academic support staff (technical):7

b) Administrative staff: 6

16. Research thrust areas as recognized by major funding agencies:

a) Signal Processing and Systems

b) Digital System Design

c) Intelligent Control

d) MEMS

e) Electronic Olfaction

f) Robust Control

g) Biomedical Instrumentation

h) Sensors Design

i) NIR instrumentation systems

17. Number and names 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 titles and grants received project-wise.

Name of the Project	Investigators	Funding Agency	Amount (Rs. Lakhs)	Duration
FIST-2008	Head of Deptt.	DST, Govt. of India	150.50	2009-2014
Studies on fabrication, characterization and standardization of Fractance	Dr. B. Goswami Dr. R. Ghosh	DST -PURSE	1.21	2009-2011
Design, Development and Supply of Two-axis Servo controller and PC based Operator Console for Indigenous EOTS	Mr. K. Banerjee, Prof. B. Dam , Mr. K. Majumdar, Prof. R. Bandyopadhyay	DRDL, Hyderabad	15	2008 - 2011
Development of a 24-bit, High Speed Data Acquisition System, with Error Correction for Enhanced Performance for HELIBORNE TDEM-Uranium-exploration	Prof. B. Dam , Mr. K. Majumdar, Mr. K. Banerjee,	BARC, Mumbai	21.38	2009 - 2011
Digital Controller for Electro-mechanical actuator	Mr. K. Mazumdar	RCI, DRDO, Govt. of India	14.5	Till 2011
Exploratory studies towards the development of indigenous sensors for tea aroma	Prof. R. Bandyopadhyay	NTRF, Govt. of India	8.60	2009-2011
Electronic Tongue for Tea Tasting	Prof. R. Bandyopadhyay	UGC, Govt. of India	6.07	2009-2011
Non Classical Estimation Techniques for Homing Interceptor Guidance	Dr. R. Ghosh Dr. B. Goswami	DRDO, Govt. of India	24.71	2004-09 Extended till 2011
Development of Constant Phase Element (CPE) based sensor for detecting adulterated milk	Dr. B. Goswami Dr. K. Biswas (IIT, Kharagpur)	DST, W.B	7.51	2008-2011
Development of transducer for quantitative determination of dental implant-bone interface stability	Dr. B. Goswami Dr. R. Ghosh	UGC, Govt. of India	9.71	2009-2011
Development of PID Controllers for Networked Control of Process Plants with Packet drop-out and Data Loss	Prof. A. Gupta (Power Engg) Dr. B. Goswami Dr. R. Ghosh	BRNS, Govt. of India	28.83	2010-2013
Development of QCM Sensors Array for Black Tea Flavour Detection with Electronic Nose	Mr. Proloy Sharma	SERC, DST, Govt. of India	6.67	2010-2012
Development of a Combined	Ms. Runu	SERC, DST,	6.80	2010-

Electronic Nose & Tongue System For Improved Classification of Black Tea Quality	Banerjee	Govt. of India		2012
Development of Ammonia Gas Sensor	Prof. Subhankar Bandyopadhyay	UGC, Govt. of India	10.30	2012-2014

18. Inter-institutional collaborative projects and associated grants received
 - National collaboration:
 - i) CGCRI, Kolkata- Commercialization of indigenously developed sensors, Rs. 20 Lakh
 - ii) CDAC, Kolkata- Inward leaf inspection system for Indian tea industries, Rs. 22 Lakh
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. (Give details.): DST-FIST, Rs.150 Lakh.
20. Research facility/centre run by the Dept./school/centre which has: Nil
 - state recognition
 - national recognition
 - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies:
22. Publications: See Annexure for details
 - * 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:
 - Patents filed: a) “Aroma Based food quality measurement machine for tea testing”
-Patent Application No. 87/KOL/2010 of 01.02.2010
 - b) "Tea Quality Measuring Instrument Based On Taste"
-Patent Application No. 463/KOL/2010 of 23.04.2010.
24. Areas of consultancy and income generated: Nil
25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad (give details):
 - i) Professor Rajib Bandyopadhyay, Visited Linkoping University, Sweden in 2010
 - ii) Professor Rajib Bandyopadhyay, Visited Rockefeller University, USA in 2011
26. Faculty serving in
 - a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.): Given in Annexure
27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted:
28. Student projects
 - percentage of students who have done in-house projects including inter-departmental

projects: (95-100)%

- percentage of students doing projects in collaboration with other universities / industry / institute: 5%

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

- Faculty: Nil
- Doctoral / post doctoral fellows: Nil
- Students (Give details): Nil

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

Name	Source of Funding	Associated Faculty
Workshop on Fractional Order Systems	TEQIP/ Institutional Sponsorship	Dr. Karabi Biswas & Dr. Bhaswati Goswami
Workshop on QCM and SAW Sensors	DST & TeQIP	Professor Rajib Bandyopadhyay

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

Original thinking is always encouraged in the research work both in theoretical and practical fields.

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
BIEE-4 Years, 8 Semesters	Admission through State JEE	136	24	100%	100%
B.Tech.-3 Years, 6 Semesters	100	51	15	100%	100%
PG-M.Tech-2 Years, 4 Semesters	350	12	4	100%	100%

33. Diversity of students

Name of the Programme (refer to q. 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
BIEE-4 Years, 8 Semesters	Not Applicable	Not Applicable	Not Applicable	Nil
B.Tech.-3 Years, 6 Semesters	60%	35%	5%	Nil
PG-M.Tech-2 Years, 4 Semesters	20%	60%	20%	Nil

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

Name of the Examination	%Students Qualified
Civil Services	(1-5)%
Defence Services	(1-5)%
NET	(1-5)%
SET	(1-5)%
GATE	(90-95)%
Others	100%

35. Student progression

Student progression	Percentage against enrolled
UG to PG	10%
PG to M.Phil.	NA
PG to Ph.D.	20%
Ph.D. to Post-Doctoral	Nil
Employed	
• Campus selection	90%

Student progression	Percentage against enrolled
• Other than campus recruitment	5%
Entrepreneurs	5%

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	60%
from other universities within the State	40%
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 (2008 – 2013): Ph.D.: 2

38. Present details of departmental infrastructural facilities with regard to

- a) Library: There is no departmental library at present. However sufficient number of text books, reference books and journals, etc of departmental requirements are available in the central library of the Salt Lake campus. These facilities are available for students, faculties and non-teaching staffs.
- b) Internet facilities for staff and students: Adequate facilities are available through campus wide LAN and internet connectivity of 10 Mbps.
- c) Total number of class rooms: 8
- d) Class rooms with ICT facility: 2
- e) Students' laboratories: 9
- f) Research laboratories: 6

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

- a) from the host institution/university
 - i) Mr. Nabarun Bhattacharyya
 - ii) Mr. Arunangshu Ghosh
 - iii) Mr. Prolay Sharma
 - iv) Ms. Runu Bnerjee
 - v) Ms. Mousumi Palit
 - vi) Mr. Arpitam Chatterjee
- b) from other institutions/universities
 - i) Mr. Chanchal Dey
 - ii) Mr. D. Simachalam
 - iii) Ms. Aditi Bhattacharyya
 - iv) Ms. Rashmita Das
 - v) Mr. Sudip Biswas
 - vi) Mr. Arun Jana
 - vii) Mr. Debasish Dutta
 - viii) Ms. Sarbari Deshmukh
 - ix) Mr. Anil Kumar Bag
 - x) Ms. Siuli Das

40. Number of post graduate students getting financial assistance from the university. (Give details.): 6 Students/Year

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

42. Does the department obtain feedback from

faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? Yes. In the up gradation of curricula and syllabi of the courses run in the department.

students on staff, curriculum and teaching-learning-evaluation and how does the

department utilize the feedback? Yes. Department utilizes such feedbacks in smooth running as well as future development of the department.

alumni and employers on the programmes offered and how does the department utilize the feedback? Yes. Department utilizes such feedbacks in smooth running as well as better placement of the present students.

43. List the distinguished alumni of the department (maximum 10)
- Mr. Swadesh Bandhab Chattopadhyay, GM, Brandt Instruments Inc.
 - Prof. Asim Kar
 - Prof. Rabindra Nath Nandy
 - Prof. Anup Majumdar
 - Mr. Chandan Bakshi, General Manager (East), Rockwell Automation Pvt. Ltd
 - Mr. Prabir Kumar Kundu, Senior Manager, HPL, haldia
 - Mr. Amitava Sengupta, Chief Engineer-Instrumentation, M.N.Dastur Ltd.
 - Ms. Mandira Dasgupta, Ex-GM, MECON
 - Mr. Asesh Banerjee, DGM (Technical), Webel Mediatronics Ltd.
 - Mr. Satyanarayan Basu, DGM, Central Electronics Ltd.
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
- A two day workshop on Embedded System was organized in 2009.
 - A training program on DCS/PLC was organized with the help of renowned persons from industries in related fields in Dec., 2011.
 - Special lectures on instrumentation and automation were organized by the students chapter of International Society of Automation (ISA) in the department with a number of faculty members involved in that program.
 - A one day industrial training program for final and pre-final year students was arranged at Tribeni , in June 2012
45. List the teaching methods adopted by the faculty for different programmes.
- Class room lectures on black board/ power point presentations.
 - Video/still pictures display of different processes related to industries.
 - Prior familiarizations of different components/equipments in class rooms are made before laboratory sessions.
 - Students have to give presentations on various topics as a part of their seminar paper.
 - Students are encouraged to carry out projects on different emergent topics in addition to the routine project work.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
- The students passing out from the department are placed in renowned industries and institutes according to the expectations.
 - On the average 10 students every year rank within 100 in the all India GATE exam, this is considered as a yardstick.
 - At least two class tests per theoretical subjects are being taken to monitor the outcomes of learning of the students.
 - In practical subjects, continuous observations are made on the students regarding their experimental skills.
47. Highlight the participation of students and faculty in extension activities.
- Prof. R. Bandyopadhyay delivered a lecture on “Data analysis techniques for electronic olfaction” in the Refresher Course organized by the Department of Instrumentation Science, Jadavpur University on “Recent Developments in Analytical Instrumentation” in the month of June 2012.
 - Prof. Rajib Bandyopadhyay presented an oral paper at ISOEN 2011 held at

Rockefeller University, New York on May 2-5, 2011.

iii) Mr. Prolay Sharma attended the refresher course on “Frontiers in Power Engineering and Energy Sustainability” organized by dept. of Power Engineering, Jadavpur University Salt Lake Campus. From 8th June to 27th June, 2009.

iv) Dr. Ratna Ghosh visited Department of Aerospace Engineering, IISc, Bangalore and worked with Prof. D. Ghose for collaborative research during August 2011 and December 2011.

v) Dr. Ratna Ghosh visited Department of Mathematics, IISc, Bangalore and worked with Prof. M. K. Ghosh for collaborative research during February 2012 and June 2012.

vi) UG students participated in the technical festival “SRIJAN”.

vii) The students of the department also use to take part in the festival on “ROBOTICS” organized by IIT, KGP, “Texus Technical Meet” organized by Texus Instruments Limited and “VI-MANTRA” organized by National Instruments Company limited.

viii) Several of our faculty members are involved in the activity of the Center for Embedded Systems in Instrumentation which is under this Department. The Coordinator of the Center is Mr. K. Majumdar of our Department.

ix) Some faculty members are also actively involved in the following MHRD sponsored Integrated Research Schemes:

Integrated Research Projects on Embedded Systems, Mechatronics, Sensors and Transducers Characterization

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

i) Students chapter of International society of automation (ISA), JU branch organizes seminars by industrial experts, visit to industry/plant regularly.

ii) Bi-annual reunion of present and past students.

iii) Freshers’ welcome programs are organized.

iv) Football/Cricket/Table Tennis/Carrom tournaments are organized.

v) Blood donation camps, tree plantation programs, Campus cleaning programs are regularly arranged.

vi) Awareness programs against Ragging are organized.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.: AICTE, UGC, NAAC

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

Faculty members and scholars are deeply engaged in research works in various fields. The areas in which contributions are made include:

a) Signal Processing and Systems; b) Digital System Design; c) Intelligent Control;

d) MEMS; e) Electronic Olfaction; f) Robust Control; g) Biomedical instrumentation

h) Sensors Design

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

Strengths

Knowledgeable faculty members.

Good class room and laboratory teachings.

Good research works in various fields.

Sufficient involvements of students and staffs beyond syllabus scholarly activities.

Friendly relations between teachers and students

Weaknesses

- Shortage of faculty members.
- Modern educational facilities are not available.
- Insufficient space.
- Insufficient financial assistance for attending conferences/seminars outside india.
- Insufficient annual budget.

Opportunities

- Excellent placement.
- Congenial environment of acquiring knowledge.
- To acquire innovative attitude.

Challenges

- To overcome the present shortcomings.
- To uplift the department in all respects to an International level.

52. Future plans of the department (in as much detail as possible):

- i) Proposal for setting up a centre of excellence on sensors and instrumentation systems will be submitted to appropriate funding agency.
- ii) The department will promote several national and international collaborations for world class research in the field of sensors and sensing systems.
- iii) Research activities related to defense application and atomic energy will be continued and boosted further.
- iv) The Department will organize more workshops, seminars and training programs involving persons from various industries and academic institutions. The participation of students in these programs is expected to be helpful in various ways.

Department of Mechanical Engineering

1. Name of the Department/School/Centre: MECHANICAL ENGINEERING
2. Year of establishment: 1906
3. Faculty to which the Department is attached: FET
4. Names of programmes offered: UG, PG, PhD
5. Interdisciplinary programmes being conducted and other departments involved:
6. Courses in collaboration with other universities, industries, foreign institutions, etc:
7. Details of programmes discontinued, if any, with reasons:
8. Examination System: Semester
9. Participation of the department in courses offered by other departments:
A large number of faculty members are taking classes on a regular basis in several other departments in the FET at the UG and PG levels.
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	11	08	
Associate Professor	26	19	
Asst. Professor	42	33	
Other			

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

Name	Qualification	Designation	Exp. Yrs.	Specialization	PhD students, last 4 years
Simul Bannerjee	Ph.D.	Professor	32	Production	2
Amitava Sarkar	Ph.D.	Professor	32	Heat Power	2
Sadhan Kumar Ghosh	Ph.D.	Professor	31	Production	2
Sujit Ghosal	Ph.D.	Professor	28	Fluid Mech.	2
Sankar Dhar	Ph.D.	Professor	28	Applied Mech	
Pradip Kumar Pal	Ph.D.	Professor	28	Production	1
Asish Bandyopadhyay	Ph.D.	Professor	26	Production	4
Swarnendu Sen	Ph.D.	Professor	24	Heat Power	
Sumanta Neogy	Ph.D.	Professor	24	Applied Mech	2
Goutam Majumder	Ph.D.	Professor	24	Production	3
Goutam Pohit	Ph.D.	Professor	23	Machine Des.	3
Dipankar Sanyal	Ph.D.	Professor	22	Fluid Mech.	2
Sudipta De	Ph.D.	Professor	22	Heat Power	
Achintya Mukhopadhaay	Ph.D.	Professor	22	Heat Power	
Prasanta Sahoo	Ph.D.	Professor	18	Machine Des.	4
Buddhadeb Oraon	Ph.D.	Professor	17	Production	2
Goutam Sutradhar	Ph.D.	Professor	8	Production	6
Tarun Kanti Naskar	Ph.D.	Professor	31	Machine Des.	
Sanjib Kumar Acharyya	Ph.D.	Professor	22	Machine Des.	
Goutam Nandi	Ph.D.	Associate Professor	31	Production	
Subodh Kumar Saha		Associate Professor	31	Heat Power	
Probir Kr. Ghosh		Associate Professor	31	Production	
Prabir Kumar Dey	Ph.D.	Associate Professor	29	Fluid Mech.	1
Dipak Laha	Ph.D.	Associate Professor	26	Production	3
Kashinath Saha		Associate Professor	26	Machine Des.	3

Amit Karmakar	Ph.D.	Associate Professor	26	Applied Mech.	2
Debasish Kumar Roy	Ph.D.	Associate Professor	24	Fluid Mech.	
Ranajit Kr. Chakroborty		Associate Professor	23	Heat Power	
Arunabha Chanda	Ph.D.	Associate Professor	22	Fluid Mech.	1
Snehamoy Majumder	Ph.D.	Associate Professor	21	Fluid Mech.	
Arghya Nandi	Ph.D.	Associate Professor	21	Applied Mech.	2
Somenath Bhattacharyya		Associate Professor	20	Applied Mech.	
Rajat Subhra Sen	Ph.D.	Associate Professor	19	Production	
Samar Chandra Mondal	Ph.D.	Associate Professor	18	Machine Des.	
Snehansu Mondal	Ph.D.	Associate Professor	17	Heat Power	
Dulal Krishna Mondal	Ph.D.	Associate Professor	13	Machine Des.	
Abhijeet Chanda	Ph.D.	Reader	13	Applied Mech	1
Koushik Ghosh	Ph.D.	Associate Professor	11	Heat Power	
Debabrata Nag	Ph.D.	Reader	11	Applied Mech.	
Himadri Chatterjee	Ph.D.	Associate Professor	06	Heat Power	2
Subhash Chandra Panja	Ph.D.	Associate Professor	04	Production	
Pabitra Balida		Associate Professor		Machine Des.	
Sandip Das	Ph.D.	Assistant Professor	28	Heat Power	1
Dipten Misra		Assistant Professor	28	Heat Power	1
Avijeet Mukherjee		Assistant Professor		Production	
Rana Saha	Ph.D.	Assistant Professor	11	Fluid Mech.	
Susenjit Sarkar	Ph.D.	Assistant Professor	11	Machine Design	
Nipu Modak	Ph.D.	Assistant Professor	06	Machine Design	
Nirmal Manna	Ph.D.	Assistant Professor	06	Fluid Mechanics	
Tapan Kumar Barman	Ph.D.	Assistant Professor	05	Machine Design	
Sudip Simlandi		Assistant Professor	05	Heat Power	
Nilkanta Barman	Ph.D.	Assistant Professor	05	Heat Power	
Debabrata Das	Ph.D.	Assistant Professor	04	Applied Mech	
Prokash Chandra Roy	Ph.D.	Assistant Professor	04	Fluid Mech.	
Titans Nandi	Ph.D.	Workshop Suptnd	05	Production	

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors:
13. Percentage of classes taken by temporary faculty – programme-wise information:
14. Programme-wise Student Teacher Ratio: 1:8
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual:
16. Research thrust areas as recognized by major funding agencies:
Thermo-fluid Science, Combustion, Tribology, Manufacturing, Management and Sustainability
17. Number and names 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 titles and grants received project-wise: See Annexure for details

18. Inter-institutional collaborative projects and associated grants received

i) National collaboration b) International collaboration

International Collaboration

Principal Investigator	Collaborative Institutes	Name of the Research Project	Project Value in lakh in INR
Prof Sadhan K Ghosh, India Leader	Aston University, UK, IIT KGP, ITRC, CSIR Lucknow. (2011-13)	Climate Change Issues and Environmental Performance of the Indian Small and Medium-sized Enterprises.	40,000 GBP
Prof Sadhan K Ghosh, India Leader	Aston University, UK (2013-15)	Waste to Energy –DSS for planning and implementation in India	60,000GBP

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

Project Title and Period	Funding Agency	Amount
UGC XIth Plan 2008 (1st Instalment)	UGC	Rs. 4,50,000/-
UGC XIth Plan 2009 (2nd Instalment)	UGC	Rs. 4,50,000/-
UGC XIth Plan 2009 (3rd Instalment)	UGC	Rs. 16,00,000/-
UGC Infrastructure 2008 (1st Instalment)	UGC	Rs. 20,00,000/-
UGC Infrastructure 2009 (2nd Instalment)	UGC	Rs. 20,00,000/-
MHRD PG Programme 2008 (1st Instalment)	MHRD	Rs. 12,00,000/-
MHRD PG Programme 2009 (2nd Instalment)	MHRD	Rs. 10,00,000/-
DST FIST Level I	DST	Rs. 3,30,00,000
DST-PURSE 2009 (1st Instalment)	DST	Rs.36,80,000/-
DST-PURSE 2011 (2nd Instalment)	DST	Rs.8,58,000/-
DST-PURSE 2011 (3rd Instalment)	DST	Rs.7,77,000/- + Rs.61,438/-
Special Allocation 2012	UGC	Rs. 20,00,000/-

20. Research facility/centre run by the Dept./school/centre which has:

- state recognition
- national recognition
- international recognition

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

22. Publications: See Annexure for details

- * 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: See Annexure for details

24. Areas of consultancy and income generated: See Annexure

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

Prof Swarnendu Sen: DAAD Research Stay, worked on “Identification of Flame Transfer Functions in Pulse Combustors” at Lehrstuhl für Thermodynamik, Technical University, Munich July-August, 2011
Prof Achintya Mukhopadhyay: Alexander von Humboldt Fellowship for Experienced Researchers, worked at Lehrstuhl für Thermodynamik, Technical University, Munich, May-July, 2011

Prof. Sudipta De: Visited Lund University Sweden and University of Stavanger, Norway as Invited Professor during May-June 2011.
Dr Dipak Laha: Visited College of Business Administration, University of Alabama
Dr. Himadri Chattopadhyay: DAAD study visit to Duesseldorf University of Applied Sciences, November 2008 to January 2009
Prof. Sadhan Kumar Ghosh a. Tsinghua University, Beijing, China, March – April 2013 b. Tongji University, Beijing, China, March – April 2013 c. Fu Jen Cathelic University, Taiwan, March 2013, May 2013, October-November 2013 d. Aston University, UK, November 2012, August 2012, March-April 2007 e. Sheffield University, UK, September 2012 f. NASA, September 2008 g. University of MALAYA, Malaysia, September 2011 h. Hong Kong Baptist University, May 2011, May 2013.

