Pandit Dwarka Prasad Mishra
Indian Institute of Information Technology
Design & Manufacturing Jabalpur

Annual Report 2011-12

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THE DIRECTOR'S REPORT

The last decade has witnessed a revolution in almost every field that affects human life. Industrial practices, business and above all, the society have become more diverse and globally interrelated as never before. India, emerging as a knowledge power, has been focusing on strengthening its education, healthcare infrastructure and manufacturing sector apart from other priority areas. The modern manufacturing environment entails a large variety of cross-disciplinary activities including the Design, IT and ITES (IT enabled services). Obviously, these elements need to find their ways into the engineering curricula. Further, the IT/ICT/ITES driven world demands that innovations be made in teaching and learning methods, especially in engineering education.

In order to integrate the cross disciplinary knowledge that would facilitate and promote the competitive advantage of Indian products in the global market, the Ministry of Human Resource Development (MHRD), Government of India, set up this Institute exclusively for imparting education in IT enabled Design and Manufacturing in 2005. Hence, working across the disciplines is a core component of our approach to education, research and development.

Since its inception, PDPM IIITDM Jabalpur has made great strides in producing human resources to contribute in India's mission of improving the quality of life of people and its growth to become global knowledge based economy. Expansion of the Institute has taken place in (i) evolving appropriate curriculum for the Design and Manufacturing flavour in the undergraduate engineering education (ii) strengthening its post graduate and research programmes, (iii) student enrolment and activities, (iv) diversity in the expertise of the faculty members, (v) infrastructural development and (vi) intra-national and international collaborations.

It is my unique privilege to present a report on the progress of the Institute and the major events that took place during the last year.

ACADEMIC ACTIVITIES

Towards strengthening its undergraduate curriculum, the Institute made a significant progress by introducing components that give better exposure to the students on how industries tackle real life and time bound problems. The students were also exposed to newer directions of research in engineering and technological developments and they worked on certain research projects /problems with academicians. I wish to place on record that the **students' response on their experiences with the six months' Project Based Internships in various industries, R&D institutions and PSUs has been overwhelming**. This new dimension of on-job training, while working on a real life project and exposure to the emerging research trends was added to the undergraduate curriculum last year. The faculty is now working on making the curriculum more focused, student centred and flexible while maintaining the highest of standards to compete with the global scenario.

In our efforts to strengthen the post graduate programme, **M. Tech. in Mechatronics was introduced last year**. This shows the commitment of the faculty to work together in cross disciplinary and interdisciplinary areas for imparting education to students in the fields of current relevance and importance as the systematic automation is the need of the hour for infrastructure development in India.

Being the design and manufacturing institute, a need was felt to introduce the **Ph.D. programme in Design** to add to the spectrum of Institute's research programmes. The programme has begun with the sincere efforts of our faculty

colleagues in spite of the acute shortage of faculty in design. I must congratulate them on their initiatives to enhance the research programme in yet another direction at the Institute.

STUDENTS

Students are always the greatest assets of any academic institution. In this Institute especially, the students have been the major force of our aspirations to bring innovation in the teaching and learning methods. Being the students of a developing institute, they have always felt that they have greater responsibilities on their shoulders towards building the reputation and prestige of this Institute. Not only that the students have brought laurels to the Institute by their brilliance, they have also contributed tirelessly to improve the quality of students' life at the Institute campus inspite of so many constraints. Although it would not be possible to list all the achievements and contributions of our students at this point, I only take a few examples to exhibit their triumph in achieving excellence.

Thinking innovatively, the students Akshay Gautam and Gaurav Singh designed a simple mechanism that leads to continuous supply of water from a hand pump when it moves in both the upward and downward directions, meaning thereby, the conservation of human energy and a simple and cost effective solution to millions of rural and urban population of India for whom the only source of water is through hand pumps. This project named "PRAVAH" was globally recognized as the best design project in the category of college students in the Extreme 3D design challenge launched by the Stratasys Company. In another challenge thrown by IBM, Which is perhaps one of the largest students' software competitions, three students of the Institute (Animesh Sinha, Pushpendra Sanyasi, Nagendra Singh) made to the final round and their project was selected as one of the top twenty projects. One of our brilliant students GauriDani was also selected for summer Internship under Indo-Brazil cooperation programme of Department of Science and Technology, Govt. of India.

Students' placement has always been a challenge for any Institute, as the Institute wishes to provide suitable placement to its budding engineers for their meaningful contribution in the development of the country. Further an Institute's identity is established by the contribution made by its alumni throughout the globe. Hence it is of utmost importance that the student be given opportunities for finding places to work or study to their satisfaction. I am delighted to express that our students have worked so passionately with the faculty and staff to bring the placement cell to a level from where the aspiring students can find options and choices. The last year especially has been exemplary when the students got excellent job opportunities due to the efforts of the placement cell. It was indeed a pleasure to note that PSUs like Bharat Electronics Limited found the quality of our students extremely impressive and recruited 12 students for their R&D units. This year the Japanese companies have also shown keen interest in recruiting our students. Canon, Amada, Hitachi, JTEKT, NSK have offered jobs to the students this year. Further, long term internships have also been proposed by Chiba University, Mitsubishi Heavy Industries from this year apart from internship offers by Canon and Amada like last year. It is a matter of pleasure for us that the first student of this Institute who is going to be awarded Ph.D. degree in the next convocation has been appointed as assistant professor at the National Institute of Technology, Raurkela.

Many of the students have also opted to go for higher studies and have got admissions in some of the prestigious Indian and foreign institutions such as IITs, Tokyo Institute of Technology, Purdue University, Texas A&M University, Imperial College of London and Stony Brook University.

FACULTY

Core of the knowledge community of the Institute comprises faculty members drawn from institutions of eminence from India and abroad who strive to excel in research, teaching and institutional building. These members are working in a

variety of areas in engineering, sciences, design, management and humanities. During the year 6 more faculty members joined the IIITDMJ family from various disciplines making the total faculty strength to thirty four. In addition, the Institute has a group of seven research engineers who also contribute in development of labs, practical sessions, mentoring of students in design and other projects. Further, the Institute invites academics and experts from industries to enrich the trans-disciplinary nature of education at Institute. Several eminent scholars from the country and Japan have visited the Institute and have contributed in the teaching programmes of the Institute.

It would be worthwhile mentioning some of the achievements of the faculty and distinctions earned by them at national and international levels. Professor Puneet Tandon has been recently nominated as the member of Board of Governors of MANIT, Bhopal. Dr. Asutosh Shrivastava and Dr. Rajesh Pandey have been awarded Indo-US research fellowships for research collaboration at Yale University and Southern Illinois University respectively. Dr. M Amarnath has been invited for a postdoctoral fellowship at Inha University, South Korea. Dr. Atul Gupta is awarded with the Drona award 2011 for mentoring students' projects for an IBM software challenge. Professor Puneet Tandon has been recently invited for a keynote address at International Conference on Mechanics and Control Engineering in China. Work of Dr. Prabir Mukhopadhyay for a bus project was commended by the Maharastra Government. Dr. NR Jena was invited as the guest editor in the journal "Current Computer-Aided Drug Design". Dr. Bhupendra Gupta has been on the Editorial board of the International Journal of Statistics and Probability, Dr. Pritee Khanna is on the editorial board of International Journal of Advancements in Computer Science & Information Technology and Dr. Ravibabu Mulaveesala was awarded with the prestigious editor of the Journal of Information Technology & Software Engineering award. One of the research papers by Dr. Pavan Kankar's was recently listed as one of the ten most downloaded papers on the prestigious ASME website while Dr. Sunil Agrawal has got the distinction of having a high citation index of 32 for one of his research papers. Dr. Jawar Singh has also been awarded with the inventor incentive award 2012 by Pennsylvania State University.

RESEARCH AND DEVELOPMENT

This year, the Board of Governors took a major initiative to review the Institute's vision for a more focused and bold plan of building the academic leadership in the country in identified areas. In our endeavour to serve the nation by producing quality manpower in some of the most demanding fields of applications, the Institute has identified two important areas for future development. These are clean and green energy and bio-medical instrumentations to begin with while having a very ambitious plan of developing leadership in areas such as product development for Indian domestic market, nanotechnology, nanophotonics, VLSI design, robotics and automation, biometric and security devices and manufacturing innovations.

Numerous projects have been undertaken by the faculty for advancement of research and development in engineering, science, management and humanities. In addition, some consultancy projects have also been undertaken by the faculty of the Institute including an impact analysis of Right to Service Act of Govt. of Madhya Pradesh.

The Institute's infrastructure is developing and the Institute does not have sufficient space to accommodate research labs of the faculty members at present. Nevertheless, the faculty research publications have been significantly increased due to their sincere efforts in establishing and developing research activities within the constraints. Their never ending support in the development of academic and research activities at the Institute has led to establishment of some of the most sophisticated research labs at the Institute. This year, the following labs were created - Computational ECE lab, communication engineering lab, microwave radiation lab, nano electronics and VLSI lab, vibration lab, variable compression ratio diesel engine test rig, signal systems and control lab and mechatronics lab.We are sure, with these facilities and many more to build up in the near future, the research and development activities will scale new heights.

IIITDMJ- JAPAN COLLABORATION

The collaboration between IIITDMJ and Japan is a part of an agreement between the Govt. of Japan and the Govt. of India for a long term strategic partnership. This is the first institute of its kind being developed with the collaboration of six universities and six industry partners of Japan. The collaboration is growing well with students' internships, exposure visits of students, short term visits of faculty, visits of Japanese experts to contribute in the teaching programme of the Institute and also their help in establishing excellent manufacturing lab in the Institute. Some joint research projects are also undertaken by the faculty and the Japanese counterparts. This year, a new dimension to IIITDMJ- Japan collaboration has been added with postgraduate mentorship programme formally approved by Govt. of Japan to sponsor long term visits of our post graduate and research students. This is going to benefit both Indian and Japanese counterparts as the students will get opportunities to work in the state of the art labs under some of the eminent experts working in different areas of engineering. Further, new directions of research collaborations will open up. This year one student has proceeded to Japan under the mentorship programme.

ORGANIZATION OF WORKSHOPS

The Institute faculty has been organizing workshops for the students and faculty since the inception of this Institute. In the last academic year, following workshops were organized at the Institute premises:

(1) NPTEL workshop during March 31-April 1, 2012 at the Institute targeting teachers and scholars from MP zone. This was the first workshop held in Madhya Pradesh to encourage and promote the use of NPTEL material Dr. Satyaki Roy and Dr. Tanuja Sheorey were coordinators.

(2) MiniDesign Workshop - March 23, 2012 , Coordinator Prof PuneetTandon.

(3) Cadence Workshop - February 17-18, 2012, Coordinator Dr. PN Kondekar

FINANCE

The Institute has been efficiently managing its funds and is performing well in terms of fund utilization. The Ministry of HRD had sanctioned Rs. 55.00 Crores as Plan Grant for the Financial Year 2011-12 which has been fully utilized by the Institute. The annual audit of the Institute for the financial year 2011-12 was completed successfully by Principal Auditor General (M.P.), Gwalior and audit report of the Institute has also been received.

CAMPUS INFRASTRUCUTRE

CPWD has been entrusted with the major campus development responsibilities. Several projects were started in the last year and hopefully by June 2013, Lecture Hall and Tutorial Complex, Narmada Residency II and III, Mess and Dining Hall, Visitors hostel, partial road network and Basket Ball Court Complex will be finalized. Hall of Residence IV is almost completed and Security barrack has been recently completed. I wish to place on record the enormous support and guidance provided by the Board of Governors in intensifying the infrastructure development work. It is expected that by 2014, most of the basic facilities would be created.

All these developments have been possible with constant support and help from countless people. At this juncture, it is almost impossible, to mention the names of all of them, but on behalf of the IIITDM family, I express our sincere thanks to each one of them.

BRIEF PROFILE OF THE INSTITUTE

Globalization has thrown enormous challenges for the Indian Industry to meet international standards and satisfy customer expectations the world over. The emerging trends in the manufacturing sector indicate that India needs to take major initiatives in preparing the small and medium scale industries for a leadership role in the Asian market in order to march ahead for a global competitiveness. National Manufacturing Policy introduced by the Government of India in 2011 is a major step to intensify the growth of Indian industry for a bright future. However, trained manpower with specialized knowledge and skill set is critical to achieve this goal. Large pool of highly trained manpower has provided India a leadership position in the knowledge-based industries. Efforts are now required to translate this leadership in building indigenous manufacturing capabilities. Whereas, China is already a leader in low-cost bulk manufacturing, India could emerge as leader in brain-intensive manufacturing. This would require skill sets appropriate for design, development and prototyping that too - using modern tools and techniques.

