

# ANNUAL REPORT 2006-2007



**BIRLA INSTITUTE OF TECHNOLOGY**  
(DEEMED UNIVERSITY)  
MESRA, RANCHI, JHARKHAND, INDIA





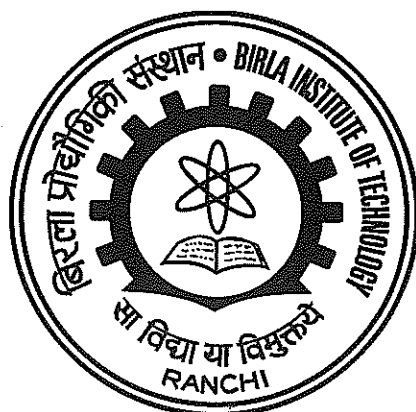


XVII<sup>th</sup> CONVOCATION 23<sup>rd</sup> MAY, 2007



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## DAILY PRAYERS

### प्रार्थना

यं शैवाः समुपासते शिव इति ब्रह्मेति वेदान्तिनो ।  
बौद्धाः बुद्ध इति प्रमाण पटवः कर्तेति नैयायिकाः ।  
अर्हन् नित्यथ जैन शासनरताः कर्मेति मीमांसकाः  
सोऽयं नो विदधात वाञ्छित फलं त्रैलोक्य नाथो हरिः ॥

“May the Lord of the Universe, the remover of evil, whom devotees of Shiava worship as Shiva, the Vedantins as Brahman, the Buddhists as Buddha, the followers of the Nyaya Philosophy who are clever in logic as Agent, those devoted to the Jaina doctrines as Arhat, the Ritualists of the Mimamsa School as Karma—Grant us all our hearty desire.”

हे जग त्राता, विश्व विधाता, हे सुख शांति निकेतन हे ।  
प्रेम के सिन्धु, दीन के बन्धु, दुःख दरिद्र विनाशन हे ।  
नित्य अखण्ड अनन्त अनादि, पूरन ब्रह्म सनातन हे ।  
जगआश्रय जगपति जगवन्दन, अनुपम अलख निरंजन हे ।  
प्राण सखा त्रिभुवन प्रतिपालक, जीवन के अवलम्बन हे ।

You are the saviour and the creator of the Universe, the abode of peace and happiness, the ocean of love, the friend of the helpless, the reliever of sorrows and afflictions. You are the external, the indivisible and the infinite. You are the complete universe and the prime Being. You are the shelter, the lord and worshipped of world. You are unparalleled, unseen and blissful. You are friend of the living, the preserver of the universe and the support of our life.



# Contents

<b>VICE-CHANCELLOR'S REPORT</b> .....	1
<b>INTRODUCTION</b> .....	7
Administration .....	7
✓ Institute Campus .....	8
✓ Institute Building .....	8
✓ Residential Complex .....	9
✓ Hostel Accommodation .....	9
Guest Accommodation .....	9
Auditorium.....	9
Games & Sports Complex.....	9
✓ Dispensary-Cum-Health Center.....	10
Shopping Center .....	11
The Students Halls of Residence.....	11
Students Intake .....	12
Admission During 2006-2007.....	15
Convocation, Results, Degree/Diploma Awarded .....	24
Summary of The Faculty Position .....	26
Department Wise Details of Faculty Position: .....	27
<b>DEPARTMENTS</b>	
✓ Department of <u>Architecture</u> .....	29
✓ Department of <u>Applied Chemistry</u> .....	56
✓ Department of <u>Applied Mathematics</u> .....	62
✓ Department of <u>Applied Mechanics</u> .....	67
✓ Department of <u>Applied Physic</u> .....	68
✓ Department of <u>Biotechnology</u> .....	77
✓ Department of <u>Biomedical Instrumentation</u> .....	83
✓ Department of <u>Civil Engineering</u> .....	87
Department of <u>Computer Science Engineering</u> .....	91
✓ Department of <u>Electronics &amp; Communication Engineering</u> .....	97
✓ Department of <u>Electrical and Electronics Engineering</u> .....	103
✓ Department of <u>Environmental Science &amp; Engineering Group</u> .....	114
✓ Department of <u>Hotel Management and Catering Technology</u> .....	117

✓ MIS



✓ Department of Management .....	122
✓ Department of Mechanical Engineering .....	125
✓ Department of Pharmaceutical Sciences .....	132
✓ Department of Polymer Engineering .....	143
✓ Department of Production Engineering .....	150
✓ Department of Remote Sensing .....	157
✓ Department of Space Engineering & Rocketry .....	163
✓ Technical Education Quality Improvement Programme .....	169
✓ Department of Physical Education and Sports .....	185
National Cadet Core .....	186
National Service Scheme .....	187

#### **EXTENSION CENTRES**

✓ Extension Centre: Allahabad .....	193
✓ Extension Centre: Jaipur .....	200
✓ Extension Centre: Kolkata .....	207
✓ Extension Centre: Lalpur .....	213
✓ Extension Centre: Noida .....	219
✓ International Centre: Muscat .....	224
International Centre: Bahrain .....	228
International Centre: UAE .....	233

#### **UNIVERSITY POLYTECHNIC.....239**

#### **CENTRAL LIBRARY.....247**

#### **TRAINING & PLACEMENT DIVISION.....255**

#### **STUDENTS CULTURAL ACTIVITIES.....261**

#### **ANNEXURE**

General Council.....	165
Members of The Board of Governors.....	267
Members of Finance Committee .....	268
Building & Works Committee.....	269
Technical Council .....	270
Executive And Department Heads/ In-Charge .....	271
Departmental Board of Study.....	273
Important Telephone Number.....	282
Address of The Extension Centres.....	284



## **VICE-CHANCELLOR'S REPORT**

The Institute continued to find its place in the league of the top institutions of the country in the various surveys. It continued to strive hard to provide ever increasing opportunities to the youth of our country to have the benefit of cost-effective quality education in technical and professional disciplines. The extension centre at Patna, the most recent addition in the list of extension centers of the Institute located within the country, started functioning from the academic session (2006-07) and the students of its first batch have already moved to the second semester of their academic programme. The pace of construction of different buildings of the centre is remarkable and the Institute expects to complete most of the construction work by December 2007.

The continued thrust on research, pursued by its faculty members and encouraged by the Institute and propelled by the recognition, of the level of research, by national level funding agencies like UGC, CSIR, DST, DAE, BRNS etc. led to the continuous garnering of support for the several new programmes/projects of the Institute. The high quality of teaching and training imparted to its students continued to be recognised by industries all over the country as reflected in the campus placement records, with more than 1100 placement offers from 76 organisations having been received by its students.

The Institute had already been able to spend about Rs. 16.00 crores under the TEQIP Scheme for supporting activities like procurement of high end testing/characterisation, instruments, equipments, soft wares, learning resources, and staff development programmes etc. The Birsa Institute of Technology, more commonly known as B.I.T., Sindri, along with two more Government Polytechnics located at Ranchi and Dumka have been attached with us for closer interaction and mutual co-operation as Net-Work institutions. Regular faculty exchange programmes have already taken place and we look forward to initiate joint guidance to post-graduate research activities with B.I.T., Sindri and providing facilities to the staff of the two Government Polytechnics to pursue higher studies at our Institute. These net-working activities are intended to improve the quality of all the four institutions through establishment of academic and intellectual net-works and thereby achieve optimum resource sharing.

Synchronous with the expansion of its academic programmes, the Institute continues its efforts of consolidating academic and support infrastructure of equipment, learning resources and space by spending well over Rs. 20.00 crores during the period under reference, representing 41% of its total expenditure and 52% of fees collected. In continuation with the trend of introducing new programmes, the Institute started M.Sc.(Bio-informatics) and M.Sc.(Geo-informatics) and increased its intake for B.Pharm. course from 30 to 60 and B.Arch. course from 20 to 40.

The Institute introduced assignment component as a compulsory module to all its subjects of teaching at Under-graduate and Post-graduate level. This has been



done to inculcate and encourage young minds to collect information from all possible sources and infuse creativity in them. I am extremely glad to report the effort being put by a few of our students who had taken up the venture of designing and fabricating formula race car as well as the second model of the race car, incorporating a novel certain mechanism designed and developed by them. They took participation in an international Racing Car Competition held at Silverton (U.K.) being sponsored by the Society for Automotive Engineers during July 12-16, 2007.

The Hon'ble Chief Minister of the State encouraged our students in their venture as well as assured financial support for this project.

Pursuant to the policy of the Institute for interaction with the other institutions, a joint collaborative research work on Automation of Production systems using Power Electronics with the University of Padova, Italy, which was initiated earlier by the Department of Electrical & Electronics Engineering, is still continuing. The Institute has also entered in another agreement with the University of Padova through which two young researchers from the Department of Biotechnology of the Institute will get the chance for two fellowships for their training in the scientific area of agro-food sciences.

Under 'Research Cooperation Programme' the Institute has moved ahead to strengthen the cooperation in the form of signing agreement to pursue research with the Aalborg University, Denmark and the University of Rome, Italy. Two fellowships have been acquired in the area of Broadband Satellite Communication and related subjects.

Prof. Animesh Jha, Chair in Applied Materials Science, The Institute for Material Science, University of Leeds, London (UK), Prof. Dr. Volker Buck, University of Duisburg, Essen, Prof. Dr. Ing. Dr.h.c. Jurgen Engemann, Head of Institute, Campus Freudenberg, Wuppertal, Germany, Prof. Michel Waldschindt, President, CIMPA, UNESCO, Curie and Prof. Srinivas V. Kaveri, Director, INSERM U681, Institut des Cordeliers, Paris, visited the Institute and delivered lectures in their fields of specialization. Prof. Animesh Jha also discussed the status of academic and research collaboration between the University of Leeds and BIT.

Prof. Chittaranjan Sahay of University of Hartford spent a complete semester on sabbatical during July to December 2006. Several joint research projects were developed and placed for approval to relevant organizations. The domains of the joint research programmes include water purification, waste heat recovery, biomass conversion and advanced fluid mechanics with applications for high power engines for aero and marine prime movers. As a result of this effort, a 'Virtual Prototyping Centre' has been established as a joint consortium between the University of Hartford and BIT to carry out cutting edge applied research in the area of design of sophisticated aero engine and gas turbine.

A high-power delegation from the University of Ningbo, China, led by its Hon'ble Chancellor, visited various departments of our Institute during April 9-10, 2007. They

have agreed for the exchange programme of both faculties and students of the two Universities.

Here are some records highlighting the achievements of our faculty members. Dr. Usha Jha, Dean (Academic Infrastructure) and Head of the Department of Applied Chemistry, has been nominated as a Senate Member of the Birsa Agricultural University, Ranchi. Dr. R.K. Dey, Reader, Department of Applied Chemistry, has been awarded TWAS Postdoc Fellowship, Brasil (2006) as INSA Visiting Fellowship, New Delhi (2006).

Dr. D. Pal, Professor, Department of Electronics & Communication Engg., has been awarded Research Fellowship (2007-08) for one year by the British Council to do research at post-doctoral level at the University College of London. Mr. Sanjay Kumar, Lecturer (Selection Grade), Department of Electronics & Communication Engg., has gone to pursue research for 1 year on the topic related to wireless communication (2006-07).

Mr. Bharat Gupta, Lecturer, Department of Electronics & Communication Engg., has gone to pursue research for one year on the topic related to Broadband Satellite Communication (2007).

Mrs. Rachna Khare, Lecturer (Sel. Gr.), Department of Architecture, received the Fulbright Fellowship. Ms. Harshit Sosan Lakra, Lecturer, Department of Architecture, was awarded the 'Ford Foundation' Fellowship. Mr. D. J. Biswas, Reader, Department of Architecture, received the best award in the Sixth China Urban Housing Conference held at Beijing in March 2007.

Shri Ashish Daiya, Lecturer, Department of Hotel Management & Catering Technology, has been nominated as Executive Committee Member of Indian Tourism Congress (2007). He has also acted as an expert member to evaluate the proposal of establishing a department of Hotel Management in Uttaranchal Open University, Haldwani (2006). Dr. Sonia Gupta, Sr. Lecturer, Department of Hotel Management & Catering Technology, has been nominated as a member of the advisory board of Mahaveer College of Professional Studies (DAVV), Indore (2006).

Prof. S. P. Bhatnagar, Advisor (Technical Development & Technology Transfer) and Dr. S. Ganguly, Sr. Lecturer, Department of Pharmaceutical Sciences, received "Al Ameen College of Pharmacy Award" by the Association of Pharmaceutical Teachers of India for their best paper in the Indian Journal of Pharmaceutical Education in Sept. 2006.

Dr. C. Guria, Sr. Lecturer, Department of Polymer Engineering, received the best paper award on Beneficiation from the Indian Institute of Mineral Engineers (IIME) in February 2007.

Dr. N. Patel, Professor, Department of Remote Sensing, was nominated as associate editor in the International Journal of Ecological Economics & Statistics. He



was also nominated as joint editor in the Journal of Current Sciences published by the Society for Sciences as well as Co-editor in the Indian Journal of Environment and Ecoplanning published by the Society for Environment Sciences. He was also nominated as a member of the Advisory Board for the Regional Centre for Urban and Environmental Studies, Lucknow as well as a member of the Advisory Board for Roland Institute of Technology, Berhampore.

Dr. A. K. Chatterjee, Dean (Extension Centres) and Head of the Department of Space Engg. & Rocketry, has been nominated as the Vice-President of the Institution of Engineers (India) (2007-08). Dr. Mohan Verma, Dean (Post-Graduate) and Professor in the Department of Space Engg. & Rocketry, was invited as a visiting scientist by DLR-German Aerospace Centre at the Institute of Space Propulsion, Lampoldshausen, Germany in Aug. 2006. He was also invited as distinguished foreign expert by the Department of Aerospace Propulsion, Politenico di Milano, Italy in July 2006.

Dr. Gopal Pathak, Dean (Faculty Development) and Coordinator, Environmental Science & Engineering Group, attended the 22<sup>nd</sup> Annual International Conference on contaminated soils, water and sediments, as a member of the advisory board and was re-nominated to the same for the 23<sup>rd</sup> Annual Conference, which will be held in the University of Massachusetts.

Dr. P. K. Barhai, Dean (Sponsored Research & Collaborative Projects) and Head of the Department of Applied Physics, visited National Technological University, Singapore, Tribhuvan University, Kathmandu, University of Leeds (U.K.) and University of Sheffield (U.K.) to discuss different aspects of collaboration between these Universities and B.I.T. Dr. S. K. Mukherjee, Vice Chancellor of the University visited the University of Aalborg to observe the progress of the joint post-graduate programme in the area of software defined radio and also to examine the feasibility of introducing problem based learning technique, while formulating the revised syllabi for the different programmes of the Institute.

Dr. D. Sasmal, Dean (Academic Coordination) and Head of the Department of Pharmaceutical Sciences, with the Vice Chancellor visited the University of Florida and the University of Hartford (USA) to discuss the academic and research collaborations and joint academic programmes.

During the year under review, several academic interaction programmes in the form of Conference/Seminar/Workshop were organised in the Institute. This year such activities started with a two-day Workshop on "Content Development in e-Learning" which was organised under the TEQIP jointly by the Department of Computer Science and Pharmaceutical Sciences between April 3 and 4, 2006. Another two-day Workshop on "Technical Education and Quality Improvement Programme" was organised under the TEQIP by the Department of Mechanical Engineering between April 20 and 21, 2006. "Modern Instrumental Methods of Drug Analysis" was held under TEQIP by the Department of Pharmaceutical Sciences during May 2 – 14, 2006 Sponsored by AICTE. National Symposium on "Medicinal

Plants : Role of Biotechnology and Bio-informatics" was organised by the Department of Biotechnology from August 3 to 5, 2006. The programme was inaugurated by H.E. the Governor of the State, Hon'ble Syed Sibtey Razi. All India Seminar on "Emerging Trends in Power Sector" was organised in our Institute by the Department of Electrical & Electronics Engineering in collaboration with the Jharkhand State Centre of The Institution of Engineers (India) between 5<sup>th</sup> and 6<sup>th</sup> August, 2006. National Workshop on "Lean Manufacturing Implementations" was organised by 'The Indian Institution of Production Engineers' in collaboration with the Jharkhand Small Industries Association and the Industry-Institute Interaction Cell of our Institute between September 8 and 9, 2006. National Seminar on "Devices, Circuit and Communication" (NASDEC<sup>2</sup>-06) was organised by the Department of Electronics and Communication Engineering during 2-4 November, 2006. Seminar on "Nanomaterials and Plasma Nanotechnology" was organised by the Department of Applied Physics on December 02, 2006.

National Seminar on "Best Practices in Manufacturing" was organised at our premises by The Institution of Engineers (India) in association with the Department of Production Engineering between 9<sup>th</sup> and 10<sup>th</sup> December, 2006. National Seminar on "Achieving technological excellence in the New Millennium : Opportunity and Challenges" was organised by the Department of Mechanical Engineering on January 23, 2007. National Seminar on "Recent Advances in Energy Systems and Combustion Processes" was inaugurated by Hon'ble Prof. Stephen Marandi, Deputy Chief Minister of the State, during February 14 - 16, 2007, which was organised by the Department of Space Engineering & Rocketry.

The Institute extended financial support to 212 of its faculty members to attend conferences, seminars, workshops and short-term courses held within India and supported 15 faculty members to attend similar programmes abroad. Further, 18 faculty members have been allowed to pursue Ph.D. at different institutions including IIT's.

This year the Association of Indian Universities requested us to hold the East Zone Vice-Chancellors' Meeting of the year at our Institute, which was held between August 25 and 26, 2006. After creation of the State, this was the first time that the Vice-Chancellors of the East Zone Universities could get a chance to meet. His Excellency, the Governor of the State as the Chancellor of all the Universities of the State was kind enough to inaugurate the conference on 25<sup>th</sup> August, 2006. Hon'ble Chief Minister of Jharkhand, kindly graced the Valedictory Session of the Conference as the Chief Guest on 26<sup>th</sup> August, '06. This great occasion was a source of pleasure to all of us.

Amongst the Games & Sports activities of the Institute held during the period under reference, the most important was the AIU East Zone Inter University Youth Festival 2006-2007, which was hosted by the Institute during the period from 9<sup>th</sup> to 13<sup>th</sup> November, 2006. It was held under the joint auspices of the Association of Indian Universities and the Ministry of Youth Affairs & Sports, Government of India. More than six hundred students from different universities of the eastern zone

are listed in Annexure-V. The composition of various departmental board of study is given in Annexure-VII.

The Finance committee gives financial advice to the Institute. Similarly, the building and works committee advises the institute in matters relating to building works. The composition of these committees are given in Annexure- III & IV.

## **Institute Campus**

The Institute is fully residential and extends over 780 acres. The main building of the Institute covers an area of 30,000 sq. mtrs. and accommodates the various research and training laboratories, administrative offices and lecture rooms.

The Workshop annexure has covered area of 4,000 sq. mtrs. The laboratories and offices of the Department of Space Engineering & Rocketry are situated for security reasons in a sub – Campus, about half a Kilometer away from the main building. For the convenience of working Engineers to participate in Post-Graduate Programmes, a Technology centre was established in Ranchi City at Lalpur in 1976. The campus is self-contained amidst well-laid lawns, with its own protected water supply, marketing center, dispensary, bank and schools.

## **Institute Building**

	(Sq. mtrs.)
✦ Main building & Administration block	3700
✦ Class room & laboratory, Drawing halls, Staff room's etc	19300
✦ Library block	2600
✦ Mini-Auditorium	450
✦ Space Engg. & Rocketry block including Explosive and Fuel cell	2372
✦ Cryogenic laboratory (SER)	118
✦ Workshop sheds, General stores, Garage/ Go down	4880
✦ Gymnasium	850
✦ Indoor Badminton Stadium	1000
✦ Animal House	400
✦ R & D Building	7200
✦ Multi-Purpose Halls	785
✦ Biotechnology Center	3334
✦ Polymer Engineering	744
✦ Lecture Theatre – I	1143
✦ Lecture theater –II	1535
✦ Hotel Management Building	2835
✦ Pharmacy Building	3500
✦ Golden Jubilee Auditorium	3280



## Residential Complex

✦	Staff quarters in different categories	422
✦	Residential complex for supporting services: Guards, Dairy, Shopkeepers, Washer man etc.	116

## Hostel Accommodation

✦	Eleven Boy's Hostel	2964 Rooms (single)
✦	Four Girl's Hostel	338 Rooms (double) & 196 Rooms (single)
✦	One Foreign Student's Hostel	152 Rooms (single)
✦	Research Scholar Hostel	112 Rooms (single)

## Guest Accommodation

The Institute maintains three Guesthouses. Two general purpose with 38 furnished rooms and one VIP Guest-House with 3 deluxe bedrooms to accommodate Guests appropriately.

## Auditorium

To meet the growing needs of the community for public function there exist a Golden Jubilee indoor theatre having the seating capacity of approximately 2500 persons.

Moreover, one Mini-Auditorium is also there, in the administrative Block, having the seating capacity of 450 persons.

## Games & Sports Complex

The Institute has a Gymnasium, which is spacious enough to arrange indoor games. Extensive playgrounds are provided for various sports. They are:

✦	Gymnasium including Multi Gym	1
✦	Stadium for Tracks & Fields for Sports/Athletics	1
✦	Cricket ground including net	2
✦	Football grounds	2
✦	Hockey grounds	2
✦	Basket Ball courts	4
✦	Volley Ball courts	6
✦	Tennis courts	6
✦	Badminton courts (three indoor & five outdoor)	8
✦	Kho-Kho ground	1
✦	Kabaddi ground	1

## Dispensary-Cum-Health Center

### *Facilities Available:*

- ✦ O.P.D. Services - 8:00 AM to 12:00 Noon  
4:00 PM to 8:00 PM
- ✦ Emergency Services - Round the clock
- ✦ Total No. of Beds - 12 (Male- 8, Female- 4)
- ✦ X- ray -Rs. 60.00/plate
- ✦ E.C.G -Rs. 50.00/ECG
- ✦ Oxygen Facility
- ✦ Suction Machine Facility
- ✦ Medical Officers - 04
- ✦ Pharmacists - 04
- ✦ Dressers - 02
- ✦ X-ray Technician - 01
- ✦ Pathological Technician - 01
- ✦ Staff Nurse - 01
- ✦ Visiting Physician - 04
- ✦ Physiotherapy - 8:00 AM to 10:00 AM (Monday to Saturday)
- ✦ Dentistry - 8:00 AM to 10:00 AM (Wednesday to Sunday)
- ✦ Pediatric Clinic - 8:00 PM to 10:00 PM (Monday to Friday)
- ✦ Homeopathic Clinic - 2:00 PM to 4:00 PM (Tuesday, Thursday, Saturday)
- ✦ Eye & Skin Clinic - 8:00 AM to 10:00 AM (Every Sunday)
- ✦ Anti Natal Clinic - During OPD Timing except Sunday & Institute's- Holidays
- ✦ Ambulance Facility - Round the clock
- ✦ Pathological Lab Facility - 8:00 AM to 12:00 Noon & also during emergency
- ✦ Immunization - 1:00 AM to 12:00 Noon (Every Wednesday)
- ✦ Average attendance of patient is above 150 per day.
- ✦ Blood donation camp, Eye camp, Gynecological camp are organized in frequent intervals.
- ✦ During emergency patient is referred either to RIMS or to any private Nursing Home including APOLLO HOSPITAL depending upon the situation as per desire of the patient / Attendants of patient.

- ✦ Permanent faculty and staff members are covered by Group Medclaim Policy in hospitalization cases.
- ✦ Proposed- Ultrasound machine facility & ICU facility, isolation ward & Pathological Lab.
- ✦ Community Health services are also carried out by organizing Medical camps in villages.
- ✦ Apart from this we have one Rural Dispensary near village Nayatoli, which take care of the health of local villagers mostly Schedule tribes & Other Backward castes.
- ✦ One Dispensary located in the campus of University Polytechnic for students & staff members of University Polytechnic.
- ✦ One Dispensary located in the campus of BIT Extension Centre, Lalpur for students & staff members of BIT Extension Centre, Lalpur.

### **Shopping Center**

A well-maintained Cooperative Stores provides the daily requirements of the campus of nearly 5,000 residents. Additional Shopping Complex is provided for sundry needs. The construction of a full-fledged Marketing Complex and Cooperative bookstore to meet the growing needs of the Campus has been completed. The annual commodities sold through these outlets of the campus exceeds Rs. 3 crores mark in value.

### **Others**

• Consumers co-operative stores	375	Sq.mtrs
• NCC Block	400	Sq. mtrs
• Rifle Firing Range	1	No.
• NCC Parade ground	1	No.

### **The Students Halls of Residence**

The institute is completely residential and all the students are provided with a room in one of the hostels or Halls of Residence. The campus has thirteen hostels for boys and four separate hostels for girls. All the hostels are spacious and beautifully laid out in the serene and pleasant campus. The front portion has well maintained lawns with flowerbeds, elegant bushes and strategically planted ornamental trees. The interior of the hostel includes spacious dining halls, common rooms, and reading rooms. Rooms located on both sides of the entrance. The rooms are constructed in a row with a wide veranda in all along the length with air gaps and balconies well set for common use.



**Master of Technology Programmes**

Remote Sensing	1997	2 Years	18
Fuels & Combustion	2002	"	25
Computer Science	1994	"	16
Scientific Computing	2002	"	16
New Material & Processing Technology	2002	"	18
Environmental Science & Engineering	2002	"	18

**Master of Pharmacy**

2 Years      36 +  
8 (QIP)

## Specialization-

1. Pharm. Chemistry	1983
2. Pharmaceutics	1983
3. Pharmacology	2004
4. Pharmacognosy	2002

**Master In Urban Planning**

2006      2 Years      12

**Master of Science Programme**

Bio-Medical Instrumentation	1992	2 Years	20
Information Science	1993	"	30
Bio-informatics	2006	"	30
Geo-informatics	2006	"	10
<b>Business Management</b>	1980	2 Years	120

## Specialization-

1. Marketing
2. Finance
3. System
4. Industrial Management

**Master of Computer Application**

1984      3 Years      60

**Continuing Education (part time) Post-Graduate Programme**

To enable working Engineers to update their technologies, the part-time Post-graduate Programme offers 3 levels:

1. A certificate of Merit after Completing 6 units.
2. A diploma after completing 12 units.
3. Degree after completing 20 units.

## Extension Centers

Course	Allahabad	Jaipur	Lalpur,	Kolkata	Noida	Patna
B.E.		80				120
BCA	100	80	200	90	80	
BBA	40	80	200	90	80	
B. Sc. (A&M)		60			80	
MCA	45	45	105	45	60	
MBA		45	60		60	
MBA (PT)			30			
MCA (PT)			30			
*M.Tech (CS), PT			30			
*M.E. (P.T)						
M. Sc. (I.T.)			30			
M.Sc. Bioinformatics		30		30		

*Desglans*

\* Courses are offered subject to availability of minimum number of candidates for the programme and approval of the department.

## Doctor of Philosophy programme

The Institute offers Research Programmes leading to Ph.D. Degree in all above disciplines.

## Admission during 2006-2007

### Student Enrollment

During the academic year 2006-2007, total of **9083** students were registered in various courses. The branch-wise enrolled is detailed below.

Course	No. of students
Bachelor of Engineering	2610
Bachelor of Architecture	125
Bachelor of Pharmacy	180
Bachelor of Hotel Management & Cat. Tech	150
Bachelor of Computer Applications	1359
Bachelor of Business Administration	1399
Bachelor of Technology	75
B.Sc. (A & M)	300
B.Sc (I.T.)	138
B.Com (E.Comm)	38

Integrated Engineering	49
Diploma in Technology	115
Master of Business Administration	650
Executive (Master of Business Administration)	36
Master of Computer Applications	1181
Master of Pharmacy	90
Master of Engineering	164
Master of Technology	151
M.Sc (Information Science)	42
M.Sc. (Biomedical Instrumentation)	66
M.Sc (IT)	58
M.Sc (Bio-informatics)	82
M.Sc (Geo-informatics)	25
<b>Total</b>	<b>9083</b>

### **New intake in 2006-2007**

In the academic year 2006-2007, 3549 fresh students were admitted in various disciplines. The branch-wise backup is given below.

<b><i>Courses</i></b>	<b><i>Total</i></b>
B.E.	737
B. Pharm.	56
B. Architecture	43
B.H.M.C.T.	35
B.B.A	661
B.C.A.	522
B.Com. (E. Commerce)	27
Bio Tech	50
B. Tech	20
B. Sc ( A & M )	155
B.Sc. (IT)	44
Integrated Engineering	26
M.B.A.	334
M.C.A.	419
E.M.B.A.	19
M. Sc. (BMI)	30



M. Sc. Geo-informatics	25
M. Sc. Bio-informatics	45
M.I.S.	18
MIT	39
ME-Civil	4
ME-Electrical (EEE)	13
ME-Electronics (ECE)	22
ME-CAAD	4
ME-AMS	4
ME-Mechanical	12
M.E-Software Engg.	13
ME-S.E.R.	10
M.Tech. (Comp. Sc.)	27
M.Tech. (Polymer)	6
M.Tech. (R.S.)	15
M.Tech. (F.C.)	4
M.Tech. (Sc. Compt.)	2
M.Tech. (NMPT)	7
M.Tech. (E.S.E.)	10
M. Pharm.	42
MBI (Bio Informatics)	37
PG. DBI/Bioinformatics	2
MGI (Geo-Informatics)	10
<b>Total</b>	<b>3549</b>

### Enrollment in Ph.D. Programme

Eighty six new scholars have been registered for the Ph.D. Programme in the area of Engineering, Science, Pharmacy and Management during session 2006-2007. The details are given below.

<i>S.N.</i>	<i>Name of the Scholar</i>	<i>Area of Research</i>
1.	Mr. Arun Dayal Udai	Design and Control of Biped Robot with Vision for Obstacle Avoidance
2.	Mr. Arbind Lal	Study on Bio-diesel from some vegetable oils and their Engine Performance
3.	Mr. P.K. Sharma	Image Processing Based Technique for Effective Object Reconstruction in 3D using Reverse Engineering Strategy

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|-----|---------------------------|---|
| 4.  | Ms. Rashmi Sahay          | An Investigation Towards Optimal Walking of Biped Robot by Using Soft Computing   |
| 5.  | Mr. Tapas Kumar           | Application of the Cellular Automata & Guide Paradigm in Colour Image Member Processing   |
| 6.  | Mr. Bhupesh Kumar Singh   | Design of Agent and Debugger for Complex Sketch Recognition   |
| 7.  | Mr. Soumya Banerjee       | Stigmergic Agent Co-ordination & Optimization Mechanisms : Journey Towards Hybrid Intelligent System"                               |
| 8.  | Mr. Sajal Chakravarty     | Studies of Polymeric & Glassy systems using Thermodynamics & Molecular Dynamics   |
| 9.  | Ms. Tiji Thomas           | Microbial Current Generation from Organic Waste and its Application for Waste Water   |
| 10. | Mr. Sanat Kumar Mukherjee | Study of Thin Film Thermocouples developed By using Anodic Vacuum Arc Technique"  |
| 11. | Ms. Neelam Kumari         | Surface Modification of Steel by Plasma Assisted Duplex Treatment"  |
| 12. | Mr. Anil Kumar Lal        | Effect of Trace Elements Implantation and Coating on Oxidation Behaviour  |
| 13. | Mr. Pankaj Neil Pande     | Conceptual Issues of Database Management System (DBMS) in Customer Relationship Management (CRM) (A specific Study of Power sector) |
| 14. | Mr. Ashok Kr. Roy         | Proliferative activity and oncogene expression in high risk cases of Pre-malignant oral lessons                                     |
| 15. | Mr S. Kanungo             | Clustering Gene Expressions Data  |
| 16. | Sri Manash Ranjan Pani    | Improving Procurement Performance with e-Procurement Systems  |
| 17. | Ms. Snigdha Priya         | Quality of Work Life of Nurses: A Study of Jharkhand Roy Enclave, Region  |
| 18. | Sri T.K. Banerjee         | Multi-Criteria Spatial Systems and ecision Support System for Underground Mining  |
| 19. | Sri Rajeev Lochan Dhar    | Changing Trends of Processes Carried out by Recruitment Agencies: A Study of Pune Metropolitan Region                               |
| 20. | Sri Somnath Mukherjee     | "Branding Influence on Industrial Purchase: A Study Industrial Buyers"  |
| 21. | Mr. Joydeep Chtterjee     | Strategic Planning for Developing Business Model for Tin-Plate Packaging Stries in India  |

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|-----|--------------------------|---|
| 22. | Ms. Swati Sinha          | Corporate Social Responsibilities: A Study of Indian Shakuntika, Lower Shivpuri Industries  |
| 23. | Mr. Rakesh Ranjan Pandey | Managing Brands in Retail: Study of Major Initiatives in India"   |
| 24. | Umesh Chandra Singh      | Transient Axisymmetric Conduction Controlled Freezing and Melting of A Surrounding Bath rial Around a Cylindrical Shaped  |
| 25. | Ranajay Kumar Singh      | Studies on in-situ Moisture Conservation Techniques for Mixed Plantation of Ber and Kusum   |
| 26. | Mr. Praveen Kumar        | Microwave and Optical Remote Sensing Application for Study of Environment Sensing and Forests   |
| 27. | Ms. Anjana Rizal         | Isolation and Molecular Characterization of thermophilic Campylobacter guide species  |
| 28. | Mr. Dinesh Prasad        | Development of DNA based Biosensor for Rapid Detection of Food Pathogens  |
| 29. | Ms. Indu Kumari Renu     | Molecular characterization and application of functional genomics to study development regulation of genes involved In phenylpropanoid byothesis in tulsi (Ocimum tenuiflorum L.) |
| 30. | Mrs. Swati Pande         | Statistical Model for Characterization of Draught assessment in Jharkhand State   |
| 31. | Mr. Prabhu Narain Gupta  | Improvement of Productivity of Machine Shop   |
| 32. | Ms. Meenakshi Sharma     | A Study on Retailing Strategies of Real Estate Perspective  |
| 33. | Ms. Shikha Rastogi       | Comparative Study of Marketing Strategies of Third Party Logistics Rana Member & External guide Services in India"  |
| 34. | Mr. Ravindra Kumar       | A Study on Elastic Plastic & Creep Transition for Homogeneous & Non-Homogeneous Materials   |
| 35. | Mrs. D. Shanthi          | Design and Development of Artificial Neural Network Model for the diagnosis of Stroke   |
| 36. | Mr. Aloke Saha           | Studies on some Function Circuits and its VLSI Implementation   |
| 37. | Mr. Gajendra Kant Mishra | Development of Hybrid Channel Assignment Algorithm Incorporating Power Control in Cellular Communication  |



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|-----|---------------------------|--|
| 38. | Mr. V. Janardhana         | State-of the Art RFMEMS Phase Shifter For Phased Array   |
| 39. | Mr. Rajeev Ranjan         | Development of Efficient Channel Assignment Guide Algorithms and Blocking Probability Analysis in Wireless Communication”  |
| 40. | Mr. Shripal Vijayvargiya  | Computational Techniques for Gene Prediction through identifying Regulatory Transcription Factor Binding Sites (TFBS) in Biological Sequences                    |
| 41. | Mr. Manik                 | Phytochemical Pharmacological Studies on <i>Litsea polyantha</i> Juss With special reference to Molecular Modelling and Docking Studies on its Phytoconstituents |
| 42. | Ms. Pratima Sukhdeo Tayde | Studies on Biological Activity of Ghee subjected to Accelerated Ageing   |
| 43. | Ms. Arulmozhi S.          | Pharmacological Evaluations of <i>Alstonia scholaris</i> Linn  |
| 44. | Mr. R. Sukesh Kumar.      | Investigation of <i>Artemisia</i> Specis for its Immunomodulatory Effect   |
| 45. | Mr. Sarvana Kumar A.      | Antimicrobial and Cytotoxic Screening of some Traditional Plants from South India  |
| 46. | Mr. Suresh Kumar K.       | Design, Synthesis and Evaluation of Some Novel quinazoline analogs   |
| 47. | Mr. Ponnilarvarasan I.    | Synthesis, Pharmacological and Antimicrobial Evaluation of Heterocyclic Semicarbazones   |
| 48. | Mr. Manish Varma          | Standardization of an Ayurvedic Formulation Known as <i>Arjunarista</i>  |
| 49. | Mr. A. Cendil Kumar       | Phytochemical and Pharmacological Evaluation of Some Taxa of the Controversial Ayurvedic Drug <i>Pashanabedha</i>  |
| 50. | Mr. Ramdas Manakkote      | Nanosuspension Parenteral Aqueous Formulations: Development, Characterization & Evaluation   |
| 51. | Ms. Aditi Sharma          | Data Mining approach for Spatio-Temporal analysis of Draught   |
| 52. | Mr. Binay Kumar Singh     | Water Resource Assessment, Harvesting, Conservation and Management in Jaipur Urban Agglomeration Rajasthan, India by Geoinformatics                              |

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|-----|------------------------------|---|
| 53. | Mr. Anup Kumar Keshri        | Applications of Soft Computing Tools to Study the Brain Electrophysiology   |
| 54. | Mr. Sreerama Murthy Velaga   | Machine Learning Application for Image  |
| 55. | Mrs. Rajni Agarwal           | Physico-Chemical Investigations of the Industrial Effluent of Sitapura Industrial Area (in Jaipur) and to Study the Effects of Pollutants on nearby Area"       |
| 56. | Mr. Anand Prasad Sinha       | Effective Management of New Technology and its Implementation in Coal Research Scholar Mining Industry  |
| 57. | Mr. Pinaki Ghosh             | Marketing Potential of Horticulture Products – A Study of Constraints and Strategies  |
| 58. | Ms. Rohini Jha               | Adoption of E-governance in India   |
| 59. | Mr. M.K. Mandal              | Alternative Sustainable Livelihood for farmers synthesizing natural resources self-help and appropriate technology through responsive administrative strategies |
| 60. | Ms. Shruti Kohli             | Information retrieval via search Engine   |
| 61. | Ms. Pooja Tripathi           | Study for Designing Expert System for the Competency Mapping for the Successful Organization  |
| 62. | Ms. Mary Jacintha            | Financial Implications in Implementation of ERP-FI in Oil Companies   |
| 63. | Mr. Arun Mittal              | A Study of Promotional Strategies Adopted by Leading Banks in India   |
| 64. | Mr. Satish Chandra Panigrahi | Design and Analysis of Efficient Topology for Parallel Processing   |
| 65. | Ms. Sanchita Paul            | Design and Analysis of Algorithms Based on DNA Computing  |
| 66. | Mr. Jeetendra Prasad Roy     | Analysis of Combined Cycle Energy Conversion Technologies for Waste Heat Recovery in Medium and Low Capacity Thermal Power Plants                               |
| 67. | Mr. Joyjeet Ghose            | Investigations of Multifunctional behavior of Metallic foams  |
| 68. | Mr. M.R. Narayanan           | Performance Improvement and Parameter Optimization Of Soi Mosfet Devices  |
| 69. | Mr. Avireni Srinivasulu      | Studies on Some CCII Based Waveform Generators / Oscillators and their VLSI Implementation  |
| 70. | Mr. Gautam Sen               | Synthesis, Characterization, Flocculation and Rheological -Characteristics of Polyacrylamidegrafted Carboxymethylated Starch CMS-g-PAM)                         |

## Convocation, Results, Degree/Diploma Awarded

Upon the recommendation of the Board, the following scholars who have cleared the programme during 2006-2007 were awarded Degree/Diploma in the convocation 2006-2007 held in May 2007.

### Ph.D. Degree

<i>S.N.</i>	<i>Name of Scholar</i>	<i>Discipline</i>	<i>Title of the Thesis</i>
1	Vinay Sharma	Engineering	Water jet System For Mining Under Indian Environment
2	Sanjay Kumar Jha	Engineering	Technology Adaptation Towards Productivity Enhancement Of Rural Artifacts Manufacturing with Special Reference To Jharkhand
3	Ritesh Kumar Singh	Engineering	Development Of Strategies For Minimization Of Wastes In A Manufacturing Industry Using Lean Paradigms
4	Rakesh Chandra Jha	Engineering	Solution Of Unit Commitment Considering Uncertainties Of Unit Availability And Deregulation Of Power Industry
5	Arup Choudhury	Engineering	Recycling Of Post Use Oil And Milk Pouch Polymers
6	Mayank Agarwal	Engineering	Mechanical Processing Of Sintered Performs Under Different Tribological Conditions
7	Arun Kumar	Engineering	Fatigue Behaviour Of Adhesive Joints In Composite Materials
8	Manjari Chakraborty	Engineering	Restructuring Under-Graduate Education Of Architecture In India- Realities And Reforms
9	Amitava Ray	Engineering	Study on the Influence of Microstructural characteristics on the spalling behaviour and performance of hot and cold strip mill works-rolls used in integrated steel plants.
10	Srilaxmi Bodduluru	Engineering	Investigations on the electromagnetic radiation during plastic deformation and crack propagation in metals.
11	Ramesh Chandra	Pharmacy	Production Of L-Asparaginase By Wild Strain Of <i>Alcaligenes Faecalis</i> .
12	Subir Samanta	Pharmacy	Synthesis and studies of pipeline analogues
13	Prabal Dutta	Science	Numerical investigation of some connective boundary-layer flows

## Other Degrees/ Diplomas

<b>I. Doctor of Philosophy</b>					<b>13</b>
	<b>Branch</b>	<b>Division</b>			<b>Total</b>
<b>II. Post-Graduate</b>		<b>I</b>	<b>II</b>		
Master of Engineering	AMS	4	-	-	4
	CADD	1	-	-	1
	Civil	5	-	-	5
	Electrical	17	1	-	18
	E.C.E.	23	-	-	23
	Mechanical	12	1	-	13
	Q.E.& M	2	-	-	2
	S.E. & R.	10	-	-	10
	Software	5	2	-	7
Master of Pharmacy		29	3	-	32
Master of Technology	Computer Science	17	6	-	23
	E.S.& E.	6	-	-	6
	Fuels & Combustion	4	2	-	6
	N.M. & P. Tech.	3	-	-	3
	Remote Sensing	13	1	-	14
	Scientific Computing	6	-	-	6
Master of Science	B. M. I.	3	1	-	4
	Information Science	10	11	-	21
	Information Tech.	25	3	-	28
Master of Business Administration		100	121	-	221
Master of Computer Application		170	139	-	309

<b>III. Under Graduate Degrees</b>		<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
Bachelor of Engineering	Civil	6	16	-	22
	Bio-Technology	27	13	-	40
	Computer Sc.	43	67	-	110
	E.E.E.	20	33	-	53
	E.C.E.	73	65	1	139
	Mechanical	54	73	-	127
	Polymer	1	6	-	7
	Production	1	6	-	7
	Information	3	27	-	30

	Technology				
	Marine	85	7	-	92
Bachelor of Pharmacy		14	17	-	31
Bachelor of Architecture		11	5	-	16
Bachelor of Technology	Civil	-	-	-	-
	Electrical & Electronics	-	-	-	-
Bachelor of Business Administration		163	173	-	336
Bachelor of Computer Application		230	95	-	325
Bachelor of Computer Application (Honours)		-	-	-	
Bachelor of Hotel Management and catering Technology		19	4	-	23
Bachelor of Science	Nautical Science	82	-	-	82

<b>IV. University Diplomas</b>	Automobile Engg.	11	19		30
	Electronics Engg.	16	16		32
	Computer Science	11	15		26
	Manufacturing Engg.	7	5		12

### Faculty position (including India and Abroad)

#### Summary of the faculty position

<b>Category</b>	<b>Sanctioned</b>
Professor	60
Associate Professor	20
Reader	46
Lecturer (Selection Grade)	11
Senior Lecturer	35
Lecturer	255
Associate Lecturer	62
Scientific Officer	14
Res. Assoc. Cum Tutor	8
Other	19
<b>Total</b>	<b>530</b>

## Department wise details of faculty position: Main Campus

### Department of Architecture

Sl. No.	Faculty Name	Designation	Qualification
1.	Dr. Ajay Khare	Professor and In-Charge	Ph. D, M. Arch.
2.	Mr. D. J. Biswas	Reader	MCP✓
3.	Mr. N. R. Mandal	Reader	MUP✓
4.	Dr. Manjari Chakraborty	Senior Architect	M. Tech, PGDEE, Ph.D.
5.	Ms. Rachna Khare	Lecturer (Sel. Gr.)	PGDEE
6.	Ms. Ritu Kumari	Senior Lecturer	MURP
7.	Mr. S. P. Bhattacharya	Lecturer	M. Tech.
8.	Ms. Harshit Lakra*	Lecturer	P.G. Dip✓
9.	Mr. Sanmarga Mitra	Lecturer	MCP
10.	Mr. Satyaki Sarkar	Lecturer	MCP
11.	Ms. Parama Mitra	Lecturer	MCP
12.	Ms. Smriti Mishra	Lecturer	MCP
13.	Mr. Gaurav Singh	Lecturer	MCP
14.	Dr. Meghali Goswami	Lecturer	Ph.D.
15.	Ms. Jayeeta Dey*	Associate Lecturer	B Arch
16.	Mr. Anuj Kumar Topo	Associate Lecturer	B.Arch
17.	Mrs. Nayana R. Singh	Associate Lecturer	B.Arch

\* On Study Leave

### Department of Applied Chemistry

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr.(Mrs.) Usha Jha	Professor and Head	Ph.D
2.	Dr. R. P. Bhatnagar	Principal Scientific Officer	Ph.D.
3.	Dr. P. K. Srivastavaa	Assoc. Professor	Ph.D.✓
4.	Dr. R. K. Dey	Reader	Ph.D.
5.	Dr. Bimal Verma	Lecturer (Sel. Gr.)	Ph.D.
6.	Dr. J. P. Pandey	Lecturer (Sel. Gr.)	Ph.D.
7.	Dr. Sagar Pal	Lecturer	Ph.D.
8.	Mr. G. K. Agarwal	Assoc. Lecturer	M.Phil.
9.	Ms. Sumit Mishra	Assoc. Lecturer	M.Phil.
10.	Ms. Lakshmikanta	Res. Assoc. Cum Tutor	M.Sc.
11.	Sh. S. S. Manjhi	Res. Assoc. Cum Tutor	M.Sc., M. Tech



**Department of Applied Mathematics**

Sl.No.	Faculty Name	Designation	Qualification
1.	Dr. N.C. Mahanti	Professors and Head	Ph.D.
2.	Dr. S.K. Jain	Reader	Ph.D.
3.	Dr. S.K. Samal	Reader	Ph.D
4.	Dr. S.S.Roy	Reader	Ph.D.
5.	Dr. S.K. Chakraborty	Reader	Ph.D.
6.	Dr. Shoubhik Chakrabarty	Sr. Lecturer	Ph.D.
7.	Dr. Manish Trevedi	Lecturer	Ph.D
8.	Dr. S. Padhi	Lecturer	Ph.D
9.	Dr. (Ms.) A. Pradhan Ghorai	Lecturer	Ph.D
10.	Dr. (Ms.) T. Pal	Lecturer	Ph.D
11.	Dr. Anurag Jaiswal	Lecturer	Ph.D.
12.	Mr. Prabal Datta *	Lecturer	M. Sc., M. Tech
13.	Dr. Manoj Kumar	Jr. Scientific Officer	Ph.D.
14.	Dr. Rajesh Kumar	Jr. Scientific Officer	Ph.D.
15.	Mr. Ranjan Chattoraj	RA-Cum-Tutor	M.Sc
16.	Ms. Swati Pande	RA-Cum-Tutor	M.sc.

\* On deputation to Muscat center

**Department of Applied Mechanics**

Sl. No.	Faculty Name	Designation	Qualifications
1.	Prof. A. K. Ray	Professor and Head	B.E., M.Tech, M.S.
2.	Dr. R. P.Singh *	Professor	B.E., M.E., PhD.
3.	Mr. K. R. Roychaudhury	Professor	B.E., M.E.
4.	Mr. U. S. Prasad	Lecturer	B.E., ME
5.	Mr. Alok Kumar	Lecturer	B.E., M.E
6.	Mr. Kishan Choudhuri	Lecturer	B.E., M.Tech
7.	Mr. S. Bhaduri	Lecturer	B.E., M.E

\* On Leave

**Department of Applied Physics**

Sl. No.	Faculty Name	Designation	Qualification
1.	Dr. P. K. Barhai	Professor and Head	Ph.D
2.	Dr. D. Jairath	Professor	Ph.D
3.	Dr. A. K. Shrivastava	Professor	Ph.D
4.	Dr. G. G. Sarkar	Principal Scientific Officer	Ph.D
5.	Dr. S. Konar	Professor	Ph.D
6.	Dr. J. T. Andrews	Assoc. Prof.	Ph.D
7.	Dr. S. Medhekar	Assoc. Prof.	Ph.D
8.	Dr. (Ms.) S. Keshri	Reader	PhD
9.	Dr. S K Sinha-I	Lecturer (Sel. Gr.)	PhD
10.	Dr. R K Paul	Lecturer (Sel. Gr.)	PhD
11.	Dr. S K Sinha-II	Lecturer	PhD
12.	Dr. Rajeev Kumar*	Lecturer	PhD
13.	Dr. Santosh Kumar Mohapatra	Lecturer	Ph. D
14.	Mr. M. K Sinha	Scientific Officer	MSc
15.	Dr. Sanjeeb Kr. Raut	Lecturer	PhD

\* on study leave

**Department of Biotechnology**

Sl. No.	Faculty Name	Designation	Qualification
1.	Dr. Ambarish S. Vidyarthi	Professor and In-Charge	Ph.D.
2.	Dr. Kunal Mukhopadhyay	Reader	Ph.D.
3.	Dr. Pratyooosh Shukla	Sr. Lecturer	Ph.D.
4.	Dr. Rajib Bandopadhyay	Lecturer	Ph.D.
5.	Mr. Debabrata Garai	Lecturer	M. Sc
6.	Dr. Sanjay Ghosh *	Lecturer	Ph.D.
7.	Dr. Pankaj K. Mishra *	Lecturer	Ph. D
8.	Mr. Dev Mani Pandey	Lecturer	M. Sc
9.	Dr. Manoj K. Singh *	Lecturer	Ph.D.
10.	Mr. Kamal Kumar	Lecture	BE, M.Tech.
11.	Mr. Raju Poddar	Assoc. Lecturer	M. Sc, M. Tech
12.	Mr. Harmeet Singh *	Assoc. Lecturer	M. Sc
13.	Ms. Supreet Kaur *	Assoc. Lecturer	M. Sc

\* On Study leave

## Department of Civil Engineering

Sl. No.	Faculty Name	Designation	Qualification
1.	Dr. K. V. Krishnamurthy	Professor and Head	Ph. D.
2.	Prof. K. R. Roychowdhury	Professor	M. E.
3.	Prof. S. Sengupta	Professor	M. E.
4.	Dr. Gopal Pathak	Professor	Ph. D.
5.	Dr. Balram Singh	Assoc. Professor	Ph. D.
6.	Dr. Anand Kr .Sinha	Assoc. Professor	Ph. D.
7.	Dr. R. R. Sahay	Reader	Ph. D.
8.	Dr. S. Chakrabarty	Reader	Ph. D.
9.	Dr. Mainak Mallik	Reader	Ph. D.
10.	Dr. Arun Kumar	Reader	M. E. ♀
11.	Ms. Bindu Lal	Sr. Lecturer	M. E.
12.	Dr. Siddhartha Sengupta	Sr. Lecturer	Ph. D.
13.	Dr. Birendra Kr. Singh	Lecturer	M. E.
14.	Mr. Suresh Kumar	Lecturer	M. E.
15.	Mr. U. C. Sahoo*	Lecturer	M. Tech.
16.	Mr. Jitu Kujur	Lecturer	M. E.

\* On Study leave

## Department of Computer Science & Engineering

Sl. No.	Faculty Name	Designation	Qualification
1	Dr. G. Sahoo	Professor and In-Charge	Ph.D.
2	Dr. Krishna G. Pande	Professor	Ph.D.
3	Dr. P.K. Mahanti*	Professor	Ph.D.
4	Dr. G. Raju*	Reader	Ph.D.
5	Dr. Vandana Bhattacharjee*	Reader	Ph.D.
6	Mr. S. Dutta	Reader	MCA, MBA ♀
7	Dr. P. K.Sharma	Sr. Lecturer	M.Sc , M.Tech
8	Ms. A. Jain	Lecturer	M.Sc., M.Tech.
9	Mr. K. Lal	Lecturer	M.Tech , BE
10	Mr. D. K. Mallick	Lecturer	M.Tech.
11	Mr. V. K.Jha	Lecturer	B.E. ♀
12	Ms. Amritanjali	Lecturer	M. Tech
13	Mr. S. C. Panigrahi	Lecturer	M. Tech

14	Mr. I. Mukherjee	Lecturer	M.Sc. MCA
15	Mr. A. Srivastava *	Lecturer	BE, M.E.
16	Mr. R. Jha	Lecturer	M.Sc.
17	Mr. A. K Keshri	Lecturer	BE, ME
18	Mr. S. K Chatterjee	Lecturer	MCA
19	Mr. S. Paul	Lecturer	MCA
20	Mr. B. K. Sarkar	Lecturer	MCA, M.Sc.
21	Mr. P. Paul	Lecturer	BE, M. Tech
22	Mr. K. S. Patnaik	Lecturer	BE , ME
23	Mr. V. S. S Sriram	Lecturer	MCA, M.E
24	Ms. S. Vijayvargiya**	Lecturer	M. Tech
25	Mr. K. K. Senapati	Lecturer	M. Tech
26	Ms. S. Mishra	Lecturer	M. Tech , BE
27	Mr. K. K. Patnaik	Lecturer	Diploma, B.E, M. Tech.
28	Mr. I. D. Ram	Lecturer	M. Tech
29	Ms. S. Ghosh *	Lecturer	M.Sc., M. Tech
30	Ms. I. Snigdh	Lecturer	ME, BE
31	Mr. A. Mustafi	Lecturer	MCA
32	Mr. B. K. Chanda	Assoc. Lecturer	MCA
33	Mr. B. K. Panjiyar	Assoc. Lecturer	MCA
34	Ms. R Sahay	Assoc. Lecturer	BE, M. Tech

\*On Study leave

\*\*On deputation

### Department of Electrical & Electronics Engineering

Sl. No.	Faculty Name	Designation	Qualification
1.	Dr. B. M. Karan	Professor and Head	Ph.D.
2.	Prof. D. Bhagat	Professor	M.Sc. (Engg.)
3.	Dr. R. C. Prasad	Professor	Ph.D.
4.	Prof. B. P. Roy	Professor	M.Sc. (Engg.)
5.	Prof. R. K. Narayan	Professor	M.S
6.	Dr. B. N. Das	Professor	Ph.D.

7.	Dr. T. Ghose	Associate Professor	Ph.D.
8.	Mr. N. Pathak	Reader	M.Sc. (Engg.) /
9.	Dr. N.L. Nath	Reader	Ph.D.
10.	Dr. D. K. Mohanta	Reader	Ph.D.
11.	Dr. R. C. Jha	Reader	Ph.D.
12.	Mr. C. Panigrahi	Sr. Lecturer	ME
13.	Mr. P. R. Thkura *	Lecturer	ME
14.	Mr. P. K. Upadhayay	Lecturer	M.Sc.
15.	Ms. Vijaya Laxmi	Lecturer	ME
16.	Mr. S. Ghose	Lecturer	ME
17.	Mr. P. Prakash	Lecturer	ME
18.	Mr. K. C. Jana	Lecturer	M.Tech
19.	Mr. S. G. Kadwane	Lecturer	ME
20.	Mr. S. Samanta *	Lecturer	ME
21.	Mr. Avinash Kishore*	Lecturer	M.Tech.
22.	Mr. J. B. Reddy	Lecturer	ME
23.	Ms. Sarbani Ray (Chakraborty)	Lecturer	M. Tech.
24.	Mr. A. Prasad	Lecturer	BE /
25.	Mrs. A. Mahapatra	Assoc. Lecturer	BE

\* On Study leave

### Department of Electronics & Communication Engineering

Sl. No.	Faculty Name	Designation	Qualification
1.	Prof. R. Sukesh Kumar	Professor and Head	M.E. /
2.	Dr.(Ms.) N. Gupta	Professor	Ph.D.
3.	Dr. D. Pal	Professor	Ph.D
4.	Dr. S. K. Ghorai	Professor	Ph.D.
5.	Dr. J. S. Roy	Professor	Ph.D.
6.	Mr. M. Puri	Reader	M.E. /

7.	Mr. K. K. Masand	Reader	M.A.Sc.✓
8.	Mr. B. B. Pal	Reader	M.E.✓
9.	Mr. N. Poddar*	Reader	M.E.✓
10.	Dr.(Ms.) V. R. Gupta	Lecturer (Sel. Gr.)	M.E.
11.	Mr. S. S. Solanki	Lecturer (Sel. Gr.)	M.E.
12.	Mr. Sanjay Kumar	Lecturer ( Sel. Gr.)	M.Tech.
13.	Mr. P. Kumar*	Sr. Lecturer	M.E.
14.	Mr. M. C. Shrotriya*	Lecturer	M.Tech
15.	Mr. V. K. Singh*	Lecturer	M.E.
16.	Mr. M. Goswami	Lecturer	M.E.
17.	Dr. S. Srivastava	Lecturer	Ph.D.
18.	Mr. K. Mahto*	Lecturer	M.E.
19.	Mr. P. K. Upadhyaya	Lecturer	M.E.
20.	Mr. Sanjeet Kumar*	Lecturer	M.E.
21.	Mr. J. Sahay*	Lecturer	M.E.
22.	Mr. Bharat Gupta*	Lecturer	M.Tech
23.	Mr. S. K. Dash	Lecturer	M.E.
24.	Mr. R. K. Lal	Lecturer	M.Sc.
25.	Mr. M. K. Jha	Lecturer	B.E.✓
26.	Ms. N. Chatteraj	Lecturer	B.E ✓
27.	Mr. D. D. Seth	Lecturer	M.Tech.
28.	Mr. Vishal H. Shah	Lecturer	ME
29.	Mr. Samnath Senguptaath	Lecturer	ME
30.	Mr. S.S. Tripathy	Lecturer	ME
31.	Mr. A. K. Tiwari	Assoc. Lecturer	B.Sc.(Engg)
32.	Mr. Vijay Nath	Associate Lecturer	ME

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\* On study Leave.



### Department of Hotel Management & Catering Technology

Sl.No.	Faculty Name	Designation	Qualifications
1.	Dr. (Ms.) Sonia Gupta	Sr. Lecturer	Ph.D.
2.	Mr. Atul Gupta	Sr. Lecturer	B.A., Hotel Mgmt
3.	Mr. Ashish Dahiya	Lecturer	PGDTHM, B.A. Hotel Mgmt
4.	Mr. Priti Ranjan Sahoo	Lecturer	M.T.M, Hotel Mgmt.
5.	Mr. Praveen Srivastava	Lecturer	M.A., Hotel Mgmt.
6.	Mr. Abhinav Shandilya	Lecturer	B.Sc. Hotel Mgmt
7.	Mr. Sanjay Kumar	Assoc. Lecturer	M.A, M.T.M
8.	Ms. Snigdha Priya	Assoc. Lecturer	M.B.A, Hotel Mgmt
9.	Mr. Amit Saran	Assoc. Lecturer	Dipl. In HMCT
10.	Mr. G. Sandilya	Associate Lecturer	Dipl. in HMCT

### Department of Information Science

Sl.No.	Faculty Name	Designation	Qualifications
1.	Dr. N. C. Mohanti	In-charge	Ph.D.
2.	Dr. Bhaskar Karan	Lecturer	Ph.D.
3.	Mr. Arindam Dutta *	Assoc. Lecturer	M. Sc.

