ANNUAL REPORT

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BIRLA INSTITUTE OF TECHNOLOGY
MESRA, RANCHI (INDIA)

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I N D E X

Director's Note

The Institute has just completed five years as a Technical University and it is in fitness of things that its performance in the last five years be critically examined keeping in view the constraints within which the Institute has to function.

The Institute was established by the Hindusthan Charity Trust 36 years ago as an all India Institute for technical education, research and training for emerging manpower needs of the country. Considering the general scenario of eastern India the Institute has done reasonably well in attaining the objective set forth.

The nature and content of technical education has gone through a sea-change in the last three decades. Degree level technical education is now aimed at producing R & D manpower rather than maintenance manpower. Thus, instead of graduating 'Engineers' the institutions are graduating 'Engineering Scientists'. In line with this change of emphasis the Institute laboratories have been modernised and the Institute today houses excellent laboratories in the modern areas of technology, such as Flexible Manufacturing, Fibre Optics, Digital Electronics, Microprocessor Applications, Solar Energy and CAD/CAM. It has a reasonably good Computer Centre. The curriculum content emphasises understanding of fundamentals and more time is devoted to project work rather than routine courses. The academic programmes have been organised on flexible credit system with a Semester-wise calendar.

The Institute interaction with Industry has now taken a definite shape. Several research programmes particularly for development of import substitute items have been

undertaken in collaboration with major industries in the Steel, Coal and Heavy Machinery sector. The response from industries for joint research projects has been good and the idea that technical institutions can successfully provide answers to industrial problem has gained acceptance. In line with the national policy for encouraging entrepreneurship a "Science & Technology Entrepreneurs Park" has been established and attempt has been made to interweave the pre-final and final year project work with development of products having economic viability for small scale manufacture.

There has been addition to the physical facilities available. The Library block has been completed and the work on Institute Hospital, another Girls Hostel and improvement of Play Grounds are well in hand and should be completed by the end of the current session.

The infrastructure available at the Institute is now comparable to that of any good technical institution of the country and in order to exploit it fully it is now necessary to add to professional manpower and increase research activity as well. The current level of funding for Institute of the size of B. I. T. is in fact low. The recurring budget of Rs. 2.5 crorres is hardly ten percent of the recurring budget of an I. I. T. in spite of the fact that atleast at the Under-graduate level the Institut is doing a comparable job. Additional funding of another Rs. 2.5 crores annually is the minimum necessary for utilising even partly the current potential of the Institute.

This Technical University is undoubtedly a natioal asset and to maintain its dynamism and standards the General Council should seriously consider approaching the national Government for adequate support, otherwise a static situation could result and the immense potential of the Institute would remain unutilised.

B.I.T., Mesra, Ranchi

Dated: June 30, 1991.

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ADMINISTRATION

B.I.T. is a 'deemed University' under sec. 3 of the UGC Act, 1956. It functions under the overall supervision, direction and control of a high-power Board of Governers, comprising representatives of the Ministry of Education, Govt. of India, the UGC, the State Govt., the Chancellor, the AICTE, the Trust and the Institute Faculty. Mr. G. P. Birla is the Chairman of the Board of Governors. The Governor of the State of Bihar is the Chancellor of the Institute. Composition of the Board of Governors is given in Annexure - I.

The Technical Council decides the academic policy of the Institute. It controls and approve the curriculum, courses and examination results. It appoints Committee to look into specific academic matters arising from time to time. The teaching, training and research activities of various departments at the Institute are constantly under review to improve both facilities and standards. The Director of the Institute is the Chairman of the Technical Council. Members of the Technical Council are listed in Annexure - II.

Financial advice to the Institute is given by the Finance Committee whose constitution is given in Appendix II. Similarly, the Building and Works Committee advises the Institute in matters relating to building works activity. The constitution is also given in Annexure - II.

In addition there are a number of other committees like the Regulation Committee for Under-graduate and Post-graduate courses, examination Committee, Semester Programme Co-ordination Committee, Admission Committee, Scholarship Committee, Students' Welfare Committee etc. which are appointed by the Technical Council to help the administration in the efficient running of the Institute.

GENERAL REVIEW

BRIEF HISTORY

The Institute was established as an All India Institute for imparting Technical Education and Research in 1955 by the Hindustan Charity Trust. Initially it functioned as an affiliated college of the erstwhile Bihar University and later in 1960 upon creation of new Universities in the State, its affiliation was transferred to the Ranchi University.

In pursuance of the recommendations of the Education Commission, Government of India (1964-66) and on the basis of the report of a Joint Selectn.Committee of the UGC and AICTE, in March, 1972 the Institute was granted the status of an 'Autonomous' College by making special provision in Bihar State Universities Act. The Rules for its governance were made by the Chancellor of the Universities of Bihar.

On the basis of its continued excellence, and approval by the UGC, the Institute was declared a "Deemed University" in August 1986 under Section 3 of the UGC Act.

Since its inception the Institute is updating its academic standards, and has now acquired a pride of place in Technical Education and is one of the Premier Institute in Eastern India.

COURSES & DEGREE PROGRAMMES

Currently it is offering a variety of curricular programmes as detailed below:

Course	Intake capacity	Duration of course	Year of introduction of the course
I. BACHELOR OF ENGINEERING			
1. Civil	45	4 years course	1957
2. Computer Science	30	-do-	1983
3. Electrical & Electronics	45	-do-	1955
4. Electronics & Coomunication	60	-do-	1964
5. Mechanical	60	-do-	1955
6. Production	30	-do-	1964
II. PHARMACEUTICAL SCIENCES			
1. B.Pharmacy	30	-do-	1972
2. M. Pharmacy	10	3 Semester or 1.½ years	1983
(i) Pharmaceutical Chemistry (ii) Pharmaceutics			
III. MASTER OF ENGINEERING			
1. Civil	2	-do-	1965
Soil Mechanics Structural & Foundation Engg.			
2. Electrical	12	-do-	1964
(i) Control System & (ii) Power System			
3. Electronics & Communication	12	-do-	1965
(i) Instrumentation (ii) Microwave Engineering			
4. Mechanical	6	-do-	1964
Heat Power Engineering			
5. Space Engineering & Rocketry	10	-do-	1965
(i) Rocket Propulsion & (ii) Aerodynamics			

Course	Intake capacity	Duratopm of course	Year of introduction of the course
IV. MASTER OF BUSINESS ADMINISTRATION	30	2 Years	1980
(i) Marketing			
(ii) Personnel			
(iii) Industrial Management			
(iv) Finance			
& (v) Maintenance Management			
V. M.C.A. (MASTER OF COMPUTER APPLICATIONS	30	3 Years Course	1984
VI. D.C.A. (DIPLOMA IN COMPUTER APPLICATIONS	30	1 year	1988

VII. CONTINUING EDUCATION PART TIME POSTGRADUATE PROGRAMME

To enable Working Engineers to update their technologies, the part-time postgraduate programme offers three levels

A Certificate of Merit after completing 5 units
A Diploma after completing 10 units and
A Degree after completing 15 units of course work.

The disciplines are:

1. Civil Engineering	: Structural Design
2. Computer Applications	
3. Electrical Engineering	: Control System & Power System.
4. Management	: Marketing, Personnel, Industrial Management and Finance.
5. Mechanical Engineering	: Design of Mechanical Equipment.

ENROLMENT

There are 1467 students who have enrolled during the current Academic Year 1990-91. The branch-wise enrolment is detailed below. Of these there are 156 Girl students and 64 Foreign students:

	Full Time	Part Time	
B.E.	959	-	
B.Pharm.	108	-	
M.C.A./D.C.A.	114	38	
M.B.A.	41	55	
M.Pharm.	9	-	
M.E.	88	55	
	1319	148	= 1467

FACULTY & STAFF

Against the sanctioned strength of 173 Faculty positions, 151 are filled with 22 vacancies. The break-up is as follows:

Category	Sanctioned Strength	In Position	Vacancies
Professors	44	39	5
Associate Professors	49	45	4
Lecturers & Associate Lecturers	80	67	13
	173	151	22

The number of administrative and supporting staff are approximately 220. In addition, there are about 250 Class IV Staff to look after the General Maintenance of electricity, water supply, Gardens, Security, Hostels and allied services.

All academic staff have been provided accomodation on the Campus.

About 60% of the administrative and other supporting staff have also been provided accommodation on the campus.

CAMPUS AND PHYSICAL FACILITIES

The Institute is fully residential and extends over 780 acres. The main buildings of the Institute covers an area of over 30,000 sq. mtrs. and accomodates the various research and training laboratories, administrative offices, lecture rooms. The Workshop annexe has a 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.

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 centre, dispensary, bank and schools.

II. Description of Buildings on the Institute

1. Institutional Buildings	Sq.mtrs.
i) Main building & Administrative Block	3700
ii) Class room and laboratories, Drawing Halls, Staff rooms etc.	9300
iii) Library Block	2600
iv) Space Engg. & Rocketry Block including explosive and Rocket Fuel Centre	930
v) Workshop Sheds, General Stores, Garrage/Godown	3721
vi) Gymnasium	850

2. Others	Sq.mtrs.
i) Animal House	400
ii) NCC Block	400
iii) Primary/High School (temporarily housed in Mechanical Engg. Block	744

Note: During the year 1987-88 a Navodaya Vidyalaya has also been established in the Institute campus. Presently it is housed in temporary sheds constructed for the purpose.

III. Residential Complex

i) Staff Quarters in differen t categories	296
ii) Residential Complex for supporting services: Forest Guards, Diary, Shop Keepers, Washermen etc.	70

IV. Hostels

i) Seven Boy's Hostels	1450 Single Rooms
ii) One Girls' Hostel	60 rooms
iii) One Foreign Students Hostel	32 rooms

V. Guest accommodation

The Institute maintains two Guest Houses. A General purpose Guest House with 8 furnished rooms and a VIP Guest House with 3 deluxe double bed rooms to accommodate guests appropriately.