Keeping the above in view, the Ministry of Human Resource Development, Department of Higher Education felt the need to set up a national institute devoted exclusively for Information Technology (IT), Design and Manufacturing (D & M). It was envisaged that such an academic institute would promote excellence in the desired areas of specialization and would facilitate and promote the competitive advantage of Indian products and manufacturing in global markets.

Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design & Manufacturing (PDPM IIITDM) Jabalpur, Madhya Pradesh was established under the Indian Societies Registration Act and was registered on January 24, 2005 with the Registrar of Societies at Jabalpur under Madhya Pradesh Societies Registration Act 1973. The foundation stone of the new Institute was laid by Shri Arjun Singh, the then Minister of Human Resource Development (MHRD) on February 7, 2005. The first academic session of PDPM IIITDM Jabalpur started from August, 2005. It was also conceived that the Institute would initially operate from the temporary location at the IT Bhawan of the Jabalpur Engineering College at Ranjhi, Jabalpur. Prof Sanjay G. Dhande, Director, IIT Kanpur was given the additional charge as the Director of the Institute. Simultaneously, the efforts were on to find suitable land where the campus of the new Institute could be built. Thus, a piece of land of ~ 250 acres, near the Dumna Airport of Jabalpur was identified and was handed over to the Institute by the Government of Madhya Pradesh on May 03, 2006. The construction work of Phase I buildings was started in 2007 after planning and designing. Presently, the Institute is operating from its own campus at Dumna Airport road, Jabalpur. First few buildings have come up and others are under construction.

The Institute started its academic programmes in 2005 with BTech in three disciplines, namely, Computer Science & Engineering, Electronics & Communication Engineering and Mechanical Engineering. Subsequently, the Institute also

started Masters and Ph.D. programmes in the above three disciplines from the years 2006 and 2007 respectively. Master of Design programme in line with those running at IIT Bombay, IISc Bangalore, IIT Kanpur, IIT Delhi, and IIT Guwahati was started from the year 2008. Two more programme - Ph.D. in Design and M.Tech.in Mechatronics have been started from the academic year 2011-12.

Vision

PDPM Indian Institute of Information Technology, Design and Manufacturing (IIITDM) Jabalpur shall be an institute of excellence providing academic leadership in the broad area of Design and Manufacturing to produce quality manpower and to facilitate and promote the competitive advantage of Indian products and manufacturing in the global market.

Mission

To create an environment of high quality research and training that

- Provides education and training, at both undergraduate and postgraduate levels, to persons of outstanding abilities who would provide leadership to Indian manufacturing industry in globally competitive economic environment.
- Facilitates advanced research and development activities on green technology and low cost products for Indian conditions and targeting other developing countries in Asia and Africa.
- Provides an environment enabling academic community to take intellectual and creative risks and to embrace changes through cross disciplinary and futuristic approaches that will lead to the technological innovations and development in future years.
- Encourages students to learn through inquiry and hands on experience rather than simple transmission of knowledge through class room teaching.

Values

Besides continuing its ongoing activities, the Institute seeks to act in a manner that is guided by a deep-rooted sense of shared values and respect for the nature and mankind. Working under such a sound frame of reference, the Institute:

- Encourages, recognizes and rewards high performance in learning, teaching, scholarship, research and other creative activities by promoting intellectual curiosity and protecting the basic principles of academic freedom.
- Provides an environment that imbibes respect for nature and environment, culture and human values.
- Aspires to build an environment of tolerance and reasoned debate without any gender, caste, religious, regional or cross country bias by affirming the worth and personal dignity of every constituent member of the Institute and by contributing to a campus climate of civility.

CORE LAB COMPLEX – BEFORE CONSTRUCTION

CORE LAB COMPLEX –AFTER CONSTRUCTION

GOVERNANCE

Administration and Governance: The Institute is governed by the Ministry of Human Resource Development through a Memorandum of Association (MOA). As per the MOA following bodies are the Institute's Administrative Authorities.

- Board of Governors (BOG)
- Finance Committee (FC)
- Building & Works Committee (BWC)
- Senate

The Board of Governors

Shri A.K. Singh, Chairman of the Board of Governors completed his term on September 21, 2011. The MHRD nominated Prof. S.V. Raghavan, Scientific Secretary, Office of the Principal Scientific Advisor, Government of India as the Chairman of the Board of Governors for a period of three years with effect from October 7, 2011. Members of the Board of Governors during 2011-12 are listed below.

Members	Designation	
Shri A.K.Singh, IAS (Retd.) Member Public Enterprise Selection Board	Chairman	Upto Sep 21, 2011
Prof. S. V. Raghavan Scientific Secretary, Office of the Principal Scientific Advisor Government of India	Chairman	W.e.f. Oct 7, 2011
Prof. U. B. Desai Director, IIT Hyderabad	Member	
Prof. Ashok Jhunjhunwala, Professor, IIT Madras	Member	
Shri Amit Khare, IAS Joint Secretary(ICC) MHRD, GOI	Member	
Dr. Ajay Kumar Joint Secretary Dept. of Electronics & information Technology, GOI	Member	w.e.f. 17 March 2012
Prof. Pradeep Mathur Director IIT Indore	Member	

Members	Designation	
Prof. Aparajita Ojha, Director PDPM IIITDM, Jabalpur	Member	Ex-officio
Shri.N.Ravi Shanker, IAS Additional Secretary,Deptt. of Information Technology, GOI	Member	Upto 16 March 2012
Prof. G. K. Sharma IIT Gandhinagar	Member	
Prof.R. K. Shyamasundar Senior Professor Tata Institute of Fundamental Research , Mumbai	Member	
Prof. Puneet Tandon Professor PDPM IIITDM, Jabalpur	Member	Upto February 24, 2012
Col (Retd.) P. S. Sandhu Registrar PDPM IIITDM, Jabalpur	Secretary	Ex-officio

Three meetings of the BOG were held during the year 2011. Two more meetings of the BOG were held during January –March, 2012. This includes a special meeting called on 24-2-2012 to discuss and review the Vision Document of the Institute.

The Finance Committee

Members	Designation	
Shri. A.K Singh, IAS (Retd.) Member, Public Enterprise Selection Board	Chairman	up to Sep 21, 2011
Prof. S. V. Raghavan Scientific Secretary, to the office of the Principal Scientific Advisor, Government of India	Chairman	w.e.f. Oct 7, 2011
Mrs. Pratima Dikshit Director (T) MHRD, Govt of India, New Delhi	Member	
Mr. Anurag Jain, IAS Secretary to CM & IT Department Govt of Madhya Pradesh	Member	

Members	Designation
Prof. Aparajita Ojha Director PDPM IIITDM Jabalpur	Member
Shri Naveen Soi Director(Finance), Department of Higher Education MHRD, GOI	Member
Shri R. P. Dwivedi Dy Registrar(Finance and Accounts) PDPM IIITDM Jabalpur	Secretary

Three meetings of the finance committee were held during the year.

The Buildings & Works Committee

Member	Designation
Prof. Aparajita Ojha, Director PDPDM-IIITDM Jabalpur	Chairperson
Ms. Pratima Dikshit Director (T) MHRD, Govt of India, New Delhi	Member
Shri Pankaj Kshatriya, Superintending Engineer MPSEB, Jabalpur	Member
Prof. G.K. Sharma IIT Gandhinagar,	Member
Prof. Puneet Tandon PDPM-IIITDM Jabalpur	Member
Shri A. K. Verma Superintending Engineer CPWD (CZ), Bhopal	Member
Shri R.P. Dwivedi Estate Officer PDPM IIITDM Jabalpur	Secretary

The building and works committee met twice during the year.

THE SENATE

The Senate was composed of the following members during 2011-12.

Members:

Name and Address	Designation
Prof. AparajitaOjha, Director PDPDM-IIITDM Jabalpur	Chairperson
Prof. M.Adhikari, Emeritus Fellow Professor	Member
Shri Siddhalingprabhu Amane Asst. Gen. Manager,(System & IT) Tata Motors	Member
Prof. R. Chatterjee Professor Dept. of Physics, IIT Delhi	Member
Prof. S.K. Choudhary, Professor Dept. of Mechanical Engineering, IIT Kanpur	Member
Prof. P.C. Das, Visiting Professor National Institute of Science Education and Research, Bhubaneswar	Member
Prof. H.P. Dikshit, Professor (Retd.) Director General, SGGPA, Bhopal	Member
Prof. Ashish Dutta, Associate Professor Dept. of Mechanical Engineering, IIT Kanpur	Member
Prof. Vinayak Eswaran, Professor Dept. of ME, IIT Kanpur	Member
Dr. Bhupendra Gupta, Assistant Professor PDPM IITDM Jabalpur	Member
Prof. Phalguni Gupta, Professor Dept. of CSE, IIT Kanpur	Member
Dr. V. K. Gupta, Associate Professor PDPM IIITDM Jabalpur	Member
Prof. Manoj Harbola, Professor Dept. of Physics, IIT Kanpur	Member
Prof. P.K. Jhinge, Professor Principal, JEC, Jabalpur	Member
Dr. Sameer Khandekar, Associate Professor Dept. of ME, IIT Kanpur	Member
Dr. Pritee Khanna, Associate Professor PDPM IIITDM Jabalpur	Member

Dr. Uday Khedkar, Associate Professor Dept. of CSE, IIT Bombay	Member
Dr. Subir Singh Lamba Assistant Professor PDPM IITDM Jabalpur	Member
Prof. B.L. Mishra (Retd.) RDVV Jabalpur	Member
Dr. Prabin Kumar Padhy Assistant Professor PDPM IITDM Jabalpur	Member
Prof. Laxman Pandey Professor Dept. of Physics, R.D. University, Jabalpur	Member
Shri Awadhesh Singh Parihar Industrialist Infosys Technologies Limited Banglore,	Member
Dr. M. Ravibabu Assistant Professor PDPM IITDM Jabalpur	Member
Prof. Amit Ray, Emeritus Fellow Professor	Member
Dr. Mukesh Kumar Roy Assistant Professor PDPM IIITDM Jabalpur	Member
Prof. P. Krishna Reddy,Professor International Institute of Information Technology (IIIT-H) Hyderabad	Member
Prof. Huzur Saran, Professor Department of CSE, IIT Delhi	Member
Dr. Tanuja Sheorey, Associate Professor PDPM IIITDM Jabalpur	Member
Prof. Puneet Tandon, Professor PDPM IIITDM Jabalpur	Member
Col. (Retd.) P. S. Sandhu,Registrar PDPM IIITDM	Secretary

Three meetings of the Senate were held during 2011-12.

Standing Committees of the Senate

Undergraduate Committee of Senate (UGCS)

Dr. P. K. Padhy	Convener
Dr. Dinesh K Vishwakarma	Member
Dr. Tanuja Sheorey	Member
Dr. Atul Gupta	Member
Mr. Shekhar Gupta	Student member
Mr. B Sudershan	Student member

Postgraduate Committee of Senate (PGCS)

Dr. P. K. Padhy	Convener
Dr. Vijay Kumar Gupta	Member
Dr. P. N. Kondekar	Member
Mr. Manish Srivastava	Member
Ms. Vandana Arora	Student member
Mr. Mitesh Niranjan	Student member

Students Prizes and Awards Committee of Senate (SPACS)

Dr. Sunil Agrawal	Convener
Dr. Goutam Dutta	Member
Dr. R. K. Pandey	Member

Students Advisory Committee of Senate (SACS)

Dr. P K Jain	Convener
Dr. Tanuja Sheorey	Member
Dr. Lokendra Balyan	Member
Dr. Anil Kumar	Member
Mr. Pranav Roy	Student member
Ms. Gouri A Dani	Student member

Library Committee of Senate (LCS)

Dr. Mukesh Kumar Roy	Convener
Prof. Amit Ray	Member
Dr. Tanuja Sheorey	Member
Dr. P. Khanna	Member
Dr. Bhupendra Gupta	Member
Dr. M. Ravibabu	Member

ACADEMIC/ADMINISTRATIVE STAFF

FACULTY

The Institute has been very particular in selecting the most talented faculty available in the country and has grown from the initial strength of only two faculty members to thirty six faculty members and seven research engineers who also contribute in the Institute's teaching and research programmes. The Institute also invited people from other Institutes/ organization as guest faculty to deliver lectures in special topics and/or as a part of course. Present sanctioned strength of faculty and research engineers is 65. Following is a list of faculty, research engineers and their specializations.