26. Faculty serving in:
- National committees
 - International committees
 - Editorial Boards
 - any other:
- See Annexure
27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted:
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
- Almost hundred percent students participate in project work both in-house and in industries in the areas of mechanical engineering as well as in interdisciplinary subjects under the supervision of Faculties/ industry managers.
29. Awards / recognitions received at the national and international level by
- Faculty (Details of all the faculty members given in Annexure)
 - Doctoral / post doctoral fellows
 - Students (Give details)
30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features): See Annexure
31. Code of ethics for research followed by the department: As per UGC/University norms.
32. Student profile programme-wise (in the Current Semester):
33. Diversity of students:
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	5%
PG to M.Phil.	NA
PG to Ph.D.	15%
Ph.D. to Post-Doctoral	--
Employed	
• Campus selection	90%
• Other than campus recruitment	10%
Entrepreneurs	

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	80%
from other universities within the State	15%
from universities from other States	5%
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 (2008 – 2013):
38. Present details of departmental infrastructural facilities with regard to
 - a) Library – Departmental Library facility available
 - b) Internet facilities for staff and students: Available
 - c) Total number of class rooms: 30
 - d) Class rooms with ICT facility: 05
 - e) Students' laboratories: Laboratory facilities available under five specializations
 - f) Research laboratories: Available
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. (Give details.):
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.
 On regular basis the B.O.S. of M.E. Dept. undertake the overall review of the course curriculum and syllabi of both U.G. and P.G. Courses. A sub-committee under B.O.S. had the responsibility to prepare a draft proposal after considering the modern methodology of teaching (both class room and laboratory) for the same and finally B.O.S. and Faculty Council finalized the revised Courses. This is a continuous process.
42. Does the department obtain feedback from
 - faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
 - students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
 - alumni and employers on the programmes offered and how does the department utilize the feedback?

A scientific feed back process is carried out by the Department on regular basis. The Department welcomes the suggestions and recommendations from the students, alumni and employees and consider with priority.
43. List the distinguished alumni of the department (maximum 10)
 - a. Late Prof. Amitava Bhattacharyya, Former Director, IIT Kharagpur
 - b. Mr. Mihir Dalal, Former CMD, EIL, Delhi
 - c. Mr. S. R. Choudhury, Former CMD, BBUNL
 - d. Late P.C. Laha, Former Chairman, MECON
 - e. Mr. Nandan Bhattacharyya, Former Chairman, WEBEL
 - f. Mr. Shyamal Gupta, Former CMD, TATA Exports Ltd
 - g. Prof. A. De, Former Director, CMERI and IITB
 - h. Dr. S. Mukherjee, DG, National Council of Science Museums
 - i. Dr. Kunal Bose, Distinguished Novelist and Professor of Management, Oxford University
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
 Department organizes Special lectures, workshops, seminars on regular basis by inviting distinguished fellows, faculties of national and international repute considering its present scenario and the future prospects.
45. List the teaching methods adopted by the faculty for different programmes.
 The Department uses for both UG and PG courses the following teaching methods:
 1. Apart from conventional teaching of Mechanical Engineering, to procure knowledge

and experience on practical knowledge of the subject, department organize factory visit for industry exposure in regular duration. Students submit the report of their learning during industrial visits.

2. Students are exposed to several workshops and laboratories during their four year courses for hands-on-training.
 3. Besides the class room teaching, the department uses adequate audio visual facilities.
 4. Classes on Engineering Drawing and graphics are now conducted by central managed CAD system.
 5. Students in both UG and PG level under takes differet projects under the faculty members to update and enhance their knowledge base in the allied subjects beyond their class room syllabus.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
A strong and updated examination process is regularly going on in the department under continuous monitoring system. A group of faculties is involved for the review process of learning outcomes under the Head of the Department.
47. Highlight the participation of students and faculty in extension activities.
Most of the extension activities in the department involve students of the department.
48. Give details of “beyond syllabus scholarly activities” of the department.
- Regular lectures by eminent speakers on Enginnering and Science are arranged
 - Workshop of Scientific Softwares and Packages are regularly held (e.g. ANSYS, ALTAIR, COMSOL, ASPEN)
 - Involvement of students in different research projects.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. UGC, AICTE, NAAC
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
The department is actively engaged in research on Applied Mechanics, Thermo-fluid Sciences, Design and Manufactuirng Technolgy. The contribution in knowledge generation is reflected in the publications in peer-reviwed journals and numerous conferences as shown in the Appendix.
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths

Excellent faculty, Avaiability of large student pool, networking with peers

Weaknesses

Lack of infrastructure and funding

Unfilled vacancies leading to high work load reducing time for research

Poor condition of Laboratory

Poor condition of Workshop and Computing Facilities

Opportunities

Increased activities in interdisciplinary areas, Demand for knowledge in design and analysis

Challenges

Sustaining growth, and catching up with latest developments

Competition with fast-growing private sector Institutions

52. Future plans of the department (in as much detail as possible):

It is envisaged

- i. To improve the overall performnace of the department by enhanced input in teaching and research

- ii. improvement of all the laboratories and workshop and improve overall infrastructure including library and computational facilities
- iii. To increase the research output by reducing teacher-student ratio and increasing the number of scholars
- iv. To interact and improve interdisciplinary activities
- v. To conduct regularly seminars/ workshops/conferences in the allied areas for dissemination of knowledge
- vi. To increase the scope of participation in international conferences and research activities
- vii. To promote international collaboration
- viii. To fill-up the vacant posts in priority basis.

Department of Metallurgical and Material Engineering

1. Name of the Department: METALLURGICAL AND MATERIAL ENGINEERING
2. Year of establishment: 1966
3. Faculty to which the Department is attached: Faculty of Engineering and technology, JU
4. Names of programmes offered (UG, PG, M. Phil, PhD, Integrated Masters, Integrated PhD, DSc, Dlitt): Undergraduate (4 year BE degree in Metallurgical Engg.), Post Graduate (2 year ME degree in Industrial Metallurgy & 2 year M.Tech degree in Material Engineering), PhD and Post Doctoral research.
5. Interdisciplinary programmes being conducted and other departments involved: None
6. Courses in collaboration with other universities, industries, foreign institutions: Certificate courses and training programme on Welding and other related area will be conducted in collaboration with Institute For Advanced Welding Training and Research.
7. Details of programmes discontinued, if any, with reasons: NA
8. Examination system: Semester System with continuous evaluation.
9. Participation of the department in courses offered by other departments: Chemical Engg.(U.G), Nano Science & Technology (PG)
10. Number of teaching posts sanctioned, filled and... :

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	3	3	9
Associate Professor	6	2 (Associate Professor-1, Reader-1)	2
Asst. Professor	5	1	1
Other	–	–	

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

Name	Qualification	Designation	Specialization	Exp. Yrs.	PhD students, last 4 years
Prof. P.K.Mitra	Ph.D	Professor	Corrosion, Physical Metallurgy	39+	5
Prof. M.K.Mitra	M.E/M.Tech	Professor	Nanomaterials, Biomaterials, Fatigue & Fracture	27+	5
Prof. T.K.Pal	Ph.D	Professor	Welding Metallurgy, Fracture, Corrosion	33+	11
Prof. P.K.Datta	Ph.D	Professor	Solidification of Metals & Alloys	25+	11
Prof. G.C.Das	Ph.D	Professor	Nano Structural Materials, Glass & Ceramics	30+	13
Prof. D.Ghosh	Ph.D	Professor	Thermodynamics, Kinetics, and Transport Phenomena	32	2
Prof. S.Mukherjee	Ph.D	Professor	Nanocomposite, Processing of Materials	33+	11+7
Prof. S.Paul	Ph.D	Professor	Electrochemistry & Corrosion, Fuel Cell, Hydro & Electrometallurgy Modelling & simulation	28+	1
Prof. P.C.Chakraborti	Ph.D	Professor	Mechanical Processing	24+	1
Prof. A.K.Pramanik	M.E/M.Tech	Associate Professor	Physical Metallurgy, Corrosion	14+	
Dr. R.Dey	Ph.D	Reader	Extractive Metallurgy, Foundry, Nanomaterials	17	1
Dr.(Mrs.) S.Banerjee	Ph.D	Assistant Professor	Nanomaterials, Physical Metallurgy, Corrosion, Heat treatment	7	

12. List of senior Visiting Fellows, ad... faculty, emeritus professors, visiting professors:
Prof. Badal Bhattacharya, Prof. Dilip Kumar Bose, Prof. Amit Dasgupta, Dr. Siddhartha Bandyopadhyay, Prof. P.S.Banerjee, Prof. Buddhadeb Bhattacharya, Prof. S.K.Ray (Steel Chair Professor)
13. Percentage of classes taken by temporary faculty – programme-wise information:
14. Programme-wise Student Teacher ratio: 10:1(UG); 4:1(PG)
15. Member of academic support staff (technical and administrative staff – sanctioned, filled and actual):

	Sanctioned	Filled
Technical		11
Administrative		6

16. Research thrust areas as recognised by major funding agencies:
Area of Research Activities: Nano Materials, Melting & Solidification, Corrosion behavior of Metal & Material, Deformation Fatigue & fracture of materials, Welding Technology, Thermodynamics and Kinetics of Metallurgical processes, Material Processing, Ceramics, Archaeo Metallurgy , Waste utilization. Chemical Processing, Characterization of Materials
17. Number and names 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 titles and grants received project wise: See Annexure for details.
18. Inter – institutional collaborative projects and associated grants received a) National collaboration b) International collaboration
Collaborative Ph.D project with –
NML, Jamshedpur
CGCRI, Kolkata,
BARC, -1 Crore
TATA STEEL – 3 Nos. 36.63 lakhs
Govt. College of Engg & Ceramic Technology, Kolkata
RDCIS-SAIL, Ranchi- Rs.24, 00,000/-
Ichapur Gun Shell Factory
Various Private & Govt. Aided colleges
IIM, Udaipur
ISI, Kolkata
19. Departmental projects funded by DST-FIST, UGC-SAP/CAS, DPE, DBT, ICSSR, AICTE, etc.; total grants received. (give details)
AICTE- MODROB project of Thermal Analysis Laboratory , AICTE- 8 Lakh ,
UGC-ASIST, UGC-DRS,DST-FIST- Phase-1 & II,DST-PURSE-I & II, TEQUIP-I&II
20. Research facility / centre run by the Departments / School / Centers which has:
State recognition: Center of Welding Technology
National recognition: Closely associated with School of Materials Science & Nanotechnology, DST
International recognition:
21. Special research laboratories sponsored by / created by industry or corporate bodies:
FESEM, KEMPI
22. Publications:
Number of papers published in peer review journals (national / international): 222
Number of papers published in peer review journals (national / international)
Citation Index – range / average-

SNIP

SJR

Impact Factor – range / average-1.0 (Prof. D.Ghosh)

h-index-3 (Prof. D.Ghosh)

23. Details of patents and income generated: Nil

24. Areas of consultancy and income generated:

Majority of the faculty members of the department have given their expertise to different industries as consultancy work. The details can be found out from Industry Institute Partnership Cell (IIPC - JU). Some of the consultancy works are given as under

Prof. A.K.Pramanik

Ref. No.	Nature of job	Job description	Name of Agency	Amount Rs
TMC/HPC/L-042/09-10	Testing	Study of remaining life of turbine(1 No.)	Test metal corporation 39/3 Canal West Road Kolkata	20.000.00
TMc/JU-HPC/L-039/11-12	Testing	Study of remaining life of turbine(2 No.)	Test metal corporation 39/3 Canal West Road Kolkata	40.000.00

Prof. P.K.Datta

- Detailed Project Report Preparation for Foundry Metal Cluster at Howrah for Cluster Development Program of MSME, Govt. of India.2009, (₹5 lakhs)
- Detailed Project Report Preparation for Brass and Bell Metal Cluster at Nadia for Cluster Development Program of MSME, Govt. of India, 2010, (~4.5 lakhs)

Prof. T.K.Pal

Welding, failure analysis and metallurgy related problems.

Revenue earned from training during last five years: Approx. 8 lakh.

Revenue earned from consultancy during last five years: Approx. 10 lakh

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

Prof. S.Mukherjee

National University of Singapore; Monash University, Australia; Ulster University, UK

Prof. M K Mitra

Ulster University, UK, Germany, Bangladesh

Prof. T.K.Pal

Name of the University/Lab	Research topic
Technical University, Berlin	MIG Brazing
Stuttgart University, Stuttgart	Spot Welding
University of Wollolgon, Australia	Hydrogen Induced Cracking
University of Cambridge, UK	Wear
Laser institute of America, USA	Laser Welding
Institute of welding and materials, Timisoara, Romania	GMAW

Prof. Dinabandhu Ghosh

i. Invited as a guest faculty for the course entitled “Thermodynamics and Kinetics of Materials and Processes” under the program of Academy of Scientific and Innovative Research (AcSIR) launched by CSIR and organized by the National Metallurgical Laboratory, Jamshedpur on August 19-23, 2013.

- ii. Invited as a guest faculty for the course entitled “Thermodynamics and Kinetics of Materials and Processes” under the program of Academy of Scientific and Innovative Research (AcSIR) launched by CSIR and organized by the National Metallurgical Laboratory, Jamshedpur on September 5-8 and September 17-19, 2012.
- iii. Invited as an external examiner for the M. Tech thesis viva-voce examination at the Indian Institute of Technology, Kharagpur on April 30, 2012.
- iv. Invited as a guest faculty on the course entitled “Thermodynamics and Kinetics of Materials and Processes” under the program of Academy of Scientific and Innovative Research (AcSIR) launched by CSIR and organized by the National Metallurgical Laboratory, Jamshedpur on January 16-19 and March 12-14, 2012.
- v. Invited as an external examiner for the M. Tech thesis viva-voce examination at the Indian Institute of Technology, Kharagpur on May 10, 2010.
- vi. Invited as an external examiner for the M. Tech thesis viva-voce examination at the Indian Institute of Technology, Kharagpur on May 11, 2009.

Dr. R. Dey

National University of Singapore, Chulalongkorn University, Thailand, Bangkok

Prof. G.C. Das

Ulster University, UK

Prof. P.K. Datta

Jahangirnagar University, Bangladesh

Prof. S. Paul

University of Florida, USA

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

Prof. P.K. Mitra

Editor, Indian Foundry Journal since October 2005 and currently Chairman of Editorial Board and Editor, IFJ and also member of West Bengal Pollution Control Board.

Prof. S. Mukherjee

MEMBER of International Advisory Committee of ACUN-6 , held in Melbourne, Australia.

UGC expert member for assessment of SAP programme of ISC- Bangalore, IT-BHU-

Varanasi, ISM Dhanbad

BOS- External Expert of Ceramic Technology Department, Govt. College of Engineering & Ceramic Technology-Kolkata,

Technical Expert for assessment of TUV for CSIR-NML, Jamshedpur,

Member of Selection committee of VNIT, Nagpur

Editorial board of ACSE and reviewer of several national & international journals. Chairman, IIM, Kolkata Chapter

Prof. T.K. Pal

Member of Technical Committee 2nd Global Conference on Materials Science and Engineering (CMSE 2013).

Chief-Editor, Indian Welding Journal (IWJ) from 2012 to till now.

Member, Publication Committee, The Indian Institute of Metals (IIM).

Chairman, IIW Kolkata Branch, 2000-2001.

Controller of AMIOW examination for about eight years.

Prof. Dinabandhu Ghosh

- i. Served as an expert member (Metallurgical Engineering) on the selection committee for the recruitment of Assistant and Associate Professors by the Maharaja Sayajirao University of Baroda, Vadodara in July, 2013.
- ii. Served as an expert member (Metallurgical Engineering) on the interview board for the recruitment of Assistant Directors Gr.ii Metallurgy by the Union Public Service Commission, New Delhi in February, 2013.

Dr. R. Dey

Worked as Member in Library Committee in Indian Institute of Metals from 2012 onwards.
Worked as Joint Secretary in Indian Institute of Metals Kolkata Chapter from 2009 onwards.

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

Prof. S. Mukherjee

UGC-ASC Refresher Course

- i) Recent trends on Nanoscience and Technology 2010
- ii) Recent Prospective of Nanoscience and Technology 2008
- iii) Instrumental Analysis 2013
- iv) Nanoscience & Technology, 2013

Workshop

India-Australia International workshop on nanotechnology in materials and energy applications, JU, 2011.

Prof. P.K. Datta & Dr. R. Dey

Certificate Course on Foundry Technology for RDSO, September 2011

28. Student projects

Percentage of students who have done in-house projects including interdepartmental projects-10%

Percentage of students doing projects in collaboration with other universities / industry / institute-

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

* Faculty

Prof. S. Paul

Gold medal, Institution of Engineers, for development of Bio electrochemical fuel cell from green Algae. 2008

Prof. S. Mukherjee

Best paper award in 2012 by MJMI

Dr. R. Dey

Best Performer Award	Indian Institute of Metals Kolkata Chapter	2009
Institute's Gold Medal	Mining, Geological and Metallurgical Institute of India	2010

Prof. T.K. Pal

Keith Hartley Memorial Award, Indian Institute of Welding, National Seminar, 2011

Associate Engineer Award by The Indian Institute of Welding for Best M.Tech thesis guided at National Welding Seminar, 2011

Prof. Dinabandhu Ghosh

Awarded the Siksha Rattan Purashkar and a Certificate of Excellence by the India International Friendship Society, New Delhi on 30 October, 2012.

Nominated for an ASM International author award in July, 2008 for the paper "Synthesis of Submicron Silver Powder by the Hydrometallurgical Reduction of Silver Nitrate with Hydrazine Hydrate and Thermodynamic Analysis of the System", authored by Dinabandhu Ghosh and Samudra Dasgupta and published in Metall. Mater. Trans. B, 2008, vol. 39B, pp. 35-45.

* Doctoral / post doctoral fellows-

Jayanta Kumar Saha got best Ph.D thesis for 2010-2011 by SSPC.

30. Seminars / Conferences / Workshops organised and the source of funding (national / international) with brief details (mention any notable feature):

Title	Organiser	Type	Place	Year
Metallix 2008; National Symposium on "Indian Steel Industries Technology and Prospects & National Metallurgical Students, Congress"	Department of Metallurgical & Material Engineering Jadavpur University	National	Jadavpur University	2008
Science & Engineering of Composite Materials	Department of Metallurgical & Material Engineering	National	Jadavpur University	2008
National Symposium on "Design and Engineering of Steel Plants" : Metallix – 09 National Student Metallurgists' Meet	Department of Metallurgical & Material Engineering Jadavpur University	National	Jadavpur University	2009
Advances in Forging Technology	Department of Metallurgical & Material Engineering	National	Jadavpur University	2009
National Seminar on "Deformation, Wear & Fracture"	Department of Metallurgical & Material Engineering	National	Jadavpur University	2009
National Symposium on "Advanced Materials for Nuclear, Space and Defence" : Metallix – 10 National Student Metallurgists' Meet	Department of Metallurgical & Material Engineering	National	Jadavpur University	2010
National Seminar on "Deformation, Wear & Fracture" (UGC ASSIST-JU Programme)	Department of Metallurgical & Material Engineering	National	Jadavpur University	2010
National Symposium on "Micro & Nano Characterisation of Materials" : Metallix – 11 National Student Metallurgists' Meet	Department of Metallurgical & Material Engineering	National	Jadavpur University	2011
Indo-Swedish International Workshop on Design of Materials, Manufacturing & Products	Lulea University of Sweden, Data Metallurgical Company and Jadavpur University	International Workshop	Hotel Oberoi Grand	2011
National Symposium on "Corrosion in Oil & Gas Sector - Problems & Mitigation" : Metallix – 12 National Student Metallurgists' Meet	Department of Metallurgical & Material Engineering	National	Jadavpur University	2012
Workshop on Advancement in Welding Technology	IIW Kolkata Branch & Department of Metallurgical & Material Engineering	National	Jadavpur University	2012
National Symposium on "Construction Steel for the Twenties" : Metallix – 13 National Student Metallurgists' Meet	Department of Metallurgical & Material Engineering	National	Jadavpur University	2013
National Seminar on "Iron & Steel making in India : Process, Opportunities & Threats"	Department of Metallurgical & Material Engineering	National	Jadavpur University	2013
MSME-CDP for Burdwan & Hooghly Districts-Brass & Dhokra Products		National	Kolkata	2010
National Seminar on Deformation & Damage	Department of Metallurgical & Material Engg.	National	JU	2010
National Seminar on Advances on Forging Technology in India		National	JU	2009
Design & Engineering of Steel Plants		National	Kolkata	2009

Skill Development Program On Modern Foundry Operation		International	Howrah	2009
Acidity of Reservoir Water: A Challenge to Kopili H E Plant		International	Shillong	2009
Quality of Raw Materials: MSME-CDP for Howrah Foundry Cluster		National	Howrah	2009
Quality of Raw Materials: MSME-CDP for Brass & Bell Metal Cluster		International	Krishnanagar	2009
STEELRISE-2009		International	Bhubaneswar	2009

Prof. T.K. Pal

Welding Technology Centre of Jadavpur University, Kolkata, in association with Indian Stainless Steel Development Association (ISSDA) is organizing two-days National Workshop on “Stainless Steel Coach and Wagon Manufacturing- Current Industrial Scenario and Future Need” during 8th and 9th September, 2011, at the Institute of Chemical Engineers Auditorium, Jadavpur University Campus.

Notable feature: The workshop sponsored by Kemppi, Jindal Stainless Limite (JSL), Migatronic and DTL ancillaries. 82 no.s of engineer from reputed companies across the India like Bombardier, RDSO Lucknow, Golden Rock Workshop, RCF Kapurthala, Jindal Stainless Limited, Intregal Coach Factory, Shyam Steel etc. and 4 no.s of speaker form USA, Finland and Malaysia participated in this workshop.

31. Code of ethics for research followed by the department: Our research programmes are based on under graduate, post graduate, doctoral and post doctoral work. Exploratory and feasibility are established from the undergraduate and post graduate research work. Major academic interests were established through doctoral and post doctoral research work. Initiations of hand on training were undertaken from undergraduate studies. The laboratory facilities were maintained by the teachers, research scholars and post graduate students.