VI. Auditorium

To meet the growing needs of the community for public functions an Open Air Theatre is partly completed and can seat 2500.

VII. Games & Sports

The Institute has a Gymnasium and is spacious enough to accommodate indoor games. Extensive play grounds are provided to facilitate sports. They are:

1.	Field Tracks for Sports/Atheletics/ Cricket.	-1
2.	Football ground	-2
3.	Hockey grounds	-2
4.	Basket Ball grounds	-4
5.	Volley Ball grounds	-6
6.	Tennis Courts	-6
7.	Badminton Courts	-6(1 indoor court)
8.	Rifle Firing Range	-1
9.	NCC Parade ground	-1

VIII. Canteen services

A Moderately furnished canteen, provides snacks for students and staff.

IX. Dispensary-cum-Health Unit

A eight bed health care unit serves the large campus community mainly as an outdoor patient unit. This unit supports three full time doctors. Excellent rapport exists for acute medical needs with the Government Medical College Hospital at Ranchi. The construction of the new Hospital building is in progress.

X. Marketing Centre

A well run Cooperative Stores provide the daily requirements of the campus of nearly 5,000 residents. Additional shopping complex is provided for sundry needs.

We hope to establish a full fledged marketing centre and cooperative Book Store to meet the growing needs of the campus. The annual needs exceeds Rs. 2 crore mark. The construction of Marketing Complex is in progress.

CENTRAL SERVICES

COMPUTER CENTRE

Computer Centre provides the central facility for the students and staff members of this Institute. It started on a modest scale with PDP-11/34 Mini computer from D.E.C., U.S.A. in 1982 and has upgraded the infrastructure from time to time not only to meet the ever increasing requirements of the Institute but the training facilities for the outside user. SN-73 which is upward compatible to PDP-11/34 has been installed and large number of BBC Micro-computers, IBM-PC's, PC-XT's and a PC/AT computer are used continuously by the users. The software support includes FORTRAN-77, BASIC, COBOL, PASCAL, C, LISP and PROLOG. We also have installed a local area network (LAN) using 80386 based file server very recently.

With support from the Dept. of Electronics, Govt. of India a "Resource Centre" for Computer Literacy and Studies in Schools (CLASS) has been established in this Institute in 1984. A series of 3 weeks duration training programme are organised for the school teachers from various schools of the Eastern Region. Under this programme after training the school teachers in the effective use of computers, the respective schools are given two BBC Microcomputers with all the necessary software. The maintenance of these computers and software needs of the schools are met by the BIT resource Centre.

In addition to providing the educational and training facilities the Computer Centre has completed many software projects. It is maintaining the pay-rolls for the Institute and academic transcripts of all the students.

With the support from Department of Electronics, Govt. of India, we are acting as a resource centre for MCA Teachers Re-orientation Training Programme from the year 1988. The participants are selected on all India level which will benefit the participating teachers for their re-orientation of MCA courses at Post-graduate level.

LIBRARY

The Library subscribes over 305 Indian and foreign journals annually. During the current year 2500 volumes were added to the existing stock of library. The up-to-date stock of the library comprises of 51,000 books and 13,000 back volumes. Facilities for microfilming and photocopying are also being provided by the library. During the year 1990-91 the first floor of the Library Building has been completed providing additional space of about 1100S.mtr.

MICROPROCESSOR RESEARCH CENTRE

During this year the laboratory facility have been expanded to facilitate application programming on fast 32 bit processors namely:

(a) 68020 at 25 MHz, programming and real time trigger trace with performance analysis.

(b) IMST 414 Transputer System for 32 bit multiprocessor environment, emulation using PC-XT, to yield system throughput upto 10 MIPS, using occam language.

both these system design facilities are unique in the eastern sector, and gives BIT the design ability on fast real time processor based system development.

The Hewlett-Packard 9000-350 system has been installed for Al applications with UNIX-0S C, Prolog, and Lisp and assembly language facility. The system is the state of the art machine capable of expansion. Currently the HP 9000 is networked with two HP 64000 development stations to constitute the 'HP-Design Centre'.

The laboratory has completed the following projects

(a) Camma ray thickness Gauge for Tinplate Company

(b) Non contact automatic length measurement system for Usha Industries.

and the following projects are nearing completion:

(a) Control of Ortho cyclic winding machine for Usha Industries.

(b) Eddy current inspection of fast moving tinplates.

Collaborative programmes are initiated with local R & D groups for automatic gauging of rolled steel items by laser techniques combined with Microprocessor instrumentation, in-circuit PC-board checking of industrial PCB's using PC-XT and the development of speicalised programmes for public sector industries.

OUT-TURN OF GRADUATES & POST-GRADUATES

During the year 1990-91, 468 students have qualified for the award of Degrees and Diplomas of the Institute; 296 for Under-graduate Degrees(B.E./B.Pharm.) and 172 for Post-graduate Degrees(M.E., M.Pharm., M.B.A., M.C.A. & D.C.A.) the break-up is as follows:

	No. of students graduated in 1990-91		Total Number of graduates upto 1990-91
I. Under-Graduate Degree			
B.E.(4-Yr. Degree Course)			
Civil Engineering	23		
Computer Science	36		
Electrical & Electronics Engg.	58		
Electronics & Commu. Engg.	55		
Mechanical Engg.	86		
Production Engg.	10	268	8083
B.Pharm. (4-Yr. Degree Course)		28	342
II. Post-Graduate Degree			
M.E.			
Civil Engineering	8		
Electrical Engineering	7		
Electronics & Commu. Engg.	11		
Mechanical Engineering	19		
Space Engg. & Rocketry	12	57	260
M.Pharm.		11	87
M.B.A.		36	448
M.C.A.		31	136
D.C.A.		37	50
Total:		468	9406

ACADEMIC INNOVATIONS, RESEARCH & DEVELOPMENT

With the encouraging response from the Government of India and the U.G.C., during the year 1990-91 the Institute has been able to create and establish infrastructure for interdisciplinary arena of research, and instructions in engineering, pharmaceutical and Applied Sciences. During the year additional facilities have been created for Post-graduate studies and research in the area of applied sciences to meet the needs of specialized research workers and rs. New programmes for Industry-Institute interaction have also been developed.

Detailed planning for introducing a wide range of academic programmes both at the Under-graduate and Post-graduate levels has been accomplished; new programmes proposed to be introduced from the next academic session for which necessary formalities/approvals of the concerned authorities is in process include M.Sc.Information Science, M.Sc. Applied Sciences, M.Pharm. in Pharmacognosy and Pharmacology, B.Arch. and B. Polymer Engineering.

In order to undertake advanced studies in the evalutionary aspects of scientific development, a 'Research Cell' for studies on 'History of Science' has already been established at the Institute. This Cell, headed by Professor R.C. Gupta, the founder faculty member of international repute, is continuously growing with richer collection of books, journals and other materials for initiating investigation for research work. The centre is duly recognised by the Indian National Academy for supervising and guiding research. Prof. Gupta who is also the Indian representative in the 'International Commission on History of Mathematics', was nominated as the "Man of the Year - 1990" by the American Biographical Institute, USA.

In pursuance of the New Education Policy of the Government of India, the Institute is keeping pace with the latest technological advances in identified areas of emerging technologies and is creating and establishing necessary infrastructure for Education, Research and Training. The Micro-processor Development Centre has already established a good rapport with SAIL, MECON, CMPDI, HEC for design and development of instrumentation and control systems for real time Computer controls. Artificial intelligence and Robot technology are being moved from the research domain to the solution of practical problems.

Currently, we are in the process of developing Plasma Engineering Laboratory. Extensive research and investigation on propagation of electro-magnetic waves in Plasma has been carried on. A grant-in-aid project, in this context, has already been submitted to the Ministry of Human Resource Development.

It is significant to place on record that the Institute has been the pioneer among the technological institutions to start the programme of Post-graduate studies and research in the area of Space Engineering & Rocketry. It has successfully developed several rocket fuels for solid propellant rockets and has set up a sophisticated research facility in Hybrid and liquid propellant technology. Several projects have been undertaken for the Ministry of Defence, Atomic Energy Commission and I.C.A.R. The work on gelled propellants is noteworthy. Extensive investigations have been made in developing rocket systems for weather modification. The Department has also developed a new hydrazine based hybrid fuel. Acoustic strand burners have been designed and fabricated to measure the burning rates of PVC-AP and HTPB-AP type solid propellants both at high and low pressures.

As initiated during the preceeding years, fibre-reinforced cement sheets, design and implementation of low cost housing and improvement in rice husk cement are now on nearly completion stage. The new low cost house designs and models for effective dissementation of knowledge regarding earthquake safety and flood mitigation along with a model of rural water supply scheme to be applied to the water starved districts of the state have been exhibiting encouraging results.

The Institute is organising a programme of high technology applications in the energy area. A Hi-tech Wind Energy Convertor of German design has been acquired and installed at Puri (Orissa) for experiments. A solar heat convertor based on an Australian design has been developed which is leading the way for designing an experimental 100 Kw steam generating station. Significant research work has been carried out in the area of bi-fueling of I.C.Engines. Emphasis has been laid on investigation into the suitability of various types of alternate fuels for reciprocating combustion engines. Bio-gas energy and geo-thermal energy research works have also been initiated and our proposals in this regard are under consideration of the Government of India.

Discovery of stress-induced Electromagnetic Radiation (EMR) and its new bio-physical application in Neurosurgery have already received international recognition. During the year under report, the second discovery, namely,"fracture-induced magnetic effect" has been given recognition on international level. The bio-engineering research in the above mentioned field has been progressing satisfactorily.