	Name and Designation	Professional Details	Areas of Interest & Specialization
	Prof. Aparajita Ojha Director	PhD from RDVV Jabalpur, Former Professor at RDVV Jabalpur, former Director of University Institute of Comp. Science and Appl., Director of Library Services, Head of Lib. and Information Sciences at RDVV.	Geometric Modeling, Computer Aided Geometric Design, Finite Elements, Spline Theory, Approximation Theory, Wavelet Analysis, Object Oriented/ Aspect Oriented Modelling and Design, Visual Cryptography, Path Planning

PROFESSORS

	Prof. Puneet Tandon Professor	PhD from IIT Kanpur	Geometric Modeling for Design, Engineering & Manufacturing; Conceptual Design, Product Innovation, Design and Development; Mechatronics; Rapid Prototyping & Tooling, Reverse Engineering, NC programming; Tool Design etc.

ASSOCIATE PROFESSORS

	Name	Professional Details	Areas of Interest & Specialization
	Dr. Tanuja Sheorey	PhD from IIT Kanpur	Algorithm development and numerical analysis, Mathematical modeling of flow through porous media; Domain decomposition and Parallel computation, Exhaust emission control from automobiles.
	Dr. Vijay Kumar Gupta	PhD from IIT Bombay	Smart Structures, Machine Design, Finite Element Methods
	Dr. Pritee Khanna	PhD from Kurukshetra University	Computer Graphics, Geometric Modeling, Database Management Systems, Biometrics, Data Structures.
	Dr. P. N. Kondekar	PhD from IIT Mumbai	Electronic Circuit Design, VLSI Design (MOST Level), Device Simulation and Modeling, RF Identification,RF Power Semiconductor and Modeling
	Dr. Atul Gupta	PhD from IIT Delhi	Software Engineering, Object-oriented Systems, Empirical Software Engineering, Software Testing, Software Engineering Education

ASSISTANT PROFESSORS

	Name	Professional Details	Areas of Interest & Specialization
	Dr. Subir Singh Lamba	PhD from IIT Kanpur	Parallel Computing, Computational Fluid Dynamics, Hyperbolic IBVP, Spectral Methods.
	Dr. Mukesh Kumar Roy	PhD from IIT Kanpur	Formation and characterization of magnetic nano particles; magnetic multilayer; immiscible magnetic alloys, Low Cost Science Teaching Methodologies.
	Dr. Prabin Kumar Padhy	PhD from IIT Guwahati	Automatic Controller Tuning, Identification and Control of Processes.
	Dr. M Ravi Babu	PhD from IIT Delhi	Material Analysis by Thermal Wave Imaging; Optical Techniques for Non-destructive Measurements; Ultrasonic Imaging; Radiography; Instrumentation for Non-destructive Measurements
	Dr. Bhupendra Gupta	PhD from IIT Kanpur	Random graphs and its applications, Stochastic process, Probability Theory.

	Dr. Sunil Agarwal	PhD from IIT Kanpur	Production and Operations Management, Probability and Statistics, Time series analysis, and Quality control.
	Dr. M Amarnath	PhD from IIT Madras	Condition Monitoring and Fault Detection in Rotating Machinery, Acoustics and vibration analysis, Lubricating Oil Tribology, Nondestructive testing.
	Dr. Prashant Kumar Jain	PhD from IIT Delhi	Rapid Prototyping & Tooling, CNC machining, Geometric Modeling, CAD/CAM Integration, Computational geometry, Design automation, Nano Technologies in Manufacturing.
	Dr. Ashish Kumar Kundu	PhD from JNCASE, Deemed University	Solid State Physics
	Dr. Goutam Dutta	PhD from IIT Bombay	Computational fluid dynamics, Heat Transfer, Two phase flow instability analysis, Nuclear coupled thermal-hydraulic instability analysis
	Dr. H. Chelladurai	PhD from IIT Kanpur	Condition Monitoring, Virtual Instrumentation and Artificial Neural Networks
	Dr. Ashutosh Shrivastava	PhD from ECE Jadavpur, CEERI Pilani	Microelectronics/VLSI, Silicon Detectors/ MEMS

	Dr. Dinesh Kumar Vishwakarma	PhD from IISC Bangalore	Analytical and FDTD Modeling, Antenna Analysis and Design, Microwave Engineering, Applied Photonics, Fiber Optic Communication
	Mr. Lokendra Balyan	PhD from IIT Kanpur	Spectral Methods, Parallel Algorithms, Partial Differential Equations, Numerical Linear Algebra
	Dr. Rajesh Kumar Pandey	PhD from BHU Varanasi	Wavelet Analysis; Numerical Analysis
	Mr. Anil Kumar	PhD from IIT Roorkee	Solid State Electronic Material (Semiconductor Device & Material Semiconductor Material & Technology Solid State Device & Technology)
	Mr. Rajib Kumar Jha	PhD from IIT Kharagpur	Video indexing, Motion detection using optical flow, Image watermarking, Steagnography, Stochastic Resonance for images, Image enhancement using Multi-Retinex, and newly developed high pass filtering approach.
	Mr. Manish Shrivastava	Pursuing PhD from IIT Bombay	Natural Language Processing, Artificial Intelligence, Graphical Models, Machine learning
	Dr. Jawar Singh	PhD from University of Bristol, UK	VLSI, Low power system design, Nano-CMOS and TFET SRAMs, Process variation and fault tolerant SRAM design, Statistical analysis of process variations in Nano-CMOS devices.

	Dr. Prabir Mukhopadhyay	PhD from University of Limerick, Ireland	Injury Prediction, Industrial Ergonomics, Occupational Ergonomics, Ergonomics in Improving Productivity, Transportation Ergonomics, Macro Ergonomics, Cognitive Ergonomics
	Dr. Sraban Kumar Mohanty	PhD from IIT Guwahati	Computer Science & Engineering
	Dr. Mamta Anand	PhD in English Literature	American Transcendentalism, Indian Spiritualism, Gender Studies, Cultural Studies, Concept of Human Identity.
	Dr. Pavan Kankar	PhD from IIT Roorkee	Vibrations, Condition Monitoring, Nonlinear Dynamics, Soft Computing
	Dr. Nihar Ranjan Jena	PhD from Banaras Hindu University	DNA Dynamics, DNA-Protein Interaction, Enzyme Catalysis, Protein-Inhibitor Binding & Drug Design

VISITING FACULTY

	Mr. Hari Kumar Voruganti	Pursuing PhD from IIT Kanpur	Computer Modeling Optimization, Introduction to robotics, Robot Motion, Planning, Engineering Mathematics
	Mr. T.V.K. Gupta	Pursuing PhD from IIT Kanpur	CAD, CAM, Reverse Engineering, Abrasive Water Jet, Machining, CNC, Rapid Prototyping
	Mr. K. K. Balakrishnan	Pursuing PhD from IIT Guwahati	Industrial Design, Sustainable Design, Product Service Systems, Art & Design

RESEARCH ENGINEERS

	Mr. Awadhesh K Singh	M.Tech from IIT Rorkee	Mechatronics, Design of MEMS Devices
	Mr. Sachin Kumar Jain	Pursuing PhD from IIT Kanpur	Power Electronics
	Mr. K. Soundra Pandian	M.Tech. from University of Delhi	Electronics & Communication, Instrumentation, Embedded Programming, Mechatronics
	Mr. B. Mukherjee	Pursuing PhD from IIT Bombay	Microwave Electronics
	Mr. D. S. Ramteke	M.Tech. from IIT Guwahati	Machine Design, Rotor dynamics
	Mr. Saket Saurav	B.E. MPCT Gwalior	Robotics, Embedded C/C++ and VB/VB. NET Programming

OFFICE ADMINISTRATION

GROUP A OFFICERS

Col P.S. Sandhu
BE, MPM, MCEME, IMCC

Registrar

Shri R P Dwivedi
MCA, MPM, LLB

Deputy Registrar
General Administration
Finance & Accounts
OIC-Estate

Shri Prabodh Pandey
M.Sc., MPM

Assistant registrar

Miss Menika Patel
M.Lib.,

Assistant Librarian

STAFF

GROUP B EMPLOYEES

S. No.	Name (S/Shri/Ms./Smt.)	Designation
1.	Shri V.K. Dubey	AE (Civil)-**(on deputation)**
2.	Shri R.K. Mishra	JE (Civil)
3.	Shri Sunil Jat	JE (Civil)
4.	Shri Nitesh Kumar	JE (Elect.)
5.	Shri Ashok Kumar	Jr. Superintendent
6.	Shri Aloysius Beenu Michael	Sr. Stenographer
7.	Ms. Megha Kushwah	Sr. Information Library Assistant

Group C Employees

S. No.	Name (S/Shri/Ms./Smt.)	Designation
1.	Shri Anil Kumar	UDC
2.	Shri Sandeep Awasthi	UDC
3.	Shri Shailesh Sharma	UDC
4.	Shri Praveen Armo	UDC
5.	Shri Dev Krishna Jha	Dy. Account Assistant
6.	Ms. Sapana A. Wankhade	Library Assistant
7.	Shri Kamlesh S Warkade	Care Taker
8.	Shri Akhilesh Srivastava	TA
9.	Shri Jitendra Gupta	TA (on lien)
10.	Shri Alok Kulkarni	TA
11.	Ms. Bharti Kewat	TA
12.	Shri Rajesh Kumar Singh	TA
13.	Shri Brajesh Kumar	TA
14.	Shri Piyush Kumar Usrethe	TA
15.	Shri Anup Bajpai	TA

16.	Shri Ghanshyam Meshram	TA
17.	Shri Mayur S. Mangole	TA
18.	Shri Anupam Shukla	TA
19.	Shri Varun Dubey	LA
20.	Shri Jagat Singh	LA
21.	Ms. Aayesha B. Mansoori	LA
22.	Shri Ram Dularey Vishwakarma	LA
23.	Shri Robinson George Markam	LA
24.	Shri Anup Kumar Gupta	LA
25.	Shri Tabish Khan	LA
26.	Shri Manoj Tigga	LA
27.	Shri Simantakar Gupta	LDC
28.	Shri Pankaj Prajapati	LDC
29.	Shri Avashesh Kumar Pal	LDC
30.	Shri Prashant Agnihotri	LDC
31.	Shri Dilip Rangare	LDC
32.	Shri Prakash B.	LDC (on lien)
33.	Shri Rajesh Kumar	LDC
34.	Shri Adesh Kumar	LDC
35.	Shri Mohd. Izrael Khan	Driver
36.	Shri Ganesh Prasad Kashyap	Driver
37.	Shri Milind P. Bobde	Electrician

ACADEMIC AND RESEARCH ACTIVITIES

Academic programmes define the philosophy of an educational institution. PDPM IIIT DM Jabalpur gives emphasis on synthesis, creativity, hands-on experience, innovation, communication and entrepreneurship. These qualities along with basic knowledge of design and manufacturing technologies form the ethos of education at the Institute. In order to ensure that the graduates are able to get suitable opportunities of employment in the Indian industry, the Bachelor's degree is being awarded in the conventional disciplines. However, at that level, the academic programmes will have more emphasis on creative design and manufacturing training. The Master's programmes are aimed at providing opportunities to students from other institutions to excel in various engineering domains with special emphasis on creativity and design. The Institute plans to orient its post graduate programmes in important areas of design and manufacturing with focus on emerging research directions and futuristic demands and needs of the society. Students will have the option of specializing in some basic tracts (or verticals) through choice of optional subjects and project work / thesis. Overall programmes are envisioned to be different than the conventional programmes of other engineering institutions.

Looking at the acute shortage of quality faculty in engineering, the Institute also aims to strengthen its Ph.D. programme by increasing the intake of Ph.D. and through collaboration with leading academic institutions, research and development organizations and industry for research programmes and sponsored projects.

The Institute plans to build relationships with other Institutions of higher learning so that joint web based and online master's programmes could be launched for the benefit of larger section of postgraduate and undergraduate students in India and other countries. This would also help in addressing the growing concern of providing quality education to students across the country and to provide alternative solutions to the problem on shortage of teachers.