32. Student profile programme-wise (in the current Semester):

Name of the Programme	Applications received	Admitted		Pass percentage { w.r.t. Last graduating batch }	
		Male	Female	Male	Female
Undergraduate	State JEE			96%	96%
Post Graduate				100%	100%
Ph.D.	102	68	32	100%	100%
Post Doctoral					

33. Diversity of students

Name of the Programme	% of students from the same university	% from other university within state	% from universities outside the state	% student from other countries
Undergraduate				
Post Graduate	6.66	73.33	20	
Ph.D (Engg.)	25	60	15	
Post Doctoral				

34. How many students have cleared Civil Services and Defence Services examinations, NET, SLET, GATE and other competitive examinations? Give details category wise. Sixty students in the last five years.

35. Student progression

Student progression	Percentage against enrolled
UG to PG	20%
PG to M.Phil	NA
PG to PhD	50%
PhD to Post-Doctoral	10%
Employed	90%
Campus Selection	
Other than campus recruitment	
Entrepreneurs	5%

36. Diversity of staff

Percentage of faculty who are graduates	
Of the same university	41%
From other universities within the state	50%
From universities other than state	9%
From universities outside the country	

37. Number of faculty who were awarded M. Phil, PhD, D.Sc and D. Litt during the assessment period (2008 -2013): 1

38. Present details of departmental infrastructural facilities with regard to

- Library-1
- Internet facilities for staff and students- For all
- Total number of class rooms-6
- Class rooms with ICT facility-3
- Student's laboratories-16
- Research laboratories-6

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

- from the host institution / university – See Annexure for details
- from other institutions / university

40. Number of post graduate students getting financial assistance from the university (Give details.): 21 students/year.

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

In the 12 Plan a PG course in Metallurgy in the evening has been proposed. We have a strong Met-Alumni association through which we get feedback from the industry. Our Alumni have been consistently requesting us to start such a course for those working in the industry in and around Kolkata.

42. Does the department obtain feedback from

- faculty on curriculum as well as teaching – learning evaluation? If yes, how does the department utilise the feedback? –Teachers Meeting, BOS Meeting etc.
- students on staff, curriculum and teaching learning evaluation and how does the department utilise the feedback? –BOS meeting
- alumni and employers on the programmes offered and how does the department utilise the feedback? –Through HOD, Alumni help in Syllabus modification and annual programme called “inception” is held every year where alumni members give an idea about Metallurgy to the 1st year students, an Annual Reunion programme called “MET BOND” is held every year where alumni members interact with the present students.

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

The department will attain its golden jubilee (50 years) in 2015. During the last 49 years mostly all the alumni members are working in reputed industries, academic and research institutions in India and abroad. Also some of them are successful entrepreneurs. During last 5 years the passed out students are either studying in reputed universities/institutions in India and abroad (MBA or M.Tech/ME/MS, PhD) along with some working in reputed national/ multinational companies/research institutes like Tata Steel, RINL, BARC, Siemens, HSBC, TCS, IBM, Ernst & Young, Indian Oil etc. A few names, who are pursuing/have completed higher studies here, are given as under

2008 Kinnor Chattopadhyay : Passed MS-PhD from McGill University Canada

- 2008 Anrin Bhattacharyya : Pursuing PhD in University of Leoben Austria
- 2008 Mainak Kanjilal : Passed MBA from NITI
- 2009 Soumyajit Sanyal : Pursuing MBA in IIM Calcutta, Scored 100 percentile in CAT test
- 2009 Abir Bhattacharya : Pursuing PhD in University of Florida, USA
- 2009 Tamoghna Mitra : Pursuing MS-PhD in Finland
- 2009 Debasis Das: pursuing PhD. In USA
- 2010 Kamal Nayan Goswami : Pursuing PhD in USA
- 2010 Naveen kumar Pandey: Pursuing PhD in USA
- 2010 Aniket Dutt : Pursuing PhD in USA
- 2011 Sagarnil Das : Pursuing PhD in USA
- 2013 Santanu Das : Pursuing PhD in USA

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

Involved with M.Tech programme of Nanoscience & Technology, Dept. of Physics, Metallix, Instrumental Science and Adult Continuing Education Centre.

Prof. S. Banerjee from New South Wales University Australia delivered a lecture on “Polymer Nanocomposites” on 27.01.2009

Professor Lars-Erik Lindgren, Lule University of Technology (Ltu) SWEDEN, delivered an evening talk on “Modeling in Science and Industry” on 02.12.2010

Dr Amit Ganguli from Mukund Steel, India delivered a lecture on “Achieving Business Excellence through Quality Management as applicable to Metallurgical Industries” on 21.01.2011

Dr. Arun Bhaduri of Indira Gandhi Center for Atomic Research (IGCAR), Kalpakkam, India delivered an evening talk on “Joining Hard- facing in Material Industry” on 23.12.2011

Dr. Arup Dasgupta from Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam delivered a lecture on “Nano-structure and Texture of Cryo-Mechanically Processed Ti Alloy” at on 19.01.2012

Dr. Manoj Thakur of Solid State Physics & Magnetism Section, Celestijnenlaan, Europe, delivered a talk on “Multiferroic Composite – An Overview” on 13.04.2012

Dr. M. Sau of Medical College, Kolkata, India delivered an evening talk on “Stress Management in Today’s Competitive World” on 07.07.2012

Mr. Santanu Ray of RDCIS, SAIL, India delivered an evening talk on “Concept of Quality Steel” on 12.10.2012

Mr. Santanu Ray of RDCIS, SAIL, India delivered an evening talk on “Concept of Quality Steel” on 12.10.2012

Mr. Atanu Pal of Tata Steel, India delivered an evening talk on “Role of Refractories in Iron & Steelmaking”

45. List the teaching method adopted by the faculty for different programmes-
By class room teaching, Laboratory, smart board projection system, Power point slides projections, plant visit etc.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? –
By continuous evaluation through class test, regular vivavoce, semester examinations and laboratory experiments
47. Highlight the participation of student and faculty in extension activities.
48. Give details of “beyond syllabus scholarly activities” of the department-

Prof. Dinabandhu Ghosh

Reviewer of the Metallurgical and Materials Transactions B in January, 2013.

Reviewer of the Metallurgical and Materials Transactions B in September, 2010.

Reviewer of the Metallurgical and Materials Transactions B in June, 2009.

49. State whether the programme / departments is accredited / graded by other agencies?
If yes, give details. UGC, NAAC
50. Briefly highlight the contributions of the department in generating new knowledge's, basic or applied.

Silicon Nitride nano wires & Aluminium Nitride were synthesized using chemical route.

Synthesis of Silica-WC-Co-Al₂O₃ nanocomposites was achieved through solgel route.

Synthesis of Intermetallic compounds by Vapor-phase coreduction of metal chlorides.

Synthesis of Cu-W composites by Hydrogen co-reduction of Cu₂O-WO₃ mixtures.

Simulation of long field exposed corrosion condition of weathering steels has been developed in the laboratory which simulates rust condition of 42 months in 4 hours.

Development of biocompatible coatings for human implants by Electrophoretic deposition.

Solid state reduction of iron ore by gassification of ordinary coal to produce iron nuggets.

Direct self sufficient and exhaustive determination of quadratic activity coefficient Vs composition relation for a quaternary system A-B-C-D with high solute concentration as proposed which serve as a general scheme to find the activity coefficient composition relations for any multi-component system.

Friction Stir spot welding advanced high strength steel and Friction Stir welding of steel and aluminium joining of modified ferritic and low nickel austenitic stainless steel using GMAW process.

Transient liquid phase diffusion bonding of ALMMC. Coated electrode development for Armour steel and Austemper ductile cast iron.

Archaeo Metallurgy-Reinventing of casting technology for Pala-Sena Bronzes.

Reconstruction of forging technology for Bell-Metal (Kansah) of ancient Bengal.

Reinventing of iron, extraction and forming technology in Medieval Bengal.

Application of Digital Image Correlation techniques for understanding microscale deformation behaviour of Dual phase steels under tensile loading.

Application of Electron Back Scatter Diffraction(EBSD) Technique for understanding the heterogeneity of plastic deformation in Interstitial Free Steel.

Effect of Cold Deformation on the evolution of ratcheting strain evolution direction in interstitial free steel.

In situ characterization of plastic deformation behaviour of automotive grade steels under SEM.

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

The *strengths* of the department are mostly on the basis of following points:

- 1) Excellent laboratory characterization facilities
- 2) New techniques and process developments
- 3) Excellent teaching faculties and undergraduate students selected based on WBJEE
- 4) Excellent publications of the department
- 5) Very strong alumni of the department

The *weaknesses* of the department are mostly on the basis of following points:

- 1) Lack of fund allocation
- 2) Lack of maintenance expenses
- 3) Weak support for the procurement of consumables
- 4) Lack of space

The *opportunities* of the department are mostly on the basis of following points:

- 1) Tremendous scopes are there for international collaboration
- 2) More sponsored research programme may be emphases for development and growth of Eastern India.

The *challenges* of the department are mostly on the basis of following points:

- 1) To develop well trained man power as demand by the industry
- 2) Innovation in research and creation of central excellence in Metallurgical and Materials Engineering field

52. Future plans of the department (in as much detail as possible):

The Department envisages extensive development in Foundry. The Foundry industry in the eastern region has lost its glory of the fifties and sixties and progressively lagging behind other regions for the lack of modernization of machines, procedure and concept. The Department of Metallurgical & Material Engineering wishes take active role in pushing up the scenario of the foundries of this region. Presently the Department has a reasonably big foundry where routine sand testing and moulding experiments at Undergraduate and Postgraduate levels are carried out. It also has about three raising hearth high temperature furnaces in addition to crucible and muffle furnaces. The Department is an active centre for rural casting and conducts outreach activities. Every year a few final year undergraduate and post-graduate students carry out project work for their dissertations in the foundry. In the recent past Institute of Indian Foundrymen sponsored research has also been completed successfully. The department is soon getting Induction melting furnace. Department wants to build up a simulation section in the foundry with a few dedicated computers and 'Procast' software. It is also intended to buy suitable machine moulding equipment to try out simulation experiments.

Department of Pharmaceutical Technology

1. Name of the Department/ School/ Centre: PHARMACEUTICAL TECHNOLOGY
2. Year of establishment: 1963
3. Faculty to which the Department/ School/ Centre is attached: FET
4. Names of programmes offered: UG, PG, Ph.D.
5. Interdisciplinary programmes being conducted and other departments involved:
6. Courses in collaboration with other universities, industries, foreign institutions etc.:
7. Details of programme discontinued, if any with reasons:
8. Examination system: Semester
9. Participation of courses offered by other departments:
10. Number of teaching posts sanctioned, filled, actual:

	Sanctioned	Filled	Actual
Professor	11	9	9
Associate Professor	12	7	7
Asst. Professor	7	3	3
Other (Research Scientist)	1	1	1

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Dr. Tanmoy Bera	M.Pharm., Ph. D	Professor and Head	Biochemistry	27	6
Dr. Biswanth Sa	M.Pharm., Ph. D	Professor	Pharmaceutics	30	5
Dr. Tarun Jha	M.Pharm., Ph. D	Professor	Pharmaceutical Chemistry	24	2
Dr. Lakshmi Kanta Ghosh	M.Pharm., Ph. D	Professor	Pharmaceutics	21	9
Dr. Tapan Kumar Paul	M.E., Ph. D	Professor	Chemical Engineering	32	7
Dr. Tapan Kumar Chatterjee	M.Pharm., Ph. D	Associate Professor	Pharmacology	18	5
Dr. Tapan Kumar Maity	M.Pharm., Ph. D	Professor	Pharmaceutical Chemistry	22	7
Dr. Biswajit Mukherjee	M.Pharm., Ph. D	Professor	Pharmaceutics	16	11
Dr. Pulok Kumar Mukherjee	M.Pharm., Ph. D, FRSC	Associate Professor	Pharmaceutical Chemistry of Natural Products	15	8
Dr. Kunal Roy	M.Pharm., Ph. D	Associate Professor	Pharmaceutical Chemistry	18	9
Dr. Pallab Kanti Halder	M.Pharm., Ph. D	Asst. Professor	Pharmacology	11	5
Dr. Subhash Chandra Mondal	M.Pharm., Ph. D	Associate Professor	Pharmacognosy	17	9
Dr. Tuhinadri Sen	M.Pharm., Ph. D	Associate Professor	Pharmaceutics	20	9
Dr. Sanmoy Karmokar	M.Pharm., Ph. D	Associate Professor	Pharmacology	15	5
Dr. Amallesh Samanta	M.Pharm., Ph. D	Associate Professor	Pharmaceutical Microbiology	24	5
Dr. Saikat Dewanjee	M.Pharm., Ph. D	Asst. Professor	Pharmacognosy	6	6

Dr. Ketu Kuotsu	M.Pharm., Ph. D	Asst. Professor	Pharmaceutics	6	7
Dr. Jasmina Khanam	M.Pharm., Ph. D	Professor	Pharmaceutical Engineering	22	4
Dr. Amal Kumar Bandhyopadhyay	M.Pharm., Ph. D	Professor	Pharmaceutics	32	5

12. List of senior visiting fellows, adjunct faculty, emiratus professor, visiting professor:

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

14. Programme- wise student teacher ratio: UG- 14:1, PG- 3:1, Ph. D- 7:1

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

16. Research thrust areas as recognized by major funding agencies:

Name	Area of Research
Dr. Tanmoy Bera	<ul style="list-style-type: none"> Nano drug delivery Biochemical parasitology. Membrane biology. Bioenergetics. Synthesis of enzyme substrates and drug derivatives. Plant tissue culture of medicinal plants
Dr. Biswanth Sa	<ul style="list-style-type: none"> Pharmaceutics Novel Drug Delivery
Dr. Tarun Jha	<ul style="list-style-type: none"> Anticancer drug designing by synthetic chemistry Biological evaluation Molecular modeling
Dr. Lakshmi Kanta Ghosh	<ul style="list-style-type: none"> Biopharmaceutics Novel Drug Delivery systems Controlled release delivery systems Targeted delivery systems
Dr. Tapan Kumar Paul	<ul style="list-style-type: none"> Chemical Engineering
Dr. Tapan Kumar Chatterjee	<ul style="list-style-type: none"> Applied Mechanics Computer Aided Design Vibration
Dr. Tapan Kumar Maity	<ul style="list-style-type: none"> Medicinal Chemistry and Chemistry of synthetic drugs.
Dr. Biswajit Mukherjee	<ul style="list-style-type: none"> Development of novel drug loaded delivery systems. Antisense therapeutic approaches.
Dr. Pulok Kumar Mukherjee	<ul style="list-style-type: none"> Development of natural leads for Alzheimer's diseases as AChE inhibitors Development of Herbosomes- value added herbal formulation and evaluation: Quality control and standardization of herbal drugs Safety evaluation of herbal medicine Exploitation of Indian Natural Resources- Phytochemical, Pharmacological screening and evaluation Exploring anti-allergic leads from natural products Exploring traditional medicine to effective herbal formulations
Dr. Kunal Roy	<ul style="list-style-type: none"> QSAR/QSPR studies Chemometrics in drug design Environmental fate modeling Ecotoxicological modeling
Dr. Pallab Kanti Halder	<ul style="list-style-type: none"> Pharmacology
Dr. Subhash Chandra Mondal	<ul style="list-style-type: none"> Pharmacognosy Herbal Medicine
Dr. Tuhinadri Sen	<ul style="list-style-type: none"> Pharmacology Natural Products, Recombinant DNA Technology Protein purification and bioactivity

Dr. Sanmoy Karmokar	<ul style="list-style-type: none"> Pharmacology
Dr. Amalesh Samanta	<ul style="list-style-type: none"> Formulation designing Polymer development and characterization Prebiotic activity study
Dr. Saikat Dewanjee	<ul style="list-style-type: none"> Discovery of lead/scaffolds to be effective against diabetes inflammation and cancer Exploring the antitoxic/antioxidant potentials of phytochemicals (natural antioxidants with special emphasis on edible plants) in ROS mediated cellular intoxications caused by common environmental pollutants Metabolic Phytochemistry <i>In vitro</i> conservation of endangered and economically important plants
Dr. Ketu Kuotsu	<ul style="list-style-type: none"> Novel drug delivery systems
Dr. Amal Kumar Bandhyopadhyay	<ul style="list-style-type: none"> Pharmaceutics Novel drug delivery systems

17. Number and names of faculty with ongoing projects from a) national, b) international funding agencies and c) total grants received.

Project title	Faculty	Funding agencies	Grant
Chemoimmunotherapy against cancer with glutamic acid derivatives and analogs through synthesis, biological evaluation, enzyme inhibition, drug design, cancer vaccine and entrapment chemotherapy	Dr. Tarun Jha	Council of Scientific and Industrial research (CSIR)	Rs. 18.051 lacks
Rational therapy with glutamine analogs as possible anticancer agents	Dr. Tarun Jha	University Grants Commission (UGC)	Rs. 7.460 lacks
Development of glutamine analogs using new anticancer technology	Dr. Tarun Jha	All India Council of Technical Education (AICTE)	Rs. 16.8 lacks
Development of AChE-inhibitor for Alzheimer s Disease- Screening Designing Synthesis and Biological validation using Chemical Library & North-East Indian Plants	Dr. Kunal Roy	DBT (Twinning Programme)	Rs. 7.03 lakhs (released so far)
In silico modeling of ecotoxicological hazards of chemicals using advanced chemometric tools	Dr. Kunal Roy	CSIR	Rs. 5,91,000/- (1st installment)
Exploring Quantitative Structure-Activity Relationships (QSARs) of Selected Classes of Antimalarial Compounds for Development of Predictive Models	Dr. Kunal Roy	UGC	Rs. 800300/-
Synthesis, Characterization and biological evaluation of some novel phthalimide derivatives	Dr. Tapan Kumar Maity	UGC	Rs. 7.65 Lakhs.
Design, Synthesis, and Pharmacological Screening of Hybrid Urea/Thiourea Derivatives as Potential Antihyperglycemics	Dr. Tapan Kumar Maity	CSIR	Rs. 8.00 Lakhs
Synergistic interaction of anti-bacterial natural products from medicinal plants of North East	Dr. Pulok Kumar Mukherjee	Department of Biotechnology -NR (DBT-Twinning),	Rs. 69,89,000/-

India: An effort in developing multi drug resistance natural antibiotic		NER Division, New Delhi	
Evaluation of safety profile of some Anti-diabetic plants used in Indian System of Medicine	Dr. Pulok Kumar Mukherjee	National Medicinal Plants Board (NMPB), New Delhi	Rs. 50,87,000/-
Novel Drug Discovery and Development Approaches For The Pharmacological Immune Enhancers In Immune Compromised Individuals	Dr. Pulok Kumar Mukherjee	Dept. of Science & Technology (DST): India-Brazil-South Africa (IBSA) Trilateral Cooperation Program	Rs. 29,04,000/-
Synergistic interaction of anti-bacterial natural products from medicinal plants of North East India: An effort in developing multi drug resistance natural antibiotic	Dr. Pulok Kumar Mukherjee	Department of Biotechnology -NR (DBT-Twinning), NER Division, New Delhi	Rs. 69,89,000/-
Experimental studies on the efficacies of natural materials as binder, emulgent, prebiotics and antimicrobials obtained from a single plant <i>Ocimum sanctum</i> (Family: Anacardiaceae).	Dr. Amalesh Samanta	UGC	Rs. 7,24,300/-
Programmed polymeric device for pulsed delivery: an approach in the management of hypertension using anti hypertensive agent as model drug	Dr. K. Kuotsu	CSIR	Rs.5,16,800
Design, Development and evaluation of maltodextrin based proniosomal drug delivery system, Containing anti diabetic drug nateglinide	Dr. K. Kuotsu	AICTE	Rs. 3,24,000
Mesoporous Silica Nanoparticle for controlled release of insulin-Design, fabrication and evaluation	Dr. K. Kuotsu	ICMR	Rs.23,28,850
Novel Drug Discovery and Development Approaches for the Pharmacological Immune Compromised Individuals	Dr. Tuhinadri Sen	IBSA (DST India International cooperation) (Co-investigator)	Rs. 29.04 lakhs
Preparation, characterization and evaluation of polymersome nanoparticles, based on preferential macrophage membrane recognition for resistant antileishmanial drug delivery	Dr. Tanmoy Bera	ICMR	Rs. 51,00,000/-
Insulin like growth factor II (IGF II) phosphorothioate antisense oligomers in search for a potential future drug of liver cancer	Dr. Biswajit Mukherjee	Indian Council of Medical Research	Rs. 18 lakhs
Anti diabetic potential of Apigenin-apharmacokinetics and mechanistic approach and	Dr. Biswajit Mukherjee	Department of Science and Technology	Rs. 14.34 lakhs

correlation with hepatocellular carcinoma Grant no: DST/INSPIRE Fellowship/ 2010 [87] dated 29/09/2010			
Preparation and invitro evaluation of Phosphatidylethanolamine conjugated Tamoxifen citrate loaded nanoparticles for the breast cancer therapy Grant No:45/20/2011 – NAN BMS	Dr. Biswajit Mukherjee	Indian Council of Medical Research	Rs. 9.024 Lakhs
Development of nano-scale Liposomal targeted delivery of an anti cancer agent Grant No: DST/INSPIRE fellowship/ 2011/ 615	Dr. Biswajit Mukherjee	Department of Science and Technology	Rs. 14.34 lakhs
Tamoxifen Citrate loaded in nanoliposomes tagged with monoclonal antibody for targeting in breast cancer cell Grant No: 45/ 16/ 2011- NAN BMS	Dr. Biswajit Mukherjee	Indian Council of Medical Research	Rs. 9.024 lakhs
Antisticking factor from caprine epididymal plasma: biochemical identity, role in sperm function and in tumor biology Grant No: 37 (1406)/ 10/ EMR-II	Dr. Biswajit Mukherjee	Council of Scientific and Industrial Research	Rs. 30.62 lakhs
Biochemical characteristics and physiological significance of a model forward motility stimulating proteins and its potential for application Grant No: BT/PR 13167/AAQ/ 01/ 416/	Dr. Biswajit Mukherjee	Department of Biotechnology	Rs. 35 lakhs
Pulmonary delivery of nanoparticles of an antifungal agent using nebulizer or dry powder inhaler Grant No: P-1/ RS/ 332/ 12	Dr. Biswajit Mukherjee	Department of Biotechnology	Rs. 10 lakhs
Diabetes mellitus, hepatocarcinogenesis and their correlation in animal model along with the modulation of the diseased conditions by Apigenin	Dr. Biswajit Mukherjee	Department of Science and Technology	Rs. 14.34 lakhs

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

Dr. Biswajit Mukherjee

a) National Collaboration:

Title of Project	Collaborative Partner	Project Cost Rs.	Current Status
Antisticking factor from caprine epididymal plasma: biochemical identity, role in sperm function and in tumor biology Grant No: 37 (1406)/ 10/ EMR-II (ICMR)	Centre for Rural & Cryogenic Technologies	30.62 lakhs	Ongoing 2010-2013
Biochemical characteristics and physiological significance of a model forward motility stimulating proteins and its potential for application	Department of Biotechnology	35 lakhs	Ongoing 2010-2013

Grant No: BT/PR 13167/AAQ/ 01/ 416 (DBT)			
Pulmonary delivery of nanoparticles of an antifungal agent using nebulizer or dry powder inhaler Grant No: P-1/ RS/ 332/ 12 (DBT)	Dibrugarh University	10 lakhs	Ongoing 2012-2015

Dr. Tarun Jha

a) International collaboration:

Dr. Laskmi Rani Basu from Bangladesh worked as an ICCR PDF for 3 years.