Research programmes in collaboration with SAIL(R&D) and MECON respectively, development of new materials for

hostile environment and CAD analysis of shape control in cold Rolling research has been under progress. The Institute is also representing in celebrating the 42nd National Metallurging Day to be held from 14th to 17th Nov.'91 hosted by the Ranchi chapter of the Indian Institute of Metals.

The Department of Computer Engineering has been active in its own distinct way. In addition to the Regular Diploma in Computer Applications Course, D.C.A. part-time and M.C.A. part-time programmes have been introduced in the previous year; the department has extended facilities by adding two more users' terminal rooms for SN-73 system, other for Magnum-IV System, Microvax-II with 8-terminals, CP 486 system with 8 terminals, 20 nos. of PC, PC/XT and PC/AT's. It is also proposed to introduce M.Tech.(Computer Science) Course programme in near future. The department is also involved in software development activities for Government of Bihar and Calcutta Medical Research Institute. Dr. P.K. Mahanti who is Head of Computer Centre of the Institute, has been appointed a member of Editorial Board of the International Journal of Modelling & Simulation, U.S.A. During the year under report the department has conducted short-term courses on Computer Applications for employees of the State Bank of India, United Commercial Bank and also for the students of Bihar Institute of Technology,Sindri.

In addition to the Industrial Robots and Flexible Manufacturing, agronomics has been introduced in the Department of Production Engineering. Research in this new field is under progress. Grant-in-aid project has already been submitted to the Government of India under the VIII Plan Development Schemes.

Unde the grant-in-aid project from the Ministry of Human Resource Development for Materials Science Laboratory, Mossbauer Spectrometer - MS 1200 and Atomic Absorption

spectrophotometer - Model AA-680 have been installed which are providing experimental base to the theoretical research done in polymer technology. Design of Heterostructure lasers for use in optical communication systems and computers is one of the significant projects under progress.

The research activities of the Department of Pharmaceutical Sciences are being carried out by the faculty members, Research Scholars sponsored by U.G.C., Post-graduate students financed by the Government of India, and Under-graduate students. At present, there are 8 candidates working for their Ph.D. out of which 3 are the faculty members. Dr. A.K. Sharma and Dr. G.M. Panpalia have UGC Scholars working under them. Dr. B.K. Razdan has received sanctiion for a Major Research Project from UGC recently. The research work of Dr. D. Sasmal and co-workers on the Ochratoxin A and Citrinin has been recognized by U.S. Department of Health and Human Services under its (U.S.A.) National Toxicology Program Technical Report Series No. 358 entitled "Toxicology and Carcinogenesis Studies of Ochratoxin A (GAVAGE STUDIES).

The research work in the Department is mainly being done in the area of Pharmaceutics and Pharmaceutical Chemsitry, as under:

Pharmaceutics :

The work in the pharmaceutics involves bioavailability, stability of formulations, evaluation of dosage forms and controlled release formulations.

The role of crystal habit on the stability and bioavailability using trimethoprim, metronidazole is being carried out under the guidance of Dr.G.M. Panpalia. It has been found that crystal habit does influence both of these factors.

Effect of long chain alcohols on the stability of emulsions has been studied under guidance of Dr. Panpalia. It has been observed that presence of long-chain fatty alcohol does effect the stability of the emulsion and this is concentration dependent.

The work on evaluation of dosage forms using dissolution-dialysis cell under the guidance of Dr. B.K. Razdan is being continued. Newer drugs like sulphamethoxazole, trimethoprim have been taken up.

Theophylline, a bronchodilator has been formulated into a controlled release formulation using water insoluble polymers like Eudragit RL100 & Eudragit RL100 and water soluble polymers like HPMC K4M and HPMC K15M. The formulation were evaluated using dissolution studies. Studies which have been carried out under the guidance of Prof. P.R.P.Verma have shown good results. Further studies, involving bioavailability studies are in progress.

Pharmaceutical Chemistry :

4-aminoantipyrine, which is the basic ring of analginan analgesic, has been modified to yield newer analogs which have been found to possess good analgesic activity. Moreover these analogs do not possess the property of agranulocytosis which is found in case of analgin. The work is being carried out under the guidance of Dr. B.K. Razdan. Work on various analogs of Tropane, Pseudopelletierine & piperidone is being carried out under the guidance of Dr. B.K. Razdan. Number of analogs have been synthesized and they are being screened for their pharmacological activities for potential use as medicinal agents.

Work on finding substitute for oils used in pharmaceutical preparations and for edible purpose is being carried out under the guidance of Dr. S.P. Basu. Work on seed oils on Pongamia pinnate (karanj), Sepindus mukorossi, Mesua ferae and Argimone mexicane is being carried out to find their usefulness in pharmaceutical purposes. Further, the active constituent of these oils are being modified by preparing their analogs to find their potential use as medicine. Analog of Pongomol and Karanjin, the active constituents of Karanj oil, have been prepared and found to possess CNS depressant and CNS stimulant activity. ^{13}C NMR of Karanjin and total synthesis of Pongomol has been reported for the first time. Work on analogs of pseudo-pelletierine is being carried out under Dr. A.K. Sharma. Number of analogs have been synthesized and screened for their pharmacological activities.

Phytochemical and pharmacological investigations on various plants include isolation of lections from Vigna munga and celosia cristata. Further studies in these plants are in progress.

With financial support from the Government of India, the following major equipment were added in the Department during the year under report:

(a) Gas Chromatograph

(b) C.H.N. Analyser

The Department has applied for Post-graduate programme in Pharmacology, Pharmacognosy and in Biotechnology. The sanction for these programmes by the UGC/Ministry is awaited.

Theoritical Medelling and simulation of solid-state devices for high speed and optoelectronic application have been an active arena of research in the Department of Electronics & Communication Engineering of the Institute. Dr. P. Chakravarty has been working on the project entitled - "Computer Simulation of Heterojunction solid-state Photodilectors for Fibreoptics Communication Systems", sponsored by the Department of Science & Technology, Government of India. During the year under report, he has introduced a number of novel solid-state source delectors structures for integrated optoelectronics applications. These include Double-Heterostructure InAs/InAs Sb Light - emitting - Diode for application in 2 m to 6 m wavelength region, High Electron - Mobility - Phototransistor and Photo-MISFIT. He has developed a number of compact Computer programmes using Fortran-77 and Turbo-Pascal for simulating the devices on IBM PC (Ax/xT). These programmes provide global characteristics of the devices as well as useful design data.

Sweep oscillators, scalar Network Analyser, Spectrum Analyser, H.P. Plotter and Power-meter om nw range are the additional equipment procured by this Department during the year under report.

The Department of Management of the Institute has been active in its own distinct way. Eminent scholars and Industrialists have been regularly invited as Guest speakers in the various conferences, Research works on decision making, human resource management, value engineering, value and human resource development,leadership and Managerial Effectiveness and materials management are continuously updated befitting to the latest technological requirements of the nation. The Department organised the Sixth B.M.Birla Memorial Lecture which was lucratively addressed by

Sri S.S. Ranganekar on the challenging topic : "Industrial Sickness:Causes & Remedies". A Management convention INTERACT on - "Developing Human Response", was also well organised. It has organised attractive Seminars/Symposium/Workshops on "Marketing Effectiveness" under the Executive Development programmes for H.E.C., Marketing Management for senior level Managers of Marketing Area of H.E.C., 3 weeks correspondence course for the supervisers of MECON, Project Management Techniques for H.E.C. The Department has also published its regular Scientific journal 'Alternative'. Prof. S.C.Mishra of the Department, was sponsored by the British Council to present a paper on Science & Technology Park in the International specialist course on "Industry and Higher Education - Working together" at Southampton, U.K. Experience reflected was unique from the developing countries' block and invited ever increasing interest in the specific affairs with particular emphasis on Technology Transfer potentialities through Technology Park.

During the year under report, some of the faculty members have again made some outstanding contribution on national and international level. The project on Computer vision and touch sensing system for aiding the blind persons has been under considerable progress. In addition to the research and development works, new courses and projects have been introduced in optical -communications and integrated optics, picturephone, fibre optic sensors, remote optic sensing and fibre and videobased digital holography.

A Post-graduate course leading to M.Sc. in Information Science from the next academic session has been finalized.

Reprography facility has been added to the Library for the users. Library automation project is likely to be completed by the end of the year.

The Institute is one of the first technical institutions in the country to have meaningful interaction with industry almost from its inception. A large number of projects have been undertaken in collaboration with both private and public sectors and several import substitutes have been developed and designed which have been passed on for commercial production to industrial units. With the encouraging response from the Government of India under the scheme "Industry-Institute Interaction", the Institute has established interaction with two leading organisations namely, Heavy Engineering Corporation (H.E.C.),Ranchi and Central Coalfields Ltd. (C.C.L.), Ranchi. Flexible Manufacturing System Design, Material handling and Flow of materials and automated gauging systems have been selected under the Research-interaction programme with H.E.C. while development of optical fibre communication system for underground mines, Documentation of spares and sub-systems, identification of indigenous equivalent hydraulic equipment for replacement in imported drills/showels and development of test rigs for repaired hydraulic motors have been under progress in the research-interaction programme with C.C.L.

We are proud to mention here that in achieving the landmark in the arena of academic innovations of the various departments of the Institute mentioned above, there has been an active participation of the Under-graduate, Post-graduate, Doctorate and Post-doctorate students/members. Sri Shamik Biswas, Saikat Ghosh and G.S. Vasudev - Under-graduate students of this Institute, have won the prestigious CSI Silver Jubilee Software Contest 1991 and were awarded an honorarium of Rs. 2500/-. Out of the seventy seven groups

for the contest, only two entries in Software and documentation were adjudged best in the country - one from organised sector and the other - "Students of the Institute" only. In view of the enthusiastic response of both faculty members and students to the development of modern technology, new courses like Environmental Engineering, Non-conventional Energy, Microprocessor Applications, Power Electronics, CAD, CAM, Environmental Geo-technique, Bio-technology have been/are being introduced at various levels.