In essence PDPM IIIT DM Jabalpur would strengthen and enhance academic activities by –

- Encouraging cross-disciplinary cross and interdisciplinary programmes.
- Increasing the flexibility of its undergraduate programmes and facilitating all round development of students.
- Evolving a policy for web-based and online education as a supplement to classroom education to provide the benefit of quality education to students across the country.
- Intensifying the activities for collaborative and sponsored research in the field of design and manufacturing with special emphasis on creativity and design.
- Orienting its post graduate programmes in important areas of design and manufacturing with focus on emerging research directions and futuristic demands and needs of the society.

a) Academic Programmes

Undergraduate programmes - The Institute has a unique undergraduate curriculum for imparting education in the following three disciplines of engineering –

(i) Computer Science and Engineering

(ii) Electronics and Communication Engineering

(iii) Mechanical Engineering

Postgraduate programmes - The Institute runs M. Tech. and Ph.D. programmes in the following disciplines –

(i) Computer Science and Engineering

(ii) Electronics and Communication Engineering

(iii) Mechanical Engineering

In addition, the Institute also offers M. Tech. in Mechatronics, Master of Design and Ph.D. in Design.

b) Innovative Practices in Teaching and Learning Process -

Concept of Project Based Internship

The academic curriculum of PDPM Indian Institute of Information Technology, Design & Manufacturing (IIITDM) Jabalpur focuses very strongly on hands on experience, interdisciplinary education and project oriented learning. Its agenda is to produce graduates who are not only technically competent but also possess other skills like capability to learn through experience, critical thinking, practical aptitude and ability to synthesize the solution. It also recognizes that not all aspects of learning can be taught in the conventional way of classroom (or laboratory) teaching methodology. Realizing that there are important elements of learning in an organization, the Institute has opened its academic programme for approximately six months long project-based internship (PBI) opportunity to its students to be executed after the completion of sixth semester. The internship aims to provide on-the-job experience or exposure to ongoing research and development in an organization under the supervision of able practitioners/researchers. The internship contributes to the development of a student's comprehension on technical skills, knowledge and practical problems.

The basic goal of the Project-based Internship is to make the students gain meaningful experiences as to help them meet their future career goals. Besides, it helps students practice the theory taught in the classrooms and to make them understand how the real world functions. The primary objectives of the internship include:

- To satisfy curiosity and hone research potential at research organizations for the research minded students,
- To obtain on-job experience in an industrial / commercial, research or educational environment,
- To provide a platform to students in applying whatever learnt in theory and to integrate theory with practice,
- To enable the students understand the functional behaviour of organizations and to sensitize the students towards corporate/industrial behaviour, man-machine management, entrepreneurship, industrial safety,
- To provide opportunities to students to work with industrial practitioners,
- To expose students to potential employers and
- To help students develop the personality and soft skills.

Mentorship Programme

The Institute has started a mentorship programme for its postgraduate students with the collaboration of expert working in Japanese Universities / industries. Under the programme some of the post graduate students will have their mentors from Japanese universities/industry and will be working on collaborative research projects. This will help students in gaining meaningful experience and exposure to some of the state of the art labs in Japanese universities /R&D units of industries and also a chance to collaborate with their Japanese mentors/guides.

A Unique Course on Product Design and Design Services using Ubiquitous and Mobile Technologies -

The Institute launched a unique course on Product Design and Design Services using Ubiquitous and Mobile Technologies in the last academic year in collaboration with following counterparts from different continents –

Technical University Delft, Netherland
Val Institute of Technology, South Africa
Purdue University, USA
EAFIT, Medlin Columbia

The course was mainly for post graduate students with participating students from each Institution. It was a project based course and different project teams were formed with each teach having atleast one student from each of the five institutes. Delivery of lectures and group discussion sessions were through video conferencing mode. The course

outcomes were products/ services which were innovative in nature. This experiment was quite successful and gave a good exposure to the students. In future, we plan to introduce more such courses with institutions in India and abroad.

Evolution of Curriculum to improvise Teaching and Learning Process

The present system of teaching and learning at the Institute is based on IIT pattern. It is felt that the system needs to be more students centric and should adapt innovative approaches in imparting education to its students. We are working on curriculum and system development with an aim

(i) to provide students time for creative thinking and activities,
(ii) to inculcate self-learning and book reading habits,
(iii) to learn through practice and hands on experience rather that simple class room transmission.

c) Research Activities

Presently the R&D activities revolve around the following thrust areas.

- Computer Aided Design
- Computer Integrated Manufacturing
- Computer Vision
- Computational Intelligence
- Communication system and device design
- Industrial Design
- Mechatronics and Robotics
- VLSI Design and Testing
- Software Modeling and Design
- Smart Structures and Bio-design

People are also working in following directions –

- Energy harvesting and energy system design
- Biomedical Instrumentation
- Nanophotonics and plasmonics
- Signal and Image Processing
- Design of Control Systems
- Sensors and Actuators
- Parallel Algorithms
- Nanotechnology
- Biometric systems
- Wireless and adhoc networks

B. Tech Programme

(a) Students Enrolment

2008 Batch

Branch	OP	OBC	SC	ST	Total
CSE	33	04	08	02	47
ECE	34	04	07	04	49
ME	29	05	05	03	42
Total					138

2009 Batch

Branch	OP	OBC	SC	ST	Total
CSE	19	02	05	04	30
ECE	34	11	09	05	59
ME	32	11	08	05	57
Total					146

2010 Batch

Branch	OP	OBC	SC	ST	Total
CSE	44	24	13	06	87
ECE	42	23	13	06	84
ME	42	23	13	07	85
Total					256

2011 Batch

Branch	OP	OBC	SC	ST	Total
CSE	44	23	13	06	86
ECE	42	24	11	06	83
ME	43	23	13	07	86
Total					255

(b) Academic Performance Evaluation Committee Report – Undergraduate

Semester II (2010-11)

Batch	No. of Students	No. of Students passed	No. of Students Terminated
2007	75	68*	00
2008	138	138	00
2009	145	145	00
2010	233	231	02

Semester I (2011-12)

Batch	No. of Students	No. of Students passed	No. of Students Terminated
2008	138	138	00
2009	145	144	01
2010	230	224	06
2011	255	255	00

* 7 students have to clear their backlog courses to complete the requirement for award of degree

(c) Academic Performance Evaluation Committee Report - Postgraduate

Semester II (2010-11) Post Graduate

Batch	No. of Students	No. of Students passed	No. of Students Terminated
2009	23	15*	00
2010	33	30	3

*8students have to clear their backlog courses to complete the requirement for award of degree

Semester I (2011-12) Post Graduate

Batch	No. of Students	No. of Students passed	No. of Students Terminated
2009	08	08	00
2010	37	37	00
2011	47	47	00

Post Graduate Programmes

Institute offers Master's degree programmes in:

(a) M.Tech

(i) Computer Science & Engineering (CSE)
(ii) Electronics & Communication Engineering (ECE)
(iii) Mechanical Engineering (ME)
(iv) Mechatronics (MT)

(b) M.Des - Master of Design

(c) Students Enrolment M.Tech and M.Des Programmes

2010 Batch

Branch	OP	OBC	SC	ST	Total
CSE	08	04	02	00	14
ECE	07	04	01	00	12
ME	01	02	00	00	03
MDes	03	01	00	00	04
Total	19	11	03	00	33

2011 Batch

Branch	OP	OBC	SC	ST	Total
CSE	08	03	01	01	13
ECE	07	04	02	00	13
ME	07	04	02	00	13
MT	07	03	00	00	10
MDes	00	01	01	00	02
Total	29	15	06	01	51

(d) Ph. D Programme

The Institute offers Ph.D. in
(i) Computer Science & Engineering (CSE)
(ii) Electronics & Communication Engineering (ECE)
(iii) Mechanical Engineering (ME)
(iv) Design

(e) Students Enrolment in Ph.D Programmes

2007 Batch

Branch	OP	SC	ST	Total
ME	01	00	00	01
CSE	00	00	00	00
ECE	00	00	00	00
Design	00	00	00	00
Total	01	00	00	01

2008 Batch

Branch	OP	SC	ST	Total
CSE	01	00	00	01
ECE	01	00	00	01
ME	01	00	00	01
Design	00	00	00	00
Total	03	00	00	03

2009 Batch

Branch	OP	SC	ST	Total
CSE	01	00	00	01
ECE	01	00	00	01
ME	01	00	00	01
Design	00	00	00	00
Total	03	00	00	03

2010 Batch

Branch	OP	SC	ST	Total
CSE	03	00	00	03
ECE	01	00	00	01
ME	02	01	00	03
Design	00	00	00	00
Total	06	01	00	07

2011 Batch

Branch	OP	OBC	SC	ST	Total
CSE	04	01	02	00	07
ECE	07	01	03	00	11
ME	08	02	02	00	12
Design	02	00	01	00	03
Total	21	04	08	00	33

Research Projects

Research Projects Approved /Completed/Ongoing during 2011-12 are as follows :

Project Title	Duration	Investigator	Funding Agency	Amount	Status
Constrained Curve Drawing Algorithms for Robot Motion Planning	2010-13	**PI:** Prof. Aparajita Ojha **Co-PI :** Dr. Tanuja Sheorey	DST, Ministry of Science & Technology, Government of India	Rs. 9.23 Lakhs	Ongoing
Improved Controller Design for AQM Routers Supporting TCP Flows	2008-11	**PI:** Dr. Prabin Kumar Padhy	DST, Ministry of Science & Technology, Government of India	Rs. 3 Lakhs	Completed
Geometric Modeling, Analysis and Design for Generic Definitions of Custom Engineered Cutting Tools	2008-12	**PI:** Prof. Puneet Tandon **Co-PI(s):** Dr. Vijay Kumar Gupta Dr. PriteeKhanna	DST, Ministry of Science & Technology, Government of India	Rs. 25.26 Lakhs	Ongoing
Development of a micro pump with NEMS sensing function for an automatic blood collecting and measurement system	2010-12	**PI:** Prof. PuneetTandon **Co-PI(s):** Dr. Vijay Kumar Gupta Dr. Tanuja Sheorey	DST, Ministry of Science & Technology, Government of India & Japanese Society for Promotion of Science (JSPS) Japan	Rs. 4.38 lakhs (Grant from the Indian Funding Agency)	Ongoing

Project Title	Duration	Investigator	Funding Agency	Amount	Status
Virtual Lab: Automated Systems	2010-12	**PI:** Dr. Tanuja Sheorey **Co-PI(s):** Dr. Vijay Kumar Gupta Prof. Puneet Tandon	MHRD, Govt. of India	Rs. 40 Lacs	Ongoing
Virtual Lab: Manufacturing Engineering	2010-12	**PI:** Dr. Vijay Kumar Gupta **Co-PI(s):** Dr. Tanuja Sheorey Prof. Puneet Tandon	MHRD, Govt. of India	Rs. 40 Lacs	Ongoing
Electrical Characterization of nano scale MOSFET's Scalability Issues and Possible Solutions	2010-13	**PI:** Dr. Ashutosh Srivastava	DST, Ministry of Science & Technology, Government of India	Rs. 15 Lacs	Ongoing
Review of the Impact and Quality of Right to Service Act in Madhya Pradesh: With a Special Reference to Seventeen districts	2011-12	**PI:** Dr. Vijay Kumar Gupta **Co_PI(s):** Dr. Pavan Kumar Kankar	School of good governance and policy analysis *(An Autonomous Institute of the Government of Madhya Pradesh), Bhopal*	Rs.4.54 Lakhs	Completed

Publications in Conferences, Journals and Books

Research Publications in National/International Journals by the Faculty of IIITDM Jabalpur

Publications
Books/ Book Chapter(s):

1. **P. Tandon, Cutting Tool Geometry: 3D Perspective**, Published by AV Academikerverlag GmbH & Co. KG, Germany, 2011 [ISBN 978-3-8465-2878-5]
2. **Jawar Singh**, Saraju Mohanty and Dhiraj K. Pradhan, "Robust SRAM Designs and Analysis", Springer-Verlag New York Inc., Hardcover, ISBN 978-1-4614-0817-8.
3. **Jawar Singh**, Balwinder Raj, "Embedded System / Book 1" Chapter Title "SRAM Cells for Embedded Systems" INTECH Open Access Publisher, ISBN 979-953-307-580-7.
4. **Lokendra Balyan, 2012** h-p Spectral Element Method for Elliptic Eigenvalue Problems with Prof. Pravir Dutt, LAP LAMBERT, GERMANY 2012
5. **G. Dutta** and J. B.Doshi, "A Numerical Algorithm for the Solution of Nonlinear Equations to Simulate Instability in Nuclear Reactor and its Analysis", Lecture Notes in Computer Science, **6783,** 695-710, 2011.