\* On study leave

### Department of Management

Sl. No.	Name	Designation	Qualification
1.	Dr. S. K. Mukherjee	Professor and Head	Ph. D.
2.	Dr. S.K. Bose	Assoc. Prof	Ph.D.
3.	Dr. (Mrs.)Manju Bhagat	Assoc. Prof	Ph.D.
4.	Dr. (Mrs.)S. Shivani	Assoc. Prof	Ph.D.
5.	Dr. R.N. Bhagat	Reader	Ph.D.
6.	Mr.S.C.Mishra	Reader	ME (IE&M), B.Sc. (Engg.)
7.	Mr. Utpal Baul	Reader	MBA, B.Sc (Engg.) Ph.D (submitted)
8.	Mr. Vijay Agrawal	Sr. Lecturer	MBA , B.Sc
9.	Mr. Anand Kumar	Lecturer	MMS, B.Sc, M.Sc
10.	Mr. A.R. Srivastava*	Lecturer	PGDBM, BE

11	Dr. P.C. Jha	Lecturer	Ph.D.
12	Mr. Niraj Mishra*	Lecturer	MBA
13	Mr. Amitabh Verma	Lecturer	MCA, MSc. (Electro.)
14	Mr. Rohit Kr. Pandey	Lecturer	MBA, PGDPM, MA

\* On Deputation to Muscat Extn. Centre

### Department of Mechanical Engineering

Sl. No.	Name of the Teacher	Designation	Qualification
1.	Dr. Ashok Misra	Professor and Head	D.Sc.
2.	Dr. A.N. Sinha	Professor	Ph.D.
3.	Dr. K. K. Srivastava	Professor	Ph.D.
4.	Sri B.N.Giri*	Reader	M.E. ✓
5.	Sri P.K.Choudhary	Reader	M.E. ✓
6.	Dr. Arbind Kumar	Assoc. Prof.	Ph.D.
7.	Dr. Kumar Arbind	Reader	Ph.D.
8.	Dr. R.P.Sharma	Reader	Ph.D.
9.	Dr. A.K.Roy	Lecturer (Sel. Gr.)	Ph.D.
10.	Sri D.B. Lata	Sr. Lecturer	M.E
11.	Sri Girish Pathak	Sr. Lecturer	M.E.
12.	Sri S.K.Sinha	Sr. Lecturer	M.E.,MBA
13.	Sri B.S.Choudhary	Lecturer	M.Tech.
14.	Sri Rajeev Kumar	Lecturer	M.E.
15.	Mrs. Richa Pandey	Lecturer	M.E.
16.	Sri J. Singh	Lecturer	M.Tech.
17.	Sri V.S.Chauhan	Lecturer	M.Tech.
18.	Sri Ranjeet Ranjan *	Lecturer	M.E.
19.	Sri R.K. Mishra	Lecturer	M.Tech.
20.	Sri Vivek Gaba	Lecturer	M.E.
21.	Sri O.P.Pandey	Lecturer	M.E.
22.	Sri S.K.Mishra	Lecturer	M.E.
23.	Sri P.Mishra	Lecturer	M.E.
24.	Sri Anand Kumar	Lecturer	M.E.
25.	Sri B.K.Prabhakar	Lecturer	M.E.
26.	Sri Sujeet Kr. Mishra	Lecturer	M.E.
27.	Sri S. K. Pradhan	Lecturer	M.E.
28.	Mr. Soumen Mandal *	Lecturer	ME

\* On deputation to extension center

## Department of Pharmaceutical Sciences

Sl. No.	Name of the Faculty	Designation	Qualification
1	Prof. S.P. Bhatnagar	Professor	M.Pharm. ✓
2	Dr. D. Sasmal	Professor and Head	Ph.D.
3	Dr. G.M.Panpalia	Professor	Ph.D.
4	Prof. C.M.Prasad	Professor	M.Pharm ✓
5	Dr. P.R.P.Verma	Professor	Ph.D. ✓
6	Dr. B.N.Sinha	Assoc. Professor	Ph.D.
7	Dr. S. Bhattacharya	Assoc. Professor	Ph.D.
8	Dr. S. Samanta	Assoc. Professor	Ph.D.
9	Dr. S.Jha	Assoc. Professor	Ph.D.
10	Mrs. S. G. Panpalia	Reader	M.Pharm. ✓
11	Dr. R.N.Gupta	Reader	Ph.D.
12	Mrs. S. M. Verma	Sr. Lecturer	M.Pharm
13	Dr. (Mrs.) R.Mazumder	Sr. Lecturer	Ph.D.
14	Dr. A. Mazumder	Sr. Lecturer	Ph.D. MBA.
15	Dr. S.Ganguly	Sr. Lecturer	Ph.D.
16	Dr. R. Chandra	Lecturer	Ph.D.
17	Dr. JayaramKumar	Lecturer	Ph.D.
18	Dr. (Mrs.) P.M.Mazumder	Lecturer	Ph.D.
19	Mr. A.K. Patnaik	Lecturer	M.Pharm.
20	Mr. Awdesh Oraon	Lecturer	M.Pharm.
21	Mr. Venkatesan J.	Lecturer	M.Pharm.
22.	Mr. Manik	Lecturer	M.Pharm
23.	Ms. Nibha Mishra	Lecturer	M. Pharm
24.	Mr. Arijit Basu	Lecturer	M.Pharm
25	Mrs. Anima Pandey	Scientific Officer	M. Pharm

## Department of Polymer Engineering

Sl.No.	Name of the faculty	Designation	Qualification
1	Dr.(Mrs.) M. Mukherjee	Professor and Head	Ph.D.
2	Dr. A.K. Sen	Sr. Lecturer	Ph.D.
3	Dr. C.Guria	Sr. Lecturer	M.E.
4	Ms. S. Goswami	Sr. Lecturer	M.E.
5	Dr. P. Mukhopadhyay	Lecturer	Ph.D.
6	Dr. G. Sarkhel	Lecturer	Ph.D.
7	Dr. C. Datta	Lecturer	Ph.D.
8	Mr. S. V. Lahne	Lecturer	M.E.
9	Sri K. Kumar	Sci. Officer	BE
10	Sri. S. Kumar Prasad	Asstt. Sci. Officer	B.E.

## Department of Production Engineering

Sl. No.	Name of Faculty	Designation	Qualification
1.	Dr. Surender Kumar	Prof. & Head	Ph.D.
2.	Sri Atul Anand	Reader	BE, MBA ✓
3.	Sri A. K. Thakur	Reader	M.Tech ✓
4.	Dr. Alok Varma	Reader	Ph.D.
5.	Dr. B.K. Singh	Reader	Ph.D.
6.	Sri S. P. Lal	Reader	ME ✓
7.	Dr. Vinay Sharma	Lecturer (Sel. Gr.)	ME
8.	Dr. Sanjay Kumar Jha	Sr. Lecturer	ME
9.	Sri Saranjit Singh	Sr. Lecturer	M.Tech
10.	Dr. Ritesh Kumar Singh	Sr. Lecturer	ME
11.	Sri S. C. Srivastava	Lecturer	ME
12.	Sri Vijay Pandey	Lecturer	ME
13.	Sri Rajeev Agrawal	Lecturer	ME
14.	Dr. A. N. Sinha	Lecturer	PhD
15.	Dr. L.N. Patnaik	Lecturer	PhD
16.	Sri Joyjeet Ghose	Lecturer	ME

**Department of Remote Sensing**

<b>Sl. No.</b>	<b>Name of Faculty member</b>	<b>Designation</b>	<b>Qualification</b>
1.	Dr. M.S. Nathawat	Professor & Head	Ph.D.
2.	Dr. Nilanchal Patel	Professor	Ph.D.
3.	Dr. Krishna A.P.	Assoc. Prof.	Ph.D.
4.	Dr. A.K. Singh	Reader	Ph.D.
5.	Dr. R. Sivakumar	Reader	Ph.D.
6.	Dr. A.C.Pandey	Sr. Lecturer	Ph.D.
7.	Mr.Subhas Chelliah	Lecturer	M.Tech.(RS)
8.	Mrs. Richa N.K. Sharma	Lecturer	M.Sc.
9.	Mr. Roheet Bhatnagar	Lecturer	M.Tech.(RS)
10.	Mr. V.S. Rathore	Assoc. Lecturer	M.Sc.

**Department of Space Engineering and Rocketry**

<b>Sl. No.</b>	<b>Name of the Faculty</b>	<b>Designation</b>	<b>Qualification</b>
1	Dr. A. K. Chatterjee	Professor & Head	Ph. D.
2	Dr. P. C. Joshi	Professor	Ph. D.
3	Dr. Mohan Varma	Professor	Ph. D.
4	Dr. J. K. Prasad	Professor	Ph. D.
5	Mr. C. R. Chodankar*	Lecturer	ME
6	Dr. P. K. Dash	Lecturer	Ph. D.
7	Shri Sudip Das	Lecturer	M. E.
8	Sri S. K. Umesh	Lecturer	ME
9	Ms. Nivedita Gupta	Lecturer	ME

\* on Study leave

### **Environment Science and Engineering Group**

<b>Sl. No.</b>	<b>Name of the faculty</b>	<b>Designation</b>	<b>Qualification</b>
1.	Dr.Gopal Pathak	Professor and Head	Ph.D
2.	Mr.Kirti Avishek	Assoc. Lecturer	M.Sc,M-Tech
3.	Ms.Neeta Kumari	Research Fellow	M.Sc,M-Tech
4.	Dr.Usha Jha	Professor (Chemistry)	Ph.D
5	Dr.M.S.Nathawat	Professor (Remote Sensing)	Ph.D
6	Dr.P.K.Shrivastava	Lecturer (Chemistry)	Ph.D
7	Dr.R.K.Dey	Lecturer (Chemistry)	Ph.D
8	Dr. A.C.Pandey	Senior Lecturer (Remote Sensing)	Ph.D
9	Mr.Satish Kumar	Research Scholar (Chemistry)	M.Sc
10.	Mr.R.Chattoraj	Lecturer (Mathematics)	M.Sc
11.	Dr.Arvind Kumar	Reader (Mech. Engg.)	Ph.D
12.	Dr.Chandan Guria	Sr. Lecturer (Polymer)	M.Tech

### **Department of Bio-Medical Instrumentation**

<b>Sl. No.</b>	<b>Name of the faculty</b>	<b>Designation</b>	<b>Qualification</b>
1.	Dr. B. N. Das	Professor and Head	Ph.D
2.	Dr. Rakesh Kumar Sinha	Lercturer	Ph.D.
3.	Mr. Surendra kumar	Lecturer	ME
4.	Mr. Supriyo Kumar Das	Assoc. Lecturer	B.Sc. Eng.



### **Extension Center : Allahabad**

<b>Sl. No.</b>	<b>Name of the faculty</b>	<b>Designation</b>	<b>Qualification</b>
1.	Prof. B.N. Jha	Director	M.E.
2.	Mr. S. Kanungo	Sr. Lecturer	M.Sc., M.Tech. (SE)
3.	Mr. R.S. Pandey	Sr. Lecturer	M.Tech (SE)
4.	Mr. B.K. Singh	Sr. Lecturer	ME
5.	Mr. Anita Kushwaha	Lecturer	MCA
6.	Mr. Ajit Kumar Keshri	Lecturer	BE, M.Tech (CS)
7.	Mr. Santanu Das	Lecturer	MBA
8.	Dr. Adhip Kr. Mahanty	Lecturer	Ph.D.
9.	Mr. S. S. Kumar	Lecturer	M.Sc. (Chem.)
10.	Mr. Anil Kr. Singh	Lecturer	ME
11.	Mr. Dhaneshwar Mahto	Lecturer	ME (Heat Power)
12.	Mr. Sunil Kumar Pandey	Assoc. Lecturer	MBA, LLB
13.	Mrs. Sweta	Assoc. Lecturer	M.A. (LSW)
14.	Mr. Pradeep Munda	Assoc. Lecturer	MBA (Finance and Marketing)
15.	Mr. P. C. Srivastava	Assoc. Lecturer	M.A. (Maths)
16.	Mr. B.N. Singh	Assoc. Lecturer	BE, MFT
17.	Mr. Kumar Nikhil	Assoc. Lecturer	ME

**Extension Center: Lalpur**

<b>Sl. No.</b>	<b>Name of the faculty</b>	<b>Designation</b>
1.	Dr. A. N. Jha,	In-charge
2.	Dr. (Mrs.) Vandana Bhattacharjee	Reader
3.	Mr. T.K.Banerjee	Lecturer
4.	Ms. Anupama Sahai	Lecturer
5.	Mr. A. K.Singh	Lecturer
6.	Mr. Somnath Mukherjee	Lecturer
7.	Mr. S. N. Sahdeo	Lecturer
8.	Mr. Ashutosh Mishra	Lecturer
9.	Mr. S.A.Haider	Lecturer
10.	Ms. Mili Dutta	Lecturer
11.	Mr. Amitabh Chandan	Lecturer
12.	Mrs. Amrita Priyam,	Lecturer
13.	Mr. N.P.Tiwari	Lecturer
14.	Ms. Kumar Rajnish	Lecturer
15.	Mrs. Onima Tirkey	Lecturer
16.	Ms. Jaya Pal	Lecturer
17.	Mr. Sanjay Kumar	Lecturer
18.	Mr. Amar Kumar	Lecturer
19.	Mr. J. Bhagat	Assoc. Lecturer
20.	Mr. Soumitro Chakravarty	Assoc. Lecturer
21.	Mr. Satrajeet Choudhary	Assoc. Lecturer
22.	Mr. Avinash Sinha	Assoc. Lecturer
23.	Ms. Swati Priyadarshani	Assoc. Lecturer
24.	Ms. P.S.Bishnu	Assoc. Lecturer
25.	Ms. Sayantoni Choudhury,	Teaching Assistant
26.	Mr. D.K.Mishra	Teaching Assistant
27.	Mr. Binod Kr. Sharma	Teaching Assistant
28.	Mr. Umesh Prasad	Teaching Assistant

**Extension Center : Jaipur**

<b>Sl. No.</b>	<b>Name of the faculty</b>	<b>Designation</b>
1.	Dr. Abhinav Dinesh	Director
2.	Dr. R.K Popli	Professor
3.	Dr. S.K. Sharma	Professor
4.	Mr. P.N. Gupta	Reader
5.	Dr. Roopali Sharma	Reader
6.	Mr. G.P. Mishra	Lecturer (Sel. Grade)
7.	Mr. S. Banerjee	Sr. Lecturer
8.	Mr. O.P. Rishi	Sr. Lecturer
9.	Mr. Jankiballabh Sharma	Sr. Lecturer
10.	Dr. Ram Prakash	Lecturer
11.	Dr. Anuj Agarwal	Lecturer
12.	Dr. Taruna	Lecturer
13.	Dr. Pramod Bubna,	Lecturer
14.	Dr. Anuj Jhankal	Lecturer
15.	Dr. Vibhuti Pandya	Lecturer
16.	Dr. M.V. Coumar	Lecturer
17.	Mrs. Pankaj Sharma	Lecturer
18.	Mrs. Ritu Arora	Lecturer
19.	Mrs. Shipra Bhutani	Lecturer
20.	Mr. Subhash Gupta	Lecturer
21.	Mrs. Seema Gaur	Lecturer
22.	Mrs. Anju Sharma	Lecturer
23.	Mr. B. Pathak	Lecturer
24.	Mrs. Archana Bhatnagar	Lecturer
25.	Mr. V. Pathak	Lecturer
26.	Mr. P.S. Rathore	Lecturer
27.	Mr. Rajeev Ranjan	Lecturer
28.	Mr. A.D.M. Kushwaha	Lecturer
29.	Ms. Preeti Sharma	Lecturer
30.	Mr. Anil Kumar Sharma	Lecturer
31.	Mr. Gurminder Singh Malhotra	Lecturer

Sl. No.	Name of the faculty	Designation
32.	Dr. Indra Kr. Dadheech	Lecturer
33.	Mrs. Kiran Patni,	Lecturer
34.	Mr. Vivek Sharma,	Lecturer
35.	Mr. Niket Mehta,	Lecturer
36.	Ms. Aditi Sharma	Lecturer
37.	Mr. Mecwan Steven Micheal	Associate Lecturer
38.	Ms. Reshu Gupta,	Associate Lecturer
39.	Ms. Shweta Mahlawat,	Associate Lecturer
40.	Mr. Santosh Kr. Agarwal,	Associate Lecturer
41.	Ms. Deepa Rohin,	Associate Lecturer
42.	Mr. Avneesh Pareek,	Associate Lecturer
43.	Ms. Nidhi Agarwal	Associate Lecturer
44.	Dr. M.P. Punia,	Sr. Sci. Officer
45.	Mr. S.P. Sarkar,	Sr. Sci. Officer
46.	Dr. Archana Srivastava,	Sr. Sci. Officer
47.	Dr. K.R. Khicher,	Sr. Sci. Officer
48.	Mrs. Neerja Sharma	Sci. Officer
49.	Mr. B.K. Singh,	Sci. Officer
50.	Mr. V.S.P. Sinha,	Project Scientist
51.	Mr. Rakesh Vyas,.	Project Scientist
52.	Mrs. Rajni Agarwal	Jr. Sci. Officer
53.	Mrs. Anindita Banerjee,	Research Associate.
54.	Mrs. Nidhi Singh,	Research Associate.

**Extension Center: Kolkota**

<b>Sl. No.</b>	<b>Name of the faculty</b>	<b>Designation</b>	<b>Qualification</b>
1.	Prof. Subho Chaudhuri	Reader	ME
2.	Dr. (Mrs.) Sraboni Mukhopadhyaya	Reader	Ph.D.
3.	Mr. R. T. Goswami	Lecturer	MCA
4.	Mrs. Jayasri Ray	Lecturer	MCA
5.	Mr. Ambar Dutta	Lecturer	MCA
6.	Dr. Debangshu Chakraborty	Lecturer	Ph.D
7.	Dr. Sandip Kumar Sengupta	Lecturer	Ph.D.
8.	Mrs. Sraboni Dutta	Lecturer	MBA
9.	Mrs. Ajanta De Sarkar	Lecturer	MCA
10.	Mrs. Sanchita Ghosh	Lecturer	M.Tech.
11.	Mr. Kuntal Mukherjee	Lecturer	MCA
12.	Mr. Somak Ray	Lecturer	ME
13.	Mr. Soumendra Bhattacharyaa	Assoc. Lecturer	M.Phil.
14.	Mr. Rohit Kamal Chatterjee,	Assoc. Lecturer	MCA
15.	Mrs. Tania Roy	Assoc. Lecturer	M.Sc.

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**International Centre: Muscat**

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<b>Sl. No.</b>	<b>Nme of the faculty</b>	<b>Designation</b>
1.	Dr. A. M. Agrawal	Professor
2.	Dr. Munish Makkad	Reader
3.	Dr. Alexander Kocian	Reader
4.	Mr. Sunil Kumar Gupta	Lecturer
5.	Dr. K. A. Goyal	Sr. Lecturer
6.	Mr. Vikash Sharma	Sr. Lecturer
7.	Dr. Pranab Kumar	Lecturer
8.	Dr. Prabal Datta	Lecturer
9.	Mr. Iftekhar Ahmad	Lecturer
10.	Mr. Jyoti K Chandel	Lecturer
11.	Mr. Mithun Srivastava	Lecturer
12.	Ms. Shashi Dua	Lecturer
13.	Mr. Sayeed Aulia	Lecturer
14.	Mr. Niraj Mishra	Lecturer
15.	Mr. A. R. Srivastava	Lecturer
16.	Mr. Sushil Kumar	Lecturer
17.	Mr. Piyush Gupta	Lecturer
18.	Mr. Satish Chander	Lecturer
19.	Mr. Sanjay Kumar	Lecturer
20.	Ms. P. Vijaya	Lecturer
21.	Mr. Shahid Ali	Lecturer
22.	Ms. R. M. Vallikannu	Lecturer
23.	Mr. Santosh Kumar Ray	Lecturer
24.	Mr. A. K. Choudhary	Lecturer
25.	Mr. Akhilesh Roy	Lecturer
26.	Mr. David Manohar	Lecturer
27.	Mr. Mohd Mohatram	Lecturer
28.	Mr. G. SivaKumar	Lecturer
29.	Mr. David Manohar	Lecturer
30.	Mr. Kenneth Mc Gowan	Lecturer
31.	Ms. Helen Daniel	Lecturer
32.	Ms. Smita Prasad	Lecturer
33.	Dr. Sadaf Zahra	Assoc. Lecturer
34.	Ms. Sreedevi	Assoc. Lecturer
35.	Ms. Anasuya Patil	Assoc. Lecturer
36.	Ms. Atiya Tabassum	Assoc. Lecturer
37.	Ms. Indrani Basu	Assoc. Lecturer
38.	Ms. Linus Norohna	Assoc. Lecturer
39.	Mr. El Amin El Nur	Assoc. Lecturer
40.	Ms. S. B. Sinymol	Assistant Lecturer

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**International Centre: Bahrain**

Sl. No.	Name of the faculty	Designation	Qualification
1.	Prof. T.R. Ranganath	Director	B.Tech. Ed, M.E. Fellow (I.E.)
2.	Prof. Surya Lal Mishra	Professor	B.Sc., M.B.A., B.Tech., Fellow (I.E.T.E.)
3.	Mr. Prateek Sharma	Assoc. Professor	B.Sc., M.C.A.
4.	Mr. Niloy Bhattacharya	Assoc. Professor	B.Com (Hons.), M.C.A.
5.	Mr. N. Saravanan	Lecturer	M.Sc., M.Phil., M.Ed.Tech., MS
6.	Mr. Pranav Nathani	Lecturer	B.Com. (Hons.), MBA
7.	Mr. Sultan Khan	Lecturer	B. Com., MBA
8.	Dr. (Mrs.) Sreeja T. D.	Lecturer	Ph.D.
9.	Mrs. D. Shanthi	Assoc. Lecturer	BE, ME
10.	Mr. Aparajit Nandi*	University Education Teacher	B.Com., M.Com., M.D.B.A.
11.	Mr. A. Rajendran*	University Education Teacher	B.Sc.
12.	Mr. Soofi Anwar*	University Education Teacher	BBA, MBA
13.	Mr. A.M. Susai*	University Education Teacher	B.Sc., M. Sc, B. Ed.
14.	Mrs. Nuzhat K. Qurashi	University Education Teacher	MBA
15.	Mrs. Kaveri Mukherjee*	University Education Teacher	B.E.

**Extension Centre Ras Al Khaimah (UAE)**

<b>Sl. No.</b>	<b>Name of the Faculty</b>	<b>Designation</b>
1.	Dr. Praveen Dhyani	Director
2.	Mr. Arshad Mallik	Reader
3.	Mr. Avnish Vijay	Lecturer
4.	Mr. S.P. Bhattacharya	Lecturer
5.	Dr. Nalini Raja	Sr. Lecturer
6.	Mr. Eugene Prakash	Sr. Lecturer
7.	Mr. Anish John	Lecturer
8.	Ms. Sreelatha Sudhir	Lecturer
9.	Ms. Padmashree	Lecturer
10.	Ms. Mallika	Lecturer
11.	Mr. Rubon L	Sr. Lecturer
12.	Mr. Abhilash Abraham	Lecturer
13.	Ms. Siva Sankari	Lecturer
14.	Ms. Abhirami	Lecturer
15.	Ms. Rekha Jayakumar	Lecturer
16.	Ms. Beena Vinod	Lecturer
17.	Ms. Anjali Rajan	Lecturer
18.	Mr. Ravi Kumar	Lecturer

**University Polytechnic**

<b>Sl. No.</b>	<b>Name of the Faculty</b>	<b>Designation</b>	<b>Qualification</b>
1.	Shri D. K. Jain	Director/ Incharge	B.Sc.Engg. (Electrical)
2.	Shri N. K. Singh	Lecturer	MCA
3.	Shri Ramkesh	Lecturer	M.E.
4.	Shri N. K. Mukherjee	Associate Lecturer	B.E. (Electrical)
5.	Shri Manish Kumar Roy	Associate Lecturer	B.E. (Mechanical)
6.	Shri Rakesh	Associate Lecturer	B.E.(Mechanical)
7.	Dr. B. N. Sanyal	Associate Lecturer	Ph.D.
8.	Shri Ramnish Sinha	Associate Lecturer	MCA
9.	Ms. Tanushree Bose	Associate Lecturer	M.Sc.(Electronics)
10.	Ms. Sumana Kumari	Associate Lecturer	M.Sc.(Electronics)
11.	Shri Subodh Kumar	Associate Lecturer	B.E. (Production)
12.	Shri Vikas Verma	Associate Lecturer	B.E. (Electronics and Tele Communication)
13.	Shri Abhay Kumar	Associate Lecturer	MCA
14.	Shri T. K. Baug	Scientific Officer	B.Sc. Engg. (Mechanical)
15.	Shri G. M. Ansari	Jr. System Analyst	MCA
16.	Mrs. Sushila Ekka	Tutor	B.Sc.(Comp.Sc. & Engg.)
17.	Shri R. K. Prasad	Jr. Superintendent	B.E. (Mechanical)
18.	Mrs. Meena Singh	Lecturer	M.Tech.
19.	Shri Pradeep Toppo	Lecturer	M.E.
20.	Shri Manish Oraon	Lecturer	M.E.

## **DEPARTMENT OF ARCHITECTURE**

The department of architecture was established in BIT Mesra in the year 1993. Nine batches of students have graduated till now and they have found gainful employment in planning, design and construction sector. Many of our students have opted for higher studies in India and abroad in the disciplines of Urban Design, City Planning, Landscape architecture, Conservation and Construction Management. Our students have also opted for diversified fields such as Visual Design, Product design, fashion design, management and software development related with architecture.

The Department has attained a rare feat of being the first ever department of Architecture in the country to be awarded research grants under the Departmental Research Support (DRS) level of the Special Assistance Programme (SAP) of University Grants Commission (UGC).

The Department of Architecture of BIT Mesra has also stood first in the country as an Architecture Department to publish an internationally refereed bi-annual research journal named ABACUS since August, 2006.

### **Course offered:**

#### *UG Course:*

- B. Arch degree course in Architecture

#### *PG Course:*

- Master in Urban Planning degree course in Architecture
- Doctorate degree in Architecture

The Department has started offering the Master in Urban Planning degree course from January 2007 with a maximum intake capacity of 12. The first batch is comprised of students from various backgrounds like architecture, civil engineering, geography, sociology and economics.

### **Faculty position**

<b><i>Designation</i></b>	<b><i>Professor Incharge</i></b>	<b><i>Reader</i></b>	<b><i>Lecturer (Sel. Grade)</i></b>	<b><i>Lecturer (Senior)</i></b>	<b><i>Lecturer</i></b>	<b><i>Assoc. Lecturer</i></b>	<b><i>Senior Architect</i></b>
Number in Position	1	2	1	1	8	3	1

## Number of Student enrolled/registered with Department

<i>Semester</i>	<i>No. of students</i>
<b>B. Arch</b>	
II <sup>nd</sup> semester	26
IV <sup>th</sup> semester	21
VI <sup>th</sup> semester	12
VIII <sup>th</sup> semester	17
X <sup>th</sup> semester	18
Total	88
<b>Master of Urban Planning</b>	
I <sup>st</sup> Semester	10
Doctoral Programme	8

## Ongoing Projects

<i>SL</i>	<i>Research project topic</i>	<i>P.I./ Co-P.I.</i>	<i>Funding agency</i>	<i>Amount Sanctioned</i>
1	Formulating a planning approach for some of the newly made district head quarters encircling Ranchi, the capital of Jharkhand state	Dr. P. K. Srivastava (P.I.)	DRS scheme of the Special Assistance Programme (SAP)	
2	GIS mapping of Heritage sites in Jharkhand	Dr. P. K. Srivastava (Co-PI)	DRS scheme of the Special Assistance Programme (SAP)	
3	Prototype designs for rural infrastructure buildings	Prof. (Dr.) Ajay Khare & Ar. N. R. Mandal (Project Co-ordinator)	DRS scheme of the Special Assistance Programme (SAP)	
4	Documentation and GIS Mapping of Architectural and Urban Heritage of Jharkhand and Planning for Pro-Poor Heritage Tourism	Prof. (Dr.) Ajay Khare	Institute	
5	Vibration Based Analysis for Health Monitoring of Multi-storey Structures due to Base Excitation	Dr. S. K. Chakraborti (Project Co-ordinator)	Institute	
6	Performance Measurement of NGO's and ULB's Initiatives in Urban Environmental Management: case studies of Slums of Ranchi	Ar. Ritu Kumari (Project Coordinator)	Institute	

### **Seminar/conference/short term course conducted by the Department.**

- An *International Workshop on Documentation of Historic Structures* held at the City Palace Complex, Udaipur in collaboration with MMCF, Udaipur, BIT Mesra and The Getty Foundation, USA, May 10-15, 2006.

### **Publications by faculty in Journals**

#### ***International:***

- Khare R. Atala Devi Masjid at Jaunpur: An example of Conquest Mosque in India? *Journal of Bengal Art*, 9 & 10, 289-296, 2006.
- Bhattacharyya S. P. Brick Temples at Pathra, Midnapore. *Journal of Bengal Art*, 9 & 10, 135-141, 2006.
- Mitra, P. and Mitra S. Metamorphosis of Indo-Islamic Architecture in the Realm of Medieval Architecture in Bengal: Focus – Gaur. *Journal of Bengal Art*, 9 & 10, 257-268, 2006.

#### ***National :***

- Khare, A. JNNURM: Hope for Urban Renewal of Jharkhand Towns, *CONTEXT: Built, Living and Natural – Journal of the Development and Research Organization for Nature, Arts and Heritage, India*, 3, 43 – 48, 2006.
- Khare, A. Early Brick Temples of Eastern India. *ABACUS: An Internationally Refereed Bi-annual Journal on Architecture, Conservation and Urban Studies, India*. 1, 7-16, 2006.
- Mandal N. R. and Mitra, S. Participatory Management of Community Assets through Asset Management Information System. *ABACUS: An Internationally Refereed Bi-annual Journal on Architecture, Conservation and Urban Studies, India*. 1, 49- 63, 2006.
- Sarkar, S., and Sengupta, B. K. Feasibility of Polycentric Development for Urban Areas of Jharkhand – An Appraisal. *ABACUS: An Internationally Refereed Bi-annual Journal on Architecture, Conservation and Urban Studies, India*. 2, 14- 22, 2007.
- Biswas D. J. Administating the future urbanization in the tribal dominated urban areas: Case study – Ranchi. *Nagarlok*, 38, 21-24, 2006.
- Biswas, D. J. and Sarkar, S. Improvement of Basic Infrastructure and Land Management for urban poor: An approach towards better tomorrow. *Sheltor*, 9, 55-60, 2006.
- Sarkar, S. *Necessity for Revision of Building Byelaws for heritage District of Kolkata*, *Nagarlok*, 38, 13–18, 2006.

- Sarkar, S. Elements of Urban Form in the Historic Urban Core of Kolkata – an appraisal. *Architecture + Design*, 23, 44–52, 2006.
- Sarkar, S. Modifying microclimate through energy-efficient Enviro-scaping. *Journal of Landscape Architecture*, 4, 34 –37, 2006.
- Mitra, P. Rural Tourism and its Adoptability in Jharkhand. *The Green Portal*, 3, 60-70, 2006.

### **Seminar/Symposium/Short-term Course Attended by faculty members:**

#### ***International Events:***

- Khare, A. Maintenance of Historic Structures presented in an *International Workshop on Conservation organized by Maharana Mewar Charitable Foundation* in association with The Getty Foundation, USA, UNESCO and National Museum, New Delhi held at Udaipur from 27<sup>th</sup> November - 1<sup>st</sup> December 2006.
- Khare, R. Disaster Management in India from the lens of Disability, presented at *Ethics 2006 - Design Ethics and Humanism, a conference* organized by European association of Universities held at Nantes, France on 15-17 June 2006.
- Khare, R. presented a paper entitled “Museums for All”, in *International conservation workshop* organized by Maharana Mewar Charitable Foundation in association with The Getty Foundation, USA, UNESCO and National Museum, New Delhi held at Udaipur on 1<sup>st</sup> December 2006.
- Mitra, A. and Mitra, P. presented a paper entitled Strand Warehouse and the Influence of Industrial Revolution on 19th century Architecture of Kolkata, presented at the *7<sup>th</sup> International Conference on Bengal Art* organised by the International Council of Study of Bengal Art and Architecture, Dhaka and held at Bogra, Bangladesh during 8 – 12 February, 2007.
- Mitra, S. presented a paper entitled Interpreting Architectural Styles at *International Workshop on Documentation of Historic Architecture*, jointly organized by Department of Architecture, B.I.T. Mesra, MMCF Udaipur and The Getty Foundation USA, at Udaipur City Palace, from 10th – 14th May 2006.
- Sarkar, S. presented a paper entitled Building an Architectural Inventory at *International Workshop on Documentation of Historic Architecture* jointly organized by Department of Architecture, B.I.T. Mesra, MMCF Udaipur and The Getty Foundation USA, at Udaipur City Palace, from 10th – 14th May, 2006.

- Sarkar, S. presented a paper entitled, Urban Development strategy for newly constituted resource based state – case study of Jharkhand, India, at *3rd International PhD Seminar on Urbanism & Urbanisation - A new modernity Approaches, theories and designs* at IUAV University, Venice, Italy 29th – 31st August, 2006.
- Sarkar, S. presented a paper entitled Revamping heritage management: responding to endemic crisis of historic urban core of Kolkata, at *12th International Planning History Conference - "Cross national transfer of planning ideas and local identity"* – 2006 at New Delhi, 11th – 14th December, 2006.
- Mitra, P. presented a paper entitled Techniques of Measure Drawing of Heritage Buildings at the *International Workshop on Documentation of Historic Architecture* jointly organized by Department of Architecture, B.I.T. Mesra, MMCF Udaipur and The Getty Foundation USA, at Udaipur City Palace, 10th – 14th May, 2006.
- Lakra H. S. and Mishra, S. attended an *International Conference on The Role of Socio-Economic & Spatial Planning in National Development New Delhi, India*, organized by FBE, Faculty of Built Environment, University of New South Wales, School of Architecture & Planning, Delhi, HUDCO, Centre for Environmental Planning and Technology, CEPT, Ahmedabad, Australian Habitat Studies, 14-15 April 2006.
- Lakra H. S. and Mishra, S. attended an *International Conference on Advisory Services in Environmental Management* organized by Urban Development Department of Jharkhand, Capitol Hill, Ranchi, 19th July 2006.

#### **National Events:**

- Khare, A presented a paper entitled Evolution of the City Palace Complex, Udaipur: An example of Hilltop Palace Fortress architecture in *National Seminar on Architecture in India: Text and Context*, organized by CASTEI, Kolkata held at The Indian Museum, 5th to 8th November, 2006.
- Khare, R. presented a paper entitled Visually cued Instruction for Autistic Spectrum Disorder in the *workshop organized by State Nodal Agency Center (SNAC) of National Trust* held at Ranchi, 8 April 2006.
- Khare, R. presented a paper entitled Redefining the architectural design process for Accessibility, in the workshop organized by State Coordinator of Disability India Network, New Delhi, held at Ranchi, 16 September 2006.
- Khare, R. presented a paper entitled "Role of Technology for the Disabled, in a *National workshop on Inclusion and Disability* organized by Deepshika Institute of Child Development and Mental Health, Ranchi, 24 January 2007.



- Kumari, R., Lakra, H., and Mishra, S. presented a poster entitled Urban Environmental Management, Performance Measurement of NGO's and ULB's initiatives, Case Study of Slums of Jharkhand" in *Ninth Biennial Conference of International Society for Ecological Economics on Ecological Sustainability and Human Well-Being*, New Delhi, December 15-18, 2006.
- Invited lecture by Mitra, S. on Application of Steel in Architecture, at *National Institute of Foundry and Forge Technology*, Ranchi, February 21st, 2007.
- Sarkar, S. presented a paper entitled "Responding to Human Resource Crisis in Construction Industry – Case of Jharkhand, in *12th National Convention of Indian Building Congress*, at Vigyan Bhawan, New Delhi, 15th – 17th June, 2006.
- Singh, G. and Singh, N. presented a paper entitled "Energy conservation – a Historical Preview", National Convention of Architectural Engineers, Trichur, *Architectural Engineering – Perspective 2020*, National Convention of Architectural Engineers, Trichur organized by The Institution of Engineers, Nov- 2006.
- Khare, A., and Mitra, P. attended a Workshop on Changing the Mindset conducted by Shiv Khera; organised by NPIU & SPFU under World Bank project on TEQUIP, August 29-31, 2006.
- Khare, A., Mandal, N. R., Lakra, H. S., Mitra, S., Sarkar, S., Mishra, S., Singh, G., Singh, N. and Toppo, A. K. attended a *One Day Technical Workshop on Model Building Byelaws for Safety Against Natural Hazards* organised by the BMTPC, Ministry of Housing and Urban Poverty Alleviation, GoI at Capitol Hill, Ranchi, March 12th, 2007.
- Khare, A., Khare, R., Mandal, N. R., Kumari, R., Mitra, S., Mitra, P. and Mishra, S. attended a *Stakeholder's Workshop on City Development Plan* by Meinhardt Singapore Pte. Ltd and Ranchi Municipal Corporation at Capitol Hill, Ranchi.
- Mandal, N. R., and Mitra, P. attended a *Training Programme on Tools and Techniques in e-Learning*, organized by DOEACC Centre, Kolkata and held at Computer Science Department, BIT, Mesra, Ranchi, August 1-6, 2006.
- Lakra, H. S. has co-organised and Khare, R., Kumari, R. and Mishra, S. have attended a Two days *Workshop on Content Development in e-Learning under Technical Education Quality Improvement Programme (TEQIP)*, BIT Mesra; Ranchi, April 3-4, 2006.
- Kumari, R. attended The *Ninth Bi-annual Conference of Ecological Sustainability and Human Well-being*, New Delhi, December 16-18, 2006.

- Parama, M. have organized a Faculty *Enablement Workshop on Soft Skills* through Department of Training and Placement of BIT Mesra during December 21-24, 2006.
- Sarkar, S. attended a 12<sup>th</sup> *National Convention & National Seminar on Human Resource Management in Building Industry of Indian Building Congress*, at Vigyan Bhawan, New Delhi, June 16-17, 2006.

**Awards/ citations bestowed on faculty members and students:**

- Fulbright Fellowship: Ar. Rachna Khare
- Ford Foundation Fellowship: Ar. Harshit S. Lakra
- Best paper award: Mr. D. J. Biswas, for the paper he presented in *Sixth China Urban Housing Conference* held at Beijing in March 2007.

## DEPARTMENT OF APPLIED CHEMISTRY

The department has been involved in imparting pure and applied chemistry courses for undergraduate as well as postgraduate students. It is actively involved in running multidisciplinary postgraduate programme in Environmental Science and Engineering. The department houses well established fuel technology and water quality monitoring and testing laboratories. The faculties of the department are engaged in some of the areas of current research such as synthesis and characterization of polymeric biomaterials, ground and surface water quality assessment, waste water treatment, dye-based polymers, oscillation reactions, bio-diesel, non-conventional energy sources, computational chemistry and nanochemistry. The Department has been promoting interdisciplinary environmental research, teaching and service activities within the organization. The Department has been actively involved in promoting environmental awareness amongst the tribal and rural population in and around Ranchi.

### Faculty position:

<i>Designation</i>	<i>Professor</i>	<i>Associate Professor</i>	<i>Principal Scitific officer</i>	<i>Reader</i>	<i>Lecturer (Sel. Grade)</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>
Number in Position	1	1	1	1	2	2	3

### Ongoing Projects

<i>SL</i>	<i>Research project topic</i>	<i>P.I./ Co-P.I.</i>	<i>Funding agency</i>	<i>Amount Sanctioned</i>
1	Evolution of sequential oscillation in a single organic substrate in a chemical system	Dr. P. K. Srivastava (P.I.)	University Grants Commission, New Delhi	2.57 lakh
2	Testing the validity of Faraday's law, ohm's law and optimization of machining parameter and newly emerging materials	Dr. P. K. Srivastava (Co-PI)	University Grants Commission, New Delhi	5.06 lakh
3	Colored candles and bio-diesel	Dr. P. K. Srivastava (P.I.)	KVIC project	
4	Water quality monitoring & surveillance	Dr. Usha Jha	UNICEF	11.0 lakh
5	Introduction of semi-micro analytical technique	Dr. Usha Jha	World Bank	20 lakh

### Project(s) completed during the year 2006-2007

SL	Research project topic	P.I./ Co-P.I.	Funding agency	Amount Sanctioned
1	Extraction of toxic/heavy metal ions using chemically modified silica gel	Dr. R. K. Dey	University Grants Commission, New Delhi	0.8 lakh

### Project(s) submitted during the year 2006-2007

SL	Research project topic	P.I./ Co-P.I.	Funding agency/	Current status
1	Impacts of environmental tobacco smoke on respiratory health of adult	Mr. Gyan Kumar Agarwal/ Dr. Usha Jha	Department of Science and Technology, Jharkhand	Under evaluation
2	Development and applications of hydrolyzed and unhydrolyzed polyacrylamide grafted tamarind kernel powder (TKP) as flocculants for wastewater treatment	Dr. Sagar Pal	Department of Science and Technology, Jharkhand	Under evaluation

### Seminar(s) /conference(s) /short term course (s) conducted by the Department.

#### *Invited Lectures:*

- By Mishra, M. K., Head of the Department, Department of Chemistry, IIT, Mumbai on topic *Quantum chemistry and its application*.
- By Chatterjee, S. K., Scientist, Department of Chemistry, IIT, Mumbai, on topic *Coordination chemistry and its application*
- By Pal, S., Department of Applied Chemistry, BIT, Mesra, on topic *Polymeric biomaterials and its application*.

### Publications by faculty in Journals

#### *International*

- Pal, S., and Singh, R. P. A model of flocculation, Witold Brostow, *Materials Letters* (in press), 2007.

- Pal, S., and Singh, R. P. A Synthesis and characterization of cationic guar gum: A high performance-flocculating agent. *Journal of Applied Polymer Science* (Accepted for publication).
- Singh, R. P., Pal, S., and Mal, D. A high performance flocculating agent and viscosifiers based on cationic guar gum. *Macromolecular Symposia*, 242, 227-234, 2006.
- Pal, S., Mal, D., and Singh, R. P. Synthesis, characterization and flocculation characteristics of cationic glycogen: A novel polymeric flocculant. *Colloids & Surfaces A: Physicochem & Engg Aspects*, 289, 193, 2006.
- Singh, R. P., Biswal, D. Pal, S., Adhikary, P., and Krishnamoorthi, S. Novel characteristics of hydrolyzed, unhydrolyzed grafted and cationised polysaccharides. *Popular Plastics & Packaging*, 83-85, 2006.
- Jha, U., Arora, V., and Bandhopadhyay, P. Investigating the relationship between coal characteristics and the effluent quality of Kedla & Rajrappa Washeries. *Journal of Environmental Management*, 78, 392, 2006.
- Jha, U. and Arora, V. Analytical evaluation of potential pollution from trace elements in various fractions of washed coal of Kedla and Rajrappa washeries. *Journal of Institution Engineers*, 78, 392, 2006.
- Dey, R. K., Jha, U., Singh, A. C., Samal, S., and Ray, A. R. Extraction of metal ions using chemically modified silica gel covalently bonded with 4,4'-diamino diphenyl ether and 4,4' - diamino diphenyl sulfone – salisaldehyde Schiff bases. *Analytical Sciences*, 22, 1105, 2006.
- Dey, R. K. et.al. Antimicrobial activity of steroid isolated from *Capparis horrida*. *Chemistry of Natural Compounds* (Accepted for publication).
- Dey, R. K. et al, Removal of heavy metal ions using new chelating material containing N, O and S donor sites. *Separation Science & Technology* (Accepted for publication).

#### **National**

- Patnaik, T., Dey, R. K., and Ganda, P. Isolation of triterpenoid glycoside from bank of termination Arjuna using chromatographic technique and investigation of pharmacological behavior upon muscle tissue. *E. J. Chem*, 04, 00, 2007.

### **Publications by faculty in Seminar Proceedings**

#### **International Events**

- Dey, R. K. Synthesis and characterization of chemically modified silica, *XVII Inorganic Conference*, September, Fortaleza, Brazil, 2006.

### ***National Events***

- Bhatnagar, R. P. Co Coordinator: *National Workshop on Lean Manufacturing Implementations*, IPE, JSIA and Institute Industry Interaction cell BIT Mesra at BIT Mesra, September 2006.
- Bhatnagar, R. P. Coordinator: *university-industry-interactions – colloquiums*, BIT, Mesra and Jharkhand Small Industries Association Ranchi, JSIA, at BIT Mesra, March 2006.
- Bhatnagar, R. P. Co Coordinator: *Workshop and Exhibition on Technology Development Utilization and Transfer* (BIT Mesra and DSIR Delhi at BIT Mesra), March 2006.
- Agarwal, G. K. actively participated in a Workshop on *Content Development in e-Learning* under Technical Education Quality Improvement Programme (TEQIP) organised by the Department of Computer Science and Engineering, Birla Institute of Technology, Mesra, Ranchi, 2006.
- Agarwal, G. K. participated in the ACCELRYs Workshop on *Computational Materials Modelling* at Accelrys, Bangalore and was organised by the Apsara Innovations Pvt. Ltd., Kalyan Nagar, Bangalore, 2006.
- Agarwal, G. K. attended the *annual meeting of the Royal Society of Chemistry* organized by the Indian Association for the Cultivation of Sciences at Kolkata, 2006.
- Agarwal, G. K. participated at the *one-day seminar on HPLC hosted by WATERS*, Bangalore at the Hotel Ranchi Ashok, Ranchi, 2007.
- Mishra, S. actively participated in a Workshop on *Content Development in e-Learning* under Technical Education Quality Improvement Programme (TEQIP) organised by the Department of Computer Science and Engineering, Birla Institute of Technology, Mesra, Ranchi, 2006.
- Mishra, S. Modern instrumental methods of drug analysis“Staff development programme, organized by Deptt. of Pharmaceutical Sciences, BIT-Mesra, 2-14 May 06
- Mishra, S. participated in the Workshop on *Introduction to Quantum mechanical modeling* organized by Accelrys and Apsara Innovations Pvt. Ltd., at BE College, Calcutta, December 2006.

## Seminar(s) /Symposium(s) /Short-term Course(s) Attended by faculty members:

### *International Events*

- R. K. Dey, *XVII Inorganic Conference*, September, Fortaleza, Brazil, 2007.

### *National Event*

- R. P. Bhatnagar, Co Coordinator: *National Workshop on Lean Manufacturing Implementations*, IPE, JSIA and Institute Industry Interaction cell BIT Mesra at BIT Mesra, September 2006.
- R. P. Bhatnagar, Coordinator: university-industry-interactions – colloquiums, March 2006- BIT, Mesra and Jharkhand Small Industries Association Ranchi, JSIA, at BIT Mesra.
- R. P. Bhatnagar, Co Coordinator: *Work shop and Exhibition on Technology Development Utilization and Transfer*, BIT Mesra and DSIR Delhi at BIT Mesra, March 2006.
- Agarwal, G. K. actively participated in a Workshop on *Content Development in e-Learning under Technical Education Quality Improvement Programme (TEQIP)* organised by the Department of Computer Science and Engineering, Birla Institute of Technology, Mesra, Ranchi, 2006.
- Agarwal, G. K. participated in the *ACCELRY'S Workshop on Computational Materials Modelling at Accelrys*, Bangalore, organised by the Apsara Innovations Pvt. Ltd., Kalyan Nagar, Bangalore, 2006.
- Agarwal, G. K. attended the annual meeting of the *Royal Society of Chemistry* organized by the Indian Association for the Cultivation of Sciences at Kolkata, 2006.
- Agarwal, G. K. participated at the *one-day seminar on HPLC hosted by WATERS*, Bangalore at the Hotel Ranchi Ashok, Ranchi, 2007.

## Awards/ citations bestowed on faculty members and students

SL	Name of faculty/student	Awards/citations	research/presentation
1	Dr.Usha Jha, Professor	Nomination as Senate member of Birsa Agricultural University, Ranchi	-
2	Mr. Gyan Kumar Agarwal, Associate Lecturer	Associate member of Royal Society of Chemistry, United Kingdom	Environmental exposure and health

3	Dr. R. K. Dey, Reader	(i) TWAS Postdoc Fellowship, Brasil (2006)  (ii) INSA Visiting Fellowship, New Delhi (2006)	(i) Chemical modification of mesoporous silica materials  (ii) Enzymatic synthesis of biodegradable polymeric materials
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### Other Informations

- Community development programmes have been initiated in following areas:
  - ✦ Water quality monitoring in and around BIT, Mesra
  - ✦ Environmental awareness drive in and around BIT, Mesra.
  - ✦ Adulteration and quality testing of food stuff materials.

### Ph.D. registration

<b>SL</b>	<b>Name of research scholar/ registration number/Guide(s)</b>	<b>Scholar's qualification/ joining year</b>	<b>Research topic</b>
1	Miss Tiji Thomas/ Ph.D/09/2006/ Dr. R. P. Bhatnagar, Principal Scientific Officer, Department of Applied Chemistry, BIT, Mesra	M.Sc. 2006	Microbial current generation from organic waste and its application for waste water treatment
2	Ms.Rajani Agarwal/55- 2006/Dr.Usha Jha, Dr. S.K.Sharma (BITEC, Jaipur)	M.Sc. 2006	Physico-chemical nearby areas
3	Mr.Ajay Kumar Singh/53/2005/Dr.Usha Jha, Prof., Dept of Applied Chemistry, BIT, Mesra, Dr.U.K.Dey, Prof., Dept of Mining Engg., BIT, Sindri	M.Sc. 2005	Process optimization and designing of the best feasible method for treatment of oil, grease coal mines
4	Mr. Sajal Chakravorty/08/2006, Dr.Usha Jha, Dr.V.N.Balaji (JBL, Bangalore)	M.Sc. 2006	Studies of polymeric technique



## **DEPARTMENT OF APPLIED MATHEMATICS**

The department had been teaching all mathematics courses offered in different branches of Engineering, Management, Pharmaceutical Sciences, Architecture and University Polytechnic. The areas where research is in progress include fluid mechanics, solid mechanics, parallel computing, mathematical modelling; fuzzy optimisation, seismology, differential equation, vibration and finite element application in engineering problems.

Department of Science and Technology (ESS Division), Govt. of India has involved this Department in the CTCZ (Continental Tropical Convergence Zone) campaign, which will commence from the year 2007. The campaign involves modelling as well as field studies. In the first meeting of Science Plan of CTCZ held at Indian Institute of Tropical Meteorology, BIT, Mesra, has been asked to set up an Agro meteorological observatory and install micrometeorological tower at BIT campus. The final approval of the project is expected soon.

### **Course offered:**

#### *PG Course:*

- M.Tech. (Scientific Computing)

### **Faculty position:**

<b>Designation</b>	<b>Professor</b>	<b>Associate Professor</b>	<b>Reader</b>	<b>Senior Lecturer</b>	<b>Lecturer</b>	<b>Jr. Scitific officer</b>	<b>RA-Cum-Tutor</b>
Number in Position	2	1	2	1	6	2	2

### **Number of Student enrolled/registered with Department:**

<b>Semester</b>	<b>No. of students</b>
M.Tech.(Scientific Computing)	
IInd semester	2
IIIrd semester	5
<b>Total</b>	<b>7</b>

## Ongoing Projects

SL	Research project topic	P.I./ Co-P.I.	Funding agency	Amount Sanctioned (in Lakhs)
1.	Observation study of land surface atmosphere interaction in the monsoon trough along its active eastern end	Prof. N. C. Mahanti	D.S.T., Government of India.	Rs. 60.29
2.	Green's function, existence and asymptotic behavior of periodic solutions of functional differential equations	Dr. S. Padhi	National Board of Higher Mathematics, Department of Atomic Energy, Government of India,	Rs. 5.30
3.	Development of forest fire forecasting system for Jharkhand state using statistical models, GIS and remote sensing	Dr. Manish Trivedi	D.S.T., Government of India	

## Publications by faculty in Journals

### International

- Sathiamoorthy, M. Basak, T., Roy, S., and Pop, I. Steady natural convection flows in a square cavity with linearly heated side walls, *Journal of Heat and Mass Transfer*, 50, 766-775, 2007.
- Sathiamoorthy, M. Basak, T., Roy, S., and Pop, I. Steady natural convection flows in a square cavity filled with porous medium for linearly heated side walls. *International Journal of Heat and Mass Transfer*, 50, 1892-1901, 2007.
- Sathiamoorthy, M. Basak, T., Roy, S., and Mahanti, N. C. Effect of temperature difference aspect ratio on natural convection flows in a square cavity for non-uniformly heated walls, Transactions. *ASME Journal of Heat Transfer*, (accepted)
- Trivedi, M. Examining stability of variability ratio with application in post-stratification. *International Journal of Management and Science*, 22 (1), 59-70, 2007.

- Trivedi, M. Post-stratification in stratified population. *Statistics in Transition*, 7 (6), 1295-1310, 2006.
- Jayswal, A. Non-differentiable minimax fractional programming with generalized  $\alpha$ -univexity. *Journal of Computational and Applied Mathematics*. Article in Press
- Paul, T., Singh, A. K., and Mishra, A. K. Transient free convection flow in a porous region bounded by two vertical walls heated/cooled asymmetrically. *Journal of Energy Heat and Mass Transfer*, 28, 193-207, 2006.
- Chakraborty, S. Can a randomized binary search have an  $O(l)$  complexity at least in practice. *Journal of Applied Mathematics and Computation*, (In Press)
- Chakraborty, S. A note on distinct integer triplets summing to a perfect square in pairs. *Interstat*, 2007 (on line).
- Chakraborty, S. A note on distributions that are sorted faster than others by our new sorting algorithm. *Interstat*, 2007 (on line).
- Chakraborty, S. On factoring large positive integers from the first principles. *Interstat*, 2007 (on line).
- Padhi, S., and Qian, C. On asymptotic behaviour of oscillatory solutions of fourth order differential equations. *Electronic Journal of Differential Equations*, 22, 1-5, 2007.
- Padhi, S., Mathematici, F. Asymptotic behaviour of solutions of forced neutral differential equations. 36, 7-16, 2007.
- Padhi, S. Oscillation and asymptotic behaviour of second order neutral differential equations. *Functional Differential Equations* 11, 18-26, 2006
- Padhi, S. Oscillation of third order delay differential equations, *Georgian Math. Journal* 13, 46-59, 2006.
- Padhi, S. Functional Oscillation and asymptotic behaviour of second order homogeneous neutral differential equations with positive and negative coefficients. *Differential Equations*, (to appear).
- Padhi, S., and Dix, G. J. Oscillation of functional differential equations of n-th order with distributed deviating arguments. *Cont. Math.* (To appear)
- Padhi, S. Asymptotic behaviour of oscillatory solutions of n-th order differential equations. *Fasc. Math.* (To appear)

- Padhi, S. Oscillation and asymptotic behaviour of forced second order neutral differential equations with positive and negative coefficients, Math. (To appear).

**Seminars/Conferences/Symposiums/Short Term courses attended by the faculty members.**

***International Events:***

- Padhi, Padhi, S., *attended 2006 CAN Summer School – Probabilistic and Analytical Prospectives on Contemporary PDEs*, Department of Mathematics, Carnegie Mellon University, Pittsburgh, USA, May 29-June 6, 2006.
- Paul, T. attended a conference on Euromech Colloquium on High Rayleigh Number Convection, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, Sept. 4-8, 2006.
- Chakraborty, S. How robust are average complexity measure?, *Sixth Triennial International Calcutta Symposium on Probability and statistical*, Decmber 29-31, 2006.

***National Events:***

- Mahanti, N.C. attended *International High Performance Computing (HPC) Users Forum conference in leadership computing for Science and Industry*, IIT, Delhi and IISC, Bangalore during February 28 - March 2, 2007.
- Sathiamoorthy, M. attended *Winter School on Modelling and Simulation*, IIT, Madras, Chennai, December, 11-22, 2006.
- Ghorai, A. P. attended a *Short Term Course on Genetic Algorithm for Engineering and Optimization*, IIT, Kanpur, April 26-29, 2006.
- Medya, B. attended a *Workshop on Quantitative Finance*, Department of mathematics, IISc, Bangalore, November 20-24. 2006.
- Ghorai, A. P. attended a *Short course on “Genetic Algorithms for Engineering Optimization*, IIT Kanpur, 26-29 April, 2006.
- Ghorai, A. P. attended a *Short course on “Genetic Algorithms for Engineering Optimization*, IIT Kanpur, 26-29 April, 2006.
- Kumar, M. Attended *Project Review Meeting/Group Monitoring Workshop for the DST Fast Track Proposals for Young Scientist in Earth and Atmospheric Sciences*, at Andhra University, Vishakapatnam, 9th-10th June, 2006.
- Kumar, M. Participated an *International Conference on Water and Flood Management*, BUET, Dhaka, Bangladesh from March 12-14, 2007.
- Mahanti, N.C. and Kumar, M. attended the *DST sponsored workshop on STORM-2006: Pilot phase results*, Kolkata, March 26, 2007.

## **Other Informations**

Department of Science and Technology (ESS Division), Govt. of India has involved this department in the CTCZ (Continental Tropical Convergence Zone) campaign, which will commence from the current financial year 2007-08. The campaign involves modelling as well as field studies and to carry out research work in the field of land surface processes and micrometeorology. To this purpose a 32 meter micrometeorological tower augmented with surface meteorological observatory to study different areas of agricultural /meteorological and land surface interaction to provide timely and accurate weather information of this region will be installed in the campus, which will be equipped with sensors of fast response sonic anemometer for wind and turbulence measurement, air temperatures, wind speed and direction, relative humidity, at different heights of 1,2,4,8,16 and 32 meters. In addition to these, different components of radiation parameters viz. net, incoming & reflected short wave and long wave radiations for radiation and energy balance study, ground heat flux plates, soil temperatures at different depths (at surface, 5,10,20,40 & 100cms), and station level pressure system will also be installed in the campus.

## **DEPARTMENT OF APPLIED MECHANICS**

The Department of Applied Mechanics was initiated in 1995. The Department has well equipped Computer - Aided Design & Drafting laboratory with latest state-of-the-art software tools and a state-of-the-art Dynamics & Vibration laboratory to serve its ME and Ph.D. students.

The department is active in the areas of research namely, Finite Element Method, Dynamics & Vibration, Composite Materials, Stress Analysis in Artificial Joints, Artificial Neural Network, Nanotechnology, Computer-Aided Design, Fluid Power and Hydraulic Controls.