The Institute has finalized the following specific courses for the next session and relevant proposals have been submitted to the Government of India, under its VIIIth Plan Development Schemes:

1) B.Tech. (Architecture)
2) B.Tech. (Chemical Engg. with specialization in Polymers)
3) M.Tech. (Bio-technology)
4) M.Sc. (applied Physics)
5) M.Sc. (Applied Chemistry)
6) M.Sc. (Applied Mathematics)
7) M.Sc. (Electronics) - only for Girls students
8) M.Sc. (Information Sciences)

During the year 1990-91, the Government of India, Ministry of Human Resource Development has provided financial support for the development of the following laboratories:

1) Manufacturing Process Laboratories
2) Pharm.Sc. Labs. - Targeted Drug Delivery Systems.
3) Rocket Combustion Research Laboratory
4) Engineering Application of Laser - Development of Lidars.
5) Industrial Tribology Laboratory
6) Non-Conventional Energy Appliances for Rural Applications.
7) Upgrading Infrastructure in Computer Science

Overall, the Institute has adopted an integrated approach such that research, dissemination and extension of knowledge go hand to hand. An inter-disciplinary Research and Development is encouraged for optimum utilisation of manpower and resource, and it is optimistically expected that the overall academic and research plans under progress, would be successfully completed within the time bound programme under the encouraging response of the Government of India.

PARTICIPATION OF FACULTY IN NATIONAL AND INTERNATIONAL CONFERENCES/SEMINARS

1990-91

1. Dr. P. Chakrabarti, Associate Professor, Deptt.of ECE, participated in the 'Asia Pacific Microwave Conference - 1990' held at Tokyo, Japan from Sept. 18-21, 1990.

2. Dr. P.K. Mahanti, Professor, Deptt. of Computer Science, participated in the 'International Conference on Computational Mathematics' held at Belgium from July 23-28,1990.

3. Shri S.C. Mishra, Assistant Professor, Deptt.of Management participated in the 'Industry & Higher Education - International Specialist Course' held at Souththampton(UK) from April 9-18, 1991.

4. Shri Gopal Pathak, Assistant Professor, Deptt. of Civil Engg., participated in the 'XIV World Conference on Health Education' held at Helsinki, Finland on June 17, 1991.

5. Shri Atul Anand, Assistant Professor, Deptt. of Production Engg. participated in the 'Aerospace and Defence Symposium and Exhibition' held at Washington from March 13-15,1991.

6. Dr. H.C. Pande, Director of the Institute, participated in the 'Commonwealth Vice-Chancellors Conference' held at New Delhi from Jan. 14 - 18, 1991.

7. Dr. R.C. Gupta, Professor, Deptt. of Mathematics, delivere an invited talk on "Ancient Indian Mathematics" in 'Summer School on History and Philosophy of Science' held at the I.I.Sc., Bangalore from July 2-13, 1990.

8. Dr. S.P. Basu, Dr. G.M. Panpalia, Shri A.K.Tiwary and Ch. Subramanyam, Deptt. of Pharmaceutical Sciences, participated in the '42nd Session of IPCA' held at Manipal in December 1990.

9. Dr. B.K. Razdan and Prof. S.P. Bhatnagar, Professors, Deptt. of Pharmceutical Sciences, participated in the 'Seminar on Cultivation of Medicinal Plants, Bihar Council on Science & Technology',held at Patna in March'91.

10. Shri S. Samanta, Assistant Professor, Deptt. of Pharmaceutical Sciences, participated in the 'National Symposium on Medicinal Chemsitry' held at Panjab University, Chandigarh in March 1991.

11. Prof. S. Kumar and A. Verma, Professors, Deptt. of Production Engg., participated in the 'National Seminar on Total Quality Management in Foundry & Forge Industries' held at Ranchi in January 1991.

12. Prof. S. Kumar, Professor, Deptt. of Production Engg., participated in the 'National Workshop cum Symposium on Beams and Plasma, Applications in Materials Technology' held at Bombay in 1990.

13. Prof. S. Kumar and Atul Anand, Professors, Deptt. of Production Engg., participated in the 'Sixth National Convention of Production Engineers and All India Seminar on Recent Developments in Metal Forming',held at Institute of Engineers (India), Maharashtra State Centre from Sept. 14-15, 1990.

14. Prof. Alok Verma, Assistant Professor, Deptt.of Production Engg., participated in the 'International Seminar on Intelligent Robotics' held at Bangalore in January,1991.

PUBLICATIONS

A list of Research Papers and Books published by the Faculty of the Institute during the year 1990-91 is given below:

Civil Engineering

(1) Gopal Pathak, "Need of basic health education amongst the coalmine workers with special reference to Indian Coalmines", Paper presented in XIV World Conference on Health Education, Helsinki, Finland, 17th June, 1991.

Computer Engineering

(1) P. K. Mahanti, "Computational Optimal solution for partial differential equation - a case study", International Conference on Computer Appl. Mech. Catholic University, Belgium (July 23-28, 1990); accepted for publication in Int. J. Appl. Maths.(1991).

Electronics & Communication Engineering

(1) A. Singhal, A. Mishra and P. Chakrabarti, 'Optical effects in Modulation Doped Field Effect Transistors', Solid-State Electronics, vol. 33 pp. 1214-1216, 1990.

(2) P. Chakrabarti, S. Kumar, P.K. Rout and B.G. Rappai, 'A proposed InGaAs MISFET photodetector', Proc. of the Third Asia - Pacific Microwave Conference, Tokyo, Japan, pp. 577-580, 1990

(3) P. Chakraborti, M. Puri, A. Singhal and A. Mishra, 'Optically controlled characteristics of TEGFET', Physica Status Solidi (a) vol. 122, pp. 405-411, 1990.

(4) J. Pal, M. Puri, P. Chakrabarti and B.B. Pal, 'Computer aided modelling of a High-Electron-Mobility-Phototransistor' J. IETE, Special issue (accepted for publication).

(5) P. Chakrabarti, Comment on 'Optically controlled Characteristics is an Ion-Implanted Silicon MESFET', Solid-State Electronics (accepted for publication).

(6) P. Chakrabarti, Comment on 'Effect of Radiation and Surface Recombination on the Characteristics of an Ion-Implanted GaAs MESFET', IEEE Trans. Electron Devices (accepted for publication).

History of Science

The following Papers published by Dr. R.C. Gupta,Professor in the Department of Mathematics (Member of International Commission on History of Mathematics).

(1) 'Certain Aspects of Trigonometry in India and Central Asia' published in the Indo-Soviet Monograph, the Interaction between Indian and Central Asian Science & Technology, Vol. 1, pages 223-232 (INSA, New Delhi, 1990).

(2) Delivered an invited talk on 'Ancient Indian Mathematics-Some Selected Topics' on 11-7-90 in the Summer School on History and Philosophy of Science held at the I.I.Sc., Bangalore, July 2-13, 1990.

(3) Review of E.S. Kennedy's paper 'Eclipse Predictions in Astronomical Tables Prepard for the Mongol Viceroy of Tibet' (ZGAIW, Vol. 4, 1987/88, 60-80) sent to The Mathematical Reviews (U.S.A.) on 8-9-1990.

(4) Hindi Article on 'Jaina Tradition for Finding the Volume of a Sphere' (10 pp.) sent to Delhi for publication in The Acharya Vimala Sagara Felicitation Volume onl0.9.90.

(5) Printed proof of the review of the book Vedic Mathematics (Delhi, 1987) sent to Math. Reviews (U.S.A.) on 9.10.1990.

(6) Article on 'An Indian Rule for Finding the Hypotenuse of a Right Angled Triangle' sent to The Mathematics Teacher (India) on 22.10.90.

(7) Following seven items published in the Ganita Bharati, Vol. 12, Nos. 1-2(1990):

(i) The Laksa Scale of the Valmiki Ramayana and Rama's Army, pp. 10-16.

(ii) The Chronic Problem of Ancient Indian Chronology, pp. 17-26.

(iii) A few Remarks concerning certain values of π in Ancient India, pp. 33-38.

(iv) The value of π in the Mahabharata, pp. 45-47.

(v) Review of J.L. Berggren's book: Episodes in the Mathematics of Mediaval Islam (N.Y. 1986), pp. 57-58.

(vi) Review of H. Gerick's book: Mathematik in Antike and Orient (Berlin 1984), pp. 58-59.

(vii) Notices of selected publications (N 2051 to N 2200), pp. 65-74. (With A.I. Volodarsky).

(8) Following six articles are to appear in Ganita Bharati, Vol. 12, Nos. 3-4(1990) (in Press):

(i) Sudhakara Dvivedi (1855-1910), Historian of Indian Astronomy and Mathematics (27 pp.).

(ii) An Ancient Rule for the area of a Polygon (7 pp.).

(iii) Report on the Bangalore Summer School on History and Philisophy of Science (3 pp.).

(iv) Essay Review of a Century of Mathematics in America (1989) (11 pp.).

(v) Review of the book: A Mathematician's Apology(Cambridge, 1988) (4 pp.).

(vi) Notices of Publications (21 pp.).

Library

(1) U.N. Singh and S. Arunachalam, 'Publication and Citation patterns in the literature of liquid crystals with special references to the contribution of India, Canada, Japan, United Kingdom and the Soviet Union', Scientometrics, 20 (1990) 197-220.

(2) S. Arunachalam and U.N. Singh, 'The place of Sankhya in the literature of Statistics - A scientometric evaluation of a Non-SCI journal', International Information Communication and Education, 10 (March 1991).

Management

(1) S. Puri and B. Narayan, 'Participative Style : A Tool for Planning and Implementation of New Strategies for Factory of the future', CAD, CAM, ROBOTICS Factories of the future (Proceedings of the Fourth International Conference on CAD, CAM, Robotics Factories of the future) Dec. 19-22 (1989), New Delhi, Vol. III, pp. 822-832.