Journal Papers

1. Sambhav, Kumar, **Tandon Puneet** and Dhande, S.G., 2012, **"**CAD Based Geometric and Force Modeling of Single Point Form-cutting Tools", Computer Aided Design & Applications, 2012, Vol. 10, No. 1, pp. 45-57. DOI: 10.3722/cadaps.2013.45-57.
2. Soni, S., Khanna, P. and **Tandon Puneet,** 2012, "Extended Axiomatic Design and Computational Support to Design for Aesthetics", Computer Aided Design & Applications, Vol. 10, No. 1, pp. 1-15. DOI: 10.3722/cadaps.2013.1-15.
3. Khan, Mohammed Rajik and **Tandon Puneet,** 2012, Mathematical modeling of a generic multi-profile form milling cutter, Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science. DOI:10.1177/0954406212455890.
4. Pal, Vijay Kumar and **Tandon Puneet,** 2012, Identification of role of machinability and milling depth on machining time in controlled depth milling using abrasive water jet, International Journal of Advanced Manufacturing Technology. DOI: **10.1007/s00170-012-4373-z.**
5. Sambhav, K., **Tandon Puneet** & Dhande, S.G., 2012, "Geometric modeling and validation of twist drills with a generic point profile", Applied Mathematical Modelling, 2012, Vol. 36, pp. 2384-2403. DOI:10.1016/j.apm.2011.08.034.
6. **Tandon Puneet** & Ito, Y., 2011, "Comparative Research into Marketability Reinforcement in Conventional Machining Center of China-, India-, Japan-, Korea- and Taiwan-Makes", Journal of Machine Engineering, Vol. 11, No. 3, pp. 58-71.
7. Gupta, Vikas, Kasana, K.S. & **Tandon Puneet,** 2012, "Reference Based Geometric Modeling for Heterogeneous Objects", Computer Aided Design & Applications, 2012, Vol. 9, No. 2, pp. 155-165.
8. Pal, Vijay & **Tandon Puneet,** 2012, "A method to reduce milling time for Ti-6Al-4V Alloy Controlled Depth Milling using Abrasive Water Jet Machining", Advanced Material Research, 2012, Vols. 383-390, pp. 1764-1768.

9. Pal, Vijay & **Tandon Puneet,** 2012, " Effect of Abrasive Flow Rate in Milling with Abrasive Water Jet" , Applied Mechanics & Materials, Vols. 110-116, pp. 196-201.

10. Vasal, Apurv, Mishra, Deepak and **Tandon Puneet,** 2012, "A Novel and Cost Effective Approach to Public Vehicle Tracking System", International Journal of UbiComp (IJU), Vol. 3, No. 1,pp. 33–44.

11. Sambhav, K., **Tandon Puneet** & Dhande, S.G., 2011, "A Generic Mathematical Model of Single Point Cutting Tool in terms of Grinding Parameters", Applied Mathematical Modelling, 2011, Vol. 35, pp. 5143–5164.DOI:10.1016/j.apm.2011.04.017.

12. Sambhav, K., Dhande, S.G. & **Tandon Puneet,** 2011, "Computer Aided Design and Development of Customized Shoe Last" Computer Aided Design & Applications, 2011, Vol. 8, No. 6, pp 819-826. DOI:10.3722/cadaps.2011.819-826.

13. **Tandon Puneet et al**., 2011, "Design and Simulation of an Intelligent Bicycle Transmission System" , IEEE/ASME Transactions on Mechatronics, Vol. 16, Issue 3, June 2011, Article number 5443749, pp. 509-517.

14. Khan, Mohammed Rajik and **Tandon Puneet,** 2011, Mathematical modeling for design of a generic custom-engineered form mill, International Journal of Advanced Manufacturing Technology, Vol. 54, Issue 1, pp. 139-148. DOI:10.1007/s00170-010-2936-4.

15. Gupta, Arun Kumar, Chandna, Pankaj and **Tandon Puneet,** 2011, "Hybrid Genetic Algorithm for minimizing non-productive machining time during 2.5 D Milling", International Journal of Engineering, Science and Technology, Vol. 3, No. 1, pp. 183-190.

16. Gupta, Arun Kumar, Chandna, Pankaj and **Tandon Puneet,** 2011, "Optimization of machining parameters and tool selection in 2.5D milling using Genetic Algorithm", International Journal of Innovative Technology and Creative Engineering, Vol. 1, No. 8, pp**. 21-27.**

17. Singhal, Sandeep, **Tandon Puneet** and Sharma, S.K., 2011, "Critical Success Factors in Implementation of ERP in Education", International Journal of Contemporary Practices, Vol. 1, No. 1, pp. 60-68. ISSN: 2231-5608.

18. Abhay M Khalatkar, **V.K. Gupta**, Rakesh Kumar Haldkar, 2011, "Study of Effect of Geometry Parameters on Piezoelectric Cantilever by Modal and Harmonic Analysis", Advanced Materials Research, Volumes 383 - 390, 6689

19. Abhay M Khalatkar, **V.K. Gupta**, Rakesh Kumar Haldkar, 2011, "Finite Element Analysis of Cantilever Beam for Optimal Placement of Piezoelectric Actuator", Advanced Materials Research, Volumes 110 - 116, 4212

20. TamrakarDeepti, **Khanna Pritee,** 2011, "Palmprint Recognition by Wavelet Transform with Competitive Index and PCA", World Academy of Science, Engineering and Technology, Special Journal, Issue 60, December 2011, pp.1581-1585.

21. ChouhanRajlaxmi, Mishra Agya, and **Khanna Pritee,** 2011, "Robust minutiae watermarking in Wavelet Domain for Fingerprint Security", World Academy of Science, Engineering and Technology, Special Journal Issue 60, December 2011, pp.1612-1619.

22. A. Kumar, A. K. Bhandari and **P.K. Padhy**, 2012, "Improved Normalized Difference Vegetation Index Method Based on DCT and SVD for Satellite Image Processing" IET Signal Processing, Vol. 7 , pp. 617-625, 2012.

23. **Padhy, P.K.** and Majhi, S., 2011, "Exact Analysis for the Identification of Non-minimum phase Processes", Journal of The Franklin Institute Vol. 348 No. 10 , pp. 2734-2743.

24. K. Bhandari, A. Kumar and **P.K. Padhy**, 2011, "Enhancement of Low Contrast Satellite Images Using Discrete Cosine Transform and Singular value Decomposition" World Academy of Science, Engineering and Technology, 79, pp. 35-41.

25. **P. K. Padhy**, A Kumar, Avinash Kumar, Vivek Chandra and Kalyan T Rao, 2011, " Feature Extraction and Classification of Brain Signal" World Academy of Science, Engineering and Technology79 , pp. 651-652.

26. V. K. Singh and **P. K. Padhy**, 2011, "The System Identification and PID Lead-lag Control for Two Poles Unstable SOPDT Process by Improved Relay Method", World Academy of Science, Engineering and Technology79 , pp. 819-823.

27. Hurde, P., and **Agrawal, S**., 2011, "Influence of correlation coefficient of lead time on bullwhip effect", CAMAN 2011 Wuhan, China, IEEE Catalog Number: CFP1125M-CDR, ISBN:978-1-4244-9281-7.

28. **Agrawal S**., Sengupta R. N., Shanker K. and Kumar N., 2011. Characterization of Upstream Demand Processes in a Supply Chain: A Simulation Approach. Proceedings of World Academy of Science, Engineering and Technology 60, 1154-1159.

29. M. Amarnath, R.L Gautam, M.K. Roy, **S. Agrawal**, A. Kumar and Hemanthakumar, 2011. An Experimental Study of Cutting Fluid Effects in Turning. Proceedings of World Academy of Science, Engineering and Technology 60, 1825-1828.

30. Vikash K. Malviya and **Prashant K. Jain,** 2012, "Computations for Simplification of Canned Cycles in CNC Programming for Turning Operations", Advanced Materials Research, Vols. 383-390, pp. 965-971.

31. M.M.Seikh, **Asish K. Kundu**, V.Caignaert, V.Pralong and B.Raveau, 2011, "Magnetic and electronic properties of Eu0.9Ca0.1BaCo2O5.5+x with the disparity of oxygen stoichiometry", Journal of Applied Physics, 109, 093916.

32. **Asish K. Kundu**, V.Pralong, B.Raveau, V.Caignaert, 2011, "Magnetic & electric properties of ordered 112-type perovskite LnBaCoMnO5+x", Journal of Materials Science, 46, 681.

33. **Asish K. Kundu**, M.M.Seikh, A. Srivastava, S. Mahajan, R. Chatterjee V., 2011, "Pralong and B.Raveau, Incoherent Effect of Fe and Ni Substitutions in the Ferromagnetic-Insulator La0.6Bi0.4MnO3+x", Journal of Applied Physics, 110, 073904.

34. **Asish K. Kundu**, V.K. Jha, M.M.Seikh, R.Chatterjee and R.Mahendiran, 2012, "A comparative study of magnetic and dielectric behaviors for La1-xBixMn1-yFeyO3", Journal of Physics: Condensed Matter, 24, 255902.

35. V.K. Jha, M.M.Seikh, R.Chatterjee, R.Mahendiran and **Asish K. Kundu**, 2012, "Magnetoresistance, Thermopower and Heat Capacity Studies in Multiferroic La0.5Bi0.5Mn0.5Fe0.5O3.09", Journal of Applied Physics, (in press).

36. V. Mishra, T. Singh, A. Alam, V. Kumar, A. Choudhary, **V. Dinesh Kumar,** 2012**,** Design and simulation of broadband nanoantennae at optical frequencies, IEE,Micro and Nano Letters, Vol. 7, Iss. 1, pp. 24–28.

37. **Dinesh Kumar V**, AbhinavBhardwaj, Deepak Mishra, 2011, Investigation of a Turnstile Nanoantenna, IEE,Micro and Nano Letters, Vol. 6, Iss. 2, pp. 94–97.

38. M. Kumar, M. Kumar, **D. Kumar,** 2012,"Beam shaping of light sources using circular photonic crystal funnel", Journal of Modern Optics, 1–5, issue 1.

39. Rajbala, A. Srivastava, H.O. Pandey, **D. Kumar,** 2012, "Investigation of a cross-slot nanoantenna and extraordinary transmission", IET Micro and Nano Letters ,Vol 7, pp. 600-603.

40. V. Mishra, T. Singh, A. Alam, V. Kumar, A. Choudhary, **D. Kumar,** 2012, "Design and simulation of broadband nanoantennae at optical frequencies", IET Micro and Nano Letter, Vol.7, pp. 24-28, 2012.

41. Bhardwaj, **D. Kumar**, 2012, "Optical Dot Antenna and Nano hole Transmission", IET Micro and Nano Letters 2012 (Accepted).

42. Bhardwaj**, D. Kumar**, 2012, "Optical Dot Antenna", Microwave and Optical Tech. Letters 2012 (Accepted)

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LIBRARY

Library Annual Report

The IIITDM Jabalpur library started in 2005. The IIITDM Jabalpur library with its modern collection of knowledge resources and innovative information services plays an essential role in the intellectual pursuits of students, faculty and the surrounding academic community. IIITDM Jabalpur library is a hybrid library with the state-of-the art technological applications and provides services in a mixed- mode, electronic and paper, environment, particularly in a co-coordinated way. Integrated library system (Library Automation Software) "Softgranth" that can be used the entire library functions is automated done like; acquisition, cataloguing, circulations etc., and also subscribe the e-resources.

Collection Development and Management

Collection building is one of the important functions of the library that supports academic and research work of the students, faculty, staff and other users. The total collection of library as on 01 April 2011 to 31st March 2012 stands as follows:

Collection	In Stock On 31st March 2011	Procured In 2011-12	Total
Books (Text Reference)	8825	934	9759
Gratis Books	38	29	67
Print Journal	0	1	1
CDs and Floppy (Received for books)	852	165	1017
Bound volumes of journals	54	2	56
Projects Report	11	16	27

News Papers and Magazines

S. No.	Items	Quantity
1	Newspaper	11
2	Magazines	22

Library Services

1. **WebOPAC**:- Searching books inside the library and user details are available.

2. **Reference Services**: Reference service helps users to make full use of library resources and services. It provides necessary assistance to users in locating information or document of their choice.

3. **Book Bank**: The library maintains a book bank to help students belonging to Scheduled Castes, Scheduled Tribes and economically weaker sections of the society.

4. **Information Alert Services:** The library continues to alert the users about the latest information of their interest by:

   a) List of New Arrivals
   b) List of New E-Resources
   c) News items display
   d) Faculty and student publications display
   e) Display of Forthcoming conferences, other national and international events.

5. **Newspaper Clipping Services:** IIITDM Jabalpur any news publishes to any newspaper to keep the newsfor the both Hindi and English.