Dr. Kunal Roy

a) National Collaboration

Participated in DBT twinning Programme with NEHU, Shillong, India

b) International

Participated in the nano-BRIDGES project with the University of Gdansk, Poland, funded by the European Commission

Dr. Pulok Kumar Mukherjee

Sl.	Title of the project	Name of the funding agency	Amt. Sanctioned (Rs.)	Ref No
a) International collaboration				
1.	Novel Drug Discovery and Development Approaches For The Pharmacological Immune Enhancers In Immune Compromised Individuals	Dept. of Science & Technology (DST): India-Brazil-South Africa (IBSA) Trilateral Cooperation Program	29,04,000	INT/IBSA/01-04/2010(i);
b) National collaboration				
2.	Synergistic interaction of anti-bacterial natural products from medicinal plants of North East India: An effort in developing multi drug resistance natural antibiotic	Department of Biotechnology -NR (DBT-Twinning), NER Division, New Delhi	69,89,000	BT /153/NE/TBP/2011

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

- DBT- PURSE II: Rs. 1.0 crore
- UGC – DSA Phase III - Fund allotted – Rs. 47.5 Lakhs
- UPE- II- Rs. 1.5 crore

20. Research faculty/ centre run by the Dept./ School/ Centre which has: Not Available
State recognition

National recognition

International recognition

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

22. Publications: (See Annexure for details)

a) Number of papers published in peer reviewed journals:

National: 90; International: 650

b) Monographs

c) Chapters in books

d) Edited books

e) Books with IBBN with Details of Publishers

f) Citation Index- range/ average:

g) SNIP:

h) SJR:

i) Impact factor- range/ average: 0.5-9.858/ 2.5

j) h- index:

Faculty Name	h- index
Dr. Pulok Kumar Mukherjee	25
Dr. Kunal Roy	27
Dr. Tarun Jha	16
Dr. Biswajit Mukherjee	30
Dr. Tanmoy Bera	10
Dr. Saikat Dewanjee	07

23. Details of patents:

Dr. Pulok Kumar Mukherjee

- “A Process of Preparing a Herbal Composition for the Management of Insomnia/Stress and Product thereof” P. K Mukherjee, S. Rai, Kakali Mukherjee and KFH Nazeer Ahamed, B.P. Saha and S. Roy Chowdhury, Indian Patent No –221881.
- “A Process of Preparing Herbosomes with Andrographolide having Better Hepatoprotective Activity and Product thereof” P. K. Mukherjee, Kuntal Maiti, Kakali Mukherjee and Bishnu Pada Saha; Indian Patent No- 234595.

Dr. Tuhinadri Sen

International (France, PCT-WP and US)

1. France: FR2856407 A1
2. WO2004113539 A2
3. United States 20070149766

24. Area of consultancy and income generated:

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

Dr. Tarun Jha

Visited Gitam University as UGC expert for inspection of 12B status in 2011

Dr. Pulok Kumar Mukherjee

Visiting Scientist at the School of Pharmacy, London at the Centre for Pharmacognosy and Phytotherapy, School of Pharmacy, University of London with Prof Michael Heinrich in the field of natural product research for safety evaluation of natural products and their metabolisms, 2008.

Dr. Kunal Roy

University of Manchester, UK, Marie Curie International Incoming Fellowship

Dr. Biswajit Mukherjee

- Asia Pharmaceutical Cold Chain Management 2008: Conference International, Kuala Lumpur, Malaysia, 2008
- National seminar on advanced approaches in drug designing and drug targeting, Gry Institute of Pharmacy, Borawan, M.P. 2009
- National seminar on novel drug delivery, 5th IAPST Convention, Manipal, Karnataka, 2012
- National seminar on novel drug delivery, 5th IAPST Convention, Puri, Orissa, 2009
- Seminar on Make Pharmacy your career, B.R. Singh Hospital, Kolkata, 2009
- National seminar on modern biology and human welfare, Berhampur University, Orissa, 2010
- 62nd Indian Pharmaceutical Congress, Manipal University, Manipal, 2010
- National seminar on application of nanotechnology in drug delivery system, Himalayan Pharmacy Institute, Majhitar, East Sikkim, 2011
- 12th International Congress of Ethnopharmacology International School of Natural Product Studies, Jadavpur University, Kolkata, 2012

- National seminar on recent research trends in herbal medicine, Dr. B.C. Roy College of pharmacy and AHS, Durgapur. 2012
- National seminar on Biopolymers, bioactive agents and delivery strategies, Gupta college of technological sciences, Asansol, 2012
- National seminar on 21st century quality challenges in Pharma formulation sector, Dr. B.C. Roy college of pharmacy and AHS, Durgapur, 2012
- Development of nano particle based delivery of antifungal drug, IMT Pharmacy College, 2009
- Doxorubicin-loaded phosphatidylethanolamine-conjugated nanoliposomes: in vitro characterization and their accumulation in liver, kidneys, and lungs in rats, Dr. B.C. Roy College of Pharmacy and Allied Health Sciences, Durgapur, 2009
- Development of nano particle based delivery of antifungal drug, College of Pharmaceutical Sciences, Puri, 2012

Dr. Saikat Dewanjee

- Department of Plant Science, Faculty of Natural & Agricultural Sciences, University of Pretoria, South Africa;
- Medicinal Chemistry Group, iMed, UL, University of Lisbon, Portugal;
- Division of Crop Improvement, Central Research Institute for Jute and Allied Fibers, Barrackpore, India;
- Department of Genetics, Bidhan Chandra Krishi Visyavidyalaya, Mohonpur, Nadia 741252, India;
- IRDM Faculty Centre, Ramkrishna Mission Vivekananda University, Ramkrishna Mission Ashrama, Narendrapur, India.
- Department of Molecular Medicine, Bose Institute, Kolkata.

Dr. Tuhinadri Sen

- Erasmus Mundus Asia Visiting Academic Staff Fellowship (Conway Institute, UCD, Dublin, Ireland), 2011.
- Erasmus Mundus India Visiting Academic Staff Fellowship (Department of Pharmaceutical Biology, Katholieke University, Leuven, Belgium), 2009.
- Indo Russian cultural Exchange Fellowship (Russia), 2004 (Pending).
- Visited UFMG, Belo Horizonte, Brazil, 2012 (IBSA programme)
- Visited IKS Centres (Medical Research Council of South Africa), Cape Town, 2013 (IBSA programme)
- Visited Institut Genomique Fonctionnelle, 2005 (TEQUIP Programme)

26. Faculty serving in: a) National Committees b) International Committees c) Editorial boards d) Any other (Please specifies and gives details, including the name of the committee/s, position/s held, duration etc.):

Dr. Pulok Kumar Mukherjee

a) International committees:

- Fellow of the Royal Society of Chemistry [FRSC], Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge CB4 0WF, U.K, 2007.
- Advisor, American Herbal Pharmacopoeia; 3051 Brown's Lane; Soquel, CA 95073 USA, 2010 onwards.
- Chairman, Natural Health Product SIAC Special Interest Area Community [SIAC], Drug Information Association, Philadelphia, USA, 2009 worked for the development of international coordination for promotion and development of natural products as therapeutically potent compounds.

- Council member of the Society for TCM Pharmaceutical Analysis under the world Federation of Chinese Medicine Societies (WFCMS), Shanghai, China, 2010.
- Member & External Examiner of PhD Research Degree Committee, Lincoln University, Malaysia 2012.
- b) National committees
 - Member of the Programme Advisory Committee (PAC), DST- on Plant Sciences for the Science & Engineering Research Board (SERB), Dept of Science & Technology, Govt of India, New Delhi, 2012.
 - Chairman of Consortium Advisory Committees [CAC], ICAR- on the subproject Utilization of Weed Flora of Medicinal Value in Some Important Cropping Systems of Andhra Pradesh; National Agricultural Innovation Project, Indian Council of Agricultural Research, Govt of India, New Delhi, 2012.
 - Member of Management Advisory Committee of National Centre for Natural Resources [NCNR], Raipur, funded by Department of Science & Technology, New Delhi, 2012.
 - Expert in Indian Pharmacopoeia Commission [IPC], Ministry of Health & Family Welfare, Govt. of India, Ghaziabad, 2012, onwards.
 - Member of panel of expert of the R&D Project evaluation Subcommittee on Chemical Sciences, West Bengal State Council of Science & Technology, Kolkata, 2012.
 - Zonal coordinator [East Zone] - for Graduate Aptitude Test in Pharmacy: GPAT - 2011 examination.
- c) Editorial Boards:
 - Associate Editor, *J. Ethnopharmacology*, International journal on botanical research, published by Elsevier Science, the Netherlands 2003 onwards.
 - Guest editor of Indian Journal of Traditional Knowledge, special issue on “Traditional knowledge of the Northeast India”, January, 2009 published from, National Institute of Science Communication and Information Resources [NISCAIR], CSIR, New Delhi.
 - Guest editor of Drug Information Journal, special issue on “Natural Health Products”, September, 2010 published from, Drug Information Association [DIA], Philadelphia, USA.
 - Chairman syllabus Review Committee for Bachelor and Master Course in Pharmacy for the Sikkim University, a central university established by an act of Parliament of India in 2008 onwards.
 - NISCAIR Panel Expert for the dissemination of information under the journal published by National Institute of Science Communication & information Resources, 2008, CSIR, New Delhi.
 - Member of the country advisers, Development Partnerships in Higher Education (DePHE), supported by Department for International Development (DFID), UK, 2010.
 - President, Association of Pharmaceutical Teachers of India [APTI], Bengal Branch, HQ at Al-Ameen College of Pharmacy, Hosur Road, Bangalore 2009 onwards.
 - Member of the Editorial Board of *International Journal of Chinese Herbal Medicine (CHM)*, an International Journal published by Institute of Medicinal Plant Development (IMPLAD), Chinese Academy of Medical Sciences (CAMS) , Beijing, P.R. China, 2008 onwards
 - Member of the Editorial Board of *J. Complementary and Integrative Medicine*, an International journal published by The Berkeley Electronic Press, 2008 onwards

- Member of the Editorial Board of *J. Oriental Pharmacy and Experimental Medicine* [OPEM], an International journal published by Springer, Institute of Oriental Medicine, South Korea, 2008 onwards
 - Member of the Editorial Board of *J. Natural Remedies [JNR]*, an Indian journal published by Natural Remedies, Bangalore 2003 onwards
 - Member of the Editorial Board of *J. Pharmaceutical Research*, an Indian journal published by Krupanidhi College of Pharmacy, Bangalore, 2008 onwards.
 - Member of the Editorial Board of *J. Pharmaceutical Education*, an Indian journal published by Association of Pharmaceutical Teachers of India [APTI].
 - Member of the Editorial Board of *Indian Journal of Traditional Knowledge [IJTK]*, a journal published by National Institute of Science Communication & information Resources, CSIR, New Delhi 2008 onwards.
 - Member of the Editorial Board of *Medicinal and Aromatic Plant Abstracts [MAPA]*, a journal published by National Institute of Science Communication & information Resources, CSIR, New Delhi. 2008 onwards
 - Member of the Editorial Board of *Journal of Health Research*, an international journal in the field of health bio sciences, published from Chulalongkorn University, Bangkok, Thailand. 2008 onwards
 - Member of the Editorial Board of *American Journal of Plant Sciences (AJPS)*, Scientific Research Publishing, USA. 2008 onwards
- Dr. Biswajit Mukherjee*

a) National Committees

- QIP Nodal cell, (Pharmacy), Jadavpur University, Kolkata, Coordinator, since 2003
- Clinical Research Organization, Jadavpur University, Kolkata. Member, since 2008
- Centre for Advanced Research in Pharmaceutical Science (Ravi Chandran Endowment Fund), Jadavpur University, Kolkata. Joint Coordinator, since 2009
- Animal Ethics Committee, Jadavpur University, Kolkata. Convener, Since 2011
- Board of study (BOS), Jadavpur University, Kolkata, Member, Since 2002
- Governing body member, NSHM College of Pharmaceutical Technology, Kolkata
- Member GPAT Examination, AICTE, New Delhi, Coordinator since 2012
- Departmental library committee, Jadavpur University, Kolkata, Member, Since 2003
- M.Pharm / PhD thesis examiner / adjudicator for
 - Berhampur University, Orissa
 - Utkal University, Orissa
 - Dibrugarh University, Assam
 - Expert of selection committee for faculties
 - NIPER, Hajipur
 - Sri Jayadev College of Pharmaceutical Sciences, Orissa
 - Served as Inspector of
 - Pharmacy Council of India
 - All India Council of Technical Education
 - Acted as referee of evaluation of projects like ICMR, CSIR etc.
 - Supervisor of M.Pharm thesis, Utkal University student as co guide.

b) Editorial Board

- Associate Editor, International Journal of Pharmaceutical Science and Technology, ISSN No.: 0975- 0525.
- Editorial Board Member, Lipid Insights (France).

Dr. Kunal Roy

a) Editorial Board:

- Associate Editor, *Molecular Diversity* (Springer) [Impact Factor 2.861 (2012)]
- Member of the Editorial Advisory Board, *European Journal of Medicinal Chemistry*, Elsevier, [Impact Factor 3.499 (2012)]
- Guest Editor, Special Issue of *Molecular Diversity* on "Topological Descriptors in Drug Design and Modeling Studies" [Vol. 8, No. 4, 2004]
- Guest Editor, Special Issue of *Molecular Diversity* on "Ecotoxicological Modeling and Risk Assessment Using Chemometric Tools" [Vol. 10, No. 2, 2006]
- Co-Guest Editor, Special issue of *Current Drug Safety* on "In Silico Modeling for Prediction of Drug-Induced Adverse Reactions and Environmental Hazards Using QSAR Tools" [Vol 7, No. 4, 2012]

Dr. Tapan Kumar Maity

a) National committees:

Member of inspection committee of PCI, UGC, AICTE.

b) Editorial boards:

Studies on Ethno-Medicine (Journal), Kamala-Raj Enterprises, Delhi, India.

Dr. Tuhinadri Sen

a) National Committee:

Academic Body	Institution	Nature of Assignment	Period / Years
Faculty Council (FET)	Jadavpur University	Member	2006-2010
School of Natural Product Studies	Jadavpur University	Joint Director	2006-continuing
Center for bioprocess engineering	Jadavpur University	Joint Coordinator	2006
UGC-DSA (Phase III)	Jadavpur University	Deputy Coordinator	2012 continuing
UPE II (UGC) Natural products and Drug delivery	Jadavpur University	Coordinator	2012 – continuing
School of Oceanographic Studies	Jadavpur University	Member, academic committee	2003 – continuing
Environmental Science	Jadavpur University	Member, academic committee	2010
Biosafety committee	Jadavpur University	Member	2009
Animal ethics committee	Jadavpur University	Member	2010
Clinical research center	Jadavpur University	Member of academic committee	2010
UGC – Research Fellowship in science for meritorious students	Jadavpur University	Expert, Selection committee	2008
UGC – Research Fellowship in science for meritorious students	Jadavpur University	Expert, Selection committee	2009
UGC – Research Fellowship in science for meritorious students	Jadavpur University	Expert, Selection committee	2012
Department of Pharmaceutical Tech.	(Jadavpur University)	BOS*	2001
Member board of examiners	Tripura, WBUT, WBHS, Guru Govind Singh Indraprastha University, SRM University, Mizoram, North Bengal	B. Pharm examination	
Member Board of examiners	BIT Mesra, WBUT, BPUT	M. Pharm (Pharmacology)	
Expert / reviewer	DST West Bengal	Project Review	2007

Expert, Selection Committee	IICB	Selection of research scholars	2005
Member, Board of examiners	Madras university	Ph. D evaluation	2004. 05, 06, 10, 11
Member, Board of examiners	Berhampore university	Ph. D evaluation	2008
Member, Board of examiners	Utkal university	Ph. D evaluation	2006-7
Member, Board of examiners	Manipal university	Ph. D evaluation	2012
Member, Board of examiners	Bharthiar university	Ph. D evaluation	2009
Member, Board of examiners	Kakatiya university	Ph. D evaluation	2006
Member, Board of examiners	Padmavati mahila viswa vidyalayam, AP	Ph. D evaluation	2010
Member, Board of examiners	Tamil Nadu MGR university	Ph. D evaluation	2005
Board Member	Assam University, Silchar	Sushrutu School of Medical and Para Medical Sciences	2013- 2015
Expert	Dibrugarh University	Ph.D	2012
Expert	Department of Technical Education, Govt. West bengal	Inspection of institutions (AICTE)	2008
Expert	Department of Technical Education, Govt. West Bengal	Inspection of institutions (AICTE)	2008
Expert	WBUT	Inspection of Pharmacy institution	2012
Moderator	WBHS	B.Pharm examination	2007
AICTE	GPAT examination	GPAT Representative (WB)	2011

b) Editorial Board:

Member of Editorial Board (Evidence Based Complimentary and Alternative Medicine), US

Member of Editorial Board, Board OA Evidence Based Medicine, UK

Member Editorial Advisory Board, Current Trends in Pharmaceutical Research, Dibrugarh University, India.

Dr. Laksmi Kanta Ghosh

a) National Committee:

Member of the different committees constituted by U.G.C, as Inspector of the Pharmacy Council of India, AICTE, etc.

Dr. Saikat Dewanjee

a) National committees

Thesis evaluator, paper setter and examiner of various Indian Universities.

b) International committees

Project evaluator of Czech Science Foundation, Czech Republic.

27. Faculty recharging strategies:

Dr. Biswajit Mukherjee

Type of Course	Title	Organized	Source of funding
Refresher course	Current Development and Direction for Drug Research and its Future Beyond 2025	Organized as coordinator	AICTE
Refresher course	Drug Research –from Laboratories to Market	Organized as coordinator	AICTE
Refresher course	Drugs design and its mechanism	Organized as coordinator	AICTE
Refresher course	Drug interactions and toxicity	Organized as coordinator	AICTE

Refresher course	Drugs to Formulations : Challenges and Solutions	Organized as coordinator	AICTE
Refresher course	Drug Delivery and Drug Targeting Research	Organized as coordinator	AICTE
Refresher course	Progress in Pharmaceutical Research and Technology	Organized as coordinator	AICTE
Refresher course	Future prospect of Biotechnology and Pharmaceutical Sciences for Pharmaceutical Industry	Organized as coordinator	AICTE
Refresher course	A New Pharmacy era: Quality Initiative and New Technologies	Organized as coordinator	AICTE
Refresher course	Pharmaceutical Sciences: Today and Tomorrow	Organized as coordinator	AICTE
Refresher course	Drug diseases and drug delivery system	Organized as coordinator	AICTE
Refresher course	Pharmacy: A fulcrum of knowledge of drug and drug research	Organized as coordinator	AICTE
Refresher course	Drug, Disease and Therapy: A recent advancement	Organized as coordinator	AICTE
Refresher course	Biotechnology in pharmaceutical sciences: recent avenues	Organized as coordinator	AICTE
Refresher course	Future Directions of pharmaceutical sciences and research	Organized as coordinator	AICTE
Refresher course	Directions of Pharma-Research to achieve Pharma-excellence by 2025	Organized as coordinator	AICTE

28. Students projects

Percentage of students who have done in-house projects including inter-departmental projects: UG- 100%; PG- 100%; Ph. D. - 80%

Percentage of students doing projects in collaboration with other universities/ industries/ institute: Ph. D. - 20%

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

Dr. Pulok Kumar Mukherjee

- ✓ Commonwealth Academic Staff Fellowship Award-2005 for research contributions in the field of Natural Product Research.
- ✓ Biotechnology Overseas Award-2007 from the Department of Biotechnology, Government of India, for development of safety profiles of herbal medicine.

Dr. Kunal Roy

- ✓ Marie Curie International incoming Fellowship 2012
- ✓ Commonwealth Academic Staff Fellowship (2007),
- ✓ Bioorganic and Medicinal Chemistry Most Cited Paper 2006-2009 Awards from Elsevier, The Netherlands.
- ✓ Bioorganic and Medicinal Chemistry Letters Most Cited Paper 2006-2009 Award from Elsevier, The Netherlands.