(2) S. Puri and B. Narayan, 'Participative Style : A Changing concept for Managing quality in Public Sectors',Proceedings of National Seminar on 'Total Quality Management in Foundry & Forge Industries', Jan. 5-6, 1991, Ranchi.

(3) B. Narayan and A.N. Jha, 'Entrepreneurship Education in Management Schools - An Integrated effort of BIT, BIT-STEP', Proceedings of National Seminars (Association of Management Schools and EDI, Ahmadabad, 1991).

(4) B. Narayan, 'Transfer of Technology in Small Sectors - A Case Study of Experiments of BISR, BIT-STEP and BIT', Indian Journal of Commerce (Sept. 1990).

(5) S.C. Mishra, 'Multicultural Scenario in Indian perspective Organizational Theory and Organizational Development', Germany (1991).

(6) A. N. Jha, 'A Case Study of M/s. Incom Pvt. Ltd., National Seminar on working Capital Management in Small Entrepreneurs', Rajasthan.

Mathematics

(1) B.B. Mishra, 'The Influence of Magnetic Field on Hydrodynamic flows', The Mathematics Educatiion, Vol.XXV No. 1, March 1991.

(2) B.B. Mishra, 'Flow generated by an Oscillating Plate in the presence of constant Magnetic field',The Mathematics Education, Vol. XXV, No. 2, June 1991..

Mechanical Engineering

(1) Ashok Misra and B.G. Varshney, 'Can a stress alone applied to a demagnetized ferromagnetic specimen produce any magnetization?' Journal of Magnetism and Magnetic Meterials, Vol. 89, Sept. 1990, pp. 159-166.

(2) A. Raj, K.P. Sinha, B.G. Varshney and Ashok Misra, 'Heat flux and shell growth in a continuous casting mould- an analytical study', International Journal of Materials and Product Technology, Vol. 6, No. 1 (1991) pp.26-36.

(3) S. Kumar and Ashok Misra, 'On the cost optimization of pressure vessels manufactured in Indian Industries', The Alternative, Dec. 1990, pp. 87-110.

Pharmaceutical Sciences

(1) B.K. Razdan and P.K. Verma, 'Evaluation of Dosage FormsIII: Studies on Acetaminophen Tablet Dosage Form', Accepted for publication in Intern. J. Pharmaceutics.

(2) S.P. Basu, D. Sasmal and D. Bhatt, 'Synthesis of Karanjin and Pongamol Analogs (Part II)', Paper presented at the 42nd Session of IPCA, Manipal, Dec. 1990.

(3) A.K. Tiwary, R. Krishnamoorthy and G.M. Panpalia, 'Role of crystal habit in the formulation of sulphamethoxazole suspension-I', Presented at 42nd Session of IPCA, Dec.1990.

(4) A.K. Tiwary, R. Krishnamoorthy and G.M. Panpalia, 'Role of crystal habit in the formulation of sulphamethoxazole suspension-II', Presented at 42nd Session of IPCA, Dec.1990

(5) M. Khatori, A.K. Tiwary and G.M. Panpalia, 'Effect of crystal habit on the dissolution profile of trimethoprim', Paper presented at 42nd Session of IPCA, Manipal, Dec.1990.

(6) U. Chaurasia and G.M. Panpalia, 'I.R.Spectroscopy in the evaluation of salbutamol-excipient interaction', Paper presented at 42nd Session of IPCA, Manipal, Dec.1990.

(7) S. Samanta, 'A survey on the methods for the manufacture of antineoplastic agents and phytochemical screening of Celosia cristata plant', Paper presented in the National Symposium on Medicinal Chemistry, Panjab University, Chandigarh, March 1991.

(8) B.K. Razdan and S.P. Bhatnagar, 'Large Scale Cultivation of Medicinal Plant', Paper presented in the Seminar on Cultivation of Medicinal Plants, Bihar Council on Science & Technology, Patna, March 1991.

(9) Ch. Subramanyam and A.K. Sharma, 'Synthesis of new analogs of I-methyl-I-azabicyc 3.3.1 nonan-3-one', Paper presented at the 42nd Session of IPCA, Manipal, Dec. 1990.

(10) B.N. Sinha and J. Thanigavelan, 'Phytopharmacological Studies on Melothria madraspatana (Linn.)', Accepted for presentation in Pharmacy World Congress, Washington, D.C., U.S.A. (1991).

Physics

(1) P.K. Barhai, 'Symmetry and Surface Energy coefficients with an effective Interaction', Czechoslovak Journal of Physics (Czechoslovakia), Vol. 6 (1991).

(2) P.K. Barhai, 'Cold Fusion - Its present status and promises' - Talk delivered at the seminar on 'Cold Fusion and Optical Fibres' held at B.I.T., Mesra on the occasion of National Science Day, 1991.

(3) P. K. Barhai and K.P.J. Reddy, 'Spatial light modulation characteristics of characteristics of reverse saturable absorber', Pramana, Vol. 35, No. 6, Dec. 1990.

Production Engineering

(1) A. Verma and S. Kumar, 'Strategies for Quality Control in FMS Environment', proceedings, National Seminar on Total Quality Management in Foundry & Forge Industries, Ranchi, Jan. 1991, paper np. V-1, pp. 1-8.

(2) S. Kumar, 'Precision Hole Drilling with Laser Beams, Proc. National Workshop Cum Symposium on Beams and Plasma', Applications in Materials Technology, BARC, Bombay, 1990, pp. 325-332.

(3) Atul Anand and S. Kumar, 'Dealing with competition through Flexible Manufacturing Technology in Developing Countries, APICS 1991', Aerospace and Defence Symposium and Exhibition. March 13-15, Washington, D.C. Page No. 221-225.

(4) A. Verma and S. Kumar, 'Judicious selection of a Robot for an Industrial Tasks - An expert system approach', Fifth International Conference on CAD/CAM, Robotics and FOF, U.S.A., Dec. 1990.

(5) A.K. Jha and S. Kumar, 'An Integrated Quality concept considering modernisation of Forge Industries', Proc. National Seminar on Total Quality Management in Foundry & Forge Industries, NIFFT, Ranchi, Jan. 1991, paper no. 1-(iv), pp. 1-11.

(6) Atul Anand and S. Kumar, 'Exploitings FMS as a strategie weapon for competitive Manufacturing applied to Forge Industries', Sixth National Convention of Production Engineering and all India Seminar on 'Recent Developments in Metal Forming', Sept. 14-15, 1990 at Institute of Engineers (India) Maharashtra State Centre.

SCHOLARS REGISTERED FOR Ph. D.

During the year 1990-91 the following Scholars were registered for Ph.D. Programmes; the subject/areas of their study is stated against each:

	Name of Scholars	Subject of study
1.	Sri Mihir Kr. Nanda	Ultra short Laser Pulses and related Plasma Phenomena.
2.	Sri Amal Kishore Prasad	Dispersion Modelling of Particular and Toxic Metallic Emissions.
3.	Sri Tausif Monif	Formulation and Studies of some Transdermal Therapeutic Systems.
4.	Ms. Urmi Chaurasia	Influence of the Nature of internal Phase on the Stability of o/w Emulsions through Zeta Potential.
5.	Sri U.S. Prasad	Stress Induced Magnetic and E.M. Effects in Metals.
6.	Sri Subhendu De	Mathematical Model of Air Pollution problems due to stack Emissions.
7.	Sri R. K. Narayan	Design of a Computer Vision and touch sensing systems for aiding the blind - a new approach.
8.	Sri V.B. Chandrasekhara	Influence of deep excavation on adjoining structures.
9.	Sri Girish Pathak	Tribological Investigations in Mechanical Processing.
10.	Sri Y. B. Joshi	Design of a Conceptual Detabase - on Information Science approach.

11.	Ms. Maya Sen Gupta	Non Linear Optimization for some Constrained Deterministic and Stochestic facility location problem through the development of Application Software.

Besides the above, the following scholars who were registered for their Ph.D. in the previous year(s) are continuing their work under the guidance of the respective Doctoral Committees:

1.	Sri S. S. Mahli	Pharmacological Studies on Purified Porgamia seed oil, Karanjin, Pongamol and their Derivatives.
2.	Sri U. K. Choubey	Efficacy of working together in Coal Industry.
3.	Sri I. I. Joseph	Study for Higher Productivity in Coal Mining through Behavioural Approach.
4.	Sri Rajendra Prasad	Quality Evaluation of Foundry-Forge Products by Ultra-sonic Techniques.
5.	Sri Atul Anand	Flexible Automation for competitive Manufacturing.
6.	Sri Bijay Kr. Singh	Some Ergonomic considerations in work design.
7.	Sri Neeraj Pandey	Computer Modelling and simulation of flow in Petroleum reservoir.
8.	Sri R. P. Singh	Study of Flow Behaviour in a cavity in an incompressible Flow.

9. Sri R. K. Singh	Studies on Elastic Buckling of composite Plates.
10. Sri A. K. Thakur	High Temperature Oxidation and Erosion Behaviour of low Alloy Steels.
11. Sri Pratik Biswas	Analysis of Elastic stability of some Anisotropic Bodies.
12. Sri S. A. Chobe	Rocks and Hydro-geological condition of the area around Urimari and Bulkudra, Dist. Hazaribagh.
13. Sri R. N. Thakur	Stability of O/W Emulsions through Zeta Potential.
14. Sri B. K. Jha	Appraisal System for Executive of an Integrated Steel Plant Design and implementation aspects with a special reference to Bokaro Steel City.
15. Sri Ashim Kumar Raha	Analysis of shape control in cold strip Rolling.
16. Ms. Pranati Mishra	Environmental Pollution in Industrial and Mining area.