### **Course offered:**

#### ***PG Course:***

- ✦ Master of Engineering in omputer Aided Analysis & Design (CAAD)

### **Faculty position:**

<b><i>Designation</i></b>	<b><i>Professor</i></b>	<b><i>Lecturer</i></b>
Number in Position	3	4

### **Number of Student enrolled/registered with Department:**

<b><i>Semester</i></b>	<b><i>No. of students</i></b>
ME (CAAD)	
IIInd semester	4
IVth semester	7

## DEPARTMENT OF APPLIED PHYSICS

Department of Applied Physics has been existing since 1955. The objective of the department is to develop the best experimental facilities in the areas of Nonlinear Optics, optical communication, Composites, High Tc superconductors, Laser applications, Plasma Science & Technology, Nanoscience, Nanotechnology and Biomedical instrumentation. To keep pace with the technology development The department regularly update the ongoing R & D activities as well as UG, PG courses and laboratories

### Course offered:

#### PG Course:

- \* M.Tech. (New Materials and Processing Technology)

### Faculty position:

<i>Designation</i>	<i>Professor</i>	<i>Principal Scientific officer</i>	<i>Associate Professor</i>	<i>Reader</i>	<i>Lecturer Sel. Grade</i>	<i>Lecturer</i>	<i>Scientific officer</i>
Number in Position	4	1	2	1	2	4	1

### Number of Student enrolled/registered with Department:

<i>Course Name</i>	<i>No. of students</i>
M.Tech-NMPT	8
<b>Total</b>	<b>8</b>

### Ongoing Projects

<i>SL</i>	<i>Investigators</i>	<i>Project title</i>	<i>Funding agency</i>	<i>Date of sanction</i>	<i>Sanctioned amount In lacs</i>	<i>Duration in years</i>
1	Dr. S. Konar	FDTD Modeling of Photonic Crystal Fibers: Fundamental Properties and Device Applications	DST	01/02/06	15.97	3
2	Dr. S. Konar	Simulation and Analytical Investigation of Nonlinear Optical Pulse Propagation in Photorefractive Crystals	DRDO	21/11/05	14.84	3

3	Dr. A. Ray	Investigation of Thermoelectric Properties of some Layered Semiconductor Oxides	DST (YS)	27 February, 2007	4.68	3
4	Dr. B. Sarma	Theoretical Investigation of Boundary Layer in Strong Tilted Magnetic Field under Various Imposed Conditions and Configurations and its Induced Instability	DST	10th November 2006	2.04	3
5	Dr. S. Medhekar (PI) & Dr. P. K. Barhai (CI)	Investigation of the effects of higher order nonlinearities on optical pulse propagation in semiconductor doped glass fibers and waveguides - S. Medhekar (PI), P.K. Barhai (CI)	BRNS, DAE	16.2.2004	8.87	3
6	Mr. M. K. Sinha (PI) & Dr. (Mrs.) S. Keshri (CI)	Studies on thin film thermocouples for the aerospace applications	ISRO	(2004-May, 2007)	10.86	3
7	Dr. (Mrs.) S. Keshri	ESR study of magnetic homogeneity in thin films of colossal magnetoresistive manganites.	UGC	(2005-2008)	4.89	3
8	Dr Arun K. Sarma	Basic Research on Experimental Dusty Plasma	DST	21st August 2003	4.14	3
9	Dr. J. T. Andrews	Measurement of thermal damage tissues using Optical coherence tomography	AICTE	-	7.2	3



10	Dr. S. K. Sinha-I	Oxidation Resistance Studies of Titanium Alloys in the Temperature Range 500-700°C: The effect of coating and trace element addition	AR & DB	20th Sept, 2005	4.689	3
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**Project(s) completed during the year 2006-2007:**

SL	Investigators	Project title	Funding agency	Date of sanction	Sanctioned amount In lacs	Duration in years
1	Dr. S. Konar	Investigation of dispersion managed breathers in long-haul optical communication systems and study the effects of higher order nonlinearities in all optical switching	DST	6/4/ 2002	14.34	3
2	Dr. S. Medhekar (PI)	Theoretical Investigation of Induced Nonlinear Optical Fiber Waveguides and Devices - S. Medhekar (PI), P.K. Barhai (CI)	UGC	1.7.2003	3.10	3
3	PI- S. Keshri	High Pressure Investigations on Oxide Superconductors to obtain higher T <sub>c</sub>	UGC	(2002-04)	3.825	3
4	Dr. A. K. Srivastava (PI)	Effect of low temperature on mechanical properties of composites	AR&DB	May, 2004	7.68	3
5	Dr. J. T. Andrews	Measurement of optical properties of stratified media using optical coherence tomography	AICTE	DST	20	3

6	Dr. P. K. Barhai (PI)	Support for Research and Development Facilities of the Department of Applied Physics	DST	2003	25	3
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### Seminar(s) /conference(s) /short term course(s) conducted by the Department

- ✦ Medhekar, S. arranged Lab visit organized for Students, Around 110 students, of Nearby Rural Schools, 26 June 2006.
- ✦ Medhekar, S. coordinated One 6 days *Physics Learning Camp* for 32 selected Under Graduate students of Bihar and Jharkhand, 24-29 November 2006.

### Books / Monograph Publications by faculty

- ✦ Biswas A. and Konar, S. (2006). *Introduction to Non-Kerr Law Optical Solitons*. Chapman & Hall/CRC, Taylor and Francis: USA.

### Publications by faculty in Journals

#### **International:**

- ✦ Sharma, R., Barhai, P. K. Sarma, A. K., and Kumari, N. Corrosion resistant behaviour of DLC films, *Thin Solid Films* (Accepted for publication).
- ✦ K. Bose, Andrews, J. T., and Barhai, P. K. Digital real time holography for non-destructive testing, *International Journal of Materials Sciences*, 1, 137-144, 2006.
- ✦ Sinha, M. K., Mukherjee, S.K. Pathak, B. Paul, R.K.and Barhai, P. K Effect of deposition process parameters on resistivity of metal and alloy films deposited using anodic vacuum arc technique, *Thin Solid Films*, 515, 1753–1757, 2006.
- ✦ Singh, G. P., Alphonsa, J., Barhai, P. K., Rayjada, P.A., Raole, P.M., and Mukherjee, S. Effect of surface roughness on the properties of the layer formed on AISI 304 stainless steel after plasma nitriding, *Surface & Coatings Technology* 200, 5807-5811, 2006.
- ✦ Konar, S., and Biswas, A. Spatial optical solitons in inhomogeneous elliptic core saturating nonlinear fiber; Shwetanshumala, *Optik (in press)*.
- ✦ Konar, S., Jana, S., and Shwetanshumala. Incoherently coupled screening photovoltaic spatial solitons in a biased photovoltaic photo refractive crystals, *Optics Communications (in press)*.

- ✦ Konar, S., Mishra, M., and Jana, S. Nonlinear Evolution of cosh-Gaussian Laser Beams and Generations of Flat Top Spatial Solitons in Cubic Quintic Nonlinear Media; *Phys. Letts. A* 362, 505-510, 2007.
- ✦ Jana, S., and Konar, S. A New Family of Thirring Type Optical Spatial Solitons via Electromagnetic Induced Transparency, *Phys. Letts. A* 362, 435-438 (2007)
- ✦ Biswas, A., Zerrad E. and Konar, S. Stochastic Perturbation of Dual Power Law Optical Solitons, *Optical Engineering (in Press)*.
- ✦ Biswas, A., and Konar, S. Intra Channel Collision of Dual Power Law Optical Solitons, *Int. J. Theoretical Phys.* 46, No.1, 161-173, 2007.
- ✦ Biswas, A., and Konar, S. Soliton perturbation theory for the general modified Degasperis-Process Camassa–Holm Equation. *International Journal of Modern Mathematics* (in press);
- ✦ Biswas, A., and Konar, S. Soliton perturbation theory for the fifth order KdV-Type Equations with power law Nonlinearity, *Applied Mathematics Letters* (in press)
- ✦ Biswas A., and Konar, S. Stochastic Perturbation of Power Law Optical solitons, *International Journal of Theoretical Physics* (in press).
- ✦ Biswas A., and Konar, S. Collisions of Optical Solitons in Non Kerr Law Media, *Organic Electronics* 8, 206-226, 2007.
- ✦ Biswas A., and Konar, S. Soliton Perturbation Theory for the Compound KdV Equation, *International Journal of Theoretical Physics*, 46, 237-243, 2007.
- ✦ Jana, S., and Konar, S. Tunable Spectral Switching in the Far Field With a Chirped cosh-Gaussian Pulse, *Optics Communications*, 267, 24 –31, 2006.
- ✦ Konar S. and Mishra, M. Induced Focusing in Higher Order Nonlinear Media and Conversion of Circular Laser Beams into Elliptic Gaussian Laser Beams, *International Journal of Microwave & Opt. Technology*, 1, 892-898, 2006.
- ✦ Biswas, A., Zerrad, E., and Konar, S. Statistical Dynamics of Optical Solitons in a non-Kerr law Media;. *Int. J. of Contem. Mat. Sciences*, 1, 777- 800, 2006.
- ✦ Konar, S., and Biswas, A. and Shwetanshumala. Optical Light Bullets in Semiconductor Doped Inhomogeneous Nonlinear Media, *Physica Scripta*, 74, 279, 2006.
- ✦ Biswas, A., Huaizhong and Konar, S. Stochastic Perturbation of non-Kerr law Optical Solitons, *Optik* (in press).
- ✦ Akimov, A. Andrews, J. T., and Henneberger, F. Stimulated emission from the biexciton in a single quantum dot *Physical Review Letters*, 96, 2006.
- ✦ Poddar, R., Sharma, S. R., Bose, K., Sen, P., and Andrews, J. T. Understanding laser modes using Optical Coherence Tomography *American Journal of Physics*, 74, 569-571, 2006.

- ✦ Bose, K., Barhai, P. K., and Andrews, J. T. Digital real-time holography for fault detection, *Int. J. Mat. Science*, (In Press).
- ✦ Poddar, R., Sharma, S. R., Sen, P. and Andrews, J. T. Measurement of scattering coefficient with blood glucose concentration using diffuse reflectance, *Journal of Biochemistry and Biotechnology*, (Accepted for publication).
- ✦ Schrittwieser, R. Sarma, A. Amarandei, G. Ionita, C. Klinger, T. Grukler, O. Vogelsang, A. and Windisch, T. Results of Direct Measurement of the Plasma Potential using Laser Heated Emissive Probe. *Phys. Scr.*, 94, T123, 2006.
- ✦ Dayal V., and Keshri, S. Structural and Magnetic properties of  $\text{La}_{0.67}\text{Ca}_{0.33}\text{Mn}_{(1-x)}\text{Fe}_x\text{O}_3$  ( $x=0-0.07$ ). *Solid State Communication* (In Press).
- ✦ Dayal, V., Keshri, S., Saha, A. and Kishan, H. Effect of  $\gamma$ -irradiation on novel properties of polycrystalline  $\text{Bi}_{1.2}\text{Pb}_{0.33}\text{Sr}_{1.54}\text{Ca}_{2.06}\text{Cu}_3\text{O}_y$  superconductor. *Radiation Effects and Defects* (In Press).
- ✦ Keshri S. and Dayal, V. Low Field AC-Susceptibility Study on  $\gamma$ -Irradiated  $\text{Bi}_{1.2}\text{Pb}_{0.33}\text{Sr}_{1.54}\text{Ca}_{2.06}\text{Cu}_3\text{O}_{10+\delta}$  Superconductor. *Phase Transition* (In Press).
- ✦ Sarkar, R. K. and Medhekar, S. Passive, Self- trapped family all-optical half adder using all optical XOR and AND gates. *Czechoslovak Journal of Physics*, 56, 359-366, 2006.
- ✦ Sarkar, R. K. and Medhekar, S. Propagation of Doughnut Mode in Nonlinear Media, *Nonlinear Optics and Quantum Optics*, 35, 275-286, 2006.
- ✦ Medhekar, S., and Sarkar, R. K. All-Optical Bistable and Astable Multivibrators, *Nonlinear Optics and Quantum Optics*, 35, 287-296, 2006.

#### **National:**

- ✦ Medhekar, S., and Paltani, P. P. Proposal for Optical Switch Using Nonlinear Refraction. *IEEE Photonics Technology Letters*, 18, 1579-1581, 2006.

#### **Publications by faculty in Seminar Proceedings**

##### **International Events**

- ✦ Jana, S., Konar, S., and Mishra, M. Two-Component Composite Spatial Solitons Supported by Cross Phase Modulation. *International Conference on Computers and Devices for Communication*, Kolkata, December 18-20, 2006.

##### **National Events**

- ✦ Jana, S. Konar, S., Shwetanshumala, S., and Bhattacharya, R. Symbiotic Coupled Screening Photovoltaic Spatial Solitons in Biased Photovoltaic Photo refractive Crystals. *Photonics-2006*, Hyderabad, December 13-16, 2006.

- ✦ Mishra, M., and Konar, S. Inter-pulse interaction in perturbed dense dispersion managed Soliton based optical communication systems. *Photonics-2006*, Hyderabad, December 13-16, 2006.
- ✦ Mishra, M., and Konar, S. Effect of TOD and IRS on pulse interaction in Dense Dispersion Managed soliton system. *NASDEC2*, B.I.T.-Mesra, 2-4 Nov. 2006.
- ✦ Jana, S. Konar, S., Mishra, M. Two-Component Composite Spatial Solitons, *NASDEC2*, B.I.T.-Mesra, 2-4 Nov. 2006.
- ✦ Jana, S. and Konar, S. Soliton Switching in a Periodically Modulated Dispersion Fiber with Cubic Quintic Nonlinearity and Coupling constant Dispersion. *PHOTONICS 2006* 13-16 Hyderabad University, December, 2006.
- ✦ Sarkar, G. G. attended Laser Based Measurement-A perfect solution for Feedback signal in process automation, *Proceedings of the seminar on Application of Laser in Material Processing*, pp-110-115, School of Laser Science and Engineering, Jadavpur University, Feb 3-4, 2006.
- ✦ Sarma & Sharma, R. Structuring of Nano Crystalline Diamond Like Coating in a Newly Developed Plasma System. *International Workshop on Nano Crystalline Diamond Like Carbon Film*, SINP Kolkata, November 28 to December 1, 2006.
- ✦ Keshri, S., and Dayal, V. Thermoelectric power of Bi-2223 superconducting samples, *National Conference on Recent Advances on Materials Science. (NCRAMS)*; Nagpur, 21-22 January 2006.
- ✦ Sarkar, R. K., and Medhekar, S. Soliton pairing in nonlinear media, , *Potonics-2006*, Hydrabad, Andrapradesh, December 2006.
- ✦ Medhekar, S. And Sarkar, R. K. Co-propagating beams in saturating nonlinear media, *NASDEC<sup>(2)</sup>*, B. I. T., Mesra, Ranchi, November 2006.
- ✦ Medhekar, S. and Sarkar, R. K. Analysis of Trapped Spatial Breather Pair in Saturable Nonlinear Media. *National Laser Symposium (NLS-6)*, CAT, Indore, December 2006.

#### **Seminar(s) /Symposium(s) /Short-term Course(s) attended by faculty members**

##### ***International Events***

- ✦ Barhai, P. K. has attended *Recent Trends in Plasma Physics and New Materials, International Symposium on Plasma Physics & Material Science*, Dhulikhel & Tribhuvan University, Nepal, Jan 24-26, 2007.
- ✦ Mukherjee, S. K., Sinha, M. K., Pathak, B., Paul, R. K., Kumar, R., and Barhai, P. K. Corrosion behavior of type-K thin film thermocouple deposited using anodic vacuum arc. *The 3rd International Conference on Advances of Thin Films and Coatings "Thin Film, 2006"*, Singapore, 11-15 December 2006.

- ✦ Sharma, R., Barhai, P. K., Sarma, A. K., and Kumari, N. attended *Corrosion resistance behavior of DLC films, The 3rd International Conference on Advances of Thin Films and Coatings "Thin Film 2006"*, Singapore, 11-15 December 2006.
- ✦ Kumari, N., Sharma, R., Barhai, P. K., and Sarma, A. K. attended *Corrosion Resistance of Plasma-Nitrided AISI 304 Stainless Steel, The 3rd International Conference on Advances of Thin Films and Coatings "Thin Film 2006"*, Singapore, 11-15 December 2006.
- ✦ Konar, S. attended an *International Conference on Computers and Devices For Communication*, Kolkata, December 18-20, 2006.
- ✦ Sinha, S. K., Shikha, D. Jha, U., Sinha, S. K., Barhai, P. K., Sarkhel, G., Nair, K. G. M. and Tyagi, A. K. Effect of nitrogen ion implantation on microstructure of biomaterial alumina in the *International conference of Design of Biomaterials*, IIT Kanpur, 8-11 December 2006.

### **National Events**

- ✦ Sarma, A. K. attended a *PSSI – IPR Workshop on National Fusion Program: ITER and Beyond*, IPR Ahmedabad, 8-10 November 2006.
- ✦ Keshri, S. attended a *National Conference on Recent Advances on Materials Sciences. (NCRAMS)*, Nagpur, 21-22 January 2006.
- ✦ Medhekar, S. attended *Photonics 2006*, University of Hyderabad, 13-16 Dec 2006.
- ✦ Konar, S. attended an *Inod-UK Workshop on Optical Fiber Sensors and Components*, British Council, New Delhi, December 7-9, 2006.
- ✦ Andrews, J. T. attended *Photonics-2006* University of Hyderabad, and presented three papers, 13-16 Dec 2006.
- ✦ Andrews, J. T. attended an Invited talk at Plasma-2006: National Institute of Technology, Jaipur on Plasma Diagnostics using Holographic Technique, December 2006.
- ✦ Andrews, J. T. attended an Invited talk at *National Workshop on Recent Trends in Nanotechnology*: SGS Institute of Technology & Science, on Coherent Control of Quantum Dots for Quantum Computing Devices, Indore, March 2007.
- ✦ Andrews, J. T. attended an Invited talk at *Defense Institute for Physiological and Allied Science, DRDO* on Optical Coherence Tomography, April 2007.

### **Infrastructural Facilities added during the year 2006-07**

*For state-of-art UG-PG and R&D, following equipment were added to our Department:*

1. RF/DC Magnetron co-sputtering system for coating any materials (Vacuum Technique)
2. Plasma Nitriding System (Millman Thin Film System Pvt. Ltd.)
3. Plasma Enhanced Chemical Vapor Deposition System
4. Cryostat with Temperature Controller
5. Real-time holography setup (indegenuous)
6. Digital holography setup
7. Optical coherence tomography setup (Indegenous)
8. Nd: YAG laser (pulsed 500mJ)
9. Electrical Equivalent of Heat
10. Mechanical Equivalent of Heat
11. Black-body radiation setup
12. Current Balance Setup
13. Raytrace-site license
14. PC based Wave generator with Medle's experiment
15. Paschen Curve setup
16. Rotary pump and pirani gauge
17. Single slit diffraction using CCD and PC
18. Verification of Brewster's law PC based setup
19. Dielectric constant Measurement Kit (INDOSAW)
20. Band Gap Measurement Kit (INDOSAW)
21. Fore Probe Apparatus for resistivity measurements (Scientific Equipment)

#### **Awards/ citations bestowed on faculty members and students**

- Best oral presentation: Keshri, S. in *National Conference on Recent Advances on Materials Sciences (NCRAMS)*, Nagpur, 21-22 January 2006.

#### **Other Information**

1. Konar, S. invited to deliver an *Invited Talk* on "Optical Spatial Solitons in Nonlinear Media and Possible Applications" in the *Workshop on Advanced Display and Optoelectronics Technology*, Catholic University of Daegu, South Korea, 29 January 2007.
2. Citation of paper by Dr. S. K. Sinha-I, P. K. Barhai "Study of defects in GaN/sapphire using Rutherford backscattering spectroscopy and channeling" in *Indian Journal Of Physics* is listed in the references in a manuscript of Paul Kretchmer, Ph.D. Managing Director, San Francisco Edit, 3 Pine Ridge Way, Mill Valley, CA 94941, USA, <http://www.sfedite.net>

## **DEPARTMENT OF BIOTECHNOLOGY**

The department has received magnificent financial supports from both Union and State Government for establishing state-of-the-art facility for academic and research activities since its inception in the year 2002. Updated knowledge and exposure on sophisticated instrumental and computational facilities by efficient faculties along with independent project work helped the students in acquiring good position in different competitive examinations both in national level (Topper in GATE 2007) and international level (GRE etc). Students of this department are well placed in company jobs and also got MS and Ph. D. positions in abroad (like Singapore, Austria, U.S.A., Germany).

Academic and scientific collaboration with foreign University (Padova Univ., Italy and Swinburne University Tech., Australia) are of active component of this department. The department is engaged in developing in house technologies, both basic & applied research in different fields and consultancy services both at international & national level. Department has also taken lead to provide academic and scientific support to various institutions like NIT's, and Universities for setting up academic and research facility as well as in developing academic curriculum at both UG and PG level.

### **Course(s) offered:**

#### *UG Course:*

- + BE (Biotechnology)

#### *PG Course:*

- + M.Sc. (Bioinformatics)
- + P.G. Diploma in Bioinformatics

### **Faculty position:**

Designation	Professor	Reader	Sr. Lecturer	Lecturer	Assoc. Lecturer
Number in Position	1	1	1	7	3



**Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
BE (Biotech.)	
IIInd semester	39
IVth semester	37
VIth semester	47
VIIIth semester	37
M.Sc.(Bioinformatics)/ PG Diploma in Bioinformatics	
IIInd semester	36

**Ongoing Projects**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Date of sanction</b>	<b>Sanctioned Amount</b>	<b>Duration of project</b>
Study of biodiversity and molecular documentation of Guggul ( <i>Commiphora wightii</i> ) plants using plant biotechnological approaches.	Dept. of Biotechnology, Govt. of India.	22.10.04.	16.95 lacs	3 years
Development of probes for early detection of microorganisms responsible for food spoilage	The Ministry of Food Processing Industries Government of India	45/MFPI/R&D/2000/254 Dt. 29.03.2005	80.00 lacs	2 years
Establishment of BTISNet Sub DIC at BIT MESRA, Ranchi	Dept. of Biotechnology, Govt. of India.	February 2004 BT/BI/04/06 5/04	46.20 lacs	5 years

**Seminar/conference/short term course conducted by the Department**

- *National Symposium on Medicinal Plants: Role of Biotechnology and Bioinformatics*, August 3-5, 2006.

**Publications by faculty in Journals***International*

- Roy, J. K., Bandopadhyay, R., Rustgi, S., Balyan, H.S., and Gupta, P. K. Association studies in wheat using AFLP, SAMPL and SSR markers. *Current Science*, 90, 683-689, 2006.

- Singh, R., Kumar, N., Bandopadhyay, R., Rustgi, S., Sharma, S., Balyan, H.S., and Gupta, P. K. Development and use of anchored-SSRs to study DNA polymorphism in bread wheat (*Triticum aestivum* L.) *Mol Ecol Notes*, 6, 296-299, 2006.
- Gupta, P. K. Balyan, H.S Bandopadhyay, R. Kumar, J. Mohan, A. Kumar, N., Kulwal, P.L Rustgi, S. Singh, R. Goyal, A. Kumar, A. Girdharwal, N. Kumar, V. and Rouf R.M. Development and use of molecular markers for wheat genomics and breeding. *Annual Wheat Newsletter*, 52, 43-46, 2006.
- Pandey, D. M., and Yeo, U. D. Comparison of various stress treatments on degradation of D1 protein and its photoprotection by DC P1P in isolated thylakoid membranes of barley leaf. *Biologia Plantarum*, 51 (In Press).
- Poddar, R., Sharma, S. R., Bose, K., Sen P., and Andrews, J. T. A Study of Longitudinal Laser Modes of a Semiconductor Laser Using Optical Coherence Tomography. *American Journal of Physics*, 74, 569-571, 2006.
- Poddar, R. Sharma, S. R. Sen, P. and Andrews, J. T. Effect of glucose concentration on scattering coefficients in blood like Turbid Media using diffuse reflectance. *International Journal of Biotechnology & Biochemistry (IJBB)*, 2 (1), 2006.
- Kumar, R., Halder P., and Poddar, R. Adaptive molecular evolution of virulence genes of avian influenza - A virus subtype H5N1: An analysis of host radiation. *Bioinformation*, 1, 321-326, 2006.
- Ranjan, A., Vidyarthi A. S., and Poddar, R. Codon bias perspectives in phage therapy of Mycobacterium tuberculosis. *Sillico Biology*, ISB (Accepted for publication).

## **Publications by faculty in Seminar Proceedings**

### ***International Events***

- Ranjan, Jha, A. K., Poddar, R., and Vidyarthi, A. S. Synonymous codon usage bias in Mycobacterium tuberculosis phages: Implication in phage therapy. *International Conference on Bioinformatics, InCoB-2006*, New Delhi, 18-20 December 2006.
- Haque, I., Bandopadhyay, R., and Mukhopadhyay, K. Molecular analysis of population structure of guggul (*Commiphora wightii*) Biotypes: A rare and endangered medicinal plant endemic to India. *Plant & Animal Genomes XV Conference, San Diego, CA*, January 2007.
- Vimal, P., Inamul, Kumari R. I., Kumar M., Bandopadhyay. R. and Mukhopadhyay K. Assessment of genetic variation among the chemotypes of tulsi: the holy Indian basil plant. *Plant & Animal Genomes XV Conference, San Diego, CA*, January 2007.

- Halder P., Kumari S., Kumari R. I., and Mukhopadhyay K. Use of Real Time PCR as Biosensor to Study Differential Gene Expression under Drought Stress in Rice (*Oryza sativa* var indica). *International Workshop on Biosensors for Environmental Analysis, BITS, Goa*, February 14-16, 2006.
- Poddar, R., Sharma, S. R., Sen, P., and Joseph T. A. Study of effect of glucose concentration on scattering coefficients in Turbid Media using Optical Coherence Tomography. *PHOTONICS 2006, Eight International conference on Opt electronics, Fiber Optics and Photonics. Hyderabad*, December 7-10, 2006.

### **National Events**

- Prasad, D., Mukhopadhyay, K., Vidyarthi, A. S. Development of DNA based biosensor for rapid detection of food pathogens. *National Symposium on Medicinal Plants: Role of Biotechnology and Bioinformatics*, August 3-5, 2006.
- Vidyarthi, S. Biopharmaceutical Research in India: Challenges and Opportunities. *National Seminar on Emerging Trends in Bioprocess & Food Processing Industries HBTI Kanpur*, March 25-26, 2006.
- Vidyarthi, S. Bioremediation of Contaminated Sites and Treatment of Wastewater Generated due to Mining and Mineral Processing Industries: An Integrated Biotechnological Approach. *Recent advances in Environmental Biotechnology for Forest and biodiversity Management, Ranchi, India*, March 7-8, 2006.
- Vidyarthi, S. Jharkhand Potential to transform as an industry-friendly Biovillage. *Workshop on Technology Development, Utilization and Transfer*, March 6, 2006.
- Prasad, D., & Vidyarthi, A. S. Recent trends in identification of spoilage microorganism in fruit and vegetables. *BIT Ranchi*, March 3-5, 2006
- Shrivastava, S., and Pratyosh Shukla. Genes encoding xylanases: comparative study of important sequences and their metabolic significance; 46 AMI. *Annual Conference at Bhopal*, December 6-8, 2006.
- Bhagat, J. Shukla, P. and Mukhopadhyay, K. Proteomic approaches in understanding host-pathogen interactions; 46 AMI. *Annual Conference at Bhopal*, December 6-8, 2006.
- Shukla, P., Raj, A. and Sammi, S. Dermatophyte Infections In Tribals: Molecular Diagnosis Using PCR Fingerprinting and their Biotechnological Potential. *WHO-ICMR National Symposium on Tribal Health, RMRC, Jabalpur, MP*, October 19-20, 2006.
- Shukla, P. Exploring indigenous fungal species of Jharkhand for patent search: Overview of the enhanced production of microbial lipases from

Rhizopus oryzae using low value substrates. NRDC-DBT. *National Seminar on Patenting in Biotechnology and Training on How to Draft Specification and Prosecute Indian Patent Application*. India International Centre, New Delhi, 19-20 October 2006.

- Bhagat, J. and Shukla, P. Bacterial Type III Protein and Their way to plant cell. *National Symposium on Medicinal Plants: Role of Biotechnology and Bioinformatics*, August 3-5, 2006.
- Shukla, P. Medicinal plant Biotechnology in control of Dermatophyte infections: Role of Azadirachta indica (Neem) Extracts. *National Symposium on Medicinal Plants: Role of Biotechnology and Bioinformatics*, August 3-5, 2006.

### **Seminar(s)/Symposium(s)/Short-term Course(s) Attended by faculty members**

#### *International Events*

- Mukhopadhyay K. *Plant & Animal Genomes XV Conference*, San Diego, CA, Jan 11-18, 2007.

#### **National Events**

- Vidyarthi, A. S. *National Symposium on Medicinal Plants: Role of Biotechnology and Bioinformatics*, August 3-5, 2006
- Poddar, R. *International Conference on Bioinformatics*, InCoB-2006, 18-20 December 2006, New Delhi.
- Poddar, R. *Current Trends in Bioinformatics*, June 29-30, 2006, B.I.T. ext center Kolkata.
- Bandopadhyay, R. A Three-Day symposium on “*Advances in Structural Biology and Structure Prediction*”, Organized by Association for the promotion of DNA Fingerprinting and Other DNA technologies (ADNAT), CCMB, Hyderabad, February 23-25, 2007.
- Bandopadhyay, R. *Workshop on Content Development in e-Learning*” under Technical Education Quality Improvement Programme (TEQIP), Birla Institute of Technology, Mesra, Ranchi-835215, April 3-4, 2006.
- Shukla, P. NRDC-DBT *National Seminar on Patenting in Biotechnology and Training on How to Draft Specification and Prosecute Indian Patent Application*. India International Centre, New Delhi, 19-20 October 2006.
- Shukla, P. *46 AMI Annual Conference at Bhopal*, December 6-8, 2006.

**Student Activities**

- Mr. Ashish Kr. Singh, a student of BE Biotechnology (sixth semester) scored FIRST Rank in GATE-2007

**Infrastructural Facilities added during the year 2006-07**

- Tissue Culture Laboratory.
- Proteomics Facilities.
- LCMS Facility.
- Fluorescent Microscopy & Stereo Zoom Microscopy Facilities.
- Biological Data analysis and molecular modeling facility at BTIS Sub DIC.

**Awards/citations bestowed on faculty members and students**

- The Department of Biotechnology has signed the MoU with University of Padova, Italy to carry out joint research in the field of Food and Agricultural sciences (February 21, 2007)
- Dr. A. S. Vidyarthi, nominated as a member of advisory board of Department of Biotechnology at National Institute of Technology, Rourkela.
- Dr. A. S. Vidyarthi received visiting Professorship of Meerut Institute of Engineering and Technology, Meerut.

## **DEPARTMENT OF BIOMEDICAL INSTRUMENTATION**

The Department aims at imparting in-depth knowledge to students with live exposure to the use of sophisticated medical equipment. This programme is conducted in collaboration with the B.M. Birla Heart Research Centre, Kolkata, and with assistance from Advanced Diagnostic Centre, Ranchi and Rajendra Institute of Medical sciences, Ranchi. The major objective of the programme is to impart knowledge of all possible applications of Biomedical Instrumentation, its technology, its use and intelligent operation to assist physicians and surgeons. Apart from the above mentioned medical institutions, the department has continuous interaction with different hospitals such as Calcutta Medical and Research Institute at Kolkata to develop the technical skill and know how about the modern advanced medical equipment among the students.

Faculty members of this department have also started collaborative research work in different areas of Biomedical Engineering with the School of Biomedical Engineering and Department of Electronics Engineering, Banaras Hindu University, Varanasi (India). B. M. Birla Heart Research Centre, Kolkata and Central Institute of Psychiatry, Ranchi. Emphasis has also been laid on the application of soft computing such as artificial neural network, fuzzy logic genetic algorithm etc. for the processing and expert computerized classification of different Biosignals

### **Course Offered**

#### *PG Course:*

- M.Sc. (Biomedical Instrumentation)

### **Faculty position**

<b>Designation</b>	<b>Professor</b>	<b>Lecturer</b>	<b>Assoc. Lecturer</b>
Number in Position	1	2	1

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
M.Sc. (BMI)	
IIInd semester	28
IVth semester	16
Vth semester	02
Ph.D.	01

### **Seminar(s)/conference(s)/short term course(s) conducted by the Department**

- One-day workshop on *Advanced Biomedical Instruments* organized exclusively for staff and students of the department, Advanced Diagnostic Center, Ranchi, November 11, 2006.

### **Books / Monograph(s) Publications by faculty**

- Kumar, R., Sinha and Das, B. N. (Eds.) *Emerging Trends in Biomedical Instrumentation*, Satya Prakashan, New Delhi, 1st Edition. 2006-07.

### **Publications by faculty in Journals**

#### ***International***

- Sinha, R. K. Study of Changes in Some Pathophysiological Stress Markers in Different Age Groups of an Animal Model of Acute and Chronic Heat Stress. *Iranian Biomedical Journal (In Press)*.
- Sinha, R. K. and Aggarwal, Y. Depletion of Serotonin Synthesis with p-CPA Pretreatment Alters EEG in Urethane Anesthetized Rats under Whole Body Hyperthermia. *Iranian Biomedical Journal*, 11, 33-39, 2007.
- Sinha, R. K., Aggarwal, Y. and Das, B. N. Backpropagation Artificial Neural Network Classifier to Detect Changes in Heart Sound due to Mitral Valve Regurgitation. *Journal of Medical Systems (In Press)*.
- Sinha, R. K., Aggarwal, Y and Das B. N. Backpropagation Artificial Neural Network Detects Changes in Electro-Encephalogram Power Spectra of Syncopic Patients. *Journal of Medical Systems*, 31, 63-68, 2007.
- Sinha, R. K. An Approach to Estimate EEG Power Spectrum as an Index of Heat Stress using Backpropagation Artificial Neural Network. *Medical Engineering and Physics*, 29, 120-124, 2007.
- Sinha, R. K. and Ray, A. K. Sleep-Wake Study in an Animal Model of Acute and Chronic Heat Stress. *Physiology & Behavior*, 89, 364-372, 2006.
- Sinha, R. K. p-CPA Pretreatment Reverses the Changes in Sleep and Behavior following Acute Immobilization Stress. *Journal of Physiological Sciences*, 56, 123-129, 2006.

### **Publications by faculty in Seminar Proceedings**

#### ***International Events***

- Kumar, S. and Prakash, P. New approach for study of effects of electromagnetic radiation on the auditory electrical signal. *International conference on "Recent Advancements and Applications of computer in Electrical Engineering"* at Engineering college, Bikaner (March 4-25, 2007).

### **National Events**

- Aggarwal, Y., Sinha, R. K., Karan, B. M. and Das, B. N. Circuit Modeling Approach to Model the Skin Blood Flow in the Thermoneutral Zone of Human Body Temperature Regulation. *All India Seminar-2007 on Achievements and Challenges in Electronics and Telecommunication Engineering* Organized by The Institution of Engineers (India), Jharkhand State Center, Ranchi, January 20-21, 2007.
- Pal, B. B., Pal, D. and Das, B. N. A Modern Scanning Filter Useful for Electro-Surgery Using Single Output Port. *National Seminar on Devices, Circuits & Communication (NASDEC2)* Organized BY Department of Electronics and Communication Engineering, BIT, Mesra, November 2-4, 2006.
- Dwivedi, A., Karan, B. M., Das, B. N., and Sinha, R. K. A Logical Approach to Analyze Heat Shock Protein 70 Gene Expression. *National Seminar on Devices, Circuits & Communication (NASDEC2)* Organized BY Department of Electronics and Communication Engineering, BIT, Mesra, November 2-4, 2006.
- Pal, B. B., Pal, D., and Das, B. N. A Modern Scanning Filter for Phonocardiography using Output Port. *National Conference on Biomedical Engineering, (NCBME, 2006)* organized by Sardar Patel Institute of Technology, Mumbai, March 28-29, 2006.
- Pal, B. B., Pal, D., and Das, B. N. Bioelectric Switched Capacitors Biquad for Medical Diagnosis. *National Symposium on Mathematical Methods and Applications, (NSMMA, 2006)* organized by department of Mathematics, Indian Institute of Technology, Madras, Chennai, December 22, 2006.
- Aggarwal, Y., Karan, B. M., Das, B. N. and Sinha, R. K. A Model to Approach Heat Transfer Mechanism of Laboratory Rats in Hot Environment. *National technical symposium on Biomedical Engineering, BIMETS'06*, organized by SIT, Siliguri, 2006.
- Dwivedi, A., Karan, B. M., Das, B. N. and Sinha, R. K. Understanding Biology from a New Perspective: Systems Biology Initiates a Dawn. *National technical symposium on Biomedical Engineering, BIMETS'06, SIT, Siliguri*, 2006.
- Mahato, B., Paul, S., Sinha, R. K., and Das, B. N. Advancements in 3-D Ultrasound Imaging Technology: In Diagnostic and Therapeutic Purposes. *National technical symposium on Biomedical Engineering, BIMETS'06, SIT, Siliguri*, 2006.



## **Seminar(s)/Symposium(s)/Short-term Course(s) Attended by faculty members**

### ***International Events***

- Kumar, S. International conference on "Recent Advancements and Applications of computer in Electrical Engineering, at *Engineering college, Bikaner*, March 24 - 25, 2007.

### ***National Events***

- Sinha, R. K. Participated in *Training Programme on Tools and Techniques in e-learning by DOEACC Center*, Kolkata at Birla Institute of Technology, Mesra, Ranchi, August 1-6, 2006.
- Sinha, R. K. Accomplished two months *training in Department of Psychopharmacology, National Institute of Mental Health and Neurosciences*, Bangalore, 1 April to 30th May, 2006.
- Sinha, R. K. Participated in *One day Workshop and Exhibition on Technology Development, Utilization and Transfer*, jointly organized by Department of Scientific and Industrial Research and Birla Institute of Technology, Mesra, Ranchi, March 6, 2006.

## **DEPARTMENT OF CIVIL ENGINEERING**

Adequate facilities exist for research work. Both undergraduate and post-graduate students are trained in computer applications to problems in Civil Engineering using the latest softwares. Major areas of research in the Department include composite materials, soil-structure interaction studies, deep foundation systems, slope stability analysis and hydrodynamics.

Laboratories and Design Sessionals provide very good supplement to lecture classes. Various Laboratories like, Surveying, Computer- aided Drafting, Engineering Geology, Structural Engineering, Soil Mechanics & Foundation Engineering, Fluid Mechanics, Hydraulics, Hydraulic Machines, Cement & Concrete.

Road Materials, Transportation, Computer Aided Design, Rock Mechanics, G I S, Environmental Engineering, and Design Sessional classes give opportunity to students to work with the latest softwares.

### **Course offered:**

#### *UG Course:*

- ✦ BE (Civil)

#### *PG Course:*

- ✦ ME (Soil Mechanics & Foundation Engineering)
- ✦ ME (Structural Engineering)

### **Faculty position:**

<b>Designation</b>	<b>Professor</b>	<b>Associate Professor</b>	<b>Reader</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>
Number in Position	4	2	4	2	4

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
<b>UG Programme</b>	
IIIrd semester	03
IVth semester	44
Vth semester	04
VIth semester	37
VIIIth semester	21
IV-G semester	04
<b>PG Programme</b>	
IIInd semester	04
Ivth	02

## **Ongoing Project**

### **Industry – Institute Interaction**

- Ground Water Resource Management Model, West Bokaro Coalfield under guidance of Dr. Balram Singh and Dr. A. K. Sinha with other Experts from CCL and CMPDI.
- Technical Appraisal, Quantity Evaluation and Cost Estimate for construction of proposed two Hotels and renovation of existing three Hotels at Deogarh and Daltonganj for Tourism Department, Jharkhand by Dr. Arun Kumar and Mr. Birendra Kumar Singh.
- Structural / Foundation problems concerning failure of a portion of a high boundary wall at Birsa Munda Airport, Ranchi was taken up with the Airport Authority of India by Dr. Mainak Mallik with Dr. K. V. Krishnamurthy.
- Routine consultancy services are being provided in areas of Geotechnical and Structural Engineering for different Public and Private Sector organisations. Advice on foundation is also being offered to this Institute for its different expansion programmes. Notable here is the recommendation of shallow foundations for the Patna Extension center, as normally under-reamed pile foundations are considered around these places. The immediate benefit seen was the savings in cost and time for execution of the Project.
- Technical Sanctions for PMGSY (Pradhan Mantri Gram Sadak Yojana) projects of the State of Jharkhand in the capacity of State Technical Advisor for the Ministry of Rural Development, New Delhi is looked after by Prof. Subrata Sengupta.
- Prof. Sengupta also participated as one of the committee members for Technical
- Evaluation of bidding entries for CSC project in Jharkhand organised by Department of I.T., Government of Jharkhand.
- Dr. Mainak Mallik coordinated the TEQIP construction related matters and attended meeting with NPIU for the World Bank Project during August 29 to 31, 2006.

### **Publications by faculty in Seminar Proceedings**

#### ***National***

- Ranjan S. R. Optimal Sizing of Reservoirs through Genetic Algorithms. *Proceedings of 2nd Bihar Science Congress* at Patna from 26 to 28 March, '07

## **Seminar/Symposium/Short-term Course Attended by faculty members**

### ***National***

- Sengupta, S. participated in 67th Annual Session of the *Indian Roads Congress*, Panchkula, Haryana, November 17-21, 2006.
- Sahay, R. R. presented a Paper in the *2nd Bihar Science Congress*, Patna, 26-28 March, 2007
- Mallik, M. attended an *International Conference on Earthquake Engineering* held at B. E. College, Howrah, January 10, 2007.
- Mallik, M. attended the *S T C on 'Seismic Soil-Structure Interaction in Time Domain'* held at I. I. T., Madras, March, 26-30, 2007.
- Sengupta, S. participated in a Workshop organised by the *Indian Roads Congress at Agra*, September 2-3, 2006.
- Sahay, R. R. participated in a Short Term Training course on *Optimisation with Genetic Algorithms* held at I. I. T., Kanpur, 24-28 April, 2006.
- Mallik, M. has attended a Short-term course on *Non-linear Seismic Analysis of Structures* held at I. I. T., Kanpur, October 14-18, 2006.
- Mallik, M. attended the *Short-Term Training Programme on Structural Steel Design* organised by INS DAG at SVNIT, Surat, December 4-9, 2006.
- Kujur, J. have attended a *Short Term course conducted by AICTE-sponsored STTP on 'Soft Computing Tools in Civil Engineering'* at I. I. T., Kharagpur, December 13-14, 2006.
- Sengupta, S., and Mallik, M. Attended a *Workshop organised by TEQIP Cell, B I T, Mesra at IICM, Ranchi*, August 29-31, 2006.

## **Student Activities**

### ***Students Educational Tours***

- Educational tour for students of 4th semester to 8th semester B. E. and M. E. was organised Dr. C.K. Singh, formerly Engineer-in-Chief cum Spl. Secretary cum Addl. Commissioner and Visiting Professor in the Department arranged the visits to sites related to roads and bridges construction sites and to hot-mixed plant in Ranchi district. Prof. Subrata Sengupta, Dr. Arun Kumar, Dr. Rajiv R. Sahay, Mr. Birendra Singh and Mr. Jitu Kujur from Faculty also accompanied the students.
- A tour to NRSA (National Remote Sensing Agency), Hyderabad, was arranged for the students of the Final year class. The tour from 13 to 22 March, 2007 was conducted by Dr. A.K. Singh, to supplement their course Remote Sensing Methods in Civil Engineering.

## ***Students Training Programmes***

### **Institutions**

- Selected on All-India basis, based on best student performance in Technical Educational Institutions, Mr. Aman Kumar (Roll No.BE/419/04) of IV Semester Civil Engineering was selected for the I. I. T., Kanpur Summer Camp 2006 training program.

### **Awards/ citations bestowed on faculty members and students**

- The Nalin Kumar Sinha Memorial Award: Mr. Rajat Banerjee (Roll No. BE / 82 / 03), February 01, 2007.

## **DEPARTMENT OF COMPUTER SCIENCE ENGINEERING**

The Department of Computer Science in B.I.T started functioning in 1983 for Bachelor's degree course with bare minimum laboratory facilities, and sanction strength of thirty students. Within a span of 22 years the Department has grown rapidly to become one of the largest departments in the Institute. The members of the faculty of the department are involved in research work primarily in the areas of Parallel and Distributed Computing, Software Engineering, Artificial Intelligence & Expert Systems, Soft Computing, Computer Graphics, Image Processing and Modeling & Simulation.

### **Course offered:**

#### *UG Programme*

- B.E. (Computer Science)
- B.E. (Information Technology)

#### *PG Programme*

- MCA (Computer Science)
- M.E. (Software Engineering)
- M.Tech. (Computer Science)

### **Faculty position**

<b>Designation</b>	<b>Professor</b>	<b>Reader</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>	<b>Associate Lecturer</b>
Number in Position	3	3	1	24	3

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students enrolled</b>
<b>BE (CS)</b>	
IVth semester	75
Vth semester	11
VIth semester	90
VIIth semester	09
VIIIth semester	60
<b>Total</b>	<b>215</b>

**BE (IT)**

IVth semester	43
Vth semester	04
VIth semester	43
VIIth semester	08
VIIIth semester	27
<b>Total</b>	<b>125</b>

**MCA**

IIInd semester	66
IVth semester	71
VIth semester	71
<b>Total</b>	<b>165</b>

**ME (SE)**

IIInd semester	08
IVth semester	08
<b>Total</b>	<b>16</b>

**M.Tech (CS)**

IIInd semester	27
IVth semester	26
<b>Total</b>	<b>165</b>

**Project(s) sanctioned during the year 2006-2007**

<b>SL</b>	<b>Project</b>	<b>Funding agency</b>	<b>Amount(Rs.)</b>	<b>Duration</b>
1.	DNA Based Computing for solving N.P. Complete Problem (Dr. G.Sahoo)	UGC	8,02100 /-	3 Years

**Publications by faculty (Journals/Conference Proceedings)****International**

- Patnaik, K. S., Pandey, P. K., Tiwari, D. Temperature variation in Q-Learning. *Proceedings of International Journal of Computer and Information Science and Engg. (IJCISE-2007)*, 20, April 25-27,2007. Barcelona, SPAIN (accepted for publication)

- Sharma, S.C., Jain A., & Singh, D. D. D. Evaluation of /Probabilistic Packet Marking Algorithm in Mitigation of DOS Attack. *International Confereance on Intelligent System and Network*, Chandigarh, India, IISN-2007.
- Panigrahi, S. C., Paul, S. & Sahoo, G. OMTSE- An Optical Interconnection System for Parallel Computing" *Proceeding of International Conference on Advance Computing and Communication (ADCOM 2006)*, Surathakal, Dec 20 – 23, 2006.
- Sarkar, B.K., Jamal, S., and Kumar, B. An efficient Parallel Algorithm for finding the largest and the second largest elements from a List of elements. *Proceedings of the ninth International Conference (ICIT-2006) (IEEE-CS)*, pp 269-272, Bhubaneswar, India, Dec. 16-21, 2006.
- Patnaik, K.S., Peters, J.F., Pandey, P.K., and Tiwari, D. Effect of Temperature on swarms that learn. *Proceedings of the International Conference on Systemics, Cybernetics and Informatics (ICSCI-2007)*, PP. 1-5, Vol.2, Hyderabad, Jan 03-07, 2007.  
Sarkar, B.K. Mukherjee, I., Kumar, .P Kumar, S., Pal, S. Rule Induction using Genetic Algorithm. *Proceedings of the International Conference on Intelligent Systems Networks (IISN-2007)*, pp -227-223, Hyderabad, India, Feb., 23-25,2007.
- Sarkar, B. K., and Jamal, S. Two efficient EREW P-RAM Algorithms on Matrix Trnspose. *Proceedings of the International Conference on Systemics, Cybernetics and Informatiocs (ICCI-2007)*, pp-221-223, Hyderabad, Jan, 03-04, 2007.
- Paul, P. Dynamic Roughing and wave length Assignment Problem Sowing in optical Network using Multi objective Genetic Algorithm (MOGA). *International Conference, Photomaps –2006*, Hyderabad, 13-16, 2006.
- Panigrahi, S. C., Paul, S. & Sahoo, G. OMTM- An Optical Interconnection System for Parallel Computing. *Proceedings of International Conference on Intelligent Systems & Controls (ISCO 2006)*, Coimbatore, Aug 6-8, 2006.
- Panigrahi, S. C., Paul, S. & Sahoo, G. Parallel Prefix Computation, Sorting and DFT on OMTM architecture. *Proceedings of International Conference on Systemic, Cybernetics and Informatics ICSCI 2007*, Hyderabad, Jan 3-7, 2006.
- Panigrahi, S. C., Paul, S. & Sahoo, G. Parallel Prefix Computation, Sorting and Reduction operation on OMTSE architecture. *Proceedings of International Conference on Advanced Computing and Communication (ICACC 2007)*, Madurai, Feb 9-10, 2007.
- Singdh, I., & Sharma, M. K. presented a paper entitled Security Threats and Radio Frequency Identification in Person Authentication Application –



Integrated Approach Towards Presentation of Tag Closing. *International Conference on Recent Advancements and Application of Computer in Electrical Engineering*, Engineering College, Bikaner, March 24-5, 2007.

- Patnaik, K. K., and Sahoo, G. Economy Driven Resource Management Architecture for Compute Grids. *Proceedings of International conference on Enterprise Information Systems (ICEIS 2007)*, Funchal, Madeira, Portugal, 2007
- Senapati, K. K., & Rastogi, T. Multi Step Data Compression. *International Conference on Information Technology*, pp. 1-2, Department of Computer Science & Informatics, Haldia Institute of Technology, West Bengal, March Feb. 19-21, 2007.
- Senapati, K. K., & Rastogi, T. Improving Network Performance by Multi Step Data Compression. *International Conference on Advance Computing and Communication*, pp. 596-598, Dept, of Computer Science & Engineering & Dept. of Information Technology, Setuhu Institute of Technology, Tamil Nadu, Feb., 9-10, 2007.
- Shankar, V.S., Sriram, Smiles, Garimukkala, S. & Raghu, A. A Cube-Based Routing Architecture for Maset. *International Conference on Advanced Computing and Communication ICACC 2007*, Sethu Institute of Technology, Puller, Kariapalli, Feb 9-10, 2007.
- Shankar, V. S. Sriram & Raghu, A. Security Enhancement for SNMP3 Architecture. *International Conference on Information Technology.*, pp. 1-2 Feb. Department of Computer Science & Informatics, Haldia Institute of Technology, West Bengal, March 19-21, 2007.

### **National**

- Mishra S. Solving the sudodu puzzle problem: DNA Computing approach. *Proceedings of ICIS '07.DMI College, Mumbai.*
- Mustafi, A. Ghorai, S. K. Sensor Image Processing using the fractional fourier transform NASDEC 2. *Birla Institute of Technology*, Nov 2-4, 2006.
- Mustafi, A. Ghorai, S. K. Sensor Pattern processing in a quasi distributed fiber optic system using Fractional fourier transform. *32 nd OSI Symposium*, Vadodara, Gujarat, March 1-3,2007.
- Mustafi, A. attended a *Workshop on Dspace installation, maintenance and at Delnet, JNO Campus*, New Delhi.Feb 7-20, 2007.
- Mustafi, A. attended *Train the Trainers, Compehency Development Program*. B.I.T., Mesra, Ranchi, Dec 22-24, 2006.

- Sahoo, G. & Panigrahi, S. C. OMTSE: Efficient Topology for parallel Processing. *Proceedings of National Conference on High Performance Computing*, Tirunelveli, April 05, 2006.
- Sahoo, G., Paul, S. & Panigrahi, S. C. On the Design of some Efficient Algorithms OMMH. *Proceedings of National Conference on High performance Computing*, Tirunelveli, April 05, 2006.
- Sahoo, G. Panigrahi, S. C., & Paul, S. An MIMD algorithm for finding maximum and minimum of K elements of Optical Multi- Trees (OMULT). *Proceedings of National Seminar on Recent Advances on Information Technology*, Dhanbad, Feb 26-27, 2007.
- Sarkar, B. K. and Jamal, S., Srivastava, A., and Kumar, B. Communication Optimization on Distributed Memory Machine for Solving Sparse Linear System using Jacobi Method. *Proceedings of the National Conference on Computer Science and Communication Technology (NCSCT-2007)*, pp. 40-41, St. Joseph College, Tiruchirappalli, Tamilnadu, India Feb. 16-17, 2007.
- Patnaik, K.S., Sahoo, G., Mustafi, A., and Singh, K. Towards face classification.: A Rough neuro computing approach. *Proceedings of the 12th Annual Conference of Gwalior Academy of Mathematical Science (GAMS) and all India Symposium on Computational Biology*, Dept. of Mathematics, MANIR, Bhopal, April 6-8, 2007 (Accepted for publication)
- Singdh, I., and Sharma, M. K. Presented a paper entitled Radio Frequency Identification for Person Authentication (RAPA). *All India Sminar 2007, on achievement and challenges in Electronics & Telecommunication Engineering.*, Ranchi, January, 20-21, 2007.
- Senapati, K. K., and Rastogi, T. Entropy in Multi Step Data Compression. *12th Annual Conference of Gwalior Academy of Mathematical Science(GAMS) and All India Symposium on Computational Bioogy*, Department Mathematics Maulana Azad National Institute of Technology, Bhopal, April 6-8, 2007.
- Mallick D. K. and Jana, P. K. Finding Hamittonian Cycle of OTIS Network with its Application to Lagrange Interpolation in Recent advances on Information Technology. *Proceedings of the National Seminar on RAIT 2007*, pp 51-58, Feb. 26-27, 2007, ISM Dhanbad, 2007.

- Sriram, V. S. S., Yellamraju, R. and Palvarapu, M. Formalizing Hybrid Slicing. *International Conference on Advanced Computing and Communication – ICACC 2007*, Sethu Institute of Technology, Puller, Kariapalli, Feb. 9-10, 2007.

### **Seminar(s) / Symposia / Short-term Course(s) attended by faculty members**

- Sarkar, B. K. attended an *E-learning Programme on "Tools and Technologies*. Conducted by DOEACC centre Kolkata, held at B.I.T., Mesra, Ranchi, August 1-6, 2006.
- Chatterjee, S. K. *E-learning Programme on "Tools and Technologies*. Conducted by DOEACC centre Kolkata, held at B.I.T., Mesra, Ranchi, August 1-6, 2006.
- Chatterjee, S. K. attended a *Workshop on National Programme on Technology Enhanced Learning (NPTEL)*, CET, IIT Kharagpur, March 27-29, 2006.
- Sharma, P.K. *E-learning Programme on "Tools and Technologies*. Conducted by DOEACC centre Kolkata, held at B.I.T., Mesra, Ranchi, August 1-6, 2006.
- Sharma, P.K. attended UGC Refresher Course in *Application of CAD/CAM & ROBOTICS in Manufacturing Engineering*. Nov-Dec. 2006.

### **Infrastructure facilities added during the year 2006 - 2007**

#### **COMPUTER CENTRE**

- *One High End IBM Netfinity Server Pentium-II*  
having Clock Speed 450 MHz/ 256 MB SDRAM/ 9.00 GB HDD/ 32X CD ROM/ Floppy Drive/ IBM Mouse and 17" SVGA Color monitor with Window NT Operating System and is networked with 100 Nos. IBM Thin Client.
- *1 No. Server of HCL Infinity*  
PII, 333 MHz/192 MB SDRAM/ 4.3 GB HDD/1.44 MB FDD/ 17"SVGA Color Monitor Digital 32X CD Drive /Keyboard/ Mouse.
- *Digital Deil*  
5100/RISC Processor/2.1 GB HDD/96 MB RAM /133 MHZ Clock Speed.

## **DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**

The Department has modern laboratories and support facilities in all major areas of Electronics and Communication. These include- Electronic Measurements, Analog and Digital Communication, Digital Electronics and Integrated Circuits, Microwave, Microprocessor, Fiber Optics Communication, Advanced Communication, Industrial Electronics, VLSI Design, Intelligent Instrumentation, Antenna Measurement, Multimedia, Wireless Network, CAD etc.

The International Center for Wireless & Mobile Communication, inaugurated on March 28, 2004 under the Department of Electronics & Communication Engineering is continuing with its activities.

Moreover, two specializations namely, Wireless Communication and Software Defined Radio, started under the International centre for Wireless and Mobile Communication. Software Defined Radio is a Double degree programme, in which two degrees one from BIT, Mesra (M.E. in Electronics and Communication Engineering, (Software Defined Radio)) and another from Aalborg University, Denmark (M.Sc. in Software Defined Radio) will be awarded.

An MOU has been signed between B. I. T, Mesra and University of Leeds in the United Kingdom. Students of ECE, EEE, Mechanical Engineering of the Birla Institute of Technology, Mesra, will now have added option of getting dual degree, one from BIT (B.E) and other from the University of Leeds (M. Engg). The present agreement would allow interested students to study for two years in BIT and in the third year, they can opt for Leeds, where they would spend another two years, but get a master's degree in the respective stream.

A letter of co-operation has been signed with University of Roma Tor Vergata in the area of broadband satellite communications.

The project proposed by University of Ferrara, relative to the institution of the Tele-doctorate plat form Italy- India has been approved by Italian ministry of education, Universities and Research (MIUR), with a financial contribution of €30,000.00

### **Course offered:**

#### *UG Programme*

- B.E. (Electronics and Communication Engg.)

#### *PG Programme*

- M.E. (Instrumentation and control)

- M.E. (Microwave)
- M.E. (Wireless Communication)
- M.E. (SDR) from BIT, Mesra,
- M.Sc. (SDR) from Aalborg University

#### Faculty position

<b>Designation</b>	<b>Professor</b>	<b>Reader</b>	<b>Lecturer (Sel. Grade)</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>	<b>Associate Lecturer</b>
Number in Position	5	4	3	1	17	2

#### Number of Student enrolled/registered with Department

<b>Semester</b>	<b>No. of students</b>
BE (ECE)	
IIIrd semester	02
IVth semester	108
Vth semester	06
VIth semester	126
VIIth semester	06
VIIIth semester	83
Total	325
ME (Instrumentation)	
IIInd semester	4 (FT) 3 (PT)
IVth semester	4 (FT) 1 (PT)
ME (Wireless Comm.)	
IIInd semester	7 (FT) 3 (PT)
IVth semester	7 (FT)
ME (Microwave Engg.)	
IIInd semester	2 (FT)

### Ongoing Project(s)

<i>SL</i>	<i>Principal Investigator</i>	<i>Project Title</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanctioned Amount</i>	<i>Duration</i>
1.	Prof. R. Sukesh Kumar	Improvement of S & T Infrastructure in Universities and Higher Educational Institutions (FIST)"	Dept. of Science & Technology	2004	Rs. 35.00 Lacs	5 Years
2.	Prof. S.C.Goel	Special Assistance Programme (SAP) at the level of Department Research Support (DRS)	UGC, New Delhi	2004	Rs. 31.50 Lacs.	5 Years
3.	Dr. S. Srivastava	Design of Active Microstrip Antenna for Wireless Communication	DST, SERC Fast Track Scheme for Young Scientists	2006	Rs. 8.60 Lacs.	3 Years

### Project(s) completed during the year 2006-2007

<i>SL</i>	<i>Principal Investigator</i>	<i>Project Title</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanctioned Amount</i>	<i>Duration</i>
1.	Prof. S. K. Ghorai	Use of Fiber Optic Sensors for Strain , Displacement and Load measurement data Acquisition Transmission through FO glass	I.S.R.O.	2002	Rs. 12.86 Lacs	4 Years

**Seminar(s) / conference(s) / short term course(s) conducted by the Department**

***National Events***

- National Seminar on Devices, Circuits and Communication -06

*No. of delegates:* 100

*Name of dignitaries:*

- Prof. S.C. Duttaroy , Emiritus Prof, IIT Delhi
- Prof. A. A. Khan, Vice Chancellor, Ranchi University

*Resource persons involved:*

- Prof. S. Banerjee, Prof., Dept. of EEE, IIT, Kharagpur
- Prof. R.Gangopadhyay, Prof, Dept. of EEE, IIT, Kharagpur
- Prof. A. Roy, Prof, Dept. of EEE, IIT, Kharagpur
- Prof. K. P. Ghatak, Prof. Calcutta University
- Prof. S. K. Sanyal, Prof, Dept of E&TCE, Jadavpur University
- Shri P. Arun Kumar

*Period (duration):* 2 – 4 November 2007

- Robotics Workshop by The Robotics Institute(TRI), IIT, Mumbai

*No. of delegates:* 75

*Resource persons involved:*

- Mr. Gaurav Chaturvedi, Alumni, IIT Mumbai
- Mr. Mohit Kumar, Alumni, IIT Mumbai
- Mr. Kalyan Raj, Bombay University

*Period (duration):* 3rd – 4th February 2007

- A Summer School on Industrial Automation with Automation and Control System (ACS), Pune.