6. **Library Seating Capacity:** 100 at a time, 4 PC for web opac and e-Resources

Details of the expenditure for the year 2011-12

Book	**Rs. 3,84,446.00 (approx.)**
Journals	**Rs.99,83,376.00 (approx.)**
Newspaper and Magazine	**Rs. 25,000.00 (approx.)**

7. **E-Resources for the year 2011**

Sl. No	Name of Publisher	Name of Bibliographic Data base
1.	Indest	MathSciNet
2.	Elsevier	Scopus
3.	Elsevier	Science Direct (Options I)
4.	Indest	ACM Resources
5.	Indest	ASME Resources
6.	Indest	IEEE Resources
7.	Indest	Springer Resources

Sl. No	Name of Publisher	Name of Journal
1.	Society for Industrial and Applied Mathematics Journals (SIAM)	1. SIAM Journal on Mathematical Analysis (SIMA) (O) 2. SIAM Journal on Matrix Analysis and Applications (SIMAX) (O) 3. SIAM Journal on Numerical Analysis (SINUM) (O) 4. SIAM Journal on Scientific Computing (SISC) (O) 5. SIAM Journal on Applied Mathematics (SIAP) (O)
2.	American Institute of Physics Journals (AIP)	1. Applied Physics Letters (O)
3.	American Physical Society Journals (APS)	1. Physical Review B (O)
4.	IOP Science Journals	1. Physics Education (O) 2. Smart Materials and Structures (O) 3. Nanotechnology (O)
5.	American Association of Physics Teachers Journals (AAPT)	1. American Journal of Physics (O+P) 2. Physics Teacher (O+P)
6.	Institute for Operations Research and the Management Science (Informs)	1. Management Science **(O)** 2. Operation Research (O)

8. Additions for the year 2012

1.	Palgrave Macmillan Journals	1. Journal of the Operational Research Society (O)
2.	Royal Society of Chemistry	1. Physical Chemistry Chemical Physics (O)
3.	Taylor & Francis	1. Tribology Transactions (O)

4.	Sage Journals	1. Ergonomics in Design: The Quarterly of Human Factors Applications (O+P) 1. Human Factors: The Journal of the Human Factors and Ergonomics Society (O+P) 2. Indian Journal of Gender Studies (O+P) 3. The Journal of Commonwealth Literature (O+P) 4. Journal of Vibration and Control (O+P) 5. Language and Literature (O+P) 6. Language Teaching Research (O+P) 7. Law, Culture and the Humanities (O+P) 8. Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics (O+P) 9. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications (O+P) 10.Science, Technology and Society: An International Journal (O+P) 11.Journals of Intelligent Meterials Systems & Structures (O+P)
5.	American Institute of Physics Journals (AIP)	1. Journal of Applied Physics (O)
6.	Institute for Operations Research and the Management Science (Informs)	1. Transportation Science (O)
7.	Nature Publishing Group	1. Nature (O)
8.	IGI Global	1. International Journal of Manufacturing, Materials, and Mechanical Engineering (IJMMME) (O)
9.	Optical Society of America	1. Applied Optics (O) 2. Journal of the Optical Society of America A (O) 3. Journal of the Optical Society of America B (O) 4. Journal of Lightwave Technology (O) 5. Optics Letters (O) 6. Optics and Photonics News (O)
10.	Emerald Journals	1. Rapid Prototyping Journal (O)
11.	ACS Journals	1. Nano Letters (O) 2. Journal of Chemical Theory and Computation (O) 3. Journal of Medicinal Chemistry (O) 4. Chemical Research in Toxicology (O) 5. Chemistry of Materials (O)
12.	Science Direct	1. OMAGA (O) 2. Energy Package (O)
13.	Wiley	1. Decision Sciences (O) 2. Journal of Business Logistics (O) 3. Production & Operations Management (O)
14.	Institute for Operations Research and the Management Science (Informs)	1. Mathematics of Operations Research (O)
15.	IOP	1. Journal of Micromechanics and Microengineering (O)

STUDENTS' LIFE

Students' Gymkhana is constituted to evolve a disciplined self-governance for carrying out various extracurricular in-campus activities and to establish a responsible and accountable student body. Students' Gymkhana is governed by Student Senate which is constituted in democratic way through elections among the students. Student Senate members elected through direct ballot voting among the members of the General Body, every year in the first week of January. Every registered student is by default member of student gymkhana and would have right to vote.

The Students' Senate has 2-3 representatives from each class. There are 50-60 members are in Students' Senate from all batches of UG and PG Students. Various club for Cultural, Sports and Science & Technology working under Students gymkhana. Club coordinators and co-coordinators will be selected based on their skill and past performance in the Institute by the members of that club and duly ratified by Student Senate. All members of the student gymkhana who have their CPI > 6.5 will be eligible to make their candidature for the Student Senate. All members of the student gymkhana who have their CPI= 6.0 are eligible to become mentors, coordinators, co-coordinators for various clubs.

A senior faculty member designated as Coordinator, Students'Affairs, looks after and guides student representatives in organizing gymkhana activities throughout the year. Apart from this three faculty members designated as counselors, look after various Cultural, Sports and Science & Technology activities as well as various annual festivals organized by the students' gymkhana.

Student Gymkhana organized three annual events during the year

(1) 'Tarang', the cultural festival

(2) 'Abhikalpan', the tech-festival and

(3) 'Gusto', the sport festival.

Cultural Activities- TARANG

The students of IIITDM Jabalpur organized the 7th annual cultural festival TARANG from March 22-25, 2012. There were various competitions of quiz, debate, extempore, mono acting, solo dance, dance, music, dramatics, literary events, art &crafts, the rock band competition, etc.The inauguration ceremony was followed by a Kavi Sammelan and the event concluded by a musical night performed by Aryans Band. More than 1000 students from various Institutes from all over India and colleges from Jabalpur participated in the events. It is important to mention that our students won trophies and prizes in almost all the events.

Tarang 2012 : Rocking performance by Aryans Band

Technical Activities- ABHIKALPAN

PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur organizes annual Technical Festival Abhikalpan every year. This year Institute has organized Technical Festival Abhikalpan'12 during March 16-18, 2012.

There was multitude of events, both technical and non-technical, along with workshops on the trending technologies such as Android and Joomla to name a few. Events related to the domain of ME, CSE, ECE, Robotics and Management along with host of informal events were organized.

Distinguished professors from various university of Japan were available during the inaugural ceremony. Prof. Haruo YOKOTA, Tokyo Institute of Technology, Japan has graced the inaugural ceremony as Chief Guest. Prof. Shinji SHIMZU of Sophia University and Prof. Michiko OHKURA of Shibaura Institute of Technology were the guests of honour of the event.

Abhikalpan 2012 : RC Nitro car, made by Rahul Gupta,
under the guidance of Dr. P.K. Jain

Sports Activities- GUSTO

Gusto is the annual sports festival being organized by the students of our institute every year by the leadership of sports secretary, elected by student gymkhana election was held on 10-13 November, 2011. The elected sports secretary builds a team of sports coordinators who help him/her in managing various activities like organizing the events, selection of captain and the players, etc. Sports secretary and his/her team of sports coordinators are being advised by the faculty-in charge of sports and coordinator of student affairs and required administrative and financial supports are also being provided by the institute.

Gusto 2011 : Chief Guest Mr. Abhinn Shyam Gupta, Former National Badminton Champion, addressing the audience

Gusto 2011 : Winner Team of Cricket Tournament
(St. Aloysius College, Jabalpur)

IIITDMJ-JAPAN COLLABORATION

ACADEMIC PROGRAMME

With passing of each year, IIITDM Jabalpur – Japan collaboration is gaining new heights. Both Industry and academia of Japan are now having a good impression of our students and eager to place the students, both for MS program and in industry. Few among them are AMADA, Canon and GE energy. Some students are now pursuing MS in Japan's leading academic Institutions, University of Tokyo and Tokyo Institute of Technology. The year has seen appreciation towards Project based internship (PBI) from industries, both across India as well as japan. Unfortunately mentorship program could not get a proper start. But efforts are on to bring it to practice in the coming years. Towards this, the Institute has signed an MoU with Chiba University, emphasizing on student exchange program.

IIITDM Jabalpur - Japan Academic Collaboration

This year also some of the renowned experts from academia and industry across Japan visited the Institute. Few among them were Professor Takashi Nanya, Research advisor to Canon, Mr. Takashi NISHIMOTO, a leading expert in Hydraulic system component design, Professor, Dr. Ming YANG, an expert in the field of nano technology, Professor Dr.-Eng. Shinji SHIMIZU of Sophia University. They delivered course lectures and extended support in our teaching programme.

The following were the experts from prestigious universities and industries of Japan who have visited the Institute during the period from August 2011 to April 2012 to impart technical education in the cutting edge technologies.

S. No.	Name	Course	Affiliation	Duration
1	Prof. Hatsuhiko Kato	CS414- advanced Computer Architecture	AkibachoTotsukaku, Yokohama, Japan	January 09-February 28, 2012
2	Prof. Kenichi Miura	EM601d-Parallel Processing	National Institute of Informatics, Tokyo	January 23-January27, 2012
3	Prof. June Sese	EM601f-Data Mining	Tokyo Institute of Technology, Department of	January 30-February03, 2012
4	Prof. Ming Yang	EM646f-Micro-metal Forming and Molding	Department of System Design, Tokyo Metropolitan University	February 27-March 02, 2012

5	Prof. Michiko Okhura	EM595a- Evaluation of product design by kansei engineering Research	Department of Information Science and Engineering, College of Engineering, Shibaura Institute of Technology	March 12-March16,2012
6	Prof.Shinji Shimizu	Research direction in Present and future perspective in machine tools	Sophia University	March 12-March 16, 2012
7	Prof. Haruo Yokota	EM601g- Advanced Engineering Technology	Computer Science & Engineering Department , Tokyo Institute of Technology	March 12-March 16, 2012
8	Prof. Takashi Nanya	EM604b- Dependable Computing	Mentor, India –Japan Collaboration, Associated with Canon Inc. Japan	March 19-March 23, 2012
9	Mr. Takashi Nishimoto	EM591a- Design Engineering	President NTRK Shinagawa ku, Tokyo, Japan	March 19-March 23, 2012
10	Prof. Shigeo Tanaka	EM542a-Fundamentals of Bone Biology and Bone Biomechanics	Institute of Nature and Environmental Technology, Kanazawa University	March 26-March 30, 2012
11	Prof. Shinichi Warisawa	EM546b -Water Jet Cutting EM592f- Industrial & Aesthetic Attributes in Concepts Design	University of Tokyo	March 26-March 30, 2012

WORKSHOPS/PROJECTS

International Collaboration Projects

1. "Development of a micro pump with NEMS sensing function for an automatic blood collecting and measurement system." It is a DST-JSPS joint collaboration project (2010-12). Professor Puneet Tandon, Dr. Tanuja Sheorey and Dr. Vijay Kumar Gupta are participating members from the Institute. Dr. Shinichi Warisawa, University of Tokyo and Dr. Kazuyoshi Tsuchiya, Tokai University, are the participating members from Japan.
2. "Dark image enhancement using Stochastic resonance". It is a one year project supported by OMRON &The University of Tokyo. Participating members are Dr. Rajib Jha from the Institute and Prof. Aizawa from University of Tokyo, Japan.

DESIGN WORKSHOP

Mini DeW 2011

As announced in the last annual report, in 2011 PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur (IIITDMJ) was going to organize Mini design workshop on "Engineering design Process: Mind to market through case studies" during 2nd week of December 2011. Due to some difficulties of arranging expert speakers, the workshop could not be arranged as planned. Instead a mini design workshop was conducted on March 23rd on "Oil Hydraulic Equipments and control". Mr. Takashi NISHIMOTO, a leading expert in hydraulic system components design from Japan and Mr. Ravi Gupta, CEO, Sun Petpack Pt. ltd., Mr Subramanyam, Maintenance head, VFJ, with his team, has attended the same along with the Institute faculty and students from mechatronics program. The workshop aimed at providing a platform for interaction between the academicians and the designers / experts from the industry to discuss the scenario of oil hydraulic equipment design and manufacturing in India. During the group discussion session, it has been emphasized that integration of electrical, electronics and oil hydraulic industry would play a vital role in the future development of the sector and hence the need to provide education at various levels, both in academic system as well as industry.

Mr. Nishimoto, Prof. A. Ojha and Dr. V. K. Gupta, Mini DeW 2011.