STUDENT ACTIVITIES

During the year 1989-90, the students were given ample encouragement for participating in co-curriculars extracurricular activities. Currently, there are more than twenty flourishing Student-Forums and Societies apart from the Athletics and Games. These societies cater to the widest possible range of extra-curricular activities for an alround development of the students personality.

The year-long activities of these societies culminate in two annual functions which were over a couple of days each, (1) ANKUR was organised for the students of the Institute wherein participation of as many as 200 students of the Institute made it quite live and fruitful. (2) BITOTSAV has been an Inter-college students festival or organised on a national invitation basis. At these-festivals, models, theatre, music, debate, quizzing, fine arts, photography, creative writing etc. were very effectively organised, a number of light-hearted informal events on stage and field were also held wherein the participants and audience derived wholesome satisfaction.

Dramatic Soceity: The 'Stage" has been a proven and vital medium of expression. Dramatics Society provided to the students an opportunity to present serious theatre and play on one hand and a touch of humour and stire through monoact mimicry and skit.

Music Club: Provided a platform for development of musical talents in a large number of interested students in the areas of Indian Classical Music, Western Music and light Indian Music. It also provided opportunities to students for organising popular musical nites on the campus during the cultural festivals. Students are also encouraged to participate in Inter-language choirs so as to create feelings of national integration in them.

Unesco Club: Under the auspicious of the Unesco Club the students participated in serious debates and quizzing. Interesting events like 'Just-a-minute' 'block and tackle' etc. were also organised by the club.

The Bhartiya Sahitya Parishad: is a forum for promoting cultural activities in the national language: the Parishad organised Kavi Sammelans, Mushaira, Folk dances, Creative writing and publications contests.

Photographic society: Expression and creativity through synthesis of ideas and color through a Camera or a canvas is an accepted truth and enjoyable pastime. Photographic Society provided ample opportunity to students interested in Camera or Darkroom/studio work. During the year the Soceity had over 200 members. There are a number of Dark-rooms with full facility for development and Printing of films in the Institute, and also in the residential Halls.

The Fine Arts Society: Looked after the generation of skills in using pencil, pastel, water and oil colors paints as well as sculpture and handicrafts. On the occasion of the Republic Day an on-the-spot competition was held by the society in which over 200 young artists including Campus children took part.

Bitian's Nature Club: An affiliate of the World Wide Fund for Nature has encouraged students participation to know and love, respond to and vibrate with the Nature in all the immensity and totality.

The Highlender's Adventure Club: Which is an affiliate of NAF and NTMC provided ample opportunity for the partici-pants to derive delight from adventure-hitch-hiking, cycle expeditions, rock climbing or mountaineering at no or very low cost.

Spic-Macay: The society for the promotion of Indian Classical Music and Culture amongst Youth had its fair share of activities by inviting famous exponents of Indian Classical Music and Dance. During the year, among others, the following distinguished Artists gave their demonstration and performance in the Institute.

1. Sri M. S. Ramachandran (Vocal)

The Audio Visual Education Club: While presenting recent and classic fims every weekend for entertainment and relaxation of the students the Club also provided a number of technical and educational films and documentaries. The Club is very popular amongst all the residents of the campus.

Pooja Committee: Looked after the celebration of 'Saraswati Pooja' and "Vishwakarma Pooja' to promote the religious sentiments of the students and staff.

The Engineering Soceity: In the technical and scientific arena, the Engineering Society promotes the interest of the students in the design, development and complete fabrication of working engineering models. The society organised a number of technical talks by eminent Scientists and Engineers.

It is note-worthy that the various Engg. faculties with their concentrated extra curricular efforts have been encouraging fraternity and identity, through the societies/Clubs in their respective areas e.g. Electrical and Communications Engineering Society, Computer Engineering Society, Civil Engineering Society and Pharmaceutical Society etc. The students' chapter of the Institution of Electrical and Electronics Engineers (India) are also engaged in a variety of technical persuits.

The Amateur Radio Society: has a membership of over hundred students; these students are able to reach out all-over the world through intricate communication network under the Radio-HAM Society.

The Indian Association of College Going Scientists: bubbles with activities including organisation Technical trips to industrial areas, Seminars, technical quizzes, apart from initiating astronomical observations.

The News and Publication Society: While providing an opportunity for news reporting, Journalism and creative writing contributed substantially, bringing out the latest news in the regular issues of "Campus Times", "Sports Times" and in quarterly issues of the BIT by BIT.

Other Voluntry Clubs: The BIT chapter of Leo Club and Rotract Club have a record of creditable performances. During the year 1990-91 they arranged a couple of Health Camps, Blood Donation Camps, with the support of the eminent Doctors of the town. Moreover, visits to rural areas for identification of their problems,adult education camps and such other social service activities were also organised by these Voluntry Clubs.

GAMES AND SPORTS

Since inception the Institute has placed emphasis on Games and Sports. Earlier this activity was organised as a co-curricular programme but from 1984 the Games and Sports have been provided in the regular curriculum of the Under-graduate course by treating it as a full subject in the 1st and 2nd Semester of the B.E. and B.Pharm. Degree Programme. Accordingly, the students are exposed to PT & Drill, Gymnastics etc. thrice a week and on the other days they are required to play the allotted Games. Suitable arrangement for training and participation of Girl students has also been made and their participation in P.T. & Games is also compulsory. Now-a-days, on an average over 50 percent of the students take part in the Games, Sports and Athletics on a regular basis.

Apart from the regular participation of students in the P.T./Drill, Games and Sports a number of intra-mural competitions and Inter-University tournaments in the various events are arranged spread all over the year. The Annual Athletic Meet for 1990-91 was held from February 21-23,1991.

This year the Institute teams participated in the following national and regional events and the attainments of our boys has been creditable:-

1. The Institute organised and conducted Inter University Tennis Tournament (East Zone) 1990-91. The Institute has won the 1st place and participated in Inter Zonal Tennis Tournament 1990-91 held at Anna University, Madras.
2. The Institute participated in All India Inter University Chess Tournament 1990-91 organised by AIU at Magadh University. The Institute team was placed at 6 position.

3. The Institute Volleyball Team participated in Inter University Volleyball Tournament (East Zone 'B') 1990-91 held at L.N. Mithila University, Darbhanga. The team was placed at 4 position.

4. The Institute organised the Inter University Volleyball Tournament 1990-91 for women.

5. The Institute Hockey Team participated in Inter Technical Hockey Tournament organised by R.E.C., Durgapur. The Institute won the Championship.

In addition, during the year 1990-91, the Institute also hosted the Inter University Volleyball and Hockey Tournaments sponsored by the Association of Indian Universities.

With financial support from the UGC, during the year under report, the Institute has undertaken projects for 'Improvement of Stadium' and 'Flood-lighting' of the Volleyball and Basketball courts. The work is in progress.

Over the years the Institute has produced outstanding State level players in Cricket, Basketball and also University level players in Basketball, Football, Hockey, Badminton, Tennis, Kabaddi and Athletics.

A Seminar on Youth policy was organised on July 16-18, 1990 in the Institute. NSS Volunteers, Sports persons and other students participated in the Seminar.

The Youth week 1991 was celebrated from January 12-19, 1991. The entry submitted By Shri Vivudh Prasad (288/88) for the Essay Contest organised on the occasion of Youth Week was adjudged as the best entry.

On the occasion of Republic Day, a one week Camp was organised in the village Massu. General programme of social awareness and reforms in the village was observed.

Technical know-how was given to the villagers about the use of low-cost materials for housing Gobar Gas Plant, potable clean drinking water etc. Tree plantations work and general cleanness derive in the village was also undertaken.

General survey of the houses of the village was undertaken by the NSS Volunteers in order to find out the number of illiterate adults of the village. Medical care and family welfare programmes were undertaken. Mess boys of the Hostel were exposed to literacy programmes. Teaching work towards awareness of family planning, health consciousness and hygine care was undertaken in the villages.

THE STUDENTS' HALLS OF RESIDENCE

The Institute is completely residential and all the students are required to stay in one of the Hostels or Halls of Residence numbered serially - as Hostel 1 to 7. In addition there are two separate Hostels one for girls and the other for foreign students. With the assistance from the U.G.C. and the State Government, construction of one more Hostel for Girls is in progress.

All the hostels are laid out beautifully to match the screne and pleasant campus with flower beds, bushes and trees encompassing each hostels, besides the well maintained lawns in front. The architecture of the hostel includes central facilities like spacious Dining Halls in the Centre and Common Rooms and reading Rooms, placed symmetrically on both sides of the central entrance and wide varandahs all along the length with air gaps and balconies well set for common use.

Each student is accomodated in a single-seated room, furnished with a steel table and a steel chair. The girl students are kept in two-or-three furnished rooms. Each room is quite spacious with a big size window and a steel door oppositely placed to make the room airy. Each room has a cup-board, wardrobe and a wide and deep rack.

Each hostel has a Common Room, where Indoor Games are available. Each hostel has a Reading Room also - where sufficient number of Magazines, Periodicals and Newspapers by consensus are made available to the residents of the hostel. Provision of getting the old magazines and periodicals issued to students are available. Each hostel has also been provided with a Color Television Set.

Frequent competitions are organised among the inmates of the hostel in a number of indoor games. Inter-Hostel Tournaments in the indoor and outdoor games are a regular and very attractive feature of the hostel life.

Once in a year, the inmates organise a Hostel-Night, where in the improvised stage, well selected cultural and musical programme, games andspecial items based on intimate knowledge pack the evening with fun and exciting festive mood.

Each hostel has an independent Mess, completely managed by the students through Mess Committee members elected from among the residents themselves. The committee looks after the complete management including the Menu, preparation, purchases and billing under the supervision of the Superintendent/Assistant Superintendent of the hostel. The bills are made on 'no profit no loss' basis and the monthly bills of the residents are submitted in the Mess Accounts Office, where individual student pays accordingly. The menu and monthly bills of the various hostels are assessed and revised periodically in the Meeting of the Hostel Council.