Dr. Tuhinadri Sen

- ✓ Awarded the UGC Cultural Exchange Fellowship, 2004 (Pending)
- ✓ INSERM "Post Vert" Fellow, INSERM U469, France (2000-2001)
- ✓ Erasmus Mundus India Visiting Fellowship, KU Leuven, 2009
- ✓ Awarded the Erasmus Mundus Asia Visiting Fellowship, UCD, Dublin Ireland, 2011

Dr. Saikat Dewanjee

- ✓ FCT- Postdoctoral grants awards (2010);
- ✓ Travel grants from various international (WOCMAP, South Africa; FCT, Portugal) and national (INSA, CSIR, DST, AICTE, Govt. Of India) funding organizations;
- ✓ Three research projects were awarded by Jadavpur University, UGC and AICTE, Government of India;

Doctoral/ post- doctoral fellows: Nil

Students: Nil

30. Seminars/ Conferences/ work shop organized and the source of funding (National/ international) with brief details:

Dr. Biswajit Mukherjee

National seminar	Drug and drug delivery research: a recent advancement	IAPST, CSIR
1 st pharm tech IAPST conference	Drug Delivery and drug Targeting research	IAPST, ICMR JU
Workshop and seminar	Biotechnology in Pharmaceutical sciences - a recent avenues	IAPST, JU
5 th annual IAPST National Convention	Gateway to Excellence in Pharma research and Development	IAPST, Manipal University

Dr. Tuhinadri Sen

12 th Congress of the International Society for Ethnopharmacology [ISE-2012], KOLKATA-2012	Conference-International	ICMR, Parker Robinson Pvt. Ltd. Kolkata	3 days; Joint Organizing Secretary	School of Natural Product Studies, Jadavpur University,
Emerging trends in Natural Product Research [NPR], KOLKATA-2011	Workshop-National	APTI; FIHI & Parker Robinson Pvt. Ltd. Kolkata	3 days- Joint Organizing Secretary	School of Natural Product Studies, Jadavpur University
Developing Quality monographs for Pharmacopeia for herbs and herbal products; 2010	Workshop-National	NMPB & APTI, Bangalore	3 days; Joint Organizing Secretary	Jadavpur University
Fractionation and standardization of natural products; 2009	Preconference Workshop-International	IPS, Kolkata	1 day- organized Joint organizing secretary	Jadavpur University, Kolkata
Herbal medicine-evaluation of quality, efficacy and safety; 2009	Conference-International	APTI, Bengal Branch	3 days- organized	Al-Ameen College of Pharmacy, Bangalore
Instrumental Chromatography and Drug Discovery; 2008	Workshop-National	APTI, Bengal Branch	1 day- organized	Jadavpur University
Natural Health Product- Opportunities and Challenges; 2008	Workshop-National	APTI, Bengal Branch	1 day- organized	Jadavpur University
Thrust Areas on Development of Natural Products; 2008	Refresher Course National	UGC, New Delhi	15 Days- Joint coordinator	Jadavpur University
International conference on integrative and personalised medicine (IPSCON, 2009)	Workshop – National	IPS, Kolkata Pre-conference workshop of IPS	1 day – organized Coordinator	Jadavpur University
International seminar on Clinical research and regulatory affairs – present scenario: 2012	Conference-International	UGC	1 day- organised	Bioequivalence Study Centre, Pharm Tech, Jadavpur University, Kolkata

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

- Research data should be reproducible.
- Research scholars should be honest to publish research data, checked by concern guides.
- The data should have high authenticity.

32. Student profile programme wise (in the current semester)

33. Diversity of students

Name of the programme	% of students from the same university	% of students from the other university within State	% of students from universities outside the state	% of students from other countries
UG	-	-	-	-
PG	70%	20%	8%	2%
Ph. D.	50%	30%	16%	4%

34. How many students have cleared civil service and defense services examinations, Net, SET, GATE, other competitive examinations:

Every year near about 30% UG students qualify the GATE/ GPAT examination.

35. Student progression:

36. Diversity of Staff:

Percentage of faculty who are graduates	
Of same university	100%
From universities within the states	Nil
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: (2008- 2013): Nil

38. Present details of departmental infrastructural facilities with regard to

Library: Substantial text books and reference books.

Students can borrow the books for 15 days.

Internet facilities are available.

More than 100 open access journals.

Internet facilities of staff and students:

24 hours internet facilities are available for both staff and students

Wi-Fi facilities are also available for faculty members.

Total number of class rooms with ICT facilities:

Student's laboratories: 13

Research laboratories: 27

39. List of Doctoral, Post-doctoral and Research associates:

From the host institution/ university

From the other institution/ university

40. Number of post graduate students getting financial assistances from the university: 80%

41. Was any need assessment exercise undertaken before the development of new programme (s)? If so highlight the methodology: Not Applicable

42. Does the department obtained feedback from

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

Students on staff, curriculum and teaching learning evaluation and how does the department utilize the feedback?

Alumni and employers on the programme offered and how does the department utilize the feedback?

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

44. Give details of the students environment programmes (special lectures/ workshop/ seminar) involving external experts
45. List the teaching methods adopted by the faculty for different programmes:
 - ✓ Chalk and Talk
 - ✓ LCD Projector
 - ✓ Overhead Projector
46. How does the departments ensure that programme objective are constantly met and learning outcomes are monitored
47. Highlight the participation of students and faculty in extension activities:
48. Give details of “beyond syllabus scholarly activities” of the department :
49. State whether the programme/ department is accredited/ granted by other agencies?
If yes, give details: UGC, NAAC
50. Briefly highlight the contribution of the department in generating new knowledge, basic or applied:
It appears from the last five years publications that our department has contributed and generated new knowledge whether basic or applied.
Basic research on parasite (*Leishmania donovani*) in biochemistry showed the discovery of substrate level phosphorylation in the pathogenic form of Kalajaar (*Leishmania donovani*) parasite, a bench mark discovery which could be exploit for new drug development. In applied area, formulation of nanomedicine as antiviral, antileishmanial, anticancer agents has been proved to be a break through research. Despite from it, molecular modeling, QSAR study, toxicity study of different drug molecules are continuously generating new knowledge.
51. Details five major strengths, weakness, opportunities and challenges(SWOC) of the department
Strengths
 Dedicated faculty members who pursue applied and fundamental research
Weakness
 Lack of funding and instrument facilities
Opportunities
 Faculty members can collaborate with each other for research
Challenges
 It appears from the current review on pharmaceutical studies that new avenues are opening up day by day; to address the new fields and technical aspects of research, our faculty members will have to enter into the current domains of research.
52. Future plans of the department (in as much details as possible)
 There are shortages of space for our faculty members and also for installation of sophisticated instruments; accordingly we are planning to increase the working space through construction of new floor of our building.
 Our department aiming to collaborate with the renowned universities out of the country which will expel the research works.

Department of Power Engineering

1. Name of the Department/School/Centre: POWER ENGINEERING
2. Year of establishment: 1989
3. Faculty to which the Department/School/Centre is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.):
 - a. Bachelor of Power Engineering
 - b. Master of Power Engineering
 - c. PhD (Engineering)
5. Interdisciplinary programmes being conducted and other departments involved:
School of Nuclear Studies and Applications, Jadavpur University (SNSA)
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
7. Details of programmes discontinued, if any, with reasons:
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester
9. Participation of the department in courses offered by other departments:
Master of Nuclear Engineering, SNSA, JU
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	4
Associate Professor	5	4	4
Asst. Professor	7	3	3
Other			

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

Name	Quali- fication	Designation	Specialization	Years of Experience	PhD students, last 4 years
Prof. Niladri Chakraborty	PhD	Professor	Energy Economics Power System Optimization, Environmental Measurements	25 yrs	04 completed 08 ongoing
Prof. Amitava Datta	PhD	Professor	Combustion Engineering	25 yrs	06 completed 02 ongoing
Prof. Amitava Gupta	PhD	Professor	Real-time Systems Control Systems	21 yrs	04 completed 04 ongoing
Prof. Bireswar Majumdar	PhD	Professor	Fluid Mechanics and Fluid Machinery	31 yrs	01 completed 03 ongoing
Prof. K. K. Mondal	PhD	Assoc. Professor	Fluid Mechanics and Fluid Machinery	25 yrs	05 ongoing
Dr. Ranjan Ganguly	PhD	Assoc. Professor	Thermal and Fluid Science	18 yrs	04
Dr. M. Basu	PhD	Assoc. Professor	Power Systems	18 yrs	02 completed 05 ongoing
Dr. A. K. Santra	PhD	Assoc. Professor	Thermal Engineering	21 yrs	00 completed 03 ongoing
Smt Gargi Konar	ME	Asst. Professor	Sensors, Control Systems	13 yrs	NA
Sri Debasis Palit	ME	Asst. Professor	Power Systems Optimization	08 yrs	NA
Sri Bhimsen Tudu	ME	Asst. Professor	Environmental Measurements	07 yrs	NA

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors:
See Annexure

13. Percentage of classes taken by temporary faculty – programme-wise information:
 - BE(Power Engg. inclusive of catering load in undergraduate programs in Instrumentation and Electronic Engineering, Information Technology, Construction Engineering and printing Engineering): 62.2%
 - ME(Power Engg.): 7.3%
14. Programme-wise Student Teacher Ratio: 3:1
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual:
Number of academic support staff (technical): 17; administrative staff: 3
16. Research thrust areas as recognized by major funding agencies:
 - Combustion Engineering
 - Hydraulics
 - Thermal Engineering
 - Automation and Control
 - Distributed Generation
 - Environmental Engineering
 - Nano and micro-fluidics
17. Number and names 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 titles and grants received project-wise: See Annexure
18. Inter-institutional collaborative projects and associated grants received
j) National collaboration b) International collaboration: See Annexure
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. (Give details.): UGC-DRS
20. Research facility/centre run by the Dept./school/centre which has:
 - state recognition
 - national recognition
 - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies:
22. Publications: See Annexure for details
 - * 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:
24. Areas of consultancy and income generated:

Dr. Ranjan Ganguly	CFD Simulation for CW System	1 Lakh
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25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad (give details):

Name	Visits	Period
Prof. Amitava Datta	Institute of Technical Thermodynamics, University of Erlangen Nuernberg, Germany Alexander von Humboldt Foundation short term visiting scientist	May-June 2012
Prof. Amitava Gupta	NC State University, USADST-NSF Exploratory Visit Prof. M.Y. Chow	2008
	VHR University of Rostock, Germany (Invited lecture) Prof. Peter Luksch	2009
	TU- Muenchen, Institute of Informatics, Germany DAAD Visiting Professorship; Prof. Arndt Bode	2009-2010
	ENIT Tunis, Indo-Tunisian Collaborative Research Prof. Salem Hasnaoui	2010
	VHR University of Rostock, Germany (Invited lecture) Prof. Peter Luksch; Research Alumni Program of the AvH foundation	2012
Dr. Ranjan Ganguly	AvH Fellow for Micro and Nanoprocess Technology, Leibniz University of Hannover, and Center of Smart Interfaces, TU Darmstadt, Germany	2008-09

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

Name	Committee	Period
Prof. Amitava Datta	Nominated AICTE representative for Management Committee (MC) University Institute of Technology, the University of Burdwan for a period of 3 years from 2012	2012 onwards
	Secretary of Humboldt Club Calcutta (an association of former Alexander von Humboldt Fellows in Kolkata)	2009 onwards
	Member, SERC School Planning Committee in Combustion constituted by DST, Govt. of India	
	Member, National Initiative on Reactive Flow CFD, a body formed under the initiative of DRDO, Govt. of India.	
	Editorial Advisory Board Member of journal Recent Patents in Mechanical Engineering; Bentham Science Publishers	
Prof. Amitava Gupta	Research Ambassador, German Academic Exchange Service (DAAD)	2010 onwards
	University Nominated Member (JNTU-Kakinada) in the Board of Studies of GMR Institute of Technology, Rajam	2012 onwards

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

Three week Refresher Course' on 'Frontiers in Power Engineering and Energy Sustainability', from 8th to 27th June, 2009

28. Student projects

percentage of students who have done in-house projects including inter-departmental projects: 100% (B.Tech. projects are compulsory)

percentage of students doing projects in collaboration with other universities / industry / institute: 5% (Projects as DAAD Wise Interns, as summer interns in IIT and utilities)

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

- Faculty

Name	Award/Recognition	Year
Prof. Amitava Datta	VMK Sastry Best Poster Award, 19th National & 8th ISHMT-ASME Heat and Mass Transfer Conference, JNTU Hyderabad,	2008
	Best Paper award in Combustion, 22nd National Conference on I.C.Engine	2011

	and Combustion, NIT Calicut	
Prof. Amitava Gupta	Selected DAAD Visiting Professor(Gastdozentur),TU-Muenchen Germany	2009
	Selected Research Ambassador of German Academic Exchange Service in India	2010
Dr. Ranjan Ganguly	Alexander von Humboldt Fellowship for Postdoctoral Research in Germany	2008
	Indian National Academy of Engineering (INAE) Young Engineer Award	2008
	VMK Sastry Best Poster Award in the 19th National & 8th ISHMT-ASME Heat and Mass Transfer Conference, January 3-5, 2008, JNTU, Hyderabad (Jointly with Prof. Amitava Datta)	2008
	PK Sarma Best Paper Award in the 20th National & 9th ISHMT-ASME Heat and Mass Transfer Conference, January 4-6, 2010, NPCIL, Mumbai.	2010

- Doctoral / post doctoral fellows
- Students (Give details)

DAAD WISE INTERNSHIPS (Sumit Mukherjee, Aritra Roy, Amlan Kusum Molla)

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

- International Workshop on Fuel Cell(Jadavpur University 2008
- Three week Refresher Course' on 'Frontiers in Power Engineering and Energy Sustainability', from 8th to 27th June, 2009

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

The Faculty Members and Research Scholars of the Department of Power Engg. are involved in active research as evident from a large number of well cited publications in different high quality journals and conferences. The following are the salient points which are broadly adhered to:

1. Only peer reviewed and non-open access journals are chosen for publication.
2. Wherever students are involved-at whatever level- they are either included as co-authors or acknowledged.
3. Publications are based on original research and are not plagiarized or re-cycled.

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
Bachelor of Power Engineering		147	13	100	100
Master of Power Engineering		32	06	100	100

33. Diversity of students

Name of the Programme (refer to q. no. 4)	% of students from the same university	% of students from other universities within State	% of students from universities outside the State	% of students from other countries
B. POWER ENGG.	100			
M. POWER ENGG.	10	50	40	
PhD. ENGG.	20	60	20	

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

GATE: Approximately 10% students qualify GATE in the Final Year and take up Postgraduate Studies immediately. None of the students have taken up Civil Services or have joined Defence.

35. Student progression

Student progression	Percentage against enrolled
UG to PG	10%
PG to M.Phil.	None
PG to Ph.D.	20%
Ph.D. to Post-Doctoral	Only 4 instances so far
Employed <ul style="list-style-type: none"> Campus selection Other than campus recruitment 	80-90% 80-90% (overlap exists)
Entrepreneurs	2 instances known

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	PhD from the same University: 04
from other universities within the State	PhD from IIT KGP: 01
from universities from other States	PhD from IIT Delhi: 01
from universities outside the country	PhD from Abroad: 02

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period (2008 – 2013): 02

38. Present details of departmental infrastructural facilities with regard to

- Library: Central Library at Salt Lake Campus
- Internet facilities for staff and students: UG and PG computational facility with internet. Separate facility for research scholars, in every lab, Offices of faculty members, office of the department and workshop.
- Total number of class rooms: 06
- Class rooms with ICT facility: 02
- Students' laboratories: 06
- Research laboratories: 10

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

a) from the host institution/university

Name	Supervisor	Program
Soumya Dasgupta	Prof. Amitava Gupta	Doctoral (BRNS)
Kaushik Halder	Prof. Amitava Gupta	Doctoral (UGC BSR)
Avik Hazra	Dr. Mousumi Basu	Doctoral (UGC BSR)
Pritam Kr. Das	Dr. A.K.Santra	Doctoral (TEQIP)
Mithun Das	Dr.Ranjan Ganguly/Dr.A.K.Santra	Doctoral(UGC-DRS)
Sri Vivekananda Halder	Prof. Niladri Chakraborty	Doctoral (DST INSPIRE)
Smt. Shyamashree Raha	Prof. Niladri Chakraborty	Doctoral (DST INSPIRE)
Smt. Debanjana Bhattacharya	Prof. Niladri Chakraborty	Doctoral (UGC BSR)
Sajjan Kumar	Dr. K.K. Mondal	Doctoral (UGC UPE-II)
Diptendu Pal	Dr. K.K.Mondal	Doctoral (UGC UPE-II)

Research scholars in fully funded positions have only been included

- from other institutions/universities: None

40. Number of post graduate students getting financial assistance from the university. (Give details.): 13 GATE-qualified students in each year of ME (Power Engg.)

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

As a part of TEQIP II. In accordance with the TEQIP II guidelines and ratified by the Board of Studies (BOS) of the Department. The inputs were taken by the HOD from individual faculty members and discussed in the meeting of the BOS

42. Does the department obtain feedback from

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

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

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

As of now, structured feedback is yet to be introduced. Feedback from students, faculty, alumni (particularly those who visit the University for campus recruitment) are regularly considered in BOS meetings.

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

Dr. Ranjan Ganguly (1995), Fellow of the Alexander von Humboldt Foundation, Young Engineer Awardee, INAE, presently a faculty in Power Engg. Jadavpur University

Prof. Abhijit Mukherjee (1993), presently Professor in a prestigious US Technical School

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

The department organizes regular invited talks by eminent persons from the industry and R&D organizations e.g. L&T, Tata Steel, BARC, WBPDCCL etc. within the ambit of various programs like TEQIP, UGC-DRS etc.

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

UG: Theoretical Classes: Chalk and Talk (80%), Power Point Presentations backed by Handouts (20%). Examination: Written

PG: Theoretical Classes: Chalk and Talk (60%), Power Point Presentations backed by Handouts (40%). Examination: Written

UG: Laboratory: Demonstrations backed by written instruction in some cases Demonstrations involve Computers in a large way. Examinations: Lab quiz and oral

PG: Laboratory: Computer based demonstrations. Examinations: Presentations and Viva

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

The department follows the broad policies laid down by the University in this regard. This policy automatically ensures that requisite numbers of classes are taken each semester, examinations are conducted in time and results duly published, and original research is reported in quality journals and conferences.

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

Some students of the department are members of NSS program of the University and some again are members of NGOs engaged in teaching underprivileged children. The faculty members are involved in a wide variety of activities related to academics and administration in different academic institutions and Government initiatives.

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

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

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

The department, since its existence in 1989, has been consistently producing high quality engineers and academicians who have produced rich research and professional output in different domains related to the realm of power engineering ranging from thermal engineering , fluid mechanics to cutting edge advancements in nano technology and control systems. The main areas where the department has made its mark are as follows:

1. Combustion
2. Micro and nano-fluidics in heat transfer
3. Soft computing based techniques and optimizations related to distributed generation

4. Environmental pollution and its control
 5. Networked Control Systems
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths

Inherently Interdisciplinary nature of the course

A large practical focus of the technology developed

Dedicated and qualified faculty members

Weaknesses

Course structure includes parts of Mechanical Engg. and Electrical Engg. which becomes difficult for students to tackle.

No GATE exam specifically for Power Engineering students - they have to take the exam either in ME or EE. Same for PSUs.

Opportunities

The Power Sector will have a huge growth –so ample opportunities

Challenges

Harnessing the diversity and preserving the Power Engineering entity.

52. Future plans of the department (in as much detail as possible):

The Department plans to focus on the following areas:

1. Micro-grid and Distributed Generation: This is an area where the department is set to place immediate emphasis. The department has received a grant from the UGC DRS scheme and within its ambit a micro-grid setup is being planned. In the next phase, this will be augmented with features like automated relay co-ordination etc.
2. Wireless sensing and Networked Information sensing is also an area where the department is interested in conducting research
3. Micro and nanoscale heat transfer is another area where extensive work is being planned.
4. Work is also planned in the area of advanced automation using Fieldbus etc.
5. On the teaching front, the department plans to introduce extensive ICT.