NPTEL Workshop – 2012

"Deployment and Use of NPTEL"

Two days NPTEL workshop-2012 "Deployment & Use of NPTEL" was inaugurated at PDPM Indian Institute of Information Technology, Design & Manufacturing Jabalpur (M.P.) on 31st March, 2012 at 0930 hours. Prof. K.R. Srivathsan, pro Vice Chancellor of Indira Gandhi National Open University (IGNOU) inaugurated the workshop. Prof. Satyaki Roy, Coordinator NPTEL, welcomed the participants on behalf of NPTEL. Thereafter, Prof. Mangla Sunder, National Coordinator, NPTEL shared the history, cleared the objectives and focussed on the future prospects of NPTEL through video conferencing, as he could not come in person due to some urgent work. Apart from this, Director of the institute Prof. Aprajita Ojha addressed the audience stressing upon the quality of teachers. She also presented her views on the progress of the institute in the national context. The programme was coordinated by Dr. Tanuja Sheorey and the vote of thanks was proposed by Dr.Jawar Singh.

After the inaugural ceremony, the workshop proceeded in four different groups for different subjects like for Mechanical Engineering, IIT Kanpur professors Dr. Sameer Khandekar, Dr. Anupam Saxena, Dr. K. Muralidhar delivered the lectures on "Liquid Vapour Phase Change Technology", "Computer Aided Engineering Design" and "Optimal Measurement Techniques in Thermal Sciences" respectively. Similarly for Computer Science Engineering domain lectures on "Compiler Design", "Indexing and Searching Techniques in Databases" and "Theory of Computation" were delivered by IIT Kanpur professors, namely, Dr. Sanjeev K Aggarwal, Dr. Arnab Bhattacharya and Dr. Somnath Biswas respectively. The third group, dedicated to Electrical and Electronics field, witnessed the presence of Dr. S. N. Singh discussing "Power System Operation & Control" and "High Voltage DC Transmission" and a lecture on "Optical Networks and Switching System" was delivered by Dr. Y. N. Singh. Fourth group covered "Advanced Hydrology" by Dr. Ashu Jain and "Numerical Solution of ODEs" by Dr. M. K. Kadalbajoo.

A demonstration on how to use NPTEL website was given to the participants in the institute's Computer Lab. After which an "Introduction to Virtual Lab" was given by Dr. Sameer Khandekar. An introduction to Classle (www.classle.net) was given by Mr. S. Vaidyanathan, CEO Classle exclusively to the Undergraduating and Postgraduating students. Despite the busy schedule, participants were full of enthusiasm and enjoyed the Cultural evening at the institute. Students of the institute presented various colourful programmes including Dance, Singing and Dramatics. Over 170 participants from 27 different institutes from all over M.P. enjoyed the workshop.

A feedback and concluding session was held by Dr. Satyaki Roy, present in person, and Prof. Mangala Sunder Krishnan through video conferencing from IIT Madras. Prof. Mangala Sunder answered the queries put forward by participants and he also said that everyone can contribute in the online publishing of new courses by just e-mailing about it to them. Moreover he also informed that hard disks with the complete NPTEL content are available at IIT Madras, which can be bought at a very nominal cost after completing few basic formalities.

The ceremony concluded with the certificate distribution to all the participants by Prof. Aprajita Ojha, Dr. Satyaki Roy and Dr. Y. N. Singh. IIT Kanpur team members thanked Dr. Tanuja Sheorey, Dr. Jawar Singh and the coordinating team for providing all the cooperation with fullest of participation. After the ceremony, the outside participants left for Bhedaghat and other worth seeing places in Jabalpur.

Jagriti Club : Nukkad Natak in a neighbouring village for awareness on social issues

Jagriti Club – Students' initiative for children of neighbouring village

Commemorating Vigilance Awareness Week - 31-10-2011 to 5-11-2012

JENESYS PROGRAMME

To strengthen the collaboration and to identify the areas of cooperation, faculty members of the Institute visit Japan. In this context the following four faculty members of the Institute visited Japan under the JENESYS programme from November 20, 2011 - December 21, 2011.

S. No.	NAME	PLACE OF VISIT	COLLABARATION
1.	Anil Kumar	The Center for Research and Development of Educational Technology, Tokyo Institute of Technology Prof. Akinori Nishihara	Prof. Akinori Nishihara Signal Processing (Multirate Filter Bank Design)
2.	Dinesh Kumar Vishwakarma	Photon Science Center of the University of Tokyo Project Lecturer. Hiroharu Tamaru	Project Lecturer. Hiroharu Tamaru Nanophotonics& Communication Engineering Electromagnetics & Microwave Engineering
3.	Goutam Dutta	The University of Electro-Communications, Dept. of Mechanical Engineering and Intelligent System Prof. Hiroshi Maekawa	Prof. Hiroshi Maekawa Thermal & Fluid Engineering
4.	Ashutosh Srivastava	VLSI Design and Education Center, The University of Tokyo Prof. Masahiro Fujita	Prof. Masahiro Fujita Nano-Electronics (MOSFET based device simulation, design and Manufacturing) and VLSI Design and Manufacturing

Apart from faculty the students of the Institute visits Japan on short term exposure visit as well as on long term internships under JENESYS programme. This programme aims at laying a foundation of human network between Japan and India by inviting outstanding undergraduate/graduate/post graduate students in the field of science and technology. Students establish their network through exchange with Japanese academic / business people as well as gain the knowledge on the latest Japanese technologies. Their visit is fully supported by Japan Government. The exposure visit of students helped them understand the education and training system of Japan. The industry people help students with the process of getting summer internships in some of the leading industrial labs. They also get an exposure to opportunities of higher education in Japan. The following 6 students visited Japan under the JENESYS programme from December 3, 2011 - December 21, 2011 on long term internship in various industries / academic Institutions.

S.No	Roll No.	Name	University / Industry
1.	1010201	ABHINAV BHARDWAJ	University of Tokyo Institute of Technology
2.	1010107	ONKAR KRISHNA	Hitachi Yokohama lab.,
3.	1120301	MITESH NIRANJAN	MHI
4.	2008014	ANAND KUMAR RAI	Amada
5.	2008083	PRANOB RAI	Amada Co Ltd.
6.	2008109	SHASHANK TIWARI	Sumitomo Metal Industries Limited

PBI Positions offered in 2011-12

(A) Project Based Internship (PBI) Position for the Mitsubishi Heavy Industries

In September 2011, Institute had received mail from Mr. Yoshitaka Tsubokura of Mitsubishi Heavy Industries Ltd., Ritto Machinery Works (Machine Tool Division) located in Ritto city, Shiga, Japan. MHI machine tool division wanted to study the possibility of employment of our students. In this regard, a questionnaire had been sent to know about the details of employment opportunity to students in Japanese Companies, criteria and the month during which this activity takes place. In the month of September, Mr.Seiji Shirao, General Manager for employment matter and Mr. Yoshitaka visited the Institute. During the meeting it had been decided that MHI machine tool division would offer students placement in the company only on the basis of their performance during PBI. Hence, the company had offered two positions of PBI for 2012.

The experts from MHI visited the Institute on January 23-24, 2012 for the purpose of selection of the students through written test and interview for the project based Internship at Mitsubishi Heavy Industries Ltd. Ritto Machinery Works. Fifteen students participated in the written test followed by group discussion. Eight students are short listed for interview. Finally two students, Deepak Keswani and Adarsh Abhinav have been selected for the PBI. The period of Internship is May 21st to November 20th, 2012 at Mitsubishi Heavy Industries Ltd. Ritto Machinery Works, Japan. The Coordinator of the Internship is Mr. Yoshitaka Tsubokura, Acting Manager General Affair Section Ritto Machinery Works. Mitsubishi Heavy Industries Ltd.

(B) Project Based Internship Position for the Canon Inc. Japan

The Institute has opened its academic program for six month long project based internship opportunity to its student after completion of six semesters from the year 2011. Prof. Nanya, Advisor to President of Canon Inc. and also one of the mentors of Japan-India collaboration program, during his visit to IIITDM Jabalpur in 2011 came to know about PBI and appreciated inclusion of project based internship in the curriculum. As a result, in the year 2011 one student, Abhinav Singh Suryavanshi had been offered PBI at Canon for six months. The Institute had received very good report on the work done by Abhinav during his internship at Canon. Abhinav has been given offer of joining Canon after the B. Tech. program. Also, the Institute received offer of two internships of six month duration from Canon this year. On the request from Canon Inc. to provide two students having similar caliber towards programming, two top students (on the basis of CPI) have been asked to submit detailed CV elaborating the programming projects done by them. They have been asked to make presentation before a committee to finalize their candidature. Names of both the students, Anubhav Mittal and Simerdeep Singh Jolly have been recommended for PBI at Canon in 2012. After going through the selection procedure details and CV of both the students, Canon Inc. has offered six months PBI to them, starting from May to November 2012.

(C) Collaboration with IIITDMJ in content generation and joint training program

Dr. Taguchi visited the Institute last year in the month of December. A presentation had been made about the curriculum of IIITDMJ w.r.t. its emphasis of hands-on training to the students as part of each course. He immediately promised another visit to see and meet the students working on various projects and lab classes. In his next visit to India in February 2012, he had visited number of joint collaborative installation of MHI in India and presented IIITDMJ curriculum and thrust areas to the heads of those companies. The following are proposals from MHI.

1. MHI proposes the Institute to make an appealing paper which explains how the Institute differs from other national universities with concrete data. It will be help in placement of the students, because features of the Institute are not well known at the moment among MHI companies in India.

2. MHI proposes the Institute to add courses which are preferable for MHI related companies.

3. Institute faculty shall help in training material content generation in English. MHI explains the abstract of contents of texts which is written in Japanese, but it believes the Institute can understand what should be taught in English even though it is not explained page by page basis.

DEVELOPMENT PLAN

Existing Infrastructures

After shifting to its own campus situated at Mahagawa village, near Dumna Airport, the Institute has been performing all its activities in the following buildings/ infrastructures already completed-

1. **Core Lab Complex**: Presently this building is under use as the main Institute building. The building has enough Class Rooms, Labs, Library, Computer Centre and Faculty Chambers created through temporary partitions etc. To cater the requirements of additional teaching spaces, workshops and labs etc, some temporary structures have been constructed with pre assigned ultimate use. There is a canteen building with connecting footpath, adjacent to this building. Proper parking space has been developed near the building.
2. **Hall of Residence I**: This hostel building has capacity to accommodate 408 students in single seated rooms. Proper arrangements have been provided for mess and dining purpose in the building itself. Reading rooms, gymnasium T.V. viewing rooms etc. have been developed for students for proper use of their leisure time. Canteen, Stationery shop, Photocopy shop etc have been constructed nearby to the building. The building is well connected through footpath with the academic building and other hostel building.
3. **Hall of Residence- III** : This building is a Triple seater hostel building having total capacity to accommodate 498 students. The building has fully occupied during the year. Space for kitchen and dining has been developed through removable partitions. A canteen has also been started inside the building itself. Dance & drama rooms, TV viewing rooms, music room, reading rooms playing area etc. have been developed inside the building for providing enough facilities to the students for extra curricular activities.

In view to provide sports facilities to the students outdoor volleyball court, tennis court, basket ball court, cricket football ground have been developed during the year. The students celebrated their sports festival “GUSTO”, inside the campus itself.

Water supply has been provided in the whole campus through borewells. The water is available in all the areas for 24 hours. An uninterrupted electricity supply has been ensured by getting 33 KV HT electrical connections from MPPKVV Co Ltd, through a separate feeder. In addition, 2 nos. Diesel Generators one of 45 KVA and another of 250 KVA is available for electrical supply during the emergency power failure. For keeping the quality sanitation conditions in the campus, the sewage treatment plant has been kept at isolated location along with a sedimentation tank provided for ground water recharge. All the occupied buildings, in the campus are well connected with pathways and road lightings. Area lighting has been provided at important and most occupied areas.

New Infrastructure Development

The Institute had shown its keen interest in infrastructure development during the year. As major construction projects were assigned to the CPWD, the institute concentrated on planning works for the new projects. The work of Security barracks has been completed by the CPWD. The construction of following buildings has been started by the CPWD during the year.

1) **C/o, Hall of Residence- 4 :** Triple seated Hostel Building with total capacity to accommodate of 498 students. The building has the estimated cost of Rs.2213 Lacs. The building is about to completion.

2) **C/o Lecture Hall and Tutorial Complex :** The main institute building having total plinth area of 10555 sqm and total estimated cost of Rs.3732 Lacs.The Bhumipujan for the building held on November 18, 2011. The progress of work is satisfactory.