NATIONAL CADET CORPS

A unit of the National Cadet Corps was set up in the Institute in 1957 for imparting technical as well as general training to the students. Initially, it functioned as an EME Sec. with a strength of 60 cadets. The seventies have been a period of serious student - unrest all over the State and consequently the NCC programme also suffered to a considerable extent. However, there was some revival in the early 'Eightees'. In order to encourage students' active participation in this programme in 1984 the Institute provided it in the regular curriculam with a weightage of '2 unit' equivalent to two courses of 100 marks each, in the 1st and 2nd Semester of the undergraduate B.E./B.Pharm. courses.

At present NCC unit is functioning as a full fledged Composite Technical Company of three different sections, viz. (i) Engineers Corps, (ii) EME Corps and (iii) Signal Corps, and its designation is "3 Bihar Comp. (Tech.) Coy., N.C.C., B.I.T., Mesra". It has a sanctioned strength of 200 Cadets.

The 3rd Bihar Comp. (Tech.) Coy of B.I.T., Mesra works under the command of a whole time Army Officer of the rank of Major or Lt. Colonel. In addition, it has on its staff two trained Part-time NCC Officers who are Professors of the Institute, five P.I. Staff from the Army, about 8-10 clerical and other supporting Staff who are provided by the State Govt. Beside an administrative building on the main Campus the NCC has adequate facilities like Parade Grounds, Firing Range and Armament Stores, Library, Staff quarters etc.

The training programme is designed to lay stress upon the technical aspects of training in the form of Engg. Projects duly supported by lectures and practical classes (6 period/week); the training for Engineers Corps mainly covers Field Work, Field defence, Military Bridges, Roads and Aerodromes; Water supply, Demolition etc. The Technical training of EME Corps covers Inspection and repairs of vehicles, Driving practice and maintenance, Acquisition with different components of Automobiles, Mechanism and elementary principles of different class of army vehicles; and for the Signal Corps it covers Wireless equipment operation, Line equipment, Line transmission theory, Acquisition with More's code and handling or telegraphic instruments etc.

Apart from the technical training the NCC also provides general training to all cadets in order to inculcate the leadership qualities, high morals, unity, discipline etc. The NCC has special arrangement for training of those cadets who appear for 'B' and 'C' Certificate exam. of NCC (Tech.).

During the year 1990-91, 196 cadets were enrolled in the NCC Coy of the Institute - 76 in the Engineers Corps, 59 EME Corps, and 61 in the Signal Corps.

SEMINARS AND CONFERENCES

List of Seminars and Symposia conducted at the Institute during the year under report:

1. Advance Management Programme for Senior Managers from Public and Private Sector Undertakings.

2. Export Strategies for the Small Scale Industries of Bihar.

3. Marketing Fair.

4. The Sixth B.M. Birla Memorial Lecture.

5. M.C.A. Teachers' Training Programme - sponsored by the DOE, DST, Government of India.

6. Short-term Computer Training Programme for Officers of Bihar State Co-operative Milk Producers' Federation (COMPFED).

7. NBO Project on Rural Housing - Roving Seminar on Modular Co-ordination and Pre-fabrication.

8. Inaugural Meeting of the Indian Society for Technical Education, Ranchi Chapter.

TRAINING AND PLACEMENT

During the last 6 months of each academic session the Institute plays host to senior executives from a large number of organisations. They visit us to recruit technical and managerial personnel via interviews conducted on Campus of our outgoing B.E., MBA and MCA students. The visiting teams are mostly from the premier private companies, some Government organisations and the Defence Services. The visiting selection teams are invariably impressed by the facilities of the Institute, the environment and well-maintained surroundings, the general discipline and behaviour of the students and, most important, by their technical aptitude and talent. We are proud to state that the demand for our graduates has been steadily growing, along with the reputation of the Institute.

The Training & Placement Division liases between the organisations that wish to visit us, the students who need jobs and the Departments and faculty concerned, to best achieve the aspiration of the students and the requirements of the organisations, also keeping the interest of the Institute in view. Apart from arranging Placement services, this division also encourages and tries to arrange industrial training for interested students during their vacations, with organisations all over the country. During the last 9 years, over 1300 graduates have received confirmed offers of appointment while still completing their studies. Other students have also benefited by their interview experiences on Campus and consequent gain of confidence to obtain jobs within a short time of graduating. Further, a few thousand have undertaken vacation training, thereby enhancing their technical awareness and increasing their prospects for employment.

We are happy to note that the placement activities have shown a continuously successful trend.

During the last academic session, 1990-91, we were visited by about 34 premier organisations. By June 1991, 25 of these companies had intimated their final selections, offering about 170 appointments to graduates from different disciplines. About 20 had received more than one offer. 9 organisations were expected to finalise/increase their selections later, bringing the total number of appointments to at least 200.

Bio-datas of M.Pharm. & B.Pharm. students were also dispatched to a large number of companies and several M.Pharm. students were subsequently called for interview and selected.

The placement activities do not end with the academic session. Students leaving the Campus without jobs are asked to leave their bio-datas, and these are still being despatched on request to organisations who have been contacting us after May. We are also frequently consulted by students requiring advice and guidance in relevant matters.

During the year under report about 400 students received vacation training at various factories and establishments during their Puja Vacations 1990 and Summer Vacations in May and June, 1991.

Note: The branch-wise number of students who secured employment through Campus Interview during the year under report (upto June, 1991) is as follows:-

	Name of Branch	Number of Students
B.E.:	Mechanical Engg.	45
	Production Engg.	01
	Electrical & Electronics Engg.	27
	Electronics & Communication Engg.	26
	Computer Science	20
	Civil Engineering	05
	M.C.A.	12
	M.B.A.	08
M.E.:	Electronics & Communication Engg.	01

The details of the placements are given below:-

A. CONFIRMED APPOINTMENTS :

SL.No.	Organisation	Branches	Total No.
1.	Ashok Leyland, Madras	Mech. - 1	1
2.	BHEL, New Delhi	Mech.-4, EEE-04, ECE-3 Comp.Sc.-3, Civil-3	17
3.	CMC, Calcutta	Mech.-1, EEE-1, MBA-1 MCA-2, Comp.Sc.-5	10
4.	Eicher Goodearth Ltd., New Delhi	Mech.-8	8
5.	Escorts Ltd., Faridabad	Mech.-5, Prod.-1 ECE-4	10
6.	Godfrey Philips	MBA-1	1
7.	Hindustan Motors Ltd., Indore	Mech.-2, EEE-3	5
8.	Hindustan Computers Ltd., New Delhi	Mech.-2, EEE-3, ECE-4 MBA-2, MCA-2,Comp.Sc-3	16
9.	HOPE, Calcutta	MBA-2, Comp.Sc.-1	3
10.	Hindustan Motors Earth-moving Equipment Division, Madras.	Mech. -1	1
11.	Hindalco, Renukoot	Mech.- 3	3
12.	Indian Aluminium Co,Muri	Mech.- 1	1
13.	ICIM, Calcutta	EEE-1, ECE-1, MBA-1 Comp. Sc.- 2	5
14.	Larsen & Toubro (ECC) Ltd., Madras	Mech.-4, EEE-1, ECE-3 Civil -3	11
15.	National Engg. Industries Ltd., Jaipur	Mech.-2, ECE-3	5
16.	Nagarjuna Signode, Hyderabad	Mech-3, ECE-4	7
17.	Pertech Computers Ltd., New Delhi	EEE-1, ECE-4 MCA-3	8
18.	Subhash Projects,Calcutta	Mech-1, EEE-2	3
19.	TELCO, Jamshedpur	Mech.-6, EEE-5, ECE-2 Comp. Sc.- 2	15
20.	TISCO, Jamshedpur		
	G.T.	Mech.-3, EEE-1, ECE-3	7
	R.M.D.	Mech.-2, ECE-1	3
	S.T.	EEE-1, Comp. Sc.-1	2

Sl.No.	Organisation	Branches	Total No.
21.	Tata Consultancy Services Calcutta	ECE-3, Comp.Sc.-2	5
22.	Taylor Instruments India Ltd, Faridabad	EEE-1, ECE-2 Comp. Sc.-1	4
23.	Tinplate Co.of India Ltd. Jamshedpur	Mech.-3, EEE-1	4
24.	Wipro Information Technology Ltd., Calcutta	Mech.-1, EEE-2, ECE-2 Comp. Sc.-2, MCA-5	12
25.	Hindustan Development Corpn. Ltd., Calcutta	Mech.-5	5

B. DETAILS OF UNDECLARED RESULTS :

1.	National Dairy Development Board, Calcutta	Final interviews of 6 shortliste candidates (Mech.-2 & EEE-4) held at Calcutta on July 4, results awaited.
2.	Blue Star Ltd., Calcutta	Final interviews of 6 shortliste candidates (Mech.-5 & Prod.-1) held at Calcutta, results awaited.
3.	Voltas Limited, Calcutta	Final interview of 7 shortlisted candidates (Mech.-4, EEE-2 & ECE-1) held at Bombay.
4.	Shalimar Paints, Calcutta	Final interviews of 3 MBA candidates held at Calcutta, results awaited.
5.	NELCO I (Calcutta)	Results awaited.
6.	NELCO II(Jamshedpur)	Results awaited.
7.	Orient General Industries Ltd., Calcutta	Final interview held at Calcutta
8.	HLS India Ltd., New Delhi	Results awaited.
9.	Batliboi & Co. Ltd. Calcutta	Results awaited.
10.	CMC, Calcutta	Final interviews of 14/15 candidates of ECE & EEE held at Calcutta in May, results awaited.
11.	ESCORTS, Faridabad	Final interviews of 4 candidates of ECE held in May at Faridabad, results awaited.