Department of Printing Engineering

1. Name of the Department: PRINTING ENGINEERING
2. Year of establishment: 1988
3. Faculty to which the Department is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): B.E. Printing, M. Tech, Ph.D.
5. Interdisciplinary programmes being conducted and other departments involved:
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
7. Details of programmes discontinued, if any, with reasons:
8. Examination System: Semester
9. Participation of the department in courses offered by other departments:
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	02	01	01
Associate Professor	03	02	02
Asst. Professor	06	04	04
Other			

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Prof. Dr. Arun Kiran Pal	B.M.E., M.M.E., Ph.D.(Engg.)	Professor	Rheology/Fluid Mechanics/ Packaging/Printing Machines	23	02
Dr. Swati Bandyopadhyay	B.CH.E., Ph.D.(Engg)	Associate Professor	Non-Conventional Energetic Power/ Ink-Technology/ Colour Technology	23	04
Dr. Kanai Chandra Paul	B. Print. E., Ph.D.(Engg)	Associate Professor	Newspaper Printing/ Paint Removal/ Deinking / Post Press/Print Surface Preparation/Paper Technology/ Non-Impact Printing	14	02
Mr. Soumen Basak	B. Print. E., M.E.(Nano Science &Technology)	Assistant Professor	Computerised Printing/ Process Photography/ Estimating & Costing/ Paper/ Waste Utilisation	12	NIL
Mr. Prodeep Kundu	B. Print. E.	Assistant Professor	Digital typesetting and imaging/ Electronic Publishing/Digital Image Processing	21	NIL
Mr Arpitam Chatterjee	B. Print. E.	Assistant Professor	Digital typesetting and imaging/ Electronic Publishing/Digital Image Processing	05	NIL
Ms. Shilpi Naskar	B. Print. E.	Assistant Professor	Paint Removal/ Deinking / Post Press/Print Surface Preparation/Paper Technology	05	NIL

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors:
13. Percentage of classes taken by temporary faculty – programme-wise information:
Approx 15%
14. Programme-wise Student Teacher Ratio: 1:16 (B.E.), 1:5 (M.Tech)
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual: Actual-11
16. Research thrust areas as recognized by major funding agencies: Print Quality Control. Paper Properties; Ink Technology; Colour Management; Coating Technology; Imaging Science
17. Number and names 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 titles and grants received project-wise.
18. Inter-institutional collaborative projects and associated grants received
k) National collaboration b) International collaboration
19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received. (Give details.)
20. Research facility/centre run by the Dept./school/centre which has:
 - state recognition
 - national recognition
 - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies: nil
22. Publications: See Annexure for details
 - * 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:
24. Areas of consultancy and income generated: Printing Press, Rs. 5.00 lakhs
25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad (give details):
Prof. A.K.Pal visited different institutions as an expert member of NBA team of AICTE.
26. Faculty serving in
 - a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)
Prof A. K. Pal has been nominated as an Expert Member of the standing committee of Govt. of India to modernize Security Presses.
Dr. K.C.Paul has been nominated as a expert member of task force committee of IIP for their courses in M Tech in Packaging Technology.
Dr.A.K.Pal & Dr. K.C.Pal have served UGC & UPSC in different committees.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted: Training of the KMC Employee to upgrade themselves so that KMC Press can be modernized by Dr. Swati Bandopadhyay
- Training of adult people during the Evening Time through Certificate Course on “Screen Printing” in collaboration with Adult Education Department. Coordinators: Dr. K.C.Paul and Mr. Soumen Basak
 - Training of the Economically Backward People on Screen Printing at Free of Cost sponsored by TEQIP,J.U. ; Coordinators: Dr. K.C.Paul and Prof. A.K.Pal
28. Student projects
- percentage of students who have done in-house projects including inter-departmental projects: 90%
 - percentage of students doing projects in collaboration with other universities / industry / institute: 10%
29. Awards / recognitions received at the national and international level by
- Faculty
 - Doctoral / post doctoral fellows
 - Students (Give details)
30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):
31. Code of ethics for research followed by the department: As per university norms
32. Student profile programme-wise (in the Current Semester):

Name of the Programme (refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
UG		79	10	100%	
PG		01	07		

33. Diversity of students

Name of the Programme (refer to q. 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	25	75		

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	5
PG to M.Phil.	
PG to Ph.D.	
Ph.D. to Post-Doctoral	
Employed	
• Campus selection	95
• Other than campus recruitment	05
Entrepreneurs	

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	100
from other universities within the State	
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 (2008 – 2013):

38. Present details of departmental infrastructural facilities with regard to
 - a) Library: Central
 - b) Internet facilities for staff and students: Available for all
 - c) Total number of class rooms: 04
 - d) Class rooms with ICT facility:
 - e) Students' laboratories: 07
 - f) Research laboratories:
39. List of doctoral, post-doctoral students and Research Associates
 - a) from the host institution/university: 04
 - b) from other institutions/universities: 03
40. Number of post graduate students getting financial assistance from the university. (Give details.)
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. N.A.
42. Does the department obtain feedback from
 - faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? Through meetings, discussions
 - students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? Through meetings, discussions
 - alumni and employers on the programmes offered and how does the department utilize the feedback? Through workshops & seminars
43. List the distinguished alumni of the department (maximum 10)
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts. Technical seminar named PRINTVISION
45. List the teaching methods adopted by the faculty for different programmes.
Audio & Visual method
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? Through continuous evaluation system
47. Highlight the participation of students and faculty in extension activities.
 - One of the Faculty members has been selected as an Expert member of Standing Committee of Govt of India for modernization of Currency Printing Presses and Some other Committee of Govt of Orissa
 - Training of the KMC Employee to upgrade themselves so that KMC Press can be modernized.
 - Training of adult people during the Evening Time through Certificate Course on "Screen Printing" in collaboration with Adult Education Department. Coordinators: Dr. K.C.Paul and Mr. Soumen Basak
 - Training of the Economically Backward People on Screen Printing at Free of Cost sponsored by TEQIP, J.U. ; Coordinators: Dr. K.C.Paul and Prof. A.K.Pal
 - Some of the faculty members of the Department are invited to train the Executives of the newspaper industries to upgrade themselves, organized by the IFRA, ABP and Printing Engineering, J.U.
48. Give details of "beyond syllabus scholarly activities" of the department.
Collaboration with Heidelberg for training of one 3rd Year Student at Heidelberg Print Media Academy, Germany.
Collaboration with leading Newspaper Industries of Eastern India regarding onsite training of the students.
Collaboration with IFRA regarding training of Industry People.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. UGC, NAAC

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

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

Strengths

new area, laboratory, pg course, faculty

Weakness

space, classroom

52. Future plans of the department (in as much detail as possible): Development and setting up of Image Surface Preparation Laboratory for Flexo and Gravure Process.

- Modernisation of Offset of Image Surface Preparation Laboratory from conventional process to Digital Process.
- Modernisation of Photography Laboratory from Analog to Digital
- Modernisation of Class rooms introducing audio Visual Aids
- Modernisation of Packaging Laboratory
- Modernisation of Binding and Finishing Laboratory
- Upgradation of Computer Laboratory
- Upgradation of Web offset Unit
- Setting up of School of color sciences, Packaging, etc.

Department of Production Engineering

1. Name of the Department: PRODUCTION ENGINEERING
2. Year of establishment: 1978
3. Faculty to which the Department is attached: FET
4. Names of programmes offered (UG, PG, MPhil, PhD, Integrated Masters; Integrated PhD, DSc, DLitt, etc.): B.Prod.E, M.Prod.E, PhD (Engg)
5. Interdisciplinary programmes being conducted and other departments involved: Nil
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
As such there is no course in direct collaboration with other universities, industries, foreign institutions, etc. However there is MOU with several foreign Universities (at University level) regarding student exchange program and many foreign students from different countries (i.e. Jordon, Iraq, Netherland) are coming to our department under this program.
7. Details of programmes discontinued, if any, with reasons: Nil
8. Examination System: Semester
9. Participation of the department in courses offered by other departments:
Faculty of Production Engg Department participated in serving Theoretical and Laboratory Class load of the following Courses at Jadavpur University;
 - a. Bachelor Course on Computer Science & Engg
 - b. Bachelor Course on Instrumentation & Electronics Engg
 - c. Bachelor in Technology Course on Instrumentation & Electronics Engg
10. Number of teaching posts sanctioned, filled and actual (Professor/Associate Professor/Asst. Professor/others):

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	4	3	5
Associate Professor	7	5	8
Assistant. Professor	7	6	1
Other			

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

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Jyotirmoy Saha	Ph.D. (Engg.)	Professor	CAD/CAM, CNC, Robotics, FMS	36	Completed: 1 Ongoing : 03
Subir Kumar Sanyal	Ph.D. (Engg.)	Professor	Computer Graphics, CAD, Ergonomics	31	Completed: 02 Ongoing : 04
Bijoy Bhattacharya	Ph.D. (Engg.)	Professor	Micro-machining, Non-traditional machining, Production Mgt.	22	Completed: 6 Ongoing : 10
Bijan Kumar Sarkar	Ph.D. (Engg.)	Professor	Operations and Information Mgt., Reliability Engg. and Tribology,	28	Completed: 8 Ongoing : 10
Ranjan Bhattacharya	Ph.D. (Engg.)	Professor	Optimization, Simulation, Manufacturing	27	Completed: 4 Ongoing : 1
Ajoy Kumar Dutta	Ph.D. (Engg.)	Associate Professor	Robotics, Sensors, Computer Vision, Microprocessor Applications, Mechatronics	22	Completed: 1 Ongoing : 3

Name	Qualification	Designation	Specialization	Years of Experience	PhD students, last 4 years
Subir Kumar Debnath	M. Tech(IIT)	Associate Professor	Robotics, Automation, Manufacturing systems, Engg. Mechanics	28	Ongoing : 1
Shankar Chakraborty	Ph.D. (Engg.)	Associate Professor	Inspection & product control, Statistics, Reliability Engg., Production Mgt.	20	Completed: 6 Submitted:2 Ongoing:4
Souren Mitra	Ph.D. (Engg.)	Associate Professor	Advanced Material Processing (AMP), Micro-Machining, Intelligent Manufacturing.	20	Completed: 6 Submitted:4 Ongoing:6
Biswanath Doloi	Ph.D. (Engg.)	Associate Professor	Advanced Machining Processes, Concurrent Engineering, Thermal Engineering, and Operations Research.	20	Completed: 4 Submitted:2 Ongoing: 9
Soumya Sarkar	Ph.D. (Engg.)	Associate Professor	WEDM, EDM, Electro-chemical deburring, optimization, Material forming	14	Submitted:2 Ongoing: 3
Debamalya Banerjee	Ph.D. (Engg.)	Associate Professor	Ergonomics, Computer Integrated Manufacturing, Prod. Management/ Industrial Engg.	14	Completed: 1 Submitted:3 Ongoing: 5
Arunanshu Shekhar Kuar	Ph.D. (Engg.)	Associate Professor	Computer Graphics, CAD, NTM, Manufacturing, Prod. Mangt.	14	Completed: 1 Submitted:1 Ongoing: 2
Biplab Ranjan Sarkar	Ph.D. (Engg.)	Assistant Professor	Non-Conventional Machining	8	Ongoing: 2

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors, visiting professors, etc.: Visiting Professors: 01
13. Percentage of classes taken by temporary faculty – programme-wise information: 1.08% of the UG Level.
14. Programme-wise Student Teacher Ratio:11.22:01
15. Number of academic support staff (technical) and administrative staff - sanctioned, filled and actual: Academic Support Staff (Actual): 13; Administrative Staff (Actual): 5
16. Research thrust areas as recognized by major funding agencies:
Advanced Machining Process (AMP), Micromachining, Robotics, Advanced Metrology, ERP, Tribology, Project management, Operations research.
17. Number and names of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received.

Title of the Project	Duration	Name of faculty	Grant	Funding
Development of Intelligent Electrochemical Deburring (ECD) system for Enhanced Finishing Characteristics of Advanced Engineering materials	2009-2012	PI: Dr. S. Mitra Co-PI: Dr. S. Sarkar	16.5 Lakh	AICTE, New Delhi
Study of Electro Discharge Machining of Engineering Ceramics	2011-2013	PI: Dr. S. Mitra Co-PI: Dr. S. Sarkar Co-PI: Dr. A. S. Kuar	12.5 Lakh	CSIR, New Delhi

Title of the Project	Duration	Name of faculty	Grant	Funding
Micro-machining of Advanced Ceramics by Pulsed Nd: YAG Laser	2007-2010	PI: Dr. B.N. Doloi CO-PI: Dr. B.R. Sarkar	6.9 Lakh	CSIR, New Delhi
Optimization Analysis of Electro-chemical Micromachining process for 3D shape generation	2010-13	PI: Prof. B. Bhattacharyya CO-PI: Dr. B.N. Doloi	38 Lakh	BARC, Mumbai
Enterprise Resource Planning (Integrated research project)	2007-2009	Co-PI: Prof. R. Bhattacharya	20 Lakh	UGC
Agent Based Modeling Systems	2008-10	Prof. R. Bhattacharya	9.2 Lakhs	AICTE
Swami Vivekananda Centre for Technical Manpower Development	2006-2012	PI: Prof. B. Sarkar Co-PI: Dr. D. Banerjee	3 Lakh	UGC

18. Inter-institutional collaborative projects and associated grants received

National collaboration: Nil

International collaboration: Nil

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

(a) Centre of Advanced Study (UGC-SAP/CAS):

Total Grant received over two crores in phase III & IV. The thrust areas were Micro Machining, Micro Manufacturing etc. Utilizing the said grant Ultrasonic Machine (USM), Electrochemical Machining (ECM) setup, Taylor Hobson Interferometer, Atomic Force Microscope (AFM) etc. were purchased in last five years. Beside this, several Research & development activities have been carried out in the thrust areas as well as different non thrust areas. Several workshops, Invited Lecturers, Conference at National and International Level have been successfully organized.

(b) Promotion of University Research and Scientific Excellence (PURSE):

Total Grant received Rs. 12 Lakhs in last five years. Utilizing the said grant Triobotester, Rockwell Hardness Tester, Polishing Machine for sample preparation and Microscope were purchased and one SRF was appointed.

(c) Technical Education Quality Improvement Program (TEQIP):

Total Grant received Rs. 20 Lakhs in last five years. Utilizing the said grant Coordinate Measuring Machine (CMM) and Microscope were purchased. One Research Scholar has been appointed under this Project.

20. Research facility/centre run by the Dept./school/centre which has:

- state recognition: Nil

- national recognition:

a) Centre of Advanced Study (CAS), funded by UGC, New Delhi.

b) Swami Vivekananda Centre for Technical Manpower Development (SVCTMD),
Funded by UGC, New Delhi.

- international recognition: Nil

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) :
141 (Last five years only as per Scopus database)

* Monographs: Nil

* Chapters in Books:

Name of Faculty	Chapter Name	Publisher	Year
Prof B. Sarkar	Fuzzy Decision Making and Its Applications in Cotton Fibre Grading.	Wood Head Publishing House (U. K.)	2011
Prof B. Sarkar	Technology Level in the	Springer(Germany)	2010

	Industrial Supply Chain: Thermodynamic Concept		
Prof B. Bhattacharyya	Chapter-13, Electrochemical Micro Machining, page No.13.1 to 13.32	Narosa, ISBN- 978-81- 7319-915-8	2010

* Edited Books:

- a) Prof B. Bhattacharyya, Dr. S. Chakraborty & Dr. B. Doloi edited books on Innovation for Sustainable Manufacturing: Proceedings of 4th International and 25th All India Manufacturing Technology Design and Research Conference (AIMTDR 2012) ISBN 9789382062752, Excel India Publishers, New Delhi.
- b) Prof. B. Bhattacharyya acted as Guest Editor of International Journal of Manufacturing Technology Research, IJMTR, published by NOVA Science Publishers, USA.

* 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.): Total Number is 253 as per Scopus Database

* Citation Index – range / average

* SNIP, SJR & Impact Factor – range / average:

Lot of research publications have been made in very high quality (in respective fields) Internationally recognized research journals like International Journal of Machine Tool and Manufacture (SNIP:4.321,SJR:2.472,Impact factor:2.877), Precision Engineering (SNIP:2.566,SJR:1.313,Impact factor:1.782), Journal of material Processing Technology (SNIP:3.107, SJR:1.268,Impact factor:2.176), Materials and Design (SNIP:2.448, SJR:1.278 Impact factor:2.805), Expert System with Applications (SNIP:2.539, SJR:1.259, Impact factor:2.339), Applied Soft Computing (SNIP:3.449, SJR:1.555, Impact factor:2.526) etc.

* h-index: 23 (Calculated on July 2013 on the basis of Scopus database publication for period 2000-2012)

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 (give details):

(a) Selected to Visit Internationally:

(i) *Prof R. Bhattacharya* acted as member of the delegation team of National Board of Accreditation(NBA), New Delhi for

- negotiating with the officials of ABET, USA for seeking membership of Washington Accord, also attended workshop organized by ABET, USA during October, 2011 in Baltimore, USA
- negotiating with the officials of Engineers Australia for seeking membership of Washington Accord, meeting held in Sydney in July, 2012 and also met with Government officials of Education Department, Australian Government in Canberra.
- negotiating with the officials of Washington Accord, USA for seeking membership of Washington Accord, meeting held at California State University, Fullerton, in Los Angeles, July 2012

(ii) *Dr. S. Mitra* was invited to visit

- Institut des sciences et technologies de Paris (Paris Institute of Technology) Paris, France in October 2010.
- Scientific-Technical Union of Mechanical Engineering, & Technical University

Varna, Bulgaria, on September 2011.

(iii) *Dr. B. Bhattacharyya* was invited to

- attend and presented research paper in the 16th International Symposium on Electromachining (ISEM-XVII) organized by China Society of Nontraditional machining, and held during 19th to 23rd April 2010 in Shanghai Jiao Tong University, Shanghai, China. The ISEM-XVII was sponsored by CIRP, CMES and NSFC.

(b) Selected to visit Nationally:

(i) *Prof B. Bhattacharyya* was invited to deliver

- Keynote address in the National Conference on “Recent Trends in Manufacturing Science and Technology”, RTMST-2013 at NITTTR, Kolkata, 18th-19th April 2013.
- Lecture on National Level workshop on Advances in Manufacturing Sciences (AMS’12), DSCET, Chennai on 08th February 2013.
- Lecture on “Electrochemical Micro-machining” for the pre-conference workshop organized by Central Manufacturing Technology Institute (CMTI), Bangalore on 20th January 2013.
- Lecture on “Electrochemical Micro-machining” for the Short term School on “Micro-manufacturing” organized by IIT Kanpur on 8th November 2012.
- Lecture on “Electrochemical Micro-machining” at NIT, Rourkela on May 11, 2012
- Lecture on “Hybrid Machining” at ISM, Dhanbad on January 11-12, 2012.
- Lecture on “Electrochemical Micro-machining” for the Short term School on “Micro-manufacturing” organized by IIT Kanpur on 30th September 2011.
- Lecture on “Electrochemical Micro-machining” for the Short term School on “Micro-manufacturing” organized by IIT Kanpur on 2nd September 2010.
- Lecture on “Electrochemical Micro-machining” for the DST sponsored 3rd SERC School on ‘Micro-machining’ organized by IIT Kanpur on 20th July 2009.
- Keynote address in the National Conference on “Recent Trends in Manufacturing Technology (RTMT’09)” at Anna University, Chennai, organized by the Department of Manufacturing Engineering during 6th & 7th March 2009.
- Lecture in the seminar on “Nano-technology- a multi-disciplinary tool for future” organized by the Mahatma Gandhi Mission (MGM), Aurangabad, Maharashtra on 28th and 29th January 2009.
- Keynote Address on “Recent Developments in Micro ECM Leading towards Nano Fabrication” in the National Seminar on “Micro and Nano Manufacturing” held at Govt. Engg. College, Pune, 5th February 2008.
- Lecture at IIT, Kanpur, for Short-term courses of QIP, AICTE and BARC, 2008.
- Lecture in Indo-US Workshop on Smart Machine Tools, Intelligent Machining Systems and Multi-scale Manufacturing, PSG College of Technology, Coimbatore, during 18th-20th December, 2008.

(ii) *Prof. B. Sarkar* was invited

- to deliver two lectures on “Leadership Management” and “Student Motivation” at Asansol Engineering College, Asansol on April 2009.
- to deliver expert lectures during AICTE sponsored “Induction Training Programming” by National Institute of Technology, Agartala on 6th and 7th May, 2009.
- to deliver an expert lecture in the DST sponsored Entrepreneurship awareness camp, Calcutta Institute of Engineering and Management, Tollygunge on 3rd September, 2009.
- to deliver lectures in the Staff Development Programme by NIT, Agartala sponsored

by AICTE during December, 2009.

- to act as a visiting professor for PG course at Jalpaiguri Govt. Engg College on “Production Technology & Management” opening on 2009-2010.
- to deliver Keynote Address in the 25th National Convention of Production Engineers & National Seminar at Tripura State Centre (Agartala) of the Institution of Engineers during May 08-09, 2010.
- to deliver address in the Faculty Development Program organized by Mechanical Engineering Department, National Institute of Technology (NIT), Agartala, Tripura during August 11-12, 2010.
- to act as Guest Speaker for a technical fest organised by TATA Consultancy Services LTD., KOLKATA on 13th July 2010 in KOLKATA.
- to conduct the training programme on “PROJECT MANAGEMENT” for WBSEDCL Engineers of District Zonal Head Quarters.
- to deliver lecture on “Soft Skills Development” at Budge Budge Institute of technology (BBIT), Budge-Budge, Kolkata-700 137 on 5th August, 2010
- to attend a meeting by All India Council For Technical Education (AICTE) in Kolkata on 29th January 2011.
- to chair the allocated Technical Session of National Conference on “Recent Trends and Advances in the Field of Eco Friendly, Plant Machineries, Automobiles, Material Handling System (NCREPMA-2011)” organized by Mallabhum Institute of Technology, Bankura on 30th January, 2011.
- to deliver lecture on “Technology and Product Selection from different R & D Laboratories” at Institute of Engineering Management, Salt Lake Electronics Complex, Kolkata- 700091 on 3rd February 2011.
- to deliver lecture at a workshop organized by St. Thomas’ College of Engineering and Technology, Kolkata on 9th June 2011
- to act as a member of the Doctoral Committee constituted by School of Management Science, Bengal Engineering and Science University, Shibpur, Howrah – 711 103 on 17th June 2011
- to visit different Technical Institution in India nominated by All India Council for Technical Education (AICTE) during the year 2011
- to attend screening committee meeting in Kolkata by All India Council for Technical Education (AICTE) on 24th May 2011.
- to conduct PhD viva-voce examination at Pune University on 11th July 2011 in PUNE.
- to deliver a talk on “Cutting Edge Tools in Decision Technology”, to M. Tech Students and faculties of Production Engineering Department, Government College of Engineering, PUNE on 12th July 2011.
- to act as an expert by Institute of Banking Personnel Selection (IBPS), Mumbai - 400101 in the interview for the recruitment of Trainee Officers in West Bengal on 24th December 2011.
- to act as an expert in the PhD registration committee meeting at Bengal Engineering & Science University (BESU), Sibpur, West Bengal on 20th December 2011.
- To act as an external expert from University by Electrical Engineering Department to the PhD Research committee meeting on 23rd December 2011 .
- To deliver a lecture on “Relevance of Swami Vivekananda in the 21st Century,” organized by the Centre for the Study of Religion and Society, Department of Sociology, Jadavpur University on 11th January 2012.
- to deliver lectures in the AICTE sponsored Faculty Development Program by Kalyani

Government Engineering College, Kalyani, Nadia -741235 on Optimization of Decision Tools using Soft Computing and Matlab” during February 1-2,2012

- to act as one of the Expert Committee Members by All India Council for Technical Education for surprise visit in AICTE approved Institutions in Bangalore during March 27-28, 2012.
- to preside over a session on “Swami Vivekananda Through Contemporary Eyes” as a part of 6th Biennial International Conference of IAAPS organized by Department of South & Southeast Asian Studies, Calcutta University on 18th December 2012
- to deliver lecture at a workshop on “ VALUE EDUCATION” organised by MCKV Institute of Engineering, Lilulah, Howrah-711204 on 21st November 2012.
- to conduct the viva- voce examination of PhD degree of West Bengal University of Technology on September 19, 2012.
- to Chair a technical Session and deliver an invited talk at National Conference on “Recent Trends in Communication, Measurement,& Control” , organized by Asansol Engineering College, Asansol, on 14th August 2012
- to deliver lecture at a workshop organised by MCKV Institute of Engineering, Lilulah, Howrah-711 204 on 21st July 2012.
- to deliver lecture at a workshop organised by St.Thomas’ College of Engineering and Technology, Kolkata on 19th June 2012.
- to conduct the viva- voce examination of M.Tech Dissertation at NITTTR, Salt Lake on 11th June 2012.
- to conduct M.Tech (P.E.) viva-voce Examination at Kalyani Government Engineering College, Kalyani, Nadia-741 235, on 6th June 2012.
- to conduct the viva- voce examination of Dual- Degree M.Tech (final year students) of Industrial Engineering & Management Department at I.I.T., Kharagpur, on 4th May 2012.
- to conduct the viva-voce examination of PhD degree by West Bengal University of Technology (WBUT), Salt Lake, on 11th April 2012.