*No. of delegates:* 103

*Resource persons involved:*

- Mr. Mangal Bilakhia, Director, ACS, Pune
- Mr. Milind Chvan, Sr Application Engineer, ACS, Pune
- Mr. Jayanta Paul , Application Engineer, ACS, Pune

*Period (duration):* 2nd May- 7th May 2007.

- One day workshop on "Installation of & Working with Cadence Design Tools"  
*No. of participants: 40*  
*Name of Guests:*
  - i. Prof. P. K. Barhai, Prof. HOD , Applied Physics, BIT, Mesra, Ranchi
  - ii. Prof. R. Sukesh Kumar, Prof. HOD, Electronics and Communicatiuon Engg. , BIT, Mesra, Ranchi*Resource persons involved:*
  - i. Prof. D. Pal, Prof, Dept. of ECE
  - ii. Mr. A. Saha, Lecturer , Dept. of ECE
  - iii. Mr. Pramod Kumar, CAD Lab.*Period (duration): 9th March 2007*

### **Awards/ citations bestowed on faculty members and students**

- Prof. J. S. Roy: Best Paper Award in *Intl. Conference ICMARS* Jodhpur, Dec 20-22, 2006.
- Dr. Seweta Srivastava: Received *SERC Fast Track Award* for Young Scientists from DST.
- Nikhil Kumar Verma, BE/ 53/ 03 of VIIth Semester:
  - a) On 18th October 2006, won an HP Laptop worth Rs 70,000/- as First prize, in ISRO Chamatkar Science Quiz- A technical quiz show aired on DD National
  - b) Won the Business & IT Quizes at IIT-Kharagpur springfest 2007 ( A Cultural Fest)
  - c) Won the Zonal at Ranchi and Came Third in National Semi-Final of IMS IQ 2007
  - d) Came Third at XLRI's Managreement Fest- Business Quiz.
- Manas Chhabra, BE/ 266/ 03 of VIIIth Semester:
  - a) Received Summer Research Scholarship-2006 by Jawaharlal Nehru Centre-Advanced Science Research (JNC-ASR), Bangalore.
- Anindya Misra, BE/398/03 of VIIIth Semester:
  - a) Received Research Associate Scholarship (AICTE), IIT, Kanpur-2006.
- Ankur Aggarwal, BE/322/03, VIIIth Semester
  - a) Developed, fabricated and presented a car, based on an innovative concept, at South Asia's biggest Auto\_Expo, Pragati Maidan, New Delhi, 2006
  - b) Innovative Idea of the year award by SIDBI, BIT, Mesra.
  - c) Developed a Formula-1 car to race at Silverstone Circuit, UK, formula student competition organized by IET and IMECHE.



#### **Ph. D. registration**

- i. Mr. Nagendra Sah, Propagation Modeling Using CSP (Constraint Satisfaction problems), Under Supervision of Dr. Nisha Gupta, Prof. Dept of ECE.
- ii. Mr. Jayanta Ghosh, Designing of Broad Band and Multifrequency Microstrip Antenna for Wireless Communication, Under Supervision of Dr. J. S. Roy, Prof. Dept of ECE
- iii. Mr. Gajendra Kant Mishra, Development of Hybrid Channel Assignment Algorithm and Blocking Probability Analysis in Wireless Communication, Under Supervision of Dr. J. S. Roy, Prof. Dept of ECE
- iv. Mr. V. Janardhana, State of the Art RFMEMS Phase Shifter for Phased Array, Under Supervision of Dr. J. S. Roy, Prof. Dept of ECE
- v. Mr. Rajeev Ranjan, Development of Efficient Channel Assignment Algorithm and Blocking Probability Analysis in Wireless Communication, Under Supervision of Dr. J. S. Roy, Prof. Dept of ECE
- vi. Mr. Aloke Saha, Studies on some Function Circuits and its VLSI Implementation, Under Supervision of Dr. D. Pal, Prof. Dept of ECE.

## **DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

The department has been a center for research in the areas of digital signal processing, plasma engineering, microprocessor applications, fractional horsepower electric machines etc. machines etc, from time to time.

Research is going on in the areas of non-stationary signal analysis, intelligent control techniques applied to automatic generation control and non linear dynamic systems, development of new architecture for neural networks, intelligent instrumentation and clean and efficient heating etc. Emphasis has also been laid on the application of neural networks, fuzzy logic, genetic algorithm based evolutionary computations in the areas of control system, power system, complex analysis and design and biomedical instrumentation.

The department has continued interaction with public and private sector industries. Consultancy assignments and sponsored research projects in the fields of control system for desired tensional/compression rolling in hot rolling mill, control of dynamical systems, study and design of observer and controller for induction motor has been successfully completed by the department.

The department desires to incorporate two small robots with sensing transducers in the laboratory. Work is now going on for the development of the programme for training the robots to identify and learn hazardous environments. We have planned to build an intelligent robot with high-resolution transducers for data acquisition making toolbox to sense and identify objects.

### **Course offered**

#### *UG Course*

- B. E. (Electrical Engineering)

#### *PG Cours:*

- M.E. (Power System)
- M.E. (Control System)
- Non-formal Diploma Course

*Vocational Training Programmes* (in collaboration with Department of Welfare, Govt. of Jharkhand)

- Repair & Maintenance of Electrical System
- Repair & Maintenance of Household Appliances

**Faculty position**

<b>Designation</b>	<b>Professor</b>	<b>Associate Professor</b>	<b>Reader</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>	<b>Associate Lecturer</b>
Number in Position	6	1	4	2	12	1

**Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
<b>BE (EEE)</b>	
IIInd semester	56
IIIrd semester	2
IVth semester	46
Vth semester	1
VIth semester	53
VIIth semester	2
VIIIth semester	54
<b>Total</b>	<b>214</b>
<b>ME (Control System)</b>	
IIInd semester	6
IVth semester	10
<b>ME (Power System)</b>	
IIInd semester	5
IVth semester	7
<b>Total</b>	<b>21</b>
<b>Ph.D.</b>	5

**Ongoing Project(s):**

<b>SL</b>	<b>Title of the project</b>	<b>Funding Agency</b>	<b>Corodinator/in vestigator</b>	<b>Amount Sanctioned</b>	<b>Duration</b>
1.	Development of Programmable Logic Controller Based Automatic Generation Control	UGC	Dr. T. Ghosh	4.92 lacs	3 years

2.	Developing Advanced Laboratories	FIST Scheme under DST	Dr. B. M. Karan	27.00 lacs	
3.	Establishment of Instrumentation Maintenance Facility (IMF) during Xth Plan Period	U.G.C.	Dr. B. M. Karan	2.50 lacs	

**Seminar(s)/conference(s)/short term course(s) conducted by the Department**

<b>Name of course</b>	<b>Candidates</b>	<b>No. of Students</b>
Non-formal Diploma Program	Tata Steel Employees	22 12(2 <sup>nd</sup> Semester) + 10(3 <sup>rd</sup> Semester)
Vocational Training Programs(in collaboration with Department of Welfare, Govt. of Jharkhand) on i. Repair & Maintenance of Electrical System ii. Repair & Maintenance of Household Appliances	Exclusively for 40% for ST 20% for SC 20% for OBC 20% for minorities	600 6 batches of 50 students in each batch per programme
Training Programme for Rural Candidates under TEQIP (2 Nos.)		30+30
TEQIP SPONSORED SHORT TERM TRAINING PROGRAMME ON DSP KIT TMS320LF2407A & C6713 (March 31, 2007 - April 2, 2007)		10

Department of EEE in collaboration with Institute of Engineers have conducted a *National Seminar on Emerging Trends in Power System* on August 5-6 2006.,

**Dignitaries:** Mr. R. V. Shahi, Secretary, Ministry of power, Govt. of India,  
Mr. S. K. F. Kujur, Chairman, JSERC,  
Mr. Ashim Barman, Chairman, DVC & many others

## **Publications by faculty in Journals**

### ***International***

- Kadwane, S. G., Kumar, A., Karan, B.M. and Ghose, T. Online Trained smulation and DSP Implementation of Dynamic Back Propagation Neural Network for Buck Converter. *International Journal of Automatic Control and Systems Engineering, ICGST*, 6, 2006 (Accepted for Publication)
- Kadwane, S.G., Gupta, S., Karan, B.M., Ghose, T. Practical Implementation of GA Tuned Buck Converter. *International Journal of Automatic Control and Systems Engineering, ICGST*, 6, 2006. (Accepted for publucation).
- Mohanta, D.K. A comparative Study of Artificial Neural Network (ANN) and Fuzzy InferenceSystem (FIS) Approach for Digital Relaying of Transmission Line Faults. *International Journal on Artificial Intelligence and machine learning*,.6, (4), 1-7, 2006.
- Mohanta, D.K. Deterministic and stochastic approach for safety and reliability optimization of captive power plant maintenance scheduling using GA / SA based hybrid techniques: A comparison of results. *Reliability and System Safety* 92 (2), 187-199, 2007.
- Mohanta, D.K. Safety and reliability optimization of captive power plant using intelligent maintenance scheduling. *International Journal on Reliability and Safety*,1 155-157, 2006.
- Mohanta, D.K. A Wavelet- neuro –fuzzy combined approach for digital relaying of transmission line faults. *International Journal on Electric Power Components & Systems* (accepted for publication).
- Panigrahi, C. K. Simulated annealing technique for dynamic economic dispatch, *International Journal of Electric Power components and systems*, 34 (5), 577-586, 2006.
- Kadwane, S. G., Kumar, A., and Karan, B.M. Dynamic back propogation based MRAH with fuzzyemulator for DC-DC converter. *Scintific Journal of Electronics and Electrical Engineering*, 1 (70), 49-51, 2007.

### ***National***

- Chakrabarti R. Chattopadhyay, P. K. and Panigrahi, C. K. A Review of recent advances of Dynamic Economic Dispatch. *Journal of Institution of Engineers* (accepted for publication).

- Panigrahi, C. K., Chattopadhyay, P. K., and Chakrabarti, R., Basu, M. Particle Swarm Optimization Based Dynamic Economic Dispatch. *Journal of Institution of Engineers (I)*-EL, 87 (1), 48-54, 2006.

## **Publications by faculty in Seminar Proceedings**

### ***International Events***

- B. M. Karan, and Dwivedi, A. Understanding Biology from a new perspective: System Biology initiates a Dawn. *International conference on bioinformatics, INCOB-2006*, 5-7 April 2006.
- Kadwane, S. G., Vepa S. P., Karan, B.M. and Ghose, T. Converter Based DC Motor Speed Control Using TMS320LF2407A DSK. 1st *IEEE conference on Industrial Electronics and Applications* to be held in Singapore, 25-27 May 2006.
- Kishore, A., and Kumar, G. S. A Generalized State-Space Modeling of Three Phase Self-Excited Induction Generator For Dynamic Characteristics and Analysis" Proceeding of 'The 1st *IEEE conference on Industrial Electronics and Application* Singapore, 2006.
- Kishore, A., Prasad, R. C., and Karan, B. M. Design of Field Oriented Controller to Improve Dynamic Characteristics of Three Phase Self Excited Induction Generator" Proceeding of *The 1st IEEE conference on Industrial Electronics and Application* 2006, Singapore.
- Jana, K. C., Thakura, P., and Biswas, S. K. A Simple and Generalized Space Vector PWM Control of Cascades H-Bridge Multilevel Inverters. *IEEE international conference ICIT-06*, p.p-1281-1286, Mumbai, Dec 15-17, 2006.
- Patnaik, D. Biomedical Image Fusion Using Wavelet Transforms and SOFM Neural Network. *IEEE International conference on Industrial technology (ICIT 2006)*, pp-1189-1194, Mumbai, December 15-17, 2006.
- Kadwane, S. G. Gupta, S., Karan, B. M., Ghose, T. and Kumar, A. Real Time Based PI Like Fuzzy Controller for a DC Motor. *IEEE conference PEDES-06*, Delhi, 12-15 December 2006.
- Jha, A. K., Babu K. H., and Karan, B. M. Parallel Power Flow AC/DC Converter with High Input Power Factor and Tight Output Voltage Regulation for Universal Voltage Application. *IEEE International conference on PEDES-06*, Delhi, Dec 12-15, 2006.
- Jana, K.C., and Biswas, S. K. A Simple and general Space Vector PWM control of Cascaded Seven Level Inverter, *IEEE international conference PEDES-06*, Delhi, Dec, 12-15,2006.
- Kishore, A., and Kumar, G. S. Dynamic modeling and analysis of three phase self-excited induction generator using generalized state-space approach. *Proceeding of 'International Symposium on Power Electronics, Electrical Drives, Automation and Motion', IEEE Conference, Italy, 2006.*

- Kishore, A., and Kumar, G. S. A Generalized Dynamic Model of Self-Excited Induction Generator using State-Space Approach with ANN-model of Mutual Inductance for Transient Analysis and Control of Output Voltage by PWM-Strategy. *Canadian Conference on Electrical and Computer Engineering*, 2006.
- Kishore, A., and Kumar, G. S. A Novel Generalized dynamic modeling of three-phase self-excited induction generator for transient analysis using state space approach. *12th International Power Electronics and Motion Control Conference, IEEE Conference Slovenia*.
- Kishore, A., and Kumar, G. S. A Generalized Dynamic Model of Self-Excited Induction Generator using State- Space Approach for Dynamic Analysis and Control of Output Voltage by PWM-Strategy, *International Symposium on Industrial Electronics-ISIE- 2006' IEEE Conference*, Canada, 2006.
- Avinash Kishore, G.Satish Kumar "A Generalized Dynamic Modeling and Simulation of Self-Excited Induction Generator using State- Space Approach with ANN model Inductance for Transient Analysis, *PECA-IFTOMM International Conference (PICA 2006) on Recent Trends in Automation and its Adaptation to Industries*, Nagpur, July 11-17, 2006.
- Kishore, A., and Kumar, G. S. A Generalized Dynamic Modeling and Analysis of Self-Excited Induction Generator using State-Space Approach with ANN-Model of Magnetizing Inductance. *International Conference on Industrial Technology (ICIT-2006) IEEE Conference*, Mumbai, 15-17, Dec 2006.
- Kishore, A., and Kumar G. S. Dynamic Analysis and Control of Output Voltage of a Wind Turbine Driven Isolated Induction Generator. *International Conference on Industrial Technology (ICIT-2006) IEEE Conference*, Mumbai, 15-17 Dec, 2006.
- Mohanta, D. K. A Wavelet Approach for classification of transmission line faults using soft computing techniques. *International conference on power system protection, Power System division, CPRI*, Bangalore, 20-21 February 2007.
- A Wavelet Approach for classification of transmission line faults using soft computing techniques. *International conference on power system protection, Power System division, CPRI*, Bangalore, February 20-21, 2007.
- Mohanta, D. K., and Reddy, M. J. B. A Wavelet-Fuzzy Combined Approach For Classification And Location Of Transmission Line Faults. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata, 12-14 January, 2007.
- Mohanta, D. K. and Reddy, M. J. B. Detection, Localization And Classification Of Power System Oscillatory Transients Using S-Transform. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata, 12-14 January, 2007.

- Mohanta, D. K. and Reddy, M. J. B. A Wavelet Based Technique For Digital Relaying Of Transmission Line Faults Using Artificial Neural Networks. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata, 12-14 January, 2007.
- Mohanta, D. K. Support Vector Machine (SVM) Based Gaze Tracking. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata, 12-14 January, 2007.
- D Mohanta, D. K. A System Approach For Optimization Of Safety And Reliability Of Capacitive Power Plant Maintenance Scheduling. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata, 12-14 January, 2007.
- Reddy, J. B. Wavelet-Fuzzy Combined Approach For Classification And Location Of Transmission Line Faults. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata 12-14 January, 2007.
- Reddy, M. J. B. Detection, Localization And Classification Of Power System Oscillatory Transients Using S-Transform. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata 12-14 January, 2007
- Reddy, M J. B. A Wavelet Based Technique For Digital Relaying Of Transmission Line Faults Using Artificial Neural Networks. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata 12-14 January, 2007
- Chakraborty, S. R., and Sengupta, S, Terbium doped glass based DC OCT usable in HVDC transmission system. *International Conference on Emerging Trends In Electrical Engineering*, organized by Electrical Engineering Department, Jadavpur University, Kolkata, 12-14 January, 2007.
- Panigrahi, C.K., Chattopadhyay, P. K. Chakrabarti, R. and Dash, D.P. Optimization techniques for power system operation and control. *Proceedings of International Conference*, 12-14, January 2007.
- Laxmi, V., Karan, B. M. Image fusion algorithm using Wavelet Transform and Neural Network. *Proceedings of International Conference on Recent advancements of computer in Electrical Engineering* organized by Engineering College, Bikaner, 25-26, March, 2007.



### ***National Events***

- Jana, K. C. A General Space Vector PWM Control of Cascaded H-Bridge Multilevel Inverters Fed IM Drives. Presented at *National conference COMOAT-06* held at ISM, Dhanbad, 15-16 oct, 2006.
- Chakrabarti, R. Chattopadhyay, P. K., Basu, M. and Panigrahi, C.K. Particle Swarm Optimization Technique for Dynamic Economic Dispatch. *Journal of Institution of Engineers (I)*-EL, 87, 48-54, September 2006.
- Chakrabarti, R., Panigrahi, C.K. and Chattopadhyay, P. K. Emerging trends in Indian Railways. Proceedings of *All India Seminar on Technological Advancements and Long- Term Perspective on Indian Railways including Mass Rapid Transit System*, IE(I), pp. 80-86, West Bengal State Centre, July, 2006.
- Kadwane, S. G., Phani, V.S., and Karan, B.M. Real time PID based DC motor speed control by TMS320LF2407A DSK with cascaded Buk converter, *Paper ID 15*, IIT Bombay December, 16-17, 2006
- Kadwane, S.G., Karan, B.M., Ghose, T. and Thakura, P.R. DSP based control of single processor multimotor system for Robotic applications. *All India seminar on CAD/CAM Robotics and Futuristic Industries. IE* (Jharkhand branch), BIT Mesra. December 14-15, 2006.
- Kadwane, S. G., Kumar, A., Karan, B.M., and Ghose, T. Compensator design for load changes in DC-DC Converter. *NCSE-2006*, pp: 51-57, Bhuwaneshwar, 2006.
- Kadwane, S.G., Gupta, S., Karan, B.M. and Ghose, T. DSP based fuzzy control for buck converter with inductive load. *NCSE-2006*, pp:20-26, Bhuwaneshwar, 2006.
- Jha, A. K. Energy Auditing of Indian Industry Context. *SAEC 2006, MECON*, Ranchi, India.
- Keshri, R. K., Singh, U. N., and Karan, B. M. Modeling Analysis And Simulation Of Series Resonant Inverter Feeding RI Load Considering Transformer Parameters. *All India Seminar On Advancement In Electronics And Telecommunication*, Institution Of Engineers, January 21-22, 2006.
- Laxmi, V., and Karan, B. K. An image fusion technique using wavelet transform and neural network. *Institute of Engineeres*, January 20-21, 2006.

## **Seminar(s)/Symposia/Short-term Course(s) Attended by faculty members**

### ***International Events***

- Karan, B. M. *T.I. Developer Conference*, Texas Instruments, Bangalore, 30-01 Dec.2006.
- Thakura, P. R., and Kadwane, S. G. *IEEE Conference on Industrial Electronics & Applications*, Singapore, 25-27, May 2006.
- Jana, K.C., Kishore, A., Thakura, P. R. *IEEE Conference ICIT-06*, I.I.T. Mumbai, December 15-17, 2006
- Kadwane, S. G., and Jha, A.K. *IEEE Conference PEDES-06*, I.I.T. Delhi, Dec.12-15, 2006
- Reddy, M. J. B. *International Conference on Power System Protection CPRI*, Bangalore, Feb 20-21, 2007.
- Mohanta, D. K. Reddy, M. J. B. Chakraborty, S., and Panigrahi C. K. *International Conference on Emerging Trends in Electrical Engineering*, Electrical Engineering Department, Jadavpur University, Science City, Kolkata, January 12-14, 2007.
- Laxmi, V., and Prakash, P. *International Conference on Recent Advancement of computer in Electrical Engineering* Engineering College, Bikaner, March 25-26, 2007.

### ***National Events:***

- Nath , N. L. and Prakash, M. *Blue Print for Success TEQIP Sponsored Program*, IICM Kanke, Ranchi, August 29-31, 2006.
- Nath, N.L., and Prakash, P. *Training on PLC*, ECE, Dept. BIT Mesra, May 2006
- Chakraborty, S. E- Learning      TEQIP      BIT, Mesra, August, 2006.

## **Patents:**

### ***Patent Applied for***

- Mohanta, D. K. and Reddy, M.J. B. Digital relay based on frequency domain approach for detection and classification of power system transmission line faults, 2007 (under Process).
- Mohanta, D. K. and Reddy, M.J. B. *Power system disturbance detection, localization and classification system using S-transform* 2007 (under Process).

## Student Activities

<i>Name of Programme</i>	<i>Organizer</i>	<i>Event</i>	<i>Guest(s)</i>	<i>Duration</i>	<i>Participants</i>
METAL GEAR	EEE Society	Student chapter		1st – 2nd Nov, 06	
International Unnayan '07	IEEE student chapter, BIT, Mesra	Technical (paper Presentation, Hardware/Software, Quiz etc.) Informal (Aptitude test, puzzlers etc.)	Dr. Giuseppe Viesti, Hitesh Bhatnagar, Dr. Rajeev Shrivastava, Subhash Bhatnagar, Mr. A.P. Mishra	5-18 Feb, 2007	300 (120 Outstations from India & Nepal)

## Infrastructural Facilities added during the year 2006-07

### *Name of Lab.*

### *Item*

Power System Lab

1. Differential Relay
2. Directional over current Relay
3. Non-Directional over current Relay
4. Earth Fault Relay
5. Negative Sequence Relay
6. Testing kit with
  - (a) 3-phase current
  - (b) 3-phase voltage
  - (c) Phase shifter
  - (d) Timer
  - (e) DC Voltage
7. Active & Reactive Power Controller
8. Generator Protection Scheme

Simulation Lab

### MATLAB

1. MATLAB & SIMULINK(50 Users)

### DSP LAB

1. TMS320C5416-3No.
2. TMS320C6713-15No.
3. TMS320C2812-4No.
4. TCP/IP Network Daughter Card-1No.
5. Image Daughter Card-2No.
6. NISpeedy33-20No.
7. NI ELVIS Data acquisition Card-5No.

Power Electronics Lab

Three phase voltage source inverter power unit-2No.

**Awards/ citations bestowed on faculty members and students**

<b><i>SL</i></b>	<b><i>Name of Programme</i></b>	<b><i>Period</i></b>	<b><i>Prize winners (students)</i></b>
1.	Metal Gear	1 <sup>st</sup> -2 <sup>nd</sup> Nov'06	Tyagi Nishant 4th Sem Ravi Choudhary 4th Sem
2.	Unnayan	5 <sup>th</sup> -18 <sup>th</sup> Feb, 07	Pankaj Kumar Barnwal 6th Sem Saurav Vicky 6th Sem

## **DEPARTMENT OF ENVIRONMENTAL SCIENCE & ENGINEERING GROUP**

The Environmental Science & Engineering Group (ESEG) was established in the year 2002. ESEG has well established laboratories in collaboration with the other departments of the institute. ESEG is also engaged in various research & developmental projects.

The key research areas are Air Pollution, water Pollution, Environmental Laws, Ecosystem Management, Eco-Audit, Eco Designs & application of GIS in Environmental Management.

The Institute has been identified as an State Referral Institute and an MOU was entered between Drinking Water and Sanitation Department, Government of Jharkhand & BIT, Mesra for community based National rural drinking water quality monitoring & surveillance Programme.

ESEG has facilitated implementation of activities of this programme as per the training strategies & modules for capacity building of surveillance agencies at different levels. Also ESEG, BIT, Mesra is helping the DWSD, Government of Jharkhand to update the laboratory facilities for Drinking water in different districts.

### **Course offered:**

#### *PG Course:*

- M.Tech. (Environmental Science & Engineering)

### **Faculty position**

<i>Designation</i>	<i>Professor</i>	<i>Reader</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>	<i>Associate Lecturer</i>
Number in Position	3	1	2	3	1

### **Number of Student enrolled/registered with Department**

<b><i>Semester</i></b>	<b><i>No. of students</i></b>
<b><i>M.Tech (ESE)</i></b>	
IInd semester	9
IVth semester	16
<b>Total</b>	<b>25</b>

### Ongoing Project(s)

SL	Title of the project	Funding Agency	Amount Sanctioned	Duration
1.	A comprehensive survey on the water quality mapping of Daltonganj, Vishrampur, Chainpur & Pandu of Palamu district and Bhawnathpur, Ranka, Bhandaria, Kharandhi, Nagar, Maghiav of Garhwa district with focus on fluoride.	UNICEF	Rs.11.68 lakhs	

### Project(s) submitted during the year 2006-2007

- FIST Proposal has been submitted to the Ministry of Science & Technology, New Delhi.

### Publications by faculty in Journals

#### *International*

- Bhattacharya, J.M., Islam, M. and Cheong, Y. W. Microbial Growth and Actions: Implications for Passive Bioremediation of Acid Mine Drainage. *Mine water and The Environment*, 25, (4), 233-240, 2006.
- Bhattacharya, J. Islam, M. Kumar, A., and Santosh, G. Application of statistical Quality control for limestone grade: a case study. *Mine Technology*, 27(1), 33-40, 2007.

### Publications by faculty in Seminar Proceedings

#### *International Events*

- Pathak, G. presented and publish a paper entitled, Arsenic & Fluoride in drinking water in some parts of eastern India: A serious threat to the community in the *International conference on Contaminated Soils, Sediments and water*, University of Massachusetts, AMHERST, USA during October 16-19, 2006.

## **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

### ***International Events***

- Pathak, G. presented a technical paper on Arsenic & Fluoride in Drinking water in some parts of Eastern India in *22nd Annual International Conference on Contaminated Soils, Sediments and water*, held at University of Massachusetts, AMHERST, USA during October 16-19, 2006.

### ***National Event:***

- Pathak, G. attended the course on *Environmental Health in Emergencies* conducted by RED R-India & UNICEF, Mussourie, 23-27, May 2006.

## **Student Activities**

- Mr. Khargeshwar Pradhan presented a paper in the National seminar on Environment & Sustainable Development, PG department of Environmental Sciences, Sambalpur University, Orissa. March 17-18, 2007.

## **Awards/ citations bestowed on faculty members and students**

- Pathak, G. participated as a *member of Scientific Advisory Board for the 22nd Annual International Conference on Contaminated Soils, Sediments and water*, University of Massachusetts, AMHERST, USA, October 16-19, 2006.
- Pathak, G. has been appointed as a *member of Scientific Advisory Board for the 23rd Annual International Conference on Contaminated Soils, Sediments and water* going to be held at University of Massachusetts, AMHERST, USA, Oct. 2007.
- Pathak, G. attended the meeting organized by UNICEF as a *committee member on Arsenic contamination*, Dhaka, Bangladesh, March 2006.
- Avishek, K. has been actively involved in the Project entitled, *A Comprehensive survey on the Water Quality of Vishrampur, Chainpur, Pandu & Daltonganj block of Palamau district & Bhawnathpur, Ranka, Bhandaria, Kharanndhi, Nagar, Maghiav of Garwa district with focus on fluoride*, funded by UNICEF.
- Avishek, K. has been actively involved in State Referral institute activities including up-gradation of districts level laboratories.

## **DEPARTMENT OF HOTEL MANAGEMENT AND CATERING TECHNOLOGY**

The Department of Hotel Management and catering Technology was established on 20<sup>th</sup> Jan 2003.

A twenty-six room Hospitality Training Centre with attached kitchen & dining facility is managed by the Department so as to provide hands on practical exposure to the students. Departmental library is maintained to provide accessibility to wide range of Hospitality & Tourism related books & magazines to the students & staff members.

The Department publishes JOHAR- *Journal of Hospitality Application & Research* in association with "Department of Tourism – Govt. of Jharkhand" Which is first of its kind in India.

Department has also been providing support in hospitality services for the institute as & when required like conferences, seminars & V.I.P visits.

### **Course offered**

#### *UG Course:*

- Bachelor Of Hotel Management & Catering Technology

### **Faculty position**

Designation	Sr. Lecturer	Lecturer	Assoc. Lecturer
Number in Position	2	4	4

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
<b>BHMCT</b>	
II <sup>nd</sup> semester	33
IV <sup>th</sup> semester	37
VI <sup>th</sup> semester	25
VII <sup>th</sup> semester	31
<b>Total</b>	<b>126</b>



### **Seminar(s)/conference(s)/short term course(s) conducted by the Department**

- Srivastava, S. P., Shandilya, S. P., and Sharan, S. A. *A short-term training programme on "Kitchen Equipment & Its Application" for hostel mess staff of BIT-Mesra, Spring 2006.*

### **Books / Monograph Publications by faculty**

- Dahiya, A., Patil, L. S. and Gupta, A. (2007). Hospitality Careers- Opportunities and Dilemmas Facing Graduate Education in Tourism & Hospitality. Published in book titled "*Cutting Edge Research in Tourism- Emerging Issues & Challenge*", PP. 585-596, Abhishek Publications: Chandigarh-India.
- Chand, M., Dahiya, A. and Patil, L. S. (2007) Impact of High Occupancies on Waste Management – a concern for Hotel Housekeepers. Published in book titled "*Tourism Development - Impacts & Strategies*", PP. 137-149, Anmol Publications: New Delhi, India.
- Dahiya, A. Revised & wrote book pertaining to *study material on "Housekeeping – Hotel Management"* for "Directorate of Distance Education – Kurukshetra University – Kurukshetra Haryana, 2006.
- Sh. Ashish Dahiya, Contributed Lesson for Front Office - published in Book Form Study Material, for "Directorate of Distance Education – Kurukshetra University – Kurukshetra Haryana. (2006)

### **Book Reviews**

- Gupta, S. and Dahiya, A. *Tourism Policy & Issues*. Department of Hotel & Tourism Management Kurukshetra University - Kurukshetra Haryana, 2006.

### **Publications by faculty in Journals**

#### ***International***

- Chand, M., Dahiya, A., and Patil, L. S. Gastronomy Tourism – A tool for promoting Jharkhand as a Tourist Destination. *ATNA a Journal of Tourism Studies* (accepted for publication).
- Patil, L. S. Dahiya, A., and Gopali, J. B. Eco Tourism, a tool for sustainability and conservation of heritage resources in Maharashtra. *Journal of Tourism – an International Journal by CMTHS, HNBGU* (Accepted for publication).

### ***National***

- Gupta, S. Gupta, A., and Dahiya, A. Need and means for organized finishing programme for hotel management students. *JOHAR*, 2(1), 21-26, 2006.
- Gupta, A. and Gupta, S. Development of wild life tourism in Jharkhand in relation with National Games'07 at Ranchi. *JOHAR*, 2(1), 56-62, 2006.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

#### ***International Events***

- Sahoo, P.R., & Kumar, S. attended a QIP *Short Term Course on Total Quality Manegement in Service Organisations*, IIT Kharagpur, March 22-26, 2007.
- Dahiya, A. attended & presented paper on theme Tourism Education System: Need for Professionalisation of Tourism Education. New methods in Tourism Research. In *International Conference organised by Institute of Vocational Studies*, Himachal Pradesh University, Shimla, March 17-18, 2007.

#### ***National Events***

- Dahiya, A. attended & presented a paper in *National Seminar on Tourism Policy & Issues* at Department of Hotel & Tourism Management, Kurukshetra University Kurukshetra, Haryana, Feb 23 – 24, 2007.
- Gupta, S., & Gupta, A. attended an *International training programme on Application of Research in Hospitality and Tourism* conducted by Waikato University, New Zealand at New Delhi, Jan 2-8, 2007.
- Kumar, S. attended a *workshop on soft skills* organised by Training & Placement Division B.I.T-Mesra, Dec 2006.
- Kumar, S. N., and Sharan, S. attended a *National Seminar on Lean Manufacturing* organised by BIT Mesra Ranchi & IPE Jharkhand, 2006.
- Sahoo, P. R. attended professional development programme on *Wine Master Class* conducted by Christ College Bangalore in Association with Grover Vineyards, 2006.
- Sharan, A. Presented on Role of TQM in Service Sector: A case study of Shreyas Travel, New Delhi. Accepted for publication by 21st *National Convention of Production Engineers*, The Institute of Engineers, India, Dec 9-10, 2006.
- Gupta, A., and Prasad, R. Attended *Workshop on changing mind set* conducted by Mr. Shiv Khera at IICM, Ranchi, Aug.2006.

## Student Activities

- Final Year Students Mr. Varun Vermani, Mr. Ravi & Mr. Sazid Eqbal won first prize in *National Level Competition (Brain Twister – Hospitality)* organised by Institute of Tourism & Hotel Management, Bundelkhand University – Jhansi, September 27, 2006.
- Students of V Semester organised a theme party on “*Jungle Theme*” in Nov 2006 under the guidance of Dr. Sonia Gupta & Sh. Atul Gupta.
- Students of IV Semester organized an *Exhibition on Flower arrangement* on 21st & 22nd February 2007 under the guidance of Dr. Sonia Gupta & Sh. Atul Gupta.
- Students of VI semester BHMCT, Participated in *Chandiwala Young Star Chef Competition – New Delhi*, November 2006.
- Students of VI semester BHMCT, Participated in *Hospitality Competition* – organised by I.A.M Kolkata, November 2006.
- Students under went *Industrial Exposure Training (VI Semester) & Vocational Training* in various star hotels all over the country during their vacations.

## Awards/ citations bestowed on faculty members and students:

- Dahiya, A. appointed as *Book Review Editor of International Journal of Tourism & Hospitality Systems*” Anmol Publications: New Delhi, 2007.
- Dahiya, A. has been nominated as Executive Committee Member, *Indian Tourism Congress*, 2007.
- Dahiya, A. has been nominated & invited as an *external expert* to establish Department of Hotel Management in Uttaranchal Open University Haldwani, Nanital, 2006.
- Dahiya, A. invited as a *Resource Person by Coordinator SAP*, Professor Department of Hotel & Management for PGDTHM Programme at Kurukshetra University – Kurukshetra Haryana, Dec 2006.
- Gupta, S. nominated as a *member of the advisory board of Mahaveer College of professional studies D.A.V.V. Indore*, 2006.
- Gupta, S. & Gupta, A. nominated as *Member of board of studies for the Department of Hotel Management*, Hemvatinandan Bahuguna, Garwhal University, 2006.

## Other Informations

- Dahiya, A. conducted a training programme on Customer Care & Excellence in Service Quality, in the *locational training programme for Front Office staff of Union Bank of India*, Jan 22, 2007)
- Priya, S. conducted a *short-term training programme on Quality worklife of Nurses* in ANM School, Hazaribagh, Nov. 2006.
- Gupta, A. and Shandilya, A. represented BIT in IITF 2006 at Pragati maidan, New Delhi, Nov 14-27, 2006.
- Dahiya, A. was invited to deliver lecture on *Overview on Accommodation Operation* to Master of Hotel Management Students at Institute of Management Studies & Research, Maharshi Dayand University, Rohtak – Haryana, Oct 27, 2006.
- Gupta, A., and Gupta, S. conducted *training programmes on Customer Care & Excellence in Service Quality. Managing Front Office Operations* in the locational training programme for Front Office staff of Union Bank of India, Oct-Nov, 2006.
- Gupta, A. conducted *national level DOT Course* from, NATRSS, July 17-21 2006.

## **DEPARTMENT OF MANAGEMENT**

The Department of Management was founded in 1979. With its massive infrastructure base of well equipped library and computer labs, seminar and conference rooms, The Department of Management facilitates better contemporary education to the students. Some of the initiatives taken by the department during the last financial year are as follows:

- The bi-annual journal of the department 'The Alternative' and quarterly newsletter, 'Manage-a-Bit' has evoked interest in the management community. Many new institutions have shown their interest for subscription as well as on exchange basis for the journal.
- The department is co-ordinating the conduct of Staff Development Program as per requirement of TEQIP in the area of Secretarial Practices.
- The department is successfully conducting Certificate course on 'Information Technology Enabled Services'. This has been sponsored by Department of Industries, Govt. of Jharkhand.

### **Course offered**

#### *UG Course:*

- Bachelor of Business Administration

#### *PG Course:*

- Master of Business Administration
- M.E. (Quality Engg. & Management)

### **Faculty position**

<b><i>Designation</i></b>	<b><i>Professor</i></b>	<b><i>Reader</i></b>	<b><i>Sr. Lecturer</i></b>	<b><i>Lecturer</i></b>	<b><i>Associate Lecturer</i></b>
Number in Position	1	3	1	5	1

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
<b><i>BHMCT</i></b>	
IIIrd trimester	107
VIth trimester	74
<b>Total</b>	<b>181</b>

### **Seminar(s)/conference(s)/short term course(s) conducted by the Department**

- Dr.S. K.Bose, A workshop on *Financial Services in India* organized by Department of Management.
- The department is successfully conducting *Certificate course on 'Information Technology Enabled Services'*. This has been sponsored by Department of Industries, Govt. of Jharkhand.
- Personality development programme organized for MBA freshers in Sep06, conducted by Prof. P K David and Prof. Juthika Banerjee.

### **Publications by faculty in Journals**

#### ***National***

- Bose, S. K. Implications of Knowledge Management (KM) in Indian Business. *Amity Business Review*, 7 (2), (2006).
- Agrawal, V. Booming Sensex under Gloomng Economy: What's The Big Deal. *The Alternative*, ISSN0973-0451.
- Shivani, S. CSR Through Green Marketing Growth. *Journal of Management Training Institute, Steel Authority of India Ltd., Ranchi* 34 (1), 2006.

### **Publications by faculty in Seminar Proceedings**

#### ***International Events***

- "Customer Service-the key differentiator for success of service Industry" submitted and presented (in absentia) in International conference on 'service sector and its challenges' organised by BIT International centre, Muscat in Oct'06 **(Name of the presenter)**

#### ***National Event:***

- Agrawal, V. Presented a paper in *National Seminar on "Innovation and Entrepreneurship* organized by SNSIMB in Collaboration with IIPA New Delhi, 2006.
- Agrawal, V. Presented a paper entitled Rebuilding Indian Economy with Lean Entrepreneurship in *Prabandhan Jyoti* Seminar issue, Dec 2006.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

- Verma, A. attended *E- learning workshop organized by TEQIP, BIT, Mesra*
- Baul, U. attended *Management Development Programme on Knowledge*
- Verma, A. attended *Management* conducted by NIT, Trichy
- Pandey, R., Verma, A., and Sinha, A. P. attended *Soft Skills Programme* conducted by T & Pin BIT, Mesra.
- Mishra S. C. and Agarwal, V. attended *Changing the Mind Set* under TEQIP, organized by Mr. Shiv Khera.
- Mishra S. C. attended *Genetic Algorithms for Engineering Optimization*, IIT Kanpur.
- Kumar, A. and Bhagat, M. attended *Labour Jurisprudence* held at IICM, Kanke Ranchi.
- Agarwal, V. attended *National Workshop on Lean manufacturing Implementations* organised by IIPE Jharkhand State Chapter, Ranchi.
- Mr. Vijay Agarwal attended *Strategic Quality Management-A Journey for Excellence*, Organised by Confederation of Indian Industry at CII Gurgaon office. New Delhi, 2006.
- Mishra, S. C. attended *Total Quality management in Service organizations* at IIT Kharagpur, March 2007.

### **Student Activities**

- All India B-School Students Festival, *SAMAAGAM 2006* was organized by the department. in March, 07.
- The department organized a *student workshop on Financial Services in India* on 20th August, 2006.

## **DEPARTMENT OF MECHANICAL ENGINEERING**

Since its inception in 1955, the Department of Mechanical Engineering has a wide reputation for the quality of teaching and research. The Department, recognized as DST-FIST sponsored Department by the Department of Science and Technology, Government of India.

Department has successfully designed, developed and commissioned one bio-gas reactor in the I.C. Engines Laboratory. A Solar-biomass hybrid cold storage cum dehydration unit is under progress. Research works on solid Modelling for custom fit Artificial Human Limbs have led to the development of a new laboratory. Smart sensors based on emission of electromagnetic radiations during micro-plastic deformations in metals and alloys have been successfully designed in the Materials Research Laboratory. Moreover, The Department had procured and installed one Tinius Olsen 100 kT Universal Testing Machine (Digital) and one Multi Point Fuel Injection Computerized Petrol engine in the I.C. Engine Laboratory.

### **Course offered**

#### *UG Course:*

- B.E. (Mechanical Engineering)

#### *PG Course:*

- M.E. (Heat Power)
- M.E. (Design of Mechanical Equipment)

### **Faculty position**

<b>Designation</b>	<b>Professor</b>	<b>Associate professor</b>	<b>Reader</b>	<b>Lecturer (Sel. Grade)</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>
Number in Position	3	5	4	1	3	16

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
<b>BE (Mechanical Engg.)</b>	
IVth semester	49
Vth semester	4
VIth semester	66
VIIth semester	26
VIIIth semester	92
<b>Total</b>	<b>237</b>



<b>ME (Heat Power)</b>	
IIInd semester	4
IVth semester	5
<b>ME (D.M.E.)</b>	
IIInd semester	5
IVth semester	4
<b>Total</b>	<b>18</b>

### Ongoing Project(s)

SL	Title of the project	Funding Agency	Corodinator/inv estigator	Amount Sanctioned	Duration
1.	"Solar – Biomass based Cold Storage cum Dehydration Plant for Tribal States"	Ministry of Food Processing Industries, Govt. of India	Dr. Ashok Misra	Rs. 66.8	2 years
2.	"Development of Infrastructure for smart Mechanical System."	FIST-DST	Dr. Ashok Mishra	Rs. 26.00	5 years
3.	"Development of CAD Model for Custom fit artificial human Limbs using Reverse Engineering Method"	DST	Dr. A. N. Sinha	Rs. 14.9	3 years

### Project(s) sanctioned during the year 2006-2007

SL	Title of the project	Funding Agency	Corodinator/inv estigator	Amount Sanctioned	Duration
1.	"Bio-robotic modeling of prosthetic aids using microprocessor based multi-function myoelectric control systems.	AICTE	Dr. A. N. Sinha	Rs. 10.00	

**Project (s) completed during the year 2006-2007:**

SL	Title of the project	Funding Agency	Corodinator/investigator	Amount Sanctioned	Duration
1.	"Engineering of smart Materials through Mechano emission characteristics"	DST	Dr. Ashok Mishra	Rs. 15.76	

**Seminar(s)/conference(s)/short term course(s) conducted by the Department**

- *National seminar on achieving technological excellence in the newmillennium: opportunities & challenges*, january 23-24, 2007.
- TEQIP Workshop on "*Automobile Engineering Systems*", September 6-11, 2006.

**Books / Monograph Publications by faculty**

- Sinha, A. N., and Udai, A. D. (2007). *Computer Graphics*: Tata McGraw Hill: New Delhi,
- Deb, K., and Sinha, A.N. (2007). *Advances in Computational Optimization and its Applications*. University Press (India) Pvt. Ltd.

**Publications by faculty in Journals*****International:***

- Kumar, R., and Misra, A. Some basic aspects of electromagnetic radiation emission during plastic deformation and crack propagation in Cu – Zn alloys. *Materials Science & Engineering*, 454, 203-210, 2007.
- Mishra, R.K., Sandeep, K., and Misra, A. Analysis of Anisotropic plate using multi-quadratic radial basis function. *International Journal of Engineering Analysis with boundary elements*, 31, 28-34, 2007.
- Kumar, S., and Misra, R. K. Analysis of Banana Fibers Reinforced Low-density Poly-ethylene/Poly ( $\epsilon$ -caprolactone) composites. *International Journal of Soft Materials*, 4 (1), 1-13, 2007.
- Sinha, A.N. Das, N., and Sahoo, G. Ant Colony Based Hybrid Optimization for Data Clustering. *International Journal of System and Cybernetics "Kybernetes*, U.K. (in press).
- Kumar, R. and Misra, A. Effect of processing parameters on the electromagnetic radiation emission during plastic deformation and crack

propagation in copper zinc alloys. *Journal of Zhejiang University SCIENCE A, China*, 7 (11), 1800 – 1809, 2006.

- Dwivedi, R., and Sinha, A. N. Design and Analysis of Dust Extraction System. *Bulk Solid Handling*, 26, 176-187, 2006.

### **National**

- Dwivedi R. and Sinha A. N, Design of Dust Scrubbers. *Mine Technology Journal*, 27 (6), 43-54, 2006.
- Dwivedi R. and Sinha A.N. Analytical Approach for Design of Dust Control System in Mineral Handling and Processing Industries. *Mine Tech Journal (Accepted)*.
- Dwivedi R., and Sinha, A. N. Analytical Approach for Particle Size Distribution. *Mine Tech Journal* (accepted for publication).

## **Publications by faculty in Seminar Proceedings**

### **International Events**

- Arbind, A. Influence of Stacking Fault Energy on Electromagnetic Radiation during Crack Propagation and Fracture of Metals. *International Conference on Advances in Machine Design and Industry Automation*, Pune, Jan. 10-12, 2007.
- Udai, A. D., and Sinha, A. N. Development of Artificial Limb Surface using Reverse Engineering Method. *International Conference on Advances in Machine Design and Industry Automation*, Pune, Jan. 10-12, 2007.
- Sandeep, K. and Mishra, R. K. Meshless Method for deflection analysis of polymeric composites. *2nd International Congress on Computational Mechanics and Simulation*, Dec. 8-10, 2006.
- Udai, A. D. and Sinha, A.N. A serial Port Interface Circuit for Robotics Applications Involving Multiple Stepper Motors. *International Conference on CAD/CAM Robotics and Factories of Future*, pp. 704 – 710, July 19-22, 2006.
- Sahay, R. and Sinha, A. N. Analysis and Evaluation of Path Trajectory of Biped for Stable Walking. *International Conference on CAD/CAM Robotics and Factories of Future*, pp: 704 – 710, July 19-22, 2006. same page no????
- Shrivastava, K. K. Hydraulic Transport of Coarse Solid Particles. *33rd National and 3rd International Conference on Fluid Mechanics & Fluid Power*, 7-9 Dec. 2006, I.I.T. Bombay.

### **National Events**

- Mishra, R. K. Application of Multi-quadratic Radial basis function to structural Analysis problems. *National Seminar on Achieving Technological Excellence in the New Millennium*, Ranchi, Jan 23-24, 2007.
- Lal, A. and Kumar, A. Manufacturing and performance study of Bio-diesel. *National Seminar on Achieving Technological Excellence in the New Millennium*, Ranchi, Jan 23-24, 2007.
- Kumar, A. Energy Audit – A complete system approach for energy conservation. *Workshop on Energy Conservation, Petroleum Conservation Research Association, IIP, Dehradun and CCL, Ranchi*, Feb. 10, 2007.
- Lal, A. and Kumar, A. Bio-diesel: The Alternative Fuel for Indian Railways. *All India Seminar on Impact of Bio-diesel, Chemical Engineering Division of West Bengal State Centre of the Institution of Engineers (I)*, Kolkata, September 8-9, 2006.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

#### **International Events:**

- Mishra, R. K. *Workshop on Personality Development organized by Qualified Learning System Co. Inc. (USA)* by Shiv Khera, August 29-31, 2006.

#### **National Events**

- Mishra, R.K. *Seminar on Finite Element Analysis – Application and Trends organized by I.I.T. Kharagpur*, June 1-2, 2006.
- Sinha, A.N. *Indo-US Workshop on Computational Optimization and Analysis of Systems (COSA)* organized by I.I.T. Kanpur, Feb. 6-9, 2007.
- Chauhan, V.S. *A Short-term course on MAT LAB., SIMULINK and LAB VIEW for Engineering Applications*, organized by NIT, Rourkela, Feb. 19-23, 2007.
- Kumar, R. *A Short-term course on MAT LAB, SIMULINK and LAB VIEW for Engineering Applications*, organized by NIT, Rourkela, Feb. 19-23, 2007.
- Kumar, R. *International Conference on Integrated Value Education*, organized by Art of Living, Bangalore,

### **Patents**

- Dr. Arbind Kumar I: Patent of “Extrusion Machine for Pooja Dhoop” vide Patent No 496/KOL/2006.

### Student Activities

- Design and Development of an advanced steering mechanism by Sri Ankur Agrawal and Sri Nirbhay Chadha (both students of final year) (Fig. below) carried out in the Department of Mechanical Engineering, gained a wide reputation during the Auto-Expo-2005 at New Delhi. This project has been financially supported by the Government of Jharkhand.



- The Mechanical Engineering Society of the students organized *MEDHA'07*, a *Technical Fest* at National level during January 19-22, 2007 which were sponsored by several industries of repute.

**Other Information:**

Following Research and Development Projects of government organization are being carried out by Dr. Arbind Kumar.

- Development of variable speed potter's Wheel for rural application (Sponsored by KVIC).
- Design, development and testing of Battery Powered Rickshaw (Sponsored by JREDA)
- Testing of 5 kVA Diesel – generator set running on Biofuel, supplying electricity to Gardih village (Sponsored by JREDA).
- Development and Testing of Cross flow hydraulic turbine of 1 kW capacity (Sponsored by JREDA).
- Development and Trial of 350 cc Formula student Car (Sponsored by Department of Industries, Govt. of Jharkhand).

## **DEPARTMENT OF PHARMACEUTICAL SCIENCES**

Established in 1972. The Department offers courses in diverse area of Pharmaceutical Sciences to create professionals in Pharmaceutical Sciences namely in Biopharmaceutics, Synthetic Drugs, Natural Products, Herbal Pharmaceuticals, Pharmacology, Biochemical Pharmacology, Toxicology etc. The department has state-of-the art laboratories for both teaching and research purposes. It also maintains a "Medicinal Plant Garden" which spreads over 10 acres of land on the campus and houses more than 200 plants. In addition, a number of entrepreneurs have been trained in processing and cultivation of medicinal plants. Department also maintain well maintained animal house which is accredited under the respective act.

### **Course offered**

#### *UG Course:*

- B. Pharm

#### *PG Course:*

- M. Pharm (Pharmaceutics)
- M. Pharm (Pharmaceutical Chemistry)
- M. Pharm (Pharmacognosy)
- M. Pharm (Pharmacology)
- M. Pharm (Biotechnology)

### **Faculty position**

<b>Designation</b>	<b>Professor</b>	<b>Associate professor</b>	<b>Reader</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>
Number in Position	5	4	2	4	10

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
<b>B. Pharm</b>	
II <sup>nd</sup> semester	54
III <sup>rd</sup> semester	02
IV <sup>th</sup> semester	33
V <sup>th</sup> semester	01
VI <sup>th</sup> semester	41
VII <sup>th</sup> semester	03
VIII <sup>th</sup> semester	32
<b>Total</b>	<b>166</b>

<b>M. Pharm</b>	
IInd smester	38
IVth semester	43
<b>Total</b>	<b>81</b>

### Ongoing Project(s)

<i>SL</i>	<i>Project Title</i>	<i>Principal Investigator</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanction Amount In Lakh</i>	<i>Duration of the project</i>	<i>Expected Time of Completion</i>
1	Transdermal Delivery of Selected Drugs: Design, In-Vitro and In-Vivo Evaluation	Dr. P. R. P. Verma	UGC	April 2004	7.08	3 Years	April 2007
2.	Technical back-up to Rural Industries of Jharkhand	Department of Pharmaceutical Sciences	KVIC Mumbai	2002	42.25	5 Years	2007
3.	Creation of Infrastructure facilities including extension services under the scheme for human resource development	Department of Pharmaceutical Sciences	MFPI	Dec. 2004	50.00	5 Years	Dec 2009
4.	Advancement of Facilities for Under Graduate and Post Graduate Teaching and Research.	Head, Department of Pharmaceutical Sciences	DST.	Feb. 2006	38.00	5 Years	

### Project(s) sanctioned during the year 2006-2007

<i>SL</i>	<i>Project Title</i>	<i>Principal Investigator</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanction Amount</i>	<i>Duration</i>
1.	Improvement of Infrastructure for Total Quality Management (TQM) and Good Laboratory Practice (GLP)	Head, Department of Pharm. Scs., BIT, Mesra	UGC	Feb 2007	45 lacs	5 years



2	Identification, Documentation and Indexing of Medicinal and Aromatic Plants of Jharkhand	Dr. S. Jha	Dept. of Agriculture , Govt. of Jharkhand	March 2007	22 lacs	1 year
3.	Synthesis and Evaluation of Some New Imidazole analogs	Dr. S. Bhattacharya	AICTE	Sep 2006	7.74 lacs	3 years
4.	Monitoring of A.D.R. of Newly Introduced drugs in Patients and awareness about ADRs and Banned drugs among health in Jharkhand	Dr. R. N. Gupta	UGC	April 2007	0.80 lacs	2 years

#### **Project (s) completed during the year 2006-2007**

<b>SL</b>	<b>Project Title</b>	<b>Principal Investigator</b>	<b>Funding Agency</b>	<b>Date of Sanction</b>	<b>Sanction Amount</b>	<b>Duration</b>
1.	Microcomputerised Identification of Indigenous drugs and development of Standards	Prof. S.P.Bhatnagar	AICTE	April 2002	12 lacs	4 years
2.	Thermodynamic Approach to Drug-Excipient Interaction	Dr. G.M.Panpalia	UGC	April 2003	5.85 lacs	3 Years

#### **Seminar(s)/conference(s)/short term course(s) conducted by the Department**

- Workshop cum Training Programme "*Modern Instrumental Method of Drug Analysis*".

No. of delegates: 20

Name of dignitaries: Dr. Agarwal, Director, RIMS was the chief guest of the inaugural function.

Resource persons involved: Faculty members of the department and other Departments of interdisciplinary relevance.

Period: May 2, 2006- May 14, 2006.

- Prof. S. Samanta organized a *National Integration Camp- of NCC* on May 2006 at BIT, Mesra, Ranchi.
- Gupta, R. N. and Ganguly, S. organized a *workshop on Content development in E-learning as one of the Programme Co-ordinators* held in B.I.T. Mesra, Ranchi, from 3rd April 2006 – 4th April 2006.

## **Publications by faculty in Journals**

### ***International***

- Gothwal, R. K., Nigam, V. K., Mohan, M. K. Sasmal, D. and Ghosh, P. Small scale DNA extractions from soils of hot Arid zones. *Protocol online*, 2006.
- Sinha, B. N. and Bansal. S. K. Phytochemical and Biological Studies of Diospyros species- a review. *Journal of Natural Products (In press)*.
- Sinha, B. N., Abhishek, K., and Mishra, A. Herbal Drugs – Present Status and Efforts to Promote and Regulate Cultivation. *The Pharma Review*, 73-77, 2006.
- Gupta, R.N., Sinha, R. K. Effect of P-CPA pretreatment on sleep and behaviour of a modal of Immobilization stress. *Pharmbit*, 30-38, 2006.
- Nagarajan, K., and Samanta, S. Pharmacological evaluation of small chain peptiods and tripeptides in alloxanized rabbits, *International Hamdard Medicines*, 2007.
- Mazumder, R., Bhattacharya, S., Mazumder, A., Pattnaik, A. K., Tiwary, P. M., and Chaudhary, S., Antidiarrhoeal evaluation of Aegle marmelos (Correa) Linn. Root extract. *Phytotherapy Research*, 20, 82-84, 2006.
- Kaleab, A., Mazumder, A., and Franz, B. Antibacterial and antifungal activities of extracts of Combretum molle. *Ethiopian Medical Journal*, 44,(3), 269-277, 2006.
- Mazumder, A., Sahay, J., and Mazumder, R. Evaluation of antipyretic potential of Eclipta \_harmacop Linn. Leaf extract in rats. *Ethiopian Journal of Pharmaceutical Sciences*, 2471-73, 2006.
- Mazumder, A., Mahato A., and Mazumder R. Antimicrobial potentiality of Phyllanthus amarus against drug resistant pathogens, *Natural Product Research*, 20(4), 323-326, 2006.
- Dash, S., Bhise, S., Bhattachrya, S., and Nath L. K. A flavanoid from the root of Heracleus nepallense D. Don, *Asian Journal of Chemistry*, 18(2), 1581-1582, 2006.
- Prakash, S., and Gupta, B. N. Upmanyu, N., Bhattacharya, S., and Moorthy, N. S. H. N., QSAR studies of 2-arylindole derivatives: Tubulin inhibitors in cancer therapy. *Asian Journal of Chemistry*, 18(1), 753-756, 2006.

- Dubey, R., Shrivastava, P. K., Basniwal, P. K., Bhattacharya, S., and Moorthy, N. S. H. N., 2-4-Aminophenyl benzothiazole: A potent and selective \_harmacophore with novel mechanistic action towards various tumor cell lines, *Mini Reviews in Medicinal Chemistry*, 6(6), 633-637,2006.
- Gupta, R. N., Vishnoi, S. P., Nagori, B. P., and Bhatnagar, S. P. Evaluation of Anti-inflammatory, analgesic and anticancer activity of Stem bark extract of Prosopis cineraria, *Natural Products*, 21(4), 35-39, 2006.
- Verma, S. M., and Gunnakunru, A., QSAR of Riluzole series as anticonvulsants. *Asian Journal of Chemistry*, 19(4), 2843-2849, 2007.
- Mazumder, A., Bhattacharya, S., and Mazumder, R. Invivo antitussive potentiality of Lagerstroemia parviflora flower extract using a cough model induced by sulfur dioxide, *Natural Product Research*, (In Press).
- Bhattacharya, S., and Moorthy, N. S. H. N. Estimation of Etoricoxib in Bulk Drug and Pharmaceutical Dosage Form using UV Spectrophotometry and RP-HPLC. *Journal of Pharmaceutical and Biomedical Analysis (Accepted for publication)*
- Richa, N., Moorthy, H. N., and Bhattacharya, S. Dihydrofolate reductase: A Potential target for antimalarial research. *Journal of Pharmacy and Pharmacology*, (UK), (Accepted for publication).
- Brijendra, S. P. Sasmal, D. Papiya, M. M. Antidiarrheal activity of Litsea polyantha, Fitoterapia (Accepted)(available online).
- Suresh, K., Vijaipandi, P., Ganguly, S., Sriram, D. and Clercq, D. E. Synthesis, antitubercular and antiviral activity of 2-phenyl 3- substituted Quinazoline derivatives. *Pharmazie, Govi –Verlag (Accepted for publication)*.
- Ganguly, S. Comparative Molecular Field Analysis-Comfa (A new 3D QSAR approach). *Pharmbit*, 27-29, 2006.
- Kumar, J. K. Effect of Geographical Variation on Contents of Tannic Acid, Gallic acid, and Chebulonic acid and ethyl gallate in Terminalia Chebula fruits. *NPAIJ*, 2(3-4), 100-104, 2006.
- Kumar, J. K. Alternatives in Standardisation of Ayurvedic medicine, *PharmaReview*, 3(18), 82, 2006.
- Kumar, J. K. Fuzzy logic and modern analytic tool coupling in comprehensive evaluation of traditional and complementary medicine. *Pharmacognosy Magazine*, 2(8), 2006.
- Ganguly, S., Partani P., and Samanta, S. Solid Phase Organic Synthesis – A Review. *Pharmatimes (Accepted for publication)*.

- Arulmozhi, S., Mazumder, P. M., Ashok, P., Basavaraj, H., and Narayanan, L. S. Antinociceptive and Anti – inflammatory activities of *Alstonia scholaris* Linn. R. br. *Pharmacognosy Magazine (Accepted for publication)*.
- Ghosh, M. AIDS Vaccine: A Global Research Challenge. *Souvenir "Global Challenges in Pharmaceutical Services, Education and Research"*, IPA & APTI Orissa State Branch; 8-9, 2006.