C. OFF CAMPUS INTERVIEWS THROUGH T&P :

1.	Small Industries Development Bank of India, Bombay.	Biodatas of MCA applicants despatched to company. Preliminary interviews of 6 candidates held on 13.4.91. Final interviews held in July, results awaited.
2.	Electronics Systems Punjab Ltd., Mohali.	Biodatas of 5 applicants despatched to company. Interviews to be held at Mohali.
3.	BPL India Ltd., Bangalore.	Biodatas of M.E. ECE & EEE candidates despatched to the company. Interviews to be hel soon.
4.	Usha Martin Industries Ltd. Ranchi.	Biodatas of B.E. Comp. Sc. candidates were despatched to company. Interviews held early May, results awaited.
5.	Woolworth India Ltd., Calcutta.	Biodatas of B.E. ECE & EEE candidates despatched. Interviews to be held.

D. Biodatas of candidates were also sent to the following Companies on request :

1. Uptron India Ltd., Lucknow
2. T.R.F., Jamashedpur
3. Times of India, Patna
4. Punjab Communication Ltd., Mohali
5. Autometers Ltd., New Delhi
6. CIMMCO Ltd., New Delhi
7. Prototype Development & Trg. Centre, Rajkot
8. Tata Chemicals, Gujarat
9. Indian Rayons, Bombay
10. Bihar Caustic & Chemicals
11. Consultancy Development Centre, Delhi
12. Citibank, Bombay
13. Shalimar Paints, Calcutta.

RURAL HOUSING DEVELOPMENT CENTRE

The Rural Housing development Centre is housed in Civil Engineering Wing of the Institute has been performing various complex functions. An important and specific function being a live partner alongwith the State Government in improving housing and environmental conditions of the tribal people located in Chotanagpur Tribal belt by developing appropriate technologies, and propogating technology transfer through field demonstrations for the construction of low cost dwellings.

Considering that special attention is required to be given for the improvement of housing and environmental conditions in the tribal settlements, the Rural Housing Development Centre has initiated socio-economic studies and engineering surveys of tribal settlements in different parts of the state to identify the specific problems and suggest appropriate solutions.

The main objective of the Centre is to promote research in the improved use of local materials and construction techniques using locally available labour force. Further, motivate rural people to construct their houses by material developed by the Centre. The extension activities like workshop, 'on low cost housing technologies and training programme for the executive personnel of the State is widely acclaimed and attended. So far 380 officers of the rank of Deputy Development Commissioners, Executive Engineers, Assistant Engineers, Block Development Officers, Junior Engineers have been benefited by this programme.

With a view to promote better understanding of low cost constructional technology a number of research projects has been initiated and completed. Here are some project profiles

Research on rice husk ash for stabilising local soil.

Low cost primary school building scheme for tribal area.

Design and development of low cost houses in earth-quake and flood hit zones of Bihar.

An experimental investigation of sunn fibre as reinforcing material in cement matrix.

Rice-husk ash cement.

The centre is working on a project entitled 'Typology and Mapping of Housing Zones' sponsored by Dept. of Science and Technology'. Further, the centre alongwith HUDCO has established a Building Centre to train local people in the art of low cost construction technology paving way for the trainee to establish a small scale unit for manufacturing building materials.

The centre has been extending help to various state and central government agencies. Here is a short list of the same.

Design of low cost houses in earthquake zones of North Bihar (Assistance offered to Govt. of Bihar).

Modification of Indira Mass housing scheme using cost reduction technique. (Assistance offered to Rural Development Department Govt. of Bihar).

The centre is involved in construction of demonstration clusters. It has already completed one such cluster at Rudia village, Kanke Block, Ranchi and distributed to identified landless adivasis.

ANNEXURE - 1

BOARD OF GOVERNORS

Chairman	:	Shri G. P. Birla
Members:		
Nominee of the Government of India, Ministry of Human Resource Development	:	Shri S. D. Awale
Nominee of the University Grants Commission	:	Prof. S. K. Sen
Nominee of the All India Council for Technical Education	:	Shri S. N. Chakraborti
Commissioner & Secretary Sc. & Tech.,Govt. of Bihar	:	Shri N. K. Singh
Commissioner & Secretary Education, Govt. of Bihar	:	
Commissioner, Chotanagpur Divn. (South), Bihar, Ranchi	:	Shri M. K. Mandal
Nominee of the Chancellor	:	Shri G. P. Lal
Nominee of the Hindustan Charity Trust	:	Shri C. K. Birla
" "	:	Shri A. L. Goenka
" "	:	Shri K. P. Singhi
Director, BIT, Ranchi	:	Dr. H. C. Pande
Member of Institute Faculty	:	Prof. K. P. Sinha
" "	:	Prof. Anirudh Singh
Member selected by General Council	:	Shri D. N. Patodia
" "	:	Shri S. R. Jain
" "	:	Shri C. S. Jha
Secretary : Registrar & OSD	:	Shri J. B. Saksena

Annexure - II

TECHNICAL COUNCIL

Chairman : Director, BIT, Ranchi	:	Dr. H. C. Pande
Members :		
Nominee of the Chancellor	:	Shri R. K. Sandhir
Director of Technical Education, Govt. of Bihar	:	Ex-officio
Director of Higher Education Govt. of Bihar	:	Ex-officio
Dean of Science, Ranchi University	:	Ex-officio
Dean of Engg. Faculty Ranchi University	:	Ex-officio
Professors of the Institute	:	Dr. C.B. Mishra Dr. B. Kanta Rao Prof. G.P.C. Rao Prof. K.P. Sinha Dr. B.K. Razdan Dr. J.N. Mishra Dr. N.L. Munjal Prof. K.C. Pande Prof. A.K. Mehta Dr. B.S. Sahay Prof. A.K. Bhattacharjee Prof. J.S. Ruhela Prof. A.K. Aggarwal Dr. R. C. Gupta Dr. S. Kumar Prof. R. A. Sharma Prof. S. H. Kekre Prof. S. C. Goel Prof. B.S. Rajeevalochanam Dr. R.K. Shrivastava Dr. Ashok Mishra Prof. Awadh Prasad Dr. A.K. Chatterjee Dr. K. N. Sahu Dr. R. C. Prasad Dr. M. N. Banerjee Dr. B. B. Mishra Dr. B. G. Varshney Dr. P. K. Mahanti Dr. S. P. Basu Dr. J. Ram Dr. O.P. Sinha Prof. S. P. Bhatnagar Prof. B. P. Roy Dr. A. K. Sharma Prof. G. C. Singh

Persons appointed by the Chairman vide Clause 4(e) of the Regulations	:	Prof. M. K. Saxena Shri R. S. Yadav Dr. D. Jairath
Librarian - ex-officio	:	Shri U. N. Singh
Controller of Examinations - ex-officio	:	Prof. S. P. Bhatnagar
Secretary : Registrar & OSD	:	Shri J. B. Saksena

FINANCE COMMITTEE

Chairman	:	Shri G. P. Birla
Members:		
Nominee of the University Grant Commission	:	Dr. L. S. Mehra
Nominee of the Chancellor	:	Shri U. Narain
Nominee of the Board of Governors	:	Shri A. L. Goenka
Nominee of General Council	:	Shri P. C. Agarwal
Director, B.I.T., Ranchi	:	Dr. H. C. Pande
Treasurer,B.I.T.,Ranchi	:	Sri S. S. Jajodia
Member-Secretary:		
Registrar & OSD	:	Shri J. B. Saksena

BUILDING & WORKS COMMITTEE

Chairman:		
Director, B.I.T., Ranchi	:	Dr. H. C. Pande
Members:		
Assistant Director,BIT,Ranchi	:	Dr. C. B. Mishra
Treasuer, B.I.T., Ranchi	:	Shri S. S. Jajodia
Representative of the Architects:		M/s Kothari and Associates, Calcutta.
Representative of the State PWD	:	Shri B. K. verma Supdtg.Engineer,PWD,Ranchi
Dean, Planning & Development	:	Prof. A. K. Agarwal
Head.Dept. of Civil Engg. B.I.T., Mesra	:	Prof. G. P. C. Rao
Member-Secretary:		
Registrar & OSD	:	Shri J. B. Saksena

EXECUTIVES AND DEPARTMENTAL HEADS/INCHARGES

Director	-	Dr. H. C. Pande
Treasurer	-	Shri S. S. Jajodia
Registrar & OSD	-	Shri J. B. Saksena

Assistant Directors :

(Admn.) - Dr. C. B. Mishra
(PG & Research)- Dr. B. Kanta Rao
(Planning &Dev)- Prof A.K. Agarwal

Deans :

Students Activities & Chief Warden - Dr. A. K. Chatterjee
Curriculum Development - Dr. Ashok Misra

Departmental Heads :

Civil Engg.	-	Prof. G. P. C. Rao
Computer Science	-	Dr. P. K. Mahanti
Electrical & Electronics Engg.	-	Dr. B. Kanta Rao
Electronics & Comm. Engg.	-	Prof. S. C. Goel
Mechanical Engg.	-	Dr. C. B. Mishra
Production Engg.	-	Prof. K. P. Sinha
Applied Chemistry	-	Dr. M. N. Banerjee
Applied Mathematics	-	Dr. B. B. Mishra
Applied Physics	-	Prof. K. C. Pande
Management	-	Prof. Awadh Prasad
Pharmaceutical Sc.	-	Dr. B. K. Razdan
Space Engg & Rocketry	-	Dr. N. L. Munjal

Incharges :

Research Cell (Histroy of Science)	-	Dr. R. C. Gupta
Finance	-	Shri G. S. Chhaochharia
Entrance Exams.	-	Prof. G. C. Singh
Trg. & Placement	-	Dr. D. Jairath
Physical Edu & Sports	-	Prof. R. S. Yadav
Library	-	Shri U. N. Singh
Examinations	-	Dr. P. C. Joshi
Nodal Centre	-	Prof. M. K. Saxena
Medical	-	Dr. A. P. Singh