(iii) *Dr. S. Mitra* was invited

- to deliver Lecture on “Belt Conveyors & Automated Handling” in the Short term course on “Introduction to Materials Handling”, at NITTTR. Kolkata, June 2008
- to deliver Lecture on “Laser Micro-machining” for the DST sponsored 3rd SERC School on ‘Micro-machining’ organized by IIT Kanpur on in September 2010.
- to deliver Lecture on “Taguchi Technique for Quality & Orthogonal Array in the Context of Product Design” at , NIT, Agartala on 22nd April 2011
- to deliver Lecture on “Laser Beam Welding” in the Short term course on “Welding Processes”, at NITTTR. Kolkata, 9-20th July 2012.

(iv) *Dr. B. Doloi* was invited

- to deliver a lecture on “Application of Laser in Manufacturing” on April 12, 2011 organized by Production Engineering Division, Institution of Engineering (India), 8 Gokhale Road, Kolkata-20
- to attend and Chair a technical session in 7th International Conference on Precision Engg., (7th COPEN)- at Govt. College of Engg., Pune, Dec., 2011
- to chair the Technical Session of National Conference on “Industrial Engineering” (NCIE 2011), WBUT, 17-18th February, 2011.
- to attend and presented a research paper in 3rd Int. and 24th AIMTDR Conference, Andhra University, Visakhapatnam, 13-15 Dec. 2010.
- to deliver a lecture on “Total Quality Management” in one week course on “Fundamentals of Industrial Engineering” organized by Swami Vivekananda Centre

for technical manpower development of Production Engg. Dept., Jadavpur University during 25th -31st March, 2011.

- to deliver an expert lecture on “An overview on Laser Beam Micro-machining Processes” in 4th DST SERC School on “Micro-fabrication and Micromachining Processes” in Production Engg. Dept, JU during 5th April to 10th April, 2010.

26. Faculty serving in

a) National committees b) International committees c) Editorial Boards d) any other (please specify and give details, including the name of the committee/s, position/s held, duration, etc.)

(a) National committees:

(i) *Prof. R. Bhattacharya*

is at present Coordinator, Nodal Centre of National Board of Accreditation, New Delhi for Eastern Region (Jurisdiction: WB, Bihar and North East states) Mainly organizing training programs in the following areas:

- (a) Program for Faculty members for Outcome based education and evaluation.
- (b) Program for training Evaluators
- (c) Program on preparation of Self Assessment Report (SAR)
- is at present functioning as Coordinator, Nodal Centre of National Board of Accreditation, New Delhi for Eastern Region (Jurisdiction: WB, Bihar and North East states)
- is Member of several important committees of National Board of Accreditation (NBA) e.g. Member of Core Committee, Desk Appraisal Committee, Document Preparation Committee etc.
- acted as Chairman of visiting team of NBA for accreditation of UG Program of different Engineering Institutions.
- is Member for Vocational Training Education, AICTE, New Delhi.
- acted as an Expert Member of AICTE visiting team for approval of new Engineering College and Polytechnics.
- acted as an expert member of AICTE visiting team for surprise visit of engineering college.
- acted as AICTE nominee for the UGC expert committee to assess the physical and academic infrastructure of Jodhpur National University.
- is at present Member of the Advisory Committee of several Academic Staff College of different Universities throughout the nation (e.g. Mizoram University, Sambalpur University, Calcutta University, North East Hill University etc.)
- acted as Member of selection committee for selecting Director and Associate director for Academic Staff College, Mizoram University
- acted as Member of the Screening Committee for selecting the college for scheme of UGC “College for Potential for Excellence” under Utkal University, Bhubaneswar, Orissa.
- acted as Member of the Expert Committee of UGC for allocation of subjects related to Orientation Program, Refresher Course and short-term course to all Academic Staff Colleges in India.
- is at present, Member of University Council for Sidhu Kanho Birsha University, Purulia.
- acted as a member of AICTE team for investigating ragging cases in engineering colleges in West Bengal (Govt. Engg. College, Jalpaiguri and Siliguri Institute of Technology, Siliguri).

- is at present, UGC Nominee for the Expert Committee for conferment of fresh Autonomous Status to Narula Institute of Technology, Agarpara, Kolkata — 700109.
- (ii) *Prof B. Bhattacharyya* acted as member of
- National Advisory Committee (NAC), All India Manufacturing Technology, Design and Research conference (AIMTDR).
 - International Advisory Committee, An International Conference on Precision, Meso, Micro and Nano Engineering (COPEN).
 - “Technical Selection Committee” of CMERI, Durgapur held at CMERI, Durgapur on 19th February 2008. Dr. A. J. Banerjee, Scientist & Head-MTG, of CMERI, Durgapur.
 - the oral examination board to conduct the oral examination for the award of Ph.D. Degree in the Department of Manufacturing Engineering, Anna University, Chennai on 8th May, 2008.
 - Selection Board for selection of Executive Trainees for BrahMos Aerospace Private Limited, Hyderabad will be held at Kolkata on 21st and 22nd June, 2008.
 - the viva-voce board to conduct the oral examination for the Ph.D. thesis in the Department of Mechanical Engineering, IIT, Kharagpur on 10th July, 2008.
 - the Assessment Committee in the area of “Material Science & Engineering” by the Council of Scientific & Industrial Research (CSIR), New Delhi.
 - Expert committee for the selection of faculty members of Mechanical Engineering Department of Sikkim Manipal Institute of Technology (SMIT), Majitar, Sikkim.
 - the Project Monitoring Group (PMG), nominated by SERC division of DST, New Delhi for reviewing progress of the proposal on Manufacturing Engineering supported at IIT-Chennai.
 - the Selection Committee as a Subject expert for the selection of faculty members at Production Engineering Department of College of Engineering, Pune.
 - Of the Recruitment Board for the recruitment of Faculty and Research Scholar Positions of the Production and Mechanical Engg. Dept. of BIT Deoghar Extension Centre, Deoghar.
 - the viva-voce board to conduct the oral examination for the Ph.D. thesis under Faculty of Engineering and Technology of PEC University of Technology.
 - the Board of Course Studies (BOCS) meeting in the Department of Mechanical Engineering & Mining Machinery Engineering of Indian School of Mines (ISM), Dhanbad.
 - Hearing Committee at AICTE Head-quarter, New Delhi on 4th October 2012.
 - Panel of one day DRDO workshop on “Advanced Manufacturing Technology-2013” to be held at DRDL, Hyderabad on 4th January 2013.
 - Selection committee for interview of the Faculty Members of Production Engineering Dept., NIT Agartala
 - the group for Advance Manufacturing Process under the Materials and Manufacturing Panel of the AR & DB, and has been invited to attend a meeting held at IISc, Bangalore on 12.10.2012.
- (iii) *Dr. S. Mitra*
- is Member of the Editorial board of the Jr. of Institution of Engineers, published by Elsevier.
 - acted as Expert Member of visiting team of NBA for accreditation of UG Program of different Engineering Institutions (2013).
 - acted as Member of selection committee for selecting Scientist of CSIR (CSIR, Chandigarh, 2011).

- was the member of Governing body council of MSME Kolkata during 28.05.2009-27.05.2011.
- (iv) *Dr. B. Doloi* was the member of Governing body council of MSME Kolkata during 28.05.2011-27.05.2013.
- (b) International committees:
- (i) *Dr. S. Mitra* acted as member of the organizing committee of the 11th INTERNATIONAL CONGRESS on "MACHINES, TECHNOLOGIES, MATERIALS" organized at Varna, Bulgaria
27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) conducted:
- a. *Prof. B. Bhattacharyya* organized DST sponsored 4th SERC School on "Micro Fabrication and Micromachining Processes", April 5–10, 2010.
 - b. *Prof. Bijan Sarkar* organized UGC-ASC JU sponsored 3-week Refresher Course on "Inner Engineering: Opportunities & Challenges" during 18th June 2012 – 7th July, 2012.
 - c. *Prof. Bijan Sarkar & Dr. Souren Mitra* organized UGC-ASC JU sponsored 3weeks refreshers course on "Reliability, Availability & Maintainability Engineering in Industry" from June 22 to July 11, 2009.
 - d. *Prof. Bijan Sarkar & Dr. Debamalya Banerjee* organized UGC-ASC JU sponsored 3 weeks refreshers course on Refresher Course on "Advances in Engg. Management" in the year 2008.
 - e. *Prof. Bijan Sarkar & Dr. Souren Mitra* organized UGC-ASC JU sponsored 3 weeks refreshers course on "Soft Computing Applications in Decision Technology" from June 28 to July 17, 2010.
 - f. *Dr. B. Doloi & Dr. B.R. Sarkar* organized one week course on Non-Traditional Machining Processes, in Production Engineering Department, JU, on October 17-21, 2011.
 - g. *Dr. S. Mitra* organized short term course on 'Recent Advances in LASER Technology & its Applications', 20-22th 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 :
Sri Debkalpa Goswami 4th year undergraduate student is perusing 10 months research project funded by cLINK Erasmus Mundus program of the European Union at the University of Bremen, Germany
29. Awards / recognitions received at the national and international level by
- Faculty:
Prof B. Bhattacharyya received
 - a. Certificate of Achievement–2009: Indian Society for Technical Education, New Delhi for having guided the best M. Tech thesis in Mech. Engg.,
 - b. Institution Award & Gold Medal–2009: The Institution of Engineers (India), Kolkata for the research paper published in the Institution journal during 2009-10
 - c. Certificate of Achievement – 2008: Indian Society for Technical education, New Delhi for having guided the best M. Tech thesis in Mech. Engg.,
 - Doctoral / post doctoral fellows
 - Students (Give details)
Sri Debkalpa Goswami 4th year undergraduate student awarded scholarship for 10

months research project funded by cLINK Erasmus Mundus program of the European Union at the University of Bremen, Germany

30. Seminars/Conferences/Workshops organized and the source of funding (national / international) with brief details (mention any notable features):

Conferences Organized:

- a. Production Engg dept (Organizing Secretary Prof. B. Bhattacharyya) organized the silver jubilee occasion of the most prestigious, reputed and globally accepted 4th International & 25th All India Manufacturing Technology, Design and Research conference (AIMTDR-2012), December 14-16, 2012. The Conference was funded by UGC, CSIR, SERC, Ordinance Factory Board (OFB), Taylor Hobson etc.
- b. Dr. S. Mitra Organized a National Conference on 'Recent Advances in Manufacturing Technology & Management (RAMTM)', 19th -20th Feb, 2010. The Conference was funded by CSIR, BRNS, UGC etc.

Workshop Organized:

- c. Prof. B. Bhattacharyya organized National Workshop on "Nano Technology" March 2009, July 2012. Funded by CAS, UGC.
 - d. Prof. B. Bhattacharyya organized National Workshop on "Micro Machining and Nano Fabrication" August 29-30, 2008. Funded by CAS, UGC.
 - e. Dr. S. Mitra organized two days workshop on 'Advanced Welding Process and Selection Consideration' on March 2013. Funded by TEQIP Ph-II.
 - f. Prof. B. Sarkar organized one day workshop on "Cutting Edge Tools in Decision Technology" in Production Engineering Department, JU, July 2011.
 - g. Prof. Bijan Sarkar organised one day workshop on "Constraints Management" in Production Engineering Department, JU, on 18th June 2011.
31. Code of ethics for research followed by the department:
Code of ethics in research is explicitly included in the subject namely 'Research Methodology' and research students have to go through this subject. The code of ethics as outlined in the course is followed by the Faculty of Engg & Technology (FET) and as part of the FET, Prod Engg Dept also follows the same.

32. Student profile programme-wise (in the Current Semester):

Name of the Programme (Refer to question no. 4)	Applications received	Admitted		Pass percentage (w.r.t. last graduating batch)	
		Male	Female	Male	Female
B. Prod. E	Through WBJEE	122	12	97%	-
M. Prod. E (Production Technology & Production management)	176	12	1	91%	100%
PhD(Engg)		73	8		

33. Diversity of students

Name of the Programme (Refer to q. no. 4)	% of students from the same university	% of students from other universities within State	% of students from universities outside the State	% of students from other countries
B. Prod. E				
M. Prod. E (12-13)	15%	62%	23%	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	
PG to M.Phil.	
PG to Ph.D.	
Ph.D. to Post-Doctoral	

Student progression	Percentage against enrolled
Employed <ul style="list-style-type: none"> Campus selection Other than campus recruitment 	Campus selection: 93.75% Other than campus recruitment: Nil (Note: About 32% students got more than one job from Campus Interview)
Entrepreneurs	01

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	64.28%
from other universities within the State	21.42%
from universities from other States	14.30%
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 (2008 – 2013): 01(One)

38. Present details of departmental infrastructural facilities with regard to

a) Library: Completely Air Conditioned Library equipped with more than twenty four thousand text books, reference books & numerous International & National journals. There is also facility for reading by twenty number of students at a time. To have enhanced accessibility to all readers, apart from normal working hours, Library is also kept open on Monday, Wednesday and Friday from 5:30PM to 7:00PM. Beside this almost every computer in the Dept are connected to the total University network and there is access to Digital Library from all these computers. Nevertheless, there is also facility to access Digital Library even from outside the campus.

b) Internet facilities for staff and students: Internet and Wi-Fi facilities have been provided in all laboratories, class rooms, staff rooms and faculty rooms.

c) Total number of class rooms: 07

d) Class rooms with ICT facility: 07

e) Students' laboratories: 16

f) Research laboratories: 12

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

a) From the host institution/university

Sl	Name	Candidate Type	Status
1	Tarun Kr. Jana	Doctoral	Undergoing
2	Chinmoy Jodder	Doctoral	Undergoing
3	Amitava Roy	Doctoral	Completed
4	Ashim Gopal barman	Research Fellow	Undergoing
5	Oindrila Sengupta	Doctoral	Undergoing
6	Swarup Paul	Doctoral	Undergoing
7	Ashish Sarkar	Doctoral	Undergoing
8	U. Mondal	Doctoral	Submitted
9	Krishnendu Mukherjee	Doctoral	Undergoing
10	Prasenjit chatterjee	Doctoral	Submitted
11	S. R. Maity	Doctoral	Submitted
12	Kanika Prasad	Doctoral	Undergoing
13	Goutam Paul	Research Fellow	Undergoing
14	Mukander Sekh	Research Fellow	Submitted
15	Monoj Singh	Research Fellow	Undergoing
16	Shibsundar Das	Research Fellow	Undergoing
17	G. Selvakumar	QIP Fellow	Submitted
18	Mrs Joshephine Peter	Research Fellow	Undergoing
19	Abhishek Sen	Research Fellow	Undergoing
20	Somnath Das	Research Fellow	Undergoing
21	Tamal Ghosh	Research Fellow	Undergoing
22	Bijan Mallik	Research Fellow	Undergoing
23	Prasun Chatterjee	Research Fellow	Undergoing
24	Susanta Chanda	Doctoral	Undergoing
25	Anupam Haldar	Doctoral	Undergoing

b) From other institutions/universities

Sl	Name	Candidate Type	Status
1	M. Kannan	QIP Fellow	Completed
2	Dilip Kr. Biswas	Doctoral	Undergoing
3	G. Shasi Kumar	Doctoral	Completed
4	Anupama Chanda	Doctoral	Undergoing
5	Balaram Dey	Doctoral	Undergoing
6	Bipradas Bairagi	Doctoral	Undergoing
7	Tuli Bakshi	Doctoral	Undergoing
8	Arindam Sen	Doctoral	Undergoing
9	Arindam Chanda	Doctoral	Undergoing
10	Abhijit Chakraborty	Doctoral	Undergoing
11	Sushmita Banerjee	Research Fellow	Submitted
12	P. J. Nikumb	Doctoral	Undergoing
13	A.K. Jha	QIP Fellow	Undergoing
14	Ishita Sengupta	QIP Fellow	Undergoing
15	Bivas Mallick	Doctoral	Undergoing
16	Sanjay Chottoraj	Doctoral	Undergoing
17	Suresh Kumar	QIP Fellow	Undergoing
18	Arnab Banerjee	Doctoral	Submitted
19	Manick Chandra Das	Doctoral	Undergoing
20	Sushanta Kr. Gauri	Doctoral	Completed
21	V. M. Aithawale	QIP Fellow	Completed
22	Monak bag	Research Fellow	Completed
23	Rina Chakraborty	Doctoral	Completed
24	Prasad Karande	QIP Fellow	Undergoing
25	Anant V. Khandekar	QIP Fellow	Undergoing
26	Rishi Dwidevi	Research Fellow	Undergoing
27	Suprakash Mondal	Doctoral	Undergoing
28	Nilanjan Roy	Research Fellow	Undergoing
29	Debasis Das Adhikari	Doctoral	Undergoing
30	Bappa Acharjee	Research Fellow	Completed
31	Dipanjana Das Poddar	Doctoral	Completed
32	Goutam Kumar Bose	Doctoral	Completed
33	Ranjib Biswas	Doctoral	Submitted
34	Nilrudra Mandal	Doctoral	Undergoing
35	U.V.Rathod	QIP Fellow	Undergoing
36	L.C. Vela	QIP Fellow	Submitted
37	Golam Kibria	SRF	Submitted
38	Debabrata Dhupal	QIP	Completed
39	Biplab Ranjan Sarkar	Faculty	Completed
40	Nilabha Sankar Mitra	Part Time	Completed
41	Srinish Dhobe (QIP)	QIP Fellow	Completed
42	Bikash Ghosal	Doctoral	Undergoing
43	V. U. Rathod	QIP Fellow	Undergoing
44	S. M. Maity	Doctoral	Undergoing
45	Sri B. B. Pradhan	Doctoral	Completed
46	Jagannath Munda	Research fellow	Completed
47	Sanchita Ghosh	Doctoral	Completed
48	Tirtharaj Sen	Doctoral	Undergoing
49	Mousumi Malakar	Doctoral	Undergoing
50	Saurav Nandi	Doctoral	Undergoing
51	Prithwiraj Mal	Doctoral	Undergoing
52	Subrata Maitra	Doctoral	Undergoing
53	Subhasis Das	Doctoral	Undergoing
54	Premanshu Mukherjee	Doctoral	Undergoing
55	Ashish Mitra	Doctoral	Undergoing
56	Srijan Pal	Doctoral	Undergoing

40. Number of post graduate students getting financial assistance from the university. (Give details.) GATE Scholarship: 09; GATE Scholarship (Course: M. Prod. E.: 2012-2014)

Sl	Roll No.	Name	Specialization
1	001211702002	Md.Niamot Ali	Technology
2	001211702003	Santosh Kumar	Technology

3	001211702004	Pravin Jain	Management
4	001211702005	Ranashsree Das	Management
5	001211702008	Bhaskar Biswas	Technology
6	001211702010	Lidiya Priyadarsini Korsapati	Management
7	001211702011	Anirudha Bhattacharjee	Technology
8	001211702012	K.Tarkeswar	Technology
9	001211702014	Kunal Mishra	Management

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

42. Does the department obtain feedback from

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

All faculties are Member of Board of Studies (BOS). All discussion regarding weakness, progress in achieving learning outcome, teaching learning methodology and evaluation are discussed periodically in BOS and curricula are modified accordingly in every five years.

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

There is a separate feedback form for student to collect opinion regarding curricula and teaching-learning evaluation anonymously. This feedback is utilized to improve learning outcome of the program.

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

There is a very active Alumni Association at Jadavpur University and most of the faculties are in close interaction with them and many faculties of the department are in fact member of the said association; Department usually get feedback from them informally. Beside this Department gets the feedback regarding impression of the employer from Placement & Training Office of Jadavpur University.

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

1	Mr. Ashok Bhattacharyya Deputy General Manager (Planning) Hindustan Aeronautics Ltd. Bangalore India	2	Mr. Monojit Bandyopadhyay Dy. General Manager (Mech. Oppr.) Jindal Poly Films Ltd. Nasik Mahavashtra, India
3	Dr. Rajkumar Roy Professor Department of Enterprise Integration School of Industrial & Manufacturing Science Crainfield University, Crainfield, Bedford, U.K.	4	Dr. Diptiprasad Mukherjee Professor & Head Electronics & Communication service Unit Indian Statistical Institute, Kolkata. India
5	Mr. A. K. Jana General Manager (Projects) GAIL (India) Ltd. New Delhi, India	6	Dr. Ranjan Sen Head & Chief Scientist Precision Engineering & Metrology Laboratory CMERI, Duragapur
7	Mr. Manoj Kumar Kar Sr. Vice President (Operations) AGI Glaspac Ltd Hyderabad India.	8	Mr. Debasis Chakraborty Chief Engineer, MMH M. N. Dustur & Co (P) Kolkata India

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts: Several Special Invited Lectures and training programs were organized during last five years. The details of organized Lectures and training Program are as follows:

Date	Subject
13.03.2008 and 14.03.2008	Lecture delivered by Prof. V. K. Jain, IIT, Kanpur, on “Micro and Nano Machining”. Lecture delivered by Prof. S. Gowri, Anna University, Chennai on “Tool Based Micro Machining (TBM)”.
16.03.2009	Lecture delivered by Dr. A. K. Chattopadhyay, Professor & Head, Mechanical Engg. Deptt. IIT Kharagpur, on “Advancement in Super-abrasive Grinding Wheel through Surface Coating”
04.04.2012	Lecture delivered by Prof. A. K. Nath, Professor, Mechanical Engineering Department, Indian Institute of Technology, Kharagpur, on “Laser Processing: macro- to nano scale breaking the diffraction limit”.
26.02. 2013	Lecture delivered by Prof. P. K. Roy, Industrial Engg. Deptt., IIT, Kharagpur on “Industrial Engineering”.