### **National**

- Gothwal, R. K. Nigam, V. K., Mohan, M. K., Sasmal, D., and Ghosh, P. Phosphate solubilization by rhizospheric bacterial isolates from economically important desert plants. *Indian Journal of Microbiology*, 46(4), 355-361, 2006.
- Sasmal D., Kar, D. M., Maharana, L., and Si, S. C., Synthesis and Evaluation of CNS activity of some Spiro Isationoid compounds, *Indian Drugs*, 43(9), 733-739, 2006.
- Poonia, B.S. Sasmal, D. Mazumder, P. M. Antidepressant activity of methanol extract of *Litsea polyantha* bark, *Indian Drugs* 43(6), 467 – 470. 2006.
- Sinha, B. N., Swain, S.R., and Murthy, P.N. Anthelmintic Activity of *Rungia pectinata* (Linn.), *Recent Progress in Medicinal Plants*, 21, IARI, 2006.
- Verma, P. R. P., and Razdan, B. K. Studies on Disintegrant Action of *Leucana Leucophala* seed gum in Ibuprofen tablet and its metabolism, *J. Sci. Ind. Res (In Press)*.
- Gupta, R.N., Panda, D., Si, S., and Swain, S. Preparation and Evaluation of Gels from Gum of *MORINGA OLEIFERA*. *Indian Journal OF Pharmaceutical Sciences*, 68(6) 777-780, 2006.
- Ganguly, S., and Ghosh, S. Computer Related Injuries- Are you next? *Indian Journal of Hospital Pharmacy*, 212-214, 2006. Volume???
- Mazumder, A., Jha, A., Mazumder, R., Basu, S. P. A comprehensive study on the factors affecting asthmatic patients in the newly formed state of Jharkhand. *Indian Journal of Hospital Pharmacy*, 215-218, 2006.
- Dash, S., Nath, L. K., Bhise, S., Kar, P. and Bhattacharya, S. Stimulation of immune function activity by the alcoholic root extract of *Heracleum nepalense* D. Don. *Indian Journal of Pharmacol*, 38(5), 336-340, 2006.

### **Publications by faculty in Seminar Proceedings**

#### **International Events**

- Verma P. R. P. and Chandak, A. R. Controlled Transdermal Methotrexate Delivery Systems. *Proceedings Of 7th International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems –*

*Controlled Release Society (USA)- Indian Chapter* held in Mumbai in Feb 2007.

- Verma, P. R. P. and Chandak, A. R. Transdermal Delivery of Tramadol using Mixed Grades of Eudragit. *Proceedings Of 7th International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems – Controlled Release Society (USA)- Indian Chapter* held in Mumbai in Feb 2007.
- Verma, P. R. P. and Chandak, A. R. Formulation and Evaluation of Transdermal Films for Pentazocine”, *Proceedings Of 7th International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems – Controlled Release Society (USA)- Indian Chapter*, held in Mumbai in Feb 2007.

### **National Events**

- Sinha, B.N., Vadivelan, S., and Sarma, J.A.R.P. Lead Identification and Lead Optimization of Cyclin dependent Kinase (CDK) 2 inhibitors using docking and pharmacophore studies. *Proceedings Of 58th Indian Pharmaceutical Congress*, Mumbai, Dec 1-3, 2006.
- Sinha, B. N., Vadivelan, S., and Sarma, J.A.R.P. Pharmacophore Modeling and Virtual Screening Studies to design some potential Glycogen Synthase Kinase 3 Beta Inhibitors. *Proceedings Of 58th Indian Pharmaceutical Congress*, Mumbai, Dec 1-3, 2006.
- Verma, S. M., Gunnakunru, A. and Saha, A. Synthesis and Study of some benzthiazole analogs. *Proceedings Of 58th Indian Pharmaceutical Congress* Mumbai, Dec 1-3, 2006.
- Thangabalan, B., Ganesh, M., Kalaisevi, R., Ganguly, S., Sivakumar, T. and Saravanan, V.S. Spectrophotometric Estimation of Simvastatin in Bulk and Solid Dosage forms. *Proceedings Of the 23rd National Conference of Indian Pharmacy Graduates Association* held by IPGA, Chennai, November 4-5, 2006.
- Ganesh, M., Sivakumar, T., Saravanan, V.S., Thangabalan, B., Murthy, V. Krishnamoorthy, G., and Ganguly, S., Extractive Colorimetric estimation of Trimetazidine Dihydrochloride in bulk and formulation. *Proceedings Of the 58th Indian Pharmaceutical Congress*, Mumbai, Dec 1-3, 2006.
- Ganguly, S., Banerjee, S., and Mishra, S. Molecular modeling of Azole antifungal agents active against *Candida albicans*: A ComFA and ComSIA study. *Proceedings Of the Silver Jubilee Conference of Indian Council of Chemists*, p. 209 (Best Oral presentation award received), Kalyan, Dec 27-29, 2006.

- Mazumder, A., Singh, A. K., Mazumder, R., Bhattacharya, S. Studies on anti-inflammatory activity of the leaf extract of *Moringa oleifera* (Lam). *Proceedings Of 58th Indian Pharmaceutical Congress*, Mumbai, Dec. 1-3, 2006.
- Mazumder, A., Kumar A., Saravanan, V.S., and Vanitha J. Invitro release study of diphtheria toxoid loaded chitosan microspheres *Proceedings Of 58th Indian Pharmaceutical Congress*, Mumbai, Dec. 1-3, 2006.
- Nagarajan, K., Krishnaveni, P., Deepashalini, S., Devi, K., Mazumder, A., Mullaicharam, A. R., Guma, D. Assesment of antimicrobial activity for the smaller chain dipeptides and tripeptides. *Proceedings of IPGA*, Chennai, Nov 4-5, 2006.
- Nagarajan, K., Parthiban, S., Mazumder, A., Krishnamoorthy, G., Mullaicharam, A. R., Hema, S., Prabakaran, P., and Kumar G. P. Synthesis of immuno amino acid Boc-Proline and its structural conformation by HNMR analysis. *Proceedings of IPGA*, Chennai, Nov 4-5, 2006.
- Verneet, J., Vivek, E., UmaDevi, G., Ghosh, L. K., and Mullaicharam, A. R. Invitro antimicrobial evaluation studies on the leaf extracts of *Aristolochia bracteata* Lam. *Proceedings of IPGA*, Chennai, Nov 4-5, 2006.
- Mazumder, A., Kumar, S., Saravanan, A., Engottuvelu, V. S., and Vanitha J. Antihyperlipedemic activity of *Camellia sinesis* in Triton Wr-1339 induced hyperlipedemic rats. *Proceedings Of 11th Annual National Convention of APTI*, Bangalore, Sept 1-3, 2006.
- Perumal P., Kumar, S., Mazumder R., Mazumder, A. Immunostimulant effect of ethanolic extract of *Artemisia dracunculus* in wistar rats. *Proceedings Of 11th Annual National Convention of APTI*, Bangalore, Sept 1-3, 2006.
- Bhattacharya S., Ramteke, S. Targeted nanoparticulate system containing triple therapy for the treatment of *H. pylori*. *Proceedings Of 58th Indian Pharmaceutical Congress* Mumbai, Dec 1-3, 2006.
- Mitra, P., Mazumder, R., Sasmal, D., and Mathur, A. Study on Antiinflammatory activity of *Zizyphus jujube*. *Proceedings of the 1st Annual Conference of IPS (Jharkhand Branch)*, BAU Kanke, Ranchi, May 6, 2006.
- Mazumder, P. M., Sasmal, D. and Ekka, P. Study of central analgesic activity of the extract of *Gmelina arborea* Roxb. *Proceedings of the 1st Annual Conference of IPS (Jharkhand Branch)*, BAU Kanke, Ranchi, May 6, 2006.
- Farswan, M., Mazumder, P. M. and Percha, V. Evaluation of hypoglycemic effect of *Ficus arnottiana* bark on normal and diabetic rats. *Proceedings of the National Conference on Natural products and Biodiversity in Forest Research Institute*, Dehradun, Nov 2-5 2006.
- Kumar J. K, HPTLC determination of an anticancer constituent Nimbolide in extract of the leaves of *Azadirachta indica*, *proceedings of Second International*

*Conference on Pharmaceutical Sciences, Technology and Practice*, JSS College of Pharmacy, Ooty, Feb 21-26, 2007.

- Pandey, A. Role of Biotechnology and Bioinformatics. Proceedings of the *National Symposium on Medicinal plants*, Department of Biotechnology, Birla Institute of Technology, Mesra, Ranchi, August 3-5 2006.
- Patnaik, S.K. Basu, A., and Mishra, N. Hypoglycemic activity of Thiocarbamoyl Guanidines. Proceedings of *58th Indian Pharmaceutical Congress*, Mumbai, Dec. 1-3, 2006.
- Thakkar, D. Patnaik, S. K. and Basu, A. Synthetic derivatives of Hydrocortisone. Proceedings of *58th Indian Pharmaceutical Congress* Mumbai, Dec 1-3, 2006.
- Manik & Brahma, S. K. Recent Advances in Traditional Anti-AIDS Plant Drugs. Proceedings of *National Symposium on Drug Molecules: Discovery and Delivery Systems* held at College of Pharmaceutical Sciences, Mohuda, Berhampur, Orissa, June, 2006.
- Manik & Brahma, S. K. Role of Today's Pharmacist in the Society. Proceedings of *IPA & APTI State Level Convention 2006 on Global Challenges in Pharmaceutical Services, Education and Research* Royal College of Pharmacy & Health Sciences, Berhampur, Orissa, April, 2006
- Manik & Kumar, D. B. AIDS Vaccine: A New Challenge. *Proceedings of National Symposium on Drug Molecules: Discovery and Delivery Systems* held at College of Pharmaceutical Sciences, Mohuda, Berhampur, and Orissa, 2006.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

#### ***International Events***

- Dr. D. Sasml attended *1st Annual Conference of IPS (Jharkhand Branch)*, at Dept. of Pharmacology and Toxicology, Faculty of Veterinary Sciences, BAU, Kanke, Ranchi, May 6, 2006.
- Dr. R.N. Gupta attended a *workshop on Soft Skills at CIT Tracers Study* conducted by NITTTTR KOLKATA.
- Dr. S. Ganguly attended a *workshop on Computational Materials Modeling*, held by Accelrys, Bangalore in Bengal Engineering and Science College, Shibpur, August 3-4, 2006.
- Dr A. Mazumder attended the *1st National Convention of Indian Pharmacy Graduate Association* at Indian Institute of Chemical Biology, Kolkata, as a member of organizing committee, March 18-19, 2006
- Dr. Papiya Mitra Mazumder attended the *workshop on Content development in E Learning* held in B.I.T. Mesra, Ranchi, April 3-4, 2006.

- Dr.R.N. Gupta and Dr. Papiya Mitra Mazumder attended a *CME – Symposium on Good Clinical Practices (GCP) in India*, organized by the Dept. of Pharmacology and Therapeutics, RIMS, Ranchi, May 5, 2006.
- Mazumder, P. M. attended *1st Annual Conference of IPS (Jharkhand Branch)*, at Dept. of Pharmacology and Toxicology, Faculty of Veterinary Sciences, BAU, Kanke, Ranchi, May 6, 2006.
- Mazumder, P. M. attended the *ICMR sponsored interactive workshop on updates in UG and PG teaching methods in pharmacology and research*, organized by IPGME&R Kolkata, January 29-30, 2007.
- Patnaik, A. K. attended *1st Annual Conference of IPS (Jharkhand Branch)*, at Dept. of Pharmacology and Toxicology, Faculty of Veterinary Sciences, BAU, Kanke, Ranchi, May 6, 2006.
- Patnaik, A. K. attended *Conference on Recent Advances in Cardiovascular Diseases* DIPSAR, New Delhi, Feb 15-16, 2007.
- Mr. Manik Ghosh attended a *Faculty Enablement Workshop on Soft Skills Training & Placement Division*, BIT Mesra, Ranchi, Dec 2006.
- Mr. Manik Ghosh attended a National Symposium on *Drug Molecules: Discovery and Delivery Systems* held at College of Pharmaceutical Sciences, Berhampur, Orissa, June 2006.
- Mr. Manik Ghosh attended a *AICTE sponsored Staff Development Program on “Modern Instrumental Methods of Drug Analysis* held at Department of Pharmaceutical Sciences, BIT Mesra, Ranchi, May, 2006.
- Mr. Manik Ghosh attended a *IPA & APTI State Level Convention 2006 on Global Challenges in Pharmaceutical Services, Education and Research*, Royal College of Pharmacy & Health Sciences, Berhampur, Orissa, April, 2006.
- Miss Nibha Mishra attended a *workshop on Alternatives to use of animals*, RCMC Medical College, Chennai, Jan 29-31, 2007.

## **Patents**

### ***Applied***

- Novel Orally administrable antidiabetic compounds, process for producing them and therapeutic compositions containing the same- published in *Patent Journal*–October 2006 by Prof. S. Samanta.

## **Awards/ citations bestowed on faculty members and students**

- Bhatnagar, S. P. and Ganguly, S. received *Al Ameen College of Pharmacy Award* by Association of Pharmaceutical Teachers of India at the 11th annual convention of APTI held at Bangalore from Sp 1-3, 2006 for the best paper



entitled *Development of a database for identification of crude drugs* in Indian Journal of Pharmaceutical Education.

- Samanta, S. was selected in the *Research Board of Advisors*, American Biographical Institute, USA.
- Banerjee, S. M. Pharm II<sup>nd</sup> year student was awarded the *Young Scientist Award* for the *Best Oral Presentation* entitled "*Molecular Modeling of Azole antifungal agents active against Candida Albicans: A ComFA and ComSIA study*" authored by S. Ganguly, S. Banerjee and S. Mishra presented in Silver Jubilee Conference of The Indian Council of Chemists, Nanotechnology Research Centre, Kalyan, December 27-29, 2006.
- Ms. Nidhi Sinha, M. Pharm. 1<sup>st</sup> year student was awarded the *M.L. Schroff Memorial award 2006* at the *58<sup>th</sup> Indian Pharmaceutical Congress* held at Mumbai in December 2006 for securing the highest G.P.A. in B. Pharm final exam amongst all Pharmacy Institutes in India.

### **Other Information**

#### **Visiting lectures arranged by the Department**

- I. Dr. Hemchandra M. Shertukde, Professor, ECE Department, College of Engineering, Technology and Architecture, University of Hartford delivered a lecture on *Identification of Human Embryonic Stem Cell using Signal characteristic Analysis* in January 2007.
- II. Mr. H. B. Joshipura, President and Executive Director, Johnson and Johnson Ltd, Mumbai delivered a lecture on *Future Prospect of Pharmaceutical Industry in India and effect of globalization* on 3<sup>rd</sup> Aug 2006.
- III. Dr. Arvind Das, Clinical associate Professor of Medicine, UMDNJ-Robert wood Johnson Medical School, New Brunswick, New Jersey, USA delivered a lecture on *Sleep Disorders* on March 6<sup>th</sup> 2007.
- IV. Dr. Subhash C. Mondal, Drugs Control Department, Government of West Bengal in collaboration with IPA, Jharkhand branch delivered a lecture on *Rational Use of Medicines* on 27<sup>th</sup> February 2007.

## **DEPARTMENT OF POLYMER ENGINEERING**

The Department of Polymer Engineering, established in 1994, has well established laboratory facilities in the fields of Polymer Synthesis, Polymer Characterization, Polymer Processing, Polymer Product Design and Development and Product Testing.

The Department has well equipped Polymer Synthesis facility including a High Pressure, computer controlled reactor. The facilities in the Polymer Characterization Laboratory include IR Spectrophotometer, RT 20 HAAKE Rotational Viscometer, HAAKE Torque Rheometer with Mixer and Extruder, Oscillating Disc Rheometer, RIGAKU Miniflex Xray Diffractometer, Instron Tensile Testing machine, ATLAS weatherometer etc. and The facilities of Polymer Processing workshop include Injection Moulding machine, Extrusion Blow moulding machine with parison programming, Kolsite Recycling Plant, Film blowing plant and PVC pipe Extrusion plant, Two roll mixing mill, 80 ton Ergotech Microprocessor controlled Injection Moulding machine, PVC compounding mixer etc. The product Testing Laboratory is well equipped with testing facilities for various plastics products like films, sheets, pipes etc. The facilities in the plastics product Development laboratory includes MCP-HEK vacuum casting machine for prototyping and Mold Flow Software with Flow, Warp, and Stress Modules, 3 axis CNC EDM machine etc.

The faculty members are actively doing research in the areas of Polymer Blends, Polymer Recycling, Process Simulation and Optimization, Product Development, Nano Composites, Membrane Technology, Tissue Engineering, Conducting Polymers for sensors application, Polymerization Kinetics, Molecular modeling, Specialty Polymer synthesis etc.

### **Course offered**

#### *UG Course:*

- BE (Polymer Engineering)

#### *PG Course:*

- ME (Polymer Engineering)

#### *Diploma/Certificate courses of Design Development and Training Centre in Plastics Engineering*

- Certificate courses: Mould Making Technician
- Certificate course: Plastic Processing Machine Operator
- PG Diploma: Plastic Processing

*Integrated Industrial Training programme: [Joint certification by BIT Mesra and City and Gilds, UK.]*

- Polymer Technology- Rotomoulding
- Polymer Technology- PVC pipe production
- Polymer Technology- HDPE pipe Production

**Faculty position:**

<b>Designation</b>	<b>Professor</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>	<b>Scientific officer</b>	<b>Asstt. Scientific officer</b>
Number in Position	1	3	4	1	1

**Number of Student enrolled/registered with Department:**

<b>Semester</b>	<b>No. of students</b>
<b>BE (Polymer)</b>	
IIInd semester	17
IVth semester	17
VIth semester	20
VIIth semester	09
IIInd semester	06
IVth semester	06
Total	75
<b>ME (Polymer)</b>	
IIInd semester	06
IVth semester	06
Total	12
<b>Certificate</b>	
Ist semester	5
<b>PG Diploma</b>	
Ist semester	1

## Ongoing Project(s)

SL	Project Title	Principal Investigator	Funding Agency	Date of Sanction	Sanction Amount	Duration
1.	Multi-objective Optimization of Polymerization Reactors	Dr. C Guria	AICTE	18.10.06	Rs 7.2 lakhs	3 Years

## Project(s) completed during the year 2006-2007

SL	Project Title	Principal Investigator	Funding Agency	Date of Sanction	Sanction Amount (Rs. in Lacs)	Duration
1.	Setting up of Design Development and Training Centre in Plastics Engineering		Department of Industries, Govt. of Jharkhand	June 2003	Rs 102.5	3 years

## Project(s) submitted during the year 2006-2007

SL	Project Title	Principal Investigator	Funding Agency	Date Sanctioned	Sanctioned Amount(in lacs)	Duration
1	Development of polymeric hybrid membrane for heavy metal separation	G. Sarkhel	DST, Jharkhand	Sanctioned	4.88	3 Years
2	Modified rice husk filled composites of polymer for structured applications	Mrs. S. Goswami	DST, Jharkhand	Sanctioned	3.58	3 Years

## Publications by faculty in Journals

### International

- Guria, C., Verma, M., Mehrotra, S.P., and Gupta, S. K. Simultaneous optimization of the performance of flotation circuits and their simplification using the jumping gene adaptations of genetic algorithm-II: More complex problems, *Int. J. Min. Proc.* 79, 149-166, 2006.

- Sen, K. Roy, S. Juvekar, V. A. Effect of Structure on Solution and Interfacial Properties of Sodium Polystyrene Sulfonate (NaPSS). *Polym. Int.*, 56, 167-174, 2007.
- Choudhury, Mukherjee, M. and Adhikari, B. Recycling of Polyethylene/poly (ethylene terephthalate) Post consumer oil pouches using compatibiliser. *Polym Polym Compos* 14, 635-646, 2006.
- Choudhury, Mukherjee, M., and Adhikari, B. Recycled milk pouch and virgin LDPE-LLDPE blend based coir fiber composite. *Journal of Applied Polymer Science (in press)*.
- Sarkhel, G. Banarjee, A. N. and Bhattacharya, P. Rheological and Mechanical Properties of LDPE / HDPE Blends. *Polymer-Plastics Technology & Engineering (PPTE)*, 45(6), 713-718, 2006.
- Sarkhel, G. Banarjee, A. N., and Bhattacharya, P. Effect of Compatibiliser and Fibre Content on Jute Fibre Reinforced HDPE/EPDM Composites. *Polymers & Polymer Composites*, 14(6), 603-610, 2006.
- Sarkhel, G., Banarjee, A. N., and Bhattacharya, P. Effect of Maleic Anhydride Grafted HDPE on Jute Fibre Reinforced HDPE/EPDM Composites: Part-II Dynamic Mechanical & Thermal Study. *Polymers & Polymer Composites (in press)*.
- Bijwe, J and Rattan, R. Abrasive wear performance of carbon fabric reinforced polyetherimide composites: Influence of content and orientation of fabric. *Tribol. International*, 40, 844-854, 2007.
- Bijwe, J. and Rattan, R. Carbon fabric reinforced polyetherimide composites: Optimization of fabric content for best combination of strength and tribo-performance in adhesive wear mode. *Wear*, 262, 749-758, 2007.
- Rattan, R., and Bijwe, J. Influence of weave of carbon fabric on low amplitude oscillating wear performance of polyetherimide. *Wear*, 262, 727-735, 2007.
- Rattan, R., and Bijwe, J. Optimization of weave of carbon fabric for best combination of strength and tribo -performance of polyetherimide composites in adhesive wear mode. *Trib. Lett. (In print, online available)*.
- Bijwe, J and Rattan, R. Erosive wear of carbon fabric reinforced polyetherimide composites: Role of amount of fabric and processing technique. *Wear (in print, online available)*.
- Bijwe, J. Fahim, M. and Rattan, R. Recent advances in tribology of fabric reinforced polymer composites- A State of Art. *JRPC*. (In print, online available).

- Rattan, R. and Bijwe, J. Carbon fabric reinforced polymer composites; influence of weave of fabric and processing parameters on performance properties & erosive wear. *Mat. Sci.& Engg.* 420, 342-350, 2006.
- Rattan, R., and Bijwe, J. Influence of weave of carbon fabric on abrasive wear performance of polyetherimide composites. *Tribol. Letts.* 22 (1), 105-111, 2006.
- Bijwe, J., and Rattan, R. Influence of amount of carbon fabric on the low amplitude oscillating wear performance of polyetherimide composites. *Tribology Letters*, 23 (3), 223-229 (2006)
- Rattan, R., and Bijwe, J. Influence of impingement angle on solid particle erosion of carbon fabric reinforced polyetherimide composite. *Wear* (in print).

## **Publication(s) by faculty in Seminar Proceedings**

### ***International events***

- Kumar, S., and Sen, A. K. Mechanical and Fire retardant behavior of Coir/Epoxy Nanocomposites. *Eight International Conference on Nanostructure Materials*, Indian Institute of Science, Bangalore, August 2006.

### ***National events***

- Guria, C. Multi-objective optimization of mineral processing units using adaptation of genetic algorithm. *International seminar on Mineral processing Technology, MPT*, Indian Institute of Technology, Bombay, February 22 – 24, 2007.
- Datta, C. Dynamic Mechanical studies of unidirectional-polyethelene-jute fibers: epoxy/VAC-EHA full IPN systems. *National Symposium on Emerging Trends in Polymer Science and Technology*, Indian Institute of Technology, Kharagpur, September 8-9, 2006.
- Goswami, S. presented paper entitled, "WRHA filled composites of phenolic resin" in *National Symposium on Emerging Trends in Polymer Science and Technology* organized by Indian institute of Technology, Kharagpur and Society of Polymer Science, Kharagpur Chapter, at IIT Khragpur, September 8-9, 2006.
- Sarkhel, G. Effect of Maleic anhydride grafted HDPE on jute fibre reinforced polyethylene/EPDM Composites: Dynamic mechanical and Thermal study. *National Symposium on Emerging Trends in Polymer Science and Technology*, organized by Indian institute of Technology, Kharagpur and Society of Polymer Science, Kharagpur Chapter, at IIT Khragpur, September 8-9, 2006.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

- Sen, A. K. and Kumar, K. attended a *Short Term course on "E-Learning*, at BIT Mesra Ranchi, April 3-4, 2006.
- Mukhopadhyay, P. and Lahane, S. attended a *Short Term course on E-Learning*, BIT Mesra, Ranchi, August 1-5, 2006.
- Mukhopadhyay, P. and Lahane, S. *Short Term course on Testing. Evaluation and Quality in Rubber Technology*, IIT Kharagpur, August 7-11, 2006.
- Lahane, S. *Short Term course on Design of Industrial Product*, IIT Guwahati, September, 11-15, 2006.
- Sarkhel, G. and Rahaman, S. J. attended *Training on Molecular Modelling and Simulation*. Bangalore, August 2006.
- Lahane, S. *Short Term course on MAT Lab Simulation and Labview for engineering application*, NIT Rourkela, Feb 19-23, 2007.
- Mukhopadhyay, P. *Short Term course on ISA- CIAT Training programme* which includes PLCs, MMI, SCADA & AC Drives, BIT Mesra, May 8-13, 2006.
- Mukhopadhyay, P. *Workshop on "Changing the mind set"* by Shiv Khera during at Ranchi, August 29-31, 2006.
- Sandeep, K. *Workshop on Faculty Enable Development Programme on Soft Skill*, BIT Mesra 21-24, December 2006.
- Kumar, K. *Workshop on Robotics* at BIT Mesra, February 3-4, 2007.

### **Awards/ citations bestowed on faculty members and students**

- Guria, C. has received *Best Paper Award on Beneficiation* in 2005, 23rd February 2007, from Indian Institute of Mineral Engineers (IIME) for the paper: Guria, C. Verma, M. Gupta, S. K. & Mehrotra, S.P. Simultaneous Optimization of the Performance of Flotation Circuits and their Simplification Using Jumping Gene Adaptation of Genetic Algorithm, *Int. J. Min. Proc.*, 77, 165-185, 2005.
- Sarkhel, G. was awarded Ph.D. from Jadavpur University for his thesis titled: *Studies on Polyethylene –EPDM Blends and Composite*.
- Rattan, R. was awarded PhD degree from IIT Delhi for her Thesis titled: Investigation on mechanical and tribological behavior of carbon fabric reinforced polyetherimide composites.

### **Invited talk**

- Mukherjee, M. invited by Indian Lac Research Institute as Chief Guest for the Programme *Interaction on Lac Research Institute – Industry Partnership*, on the occasion of 82nd Anniversary foundation, 20th September 2006.

- Rattan, R. was the Chair of the Technical Session in the Seminar on *Plastics - Opportunity Beckons Eastern India* held in Science city at Kolkata on 26th November 2006.
- Sen, A. K. was invited for given a lecture on *Applications on Nanotechnology*, in *A National Seminar on Nanotechnology- an overview (Nanotech – 2007)* at Department of Physics, KKTU Government College, Pullut, Kodungallur, Kerala, March 12-13th 2007.



## **DEPARTMENT OF PRODUCTION ENGINEERING**

Department of Production Engineering since its inception in 1964 has been trying to impart quality education to under graduates and train them to meet the demands of the manufacturing industry. The Department has established links with the industry, R&D organizations, consultancy organizations and academic institutes of the near by area in furtherance of the cause of manufacturing engineering.

The Department's also aimed at assisting manufacturing industry. An increasing number of university-industry collaborations are shaping through sandwich training programmes, short term courses, and workshops, collaboration and support from industry for both laboratory as well as Industry based studies. Some important research achievements of the department are in the field of forming Technology for New Materials, Manufacturing Automation & Robotics for specific Tasks and Work Space Design Considering Ergonomic Parameters.

### **Course offered**

*UG Course:*

BE (Production)

*PG Course:*

ME (Automated Manufacturing System)

ME (Safety & Maintenance)

### **Faculty position**

<i>Designation</i>	<i>Professor</i>	<i>Reader</i>	<i>Lecturer(Sel.Gr.)</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>
Number in Position	1	5	1	3	6

### **Number of Student enrolled/registered with Department**

<b><i>Semester</i></b>	<b><i>No. of students</i></b>
<b><i>BE (Production)</i></b>	
IIInd semester	15
IVth semester	32
Vth semester	2
VIth semester	16
VIIth semester	5
VIIIth semester	20
<b>Total</b>	<b>90</b>

<b>ME</b>	
IIIrd semester	1
IVth semester	3
<b>Total</b>	<b>4</b>
<b>Gr Total</b>	<b>94</b>

### Ongoing Project(s)

<b>SL</b>	<b>Project Title</b>	<b>Principal Investigator</b>	<b>Funding Agency</b>	<b>Date of Sanction</b>	<b>Sanction amount</b>	<b>Duration</b>
1	Creating infrastructural facilities for training and research in precision forming.	Dr. S.Kumar	UGC (SAP)	1.04.07	32 lakhs	5
2	Deformation and Fracturing Behaviour of Metallic Foams	Dr. S.Kumar	AICTE (NCP)	2006	20 lakhs	3

### Seminar(s)/conference(s)/short term course(s) conducted by the Department

<b>Name of Programme</b>	<b>No. of Delegates</b>	<b>Name of dignitaries</b>	<b>Resource persons involved</b>	<b>Duration</b>
Training on Turning and Machining. (under TEQIP scheme)	20	Dr. C.K. Singh	5	15– 20 May, 2006.
Training Programme on Welding and Fitting. (under TEQIP scheme)	18	-	6	22–27 May, 2006.
Training Programme on Machining of flat surfaces. (under TEQIP scheme)	24	Dr. J.N. Dube Dr. C.K. Singh	6	29 May – 02 June, 2006.
National Workshop on Lean Manufacturing Implementations Organised by Indian Institution of Production Engineers, Jharkhand state chapter in association with Jharkhand Small Industries Association & Institute Industry Cell Birla Institute of Technology Mesra, Ranchi.	30	Dr. O.P. Khanna Dr. C. Sahay Dr. R. Kumar	10	September 8-9, 2006.

21st National Convention of Production Engineers and National seminar on Best Practices in Manufacturing, organized by The Institution of Engineers (India) Jharkhand State Centre and Department of Production Engineering, B.I.T. Mesra, Ranchi on	50	Dr. A.K. Jha Dr. P.K. Mishra Dr. S.K. Mukherjee Dr. A.P. Roy Er. P.J. Bharadwaj Er. S. Biswas	15	December 9-10, 2006.
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## Publications by faculty in Journals

### *International*

- Jha, S.K., Kumar, S. Assessment of productivity of items manufactured by rural artefacts community with special reference to Jharkhand State (India). *International Journal of Applied Management and Technology*, 4, (2), 288-320, 2006.
- Singh, S., Kumar, S., and Jha, A. K. Analysis of Rotary Forging of Sintered Preforms, Part – I: Indentation Phase. *Tamkang Journal of Science & Engineering: An International Journal*, 313 – 324, 9 (4), 2006.
- Singh, R. K., Kumar, S., Prakash, and Tiwari, M. K. Psycho-Clonal based approach to solve a TOC Product Mix Decision Problem, *International Journal of Advance Manufacturing Technology, Springer*, 29, (11-12), 1194-1202, 2006.
- Singh, R. K., Kumar, S., Choudhury, A. K., and Tiwari, M. K. Lean Tool Selection In A Die Casting Unit: A Fuzzy Based Decision Support Heuristic. *International Journal of Production Research, Taylor & Francis*, 44 (7), 1399-1429, 2006.
- Singh, R. K., Kumar, M., Antony, J., Tiwari, M. K., and Perry, D. Implementing the Lean Sigma Framework in an Indian SME: A Case Study. *Production Planning & Control, Taylor & Francis*, 17, (4), 407 – 423, 2006.
- Singh, R. K., Choudhury, A. K. and Tiwari, M. K. Maull, R. S. An Integrated Fuzzy based Decision Support System for the Selection of Lean Tools: A Case Study from the Steel Industry. *Journal of Engineering Manufacture IMechE: Part B*, 220, (10), 1735-1749, 2006.
- Singh, R. K., Khilwani, N., and Tiwari, M. K. Justification for the Selection of Reconfigurable Manufacturing System: A Fuzzy Analytical Hierarchy Based Approach. *International Journal of Production Research, Published Online*, 2006.

- Pandey, V., Tiwari, M. K., and Kumar, S. An interactive approach to solve the operation sequencing problem using simulated annealing. *International Journal of Advance Manufacturing Technology*, 29, (11-12), 1212-1231, 2006.
- Singh, S., Kumar, S., Jha, A. K. Analysis of Rotary Forging of Sintered Preforms, Part – II: Rotary Phase. *Tamkang Journal of Science & Engineering: An International Journal*, 9, (4), 325 – 330, 2006,
- Energy Analysis during High-Speed Sinter-Forging of Truncated Conical Preforms, S. Singh, S. Kumar, A.K. Jha. *Tamkang Journal of Science & Engineering: An International Journal*, 7, (4), 227 – 236, 2006.
- Srivastava, S. C., Tiwari, M. K., Kumar, S., and Choudhary, A. K. Development of Intelligent Agent Based AGV Controller for Flexible Manufacturing System *International Journal of Advanced Manufacturing Technology* Published on line D.O.I. 10.1007/s00170-006-0892-9. 2006.
- Muthukumaran, S., and Mukherjee, S. K. Two modes of metal flow phenomenon in friction stir welding. *Science and Technology of Welding and Joining*, 11, 337-340, 2006.
- Muthukumaran, S., Pallav, K. Pandey, V. K., and Mukherjee, S. K. A Study on Electromagnetic Properties during Friction Stir Weld Failure. *International Journal of Advanced Manufacturing and Technology* (published online on 15 December 2006).
- Sinha, P. Muthukumaran, S., Sivakumar, R. and Mukherjee, S. K. Condition monitoring of first mode of metal transfer in friction stir welding by image processing techniques *International Journal of Advanced Manufacturing and Technology* (published online on 15 December 2006).
- Pattanaik, L. N. Jain, P. K. and Mehta, N. K. Cell Formation in the Presence of Reconfigurable Machines. *International Journal of Advanced Manufacturing Technology* (Published Online, 2006)

### **National**

- Singh, S. Kumar, S., Jha, A. K. Forging of Sintered Components: Technology Management Issues. *Journal of Manufacturing Technology Today, CMTI, India*, 2 (5), 23 – 27, 2006.
- Singh, S. Kumar, S. Jha, A. K. Forging of Sintered Components: Technology Management Issues. *Journal of Manufacturing Technology Today, CMTI*, 2, (5), 23–27, 2006.

## **Publications by faculty in Seminar Proceedings**

### *International Events*

- Muthukumaran, S. and Mukherjee, S. K. *International conference on Cleaner technology and Environmental Management, on Friction Stir Welding—A Cleaner Joining process*. 4-6th January 2007, Organised by Pondicherry Engineering College, Pondicherry.

### *National Events*

- Jha, S.K. Kumar, S. *National seminar on Focus Human Resource, College of Agribusiness Management, Panthagar, Stress, health and productivity: Case study of artefacts manufacturing units of Jharkhand*, 8-9, April 2006.
- Jha, S.K. Kumar, S. *11National seminar on Bharatiya Heritage in Engineering and Technology, Indian Institute of Sciences, Bangalore, Dokra brass artefacts from Jharkhand: Glorious past and uncertain future*-13, May 2006.
- Agarwal, R. A strategic framework of an effective advanced planning and scheduling system, *21st National Convention of Production Engineers & National Seminar on Best Practices in Manufacturing*, The Institution of Engineers (India) Jharkhand State Centre and Department of Production Engineering, B.I.T. Mesra, Ranchi, 9-10 Dec, 2006,
- Muthukumaran, S. *National Workshop on lean manufacturing implementation on Birla Institute of Technology, Mesra, Ranchi, Implementation of lean manufacturing in industries—A case study*, 8-9 September, 2006.
- Pattanaik, L. N. Methodologies for Implementing Lean Manufacturing by Understanding Products, Demands and Processes. *National Workshop on Lean Implementation*, BIT, Mesra, Ranchi, Sept 9-10, 2006.
- Pattanaik, L. N. Machine and System Level Design Methodologies for Reconfigurable Manufacturing Systems, *21st National Convention of Production Engineers and National Seminar on Best Practices in Manufacturing*, BIT, Mesra, Ranchi, Dec 10-11, 2006.
- Sinha, A.N. Experimental evaluation of heat source size for modelling of arc welding, *National, Conference on Achieving Technological Excellence in New Millenium*, Department of Mechanical Engineering, BIT, Mesra, Ranchi. January 23-24, 2007.

## **Seminar(s) / Symposia(s) / Short-term Course(s) attended by faculty members**

### ***International Events***

- Muthukumaran, S. *International conference on Cleaner technology and Environmental Management*, Pondicherry Engineering College, Pondicherry. 4-6 Jan, 2007.

### ***National Events***

- Lal, S.P., Pandey, V., Agarwal, R., Singh, S., and Ghose, J. Faculty enablement *workshop on Soft Skills*. Training & Placement Division, BIT Mesra, 21–24 Dec 2006.
- Lal, S.P. Singh, S. Singh, R.K., Muthukumaran, S., Pattanaik, and L.N. *National Workshop on Lean Manufacturing Implementations*. The Indian Institution of Production Engineers and Department of Production Engineering B.I.T Mesra, Ranchi, 8-9 Sept 2006.
- Pattanaik, L. N. *National Convention of Production Engineers On Best Practices in Manufacturing*, Ranchi, The Institution of Engineers (India) Jharkhand State Centre and Department of Production Engineering, B.I.T. Mesra, 9-10 Dec, 2006.
- Srivastava, S.C. Agarwal, R. *A short-term course on Genetic Algorithms for Engineering Optimization*, Kanpur Genetic Algorithms Laboratory (KanGAL), IIT Kanpur, 26-29 April, 2006.
- Agarwal, R. *Training programme on Tools & Techniques in e-learning DOEACC Centre*, Kolkata, 1-5 August, 2006.
- Kumar, S. *National Workshop on Industry Institute Interaction*, National Institute of Technology, Kurukshetra, 19-20, Feb, 2007.

## **Patents**

### ***Applied***

- Indian patent entitled A gadget for friction stir welding using a milling machine. Application No- 164/ KOL/ 06, applied by S. Muthukumaran
- An Indian patent entitled Friction processing machine with tool and fixtures. Application No- 137/ KOL/ 06, applied by S. Muthukumaran
- Indian patent entitled Tube to tube sheet welding machine with tool and fixtures. Application No- 189/ KOL/ 06, applied by S. Muthukumaran

**Infrastructural facilities added during the year 2006-07**

- TIG/ GMAW Machine Fronius, Transynergic 5000
- Plasma cutting, EWAC PLACUT 80i

**Other Information**

The department is publishing quarterly "*Manufacturing Technology and Research: an International Journal*", ISSN NO: 0973-0281.

## **DEPARTMENT OF REMOTE SENSING**

The Department of Remote Sensing was established at the Institute in 1997. The Department has set up various laboratories to provide hands-on training to its postgraduate students such as for Digital Image Processing, GIS, GPS and Satellite Navigation, Photogrammetry and Digital Photogrammetry, Cartography & Image Interpretation. Forty-five Pentium-4 computers have been installed. The Department has procured and installed Magellan ProMark V Global Positioning system (GPS), LEICA DGPS, Umax Scanner, Widecom Scanner AO, HP AO Plotter, Procom-2 Optical Pantograph, Mirror Stereoscopes, GTR, etc. The Department has also procured latest software for GIS, Cartography and Digital Image Processing such as ArcGis, ERDAS Imagine, ERDAS Virtual GIS, LEICA Photogrammetry Suit, PCI Geometica, Image Analyst, Modular GIS Environment (MGE), IIRAS, Geomedia Professional, Geomedia Intersite Interplot Professional, Microstation SE, Oracle 8.0, etc.

The Department of Remote Sensing is now DST-FIST sponsored and UGC SAP supported department. The Department of Science of Technology, of the Govt. of India has identified the department to establish the district NRDMS Center. The department is also engaged in various R & D Project and consultancy jobs from ISRO, DOS, Government Organisations and other agencies.

### **Course offered**

#### *PG Course:*

- M.Tech. (Remote Sensing)
- M.Sc. (Geoinformatics)

### **Faculty position:**

<b>Designation</b>	<b>Professor</b>	<b>Associate professor</b>	<b>Reader</b>	<b>Lecturer (Senior)</b>	<b>Lecturer</b>	<b>Associate Lecturer</b>
Number in Position	2	1	2	1	3	1

### **Number of Student enrolled/registered with Department**

<b>Semester</b>	<b>No. of students</b>
M.Tech. (Remote Sensing)	30
M.Sc. (Geoinformatics)	10
<b>Gr. Total</b>	<b>40</b>



## Ongoing Project(s)

<i>SL</i>	<i>Project Title</i>	<i>Principal Investigator</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanction amount (in lakhs)</i>	<i>Duration</i>
1.	Establishment of District Centre of Ranchi (Jharkhand) & Creation of Geospatial Database for the Development of Decision Support System.	Dr. M.S.Nathawat	DST, Gol	1-10-03	29.60	3 Years
2.	Geo-Informatics based water resource management plan for Ghad sub-watershed, Maharashtra.	Dr. R.Shivakumar	DST, Gol	25.11.04	10.02	3 Years
3.	Desertification Status Mapping in NE Parts using AWIFS Data	Dr. M.S.Nathawat	SAC, Ahmedabad	2.8.05	0.50	6 Months
4	FIST Project PG Teaching Research facilities	Dr. M.S.Nathawat	DST, Gol	7.3.06	38.00	5 Years
5.	A Comprehensive survey on the Water Quality of Vishrampur, Chainpur, Pandu & Daltonganj block of Palamau district & Bhawnathpur, Ranka, Bhandaria, Kharandhi, Nagar, Maghiav of Garwa district with focus on fluoride	Dr. G. Pathak, Dr.M.S.Nathawat, Dr. Usha Jha	UNICEF	26.12.05	11.68	1 Year

## Project(s) completed during the year 2006-2007

<i>SL</i>	<i>Project Title</i>	<i>Principal Investigator</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanction amount (in lakhs)</i>	<i>Duration</i>
1.	Mapping of Indicators of Desertification using Satellite based SAR Data	Dr. M.S.Nathawat	SAC, Ahmedabad	6.9.05	4.3	2 Years
2.	Interferometric and Clinometric Analysis of Radar Data for Estimation of Tree/Stand height"	Dr. M.S.Nathawat	SAC, Ahmedabad	16.9.05	5.0	2 Years

### **Seminar(s)/conference(s)/short term course(s) conducted by the Department**

- Hosted the XIth Review Committee for DST, Gol Meeting.

### **Books / Monograph Publications by faculty**

#### ***Chapters in Books***

- Patel, N. contributed three chapters titled 1. *Fundamentals of Satellite Remote Sensing* 2. *Fundamentals of Geographical Information Systems* and 3. *Biomass Estimation through Remote Sensing* in Lecture Notes on Geoinformatics and Its Applications edited by Subashisa Dutta, IIT Guwahati.
- Patel, N. contributed two chapters titled 1. *Fundamentals of Satellite Remote Sensing* and 2. *Fundamentals of Geographical Information Systems* in Lecture Notes on Hydroinformatics and Flood Management edited by Subashisa Dutta, IIT Guwahati.

#### ***Articles in Books***

- Singh, K. K., Krishna, A. P., Rai L. K., and Rai Y. K. *Farm Based Appropriate Technologies for Capacity Building of Mountain Farmers and Rural Women: A Case Study from Sikkim Himalaya*, In: Anil P. Joshi, Sunil K. Agarwal and Rakesh Kumar (Eds.), *Mountain Technology Agenda – Status, Gaps and Possibilities: Developing Appropriate Technologies for Sustainable Livelihoods in Mountain and Hilly Areas* (pp. 101-115), HESCO, TIME & DST, Gol; Dehradun, India, 2006.
- Nathawat, M.S. and Pandey, A.C. *Natural Resource Mapping and Management through Geoinformatics*. In: Training Manual, Advance training in Natural Resources Management and Planning. Published by Institute for Sustainable Management (ISM), Pundag, Ranchi, April 2006.

### **Publication(s) by faculty in Journals**

#### ***International***

- Nathawat M.S., Rathore V.S. and Sinha A. K. A Geoinformatics approach for water resource development in hydrologically disturbed coal mining area. *The Eastern Geographer*, 3 (1), 2007.
- Chettri, S. K., Singh, K. K. and Krishna, A. P. Anthropogenic pressures on the natural resources of Khangchendzonga Biosphere Reserve fringe areas.

*International Journal of Ecology and Environmental Sciences*, volume 32 (3), 229-240, 2006.

- Sinha, P., Muthukumaran, S., Sivakumar, R. and Mukherjee, S.K. Condition monitoring of first mode of Metal transfer in friction stir welding by Image processing techniques. *International Journal of Advanced Manufacturing Technology*, 1-6 October 2006.
- Pandey A.C, Nathawat, M.S. and Singh, G. Evaluating Geo-aspects implications on land sliding in Himalayan Terrain in a part of Aizwal district, Mizoram State using remote sensing and GIS. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, 34 (30), 2006.

### **Publication(s) by faculty in Seminar Proceedings**

#### ***International Events***

- Kumar, P., Krishna, A. P., Nathawat, M. S., Singh, C. P., Kandya, A. K., Mohan S., and Ajai. Tree height estimation in Tundi Reserved Forest using SAR Interferometry. *Proceedings of Fifth International Symposium on Asia-Pacific Remote Sensing - Conference on Microwave Remote Sensing of the Atmosphere and Environment V*, Goa, Organised by The International Society for Optical Engineering (SPIE), India, (Published online doi: 10.1117/12.697819:<http://spiedl.aip.org/>) November 13-17, 2006
- Patel, N. and Kushwaha, S. D. K. Assessment of Impact of Road Network on the Vegetation through Remote Sensing and GIS. *NE-Geo Conference*, Guwahati September, 21-22 2006.

#### ***National Events***

- Patel, N. Remote Sensing and GIS Techniques for Earth Resources and Environmental Studies (Invited Lecture). *Workshop on Geospatial Technology for the Study of Earth Resources and Environment*, Department of Earth Sciences, Sambalpur University, Jyoti Vihar, Burla, Orissa, India, Feb 17-18, 2007.
- Patel, N., Kushwaha, S. D. K., and Panda, R. K. Remote Sensing and GIS Techniques for Environmental Management (Invited Lecture). *National Seminar on Environment and Sustainable Development*, P.G. Department of Environmental Sciences, Sambalpur University, Jyoti Vihar, Burla, Orissa, India, March 17-18, 2007.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members:**

#### ***International Events***

- Krishna, A. P. & Kumar, P. attended *Fifth International Symposium on Asia-Pacific Remote Sensing - Conference on Microwave Remote Sensing of the*

*Atmosphere and Environment V*, Organised by The International Society for Optical Engineering (SPIE), Goa, 13-17 November 2006.

- Patel, N. attended *Brain Storming Workshop on Aerosols and Its Impact on Climate with Special Reference to Indo-Gangetic Plains*, IIT Kanpur, November 10-11, 2006.
- .Nathawat, M. S. ISPRS TC IV *International Symposium on 'Geospatial Databases for Sustainable Development* organized during September 25-30, 2006 Goa, India

#### **Infrastructural Facilities during the year 2006-07**

- P4 Computer 10 Nos.
- LPS S/W- 10 License with Stereographic cards, Infrared emitter and 3D Glasses.

#### **Awards/ citations bestowed on faculty members and students**

- Patel, N. *Associate Editor* in the International Journal of Ecological Economics and Statistics (IJEES).
- Patel, N. *Joint Editor*, Journal of Current Sciences published by the Society for Sciences.
- Patel, N. *Co-Editor*, Indian Journal of Environment and Ecoplanning published by the Society for Environment Sciences.
- Patel, N. *Honorary Fellow of the Society of Environment Sciences* (F.S.E.Sc.), India.
- Patel, N. *Honorary Fellow of the Society for Sciences* (F.S.Sc.), India.
- Patel, N. *Member, Advisory Board, Regional Centre for Urban and Environmental Studies*, Lucknow, India (An autonomous organization of the Ministry of Environment and Forest, Govt. of India).
- Patel, N. *Member, Advisory Board, Roland Institute of Technology*, Berhampore (Affiliated to the Biju Pattnaik Institute of Technology, Rourkela, Orissa).

#### **Other Information**

- Dr. N. Patel, *Life Member* of the Indian Journal of Environment and Ecoplanning.
- Dr. N. Patel, *Life Member* of the Journal of Current Sciences.

- Dr. N. Patel, *Life Member* of the Journal "Urban Panorama".
- Dr. N. Patel, *Honorary Member*, Coordinates (A journal on GPS).
- Dr. N. Patel, *Honorary Member*, GIS at Development, An International Journal.
- Dr. N. Patel, Chaired a Student Session in the *NE-Geo Conference held at Guwahati*, India during 21-22 September 2006.
- Dr. N. Patel *delivered invited lectures* at IIT Guwahati, Sambalpur University and Indian Institute of Science & Management, Ranchi.
- Sharma, R. N. K. completed *the course work for M. Phil degree in Education, with Environmental Education* as an optional paper, through distance education programme conducted by the directorate of distance education, Annamalai University, Annamalai Nagar.
- Sivakumar, R. invited as Expert and advisory committee member in Water resources and Urban hydrology for Research and development plan for Earth System Sciences DST, Govt. of India programme held at Indian Institute of Science Bangalore Feb 2007.

#### ***Invited Guest Lecturers Delivered***

- Dr. A. C. Pandey delivered Guest Lecture on "Natural Resource Mapping and Management through Geoinformatics". Training session on *Advance training in Natural Resources Management and Planning*, conducted by Institute for Sustainable Management, Pundag, Ranchi, April 2006.
- Pandey, A. C. delivered series of Guest Lecture on Management Information Systems (MIS) For Water Quality Surveillance. *Training session on Water Quality Surveillance*, conducted by Vishwaraiya Sanitation & Water Academy, Ranchi, December 2006

## **DEPARTMENT OF SPACE ENGINEERING & ROCKETRY**

The faculty members have carried out and guided considerable R & D work in the broad areas of Aerodynamics, Propellant Technology, Combustion, Rocket Propulsion, Combustion and Composite Materials.

### **Course offered**

#### *PG Course:*

- M. E. (Space Engineering & Rocketry)
- M. Tech. (Fuels and Combustion)

### **Faculty position**

<i>Designation</i>	<i>Professor</i>	<i>Lecturer</i>
Number in Position	4	5

### **Number of Student enrolled/registered with Department**

<i>Semester</i>	<i>No. of students</i>
ME (SER)	
2006-07	8
2005-06	11
Total	19
M.Tech. (F & C)	
2006-07	3
2005-06	3
Total	6
<b>Gr. Total</b>	<b>25</b>

### **Ongoing Project(s)**

<i>SL</i>	<i>Project Title</i>	<i>Principal Investigator</i>	<i>Funding Agency</i>	<i>Date of Sanction</i>	<i>Sanctioned Amount</i>	<i>Duration (In year)</i>
1.	Development of Cryogenic Propulsion System	Dr. A. K. Chatterjee	UGC (SAP)	Apr 2002	49.00 Lakhs	5
2.	Propellant Technology and Combustion Facility	Dr. A. K. Chatterjee	DST (FIST)	Jan 2005	25.00 Lakhs	5

3.	Development of Gel Propulsion System for Reaction Control System using UDMH & RFNA	Dr. Mohan Varma	DRDL Min. of Defence	Nov 2005	23.00 Lakhs	1.5
4.	Experimental Investigation of Flow Field around Protrusions at Supersonic Speeds	Dr. J. K. Prasad	AR&DB Min. of Defence	July 2005	8.26 Lakhs	2
5.	Investigation of Flow Field Interaction around Protrusions at Supersonic Speeds	Dr. J. K. Prasad	RESPO ND (ISRO) Dept. of Space	July 2004	9.30 Lakhs	2
6.	Experimental Investigation of Flow Field around Slender Body at High Angles of Attack	Dr. J. K. Prasad	AR&DB Min. of Defence	June 2004	7.22 Lakhs	2

### Project (s) completed during the year 2006-2007

SL	Project Title	Principal Investigator	Funding Agency	Date of Sanction	Sanctioned Amount	Duration
1.	Investigation of Flow Field Around Fore Body with Vertical Fences at Supersonic Speeds	Dr. J. K. Prasad	DRDL Min. of Defence	July 2004	9. 50 Lakhs	9 mnths

### Seminar(s)/conference(s)/short term course(s) conducted by the Department

- Short Term Course and *Workshop on Compressible Internal Flows*, B.I.T. Extension Centre, Noida, Jan 15 – 19, 2007.

Co-ordinator– Dr. A. K. Chatterjee

No. of delegates- 7

Resource Person- Professor Edward M. Greitzer, Dy. Departmental Head, M.I.T., Massachusetts, USA

- *National Seminar on Recent Advances in Energy Systems and Combustion Processes*, B. I. T., Mesra, Feb 14 – 16, 2007

Convenor – Dr. A. K. Chatterjee

Organising Secretary– Dr. P. C. Joshi

No. of delegates- 40

Names of : Shri Stephen Marandi, Dy. C.M., Jharkhand.

Dignitaries- Dr. A. Subhananda Rao, Director, HEMRL, Pune

Shri C. B. Kartha, Dy. Director, VSSC, Thiruvanthapuram.

Dr. S. K. Srivastava, Director, CFRI, Dhanbad.

Dr. V. Ramanujachari, Dy. Director, DRDL, Hyderabad.

Shri J. C. Kapoor, Dy Director, CFEES, Delhi.

Dr. B. R. Raghunandan, Chairman, Aerospace Engg., IISc

### **Publications by faculty in Journals**

#### ***International***

- Guria, C. Varma, M., Surya, Mehrotra, P., and Gupta, S. K. Simultaneous Optimization of the Performance of Flotation Circuits and their Simplification using the Jumping Gene Adaptation of Genetic Algorithm– II: More Complex Problems, *International Journal of Mineral Processing*, 79, 149-166, 2006.
- Guria, C., Varma, M., Gupta, S. K., and Surya, Mehrotra, P. Optimal Synthesis of an Industrial Beneficiation Plant using a Jumping Gene Adaptation of Genetic Algorithm – II: More Complex Problems, *International Journal of Mineral Processing*, (in press)

### **Publications by faculty in Seminar Proceedings**

#### ***International Events***

- Kumar, P. Das, S. Roy, A. and Prasad, J. K. Computation of flow field around blunt times at Supersonic Speed, *51<sup>st</sup> Congress of ISTAM (An International meet)*, A. U. College of Engineering, Visakhapatnam, Dec 18 – 21, 2006.
- Varma, M., Pein, R. Optimization of Processing Conditions for Gel Propellant Production, *7th International Symposium on Special Topics in Chemical Propulsion*, Kyoto, Japan, 2007 (Accepted).

#### ***National Events***

- Bhumker, Y. G. Roy, A. Das, S. and Prasad, J. K. Investigation of Two-dimensional Incompressible Flow Past a Pair of Circular Cylinders , *20<sup>th</sup> National Convention of Aerospace Engineers and National Seminar on Indian Aerospace: Present Scenario and Future Trends*, The Institution of Engineers (India), Kerala State Centre, Thiruvananthapuram, Oct 29-30, 2006.



- Prasath, M. Das, S., Roy, A., and Prasad, J. K. Effect of angle of attack on a Rectangular Supersonic Air Intake, *20<sup>th</sup> National Convention of Aerospace Engineers and National Seminar on Indian Aerospace: Present Scenario and Future Trends*, the Institution of Engineers (India), Kerala State Centre, Thiruvananthapuram Oct 29-30, 2006.
- Karthik, N., Das, S., Roy A. and Prasad, J. K. Flow field around protrusion of different cross section at Supersonic Speed, *20<sup>th</sup> National Convention of Aerospace Engineers and National Seminar on Indian Aerospace: Present Scenario and Future Trends*, the Institution of Engineers (India), Kerala State Centre, Thiruvananthapuram, Oct 29-30, 2006.
- Prasath, M., Das, S., Roy A., and Prasad, J. K. Behavior of Flow Field of an Isolated Rectangular An Intake at Supersonic Speed, *33<sup>rd</sup> National and 3<sup>rd</sup> International Conference on Fluid Mechanics & Fluid Power*, IIT Bombay, Dec 7-9, 2006.
- Karthik, N. Das, S. Roy A. and Prasad, J. K. Flow around Circular Cylinder on Flat Surface at Supersonic Speed, *33<sup>rd</sup> National and 3<sup>rd</sup> International Conference on Fluid Mechanics & Fluid Power*, IIT Bombay, Dec 7-9, 2006.
- Bhumker, Y. G. Roy, A. Das, S. and Prasad, J. K. Incompressible Flow Field around two demensred Circular Cylinders in Pair, *33rd National and 3rd International Conference on Fluid Mechanics & Fluid Power*, IIT Bombay, Dec 7-9, 2006.
- Das, S., Roy A., and Prasad, J. K. Numerical simulation of combined External / Internal Compression supersonic air intake, *51st Congress of ISTAM (An International meet)*, A. U. College of Engineering, Visakhapatnaam. Dec 18-21, 2006.
- Guptam, N. and Joshi, P. C. Combustion Studies of Bio-diesel Droplets. *Proceedings of National Seminar on Recent Advances in Energy Systems & Combustion Processes*, pp. 155-165, held at B.I.T., Mesra, Feb 14-16, 2007,
- Tiwari, P., Banerjee, P. K., Sharma, R., and Joshi, P. C. A Combustion Evaluation of Taryield from Top charged and Stamp charged Coke making Processes. *Proceedings of National Seminar on Recent Advances in Energy Systems & Combustion Processes*, pp. 95-100, held on B.I.T., Mesra, Feb 14-16, 2007.

- Varma, M. and Chodankar, C. R. Design and Validation of a Premixed Swirl Burner for LPG - Air System. *Proceedings of National Seminar on Recent Advances in Energy Systems & Combustion Processes*, pp. 252-263, B.I.T., Mesra, Feb 14-16, 2007.

### **Seminar(s) /Symposia(s) /Short-term Course(s) attended by faculty members**

#### ***International Events***

- Varma, M. attended Porzer Seminar on *International Cooperation on Research in Aeronautics, Space Traffic and Energy*, DLR Centre for Corporate Development & External Relations, Koln, Germany, June 27, 2006.
- Varma, M. attended the Expert Lecture Series in *Aerospace Propulsion Seminar*, *Dipartimento di Energetica, Politecnico di Milano, Milano, Italy*, July 17-18, 2006.

#### ***National Events***

- Chatterjee, A. K. attended National Seminar on *Quality, Sustainability and Social Responsibility: Interfaces in Technical Education in the Context of Globalization*, B.A.I.T., Sathyamangalam, Dec 14-16, 2006.
- Chatterjee, A. K. attended *21<sup>st</sup> Engineering Congress on Challenges of Engineering for Sustainable 10% Growth and Beyond*, The Institution of Engineers (India), Assam State Centre, Guwahati, Dec 21-24, 2006.
- Dr. Mohan Varma attended National Seminar on Recent Advances in Energy Systems & Combustion Processes, B.I.T., Mesra, Feb 14-16, 2007.
- Prasad, J. K. attended *National Convention of Aerospace Engineers and National Seminar on Indian Aerospace : Present Scenario and Future Trends*, Thiruvananthapuram, Oct 29 – 30, 2006.
- Prasad, J. K. attended *33rd National and 3rd International Conference on Fluid Mechanics & Fluid Power*, I.I.T., Bombay, Dec 7-9, 2006.
- Prasad, J. K. attended *Short Term course and Workshop on Compressible Internal Flow*, B.I.T. Extension Centre, Noida, Jan 15 – 19, 2007.
- Dash, P. K. attended *National Seminar on Recent Advances in Energy Systems & Combustion Processes*, B.I.T., Mesra, Feb 14-16, 2007.
- Das, S. attended *51st Congress of the Indian Society of Theoretical and Applied Mechanics*, A.U. College of Engineering, Visakhapatnam, Dec 18–21, 2006.
- Das, S. attended *Short Term course and Workshop on Compressible Internal Flow*, B.I.T. Extension Centre, Noida, Jan 15 – 19, 2007.

- Ghosh, K. S. attended *National Seminar on Recent Advances in Energy Systems & Combustion Processes*, B.I.T., Mesra, Feb 14-16, 2007.
- Gupta, N. attended *National Seminar on Recent Advances in Energy Systems & Combustion Processes*, B.I.T., Mesra, Feb 14-16, 2007.

### Infrastructural Facilities added during the year 2006-07

SL	Name of Equipment	Qty.	Cost of Equipment (in Rs)	Project / Lab. Expenses
1.	Reciprocating Air Compressor	1 No	87,500	UGC : SAP
2.	Combics Scale PC	1 No	1,35,000	Defence Project
3.	Sieve Shaker	1 Set	93,260	UGC Project
4.	Automatic Voltage Stabilizer	1 No	30,600	DRDL Project
5.	Honeywell Pressure Sensor 24PVEF6D	40 Nos	63,000	DRDL Project
6.	N2 Gas Regulator & Flow Meter for N2	2 Nos	32,680	Defence Project
7.	UV VB Spectrophotometer	1 No	14,50,000	Defence Project

### Awards/ citations bestowed on faculty members and students

- Chatterjee, A. K. has been nominated as *Vice President* of The Institution of Engineers (India) for the Session 2007-2008.
- Varma, M. was invited by DLR-German Aerospace Center at Institute of Space Propulsion, Lampoldshausen, Germany as *Visiting Scientist* from June 14 to Aug 16, 2006.
- Varma M. was *invited to deliver Expert Lectures* at Department of Aerospace Propulsion, Politenico di Milano, Milano, Italy on July 17-18, 2006.

## **TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME**

The Technical Education Quality Improvement Programme (TEQIP) of Government of India (GOI) has been conceived in pursuance of the National Programme on Education (NPE)-1986 (as revised in 1992). The Programme aims to upscale and support ongoing efforts of GOI to improve quality of technical education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at national and international levels.

The broad objectives of the Programme are to create an environment in which engineering institutions selected under the Programme can achieve their own set targets for excellence and sustain the same with autonomy and accountability, support development plans including synergistic networking and services to community and economy for achieving higher standards, and to improve efficiency and effectiveness of the technical education management system. The effort would provide a flexible platform to well performing institutions to acquire excellence in specialized areas and emerge as world-class institutions.

The Programme aims to support production of high quality technical professionals through reforms in the engineering education system for fostering and propagating excellence. This is to be achieved by (a) developing competitively selected institutions as lead centres, (b) synergizing networking of neighboring institutions, (c) promoting active linkages with industry and community and (d) enhancing system management capacity.

The Programme is being implemented as a centrally coordinated, multi-state, long-term Programme in overlapping phases. Under each phase, there are 2 to 3 cycles of selection of well performing institutions in a competitive manner. The programme has two principal components (a) Institutional Development and (b) System management capacity Improvement. Qualifying applicant institutions, based on their capabilities, is selected either as Lead or Network Institutions.

Total National project cost Rs 1550 crores, is shared by World Bank (Rs 1250 crore) and Government of India /State Governments (Rs 300 crores)

The participating states in the first cycle are Haryana, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra and Uttar Pradesh. In the second cycle following seven states are included : Andhrapradesh, Gujrat, Jharkhand, Karnataka, Tamil Nadu, Uttarkhand and West Bengal. Total number of Institutions under the project is 128 (18 Central Funded and 110 State Institutions).

Under second cycle of TEQIP-GOI, Birla Institute of Technology, Mesra has been identified as a leading Institution. . Three other Institutions viz., Birsa Institute of Technology, Sindri, Govt. Polytechnic, Ranchi and Govt. Polytechnic, Dumka are identified for networking with BIT, Mesra. BIT Mesra was allotted a grant of 20 Crore to support Institutional Development for improving quality of Technical Education by providing inputs like modernization of laboratories/workshops, library. Faculty development etc. The TEQIP-Cell, BIT, Mesra started its activities from 2005. Closing date for the Project is June 30 2008. The project at state level is coordinated by State Project Facilitation Unit (SPFU), and at national level by Nation Project Implementation Unit (NPIU).

## **INSTITUTIONAL DEVELOPMENT AT BIT MESRA**

Institutional Development would be achieved through three subcomponents:

- (1) Promoting academic excellence,
- (2) Networking of institutions for quality enhancement and resource sharing,
- (3) Enhancing quality and reach of services to community and economy.

## **PROMOTION OF ACADEMIC EXCELLENCE**

Plans for Academic excellence covers activities as

- (i) Improvements in teaching, training and learning facilities
- (ii) Academic Reforms
- (iii) Tribal Development Plan
- (iv) Faculty and staff development
- (v) Intensive interaction with industry
- (vi) Improvements in Institutional governance ,management and administrative practices

### **(i) Improvements in teaching, training and learning facilities**

To improve the teaching, training and learning facilities, Laboratory facilities are augmented in various Departments, Central Instrumentation Facilities are created, Learning Resources are procured for various Departments, Central CAD laboratories are created and Existing Central CAD Laboratory facility augmented, Infrastructure is developed , Library facility is augmented, Campus wide networking installed.

## **AUGMENTATION OF LABORATORY FACILITIES IN VARIOUS DEPARTMENTS:**

**Applied Physics:** Magnetron Sputter Coating System, Nd:YAG Laser, Nitriding Unit, Plasma Enhanced Chemical Vapour Deposition System, Current Balance, couple Oscillator, Mechanical Wave Driver, Fresnel's Equations verification setup, Mechanical and Electrical Equivalent of heat, Thermal Radiation setup, atomic Spectra of Gases

**Applied Chemistry:** Gas Chromatograph, Chemito, BOD Monitor, Hach COD Monitor, Hach

**Electronics and Communication Engineering:** Microwave Signal Generator, tunable Laser Source, Optical Spectrum Analyzer, Microprocessor system Hardware Training Module, Optical time Domain Reflectometer, Microwave Laboratory Accessories, QMA System, GSM Test System, Antenna Measurement Set-up, Global Positioning System, Module Mobile Telephone Simulation System, Satellite Communication System Module, CDMA, DSS System Module

**Mechanical Engineering:** Computerized Maruti Zen Petrol Engine Test Rig, Hydrogen Fuel stack System

**Production Engineering:** Dynamometer with Charge Amplifier, Kistler, Plasma Welding and cutting unit, MIG MAG welding machine with digital Display, 5 Axis CNC Machining Centre

**Polymer Engineering:** Fused Deposition Modelling, Stratasys, Dynamic Mechanical Analyser, TA

**Remote Sensing :** Differential GPS, Plotter

**Department of Architectur:** Plotter

**Space Engineering and Rocketry :** Sigma Mixer

## **CENTRAL INSTRUMENTATION FACILITY**

Central Instrumentation Facility has been created, which has high value sophisticated Instruments, to cater to the needs of Departments. The facilities are being extensively used by Post Graduate Students, Doctoral Research Scholars and

Sponsored Projects for advanced Research. This facility is also extended to External Organizations, mainly Academic Institutions of the region on nominal chargeable basis. Present facilities include:

- Electrochemical Analyzer,
- Gel Permeation Chromatograph, Waters
- Differential Scanning Calorimeter, TA
- Particle Size, zeta potential, cum molecular weight Analyzer, Malvern
- Thermo-gravimetric Analyzer, Shimadzu
- FTIR Spectrophotometer, Shimadzu
- Chemiluminescence's Spectrophotometer, Shimadzu
- Color measurement System, Hunter Lab
- Elemental Analyzer, CHNSO, Elementar
- Pulse Analyzer, Oros
- Porosity meter, Thermoelectron
- Atomic Force Microscope, NT-MDT
- Surface tensiometers- Plate and Ring and Drop, Dataphysics
- ServoHydraulic Dynamic Tensile Testing machine, Instron

#### **CENTRAL CAD LABORATORY**

Under the procurement of Learning Resources category of TEQIP, BIT has established state of the art CAD facilities in various areas. Today there are two Central CAD facilities, available to all the Departments.

**CENTRAL CAD LABORATORY I:** The existing CAD Laboratory in the Mechanical Engineering wing has been extended to a 60 user Laboratory, and facility augmented by Workstations, Computers and Servers. This Laboratory supports Department of Mechanical Engineering, Civil Engineering, Architecture, Applied Mechanics, Production Engineering, Polymer Engineering. This also houses the Molecular Modelling Laboratory used extensively by Department of Pharmaceutical Sciences, Applied Chemistry, Polymer Engineering, Applied Physics etc. The softwares procured under TEQIP are:

Autodesk: Civil and Mechanical Solution Sets • Ansys: Multiphysics Version 9.0 • Fluent • Polyflow • Catia, V5 • NX Manufacturing Bundle • Mold Wizard • Knowledge automation Studio Bundle • Extended Lingo • Adams University FEA Bundle Software  
• Molecular Modelling software TRIPOS • Accelrys software- MS Visualizer, MS Synthia, M S Blends, • Chemoffice Ultra 2005

## **CENTRAL CAD LABORATORY II:**

MATLAB 60 user laboratory.

Digital Signal Processing 30 user laboratory.

## **AUGMENTATION OF DEPARTMENTAL CAD FACILITIES**

**Department of Computer Science:** Oracle • Turbo C++ • Borland C++, LISP • Visual Prolog 6.3 • Adobe Creative Suite 8.0 • Adobe Acrobat 7.0 • Symant Coporate Edition 10 • 3D Studio Max • MSDN Academic Alliance 7.0 • IBM Rational Rose Suite, ACS Digital Library

**Applied Chemistry:** Chemoffice Ultra 2005

**Mechanical Engineering:** ITI simulation,

**Electrical and Electronics Engineering:** NI ELVIS/PCI – 6251Bundle •DSP Bundle with SPEEDY 33 Bundle •PSIM(Motor Drive, Digital Control,Simcoupler) •SKM Power System Analysis Software

**Electronics & Communication Engineering:** Cadence University Programme • Comm sim • Fidelity • MDSpice • BeamPro V,

**Bio Technology:** GCG Wisconsin Package • DS GeneStatic • Insight II LS • BioPolymer • Homology

**Polymer Engineering:** Paulsons Training Basic Injection Moulding, Simtech, single Screw Extrusion, and Compounding with twin screw extruder,

## **INFRASTRUCTURE DEVELOPMENT**

Utilizing the funds for Civil Works and Furniture the following Infrastructure has been developed:

- Construction of Central Instrumentation Centre under progress, and to be completed shortly.
- 10 Seminar Halls/Class rooms are equipped with ceiling mounted LCD Projectors.
- Bose Acoustics System procured and installed in Golden Jubilee Auditorium in December 2006



- Refurbishment of three Seminar Halls
- Refurbishment of various Laboratories: Cadence Laboratory, Central Instrumentation Facility etc.
- Air conditioning of CAD Laboratories and Central Instrumentation Facility.

### **AUGMENTATION OF LIBRARY FACILITY**

- e- journal facility augmented after procurement of Science Direct [Engineering, Chemical Engineering, Energy, Material Science, Computational science]
- D Space, for digital archiving: Institutional Repositories, Learning object Repositories, e-Thesis, Electronic records Management, Digital preservation etc.
- Web based OPAC : all the library information can be accessed through LAN.
- Computers, Furniture, pass book printers, etc.

### **CAMPUS WIDE NETWORKING**

Birla Institute of Technology, Mesra, has recently deployed a campus wide network at its main campus under the Technical Education Quality Improvement Program (TEQIP). The network will allow efficient, reliable and seamless conductivity across all the major building in the campus.

The networks are supported on a fiber optic backbone with CAT 6 cable enshrine enabling it to support very high speed data transfer. The network is also serviced by one high and extreme Black Diamond core switch, and 15 other distribution switches (one in each hostel). Apart from this 120 other switches complete the full topology connecting each hostel room and even the guesthouse.

To back up this elaboration hardware arrangement, the institute has also deployed a sophisticated range of software consisting of network management tools, Firewall's, Juniper IDP etc.

The switches are all managed at the third layer and is assisted by a unified third management system i.e. the Cyberoam. This safeguards the security of the entire network. The deployed system is compliant with the latest standards and is currently supporting about 3600 terminals throughout the campus.

Under TEQIP, three Sony video conferencing IP based equipment has also been procured by the institute, to enable videoconferences and centralized classrooms for its extension centers.

Under the program, an intranet server has also been setup to automate the various institute processes like admission, examination, registration etc. A team of developers are constantly working to improve the intranet and its capabilities. The library has also set up a DSpace server enabling the storage and browsing a digital

documents online. This will allow faculty and staff to reference digital document from any location in the campus.

TEQIP has also funded for the setting up of Disklamp, which help Internet connectivity to the Faculty residence quarters through internal telephone allowing easy, economical access to our staff members to access internet from their residence.

## **(ii) Academic Reforms**

Academic Reforms is an on going process of BIT. On the basis of the recommendations of Academic Reform and Examination Reform committees, following reforms were implemented during the tenure of the Project:

- Evaluation scheme to be reviewed continuously.
- Evaluation of Theory courses:

Mid Semester Examination	25%
End Semester Examination	60%
Assignment	10%
Attendance	5%
- Introduction of External Examiner for Laboratory Examinations
- Mid Semester evaluated papers are shown to students
- Introduction of Term Papers in all Courses, including presentation
- Students appraised the teachers at the end of the Semester. The feed back to be primarily used for self correction of teachers.

## **(iii) Tribal Development Plan**

The proposed Technical Education TEQIP is committed to support the existing schemes for SC/ST .The various activities being carried under the programme will further boost the cause of SC/ST students. Apart from ongoing activities like Remedial classes, Book bank, following activities have been initiated:

- A Language Laboratory, located in Computer Science Department has been set up.
- Training programmes were conducted: communication Skill Development Programme, Ansys, Fluent, Autodesk Inventor.
- Pre Examination Training (PET) Cell has been set up. Following Counselors give guidance to students: Dr. C. Guria – GATE, IES, PSU Examination, Prof. A.K.Roy – GRE, TOEFL and admission to Foreign Universities. The activities of the cell includes Programme for Motivation and Preparation for various examinations like GATE (Graduate Aptitude Test in Exam), GRE, TOFEL,

CAT and Indian Engineering Services and Examinations for Public Sector Jobs ONGC, IOC etc.

#### (iv) Faculty and Staff Development

Staff training is an important component of TEQIP. Training need analysis was done for all the Faculty and Staff of the Institute as per NPIU guidance. In the year 2006-2007, following trainings in India were supported by TEQIP:

<b><u>Area of Training</u></b>	<b><u>No of Faculty/Staff</u></b>
• Research training at NIMHANS, Bangalore, 1st April to 30th May,	1
• Content Development of e- Learning, 3rd -4th April, BI T Mesra,	42
• Speech Processing and Communications, IIT,Kharagpur, 24th – 29th April	1
• Automation Training Programme, 8th -13th May, Automation control Systems, Pune	30
• Wireless Communication & Networks, 15th to 20th May, G.S. Sanyal School of Telecom, IIT Kharagpur,	1
• Symplify Pro, Implementaion tool, 22nd to 26th May, NITTTTR Chandighr and JNIT , Jaipur,	1
• Optical Network,22nd to 27th May, G.S. Sanyal School of Telecom, IIT Kharagpur,	1
• English Communication, 10th May to 10th July, BIT Mesra,	30
• Short Hand Course, 9 months course starting from 10th May, BIT Mesra	21
• Application of Power Electronic Devices 19th to 30th June, IISC Bangalore	2
• Modelling and simulation of Polymer Systems, 3rd to 8th June, Central Leathaer Research Institute, Chennai	1
• Study tour to Information Cell, IIT Kharagpur, 20th – 21st. June	1
• Research training in Civil Engineering at IISC Bangalore, 10th June to 9th July,	1
• Study tour of Electrical Engineering Laboratory at IISC Bangalore, 16th June to 30th June	2
• “Power System Protection”, OPG Power Systems, Pvt. Ltd., Kolkata, 10th to 12th June,	1
• DSP Tools and Practice,12th to 17th June, G.S. Sanyal School of Telecom, IIT Kharagpur	1
• E Learning, DOEACC Centre, Kolkata, 31st July to 3rd	49
• Industry Institute Interaction, by SPFU AP, Hyderabad	1
• Nano-Manufacturing, Bangalore,	1
• Computational Materials Modelling –Polymer by Accelrys, Bangalore,	3

• Computational Materials Modelling – Quantum Mechanics, Accelrys, BE College, Shibpur,	5
• “Changing Mind Set” by Shiv Khera, SPFU Jharkhand, 29th to 31st August, 2006	47
• Fused Deposition Modelling, by Infosolutions, Bangalore, 31st August to 1st September,	3
• National Workshop on Emerging Trends in Information Technology, Association of Indian Universities, 4th -9th September 06	1
• Auto Desk Mechanical Solution, Autodesk, 7th -9th September 06	11
• Workshop on Lean Manufacturing Implementations, Indian Institute of Production Engineers, 8th, 9th September 06	5
• Training on Electric Power System Operation and control, IIT Kanpur, 28th August -1st September	1
• Workshop on Bioinformatics in Genomics and Proteomics, IIT Kharagpur 22nd and 23rd September	1
• Training Programme on “Automobile Engineering Systems”, BIT Mesra 6th -9th September	9
• National Workshop on Power Electronics, NWPE 2006, IIT Kanpur, 30.10.06 to 01.11.06	1
• Training on MIS (developed for TEQIP), 05.10.06 to 08.10.06, NPIU, Noida	3
• National Workshop on Industry Institution Interaction, at NIT Rourkela, 30.11.06 to 1.12.06	2
• Short Term Course on Tracer Study 13.11.06 to 15.11.06 NITTTR, Kolkata	2
• Workshop on Research methodology in Basic Sciences, 13.11.06 to 17.11.06 Assam University, Silchar	1
• INFOCOM (Conference & Exhibition) 7 to 9.12.2006, Businessworld, Bengal Universal, Kolkata	2
• Mechatronics Lab visit to IIT Kanpur 09.12.06 to 15.12.06, IIT, Kanpur	1
• Winter School on Modeling, Computing and Simulation in Engineering 23.12.06 to 31.12.06, IIT Madras, Chennai	1
• CADENCE Tools Installation 7.12.06 to 8.12.06, CADENCE India Private Ltd., Bangalore	3
• Short term Course & Workshop on Compressible Internal Flow, 15.01.07 to 19.01.07 by Prof, MIT USA organized by Virtual Prototyping Centre, B.I.T. Extension Centre, Noida	5
• Visit to IIT Kharagpur for Network Security 22. to 23.01.07	1
• Management Capacity Development programme on Knowledge Management 08.01.07 to 12.01.07 Dept. of Management Studies,	
• National Institute of Technology, Trichirappalli	2

• “All India Seminar-07” on Achievements & challenges in Electronics & Telecommunication Engg.20.01.07 to 21.01.07, The Institute of Engineers (India), Jharkhand State Centre	1
• Workshop on Industry Institute Interaction at Chandigarh19.02.07 to 20.02.07Organized by NIT, Kurukshetra	2
• Short term course on MatLab, Simulink and Labview for Engineering applications19.to 23.02.07 Dept. of Electrical Engg. N.I.T. Rourkela	6
• iTRlx workshop on Autonomous Robots3.02.07 to 4.02.07, The Robotics Institute (TRI), Bombay	5
• National Workshop on E-learning for Pedagogical Innovations, 13.02.07 to 15.02.07NIT, Durgapur	2
• Conference on D Space and Digitization of Library in Delnet, 12.to 15.02.07, DELNET, JNU,New Delhi	2
• Workshop on Library Automation and Networking by DELNET, 22.02.07 to 24.02.07	3
• Workshop on “Welding and Fabrication”19.02.07 to 22.02.07, Govt. Polytechnic, Ranchi	6
• Short Term Course on VLSI12.03.07 to 16.03.07National VLSI Faculty Development Centre, Nagpur	1
• Short-Term Training Programme on ‘DSP KIT TMS320LF2407A & C6713’31.03.07 to 02.04.07Dept. of EEE, BIT Mesra, Ranchi	3
• Course on Lean Management28.03.07 to 30.03.07, Govt Polytechnic, Dumka	2
• Workshop on Refrigeration andAir conditioning21.03.07 to 24.03.07 Organized byGovernment polytechnic Ranchi	8

### **Foreign Training:**

Prof Kunal Mukhopadhyay attended “International Plant and Animal Genome XV” and Workshop on “Plant Genome analysis” organized by Feragdro International, at San Diego, California, 12<sup>th</sup> -17<sup>th</sup> January 2007.

### ***Following foreign research training arrangements are being made:***

- ‘Grid Resource Management and Application Scheduling’ at University of Melbourne, Australia, Mr. K.K.Patnaik Lecturer, Deptt of Computer Science
- “Digital Image Processing”, University New Brunswick, Canada - Mr. A. Mustafi, lecturer Deptt of Computer Science

- “Development of Neuro Fuzzy Controller for Wind Turbine”, . University of Duisburg- Essen, Germany- Dr. T.Ghose, Associate Professor, Department of EEE

#### **(v) Intensive Interaction with Industry**

Intensive interaction with Industry is mandatory for development of any Technical Institution. At BIT it is an ongoing activity. BIT representatives participated in several Industry Institute Interaction Seminars organized by various participating States. As per NPIU guidance, a Tracer Study Cell has been Created. To facilitate intensive interaction with Industry Training and Placement Cell, videoconferencing system is being procured.

#### **TRACER STUDY CELL**

Tracers Study Cell has been constituted in our Institute under TEQIP. It is been coordinated by Dr. R.N Gupta, Department of Pharmaceutical Sciences. The main objective of the study is to keep up-to-date record of all pass-out students of the institute. The ‘Tracer Study’ is to maintain employment status of all pass out students and to utilize it for the benefits of both institution and industry. The benefits of the cell are:

- Employment Generation of students
- Industry –Institution Partnership
- Development of Technology
- Course content up gradation

#### **NETWORKING OF INSTITUTIONS FOR QUALITY ENHANCEMENT AND RESOURCE SHARING**

Two types of networking are proposed under the Programme. The first type of networking is a formal network (bi-directional resource and expertise sharing) between Lead and Network educational Institutions. The second type of networking (non\_formal network) will be between Programme Institutions and R&D Organizations specialized Laboratories, leading engineering and other educational institutions in India and abroad, industry and community.

BIT Mesra is the Lead Institute in Jharkhand, and the formally network partners are Birsa Institute of Technology, Sindri, Government Polytechnic Dumka and Government Polytechnic Ranchi. Video conferencing Facility is being procured, then all the Network Partners will be connected. Following are the activities in the Academic year 2006-2007.

***Activities Flowing out of BIT Mesra:***

- Training on “Automobile Engg. Systems” for Technical Assistants and Lab Assistants of both Polytechnics and BIT Sindri held at BIT from 6 – 11th September 2006.
- All TEQIP partners invited to workshop on “Content Development of e Learning”, 3rd -4th April, 2006, BIT Mesra
- Prof. B.M.Karan, Prof and Head, Deptt of Electrical Engg. took classes at BIT Sindri on Neural Networks in December 2006
- Prof D. Pal delivered lecture on VLSI Design from 08.01.07 to 11.01.07
- Three participants from BIT Sindri attended the course on “Robotics” held at BIT Mesra on 3-4 February 2007.
- Two faculty from BIT Sindri attended course on Digital Signal Processing held at BIT Mesra 31<sup>st</sup> March – 2<sup>nd</sup> April. 2007
- Three Faculty from Govt. Polytechnic Ranchi have been admitted in ME and M.Tech Programmes

***Activities Flowing in From Network Institutes:***

- 6 participants from BIT Mesra, took training on “Welding and Fabrication” held at Govt. Polytechnic Ranchi. 19<sup>th</sup> -22<sup>nd</sup> February.
- Two participants from BIT Mesra attended the Short term Course on “Lean Management” organized by Govt. Polytechnic Dumka from 28.03.07 to 30.03.07.
- Eight participants from Workshop on “Refrigeration and Air conditioning” organized by Govt. Polytechnic Ranchi from 21.03.07 to 24.03.07.
- Dr. Om Prakash of Department of Chemical Engineering, delivered lectures on Process Control to UG students of BIT Mesra, Deptt of Polymer Engineering and Biotechnology.

***Joint Activities:***

- Proposal for Major Research Project “Characterization and Evaluation of Cellular Metals” submitted to UGC jointly by Department of Production Engineering BIT Sindri and Department of Production Engineering BIT Mesra.
- MTech Thesis of Mr. Subodh Kumar, PG Student of BIT Sindri, to be conducted under joint supervision of BIT Sindri and BIT Mesra.
- Joint Research Proposal being prepared by Department of Polymer Engineering, BIT Mesra and Department of Chemical Engineering, BIT Sindri.

## **ENHANCING QUALITY AND REACH OF SERVICES TO COMMUNITY AND ECONOMY:**

The project expects all the faculty and students to participate in Institutional programmes for rendering services to the local community and to both the formal and informant segments of the economy (Industry, services and agriculture) All programmes are demand based and identified through interaction with the community and economy. With a aim benefit not only to the community ad the economy(through improved productivity, earnings and quality of life) but also to students and faculty through implementation studies, Programmes and researches. Following are such activities for the year 2006-2007, under the categories of Community. Unorganized Sector and Organized Sector.

### **SERVICES TO COMMUNITY: COMMUNITY**

- Watershed development plan surrounding BIT campus(5 Km radius), being prepared by Department of RemoteSensing.
- Water quality assessment of ground & surface water resources in & around BIT, Mesra, conducted by Department of Applied Chemistry and students of M.Tech.(Environmental Science and Engineering)
- “Mass awareness programme for drinking water quality, water management and sanitation techniques” in villages around BIT by Department of Applied Chemistry and students of M.Tech.(Environmental Science and Engineering)
- Development of model village by students of NSS Renovation of well, preparation of soakpit, building smokeless Chullah, and literacy survey
- Computer awareness programme for villagers, being conducted by NSS students.
- Awareness programme on food adulteration, training in detection by simple methods.
- Awareness Programme on Solid waste management, including plastics waste management, by students of Polymer Engineering and Environmental Science and Engineering.
- IT Kiosk in villages: BIT is establishing (initially two) IT Kiosk, in Villages, in space given by District Administration. BIT will provide Internet facility and computer operator, who will help villagers access Internet to access Agriculture Information System Developed by BIT as well as to other information.

### **SERVICES TO COMMUNITY: UN-ORGANIZED SECTOR**

- Awareness and Training Programme for villagers on “Energy cakes, Dhoop making, Tamarind pulp compression, Awala Punching, packaging, medicinal



plant cultivation etc. " 8th and 9th April 2006.conducted by Rural Technology Centre

- Workshop cum Awareness Camp on "Energy Awareness in Community" 20th and 21st April, 2006., organized by Department of Mechanical Engineering
- Training on "Turning and Machining" conducted 15th to 20th May, 2006, by Department of Production Engineering.
- Training on "Welding and Fitting" conducted 22nd to 27th May, 2006, by Department of Production Engineering.
- Training on "Repair and Maintenance of Electrical Household appliances" June 05 to June 10 2006. and 27.11.06 to 2.12.06., conducted by Department of Electrical and Electronics Engineering
- Development & Deployment of Agriculture information System (in Hindi). It is developed by Integrated Information Cell, and being deployed to villages by NSS students.

#### **SERVICES TO COMMUNITY: ORGANIZED SECTOR**

- Development & Deployment of School information System in Hindi

#### **(vi) Improvements in Institutional governance and management and administrative practices**

The major activity improvement in Institutional Governance had been development of Intranet and an Integrated Institute Information System, which is already been used for deploying Question Bank, Course material, On line Registration etc.

Following funds have been for Institutional Development and Quality Improvement:

- |                             |            |
|-----------------------------|------------|
| a) Corpus fund:             | 10.00 lacs |
| b) Staff Development funds: | 5.00 lacs  |
| c) Maintenance funds :      | 5.00 lacs  |
| d) Depreciation funds :     | 10.00 lacs |

#### **INTEGRATED INSTITUTE INFORMATION CELL**

A Campus wide Intranet has been set up in the institute. A group lead by Dr Shraddha Shivani, Department of Management, Mr Sandip Datta and Mr Abhijit Mustafi, Department of Computer Science, has been constituted for design and development of an integrated information system for the Institute. This system will cater to the information requirements of all academic and non-academic departments as well as for the offices of the Deans, the Registrar, Vice Chancellor and the students.

Besides facilitating smooth academic interaction among faculty members and between teachers and students this system will lead to improved governance by ensuring efficient and transparent decision making and planning at all levels in the organization. It is proposed that this system will be completed and deployed with all its modules by the end of the year 2007.

The system will fulfill the following information requirements of the various user groups in the institute:

- Information pertaining to the academic departments
- Information about faculty members
- Information regarding ongoing doctoral research
- Information regarding students
- Information about Staff Quarters

**The system will also enable the following:**

- Upload and download facility for subject wise tutorials and lab assignments, institute wide mailing facilities, global notices etc.
- Online solution for the student registration process
- Providing a software solution to the examination department for result preparation and report generation
- Computerized collection and reporting of Student dues

## **MENTORING**

Mentoring is an ongoing process of the Project as the project requires regular guidance on various difficulties (TEQIP related arena as well as Institutions internal ones), concept clarity, setting pace of implementation, convincing concerned authorities, etc.

The first Mentor visit was on 13<sup>th</sup> April & 14<sup>th</sup> April '06 by Dr. B.K Dhindaw, from IIT Kharagpur. On 10<sup>th</sup> & 11<sup>th</sup> January '07 mentoring was done by Prof. M.K Banerjee, Director NIFFT, Ranchi. Third mentoring also by Dr M.K.Banerjee was conducted on 27<sup>th</sup> April '07 & 8<sup>th</sup> May'07.

## **QUALITY PERFORMANCE AUDIT**

As part of Institutional reforms, the Institutions under the Programme are to establish mechanism for quality performance audit using external agencies. The finding of these audits are used for taking remedial actions to improve performance of the Institutions in the Programme implementation. The current audit assessed (i) Degree of progress on various activities envisaged under the project (ii) improvements in short coming notices by the auditors during conduct of earlier audit.

The exercise is done bi-annually. Auditors evaluate performance of Project Institutions in respect of the following for:

- Implementation of Institutional Projects as described in their Concise Institutional Proposals (CIPs)
- Implementation of Institutional Reforms
- Administrative and Managerial Efficiency improvements
- Quality of Education, Training and Services offered by the Institutions

*The process of auditing involves*

- Filling up of response sheets administered to four major stakeholders namely ViceChancellor, HODs Faculty and students through software made by NPIU in presence of auditor.
- Focused Group Discussions (FGD) with HOD, faculty and students.
- Selective visit to labs workshop hostels and campus.
- Discussion with Vice Chancellor.

The second Audit was on 27<sup>th</sup> & 28<sup>th</sup> April 2006 by Dr. R.K Singh and overall score was 6. The third performance Audit was conducted on 23<sup>rd</sup> & 24<sup>th</sup> October 2006 by Prof. A.K Ghose and the overall score was 7.6. The fourth performance Audit was on 16<sup>th</sup> & 17<sup>th</sup> April by Prof. A.K Ghose and overall score is 8.5.

## **DEPARTMENT OF PHYSICAL EDUCATION AND SPORTS**

The Institute has a well equipped sports complex extending over approximately 110000 sq.mt of land. It comprises of a stadium with 400 meters track, Gymnasium with multigym facilities, Indoor Badminton hall with two courts and Spectators Gallery, Football Ground, Hockey Ground, Lawn Tennis Court, Volley Ball Court, Basket Ball Court, Cricket Ground, Kabaddi Court etc. The sports complex is fully updated with required infrastructural structures necessary for a premier institution for imparting physical education and encouraging sports activities.

### **Organization and activities**

- East Zone InterUniversity Basketball tournament-2006-07 was organized on newly constructed basketball court.  
Inaugurated by: Dr. S. K. Mukerjee, Vice-Chancellor, BIT, Mesra.  
Participants: 20 Teams from East Zone; Winner: Purvanchal University
- Chetan Devraj Memorial Cricket Tournament for East Zone Technical Institutes in January, 2007.  
Participants: 10 Teams from different Institutions

### **Activities of the Year 2006-07**

- *Organised the Chetan Devraj Memorial Cricket Tournament for East Zone Technical Institutes.* Winner: BIT, Mesra, Ranchi; Runnerup: Allahabad Agricultural Institute, Allahabad, U.P.
- *Organized Athletic Meet-2006-07, February 8-10, 2007.*  
Inaugurated by: Dr. S. K. Mukerjee, Vice-Chancellor, BIT, Mesra.  
Price Distribution by: S. K. Satpati, I.A.S.
- Organized an Inter-hostel Football Tournament.  
Winner: University Polytechnic
- *Organized Best Physique competition*  
Winner (Mr. BIT-2006-07): Mr. Rahul Gaurav, Department of Bio-technology.
- *Organised an Inter Hostel Basketball Tournament*  
Winner: Hostel No. 7; RunnerUp: Hostel-6
- *Organized an Inter Hostel Volleyball Tournament*  
Winner: Hostel No 2+3
- *Organised an Inter Hostel Hockey Tournament*  
Winner: University Polytechnic; Runnerup: Hostel No. 6
- *Organised an Inter Hostel Badminton Tournament*  
Winner: Hostel No. 5B; Runnerup: Hostel No. 7

## **NATIONAL CADET CORE**

### **3- Jharkhand Comp. Tech. COY NCC BIT Mesra Ranchi**

**NCC- National Cadet Core**, of BIT Mesra is one of the important component of the institute which imparts Technical training and Physical as well as other programmes of NCC for 4 semesters. We have 200 cadets strength enrollment for EME, Enggrs and Signals. In this session 2006-2007 we imparted training for Drill, Firing and other lecturer classes for all enrolled cadets of NCC. This year the cadets took part in Republic day parade, Independence day parade. The army band gave a supportive music during the celebration parades.

This year in May 2007 for the third time NCC, BIT organized National Integration Camp where 700 cadets from all India both Junior and senior wing boys and girls participated in the camp. Major S. Samanta took part in organizing this camp as the senior most Associate NCC officer.

The camp comprised of different cultural competitions i.e. Solo song, group song, solo dance, group dance, quiz contest & NIC presentation.

Various dignitaries including Chief Minister of Jharkhand Sri Madhu Kodaji, Vice Chancellor Dr. S. K. Mukherjee, other dignitaries from H.R.D. & Army motivated the students with their gracious presence and encouraged for this type of gathering every year.

This unit is officiated by Lt. Col. S. K. Singh and A.N.O.- Major Subir Samanta, Part time ANO- Prof. Saranjit Singh other staff of army and civil staff.

## **NATIONAL SERVICE SCHEME**

### **NSS Event Description**

#### **1. Tree Plantation at BIT, Mesra:**

Inaugurated by honorary Vice chancellor Dr S K Mukerjee on Aug 08` 06. More than thousand plants of different varieties were distributed.

#### **2. Prabhat Pheri:**

On January 26, N.S.S. organised a morning rally maintaining it's past tradition. This morning rally was accompanied by Mr. S.K. Mukherjee (VC), Senior professors and enthusiastic young students of BIT, Mesra.

#### **3. NSS Camp:**

Volunteers visited the neighboring villages like Kaditola, Januari, Panchauli and Turup. The main objective the volunteers were jeweled with was to survey out the condition of the Literacy and Cleanliness. Keeping this by heart volunteers met children of 6-14 age group and they surveyed how many of them are going to school and how many not. They have come up with a plan to open child rehabilitation center for such children.

Keeping the view of computer literacy Men and Women of villages were made to go through 10 days training at BIT Mesra computer laboratory.

#### **4. Literacy Programme:**

N.S.S. began a computer literacy programme for villagers from the nearby villages. This literacy programme started in December during the winter camp, starting with some volunteers. In this semester, more volunteer participated resulting it a big-bang in the computer literacy.

Students are divided into two batches on the basis of their knowledge about computers. Batch-1 contains those who have basic knowledge of MS office and DOS. These students are planned to teach C, C++ languages. Batch-2 contains newcomers. Classes have been running everyweek (Mon-Fri) from 4:10pm to 5:30pm in the lab-4 of R&D building.

#### **Weekly projects of about 30 teams:**

1. Teaching Science/Mathematics/Computer in High/Middle schools like Premchand Vidlaya, Rajkiya Buniyadi Vidyalaya on NH 33, Gondli Pokhar High School in Turup, BIT High, BIT Middle near Outer Co-operative. Volunteers lay stress on creating interest among students, demonstrations, field activities by using special techniques.

2. Teaching Music/Dance/drawing/English/Fun with paper in Primary Schools like Kislaya Vidyalaya near H#6,BIT Primary near O
3. Making Teaching/Learning Aids like Posters, Charts, Models, Puzzles etc. for schools. A book on tribal Children on India and Jharkhand is being compiled.
4. Teaching Domestic Crafts to Young Women in Dhobi Bastis near Outer Co-operative & Sweeper bastis.
5. Running Bal Sanskar Kendras in Bastis and Villages like Pancholi behind H#5, Homebay near BIT More, Nawatoli near Navodaya Vidyaya.
6. Literacy and ageneral education of Mess Workers in different Hostels. Volunteers also teach children of mess workers.
7. Cnducting quizzes in Schools and Organising Science Exhibition. Quizzes are generally based on India, Jharjhand, Our great Leaders.
8. Visiting Children's Home in Ranchi. Volunteers interact with children; organize various competitions in Guru Nanak Home for Handicapped Children in Bariyatu, Nivedita Ashram, and Stephens's blind school.
9. Making posters and Thought Charts which are put everyday on institute main notice board.
10. Helping Rural Students in Polytechnic and BIT.
11. Promoting Physical Activity among Students. Volunteers encourage students for Yoga and meditation Classes and other sports activities.
12. Rural People's Health project. Volunteers teach them about first aid and health tips, self health care, elementary Yoga, Prevention & Cure from addictions and Cleanliness.
13. Making and Maintaining Blood Group Register which used for emergency cases in Apollo and other Hospitals Many students donate blood regularly.
14. Technical Field Studies including nature study, environment study, exposing miracles, treating superstitions using scientific experiments.

#### **Serving As Volenteers When Required:**

1. Sep15-17, 06: Preparation and celebration of Lord Vishwakarma pooja of the institute, conducted by Puja Samiti.
2. Nov 8-12, 06: National youth festival organized by BIT, Mesra.
3. Jan 13-14, 07: Guru Ka Langar.
4. Jan 21-23, 07: Saraswati Puja.
5. Feb 08-10, 07: BIT annual sports meet.
6. Feb 11-12, 07: BITOTSAV'07.

**Special Events:**

1. Aug 11-15, 06: Practice of patriotic songs and other preparations for Prabhat Pheri.
2. Aug 20, 06: Around 150 students from various village schools participated in literary events like poetry competition ,essay writing competition ,speech competition for primary ,middle and high group.
3. Aug 23, 06: Briefing on blood donation, given by RIMS, Ranchi.
4. Aug 24, 06: Tree plantation. 70 trees of neem, seesam, gamhar were planted in BIT dispensary.
5. Aug 28, 06: Blood donation camp held at BIT dispensary students donated blood which was collected by RIMS, Ranchi.
6. Oct 13-14, 06: Pamphlet distribution and conduction of yoga programme of Swami Nirjananand Saraswati.
7. Dec 08-18, 06: special camp for the NSS students was held successfully.
8. Jan 19, 06: National Youth Week celebration. Following programs were held :  
Patriotic song competition.  
Essay competition.
9. Jan 22-25, 07: Practice of patriotic songs, national anthem and national songs.
10. Jan 26, 07: Prabhat Pheri





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|| **EXTENSION CENTRES** ||

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## **EXTENSION CENTRE: ALLAHABAD**

### **A brief profile**

The Extension Centre at Naini (Allahabad) is located at the Raymond crossing on Allahabad-Mirzapur Road on plot B-7 Industrial Area, Naini, Allahabad – 211 010. This Centre was setup in the session 1997-98 with the decision to start B. Tech. Degree programme in Civil, Mechanical and Electrical & Electronics Engineering for the Engineering diploma holders on part time basis. The first batch of students of B. Tech (Part-Time) programme was admitted in January 1998 and so far, three batches of students have completed their B. Tech. Degree programme.

The computer laboratory of this centre has over 100 P-4 computers connected through LAN network and Internet connectivity are available through out the day. The Institute Library has a reasonably good number of text books and Technical Journals are being regularly subscribed by it.

Some of the engineering laboratories developed by the centre are Electrical Machines laboratory, Basic Electrical & Electronics laboratory, Microprocessor laboratory, Digital Electronics laboratory, Control Engg. laboratory, IC Engines laboratory, Manufacturing Processes laboratory, Non-conventional Energy laboratory, Surveying and Geotechnical Engg. Laboratory.

The centre has a moderate play ground, Volleyball Court and Badminton Court. The centre encourage students to organize co-curricular and extra curricular activity such as Games and Sports meet, Cultural meet, Quiz, Debates & Essay competition, Painting & Photographic competition etc at periodic intervals.

The centre is poised for expansion in a big way. The deck has been cleared for a three-storied new Institute building having floor area of 275,000 sq. ft. and the construction work is due to begin soon.

### **Brief Description of Different Departments at B.I.T. Extension Centre, Allahabad.**

The Centre provides full time MCA, BCA and BBA Programme and part time B.Tech degree in various discipline like Civil, Electrical & Electronics and Mechanical Engineering.

#### **Department of Computer Science:**

The Computer Science Department has spacious and well-equipped laboratories with a large number of HP P-D, IBM P4, DELL P4, Compaq P4 and Compaq Celeron computer systems, a Compaq Proliant Server and DELL PowerEdge Servers, with various operating systems and other software. All systems

are networked and the Dept. has 2 Mb Broadband connection for Internet access. The students do project work on networking, web service, multimedia applications, Internet controlling tools, image processing, e-security, artificial intelligence, etc. Recently the Computer Science Department has established links with some neighboring IT industries for better exposure to new development that are taking place through industrial visits and arranging popular lectures of experts from the industries. Teachers of the department are actively engaged in the research work.

#### **Department of Management:**

From time to time, the department organizes guest lectures from experts for the benefit of the students and also provides in-house support to the students of other departments especially in the area of communication skills and management practices. The department has developed a strong liaisoning with industries in the vicinity of Allahabad, where our students undergo practical training to make themselves aware of various problems faced by industries in general. Students do project work in the area of Marketing, Finance, Human Resource Management, Industrial Management under the able guidance of the teachers of the Department.

#### **Department of Civil Engineering:**

The department is at the developing stage. Presently, it is B Tech. (PT) course with intake strength of 30. The department has full time faculty and also takes help of senior faculty of other institutes as visiting faculty. The department has moderately equipped Geotechnical Engineering and Surveying Laboratories and some laboratories are in the process of being established. Teachers of the department are actively engaged in research work. Students of the department have done project work on environmental engg, Rural water supply, Foundation engg, Multi story building construction etc.

#### **Department of Electrical and Electronics:**

The Department of Electrical and Electronics has Basic Electrical & Electronics Lab, Electrical Machines Lab, Digital Electronics Lab, Microprocessor and Control Engineering Lab equipped with MATLAB software. The Department currently conducts only the B.Tech Programme for Part Time students. The students have done projects on High Voltage Transmission, Modern Communication System, Control System, Energy Saving Devices etc. The Digital Signal Processing Lab is being established currently.

#### **Department of Mechanical Engineering:**

The Department has a well –equipped laboratory in the Conventional area of Manufacturing and Mechanical fabrication. It has also a Non-Conventional Energy Resource Laboratories set-up with particular reference to Solar Energy. The

Department has a well-equipped Internal Combustion Engines Laboratory with facilities for the measurement of engine parameters, metering fuel and Exhaust gas conditions, monitoring and Energy Auditing. The Dept. trains students in the field of Design for Manufacturability, Fabrication, Integrated Manufacturing and Machine Tools Design etc. The facilities provided towards this include Conventional Machine shops, Computer-aided Design (AUTO-CAD) Lab. Integrated with computer Science Laboratories.

The Department has developed Non-Conventional Energy Lab. Containing Solar Collector, Solar pyramid drier, Low temperature multistage drier, cooker, Hot water Magic solar bucket etc.

**Department of Applied Science:**

The Department provides service to the students in the area of Mathematics, Physics, Chemistry, Environmental Science etc., The teachers of the department are actively engaged in research work.

**Course offered:***UG Course:*

## Full Time

- ✦ BE (Electronics and Communication Engineering)
- ✦ BE (Computer Science & Engineering)
- ✦ Bachelor of Computer Applications (BCA)
- ✦ Bachelor of Business Administration (BBA)

## Part Time

- ✦ B. Tech (Civil)
- ✦ B. Tech (EEE)
- ✦ B. Tech (Mechanical Engineering)
- ✦

*PG Course:*

## Full Time

- ✦ Master of Computer Applications (MCA)
- ✦ Master of Business Administration (MBA)
- ✦ M.Sc. (Information Technology)

**Faculty position:**

<i>Designation</i>	<i>Professor</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>
<b>Number in Position</b>	2	3	7	6

**Number of Student enrolled/registered with Department:**

<b><i>Semester</i></b>	<b><i>No. of student</i></b>
<b><i>B.Tech (PT)</i></b>	
IIInd semester	15
IVth semester	9
Vth semester	2
VIth semester	43
<b>Total</b>	<b>69</b>

<b>BCA (FT)</b>	
Ist semester	1
IIInd semester	84
IIIrd semester	6
IVth semester	57
Vth semester	3
VIth semester	39
<b>Total</b>	<b>190</b>
<b>BCA(FT)</b>	
IIInd semester	60
IIIrd semester	1
IVth semester	45
Vth semester	15
Addl. semster	1
<b>Total</b>	<b>122</b>
<b>MCA (FT)</b>	
IIInd semester	69
IVth semester	57
Vth semester	31
Addl. semster	1
	158
<b>Total</b>	<b>539</b>

## **Publications by faculty in Journals**

### ***National***

- ✦ Singh, A. K., Shepherd, and Nema. Drying of Hyfrosopic Grain (green Pea) by Solar Cabinet Drier and Fabrications. *National Conference, on Energy and Environment NEE-2006*, 1, 76-81, 2006.



- ✦ Singh, B. K. Assessment of Noise Pollution due to Vehicular Traffic in Allahabad City. *Proceedings of the National Conference* at Sona College of Technology, Salem (T.N). (Accepted for publication).
- ✦ Singh, A. K. Performance Evaluation of GM Model for Prediction of SO<sub>2</sub> Due to Vehicular Traffic. *Proceedings of the National Conference* at M.S.Engineering College Tamil Nadu, (Accepted for publication).
- ✦ Srivastava, P.C. Presented a paper entitled Quasi semi-norm structures in linear lattices. *76<sup>th</sup> Annual Academy of Sciences*, National Academy of Sciences, I.I.T. Mumbai, 2006.

### **Seminar/Symposium/Short-term Course Attended by faculty members**

#### ***National Events***

- ✦ Pandey, R.S. participated in *Faculty Enablement workshop on soft skills* by Training and Placement Division, BIT Mesra, December 21-24, 2006.
- ✦ Singh, B.K. presented a paper entitled Assessment of Noise Pollution due to Vehicular Traffic in Allahabad City. *Proceeding of the National Conference* at Sona College of Technology, Salem (T.N). (accepted for publication)
- ✦ Pandey, R.S. participated in *TECS Week 2007 on Data-intensive Computing*, TATA Research Design and Development Centre, Pune, January 3-7, 2007.
- ✦ Pandey, R.S. participated in *CEP Workshop "AAYAAM-07" on SOA and Semantic Web*, IIT Bombay, March 16-18, 2007.
- ✦ Singh, A. K. attended *Natioanl Conference on Energy and Environment NEE-2006*, Jaipur Engineering College, Jaipur, Nov.25-26, 2006.

### **Student Activities:**

The student activities for the session 2006-2007 was organized and managed by Prof. R.S. Pandey, Prof. In-Charge students welfare and it was assisted by Prof. S.Das, I/C cultural activities, Prof. B.K.Singh, I/C Sports activities, as mentioned below.

- ✦ *BITEC Souvenir– 2006* published for better interaction of the outgoing students.
- ✦ The student cultural committee organized various competitions such as *debate, solo song, group song to promote spirit of healthy competition* among the students on 15th August and 26th January.

- ✦ Conducted *Annual athletic meet* held at BITEC, Allahabad, January 26-29, 2007.
- ✦ Participated in *BITOTSAV – 2007* held at BIT, Mesra, Ranchi, Feb.11-13, 2007.
- ✦ Participated in *20th Annual Sports of BIT Mesra, Ranchi* held at Ranchi during 08.02.07 to 10.02.07

***Prizes won by students at BIT Mesra, Ranchi***

<u>Roll No.</u>	<u>Name</u>	<u>Position</u>	<u>Event/Function</u>
BBA/2011/04	Sonal Sharma	Illrd	Discus Throw/ Annual sports

**Infrastructural Facilities added during the year 2006-07**

***Department of Computer Science***

✦ LCD Projector (Sanyo Make)	1 No.
✦ Autocad Software-2006 for Electrical	10 Sets
✦ UPS (600VA) Dlink Make	4 Nos.
✦ DELL PowerEdge Server	1 No.
✦ Colour Laser Printer-(HP Make)	1 No.
✦ 3 Phase 10 KVA UPS (Pegasus Make)	1 No.
✦ 16 port Dlink Switch (for Networking)	1 No.
✦ Norton Antivirus (Corporate Edition) Software	1 Set

***Department of Electrical & Electronics Engineering***

- ✦ Digital Signal Processing lab has been established.

***Department of Civil Engineering***

- ✦ Existing Geotechnical Engineering and Surveying laboratories have been upgraded and some new laboratories eg. Building Materials testing laboratories are in the coming up stage.

## **EXTENSION CENTRE: JAIPUR**

### **About the BIT Extension Centre, Jaipur**

The BIT Extension Centre Jaipur was established in 1995 in the sprawling campus of the reputed Birla Institute of Scientific Research (BISR) that is well known for its contribution in the field of applied science and entrepreneur development. The Centre caters to the growing need of skilled & quality professionals through the pursuit of knowledge in the field of Education, Research, Consultancy and Training.

### **Academic & Other Activities**

The whole academic activities of the institution revolve around the philosophy that knowledge enhances when it is shared, discussed, practiced and spread. The free flow of information involves: class room presentation, seminars, workshops, training modules, industrial visits, guest lectures from prominent experts, etc.

To meet requirement of practical training and professional exposure to students, the institution arranges project work and summer training in reputed industries. Internal seminars are regularly conducted in the auditorium of the institution. The purpose is to give the students an adequate environment where they can learn subject analysis, presentation skills and interaction with audience. External Seminars are conducted from time to time. Eminent experts from emerging technology areas are invited to deliver lectures on the latest developments and technologies. Such events open a world of knowledge to the students. The institute conducts software development competition each year, in which teams from engineering colleges all over the city participate. Besides these, institution also conducts national and international level seminars/conferences/workshop to give its faculty and students an exposure to new developments in the emerging technologies and trends.

For the overall personality development extra-curricular activities are given due importance along with academic activities. The students organize the activities and as a result, improve their own leadership skills. Cultural events, sports, quiz and debates are organized under the supervision of experts.

### **Campus Placements**

The institution has a placement cell to guide students about their career plan, to train them and to facilitate their placement in reputed organizations. Expert faculty members having vast experience in the area of high learning and industry; the excellent relationship with prospective employers and an intelligent mechanism of analysis of student's interest, strength, weakness, training needs, etc. are the highlighting features of the placement cell. The focus of the placement cell is to train and equip students in such a way that they are gladly accepted by the best

organizations & industry. It operates under the guidance of the placement division of our main campus at Mesra, Ranchi.

## **A Glance To Various Departments:**

### **Computer Science & Engineering Department**

The Department is concerned with the study of the hardware, software, and theoretical aspects of high-speed computing devices and with the application of these devices to scientific, technological, and business problems.

The emerging areas where the department is putting thrust could be mentioned as soft – computing and applications, optimization and control based software, mobile application development, high-level multilingual search, adaptive and self-organized compilers etc.

The department has eight high-tech computer laboratories having over 400 machines of IBM, Compaq, Dell and HP connected to latest state of the art servers. Other laboratories are also been set up, on Unix and CAD and simulations. With the objective of giving the students the best exposure, the Department has the latest versions of all required software such as Oracle, Developer, MS SQL Server, C++, JAVA, Visual Basic, MS Office, Adobe PhotoShop, C, Cobol, etc, and UNIX, Windows NT and Windows OS platforms.

### **Electronics & Communication Engineering Department**

The course covered under this department is BE in Electronics & Communication Engineering

Electronics now days involve in all disciplines of engineering, it provides basic hard ware support to Computer Science, basic control and display systems to all kind of instruments and mechanical and electrical machines. When it combines with communication, it brings miracle technologies in wireline and wireless connectivity and networking like; Satellite Communication, Mobile Communication, Optical Communication, Broad Band SDH & ADSL, Internet and Intranet, Wireless in Local Loop (WLL), Bluetooth, etc. In nutshell, the advancement in the Electronics & Communication Engineering has played the vital role in realization of the concept of 'Global Village'

The department has excellent lab infrastructure in the area of Basic Electronics, Control System & Instrumentation, Integrated Electronics, Analog & Digital Circuits, Semiconductor & Microelectronics, VLSI, DSP, Micro-controller & Microprocessor, Analog & Digital Communication, Optical Communication, Microwaves and Antenna. To give students exposure to software based designing, the department has well equipped simulation lab having software simulation tools like MATLAB, MULTISIM, COMSIM, and Code Composer Studio for DSP, etc.

The department is looking forward to enhance core skill set through research and development in the emerging technologies like; Communication Systems, Software Defined Radio , VLSI, Microwave & Milimeter Wave Circuits, Optical Networks, Microstrip Antennas, Virtual Reality, etc.

### **Management Department**

Matching to the new trends of professionalism in all business practices, the management department of the institution offers specializations in the field of Marketing, Finance, Information Technology (IT) and Human Resource Management. The department has learned teaching faculty qualified at Postgraduate and Ph.D. Levels in Management discipline.

The department is looking forward to enhance its core strength to enter into new knowledge area related to emerging trends like; retail sector, service sector, foreign trade, technology management, etc.

Understanding the requirement of an additional skill set of communication skills, leadership quality, crisis management, language proficiency, etc, the department organizes regular personality development & training programmes, seminars and corporate visits.

### **Animations and Multimedia Department**

Understanding the market demand, three years degree course has been introduced in the Animation and Multimedia Department to train budding artists with the skills of 2D and 3D animation with multimedia application.

The department has skilled and learned teaching staff having academic and industrial experience. The department has excellent lab infrastructure for fine arts, 2D & 3D Animation, acting and well-equipped computer systems for multimedia application. The department has specialized softwares like; MAYA, COMBUSTION, 3DS-MAX, Toon Boom Studio, Adobe Suite, etc.

### **Bio-Informatics Department**

The course covered under this department is two years M.Sc. Degree in Bio-informatics.

The department has excellent lab infrastructure and software tools that include; Molecular bio-lab, PLASTA & FASTA Algorithm Lab, Genomics & Proteonomics Lab, MATLAB & SPSS-bio-informatics tool kit, Bio-PERL, Bio-JAVA, and VC++ with MFC, MYSQL.

## Geo-Informatics Department

The course covered under this department is two years M.Sc. degree in Geo-informatics.

The department offers a unique course at postgraduate level to formulate various application of computer and IT in geological surveys and resource analysis. The department has excellent lab infrastructure and software tools that include; well equipped remote sensing lab, Image Processing tools like; Eardas Imagine, Geomatica, Image Analyst & LICA Photogrammetry Suit and GIS Software tools like; ARC GIS, ARC View, Modular GIS Environment (MGE) & Geomedia Professional & Auto Cadd Map 3D

### Course offered:

#### UG Course:

- ✦ B.E. (Computer Science & Engineering)
- ✦ B.E. (Electronics and Communication Engineering)
- ✦ Bachelor of Computer Application
- ✦ Bachelor of Business Administration
- ✦ B.Sc. (Animation & Multimedia)

#### PG Course:

- ✦ Master of Computer Application
- ✦ Master of Business Administration
- ✦ M.Sc. (Geoinformatics)
- ✦ M.Sc. (Bioinformatics)

### Number of Student enrolled/registered with Department

<b>Semester</b>	<b>No. of students</b>
<b>B.Sc. (A&amp;M)</b>	
Ist semester	68
IIIrd semester	55
<b>BE</b>	
Ist semester	82
IInd (G) semester	3
IIIrd semester	75
IVth semester	4
Vth semester	61

<b>MCA</b>	
Ist semester	45
IIIrd semester	42
Vth semester	73
<b>MBA</b>	
Ist semester	45
IVth semester	35
<b>M.Sc. (Geo-informatics)</b>	
Ist semester	13
<b>M.Sc. (Bio-informatics)</b>	
Ist semester	23
<b>Total</b>	<b>624</b>

**Faculty Position:**

<i>Designation</i>	<i>Professor</i>	<i>Reader</i>	<i>Lecturer (Sel. Grade)</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>	<i>Research Staff</i>
<b>Number in Position</b>	3	2	1	3	28	7	11

**National (Conference/Seminar paper presentation by faculty members)**

**National Events:**

- ✦ **Invited Talk** on the topic Spreading Range of Microwave Applications: New Stimulus and Scope for Applied Research by Dr. Abhinav Dinesh in *National Conference on Recent Advancements in Microwave Technique and Applications*, University of Rajasthan, Jaipur October 6-8, 2006.
- ✦ **Invited talk** on topic Automation Trends in Design and Manufacturing in Electronics and Scope for Interdisciplinary Development by Dr. Abhinav Dinesh *Seminar on Automation & advances in Manufacturing Strategies* Organized by The Institution of Engineers-India, Jaipur January 27-28, 2007.
- ✦ Soumya Banerjee presented a paper entitled Automation and Computational Intelligence in Manufacturing-A leading Era. *All India Seminar on Automation & advances in Manufacturing Strategies*, The Institution of Engineers, Jaipur, January 27-28, 2007.
- ✦ Dr. Ram Prakash presented a paers entitled Spectroscopic Divertor Plasma Characterization in ASDEX Upgrade Tokamak. *21<sup>st</sup> National Symposium PLASMA-2006 on Plasma Science and Technology MNIT*, Jaipur, June 19-23, 2006.

- ✦ Mr. G.P. Mishra presented a paper entitled Leadership Style and Organisational Effectiveness for Middle Level Managers. *5<sup>TH</sup> National Conference, Organised by FMS Gurukul Kangri University, Haridwar, Dec. 19-22, 2006.*
- ✦ Mishra G.P. presented a paper entitled Leadership Style and Organisational Effectiveness. *Global Organization Development Summit (GODS) SDMMID Campus MYSORE, Jan 20, 2006.*

### Ongoing Project (s)

SL	Research project topic*	P.I./ Co-P.I.	Funding agency	Amount Sanctioned
	Promotion of Environment friendly plasma nitriding process for surface hardening of industrial component	Dr. Ram Prakash, Lecturer, Department of Physics	DST, New Delhi and NEI, Jaipur	

\*Besides this, some projects on emerging engineering applications are submitted to government research agencies for funding. Presently, these are in evaluation stage.

### Publications by faculty in Journals

#### International

- ✦ Banerjee, S. Simulating Targeted Attacks Using Research Honeypots Based on Ant Colony Metaphor *European Journal of Scientific Research*, 17, 16-31, 2007.
- ✦ Banerjee, S. Soft Modeling of Group Dynamics and Behavioral Attributes Conceptualizing Stigmergic Optimization. *European Journal of Scientific Research*, 15 (2), 12-24, 2006.
- ✦ Mr. Soumya Banerjee Evaluation of Cognitive Behavior Using Hybrid Intelligence. *IEEE Press Proceedings, CSIT 2006*
- ✦ Banerjee, S. Automated Testing in Software Engineering: Using Ant Colony and Self-Regulated Swarms. *ACTA Press* (Accepted for Publication)
- ✦ Banerjee, S. OptiTest: Developing Optimized Test Case Set in Automated Debugging for Program Components Using Hybrid Intelligence in Congress on Engineering, *WCE. IAENG -ISBN: 978-988-98671-5-7*, London, 2007.
- ✦ Prakash, R. Spectroscopic Divertor Characterization and Impurity Influx Measurements in ASDEX Upgrade Tokamak. *IPP*, 10/31, 1-35, 2006.