List of Training Program organized

Date	Subject
25.06.2008 - 26.06.2008	Metatech, Pune given training on Electrochemical Machining (ECM) System (EC MAC-II).
02.06. 2008	Holmarc Opto-Mechatronics (P) Ltd, Cochin given training on Motorized XYZ gantry stage and Position controller.
19.09. 2008	Training was organized on “Enterprise Resource Planning (ERP)” of Microsoft Dynamics.
23.05.2013- 24.05.2013	Taylor Hobson Limited given training on Talysurf CCI Lite Non-contact 3D Profiler.
21.06.2013	Training was organized on Nanosurf easyScan 2 Basic AFM package of Nanosurf AG, Switzerland.

45. List the teaching methods adopted by the faculty for different programmes.
A stronger emphasis is placed on teaching student how to read and apply information. Students are encouraged to read widely, to question and analyze what they have read, and to discuss openly their own ideas in seminars and tutorials. The main teaching and assessment methods in Production Engg Dept are:
(1) Lecture Classes (2) Laboratory practical classes (3) Individual & Collaborative Projects (4) Seminar & Tutorial Classes (5) Vocational Training
Beside this continuous assessment is made through class test, projects and laboratory work throughout the semester and are taken into account when deciding the final marks. At the end of semester students have to sit for three hours written exams.
46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Program Objectives:

The mission of the Production Engineering Department has been formally defined as follows: “The Production Engineering Department provides quality education to a diverse student population who will be empowered to develop their full potential as engineers, leaders and citizens of a global society. The program provides the opportunity to demonstrate and apply knowledge successfully to meet engineering challenges, function competently in multidisciplinary teams, communicate clearly and effectively, listen keenly, and understand professional and ethical responsibility. Graduates are enabled to contribute to the enhancement of the quality of life and wealth of society, their community, the manufacturing industry, and themselves, through full participation and leadership in the manufacturing enterprise.”

The Production Engineering Department at Jadavpur University is dedicated to prepare students for manufacturing engineering careers in diverse manufacturing

enterprises. The following program educational objectives have been developed to address the local, state, and national opportunities or needs:

1. Develop Production Engineering graduates with a thorough understanding of engineering principles
2. Provide comprehensive preparation for careers in manufacturing industry
3. Introduce graduates to research methods and experiences
4. Empower individuals from underserved populations to contribute leadership and service to society
5. Instill in graduates the University's core values of honesty, hard work, caring and excellence.

Learning Outcomes:

To achieve the Production Engineering program objectives, the Production Engineering Department has designed a curriculum and developed strategies that measurably achieve the following student academic outcomes:

1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to design and conduct experiments, as well as to analyze and interpret data.
3. An ability to design a system, component, or process to meet desired needs subject to constraints.
4. An ability to function on multi-disciplinary teams.
5. An ability to identify, formulate, and solve engineering problems.
6. An understanding of professional and ethical responsibility.
7. An ability to think, listen and communicate effectively.
8. An understanding of the impact of engineering solutions in a global and societal context.
9. Recognition of the need for, and ability to engage in life-long learning.
10. Knowledge of contemporary issues.
11. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Additionally, our students are prepared for career success by demonstrating that they have proficiency in:

- Proficiency in materials and manufacturing processes: understanding the behavior and properties of materials as they are altered and influenced by processing in manufacturing.
 - Proficiency in process, assembly and product engineering: understanding the design of products and the equipment, tooling and environment necessary for their manufacture.
 - Proficiency in manufacturing competitiveness: understanding the creation of competitive advantage through manufacturing planning, strategy and control.
 - Proficiency in manufacturing systems design: understanding the analysis, synthesis and control of manufacturing operations using statistical and calculus based methods, simulation and information technology.
 - Proficiency in laboratory practices: graduates must be able to measure manufacturing process variables in a manufacturing laboratory and make technical inferences about the process.
47. Highlight the participation of students and faculty in extension activities.
- a. Participation of students and faculty in extension activities through Swami Vivekananda Centre for Technical Manpower Development (SVCTMD):
Swami Vivekananda Centre for Technical Manpower Development (SVCTMD) funded by UGC, under Epoch making Social Thinkers of India was established in Production Engg Dept during 2006 by Prof. B. Sarkar. The Centre offered the following short term

courses for the underprivileged section in order to impart training and empower them with modern technologies for their upliftment in the society.

- (a) CNC Machine & Robotics
- (b) Advanced Machining processes (AMP)
- (c) Fundamental of Computers and internet.
- (d) Fundamentals of Industrial Engineering
- (e) Industrial Communication
- (f) Office Management

Faculty members as well as students were actively involved in the above program. Dr. Debamalya Banerjee and Dr. Bijan Sarkar visited Malda Polytechnic, Malda, West Bengal on 3rd and 4th April, 2009 to deliver lectures to all students, staff and faculty members about the technical education as expounded by Swami Vivekananda. Beside this a two-day seminar on 'Leadership Management and Personality Development' was organized by Swami Vivekananda Centre for Technical Manpower Development (SVCTMD) in Ramakrishna Mission Shilpapitha, Belgharia, West Bengal in collaboration with DTE, Govt. of West Bengal, on 6th -7th March, 2010.

(b) Blood Donation Camp:

Production Engg Dept organizes blood donation camp every year on 23rd Feb in collaboration with Association of Voluntary Blood Donors to commemorate the birth anniversary of Late Prof G.C. Sen. Faculties, staff and students actively participate in the program by voluntarily donating blood as a gift of love to the ailing patient needing blood transfusion in hospital & other health care centers. Every years around 40 (forty) units of blood are collected by the Govt Blood Bank. In the program some of our faculties deliver speeches mentioning the scarcity regularly faced by the blood bank and inspire the students in participating blood donation activity.

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

A lot of “beyond syllabus scholarly activities” haven been arranged and organized by Swami Vivekananda Centre for Technical Manpower Development (SVCTMD) under Production Engg Dept. A two-day seminar on 'Leadership Management and Personality Development' was organized by Swami Vivekananda Centre for Technical Manpower Development (SVCTMD) at Ramakrishna Mission Shilpapitha, Belgharia, West Bengal in collaboration with DTE, Govt. of West Bengal, on 6th-7th March, 2010. Speakers from industry as well as academic institutes like JU, BESU and TELCO addressed the gathering on different aspects and dimensions of the subject. Apart from this, several Lectures (shown in Table below) were also organized:

Date	Topic	Speaker
January 2011	Use of Mobile Phones by MSE Sectors in India	Dr. Kala C. Seal Professor Applied Information Management Systems College of Business Administration Loyola Marymount University, , Los Angeles,U.S.A.
January 2011	Indian Ethos on Technology Management	Dr. Pawan Kumar Singh, Professor, IIM. Indore
February 2011	Self development for students and executives	Swami Nikhileswarananda, Head of Vadodara centre of Ramakrishna Mission

Apart from this Swami Vivekananda Centre for Technical Manpower Development (SVCTMD) and National Service Scheme (NSS), JU jointly organized a seminar on “MIND MANAGEMENT” on 12th September 2011 at Dr. K. P. Basu Memorial Hall, JU. Distinguished speakers from different backgrounds discussed and highlighted the importance of this topic. There were more than one hundred participants present in the seminar. The question answer was also attractive and illuminating.

Apart from conventional learning outlined in curricula, students of Production Engg Dept also carried out research studies. They have published several research works in many International Journals.

Research Publication by Students (in last five years):

1. Barman, D., D. Goswami, and B. Kundu, An optimum longitudinal wet fin without the “length-of-arc” assumption. HVAC&R Research, 2013. 19(4): p. 444-456.
2. Mukherjee, S., D. Goswami, and B. Roy, Solution of Higher-Order Abel Equations by Differential Transform Method. International Journal of Modern Physics C, 2012. 23(09): p. 1250056.
3. Goswami, D. and S. Chakraborty, Optimal Process Parameter Selection in Laser Transmission Welding by Cuckoo Search Algorithm, in International Conference on Advanced Engineering Optimization Through Intelligent Techniques, R.V. Rao, Editor 2013: Surat, Gujarat, India. p. 40-44.
4. Mukherjee, R., Goswami, D. and S. Chakraborty, ‘Pneumatic optimization of Nd: YAG LASER beam machining process using artificial Bee Colony Optimization’ Journal of Industrial Engineering, Article in Press.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.
UG & PG Programs are approved by AICTE and PhD Program is approved by UGC.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Lot of research studies have been made in different fields of production engineering and management. Following are the significant contributions made in last five years;

- Path breaking research has been carried out in the field of high precision Wire Electrical Discharge Machining (WEDM). A novel method has been developed to measure the wire lag in WEDM. This fundamental research study is extremely helpful in generating high precision profile in WEDM. Beside this many significant contribution has also been made for improvement of corner accuracy in WEDM.
- The research finding in the area of ECDM will lead to exploration of the most effective parametric combinations for enhancing machining rate and accuracy during micro machining of advanced engineering ceramics.
- A Traveling Wire ECDM system has been developed for effective micro machining of non-conductive materials like ceramics, composite etc.
- Research findings in the area of Wire Electro Discharge Machining (WEDM) of advanced engineering materials i.e. titanium alloys, Al/SiC MMC will provide effective and useful economical solutions to the machining problems faced by the modern manufacturing engineers during processing of advanced engineering materials.
- Experimental investigation has been carried out for generation of complex profile in Bio-ceramics through USM. Optimal settings of different USM parameters have been searched out for achieving high quality machining.
- Experimental results and analysis on CNC Nd-YAG Laser micro machining will fulfill the expectation of the manufacturing engineers working in the area of advanced machining technology to deal with the needs of optimal parametric setting.
- Development of Nd:YAG Laser micro-turning system & its utilization for generating the cylindrical surface on ceramic materials. Beside this, in-depth study has been made to investigate Laser marking process of ceramic through experimental study considering different significant laser marking parameters for improving marking quality.

- ECM process has been investigated for efficient machining of titanium samples to be utilized for bio-medical applications.
- The experimental investigation utilizing the developed Electrochemical Micromachining (EMM) setup fulfills the crucial requirements of the micro-machining operations. Research findings have great potential to solve the challenging problems faced by the ultra-precision manufacturing industries in generating micro-hole and micro-profile.
- Investigation has been made to develop polarity-changing strategy for micro-EDM setup. Investigation of different micro-EDM characteristics utilizing rotary micro-tool and abrasive mixed dielectrics during machining of die steel and titanium alloy (Ti-6Al-4V) was carried out.
- Generation of micro-channel and micro features applying anodic dissolution principle.
- Development of Electrochemical Micromachining (EMM) set-up for 3D fine pattern generation for applications in aerodynamic bearings.
- Development of Microprocessor based Electrochemical Machining (ECM) setup and analytical models for optimal machining of Titanium.
- Lot of research studies have been carried out in the field of application of various non conventional optimization technique for solving different real life technical and managerial decision making problems.
- Research studies have been carried out in recognition of quality control chart pattern using shape features.
- Exploration of industrial and traffic noise research on areas, hitherto unattended. Apart from this, postural analysis on people working in common machine tools (e.g. shaping machine, lathe machine etc) & thereby suggesting for design change on those.
- Robotics-path planning strategies under multiple obstacle environment have been developed
- Reversed Engineering based Product Development techniques have been applied to real life product.

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

Weaknesses	Strengths
1. Not enough space in the Dept. 2. Lack of formal mechanism to collect feedback from industry and alumni in a systematic manner. 3. Shortfall in faculties sometimes resulting in high teaching load 4. Scarcity of fund to support high end research project, maintenance of existing sophisticated machines and future expansion. 5. Absence of automation of information processing technologies using an appropriate reliable software and fast information system.	1. This Dept belongs to a five star category University and as well as University of excellence status which is situated at the heart of a metro city like Kolkata. 2. It is pioneering Centre of learning in Manufacturing Sciences and Production Management in the academic map of India. This fact is evident from high demand from top ranking students to enter in the Production Engg Dept. Almost every students are getting good job from campus itself. 3. Department received several recognitions, such as DSA, COSIST, CAS (Ph. I, II, III & IV), FIST and many others from UGC, DST, CSIR, MHRD, AICTE, BARC, BRAN, AR & DB etc.,

	<p>for its potential and excellence in teaching and research activities.</p> <p>4. In fact the best quality teaching and research facilities are provided at the lowest price. Average ages of faculties are comparatively less and as such are very energetic. Most of the teachers are recognized nationally and internationally for research and leadership in respective fields.</p> <p>5. State of art laboratories equipped with international standard machines and instruments to support world class research work.</p>
Challenges	Opportunities
<p>1. Faculty recruitment and promotion suffers for a long time due to various reasons which are sometimes beyond the control of the authority itself.</p> <p>2. Performances of Indian universities are very poor in global ranking. In near future more number of universities (e.g. private, foreign universities) will compete to occupy their position in higher education sector.</p> <p>3. Lack of steady assured uninterrupted flow of fund to sustain quality research and teaching of the Dept. There is also internal competition due to limited funding.</p> <p>4. Inadequate effort to promote brand image of Production Engg Dept in its areas of excellence, value and quality.</p> <p>5. Decline in enthusiasm and initiative among few faculties and staff members due to job security and lack of appropriate incentives to motivate them.</p>	<p>1. To start UG and PG Degree Evening Courses to cope up the growing demand in our society at various levels. Scope for offering interdisciplinary as well as inter-institutional program may also be explored.</p> <p>2. There is increasing need for different kind of training to run high end machines, instruments and applications software in modern manufacturing industries and as such there is a very bright prospect in opening up of various kinds of long and short term training courses.</p> <p>3. There is a scope to increase earning through patent and consultancy in the relevant areas of advanced manufacturing technology and to provide relevant technology solutions.</p> <p>4. Implementation of Campus Automation through in-house ERP Solution to run the campus more efficiently even by using much less manpower and simultaneously open up an ERP software training centre.</p> <p>5. Develop a differentiated strategy within the traditional research university to attract increased research funding, and through pursuit of partnering/alliance strategies.</p>

52. Future plans of the department (in as much detail as possible):

Where we are and why we need improvement

Jadavpur University is among the top ranking University of the nation and as per National Institute of Science, Technology & Development Studies (NISTADS) report JU

ranks first among top Engineering and Technology Universities and second in number of publication and fourth in performance index among the Indian Universities and even ranked ahead of several IITs. Beside this NAAC (UGC) has accredited Jadavpur University as FIVE STAR level and subsequently it has been awarded as University of Excellence status. Although, no separate ranking for individual department has been carried out formally, but analysis from SCOPUS international bibliographical database reveals that in terms of research performance, Production Engg Dept is among top five departments considering all Mechanical, Manufacturing and Production Engg Dept of different leading IITs and Universities in our nation. Thus undoubtedly Production Engineering Department is a pioneering Centre of learning Manufacturing Sciences and Production Management in the academic map of India. The department has a very good track record in respect of employment of the student. Almost every student are getting job and many of them even are getting more than one job from campus interview. The most important is its excellent performance in the field of research and in fact as per Scopus database, research performance is it par or even better than similar category department of different IITs. The department has been awarded for the Center of Advanced Study, Phase- IV Program from UGC, New Delhi for its excellent research performance.

India as a nation is positioned at 12th rank among the top 20 countries in Science & Technology according to a study conducted by the NISTADS and whereas rank of Japan and China are 3rd and 5th respectively. In that study it was also pointed out that amount of research contribution of Indian Universities are poor compared to the national institutes of importance and research institutions. Ranking of Indian Universities as a whole are very poor from a global perspective. In fact Chinese universities outrank their Indian counterparts in global rankings regularly. It is really unexpected because rank of India is quite good (12th) in terms contribution towards Science and Technology and our nation has already produced several individual world class researchers, academicians, and students and thus there can't be any reason for which Indian universities will fail so poorly in global ranking (Quacquarelli Symonds (QS) world University ranking there is not a single Indian University up to 400 rank). Jadavpur University already possesses many qualities shared by the nation's best universities and thus has potential to achieve a remarkable position in at least in Asian ranking. The region has a tradition of greatness achieved through the creativity. There are strong reasons to believe that our University as well as our department can become an International standard public research place with focused centers of excellence. Lot of strategic future planning and their implementation has to be done in order to achieve this.

How we can achieve the goal

We aspire to be a leader in research and education in emerging areas of technology. We will be a valued partner to industry, government, as well as with local schools, community colleges, universities, and institutions. We will be among the most creative, innovative department. One of University's great assets is its geographical location i.e. it is situated at the heart of a metro city like Kolkata. As we create our future, we will do so in a way that builds on the nexus of the University and our community. To achieve this following Critical Strategy will be implemented:

1. Increase the student number and faculty size: Although we have history of increasing the number of students in last few years but faculty size has not increased in last decade. Number of faculty has also great impact on total research output. Department must grow its faculty if it is to compete at international level. New faculty (if possible from different countries) will be appointed in areas of greatest opportunity for research, discovery and contribution to our region's success. This will also help in accomplishing University's

goal for external research funding as well. Beside this special emphasis will be given for increasing the number of international students.

2. Preparing Students: Above all else, the purpose of universities is to educate students and to prepare them for a lifetime of contribution, leadership, and personal fulfillment. Education of students is a critical element of this strategic plan.

3. Strengthening Research activity: Plan to promote intense research by Building the requisite infrastructure and administrative structure to support a top-tier research centre. Beside this incentives will be provided for promoting latest cutting edge research. Interdisciplinary and inter-institutional research and development will be encouraged through schools and centers. In this connection it may be pointed out that Department has already received several projects from DSA, COSIST, CAS (Ph. I, II, III, & IV), FIST and many others from UGC, DST, CSIR, MHRD, etc., for its potential and excellence in teaching and research activities. We have a future strategy to increase the annual budget for research expenditure gradually.

4. Putting more emphasis on publicity: The Department will tell its story better to improve brand image. The Department will communicate its unique strengths and accomplishments with all major stakeholders which include prospective students and their parents, current students, faculty and staff, alumni, employer of our student, research sponsors, donors and prospective donors, elected officials, and thought leaders in our region, state, and nation. High priority will be placed on spreading the news of achievement of student and faculty through university website. Newsletters, Annual Report and other forms of publications (paper and electronic) will be developed and used in an integrated communication program.

5. Private Funding: National and state support provides the bare essentials of operating revenue, but private funding creates true excellence. The Department will prioritize private fund raising. Emphasis will be placed on creation of facilities (e.g. laboratory, seminar Hall etc.) through sponsorship by industry or corporate bodies. However, all these activities need prior approval from Executive Council of our University.

6. Intense Interaction with Industry & Alumni: Special emphasis will be given to set up platforms for close interaction with industries, National R&D Laboratories and neighboring institutions. Several experts from our department will provide different kind of service and solution faced by different manufacturing industries. Our department also carried out industry related research projects earlier. We have a very active alumni association in our University. Special strategic initiatives will be taken to collect formal feedback from different industries (employer) and alumni regarding performance of our students and involve them in University policy making process.

7. Increase in number and quality of PhD: Graduate student research and education is the cornerstone of true distinction among the nation's premier research universities and was the prime motivator for founding Jadavpur University and as well as our department. There is a plan to increase the number of PhD per year while maintaining high standard. This increase will require additional resources, including enhanced research infrastructure.

8. Improve Operating Efficiency: The Department and University will carefully assess all its major costs in order to become both efficient and cost effective. Particular attention will be focused on reduction of energy bill and implementation of Campus Automation through ERP Solution (e.g. Student Information System, Financial Accounting System, Examination Management System etc) in order to reduce operational cost, improve overall efficiency, maintain transparency and improve brand image.

9. Making our great city even greater: A leading university contributes significantly to the level of achievement in its community. Our department will interact with area

schools to strengthen education. Create a Community Outreach Office to engage students, faculty, and programs with the community. Production Engineering Department is in fact already running such center, naming Swami Vivekananda Centre for Technical Man Power Development. To promote entrepreneurship program we will train business leaders that the region will need. Beside this, special activities will be undertaken to enhance the physical appearance of the campus and our department, and use unoccupied land to develop places of business where university residents and the community can co-mingle, such as restaurants, book stores, and University-related businesses.

Major obstacles: Space & Fund

To meet the above stated strategic goal we need two important things; first one is space and the second one is fund. In respect of future expansion, space is a major constraint. We have already taken special drive to increase the space. As a part of this program we have already increased the space of our department by adding three separate floors in our annex building. Nevertheless, Our University has recently acquired the erstwhile National Instruments Limited (NIL) and becoming the first Indian University to acquire such a manufacturing unit. It is on a nine-acre plot opposite to the main campus. After renovation, the new campus is expected to add much-needed space for future expansion of our department along with other departments of our University. There is also scope to increase earning through patent and consultancy in the relevant areas of advanced manufacturing technology and to provide relevant technology solutions. To increase our fund we must promote many self financed new courses (preferably interdisciplinary, inter-institutional courses including executive education programs) demanded by our society. Desperate effort will be given to collect fund from all possible source of funding agencies. It has already been stated that special initiatives will be taken to collect private gift. Beside this, fees related to student housing, student tuition fees, parking fees, food service income, or other service income will be enhanced. At the same time it may also be emphasized that the general fees structure will not be applicable for the meritorious students coming from lower income group family; they will get special concession.

We Can Do It

The University's ability to succeed in all the critical elements of this plan is proven. The major constraint i.e. space has been solved to great extent by acquiring the adjacent campus of National Instruments Limited (NIL). Another impediment is fund; but we have already shown our potential to collect funds and still now there are many things to be done to achieve the goal. Students from different countries (Jordon, Iraq, Netherland etc) are already coming to our department for pursuing their higher studies. Very recently our department has organized the silver jubilee occasion of the most prestigious, reputed and globally accepted International Conference in the field of Manufacturing i.e. All India Manufacturing Technology, Design and Research (AIMTDR) Conference. In fact this conference was initiated and organized by Jadavpur University itself in the year 1967 by founder member of our department Late Professor Amitabha Bhattacharyya. There are many such success stories of our department which shows the capability of the Production Engineering Department to become one of the nation's best public research centers and one of the great departments of the world-an engine of discovery, invention, creativity, and entrepreneurship. We have no other choice if we are to fulfill the legacy of our founders and meet the promise of our potential.