- ✦ Prakash, R. Investigation on Tungsten Walls at ASDEX Upgrade. *33<sup>rd</sup> European Physical Society Conference on Plasma Physics, ENEA, Rome, Italy, June 2006.*

### **Other worth mentioning events**

Invited Seminar Presentation by prominent experts:

- a) Dr. Surendra Pal, Deputy Director, & Out standing Scientist, ISRO Satellite Centre Bangalore on 'Perspectives in Satellite Communication' on October 9, 2006
- b) Mr. Rakesh Malik, Vice President – Corporate Affairs, Siemens Public Communication Networks Ltd. On " Latest Trends in Mobile Communication Technology" on October 28, 2006

## **EXTENSION CENTRE: KOLKATA**

The Kolkata Extension Centre was established in 1995. This Centre offers academic programmes in Computer applications and Business Management. The Centre has most modern computer laboratories, a well-equipped library and other academic infrastructure. The Centre, located in the southern part of the city, is well connected with the rest of Kolkata. The extensive 31, 000 sq feet premises( another new area of 10,000sq.ft.(approx.) has been which includes covered space of 5500 sq.ft and open terrace of 4025 sq.ft) of the Centre includes a spacious computer laboratory with a server room, several lecture rooms, a seminar hall, and a well-equipped library with books, journals and an e-library. Students have free access to online journals through ACM, IEEE and Emerald-online. The whole Centre is networked both LAN and Wi Fi System and internet facilities are provided through a 128 kbps leased line.

The computer laboratory has 110 modern HP and Dell PC's, and another 30 Compaq machines. The Centre will very soon offer high-class professional multimedia courses, for which the Dell PC's are specially configured. The Laboratory has latest software ranging from C, Turbo C++, Java, VisualStudio.net, etc, to Oracle 9i, Photoshop 9, Adobe Writer, Flash 8, Dreamweaver 8 and Rational Rose. Platforms include Windows 2000, Windows 2003 Server, Windows Workstation version, Red Hat Linux 4, etc.

All students of last batch of MCA have secured campus placements in renowned software organizations such as IBM Global Services, Accenture, Aricent Communication Software, TCS, Wipro, HP, Zensar, Sarangsoft, Computer Sciences Corporation etc . These students are doing their final semester projects in various organizations like CTS, WIPRO, ISI Calcutta, Jadavpur University, Electra Design automation, IBM GLOBAL, Sunrise software, Aricent, Agilent Technologies, TCS. They are doing their projects on different platforms like R&D, Networking, Image Processing, VLSI design, Database software.

The faculty at the Centre has a range of teaching, research and industry experience in Digital Image Processing, Mobile Computing, Distributed and Parallel Computing, Agile Programming, and Data Warehousing and Mining, Industrial Marketing, Corporate Finance, HR and Organizational Behaviour, Entrepreneurship, Industrial Relations. Many of them are also actively involved in training and development programmes as well as consultancy for different and public sector organizations.

Guest lectures are also delivered regularly by eminent faculty from IIT Kharagpur, Jadavpur University, Burdwan University, B.E College (Shibpur), Bengal Institute of Technology etc.

### **Computer Laboratory facility at BIT Kolkata Extension Centre**

The Centre's Computer Laboratory currently boasts of a PC strength of 110 (soon to be expanded to a strength of 150+), all of renowned international brands like Compaq, Dell, etc. There are also two servers at present, one for Windows 2000 networking, the other for Linux networking. The entire Computer Laboratory is networked internally through high-performance Netgear switches, and the Centre is connected to VSNL's 128Kbps leased-line through a high-performance Cisco router. The Computer Laboratory also boasts of two high-quality laser printers.

The Computer Laboratory uses various softwares as part of the professional courses that it offers, like the standard language processors (viz., C, TurboC++, Java, VisualStudio.net, etc.), as well as industry strength softwares for multimedia, project development and for learning software engineering methodologies (specially required by the quality software and consultancy companies) like Rational Rose (from IBM Corporation), Oracle 9i Enterprise Version (from Oracle Corporation), Photoshop 9 & Adobe Writer (from Acrobat), Flash 8 & Dreamweaver 8 (both from Macromedia). There are also standard OS support platforms like Windows 2000 & 2003 Server and Workstation version, Red Hat Linux 4, etc. All in all, the Computer Laboratory at the Centre is fully equipped to cater to the rigorous demands of the present and future professional and academic community of students, teachers, and industry personnel.

### **Library Facilities at the Kolkata Extension Centre**

The library currently has a stock of books for the following streams: BCA, BBA and MCA. It remains open for the purpose of reading from 9 hrs. to 19.30 hrs. The total number of books counting upto 4015 (approx) cater 450 students. The books are segregated under three sections viz. general, reference and text. The library maintains one copy of all the titles for the reading section. There is another set of all the titles for reading and issuance by the faculty members only. The reference and textbooks are allowed to be issued for 3 days for UG and for 7 days for PG students. However, general books can be issued for two weeks.

The library subscribes four magazines on computer science (monthly), four on management (weekly/ bi-weekly), one in bioinformatics (monthly) and five general magazines (weekly). Five newspapers are also subscribed. Most importantly there is a separate enclosure earmarked for the e-library. Students have free access to online journals through ACM, IEEE (fulltext) and Emerald-online (fulltext). This facility

further research activities. The library also maintains an archive of students' projects since the inception of the Kolkata Centre. A software for day-to-day operations of the library has been developed. At a given time 50 students can comfortably sit and study. The management of the library is looked after by a Library co-ordinator, two Assistant Librarians and a supporting staff.

#### **Course offered:**

##### *UG Course:*

- ✦ Bachelor of Computer Applications
- ✦ Bachelor of Business Administration

##### *PG Course:*

- ✦ Master of Computer Application
- ✦ M.Sc. (Geoinformatics)
- ✦ M.Sc. / PG Diploma (Bioinformatics)

#### **Faculty position:**

<i>Designation</i>	<i>Reader</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>
<b>Number in Position</b>	2	10	3

#### **Number of Student enrolled/registered with Department:**

<i>Semester</i>	<i>No. of students</i>
<b>BCA</b>	
Ist & IInd semester	156
IIIrd & IVth semester	157
Vth & VI semester	22
<b>BBA</b>	
Ist & IInd semester	133
IIIrd & IVth semester	122
Vth & VI semester	
<b>MCA</b>	
Ist & IInd semester	91
IIIrd & IVth semester	95
Vth & VI semester	68
<b>M.Sc./PG Diploma (Bioinformatics)</b>	
Ist & IInd semester	48
<b>M.Sc. (Geoinformatics)</b>	
Ist & IInd semester	24

**Project submitted during the year 2006-2007:**

<b>SL</b>	<b>Research project topic</b>	<b>P.I./ Co-P.I.</b>	<b>Funding agency</b>	<b>Amount Sanctioned (Lakhs)</b>
1	Managing During Mergers Problems of Cultural Transition (A cross-organizational study)	Dr. Debangshu Chakraborty	UGC	7.71

**Seminar/conference/short term course conducted by the Department.  
Number of delegates****Report on 2<sup>nd</sup> International Conference On Information Systems Security (ICISS 2006)**

The conference was held at Kolkata from December 17-21, 2006 jointly with the Centre For Distributed Computing at Jadavpur University, with Birla Institute Of Technology Mesra, Indian Statistical Institute, Kolkata, George Mason University, USA. BIT Kolkata Extension Centre hosted the tutorials of ICISS 2006 on December 17-18, 2006.

***Tutorial chairs:*** Prof. R.T. Goswami of BIT Kolkata Extension Centre  
Dr. Pinakpani Pal Asst. Professor ISI, Kolkata.

- ✦ Report on the Workshop on the Current Trends In Bioinformatics (CTB-06)  
Birla Institute Of Technology Mesra, Extension Centre, Kolkata in collaboration with the Computer Society Of India, Kolkata Chapter has organized a Workshop on Current Trends In Bioinformatics held during June 30, 2006 - July 01, 2006.

**Publications by faculty**

- ✦ Sarkar, A. D. Agent-based Performance Analysis in Grid Environments, *proceedings of National conference on Recent Trends in Information Systems (ReTIS – 06)* July 2006.
- ✦ Sarkar, A. D. and Mukherjee, N. A Study on Performance Analysis Tools for Applciations Running on Large Distributed Systems. *International Journal of Information and Computing Science (IJICS)* 9 (2), 2006.
- ✦ Sarkar, A. D., Roy, S., Biswas, S. and Mukherjee, N. An Integrated Framework for Performance Analysis and Tuning in Grid Environment. *Web Proceedings of*

*the International Conference on High Performance Computing (HiPC '06)*, December 2006.

- ✦ Ghosh, B. Business Ethics, *Journal of Human Values*, Vol. 12(1), 2006.

### **Book Publication:**

- ✦ Dr. Debangshu Chakraborty (Co-author) *Culture, Society and Leadership: Spiritual Perspectives*, ICFAI University Press, 2006.
- ✦ Dr. Debangshu Chakraborty (Co-author) *Human Values and Ethics: Achieving Holistic Managerial Excellence*. ICFAI University Press: 2006.

### **Seminar/Symposium/Short-term Course Attended by faculty members**

#### ***International Events***

- ✦ Goswami, R. T., Chaudhuri, S., Dutta, A., Chatterjee, R. K., Sarkar, A. D., and Mukhopadhyaya, S. attended *International Conference on Information System Security*, BIT, Kolkata and ISI, Kolkata, December 17-21, 2006.
- ✦ Goswami, R. T. was the Tutorial Chair for the *International Conference on Information System Security (ICISS)*, 2006.
- ✦ Sarkar, A. D. attended *5th Asian International Mobile Computing Conference (AMOC 2007)*, January 2007.

#### ***National Events***

- ✦ Goswami, R. T., Chaudhuri, S. Dutta, A., Chatterjee, R. K. attended the *workshop on Current Trends In Bioinformatics (CTB-06)*, BIT, Extension Centre Kolkata, June 30-July 01, 2006.
- ✦ Goswami, R. T. was the Joint Convenor for the *workshop on Current Trends In Bioinformatics (CTB-06)*.
- ✦ Goswami, R. T., Chaudhuri, S. Dutta, A., Chatterjee, R. K. Sarkar, A. D., Mukhopadhyaya, S. participated in the *National Convention Computer Society of India, Kolkata Chapter*, Science City, Kolkata, November, 2006.
- ✦ Goswami, R. T., Chaudhuri, S. was the session chair for two different session in the *National Convention* organized by Computer Society of India, 2006.
- ✦ Goswami, R. T., Chaudhuri, S. Participated in *National Conference on Trends in Advanced Computing* by the Department of Computer Science, Tezpur University, March 22-23, 2007.

- ✦ Goswami, R. T., Jana, D. Tarafdar, D. and Goswami, R. T. Delayed propagation of new technology from laboratory to field. *CSI Communications*, April 2006.
- ✦ Dutta, S. Presented the paper entitled A Framework to initiate the process of Innovation in Indian Small and Medium Enterprises. *International Conference of Innovation and entrepreneurship: Agenda for the 21st Century*, Xavier Institute of management Bhubaneswar (XIMB), 2006.
- ✦ Dutta, A. Presented a paper entitled defusion to Refusion: A New Approach to Edge Detection. *National Conference on Range Technology, 2006 (NACORT 2006)*, presented by Integrated Test Range, DRDO, Chandipur, Orissa, November 28-30, 2006.

### **Student Activities**

- ✦ Our MCA and BCA students took part in almost all events of the *Bitotsav'07* and *Jadavpur fest*. One of the BCA final year students bagged a prize the Jadavpur University fest.
- ✦ All the students of 2K4 MCA has been placed through campus placements In the renowned multinational company.
- ✦ 2K5 batch Students have organized freshers' welcome on September 21, 2006

### **Awards/ citations bestowed on faculty members and students:**

- ✦ Dr. Debangshu Chakraborty, Department of Management has been invited to offer *in-house training programmes Managerial Effectiveness By Human Values, Leadership and Fellowship and Stress Prevention for the Senior and Middle level Executives* of the Companies like BPCL, IPCL, IFFCO, SAIL, Power Grid Corporation, NTPC

## **EXTENSION CENTRE: LALPUR**

The Institute first started a Center for Continuing Education at Lalpur in Ranchi, initially with part-time postgraduate M.E. courses in the disciplines of Mechanical, Civil, Electrical and Electronics Engineering, for the benefit of officers working in various Ranchi based Public Sector Undertakings and private industries such as, MECON, RDCIS-SAIL, HEC, COAL India Limited, CEMPDIL, Shriram Ball-bearings Limited, Usha Martin Industries Limited, Nationalized banks, etc, who wished to upgrade their qualifications. Part-time evening courses were offered for first the M.E. then subsequently the MBA, MCA and DCA courses with laboratory classes being conducted on Sundays and holidays at the Mesra campus. This Centre is now named the Lalpur Extension Centre.

In 1997 the Institute started the full time courses, B.Sc. Computer Science and B.Sc. Electronics for girls, and in 1998 the BCA course, again for girls only. The fact that these were extremely successful led in 1999 to the introduction of the BCA course for boys also. The M.Sc. Information Technology and M.Sc. Electronics and Telecommunication courses for girls and BBA course for girls and boys were introduced in 1999.

Quality is of paramount importance to the Department of Management at the Lalpur Extension Centre. The Department has access to an excellent library with books, journals and periodicals as well as computer laboratories with broadband connectivity, latest software and online journals. The Center has its own official website ([www.biteclalpur.ac.in](http://www.biteclalpur.ac.in)), functioning from 16th March, 2007. The faculty members at the Lalpur Extension Centre have considerable academic and corporate experience, as do the adjunct from other department of the institute, the distinguished visiting academicians and the professionals from industry.

Currently the Lalpur Extension Centre has over 1904 students on its rolls, of which almost 597 are postgraduate students of the Lalpur Centre organize their own cultural and extra-curricular events, and also take active part in sports and cultural events organized at Mesra.

### **Campus placements**

Final year students participate in campus placement at the main campus at Mesra, and secure excellent placements. The Placement activities are carried out by a dedicated placement cell, comprising a team of training and placement student coordinators under the supervision of the faculty-in charge, which has initiated in overwhelming response in the placements. All possible guidance and support is offered to the students resulting in a rewarding placement level. Accepted as a premier center for technical and management education, the center have been



successfully placing the computer science students consistently in the reputed organizations like: INFOSYS, HCL Technologies, TCS, COGNIZANT, ACCENTURE, WIPRO, GOLDMAN SACHS etc and the management students in HCL Infosystems, HCL Commnet, ICICI, UTI, Goodyear, Pantaloon, IDBI, Reliance, ISPAT Industries, Bluestar etc.

**Course offered:**

*UG Course:*

Full time

- ✦ Bachelor of Computer Applications
- ✦ Bachelor of Business Administration

*PG Course:*

Full Time

- ✦ Master of Computer Applications
- ✦ Master of Business Administration
- ✦ M.Sc. (IT)

Part Time

- ✦ Master of Business Administration
- ✦ M.Tech. (Computer Science)

**Faculty position:**

<i>Designation</i>	<i>Reader</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>	<i>Teaching Assistant</i>
<b>Number in Position</b>	2	16	6	4

**Number of Student enrolled/registered with Department: (as on February 2007)**

<i>Semester</i>	<i>No. of students enrolled</i>
BCA	630
BBA	677
MCA	355
MBA	173
M.Sc (IT)	57
M.Tech. (Comp. Sc)	12
Total	1904

### **Publications by faculty in Journals**

- ✦ Bhattacharjee, V. and Shalini, S. Object Oriented Database Management System. *International Journal PCTE Journal of Computer Science*, 2, 1, 2006.
- ✦ Rajnish, K. and Bhattacharjee, V. Complexity of development Time: A study. *Journal of Theoretical and Applied Information Technology [JATIT]*, 3 (1), 63-70, 2007.
- ✦ Rajnish, K. and Bhattacharjee, V. Class Cohesion: An Empirical and Analytical Approach. *International Journal of Science & Research. (ITSR)*, (Accepted for Publication).
- ✦ Rajnish, K. and Bhattacharjee, V. An Analytical and empirical Approach to class in heritage Metrics. *International Journal of Information Technology. [IJIT]*, (Accepted for publication).
- ✦ Mukherjee, S. Green Marketing CSR" Growth. *A MTI, SAIL Publication*, 34(1) 2006.

### **Publications by faculty in Seminar Proceedings**

#### ***International***

- ✦ Sahai, A. A Holistic View to improve overall quality of life. *Proceedings of Third International Conference On New Direction In The Humanities*, University of Cambridge (UK), Jan-June, 06 <http://HO5.cg.publisher.com>.
- ✦ Sahai, A. presented a paper Management solution with a spa spa mindset. *22nd annual conference of International Association of Management (IA.M/A.M)*, Norfolk Virginia USA, 22 (01), 188-193, January-June 06.

### **Seminar/Symposium/Short-term Course Attended by faculty members**

#### ***National Events***

- ✦ Bhattacharjee, V., and Rajnish, K. Cohesion Metric for Object Oriented Design Second *National Conference on Innovation in Information and Communication (NCIICT 2006)*. Coimbatore, July 7-8, 2006.
- ✦ Bhattacharjee, V. and Rajnish, K. A New Metric for Class Inheritance Hierarchy: An Illustration. *National Conference on Emerging Principles and Practices of Computer Science & Information Technology (EPPCSIT'06)*, Ludhiana, Aug18-19, 2006.
- ✦ Bhattacharjee, V. . Mahanti, P. K. and Rajnish, K. Measuring Class Cohesion: An Empirical Approach. *International Conference on Computer Applications in*

*Industry and Engineering CAINE*, Las Vegas, Nevada USA, Nov. 13 –16 2006.

- ✦ Bhattacharjee, V., and Rajnish, K. *National Conference on Methods and Models in Computing (NCM2C 2006)* JNU, New Delhi, December 18-19, 2006.
- ✦ Bhattacharjee, V. The soft Computing Approach to Program Development Time *International Conference on Information Technology (ICIT-2006)*, Bhubaneswar, December 18-21, 2006.
- ✦ Bhattacharjee, V., Neogi, M., and Mahanti, R. Software Development patterns in University Setting: A Case Study. *National Seminar on Recent Advances on Information Technology (RAIT2007)*, Dhanbad February 26-27, 2007
- ✦ Bhattacharjee, V., Neogi, M., and Mahanti, R. presented a paper entitled Evolution of Software Process Models. *National Conference on Technological Advances and Emerging Societal Implications (TAESI-2007)* Rourkela, March 25-26, 2007.
- ✦ Priyam, A., and Tiwary, N. P. attended a *Faculty Enablement Workshop on Softskill*, by Training & Placement Division, B.I.T. Mesra, December 21-24, 2006.
- ✦ Rajnish, K. and Bhattacharjee, V. presented a paper entitled Cohesion metric for OOD NCITCT-06 PSG College Of Tech Coimbatore July 7-8, 2006.
- ✦ Rajnish, K. and Bhattacharjee, V. and Mahanti, P.K. presented a paper entitled Measuring class cohesion: An Empirical approach, *CAINE-06*, Las Vegas, Nevada, USA, November 13-15, 2006.
- ✦ Rajnish, K., and Bhattacharjee, V. presented a paper entitled A New Metric for class inheritance hierarchy: An Illustration. *EPPCSIT'06*, GNOEC, and Ludhiana, August 18-19, 2006.
- ✦ Rajnish, K., and Bhattacharjee, V. presented a paper entitled Class cohesion and Development Time: Study, *NCM2C-06*, JNU, Delhi, and December 18-19, 2006.
- ✦ Sanjay Kumar, and Bhattacharjee, V. An Expert Case –Based Framework for software Cost Estimation. *National Conference on Soft Computing Techniques for Engineering Application (SCT 2006)*, NIT, Rourkela, March 26-27, 2006.
- ✦ T. K. Banerjee, Mukherjee, S. K., and De, S. attended *Business optimisation Research wave*, NITIE Mumbai, February 15, 2007.
- ✦ Sandeep N. Sahdeo, attended *Management Teacher Programme* organized by IIM, Kozhikode, September 11-16, 2006.

- ✦ Choudhury, S. attended *Indian Marketing summit*, Organized by Birla Institute of Management Technology, India Habitat Centre, Greater Noida (U.P), Jan 8-9, 2007.
- ✦ Sinha, A. K. Jha, A. N., and Haran, H. presented a paper entitled Growth strategies to improve Balance of Payment Condition of India Under liberalized environment. *National seminar on organizational strategies and processes for meeting challenges of growth*. Management Training Institute (MIT) SAIL, Ranchi, March 14-15, 2007.
- ✦ Choudhury, S. attended an Indian Marketing Summit, Indira Habitat Centre, New Delhi, Birla Institute of Management Technology. Greater Noida (U.P), January 8-9, 2007.

## Student Activities

INTERACT SOCIETY (Breaking the ice)	To provide students with facilities for enhancing the approach towards various problem faced in the life and giving a platform to the students to enhance their interactive skills & unproven their attitude towards career & life.	<i>Mock – CAT</i> Quest - @K6 (A fun event) Seminar conducted on Stress handling and meditation
DEBATING SOCIETY (Break out of your shell)	To provide a platform to the students where they can interact with each other & enhance their public speaking skills.	CATALYST (It comprise written test, GD/PI for MBA aspirant)
NEWS AND PUBLISHING SOCIETY (We promote talent)	To provide a platform to enhance the communication & writing skills, which help them to come up with an outstanding performance in today's competitive world.	BUSINESS BAAZIGAR (Presenting new ideas), Seminar on CAT – 2006, “VIGYAPAN” An ad-mad show and fun geometry round.

FINE ART SOCIETY (Zoom your creativity)	To bring out the hidden creativity & giving the students a platform to exhibit it.	SRIJAN – 06 (Mega event of Art and Craft exhibition), Rangoli, Tattoo, Alpana, Painting, Collages, etc.
BIZWIT	To develop business acumen amongst future managers	B.Plan COMP – FEB 07

## **EXTENSION CENTRE: NOIDA**

BIT, Mesra in the year 1998, has established one of its extension center at NOIDA. This is an advantageous position compared to other extension centers of BIT in terms of its location near capital region and gateway to many IT and other corporates at Greater NOIDA, Gurgaon and Delhi besides NOIDA itself.

Starting with its humble beginning with a few students in BCA course, the centre is now imparting quality education to about 900 students through various academic programmes like BCA, MCA, BBA, MBA and B.Sc. (Animation & Multimedia). The centre is well equipped with computer labs, animation & multimedia lab. & Studio, The computers are connected in LAN with Internet facility. The centre also has a well equipped library and is subscribing to e-journals. It has its own auditorium to accommodate about 300 persons, for conducting seminars, workshops and other student activities.

The campus registers scholars for PhD. programmes in Management & Computer Science. While the centre has a strong core faculty in all the related subjects, it has the location advantage to engage guest faculty from the Industry and other academic institutions for specialized lectures. Its placement cell is very active in getting the students placed with the Industry.

### **New Courses introduced**

The model system technologies courses and laboratory learning for Ph.D. programme proposal between University of Bologna and University of Ferrara (Italy) and Birla Institute of Technology (India) headed by Prof. S.C. Goel, Director, Birla Institute of Technology, Extension Centre, NOIDA are in the process of Collaboration.

The modalities are also in the process to use experience of foreign collaborators in distance learning and explore potential solutions for the setting up of a full fledged distance learning Centre in Birla Institute of Technology in India with all consequent possibilities for education offerings

### **Course offered:**

#### *UG Course:*

- Bachelor of Computer Applications
- Bachelor of Business Administration
- B.Sc. (Animation & Multimedia)

#### *PG Course:*

- Master of Computer Applications
- Master of Business Administration

**Faculty position:**

<i>Designation</i>	<i>Professor</i>	<i>Associate Prof.</i>	<i>Reeader</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>
<b>Number in Position</b>	2	1	2	3	23	1

**Number of Student enrolled/registered with Department:**

<b>Semester</b>	<b>No. of students</b>
<b>B.Sc. (A&amp;M)</b>	
Ist semester	87
IIIrd semester	71
IVth semester	19
<b>MCA</b>	
Ist semester	62
IIIrd semester	64
Vth semester	43
<b>MBA</b>	
Ist semester	55
IVth semester	52
<b>Total</b>	<b>453</b>

**Seminar/conference/short term course conducted by the Department**

- ✦ A Short Term Course and Workshop on Compressible Internal Flows  
*Venue-* BIT, Noida  
*Duration-* Jan 15-19, 2007  
*Convener-* Prof. S.C. Goel, Director  
*Chief Guest-* Dr. H.C.Pande, VCE, BIT  
*Dignitaries-* Dr. Edward, M. Gretizer  
*Key Note Address-* Dr. A.K. Chatterjee  
*Brief Report-* The Course provided physical principles governing the behavior and performance of propulsion systems of practical interest.
- ✦ Rural India Calling A Seminar on Emerging Trends  
*Venue-* BIT, Noida  
*Duration-* Jan 7, 2006  
*Convener-* Dr (Mrs.) Asha Prasad

*Chief Guest-* Mr. Vinay Shankar, IAS, Retd. Former Gen. Sect. (Govt. of India)  
*Dignitaries-* Mr. V.Venkatesh, GM (N) HLL  
*Key Note Address-* Mr. M.B. Athray  
*Brief Report-* Brain Storming of Rural India Challenges  
*Press Coverage-* Amar Ujjala, UP, The Times of India, Delhi

✦ A Seminar on HR Professionals in Global Village: Challenges & Opportunities

*Venue-* BIT, Noida

*Duration-* Dec 14, 2006

*Convener-* Dr (Mrs.) Asha Prasad

*Chief Guest-* Mr. Y. Andlay, MD, Nuclear Software Engineering

*Dignitaries-* D.M. Reddy, Chief Operating Officer, Coobrose India Ltd.

*Key Note Address-* P.V. Bhide, Group President HR, JK Group

✦ Indian Animation Next Hub 2010

*Venue-* BIT, Noida

*Duration-* 16 April' 06

*Convener-* Dr. C.P. Srivastava

*Chief Guest-* Mr. Anand Gurnani, MD, Animation Express

*Dignitaries-* Mr. R. Rao, MD, Dhruv Interactive

*Key Note Address-* Mr. Paresh Mehta, Gecko Animation, Mr. Rahul Bakshi,

Focus Creation: Prof. M. M. Pant

### **Books / Monograph Publications by faculty**

- ✦ Pandeya, T. (2007). *Consumer Behavior: Concept and Application* New Age Publisher:
- ✦ Ray, S. K. (2006). *Formal Languages and Automata Theory*. Vrinda Publications Pvt. Ltd.
- ✦ Sharma, V. (2006). *Principles and Practice of Management*. Sun India Publications
- ✦ Sharma, V. (2006). *Fundamentals of Information Technology*. Sun India Publications
- ✦ Gupta, S. L. and Bahadur, S. (2006). *Business-to-Business Marketing (Indian Context)* Wisdom Publication.



## **Publications by faculty in Journals**

### ***National***

- ✦ Prasad , A. Power Sector Reform in Delhi. *Indian Journal of Industrial Relations*, 42 (42), 203, 2006.
- ✦ Pandeya, T. Making a Great Advertisement. BVIMR, *Management Edge*, 3 (3), 2006.
- ✦ Pandeya, T. Impact of humor in Advertisements: An Analytical perspective. *Journal science Tech. Entrepreneur*) accepted for publication).
- ✦ Gupta S. L. An Exploratory Study on Trends in E – Retailing Industry in India - A Case Study on Shopping Mall's. *Proceedings of International Conference on Bridging Digital divide(ICBDD 2007)*.

## **Seminar/Symposium/Short-term Course Attended by faculty members**

### ***International Events***

- ✦ Sharma, V. Knowledge Management- A HR tool to get ompetitive- Edg An Empirical study in telecom Sector. *7<sup>th</sup> International Conference at India International Habitat Centre*, New Delhi, Jan 3-5, 2006.
- ✦ Sharma, V. presented a paer entitled attended Competitiveness of an Organization – A-KM perspective. *8<sup>th</sup> International Conference on India Investment Destination*, Nation Academy of Agricultural Sci. (NAAS) Pusa, New Delhi, Jan 2007.

### ***National Events***

- ✦ Gupta, S.L., Bahadur, S. and Singh, P. Attended a *Nationl Conference on New Approaches to Insurance Business Market & Customers Expectations*, FICCI, New Delhi, Feb. 16, 2007
- ✦ Sharma, V. attended *SPSS faculty Development Programme*, I.P. University, Delhi, October 6-30, 2006.
- ✦ Singh, P. Joshi, M., Kumar, A., and Prateek, R. Attended a *Faculty Enablement Programme*, BIT, Mesra, Ranchi, Dec. 21 – 24, 2006.
- ✦ Verma, M. attended a *Workshop on Library Automation and Networking*, JNU Campus, DELNET, Feb. 22-24, 2007.

## Student Activities

- I. The Extension Centre organized its annual cultural festival *BITUTSAV-07* on 31.3.07. The theme for this year fest was '*INCREDIBLE INDIA*'. The chief guest for the fest was the Director of the centre Prof. S.C. Goel. The students displayed various colors of India. They presented dances of various states, the animation students presented skits and dramas with social messages. The students also participated in *Antakshri* and debates. Some students sang melodious songs of the yesteryears. The vote of thanks was given by the Additional Registrar, Shri S. Dua.
- II. An *Inter college cricket tournament* was organized in which students from all courses and semesters of the NOIDA campus participated. The winner of the tournament was MCA IV semester students of 2005 batch.
- III. During BITUTSAV-2007 B.Sc. (Animation & Multimedia) department organized *sketching and painting exhibitions* of the students for a week in the Institute.
- IV. A *Four Day trip to Bhimtal Centre* was also organized for the BAM students so as to enable them to have outdoor study experience from 6 to 9 April, 2007.
- V. A documentary film, *Floating Lamp* was presented by Mr. Rajesh Jala for the animation students in January 2007.
- VI. Placement week was organized for MCA students from 24 March to 28 March 2007. Students from Jaipur, Bhimtal, and Allahabad were also called for the placement week. In all about 270 students participated in the campus placement. Companies like Accenture, Fasarv, Aricent and Syental etc. participated in the placement week. In all 54 students got selected in various companies during the placement week.

## **INTERNATIONAL CENTRE: MUSCAT**

Waljat Colleges of Applied Sciences (WCAS) founded by H.E. Dr. Omar bin Abdul Muniem Al Zawawi in 2001, is a pioneering institution of technical education and research and occupies a pride of place among the technical colleges in the Sultanate of Oman. The college has been successful ever since its inception and the total number of students at the college have increased from 57 in 2001 to 1062 now.

The college has expanded its facilities by building a new four-storied teaching block that will have facilities for 40 classrooms, a state-of-the-art library, computer lab, staff rooms, and offices for administrative staff and facilities for disabled students.

Apart from the new teaching block, a multipurpose seminar hall, featuring the latest public address and audiovisual system with a capacity of 350 participants, is also being constructed. Adjacent to the seminar hall, a spacious canteen with common room facility has come up.

Located at Rusayl, in the upcoming premises of Knowledge Oasis Muscat, WCAS attracts students from all over Oman and also from neighbouring countries.

All the facilities provided by Waljat Colleges, are as per the norms laid down by the criteria for Private Colleges recommended by the Ministry of Higher Education.

### **Course offered:**

#### *UG Course:*

- ⊕ BE (Computer Science)
- ⊕ BE (Electronics & Communication)
- ⊕ BE (Biotechnology)
- ⊕ Bachelor of Computer Applications
- ⊕ Bachelor of Business Administration

#### *PG Course:*

- ⊕ Masters in Business Administration
- ⊕ Executive MBA

### **Faculty position:**

<i>Designation</i>	<i>Professor Incharge</i>	<i>Reader</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>	<i>Asstt. Lecturer</i>
<b>Number in Position</b>	1	3	2	25	7	1

**Number of Student enrolled/registered with Department:**

MO 06				SP 07	
Course	Semester	Number		Semester	Number
BBA	1st	269		2nd	251
BCA	1st	90		2nd	76
BE - EC	1st	28		2nd	27
BE- CS	1st	11		2nd	11
BE-BIO	1st	18		2nd	16
MBA	2nd Trimester	7		3rd Trimester	7
EMBA	1st	16		3rd Trimester	12

BBA	3rd	116		4th	105
BCA	3rd	29		4th	24
BE - EC	3rd	16		4th	19
BE- CS	3rd	4		4th	4
BE-BIO	3rd	12		4th	12

BBA	5th	75		6th	105
BCA	5th	28		6th	24
BE - EC	5th	15		6th	19
BE- CS	5th	7		6th	4
BE-BIO	5th	12		6th	12
MBA	5th	5		MBA 6th	5

BE - EC	7th	8		8th	8
BE- CS	7th	3		8th	3
BE-BIO	7th	7		8th	7

BBA PT	1st	76		2nd	68
BBA PT	3rd	31		4th	28
BBA PT	4th Fast Track	47		5th Fast Track	46
BBA PT	5th	9		6th	8
BBA PT	7th Fast Track	7		8th Fast Track	7
BBA PT	7th Normal Track	15		8th Normal	14
BE-EC 3rd old		5		BBA Special	18
BBA -2G		17		BE Special	7
BE-EC 2 G		8		BCA Special	4
Non-Collegiate		7			
Total Main Course		978		Total Main	933
Foundation Course		376			376

## Academic Innovations, Research & Development activities\

### Project completed during the year 2006-2007:

SL	Research project topic	P.I./ Co-P.I.	Funding agency	Amount Sanctioned
1	PMP certificate programme training	Prof. A.M. Agrawal, Dr. Munish Makkad, Mr. Vikash Sharma and Mr. Mithun Shrivastava	Ministry of Commerce & Industry, Sultanate of Oman	RO 2,400
2	PMP certificate programme training	Prof. A.M. Agrawal and Dr. Munish Makkad of Background Material, developed by: Mr. Vikash Sharma, Mr. Mithun Shrivastava, Mr. A.R. Srivastava, Mr. Niraj Mishra and Mr. Sushil Kumar	Rural Electricity Distribution Co	RO 1,500
3	Feasibility Study of marketing of sealants by Sadolin	Prof. A.M. Agrawal. Dr. Munish Makkad	Sadolin Paints (Oman) Ltd.	RO 3,000
4	Corporate Training Programme on Oracle discoverer administration module and end user module	Mr. Piyush Gupta, Ms. P. Vijaya and Mr. Sanjay	Oman Telecommunication Co.	RO 1,800

### Seminar/conference/short term course conducted by the Department. Number of delegates

- ✦ *International Conference on Service Industry: Challenges & Opportunities*– 13-14 September 2006  
*Delegates:* from India, Pakistan, Slovenia, UAE, Bahrain, Iran, Sudan, USA, Italy, Ethiopia and Oman participated.  
 66 papers were presented.  
*Key Note speakers:* Prof. N.D. Mathur, Prof. R. Vaidyanathan, Prof. H. Chaturvedi, Prof. R. K. Saxena, Prof. R.P. Mohanty, Prof. B.P. Bhatnagar and Prof. Giuseppe Perrone.
- ✦ Conducted a *seminar on Plant Cell Technology* on 7<sup>th</sup> January 2007.  
*Key Note speaker:* Dr. Jamal Khan of Sultan Qaboos University.
- ✦ *Executive Development Programme on Effective Leaders and Decision Makers* was conducted on 25<sup>th</sup> & 26<sup>th</sup> February 2007.  
*Key Note speakers:* Prof. R. Mohanty and Dr. A.M. Agrawal.

## **Publications by faculty in Journals**

### ***International***

- ✦ Goyal, K. Impact of Globalization on Developing Countries. *International Research Journal of Finance & Economics*, 5, 166-171, 2006.
- ✦ Koccian, A., Land, I., and Fleury, B. Joint channel estimation, partial successive Interference cancellation, and data decoding for DS-CDMA based on the SAGE Algorithm. *IEE Trans, Communications*, 55, 1231-1241, 2006.

## **Seminar/Symposium/Short-term Course Attended by faculty members**

- ✦ Agrawal, A.M. attended *Middle East – Japan Fourm – The Role of Higher Education in Global Innovation and Human Development*, Tokyo, March 26-28, 2007.
- ✦ Basu, I. and Noronha, L. attended a symposium in *Sultan Qaboos University on the topic of "Teaching English as a foreign language in Oman: Challenges and Perspectives*. February 7- 8, 2007.
- ✦ Daniel, H. attended the 7<sup>th</sup> *Annual ELT Conference (Working with ELT Materials: From Design to Implementation)* Sultan Qaboos University, April 18-19 2007.
- ✦ Following faculties presented the papers during the *International Conference on Service Industry: Challenges & Oppportunities*, September 13-14, 2006.
  - I. Makkad, M. *Transition in Education Industry in Oman*.
  - II. Mohatram, M., Kumar, S. and Chandra, S. *Knowledge Management in Higher Educational Institutions*.
  - III. Ahmed, I. *ICT in the Development of GCC Nations: Issues ahead – with special reference to Sultanate of Oman*.
  - IV. Gupta, P. *Application of E- Learning in Higher Education in India: A case study*.
  - V. Sivakumar, G. and Vijaya, P. *Engineering Services out sourcing: Challenges and Opportunities*.
  - VI. Aulla, S. *A scenario of Oman's Tourism in New Millenium*.

## **INTERNATIONAL CENTRE: BAHRAIN**

### **Brief Description of the Departments**

#### **Computer Science & Engineering Department**

The Department has well-equipped laboratories with latest versions of different software along with Internet facilities.

#### **Electronics & Communication Department**

The department has good laboratory facilities in the areas of Basic electronics, Microprocessors, Digital Systems Design, Instrumentation and process control, Communications, Circuit Simulation, etc.

#### **Production Engineering Department**

The Centre has established the state of art workshop facilities to offer higher education programme in Production Engineering. The facilities include most modern machine shop, fabrication shop, sheet metal shop and a host of other facilities. To cope up with the latest trends in machining, CNC train masters and Electric Discharge machining, facilities have also been installed.

#### **Management Department**

The department has fairly good facilities to offer BBA, MBA and B.Com. (E-Com) programmes. All these departments are currently engaged in conducting the educational programmes of the Institute.

#### **Course offered:**

##### *UG Course:*

- ⊕ BE (Computer Science)
- ⊕ B.Sc. (Information Science)
- ⊕ BE (Biotechnology)
- ⊕ Bachelor of Business Administration
- ⊕ B.Com (E-commerce)

##### *PG Course:*

- ⊕ Masters in Business Administration
- ⊕ Executive MBA

##### *Diploma:*

(Diploma In Technology)

- ⊕ D. Tech. (Computer Science and Engineering)
- ⊕ D. Tech. ( Production Engineering)

**Faculty position:**

<i>Designation</i>	<i>Professor</i>	<i>Associate Professor</i>	<i>Lecturer</i>	<i>Assoc. Lecturer</i>	<i>Uni. Education teacher</i>
<b>Number in Position</b>	2	2	4	1	5

**Number of Student enrolled/registered with Department:**

<b><i>Semester</i></b>	<b><i>No. of students</i></b>
<b><i>BE</i></b>	
VIIIth semester (Com Sci)	10
IVth semester (Com Sci, ECE, Mech)	14
Ist semester (Com Sci, ECE, Mech)	17
Total	41
<b><i>Bs.C. (IT)</i></b>	
Ist semester	33
IInd semester	37
IIIrd semester	39
IVth semester	33
V semester	12
Foundation programme	7
Sub total	161
<b><i>BBA</i></b>	
II nd Semester	58
IVth Semester	39
VIth Semester	33
Sub total	130
<b><i>B.Com (E-Com)</i></b>	
IInd Semester	24
IVth Semester	14
<b><i>MBA (Trisem)</i></b>	
IIIrd Trisemester	21
Vith Trisemester	14
Sub Total	35
<b>Grand Total</b>	<b>405</b>



**Ongoing Project:**

<i>SL</i>	<i>Name of the Project</i>	<i>P.I./ Co-P.I.</i>	<i>Funding agency</i>	<i>Amount Sanctioned</i>
1	One year Mechanical maintenance programme	Dr. P. K. Srivastava (P.I.)	Special Council for vocational Training, Kingdom of Bahrain	BD 61250

**Project submitted during the year 2006-2007**

Two proposals to conduct training programmes of duration 3 months and above have been submitted to Arab Shipping and Repairing yard (ASRY) and Awal Dairy, Kingdom of Bahrain to train about 60 candidates.

**Seminar/Symposium/Short-term Course Attended by faculty members**

Nathani, P. Roadmap for active learning in Higher Education. *International Conference on Service Industry Challenges and Opportunity* organized at Waljat College of Applied Science in partnership with BIT, Mesra, September 13-14, 2006.

**Student Activities**

1. Induction Day on September 3, 2006 for Freshers
2. Induction Day for new entrance of B.Sc. (IT) evening programme was organized and Students have participated in *Tech-Fest Engineer 2007* at the National Institute of Technology, Surathkal, Karnataka. Their technical paper on *Honeycomb stabilized saltless solar pond as an alternative to Salinity Gradient Solar Pond* was Adjudged the 'Best presentation and awarded first prize' in the wind of change category. The same group won the second prize under another category related to designing of the fastest propulsion mechanism for boats.
3. Participated in the Career Expo at the Indian School, Kingdom of Bahrain, 2006.
4. Organized Table Tennis, Badminton, Carrom and Chess Tournaments between October 29-November 2, 2006.
5. Cultural events organized: a) FIESTA-2006 ON April 12, 2006 b) MOSAIC-2006 on November-2006.
6. Publication of Two News letters.

## **Infrastructural Facilities added during the year 2006-07**

*Additional built area of 600m<sup>2</sup> has been added to create the following facilities:*

- |  |                   |
|--|-------------------|
| 1. Mini Auditorium/ Seminar hall to accommodate 250 people   | 200m <sup>2</sup> |
| 2. 4 class rooms (52m <sup>2</sup> +52 m <sup>2</sup> +28m <sup>2</sup> +24m <sup>2</sup> ) including corridor | 170m <sup>2</sup> |
| 3. Mini Conference Room- 1   | 28m <sup>2</sup>  |
| 4. Canteen (Kitchen 18m <sup>2</sup> +Dinning Hall 50m <sup>2</sup> )  | 68m <sup>2</sup>  |
| 5. Faculty Rooms- 2 (20m <sup>2</sup> +20m <sup>2</sup> )  | 40m <sup>2</sup>  |
| 6. Reception   | 39m <sup>2</sup>  |
| 7. Others are including stair case, Toilets, Corridor etc  | 55m <sup>2</sup>  |
| 8. Over 400 books have been added to the library   |                   |

## **Any other Information**

### **Activities:**

#### **✓ Meeting of Director with His Highness The Crown Prince**

His Highness The Crown Prince and commander in Chief of Bahrain Defence Force Shaikh Salman Bin Hamad Al Khalifa received the Indian Ambassador Balakrishna Shetty and the Director of BIT International Center , Prof. T. R. Ranganath on 7<sup>th</sup> April 2006 at Riffa Palace. The Director of BITIC, Prof Ranganath briefed his highness about the ongoing academic programmes and the progress made by the institute. During the audience, The Crown Prince expressed his satisfaction at the high quality of education being provided at the center and praised the reputation of the BIT, Mesra, Ranchi India. He wished everyone of the institute all success and bright future.

#### **✓ Visit of Crown Prince:**

His Highness the Crown Prince and Commander in Chief of the Bahrain Defence Force visited the Institute on 13 May 2006. On his arrival, he was received at the institute by Minister of Labour, Kingdom of Bahrain His Excellency Dr. Majeed Bin Mohseen Al-Alawi, Indian Ambassador to the kingdom His Excellency Balakrishna Shetty, The Governor of Northern Governorate, His Excellency Mr. Ahmed Bin Mohsen Bin Saloum, Chairman of the executive committee of BITIC Mr. Jalal Md. Jalal, Vice Chancellor Emeritus, BIT, Mesra, Ranchi, India, Dr. H.C. Pande, Members of the

Board of Directors Mr. Sami M. Jalal and Mr. Nevin Megchiani, Director of BITIC and other official of the Institute.

His Highness The Crown Prince was conducted around the Institute's facility and was briefed about the activities of the institute by the Director Prof. T. R. Ranganath and Vice chancellor Emeritus of BIT, Dr. H. C. Pande. His Highness expressed his happiness to visit the Institute and praised the high academic standard maintained by the Institute. He complimented the Institute for providing high quality technical education and wished Institute the very success. Chairman of the executive committee of BITIC Mr. Jalal Md. Jalal, and Vice Chancellor Emeritus, BIT, Mesra, Ranchi, India, Dr. H.C. Pande expressed their thanks and gratitude to His Highness for his kind visit and support.

## **INTERNATIONAL CENTRE: UAE**

BIT entered in to an agreement with the Royal College of Applied Science & Technology (RCAST), Ras Al Khaimah (RAK) on November 22, 2004 wherein BIT is required to conduct its academic programs at RCAST, RAK Free Zone, RAK. BIT started MBA, B. Arch. BE (CS), BE (EC), BE (EE), BBA, BBM, B.Com and IE programs from 17<sup>th</sup> September 2005.

In February 2006 a second intake was made for regular BBA & MBA students, and preparatory course for BE and Executive MBA were commenced by BITIC, RAK

In academic year 2006-2007 (September), three new programs, viz., Bachelor of Hospital Administration, B.Sc. in Animation & Multimedia and B. Pharma are being proposed.

### **Infrastructure facilities:**

Existing teaching block: The existing teaching block is an eight storied leased building. Currently, BITIC has 11 class rooms, one computer lab with 60 computers (networked), 2 MB leased line for internet, a Chemistry lab, a Physics lab, an Electronics lab, a Mechanics lab, an Architecture Drawing lab, an Engineering Drawing Lab, Mechanical workshop, Library, offices for Director, Examination in charge, teaching faculty and administration staff, a Seminar hall, canteen and separate prayer rooms for girls and boys.

Preparations for construction work are in progress for the new building in a plot area of 5 acres with a 3 storied teaching block with conference room, prayer rooms, big library, computer laboratory, a Chemistry lab, a Physics lab, an Electronics lab, a Mechanics lab, an Architecture Drawing lab, an Engineering Drawing Lab and Mechanical workshop. The campus will also have hostels for boys and girls, a centrally located auditorium, and a Canteen. The total built up area of the building is 26,500 sq. meters.

### **Course offered:**

#### ***UG Course:***

- ⊕ BE (Computer Science)
- ⊕ BE (Civil)
- ⊕ BE (Electronics & Communication)
- ⊕ BE (Electrical & Electronics)
- ⊕ Bachelor of Pharmaceutical Science
- ⊕ Bachelor of Architecture
- ⊕ Integrated Engineering

- ✦ Bachelor of Business Administration
- ✦ Bachelor of Business Management and Accounting
- ✦ Bachelor of Commerce

**PG Course:**

- ✦ Masters in Business Administration
- ✦ Executive MBA

**Faculty position**

<i>Designation</i>	<i>Reader</i>	<i>Lecturer (Senior)</i>	<i>Lecturer</i>
<b>Number in Position</b>	<b>1</b>	<b>3</b>	<b>13</b>

**Number of Student enrolled/registered with Department:**

<i>Semester</i>	<i>No. of students</i>
<b><i>B.Arch.</i></b>	
Ist semester	13
IIIrd semester	13
<b><i>BE</i></b>	
Ist semester	56
IIIrd semester	38
<b><i>BBM</i></b>	
Ist semester	23
IIInd semester	1
IIIrd semester	3
<b><i>B.Com.</i></b>	
Ist semester	3
IIIrd semester	4
<b><i>MBA</i></b>	
Ist semester	12
IIInd semester	1
IVth semester	10
<b><i>EMBA</i></b>	
Ist semester	16
IIInd semester	17
<b><i>Integrated Engg. (IE)</i></b>	
Ist semester	26
IIIrd semester	23
<b>Total</b>	<b>259</b>

**Infrastructural Facilities added during the year 2006-07**

	<b>Amt. in Dirhams</b>	<b>Amt. in Rs.</b>
Electrical & Electronics labs	65,560.00	6,78,720.00
Chemistry lab	2,520.00	30,240.00
Physics lab	12,784.00	1,53,408.00
Computer lab	2,67,803.00	32,13,636.00
Mechanical Workshop	20,653.00	2,47,836.00
Survey lab	18,905.00	2,26,860.00
Engineering Drawing lab	2,850.00	34,200.00
<b>Total</b>	<b>3,91,075.00</b>	<b>46,92,900.00</b>

**Other Information:**

The quality management system of BIT International Center, RAK has been registered under ISO 9001:2000 for "management of educational services leading to award of degree in architecture and degree / diploma in management and engineering".



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|| **UNIVERSITY POLYTECHNIC** ||

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# **UNIVERSITY POLYTECHNIC**

## **B.I.T., MESRA, RANCHI**

Year 2006-2007 can be viewed as a year of rapid development in the infrastructural facilities for Polytechnic students besides maintaining their regular programmes and schedules.

Need of Sports facility, which was badly felt during all these years was taken up on a war footing and with the support of the Parent Institute, the land between Entrepreneur Hostel & Boy's Hostel – 1 & behind Entrepreneur Hostel was converted into Ground for Basket Ball, Volley-ball, Football, Badminton etc. Indoor Games facilities such as T.T. table, Carrom-board, Chess-board etc. were provided in each of the Boys and Girls Hostel.

The Entrepreneur's Hostel which was hitherto not in use was made fully functional. The work for 2<sup>nd</sup> floor of Girls Hostel has started and it is expected to be completed by August '07. This will have 24-more rooms to accommodate 72 girl students.

Campus can also boast upon its Petrol Pump facility which has been started as a part of its full fledged vehicle service-station facility, a programme for its Automobile Engineering students.

For the first time Polytechnic provided warm Hospitality to the participants of Youth festival & East-Zone Basket Ball tournament held at B.I.T.

The third batch (2003-2006) of Diploma course in various discipline, passed out in May-June, 2006. 36 students got placed in reputed organizations through campus interview and many opted for higher studies and are pursuing their degree level course in reputed engineering colleges.

B.Sc. MLT course for 2005 Batch took-off successfully in May '06 and the classes for 2006 batch with 36 students started in August, 2006.

A detailed list of students who have registered in Diploma and B.Sc.MLT course is given in item no. 1 of the report.

In the field of Sports, Polytechnic students have once again kept the Polytechnic flag flying. They not only won the overall women championship in Athletics, but also proved their superiority in Inter Hostel Football and Hockey tournaments by winning the events by a Good margin. Sports achievements are mentioned at item no.5 of the report.

There were some internal transfers from Polytechnic to other extension Centre of BIT. Polytechnic also got three new faculties, one each in Electronics, Automobile

and Manufacturing Technology while one faculty member left during this period as he got a chance at B.I.T., Sindri.

### **Registered Students at University Polytechnic:**

During the period from 1<sup>st</sup> April'2006 to 31<sup>st</sup> March 2007, 99 students passed out and 180 students got admitted. 107 in 2006 Diploma course and 37 & 36 respectively in 2005 & 2006 B.Sc. MLT course. Batch wise position of registered students at University Polytechnic as on 31.03.2007 is as under:

Sl.	Course	Batch	Semester	No. of Students
1.	B.Sc.MLT	2005	III	37
2.	B.Sc.MLT	2006	II	36
3.	Diploma (All Branches)	2004	V	107*
4.	Diploma (All Branches)	2005	IV	107*
5.	Diploma (All Branches)	2006	II	107*
<b>Total:</b>				<b>394</b>

\* Figures indicate the total no. of students admitted. Some of the students who could not make it to the next semester are registered for lower semesters but they are included with their batch details.

### **Automobile Engineering:**

- ✦ Various cut sections of car were assembled and a complete chasis was made for demonstration purpose.
- ✦ Mr. M. K. Roy of the Department attended 5-days workshop from 6<sup>th</sup> – 10<sup>th</sup> September, 2006 on "Automobile Engineering System".

### **Electronics Engineering:**

- ✦ Following papers were presented by faculties of Electronics Deptt., University Polytechnic during 2006-07:
  - a) A paper on 'Broadband Compact Microstrip Patch Antena for Wireless Communication' by Ms. Sumana Kumari and Ms. Tanushree Bose in National Seminar for Devices, Circuits and Communication, held at B.I.T., Mesra from November 2<sup>nd</sup> – 4<sup>th</sup>, 2006.

- b) A paper on 'Design & Analysis of Multilayer Broadband Microstrip Patch Antenna' by Ms. Sumana Kumari and Ms. Tanushree Bose in the Seminar titled 'Achievement and Challenges in the field of Electronic & Telecommunication Engineering organized by Institution of Engineers, Ranchi, from 20<sup>th</sup> to 21<sup>st</sup> January, 2007.
  - c) A paper on 'Design of Rectangular Patch Microstrip Antenna using Artificial Neural Network' was submitted by Ms. Tanushree Bose & Ms. Sumana Kumari in the Seminar organized by Institution of Engineers, Ranchi 20<sup>th</sup> & 21<sup>st</sup> of January, 2007.
  - d) A paper on 'An artificial Neural Network Model in design of compact Microstrip Antenna for Wireless Communication' by Ms. Tanushree Bose & Ms. Sumana Kumari in NASDEC<sup>2</sup> – 2006, organized by E.C.E., B.I.T., Mesra, from 2<sup>nd</sup> November to 4<sup>th</sup> November, 2006.
- ✦ Ms. Tanushree Bose, a faculty from the Department and Co-ordinator T & P Cell, attended a 4-day workshop from 21<sup>st</sup> to 24<sup>th</sup> December, 2006 on 'Faculty enablement on Soft – Skills'.
  - ✦ Microstrip antenna for wireless communication, patch antenna for Blue tooth etc. were developed and delivered for research work at PCB Lab., University Polytechnic.
- |  |            |
|--|------------|
| i.. Active Microstrip Antenna for Wireless Communication | 24.04.2007 |
| ii.. Microstrip Patch Antenna for Blue tooth             | 27.01.2007 |
| iii. Wireless Communication                              | 04.12.2006 |
| iv. Antenna Design                                       | 31.10.2006 |
| v. Microstrip Antenna                                    | 27.11.2006 |
| vi. Microstrip Antenna                                   | 24.04.2006 |
| vii. P.C.B.Antenna Fabrication                           | 21.04.2006 |

## **Computer Science**

- ✦ Mr. N. K. Singh was awarded Ph.D.

## **Manufacturing Engineering:**

- ✦ Following faculties from the Department attended Workshop & Seminars held at B.I.T., Mesra & NIFFT, Hatia during the year :
  - a) Mr. T. K. Baug, Mr. M.K. Roy & Mr. Subodh Kumar attended a Two-Day-workshop on 'Technical Education in National Scenario' (20-21<sup>st</sup> December, 2006).
  - b) Mr. T. K. Baug, Mr. M. K. Roy, Mr. Subodh Kumar, Mr. Rakesh attended "National Seminar on Achieving Technological Excellence in New Millennium" from Jan. 23-24, 2007).
  - c) Mr. T. K. Baug, Mr. Subodh Kumar and Mr. Rakesh attended 2-days National Workshop, held on 8-9<sup>th</sup> September, 2006 on "Lean Manufacturing Implementations".
- ✦ Following works were carried out at the University Polytechnic workshop during 2006-2007.
  - 1. Working model of roller grinder fabricated by students
  - 2. M.S. ramp body for Space Engineering & Rocketry Deptt., B.I.T.
  - 3. Injector Plate for Space Engineering & Rocketry Deptt., B.I.T.
  - 4. Mould & Mandrels for fly bird FEL for Space Engineering & Rocketry Deptt., B.I.T.
  - 5. Working model of chaff separator from grains.

## **Training & Placement Details:**

### **INDUSTRIAL VISITS**

- 1. Usha Martin Industries Ltd., Namkum.
- 2. Doordarshan Kendra, Ranchi
- 3. Sushila Automobiles Services, Ranchi.
- 4. NIFFT, Ranchi.
- 5. Schenck Process India Ltd., Tupudana.

### **TRAINING**

- 1. For the first time a 3.5 months training was arranged for Automobile Engineering, 2004 batch students at TATA MOTORS Ltd., Jamshedpur (Dec.'06 to March'07).
- 2. Patratu Thermal Power Station, Patratu, Hazaribagh
- 3. Bharat Coking Coal Ltd., Patratu
- 4. HINDALCO Ltd., Muri.
- 5. DVC, Chandrapura
- 6. Usha Martin Industries Ltd., Namkum.

#### INTERACTIVE SESSION

An interactive session by Technical Experts from Indo Danish Tool Room, Jamshedpur for students of University Polytechnic on 8<sup>th</sup> February, 2007.

#### PLACEMENT DETAILS FOR 2003-2006 BATCH

99-students successfully completed their Diploma course in 2006-2007. Thirty six students got jobs through campus interview & as per information about 35 students are pursuing Degree course in various reputed college of the country.

<b><u>Company</u></b>	<b><u>No. of Students</u></b>
Hero Honda Motors Ltd.	20
Compucom Software	02
CMC, Ranchi	02
B.I.T., Mesra, Ranchi	04
Schenek Process India Ltd.	01
Power Mech, Ranchi	01
Rameshwaram Construction, Ranchi	02
Greaves Cotton Ltd., Ranchi	01
Meditron, Ranchi	02
Jetking, Ranchi	01

#### **Sports & Games:**

Students have shown their excellence in the field of sports in the year 2006-2007. Fully utilizing the newly developed Grounds for practicing various games and athletic events, they won the trophies for Institute in :

- Overall women championship in 21<sup>st</sup> Annual Athletic meet 2006-2007 at B.I.T., Mesra.
- Individual women-championship – Championship – Ms. Lalmani Minz.
- Inter Hostel Hockey tournament
- Inter Hostel Football tournament.



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|| **CENTRAL LIBRARY** ||

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## **Central Library**

**Website:** <http://www.bitmesra.ac.in/library/index.html>

The Central Library strives to evolve into a model and leading technical university library. The library contributes and supports BIT in building an internationally top ranked academic & research driven institution by establishing a knowledge hub.

The collection comprises of documents in the field of Applied Chemistry, Mathematics, Physics, Engineering Mechanics, Architecture, Biotechnology, B.M.I, Civil Engg, Mechanical Engineering, Computer Science, Information Technology, Electronics Communication Engineering, Electrical/ Electronics Engineering, Hotel Management, Catering Technology, Management, Pharmaceutical Sciences, Polymer Science, Polymer, Remote Sensing, Space Eng/Rocketry and information science. The Library has a book bank for SC/ST/OBC students of the Institute. The Library has a separate Internet section consisting of a number of networked terminals for providing recent and most comprehensive access to **e-journals** and other **e-reference** resources to the faculty, students, and staff under **Intranet and Internet environments**.

### **Resources available:**

#### **No. of Books:**

General	88,880
Book Bank	23,590
<b>Total</b>	<b>1,12,470</b>

#### **Online Journals:**

Full Text	6609
Abstracts	3521
<b>Total</b>	<b>10130</b>

#### **Periodical Journals:**

Indian Journals	79
Foreign Journals	21
<b>Total</b>	<b>100</b>

<b>No. of Bound Volumes</b>	<b>:</b>	<b>17,787</b>
<b>No. of Books on CD</b>	<b>:</b>	<b>2503</b>
<b>No. of Project Reports</b>	<b>:</b>	<b>4079</b>
<b>No. of Audio Cassettes</b>	<b>:</b>	<b>58</b>

**CD-ROM Database Search Services:**

CDs- 724 IPA (International Pharmaceutical Abstracts)

IEEE ( Institute of Electrical/Electronics Engineers)

IMID (Institute of Management International Databases)

**Web OPAC (Online Public Access Catalogue)**

<http://172.16.3.110:8080/webopac/>

Web-based OPAC for checking online availability and reserving online, remote access to e-resources and databases make the library user friendly.

**e-Resources**

The Central Library holds a hybrid collection of printed as well electronic/digital resources which include books, journals, e-books, databases (full text and abstract), audio-visuals, CDs/DVDs, floppy's, reports & Theses, case studies, conference proceedings, training manuals, etc.

**SERVICES****Reference/Readers' Advisory Services/Help Desk:**

Reference Service is for all the members and extended to visitors for short-term period. A Help Desk has been created for assisting the library members.

**Reading Rooms**

The common reading room facility has been provided.

**Newspaper Reading**

12 Regional and National Newspapers and 12 magazines and allied publications are provided in the Newspaper section.

**Lending:**

*Enrolled members are lent books in his/her name as indicated below:*

<b>Description</b>	<b>Books</b>	<b>Loan Period</b>
Teaching Faculty	08	One Month
Non Teaching Staff	04	One Month
Under Graduate/Post Graduate students	05	15 Days
Research Scholars	02	One Month
Faculty Staff for Extension Centre (Lalpur/Polytechnic)	08	One Month
Non Teaching Staff for Centre (Lalpur/Polytechnic)	04	One Month
Research Scholars for Extension Centre (Lalpur/ Polytechnic)	02	One Month
Books from Textbook Section for all categories	01	Over-night
Book Bank		
SC/ST	10	Six Months
OBC	05	Six Months

**Reprographic Service**

Photocopying of documents in the Library is provided free of charge to the members. The non-members are charged at the approved rates.

**Consortia Membership**

The Library is a member of three consortia viz.

1. AICTE-INDEST
2. UGC- INFONET
3. DELNET for union catalogues.

**Timing of the Library:****Reference/Visiting the Library**

Monday – Friday	8.00 AM to 8.00 PM
Saturday s	8.00 AM to 3.00 PM
Sundays	9.00 AM to 1.00 PM

**Issue/Return/Lending**

Monday – Friday	8.00 AM to 5.00 PM
Saturday	8.00 AM to 1.00 PM
Sunday	NO ISSUE/RETURNS/RENEWALS

**Return**

Library staff has right to recall any borrowed book at any time. Books should be returned on or before the due date. Reminders will be sent to the borrower accordingly.

**Renewal**

Books can be renewed if there is no reservation against the particular book.

**Fine**

For books from Textbook Section, a fine of Rs 10 per day per book shall be charged after the due date. For general books Rs. 1 will be imposed up to one week and Rs. 10 will be levied on the same there after.

**Location Index**

The library is housed in the main building of the Institute. The location of

services/ resources in the Library is indicated below:

<b><i>Name of the resource, service, section</i></b>	<b><i>Location</i></b>
Binding Section	Ground floor
Book Acquisition Section	Ground floor
Book Bank	Second floor
Book stacks (All disciplines)	First floor/Second floor
CD ROM workstations	Ground floor
Circulation counter /section	Ground floor
Claimed Books/Books processed urgently	Ground floor
Back Volume Journals	Ground floor
Journals (Bound volumes)	Ground floor
Journals Section / current journals display	Ground floor

<b><i>Librarian's Office</i></b>	<b><i>Ground floor</i></b>
Newspapers and non-technical material	Ground floor
OPAC (Online catalogue)	GF/FF/SF
Pamphlets Section (Standards, Patents,	Ground floor
Photocopying facility for faculty	Ground floor
Reference Section	First floor
Reading Hall	Ground floor /First floor
Text Book	First floor
Technical Processing Section	Ground floor

#### **Digital Library/e-Library**

BIT Digital Library holds electronic/digital resources which include books, journals, databases (full text and abstract), audio-visuals, CDs/DVDs, floppy's, e-books, reports & Theses, case studies, conference proceedings, training manuals, etc.

#### **D-Space**

BIT Central Library is using DSpace for open-source digital archiving system to capture, store, index, preserve, and redistributes all our scholarly research materials

of research out put, projects, Ph.D. Theses, M.Tech/B.Tech/B.E. Dissertations in digital format. Even, we can share our research findings quickly with a worldwide audience and preserve our materials in perpetuity.

#### **DELNET- Developing Libraries Network**

DELNET provides access to Union Catalogue of Books, Periodicals, Database of Periodical Articles, CD-ROM Database, Vedio Recordings, Theses and Dissertations and allows Inter-Library Loan for books & journal articles.

#### **ONLINE JOURNALS (FULL TEXT )/ ONLINE DATABASES**

ACM DIGITAL LIBRARY	<a href="http://portal.acm.org/dl.cfm">http://portal.acm.org/dl.cfm</a>
ACS (American Chemical Society)	<a href="http://www.pubs.acs.org">http://www.pubs.acs.org</a>
AIP (American Institute of Physics)	<a href="http://www.aip.org">http://www.aip.org</a>
ASCE (American Society of Civil Engineers)	<a href="http://www.asce.org">http://www.asce.org</a>
ASME(Ame-Soc-MechanicalEng)	<a href="http://www.asme.org/pubs/journals">http://www.asme.org/pubs/journals</a>
ANNUALReview	<a href="http://arjournals.annualreviews.org">http://arjournals.annualreviews.org</a>
ASTROPHYSICS JOURNALS	<a href="http://www.digitallibrary.ernet.in">http://www.digitallibrary.ernet.in</a>
BIOMED	<a href="http://www.biomedicalcentral.com">http://www.biomedicalcentral.com</a>
BLACKWELL SYNERGY	<a href="http://www.blackwell-synergy.com">http://www.blackwell-synergy.com</a>
CAMBRIDGE UNIVERSITY PRESS	<a href="http://journals.cambridge.org">http://journals.cambridge.org</a>
IEEE/IEE Electronic Library Online	<a href="http://ieeexplore.ieee.org">http://ieeexplore.ieee.org</a>
INDIAN ACADEMY OF SCIENCES	<a href="http://www.ias.ac.in">http://www.ias.ac.in</a>
JSTOR	<a href="http://jstor.org">http://jstor.org</a>
IOP (Institute of Physics Publishing)	<a href="http://www.iop.org/EJ">http://www.iop.org/EJ</a>
OXFORD UNIVERSITY PRESS	<a href="http://www.oup.co.in">http://www.oup.co.in</a>
NATURE	<a href="http://www.nature.com/nature">http://www.nature.com/nature</a>
PROJECT MUSE	<a href="http://muse.jhu.edu">http://muse.jhu.edu</a>
PORTLAND PRESS	<a href="http://www.portlandpress.com">http://www.portlandpress.com</a>
PROJECT EUCLID	<a href="http://projecteuclid.org">http://projecteuclid.org</a>
ROYAL SOCIETY OF CHEMISTRY	<a href="http://www.rsc.org/is/journals/j1.htm">http://www.rsc.org/is/journals/j1.htm</a>
SPRINGER VERLAG LINK	<a href="http://www.springlink.com/">http://www.springlink.com/</a>
TAYLOR & FRANCIS	<a href="http://www.tandf.co.uk">http://www.tandf.co.uk</a>
SCIENCE DIRECT	<a href="http://www.science-direct.com/">http://www.science-direct.com/</a>
EBSCO –ELITE	<a href="http://www.search.ebscohost.com/">http://www.search.ebscohost.com/</a>
ASTROPHYSICS JOURNALS	<a href="http://www.digitallibrary.ernet.in">http://www.digitallibrary.ernet.in</a>
INFOLIBNET	<a href="http://www.inflibnet.ac.in">www.inflibnet.ac.in</a>

**Library Staff recently joined**

1. Dr. V.Sreenivasulu, Library-In-Charge/Senior Deputy Librarian
2. Dr. Vijayakumar, Deputy Librarian
3. Mr. Samir Kumar Jalal, Assistant Librarian
4. Ms. Tanushree Bhatnagar, Junior Information Officer
5. Mr. Bhola Prasad, Assistant

**Workshops/Conferences attended:**

1. Dr. Vijayakumar, Deputy Librarian has attended a National Workshop on “E-Resources Management for Excellence”, 16<sup>th</sup>-18<sup>th</sup> July, 2007, organized by Indian Institute of Technology, Chennai

**Library Governance/Library Authority**

Dr. H.C.Pande, Vice-Chancellor-Emeritus/Patron

Dr.S.K. Mukherjee, Vice-Chancellor

Dr. Usha Jha, Dean – Academic Infrastructure

**Library Administration**

Dr. V. Sreenivasulu, Librarian's Office,

**CONTACT US:**

Librarian's Office, 0651-2276675 Ext:452/505/506/507 9430730106

**E-mail:** [library@bitmesra.ac.in](mailto:library@bitmesra.ac.in)

**Website:** <http://bitmesra.ac.in/library/index.html>

**Phone :** 0651– 2276675

**Fax :** 0651 - 2275401

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**TRAINING & PLACEMENT DIVISION**

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## **TRAINING & PLACEMENT DIVISION**

The Training & Placement Division of BIT, Mesra, Ranchi has the responsibility of providing the most effective employment support and outstanding career development services to its students community. The activities of this Division are diverse and yet pointed towards its core mission of providing information, guidance, counselling as well as providing opportunities for effective influencing life long career transition among the students.

The Division seeks to work with organizations to effectively supplement their hiring strategies through the Institute's talent pool. The effort of this department has been to move beyond with the realm of campus placements to comprehensively match the individual competencies with the needs of our partners in the industry.

A summary of the activities undertaken by the Division during the year 2006-07 is as under:

1. **Campus Recruitment Programme:** The Campus Recruitment programme at BIT, Mesra has over the years being most successful not just in terms of generating offers exceeding the number of students on campus but also in terms of development of wide ranging relationship covering almost all sectors of the industry. This year the Campus Recruitment Programme was conducted in 3 Phases. Phase I was held late April at the NOIDA Extension Centre where a pooled campus was organized for the 3 centres of Noda, Jaipur & Allahabad. The second phase was the Campus Recruitment Programme at the main campus at BIT Mesra and this was followed by a similar programme organized at the Extension Centre at Lalpur for the BCA & BBA students.

A total of 76 organisations visited for campus recruitment and a total of 1026 offers were generated through this process which encompasses all students of BE, ME, M.Tech., MCA, M.Sc., Pharmacy, Architecture, Management & HMCT. As many as 94 students have received more than one offer.

2. **Competency Development Programme:** In the second year of its functioning, this Programme, was made available to the students of the 4<sup>th</sup> semester as well. The total enrollments (Senior & Junior Batch) crossed 900 this year and sessions, on a daily basis, were held during the evening hours. The sessions include the entire gamut of soft skills. This year has seen initiation of sessions in spoken English for students from vernacular medium of study. This activity is proposed to be up scaled further in the years to come

3. **A 4-Day Faculty Enablement Workshop on Soft Skills** was conducted by the Division. This was attended by 50 faculty members from the Mesra ,other centres of BIT and from the University Polytechnic.
4. **Student workshops conducted in collaboration with Industry:**
- i. Microsoft Technology (TCS)
  - ii. Embedded Technology(TCS)
  - iii. Information Security Framework (TCS)
  - iv. 2 tier & 3-Tier System (TCS)
  - v. Six Sigma (TCS)
  - vi. Facing Interviews (ARICENT)
  - vii. Automobile Industry Overview- Global & Indian (TATA MOTORS)
  - viii. Getting Cognizant (CTS)
  - ix. Semiconductor Industry & Expectations from Freshers (Freescale Semiconductors)
  - x. Increasing Competencies & Road to Higher Studies (Abhishek Rudresh, BIT Alumnus with Oracle Corporation)
  - xi. Fast Forward & Innovate (WIPRO)
5. **Faculty Development Programmes:**
- i. Software Engineering- an Industrial Perspective (TCS)
  - ii. Data warehousing & Business Intelligence (TCS)
  - iii. Six Sigma Workshop at Kolkata Extension Centre (TCS)
  - iv. Service Oriented Architecture (TCS)
  - v. Train the Trainer Workshop (Infosys, Bhubaneswar)
6. **On-Campus Training Programmes of the Infosys & TCS Recruits were organized.** The Division is entering into an agreement with Cognizant Technology Solutions (CTS) also to provide training through V-SAT to the recruits.
7. **Training Opportunities** for the entire batch of Diploma students (Automobile engineering) was organized at Tata Motors. This is expected to lead towards a synergistic association for generating larger employment opportunities for Diploma Engineers.
8. **Customized Online Testing Software** was developed in-house for providing the students an opportunity for taking aptitude & IT skills test. The software was successfully implemented towards conducting a mid-semester exam as well. This test has been made available to the student community through the intranet interface of the Training & Placement Division.

9. **Placement Briefings** coupled with mock test and GD's was conducted at the Kolkata, Noida, Lalpur and Jaipur Centres. A Placement Simulation Exercise was conducted with the help of the passing out batch for the entire next batch students.

#### Company-wise Placements 2006-07

Sr.	Company Name	Offers	Sector
1	Accenture	76	IT
2	Amdocs	14	IT
3	Anhox Health Care	3	Pharmaceutical
4	Avaya Global Connect	4	Electronics
5	Barista	5	Services
6	Baxter	4	Pharmaceutical
7	Birlasoft	12	IT
8	CSC	21	IT
9	CTS	78	IT
10	CTS for BCA	18	IT
11	Cummins	1	Engineering
12	Dr. Reddy's	6	Pharmaceutical
13	EICHER motors	4	Automotive
14	Essar Group	2	Engineering
15	Fiserv	9	IT
16	Flextronics	21	IT
17	Freescall	4	Electronics
18	GENOM	9	Pharmaceutical
19	Goldman Sachs	3	Consulting
20	Good Year	3	Manufacturing
21	Google		IT
22	HCL Infosystems	2	MBA
23	HCL TECH	21	IT
24	HDFC Bank	1	Banking
25	Hindalco	4	Metals & Minerals
26	HP	18	IT
27	HSBC	2	Banking
28	HSBC (for BCA/BBA)	10	IT
29	IBM	37	IT
30	ICICI Bank	11	Banking
31	ICICI Pro	13	Insurance
32	IDBI Bank	6	Banking
33	Impetus	5	IT
34	Indian Oil Corp. Ltd.	4	Public Sector Oil Company
35	Induslogic	6	IT
36	Infosys	51	IT

37	Infosys (for BCA/BBA)	33	IT
38	Jindal Steel	9	Metals & Minerals
39	Jusco	2	Engineering Services
40	Keane	11	IT
41	L&T	13	Heavy engineering
42	L&T EES	3	Engineering Services
43	LG Electronics	4	Electronics
44	Maruti Udyog	12	Public sector Auto
45	Microsoft	3	IT
46	Moolchand Healthcare	6	Services
47	NEI	1	Engineering
48	Oracle	10	IT
49	Patni	14	IT
50	PWC	21	Consulting
51	Rameshwaram Constructions	2	Construction
52	Reliance Infocomm	4	Services
53	Reliance Telecom	12	Services
54	Right Insites	5	Services
55	SAMTEL	3	Electronics
56	Sapient	4	IT
57	Sasken Technologies	4	IT
58	Satyam	8	IT
59	Siemens Information Systems Ltd.	10	IT
60	ST Microelectronics	4	Electronics
61	Tata Consultancy Services (TCS)	159	IT
62	Tata Motors	24	Automotive
63	Tata Power	8	Electrical
64	Tata Steel	3	Metals & Minerals
65	Tavant Technologies	2	IT
66	TCS for BCA	40	IT
67	Tech Mahindra	10	IT
68	Telcon	3	Engineering
69	Texas Instruments	1	Electronics
70	Trident (Abhishek Industries)	6	Manufacturing
71	TVS Motors	2	Automotive
72	UBI	5	Banking
73	UTI Bank	15	Banking
74	Wipro	37	IT
75	WIPRO (for BCA/BBA)	7	IT
76	Zensar	18	IT

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# **STUDENTS CULTURAL ACTIVITIES**

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## **STUDENTS CULTURAL ACTIVITIES**

### **EVENTS HELD DURING 2006-2007**

Various clubs and societies of the students of BIT Mesra organised many events during 2006-07 session. These were- Cultural Evening on 3<sup>rd</sup> Aug' 06 on the occasion of Biotech Symposium' 06, Independence Day, the 15<sup>th</sup> of Aug' 06, "Ye Shaam Mastani", a Teachers' Day Special programme on the 2<sup>nd</sup> Sept' 06, "Shikdhoom' 06", an Antakshari Competition on 17<sup>th</sup> Sept' 06, Technieek'06 in Sept'06, "Fugiya'06", a food festival on 15<sup>th</sup> Oct' 06, Diwali festival on 21<sup>st</sup> Oct' 06, Musical Competition named "Talent Hunt" on the 30<sup>th</sup> & 31<sup>st</sup> Oct' 06.

The students actively participated in The AIU East Zone Universities Youth Festival' 06 held in BIT Mesra from 9<sup>th</sup> – 13<sup>th</sup> Nov' 06. The Youth festival attended by 300 students of 25 universities of the eastern part of our country was inaugurated by His Excellency the Governor of Jharkhand, Shri Syed Sibtey Razi. Apart from various cultural events many lectures and talks were also organized during the Youth festival and one important lecture was delivered by The Chief Justice of Jharkhand High Court. The Youth festival was concluded in a valedictory function chaired by the Chief Minister of Jharkhand Shri Madhu Koda ji who gave away the prizes to winners.

BIT Mesra was declared the "CHAMPION" in MUSIC CATEGORY with following students winning the prizes in the AIU East Zone Universities Youth Festival, 06.

✦ Group Song (Indian)	- 1 <sup>st</sup> Prize - Parthojit, Sohini, Devottama, V. Sweta, Veena, Asmita, Sourav, Animesh, Shantanu
✦ Group Song (Western)	- 1 <sup>st</sup> Prize – Shaleen, Soumya, Ankita, Ishanie, Rahul, Arnab, Shrikar
✦ Western Solo	- 2 <sup>nd</sup> Prize – Ishanie Niyogi
✦ Instrumental (Percussion)	- 3 <sup>rd</sup> Prize – Sourav Bhounmik
✦ Folk Orchestra	- 3 <sup>rd</sup> Prize – Sona, Anuj, Sandeep, Gulshan
✦ Vocal Classical	- Suchitra Mukherjee (BCA, Lalpur)
✦ Light Vocal (Solo)	- Abhinav Sharma

By virtue of students winning laurels in Zonal Festival of AIU, they were invited



to participate in The 22<sup>nd</sup> National Youth Festival' 07 held in Madras University, Chennai from 21<sup>st</sup> – 25<sup>th</sup> Jan' 07 & won following prizes.

- ✦ Group Song(Indian) - Parthojit, V. Sweta, Veena, Asmita, Bruce, Vijay, Rakesh
- ✦ Group Song(Western) - 4<sup>th</sup> Prize – Shaleen, Soumya, Ankita, Ishanie, Rahul, Arnab, Shrikar
- ✦ Western Solo - Ishanie Niyogi
- ✦ Installation - Vasudha Verma and Thyagarajan

Afterwards BIT students represented the EAST ZONE in the 2<sup>nd</sup> South Asian Youth Festival held in SNDT Women's University, Mumbai from the 7<sup>th</sup> – 11<sup>th</sup> March' 07 in an event of Group Song(Indian) sung by Parthojit, Anumita, Indrapal and Vijay.

BIT students also participated in IIT Kharagpur "SPRING FEST' 07 from 25<sup>th</sup> - 28<sup>th</sup> Jan' 07, and organized a programme on the occasion of Republic Day, 26<sup>th</sup> January 07, a Musical Evening in IEEE's Informal Stalls Arena, " SWIRL" on 6<sup>th</sup> Feb' 07, a Musical Evening in a programme organised by the Space Science & Rocketry Dept. on 15<sup>th</sup> Feb' 07.

Annual festival of BIT Mesra was organized on 11<sup>th</sup>- 13<sup>th</sup> February, 2007 and was inaugurated by our Vice Chancellor, Prof. S. K. Mukherjee and attended by all students of BIT Mesra. BIT Music club organised a Karaoke singing competition "BIT IDOL'007" on 31<sup>st</sup> March'07 in which following students won the prizes distributed by the Vice Chancellor.

1<sup>st</sup> – Devottama Banerjee

2<sup>nd</sup> – M.Manya

3<sup>rd</sup> – Anumita Hajra

The students of all clubs and societies took very active part in organizing International Unnayan held in February 2007 and Medha 2007 which are described in Electrical and Mechanical department's report.

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## **ANNEXURE**

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## Annexure- I

### **GENERAL COUNCIL**

#### **Founder Member**

Shri G.P. Birla	-	Chairman
Shri C.K. Birla	-	Founder Member
Shri S.L. Bhatler	-	Founder Member
Dr. A.K. Chatterjee	-	Founder Member
Shri Sarosh Ghandy	-	Founder Member
H.E. Dr. A.R. Kidwai	-	Founder Member
Shri G.D. Kothari	-	Founder Member
Shri Russi Modi	-	Founder Member
Shri D.N. Patodia	-	Founder Member
Dr. Karan Singh	-	Founder Member
Dr. H.C. Pande	-	Life Member
Shri Mohammed Yeusif Jalal	-	Life Member
H.E. Dr. Omar bin Abdul Muniem		
Al-Zawawi, OSQ, WOI	-	Life Member
Shri R. D. Sahay	-	Representative of the Ministry of Human Resource Development, Government of India
Dr. Kota Hari Narayana	-	Representative of the University Grants Commisson
Shri H.K. Mittal	-	Representative of the Department of Science & Technology Government of India
Prof. Raj Pal Singh	-	Representative of the All India Council for Technical Education
Shri A.K. Basu, I.A.S.	-	Representative of the Department of Science & Technology Government of Jharkhand
Shri S.S. Jajodia	-	Representative of the Birla Institute of Scientific Research
Dr. S.K. Mukherjee	-	Vice Chancellor, B.I.T., Mesra

### **Annexure- III**

## **MEMBERS OF FINANCE COMMITTEE**

Shri G.P. Birla	- Chairman
Dr. K. Gunasekaran	- Nominee of the University Grants Commission
Shri Mithilesh Kumar, I.A.S. (Retd.)	- Nominee of the Chancellor
Shri C.K. Birla	- Vice Chairman, Nominee of the Board of Governors
Dr. H.C. Pande	- Nominee of the General Council
Shri S.S. Jajodia	- Honorary Treasurer, BIT Mesra
Prof. S.K. Mukherjee	- Vice Chancellor, BIT Mesra , Ranchi

#### **Annexure- IV**

### **BUILDING & WORKS COMMITTEE**

#### **Chairman**

Vice Chancellor, BIT, Mesra, Ranchi - Dr. S. K. Mukherjee

#### **Members**

Adviser, Planning & Campus Development - Prof. P. P. Singh  
Treasurer, BIT, Mesra, Ranchi - Shri S. S. Jajodia  
Representative of the Institute Architects - M/s Kothari & Associates Kolkata  
Representative of the State PWD - Nomination Awaited  
Head, Department of Civil Engineering - Dr. K. V. Krishnamurthy

#### **Member-Secretary**

Registrar - Dr. K. V. Krishnamurthy

**Annexure- V**  
**TECHNICAL COUNCIL**

**Chairman**

Vice-Chancellor, BIT, Mesra Ranchi (Ex. Offico) : Prof. S.K. Mukherjee

**Members:**

Chancellor's Nomminees : Shri Siddhi Nath Singh  
: Dr. Madhukar S. Bhat  
: Dr. Krishna Kumar  
Director of Higher Education : Dr. K.K. Srivastava  
Government of Jharkhand, (Ex. Offico)

Dr. S. Kumar	Prof. S.P. Bhatnagar	
Dr. Ashok Misra	Dr. A.N. Sinha	Dr. A.K. Chatterjee
Dr. J.K. Prasad	Dr. R.C. Prasad	Prof. B.P. Roy
Dr. N.C. Mahanti	Dr. D. Jairath	Dr. P.K. Barhai
Prof. S. Sengupta	Prof. K. R. Roychowdhury	Dr. B.M. Karan
Dr. G.M. Panpalia	Dr. R.K. Narayan	Dr. G. Sahoo
Dr. P.C. Joshi	Dr. (Mrs.) Mandira Mukherjee	Prof. R.P. Singh
Dr. D. Sasmal	Dr. Mohan Varma	Dr. B.N. Das
Dr. Gopal Pathak	Prof. R. Suresh Kumar	Dr. A.K. Srivastava
Prof. A.K. Ray	Dr. M.S. Nathawat	Dr.(Mrs.) Usha JhaProf.
C.M. Prasad	Dr. S.K. Jain	Dr. Ajay Khare
Dr. P.R.P. Verma	Dr.(Mrs.) Nisha Gupta	Dr. D. Pal
Dr. A.S. Vidyarthi	Dr. J.S. Roy	Dr. S.K. Ghorai
Dr. Swapan Kr. Konar	Dr. Nilanchal Patel	

**Secretary**

Registrar : Dr. K.V. Krishnamurthy

## Annexure- VI

### **EXECUTIVE AND DEPARTMENT HEADS/ IN-CHARGE**

Vice Chancellor	:	Dr. S. K. Mukherjee
Treasurer	:	Shri S. S. Jajodia
Registrar	:	Dr. K. V. Krishnamurthy

#### **DEANS**

Admissions	:	Dr. D. Jairath
Post-Graduate Studies	:	Dr. Mohan Varma
Under-Graduate Studies	:	Prof. C. M. Prasad
Sponsored & Collaborative Research	:	Dr. P. K. Barhai
Academic Coordination	:	Dr. D. Sasmal
Extension Centres	:	Dr. H. K. Chatterjee
Faculty Development	:	Dr. Gopal Pathak
Finance	:	Dr. P. C. Joshi
Academic Infrastructure	:	Dr. (Mrs.) Usha Jha
Doctoral Research	:	Dr. Ashok Misra
Development Programme	:	Dr. (Mrs.) M. Mukherjee

#### **ASSOCIATE DEANS**

Women Affairs	:	Mrs. S.G. Panpalia
Boys Affairs	:	Dr. A. K. Sinha

#### **DEPARTMENTAL HEADS/ IN CHARGE**

Architecture	:	Dr. Ajay Khare*
Applied Chemistry	:	Dr. (Mrs.) Usha Jha
Applied Mathematics	:	Dr. N. C. Mahanti
Applied Mechanics	:	Prof.. A. K. Ray
Applied Physics	:	Dr. P. K. Barhai
Bio-Medical Instrumentation	:	Prof. B. N. Das*
Bio-Technology	:	Dr. A. S. Vidyarthi*
Civil Engineering	:	Dr. K. V. Krishnamurthy
Computer Science & Engineering	:	Dr. G. Sahoo*
Electronics & Communication Engineering	:	Prof. R. Sukesh Kumar
Electrical & Electronics Engineering	:	Dr. B. M. Karan
Environmental Engineering & Science	:	Dr. Gopal Pathak
Hotel Management & Catering Technology	:	Dr. S. K. Mukherjee
Information Science	:	Dr. N. C. Mahanti*
Management	:	Dr. S. K. Mukherjee
Mechanical Engineering	:	Dr. Ashok Misra
Polymer Sciences Engineering	:	Dr. (Mrs.) M. Mukherjee



Production Engineering	:	Dr. S. Kumar
Pharmaceutical Sciences	:	Dr. D. Sasmal
Physical Education & Sports	:	Dr. Gopal Pathak*
Remote Sensing	:	Dr. M. S. Nathawat
Space Engineering & Rocketry	:	Dr. A. K. Chatterjee
Co-coordinator Semester Programme	:	Dr. D. Sasmal
Additional Controller of Examination	:	Dr. S. K. Samal
Additional Registrar (Admn.)	:	Dr. A. K. Jha
Additional Registrar (Fin.)	:	Shri O. P. Bhagaria
Additional Registrar (Career Planning & Development Programme)	:	Shri B. B. Pant
Controller of Examination	:	Dr. S. K. Jain
Comptroller	:	Shri M. L. Verma
Chief Accountant	:	Shri G. S. Sharma
Library	:	Dr. (Mrs.) Usha Jha
Chief Medical Officer	:	Dr. Arjun Prasad Singh
Cultural Coordinator	:	Dr. Ajay Khare

#### **ADVISORS**

Planning & Development	:	Prof. P. P. Singh
International Wireless Research Centre	:	Dr. S. C. Goel
Students Projects ECE, IT, CSE	:	Dr. B. M. Karan
Technology Development & Transfer	:	Prof. S. P. Bhatnagar
Students Projects Production, Civil, Polymer	:	Prof. S. Sengupta
Architecture:		

\* In-charge

## Annexure- VII

### **DEPARTMENTAL BOARD OF STUDY**

#### **Department of Applied Chemistry**

Chairman- Dr. (Mrs.) Usha Jha, Head of the Department

- Members-
- |                            |                        |
|----------------------------|------------------------|
| 1. Dr. P.K. Shrivastava    | 2. Dr. R. P. Bhatnagar |
| 3. Dr. R.K. Dey            | 4. Mrs. Sumit Mishra   |
| 5. Dr. (Mrs.) M. Mukherjee | 6. Dr. Mohan Verma     |

Panel of Experts from outside of the Institute

- |  |   |
|--|---|
| 1. Dr. M. K. Mishra<br>Professor & Head<br>IIT, Mumbai | 2. Dr. M. K. Banerjee<br>Professor & Head<br>NIT, Jamshedpur  |
| 3. Dr. M.N. Mishra<br>Professor & Head<br>ISM, Dhanbad | 4. Dr. C. R. Das<br>Retd. Professor of Chemistry<br>Environmental Advisor to<br>State Govt. of Orissa |

#### **Center of Environmental Science & Engineering Group**

*Chairman - Dr. Gopal Pathak Coordinator ESE*

- Members -
- |                           |                      |
|---------------------------|----------------------|
| 1 Dr. (Mrs.) M. Mukherjee | 2. Dr. (Mrs.) U. Jha |
| 3. Dr. M.S. Nathawat      | 4. Mrs. Bindu Lal    |

Panel of Experts from outside of the Institute

- |   |  |
|---|--|
| 1. Dr. Gurdeep Singh<br>CESE, ISM, Dhanbad    | 2. Dr. S.K. Gupta<br>CESE, IIT, Mumbai |
| 3. Dr. (Mrs.) R.S. Patil<br>CESE, IIT, Mumbai | 4. Dr. Mukesh Khare<br>IIT, Delhi      |

#### **Department of Biotechnology**

*Under Graduate Programme*

Chairman - Dr. A.S. Vidyarthi, Head of the Department

- Members -
- |                               |                        |
|-------------------------------|------------------------|
| 1. Dr. P. Ghosh               | 2. Dr. K. Mukhopadhyay |
| 3. Dr. (Ms) Mandira Mukherjee | 4. Dr. Pratyosh Shukla |
| 5. Dr. D. Sasmal              | 6. Mr. G.K. Sharma     |
| 7. Dr. V.P. Gupta             |                        |

### *Post Graduate Programme*

Chairman - Dr. A.S. Vidyarthi, Head of the Department

- Members -
- |                      |                        |
|----------------------|------------------------|
| 1. Dr. P. Ghosh      | 2. Dr. K. Mukhopadhyay |
| 3. Dr. (Ms) Usha Jha | 4. Dr. Pratyosh Shukla |
| 5. Dr. R.T. Goswami  | 6. Dr. S.P. Bhatnagar  |

### *Panel of Experts from outside of the Institute*

- |  |  |
|--|--|
| 1. Prof. T. Ghosh<br>IIT, Delhi                                | 2. Dr. M.P. Singh<br>VC, Vinoba Bhave University                     |
| 3. Dr. T. Madhan Mohan<br>New Delhi                            | 4. Dr. Debbrata Das<br>IIT, Kharagpur                                |
| 5. Dr. D.J. Chattopadhyay<br>Calcutta University               | 6. Dr. R. Srivastava<br>CDRI Lucknow                                 |
| 7. Mr. G.K. Sharma<br>GM, Ranbaxy Pvt. Ltd<br>Himachal Pradesh | 8. Mr. Rajesh Soni<br>Director, Genom Biotech-<br>- Pvt. Ltd. Mumbai |

### ***Department of Pharmacy***

#### *Under Graduate Programme*

Chairman - Dr. D. Sasmal, Head of the Department

- Members -
- |                            |                         |
|----------------------------|-------------------------|
| 1. Dr. G.M. Panpalia       | 2. Prof. S.P. Bhatnagar |
| 3. Dr. B.N. Sinha          | 4. Mrs. S.M. Verma      |
| 5. Dr. (Mrs.) M. Mukherjee | 6. Dr. (Mrs.) Usha Jha  |
| 7. Prof. C.M. Prasad       | 8. Dr. P.R.P. Verma     |

### *Panel of Experts from outside of the Institute*

- |  |   |
|--|---|
| 1. Dr. Taushif Monif<br>(Industries Clinical Pharmacology &<br>Pharmacokinetics) Ranbaxy Research<br>Laboratories, Udyod Vihar, Plot No.20,<br>Sector 18 Gurgaon-122001, | 2. Dr. S.K. Kulkarni<br>Professor, University<br>College of Pharm. Sc.,<br>Punjab University<br>Chandigarh. |
|--|---|

### *Post Graduate Programme*

Chairman - Dr. D. sasmal, Head of the Department

- Members -
- |                      |                         |
|----------------------|-------------------------|
| 1. Dr. G.M. Panpalia | 2. Prof. S.P. Bhatnagar |
| 3. Dr. B.N. Sinha    | 4. Dr. S. Ganguly       |
| 5. Dr. N.C. Mohanti  | 6. Dr. Mohan Verma      |
| 7. Prof. C.M. Prasad | 8. Dr. P.R.P. Verma     |

Panel of Experts from outside of the Institute

- |   |  |
|---|--|
| 1. Dr. P. Gundu Rao<br>(Director)DIVIS Laboratory<br>R & D Centre, C-26, Santha Nagar<br>Hyderabad 500018 (India)<br>Mulshi Taluka -PUNE-2  | 2. Dr. S. J. Surya Kumar<br>Assistant Director<br>(Formulation) Lupin (Ltd.)<br>46A/47A, Nande Village |
| 3. Dr. Taushif Monif (Industry)<br>Associate Director (Clinical<br>Pharmacology & Pharmacokinetics)<br>Ranbaxy, Research Laboratoryes<br>Udyog Vihar, Plot No. 20, Sector-18,<br>GURGAON-122001 | 4. Dr. Roop K. Khar<br>Professor, Hamdard<br>College Pharmacy,<br>Jamia Hamdard, Delhi                 |
| 5. Dr. S.Y. Gabhe,<br>Principal & Professor<br>C.V. Shah College of Pharmacy<br>SNDT Women's University<br>Santacruz, Mumbai-49   | 6. Dr. C.K. Kokate<br>Vice Chancellor<br>Kakatiya University<br>Warangal (A.P.)                        |
| 7. Dr. P.G. Yeole (Principal)<br>Institute of Pharm. Education &<br>Research, Baraon, Wardha 442001.<br>Punjab University,<br>Chandigarh.   | 8. Dr. S.K. Kulkarni<br>Professor, University<br>College of Pharm. Sc.,                                |

**Applied Mathematics**

Chairman - Dr. N.C. Mohanti, Head of the Department

- Members -
- |                        |                   |
|------------------------|-------------------|
| 1. Dr. S.S. Roy        | 2. Dr. S.K. Jain  |
| 3. Prof. Sukesh Kumar, | 4. Prof. G. Sahoo |

Panel of Experts from outside of the Institute

- |  |                                      |
|--|--------------------------------------|
| 1. Prof. K.S. Chaudhury,<br>Jadavpur University, Kolkata | 2. Prof. S.S. Alam<br>IIT, Kharagpur |
| 3. Prof. K.C. Prasad<br>Ranchi University, Ranchi        | 4. Prof. Satyajit Roy<br>IIT, Madras |

**Department of Applied Mechanics**

Chairman - Prof. A. K. Roy, Head of the Department

- Members -
- |                       |                              |
|-----------------------|------------------------------|
| 1. Dr. S. Kumar       | 2. Prof. K. R. Roy Choudhary |
| 3. Prof. Rampal Singh | 4. Prof. U.S. Prasad         |
| 5. Prof. S. Sengupta  |                              |

Panel of Experts from outside of the Institute

5. Dr. S. Talapatra  
B.E College Shibpur.

6. Dr. B.N. Sreedhar  
IIT Kharagpur

### ***Department of the Applied Physics***

U.G. Programme

Chairman - Dr. P.K. Barhai, Head of the Department

Members -

1. Dr. A.K. Shrivastava	2. Dr. J.T. Andrews
3. Dr. S. K. Sinha	4. Dr. N.C. Mahanti
5. Dr. (Mrs.) M.Mukherjee	6. Dr. D. Jairath
7. Dr. G.G. Sarkar	

Panel of Experts from outside of the Institute

1. Prof. Subhandu Kr. Ghatak  
Head, Physics & Metrology  
IIT Kharagpur

2. Dr. B.K. Chakraborty  
NIFFT, Ranchi

3. Dr. T.K. Dey  
IIT, Kharagpur

4. Dr. P.S. Gupta  
Indian School of Mines,  
Dhanbad

### **Department of Civil Engineering:**

Chairman - Dr. K.V. Krishnamurthy, Professor & Head of the Department

Members -

1. Prof. K.R. Rochoudhary	2. Dr. Gopal Pathak
3. Dr. Balram Singh	4. Prof. Arun Kumar
5. Prof. Ashok Mishra	6. Prof. Ajay Khare
7. Prof. S. Sengupta	8. Mrs. Bindu Lal

Panel of Experts from outside of the Institute

1. Prof. V. Kumar  
IT BHU, Varansi

2. Dr. K. Sudhakar Reddy  
IIT, Kharagpur

### **Department of Computer Science & Engineering**

Chairman - Dr. G. Sahoo, Head of the Department

Members -

1. Mr. A. Mustafi	2. Prof. S. Dutta
3. Mr. P.K. Sharma	4. Mrs. Aruna Jain
5. Dr. N.C. Mahanti	6. Prof. R. Sukesh Kumar

Panel of Experts from outside of the Institute

- |  |  |
|--|--|
| 1. Dr. C. Majumdar<br>Jadavpur University, Kolkata | 2. Dr. Abhijit Kar<br>Jadavpur University, Kolkata |
| 3. Dr. A. Mishra<br>NIT, Jamshedpur.               | 4. Dr. S.K. Jena<br>NIT Rourkela                   |
| 5. Dr. C.R. Tripathy<br>UCE, Burla, Sambalpur      |  |

**Department of Electrical & Electronics Engineering**

Chairman - Prof. D. Bhagat

- Members -
- |                                 |                             |
|---------------------------------|-----------------------------|
| 1. Dr. B.M. Karan               | 2. Prof. R.C. Prasad        |
| 3. Prof. R.K. Narayan           | 4. Prof. B.P. Roy           |
| 5. Dr. B.N. Das                 | 6. Prof. R.C. Jha           |
| 7. Dr. T.Ghosh                  | 8. Prof. N. Pathak          |
| 9. H.O.D (Computer Sc. & Engg.) | 10. H.O.D (Electr. & Comm.) |

Panel of Experts from outside the Institute

- |  |  |
|--|--|
| 1. Dr. T.K.Ghoshal<br>Jadavpur University, Kolkata | 2. Dr. Samiran Choudhary<br>Jadavpur University, Kolkata |
| 3. Dr. T.K. Basu<br>IIT, Kharagpur                 | 4. Mr. N. Neogi<br>GM, RDCIS, Ranchi                     |

**Department of Electronics & Communication Engineering**

Chairman - Prof. R. Sukesh Kumar, Head of The Department

- Members -
- |                    |                       |
|--------------------|-----------------------|
| 1. Prof. S.C. Goel | 2. Dr. N. Gupta       |
| 3. Dr. D. Pal      | 4. Dr. J.S. Roy       |
| 5. Dr. S.K.Ghorai  | 6. Prof. S.S. Sonanki |
| 7. Dr. P.K. Barhai | 8. Prof. M. Puri      |
| 9. Prof. D. Bhagat |                       |

Panel of Experts from outside of the Institute

- |   |   |
|---|---|
| 1. Dr. G. Panda<br>R.E.C. Rourkela.       | 2. Dr. P.C. Rakshit<br>Calcutta University. |
| 3. Dr. Ajay Chakraborty<br>IIT Kharagpur. |   |

### **Department of Mechanical Engineering**

Chairman -

- Member -
- |                        |                         |
|------------------------|-------------------------|
| 1. Dr. A.K. Chatterjee | 2. Dr. A. Kumar         |
| 3. Mr. D.B. Lata       | 4. Prof. P.K. Choudhary |
| 5. Dr. A.N. Sinha      | 6. Dr. S. Kumar         |

Panel of Experts from outside of the Institute

- |  |                                       |
|--|---------------------------------------|
| 1. Sri A.P. Mishra<br>GM Larsen & Turbo, Kansbahal | 2. Dr. B.N. Prasad<br>NIT, Jamshedpur |
|--|---------------------------------------|

### **Department of Management**

Chairman - Prof. Anand Mohan Agarwal, Head of The Department

- Members -
- |                      |                        |
|----------------------|------------------------|
| 1. Prof. J.K. Prasad | 2. Mr. A.R. Srivastava |
| 3. Dr. S. Shivani    |                        |

Panel of Experts from outside the Institute

- |                                      |   |
|--------------------------------------|---|
| 1. Prof. B.B. Khanna<br>IGNOU, Delhi | 2. Prof. J.V. Prabhakara Rao<br>Andhra University |
|--------------------------------------|---|

### **Department of Polymer Engineering**

Chairman - Dr. (Mrs) M. Mukherjee, Head of The Department

- Members -
- |                  |                 |
|------------------|-----------------|
| 1. Dr. Usha Jha  | 2. Dr. S. Kumar |
| 3. Sri. S. Guria |                 |

Panel of Experts from outside the Institute

- |  |                                      |
|--|--------------------------------------|
| 1. Prof. Anup Kumar Ghosh<br>IIT, Kharagpur                              | 2. Prof. N. Bhatanagar<br>IIT, Delhi |
| 3. Prof. D.D. Kale<br>University Dept. of Chemical<br>Technology, Mumbai |                                      |

### **Department of Production Engineering**

Chairman - Prof. (Dr.) Surender Kumar

- Members -
- |                   |                       |
|-------------------|-----------------------|
| 1. Dr. B.K. Singh | 2. Prof. Vinay Sharma |
| 3. Dr. J. Prasad  | 4. Dr. Ashok Mishra   |

Panel of Experts from outside of the Institute

- Members -
- |  |   |
|--|---|
| 1. Dr. Anjani Kumar<br>NIT, Jamshedpur             | 2. Dr. A.K. Jha<br>IT BHU, Varanasi       |
| 3. Dr. B.N. Lahiri<br>Jadavpur University, Kolkata | 4. Dr. Raghuvir Kumar<br>MNNIT, Allahabad |
| 5. Dr. K.S. Bhat<br>R&D SAIL, Ranchi               |   |

**Department of Remote Sensing**

Chairman - Prof. M. S. Nathawat, Head of The Department

- Members -
- |                     |                       |
|---------------------|-----------------------|
| 1. Dr. A.K. Singh   | 2. Mrs. R.N.K. Sharma |
| 3. Dr. Gopal Pathak | 5. Dr. P.K. Barhai    |

Panel of Experts from outside of the Institute

- |   |  |
|---|--|
| 1. Dr. J.R. Sharma<br>CAZIR, Jodhpur                  | 2. Dr. P.L.N. Raju<br>IIRS, Dehradun                   |
| 3. Dr. I.V. Murli Krishna<br>JNT University Hyderabad | 4. Dr. S.M. Ramaswami<br>Bharathidasan Univ. Tamilnadu |

**Department of Space & Rocketry Engineering**

Chairman - Dr. A.K. Chatterjee, Head of the Deptt.

- Members -
- |                    |                     |
|--------------------|---------------------|
| 1. Dr. P.C. Joshi, | 2. Dr. Mohan Verma  |
| 3. Dr. J.K. Prasad | 4. Mr. P.K. Dash    |
| 6. Dr. S. Kumar    | 7. Dr. M. Mukherjee |

Panel of Experts from outside the Institute

- |   |   |
|---|---|
| 1. Dr. A.K. Ghosh,<br>Dept. of Aerospace Engg.<br>IIT Kharagpur               | 2. Dr. N.G. R. Iyengar<br>Dept. of Aerpc Engg.<br>IIT Kharagpur |
| 3. Shri A.K. Chakrabarti<br>Dept. of Aerospace Engg,<br>K-15, DRDL, Hyderabad | 4. Shri S.C. Ghosh,<br>Aerpc Engg,<br>LPSC, Trivandrum          |



### **Department of Architecture**

Chairman - Prof. Ajay Khare, Head of the Department

Members - 1. Mr. N.R. Mandal 2. Mr. S.P. Bhattacharya  
3. Dr. M.S. Nathawat 4. Dr. A.K. Sinha

Panel of Experts from outside of the Institute

- |  |  |
|--|--|
| 1. Prof. S. Chakraborty<br>Professor<br>Jadavpur University, Kolkata | 2. Dr. S. Singh<br>Assoc. Professor<br>Integral University Lucknow |
| 3. Dr. U.K. Banerjee<br>Professor<br>IIT Khargapur                   | 4. Mr. A. Kumar (for UG only)<br>Arch En Design Centre<br>Lucknow  |
| 5. Ar. A.S. Lal (For UG Only)<br>Alley and Associates<br>Kolkata     |  |

### **Department of Information Science**

Chairman - Dr. N.C. Mohanti, Head of the Department

Member - 1. Dr. Bhaskar Karn 2. Dr. P.K. David  
3. Prof. H.K. Singh

Panel of Experts from outside the Institute

- |   |                                       |
|---|---------------------------------------|
| 1. Prof. A. Kar<br>Jadavpur University, Kolkata | 2. Prof. A. Mishra<br>NIT, Jamshedpur |
|---|---------------------------------------|

### **Department of Hotel Management & Catering Technology**

Chairman - Dr. A.M. Agrawal, Head of Dept.

Member - 1. Mr. Atul Gupta 2. Mr. Ashish Dahiya  
3. Mr. Roshan Prasad

Panel of Experts from outside the Institute

- |   |   |
|---|---|
| 1. Prof. R.K. Saxena<br>Principal, Institute of<br>Hotel Management, Mumbai | 2. Dr. B.K. Chakraborty<br>Ex. Principal, Institute of<br>Hotel Management, Patna |
|---|---|

## **Department of Biomedical Instrumentation**

**Chairman** - Dr. B.N. Das

**Member** -

1. Dr. B.M. Karan	2. Dr. R.K. Sinha
3. Mr. S. Kumar	4. Dr. S.K. Ghorai
5. Dr. B.N. Sinha	6. Dr. D. Pal

### **Panel of Experts from outside the Institute**

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| 1. Dr. H.P. Narain<br>RMCH, Ranchi    | 2. Dr. Anil Mishra<br>BMBHRC, Kolkata |
| 3. Dr. D.N. Tibarewala<br>RMCH Ranchi | 4. Dr. R.K. Jha<br>RIMS Ranchi        |
| 5. Dr. A.K. Ray<br>BHU, Varanasi      |                                       |

## Annexure- VIII

### **IMPORTANT TELEPHONE NUMBER**

S.N.	Name	Department	Phone No.	Fax
1.	Dr. S.K. Mukherjee	Vice Chancellor	2275402	2275401
2.	Dr. K. V. Krishnamurthy	Registrar	2276052	
3.	Dr. Ashok Misra	Dean Doctoral Res.	2275924	
4.	Prof. Sukesh Kumar	Electronics & Comm.	2276185	
5.	Dr. S. Kumar	Production Engg.	2275044	
6.	Dr. A.K. Chatterjee	Space & Rocketry	2275983, 2276224	
7.	Dr. P.C. Joshi	Dean (Finance)	2276290	
8.	Dr. P.K. Barhai	Applied Physics	2275522	
9.	Mr. B.B. Pant	Training & Placement	2275566	
10.	Prof. K.V. Krishnamurthy	Civil Engineering	2276502	
11.	Prof. A.K. Ray	Applied Mechanics	2276182	
12.	Dr. N.C. Mahanti	Applied Mathematics	2276183	
13.	Dr. (Mrs.) M. Mukherjee	Polymer Engineering	2276053	
14.	Dr. M.S. Nathawat	Remote Sensing	2276003	
15.	Dr. D. Sasmal	Pharmaceutical Sciences/ Dean Academic Coordination	2276247 2275872	
16.	Dr. S.K. Jain	Controller of Examination	2275138	
17.	Prof. C.M. Prasad	Dean (Under-graduate)	2275872	
18.	Dr. A.K. Chatterjee	Dean (Faculty Development)	2275983	
19.	Mr. A.K. Thakur	University Polytechnic	2276008	
20.	Mr. D. Jha	Purchase Executive	2276501	
21.	Dr. Gopal Pathak	Dean (Students Welfare)	2276587	
22.	Dr. A.K. Jha	Addl. Registrar (Admn)	2275351	
23.	Mr. M.L. Verma	Comptroller	2275808	
24.	Mr. G.S. Sharma	Chief Accountant	2275927	
25.	Dr. Arjun Prasad	Chief Medical Officer	2276009	
26.	Mr. K.B. Yadav	Chief Security Officer	09431326696	
27.	Dr. A.S. Vidyarthi	Biotechnology	2276223, 2276590	
28.	Dr. Ajay Khare	Architecture	2275093	
29.	Dr. G. Sahoo	Computer Science	2276185	
30.	Dr. D. Jairath	Dean (Admissions)	2275868, 2276007	
31.	Dr. (Mrs.) Usha Jha	Applied Chemistry	2275636	
32.	Prof. S. Sengupta	Advisor	2275051	
33.	Prof. P.P. Singh	Advisor	2276431	
34.	Dr. Mohan Verma	Dean (Post Graduate)	2276224	

- |                       |  |
|-----------------------|--|
| 35. BIT Exchange      | 2275444, 2275896, 2276267 (INPCO)<br>2276492/93/94/95/97/98/99   |
| 36. VIP Guest House   | 2275213  |
| 37. Chairman Bungalow | 2275214  |
| 38. Hostels           | H1 – 2276074, H2 – 2276073, H3 – 2276072,<br>H4 – 2276071, H5 – 3298371, H5A – 3298372,<br>H5A – 2276069, H6 – 3298373, H7 – 3298374<br>H8 – 2276075, H8 (New) – 2807639, H8A – 3207973<br>H9 – 2276076, H9A – 3207974 |
| 39. I.G.H.            | 2276210  |

**Off Campus Centre:**

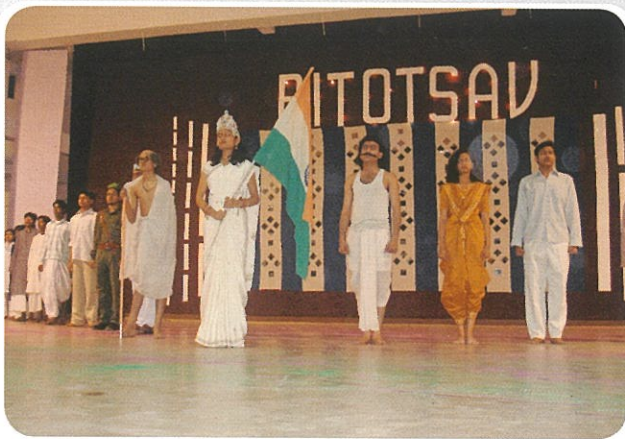
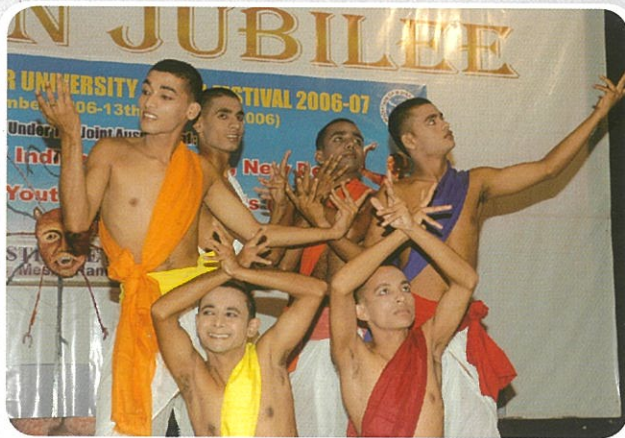
- |                   |  |
|-------------------|--|
| 1 Ranchi (Lalpur) | (0651) 2531679, 2531817                |
| 2. Kolkata        | (033) 55256728, 24414542               |
| 3. Jaipur         | (0141) 2751178, 2751567                |
| 4. Allahabad      | (0532) 2687099                         |
| 5. Noida          | (0120) 2553661 – 2                     |
| 6. Patna          | (0612) 2223538, 2223545, 3200853       |
| 7. Bahrain        | (00973) 17690025, 17691506             |
| 8. Muscat         | (00968) 24449196                       |
| 9. U.A.E.         | (+971) 50 4862900,<br>(+971) 7 2272203 |

**Annexure- IX**  
**ADDRESS OF THE EXTENSION CENTRES**

- |  |  |
|--|--|
| <p>B.I.T. Extension Centre Lalpur</p> <p>1. Lalpur, Ranchi- 834001<br/>Ph No- (0651) 2531679, 2531817<br/>Fax No-(0651) 2531658, 2531676<br/><a href="http://www.biteclalpur.ac.in">www.biteclalpur.ac.in</a></p> <p>3. B.I.T. Extension Centre Kolkata<br/>Southend Conclave<br/>1582, Rajdanga Main Road,<br/>4<sup>th</sup> Floor, KOLKATA-700107<br/>Ph. No-(033) 55256728, 24414542<br/>Fax No- (033) 25762398, 24414547</p> <p>5. B.I.T. Extension Centre, Allahabad<br/>B-7, Industrial Area, P.O.- TSL Naini<br/>Allahabad- 211010<br/>Phone: 0532- 2687363, 2687099<br/>Fax: 0532- 2687554</p> <p>City Office- 14 Tagore Town,<br/>Allahabad- 211 002<br/>Phone: 0532- 2465518</p> <p>7. B.I.T. Extension Centre Bahrain<br/>P.O. Box 31320, Budaiya, Kingdom of<br/>BAHRAIN (AG)<br/>Fax No-(00973) 17692879<br/>Ph No-(00973) 17690025 (PBX),<br/>17691506(Direct)<br/>Email : bitic@ batelco.com.bh,<br/><a href="http://www.bitic.edu.bh">www.bitic.edu.bh</a></p> <p>9. B.I.T. Extension Centre UAE<br/>C/o Royal College of Applied Science &amp; Technology<br/>Knowledge Centre, RAK Free Zone<br/>Ras Al Khaimah, U.A.E.<br/>Ph No- +971 50 4862900(M), +971 7 2272203</p> | <p>B.I.T. Extension Centre Jaipur</p> <p>2. B.I.S.R. Campus<br/>27, Malviya Nagar Industrial Area,<br/>JAIPUR-302017<br/>Ph. No- (0141)-2751567/ 2751178<br/>Fax No-(0141)-2751601, 2751565</p> <p>4. B.I.T. Extension Centre Noida<br/>A-7, Sector-1,<br/>NOIDA-201301, (U. P.)<br/>Ph. No- (0120) 2553661 / 2<br/>Fax No- (0120) 2554146</p> <p>6.. B.I.T. Extension Centre Patna<br/>Near Patna Airport, P.O. Bihar Veterinary<br/>College, Patna 800014<br/>Phone: 0612- 2223538/2223545/3200853, Fax:<br/>0612- 2223545<br/>Patna City Office: 62 D, Rajesh Kumar Path,<br/>S.K.Puri, Patna – 800 001<br/>Phone: 0612- 2540105, Fax: 0612- 2540105</p> <p>8. B.I.T.Extension Centre Muscat<br/>Waljat Colleges of Applied Science<br/>P.O. Box No.197, Rusayal,<br/>Postal Code 124<br/>MUSCAT, Sultanate of OMAN<br/>Fax No- (00968) 24449196<br/>Ph No-00968-24449193</p> |
|--|--|



## Bitotsav & Youth Festival 2006-2007





## Co-curricular Activities at the Institute



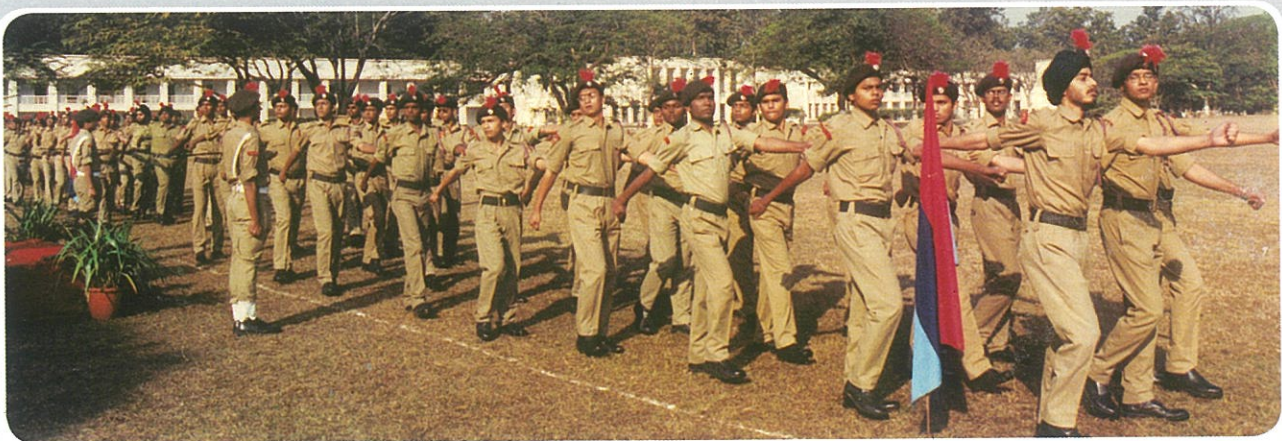
N.S.S. Activity



N.S.S. Activity



A Army band of 23 Inf Div Participating the ID 2004 Parade with 3 Jhar CTC NCC Cadets at BIT Mesra Ground



N.C.C. Parade



## Extra-curricular Activities





## BIT Extension Centres



BIT International Centre, Bahrain



BIT International Centre, Muscat



BIT International Centre, UAE



BIT Extension Centre, Noida



BIT Extension Centre, Kolkata





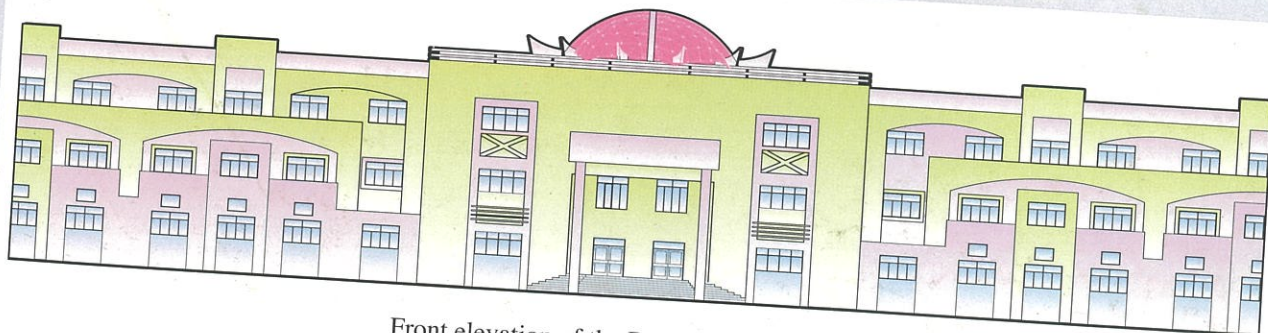
BIT Extension Centre, Lalpur



BIT Extension Centre, Allahabad



BIT Extension Centre, Jaipur



Front elevation of the Patna Extension Centre



# **BIRLA INSTITUTE OF TECHNOLOGY**

**Mesra-835215, Ranchi, Jharkhand**

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