3) **C/o Narmada Residency-2 :** 55 Nos. 2 bed room residential quarters for staff members with estimated cost of Rs.151 Lacs. The Bhumipujan for the building held on November 18, 2011. The progress of work is satisfactory.

4) **C/o Narmada Residency-3 :** 60 Nos. of 3 bed room residential quarters fo faculty members with estimated cost of Rs.244 Lacs. The Bhumipujan for the building held on November 18, 2011. The progress of work is satisfactory.

5) **C/o Basketball court (Indoor) :** Indoor sports facility for students with estimated cost of Rs.230 Lacs. The Bhumipujan for the building held on November 18, 2011. The progress of work is satisfactory.

6) **CC Road from Security barrack to Hall of Residence -1** : Cement concrete road is being provided from security barrack to Hall of Residend-1 with the estimated Cost Rs.115 lacs.

7) **C/o 2 Lacs Litre capacity RCC Overhead Tank :** The tank shall provide water to all the existing buildings. The estimated Cost is Rs. 41 lacs.

8) **C/o 2 Nos. Type 5 Quarters** : The plinth area of the building is approx 370 sq.m. The estimated cost is Rs.73 lacs. The building is located near Hall of Residence-I and shall provide accommodation to hostel wardens.

Tendering processes for the following buildings have been under progress from CPWD.

1. **C/o, Library cum Computer Centre** : The plinth area of the building is 6120sqm. The estimated Cost is Rs. 2359 lacs.

2. **C/o Hall of Residence 7 (Phase-I)** : The plinth area of the building is 6135 sqm. The estimated Cost is Rs.1237 lacs. This hostel building shall provide accommodation for 98 married PG students.

3. **C/o Hall of Residence 7 (Phase-II)** : The plinth area of the building is 9500 sqm. The estimated Cost is Rs.2369 lacs. This building shall provide single seated accommodation for 404 PG students. There is facility block well connected with hostel block.

4. **C/o Visitors' Hostel :** The plinth area of the building is 2555 sqm. The estimated Cost is Rs.1185 lacs. The building contains 06 suites, a facility block and 30 nos. double beaded rooms for institute guest.

The details planning and designing work for following projects has been started by the consultants after accord of Administrative approval and Financial Sanction.

1. **C/o Rewa Residency 2A** : The plinth area of the building is 6550 sqm. The estimated Cost is Rs. 1440 lacs. The building contains 72 nos. of staff quarter.

2. **C/o Primary Health Centre** : The plinth area of the building is 1532 sqm. The estimated Cost is Rs. 495 lacs

3. **C/o Hall of Residence 8 (Girls Hostel-I) :** The building has provision for single / triple seated rooms with total capacity of 250 students. The plinth area of the building is 6406 sqm. The estimated Cost Rs.1512 lacs.

4. **C/o Student Activities Centre** : The estimated Cost is Rs.1816 lacs.The building shall provide ample indoor sports facilities to the students.

5. **C/o Administrative Block :** The building has 4850 sqm area and the estimated cost is Rs.1454 lacs.

The institute has taken up some construction through the Institute Works Department, so as to fulfill its urgent needs of space at its growing stage. Some temporary class rooms, Laboratories, pathway, canteen, Bank ATMs etc. along with area lightings has been carried out by the Institute.

Bhoomi Pujan of Lecture Hall and Tutorial Complex

LABORATORY EQUIPMENT

Laboratory Equipment/ Infrastructure

The Institute has an excellent lab infrastructure with sophisticated equipment in the course labs as well advanced research labs of the Institute. Details of the equipment donated by Okuma Company, Japan are as follows.

OKUMA CNC Lathe

Model: LCS250-R

With OSP-P20L-R Controller

And Standard Accessories

X-axis Travel : 155 mm

Z-axis Travel : 320 mm

Speed Range : 75-3000 rpm

Feed Rate: Rapid Traverse X 20000 mm/min, Z-axis 25000 mm/min

Cutting Feed Rate: 0.001 – 1000 mm/min

OKUMA Vertical Milling Machine

Model: MB-46VAE

Travel

X: 560 mm

Y: 460 mm

Z: 460 mm

Spindle Speed: 8000 rpm

Feed Rate: Rapid Traverse X: 40 m/min, Z-axis 32 m/min

Cutting Feed Rate: 32 m/min

Other machines that were installed in the previous years are as follows.

SEM (Scanning Electron Microscopy) Make:- FEI, Model :-Quanta 200. The QuantaTM series from FEI is the advanced, flexible solution for current and future diagnostics applications. Featuring three imaging modes – high-vacuum, low-vacuum and ESEM™ it accommodates the widest range of samples of any SEM system. It is engineered to provide maximum data – imaging and microanalysis – from all specimens, with or without preparation.

Specifications:-

Electron optics

- High-performance thermal emission- SEM column with dual-anode source emission geometry, fixed objective aperture and through-the-lens differential pumping
- Filament lifetime >100 hours

Resolution

- **High-vacuum:-**

  -3.0nm at 30kV (SE)

  -4.0nm at 30kV (BSE)

  -10nm at 3kV (SE)
- **Low-vacuum**

  -3.0nm at 30kV (SE)

  -4.0nm at 30kV (BSE)

  -<12nm at 3kV (SE)
- **Extended vacuum mode (ESEM)**

  -3.0nm at 30kV (SE)
- **Accelerating voltage:200V –30kV**
- **Probe current up to 2 µA –** continuously adjustable

Detectors

- Everhardt -Thornley SED
- Low-vacuum SED (LFD)
- Gaseous SED (GSED)
- IR-CCD
- Solid-state BSED
- Gaseous BSED

Chamber vacuum

- High-vacuum:<6e-4 Pa
- Low-vacuum:10 to 130 Pa
- ESEM-vacuum:10 to 2600 Pa

Vacuum system

- 1x 240 l/s TMP,1x PVP
- Patented through-the-lens differential pumping
- Beam gas path length:10 or 2 mm

Chamber

- 284mm left to right
- 10mm analytical WD
- 8 ports
- EDX take-off angle:35 °

4-axis motorized stage

- Eucentric goniometer stage
- X,Y =50mm
- Z =50mm (25mm motorised)
- T =-15 °to +75 °(manual)
- R =360 °continuous
- Repeatability:2 µm

System control

- 32-bit graphical user interface with Windows XP,keyboard,optical mouse
- Image display:19-inch LCD,SVGA 1280 x 1024
- Single frame or 4-quadrant image display
- 4-quadrant live

Image processor

- Up to 4096 x 3536 pixels
- File type:TIFF (8-or 16-bit),BMP or JPEG

Standard utilities

- Digital video recording (.avi)
- SW temperature control
- Image histogram and measurement software

Atomic Force Microscopy

AFM ModelIntegra prima, Make NT-MDT

Specifications

SFV10NTF- Scanning AFM head, ST007NTF- STM head, ST005NTF- Universal SPM head SC201NTF-Exchangeble Scanner 1X1 mkm, SU045NTF-Heating stage (150C), AU007NTF- measuring insert for contact and semi contact AFM, EFM,KPM,SCM, SCC04NTF – Vacuum Exchangeable mount for SPM heads, SCB14aNTF- Universal base unit, BL222RNTF-PNL workstation in rack, BTC04NTF- Thermo controller, IN00-PCI interface board, CCD040- Video microscope, CCBC1-Color CCD Camera, WT001NTF- Toolkits for Ntegra, OB006- Objective10X, AC007NTF- cover, WTSTM1-toolkits for STM.

Other Equipment Installed

Apart from the equipment mentioned above, some of the other equipment whose procurement was initiated in the previous years were installed in the advanced research labs of the Institute. These include cluster computers, server for biometric labs, high end systems for digital signal processing, CNC machines, injection molding machine, rapid prototyping machine, Infra red camera.

TORISON TESTING MACHINE

OMAX WATER JET MACHINE

Table top Injection Molding Machine : This table top injection molding machine is used for prototyping and R&D projects.

Table top Injection Moulding Machine

Vacuum Forming : Vacuum forming is a technique that is used to shape a variety of plastics. It is used to form/shape thin plastic, usually plastics such as; polythene and perspex. Vacuum forming is used when an unusual shape like a 'dish' or a box-like shape is needed.

Vacuum Forming Machine

ANNUAL ACCOUNT : 2011-12

FORM OF FINANCIAL STATEMENTS

NAME OF THE ENTITY: Pt. DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR

BALANCE SHEET AS AT 31ST MARCH, 2012

SL. NO.	PARTICULARS	SCHEDULES	(Amount - ₹) CURRENT YEAR *(As on 31/03/2012)*	(Amount - ₹) PREVIOUS YEAR *(As on 31/03/2011)*
1	**CORPUS/CAPITAL FUND AND LIABILITIES**			
1.A	CORPUS/CAPITAL FUND	**1**	126,90,24,286	102,15,99,904
1.B	RESERVE AND SURPLUS	**2**		
1.C	EARMARKED/ENDOWMENT FUNDS	**3**	34,21,501	34,12,987
1.D	SECURED LOANS AND BORROWINGS	**4**		
1.E	UNSECURED LOANS AND BORROWINGS	**5**		
1.F	DEFERRED CREDIT LIABILITIES	**6**		
1.G	CURRENT LIABILITIES AND PROVISIONS	**7**	19,88,84,925	3,69,33,967
	TOTAL		**147,13,30,712**	**106,19,46,858**
2	**ASSETS**			
2.A	FIXED ASSETS	**8**	71,71,20,975	640,287,588
2.B	INVESTMENTS - FROM EARMARKED/ENDOWMENT FUNDS	**9**	0	0
2.C	INVESTMENTS - OTHERS	**10**	20,00,000	1,710,603
2.D	CURRENT ASSETS, LOANS, ADVANCES ETC.	**11**	75,22,09,737	419,948,667
2.E	MISCELLANEOUS EXPENDITURE (TO THE EXTENT NOT WRITTEN OFF)		0	0
	TOTAL		**147,13,30,712**	**106,19,46,858**
	SIGNIFICANT ACCOUNTING POLICIES	**24**		
	CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS	**25**		

(Ram Phal Dwivedi)
Dy. Registrar (F&A)

(Col.(Retd.)P.S.Sandhu)
Registrar

Aparajita Ojha
(Director)

FORM OF FINANCIAL STATEMENTS

NAME OF THE ENTITY: Pt. DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR

INCOME AND EXPENDITURE ACCOUNT
FOR THE PERIOD/YEAR ENDED 31ST MARCH, 2012

SL. NO.	PARTICULARS	SCHEDULES	(Amount - ₹) CURRENT YEAR *(As on 31/03/2012)*	(Amount - ₹) PREVIOUS YEAR *(As on 31/03/2011)*
1)	**INCOME**			
A)	INCOME FROM SALES & SERVICES	**12**	0	0
B)	GRANTS/SUBSIDIES(OTHER GRANTS)	**13**	12,00,00,000	0
C)	FEES/SUBSCRIPTIONS	**14**	2,12,39,285	1,63,51,378
D)	INCOME FROM INVESTMENT (Excluding Income from Earmarked/Endowment Funds transferred to Funds)	**15**	0	0
E)	INCOME FROM ROYALTY/PUBLICATIONS, ETC.	**16**	0	0
F)	INTEREST EARNED	**17**	35,59,610	42,32,313
G)	OTHER INCOME	**18**	12,38,219	8,78,927
H)	INCREASE/(DECREASE) IN STOCK OF FINISHED GOODS & WORK-IN-PROGRESS	**19**	0	0
	TOTAL (A)		**14,60,37,114**	**2,14,62,618**
2)	**EXPENDITURE**			
A)	ESTABLISHMENT EXPENSES	**20**	6,71,89,076	5,08,63,965
B)	OTHER ADMINISTRATIVE EXPENSES, ETC.	**21**	7,05,68,729	5,17,25,315
C)	EXPENDITURE ON GRANTS, SUBSIDIES, ETC.	**22**	0	0
D)	INTEREST PAID	**23**	0	0
E)	DEPRECIATION FOR THE YEAR	**8**	3,63,21,202	2,75,54,922
	TOTAL (B)		17,40,79,007	13,01,44,202
	BALANCE BEING SURPLUS/(DEFICIT) FOR THE YEAR		(28,041,893)	(108,681,584)
	LESS : PRIOR PERIOD ADJUSTMENTS		(5,981,623)	0
	BALANCE BEING SURPLUS/(DEFICIT) CARRIED TO CORPUS/CAPITAL FUND		**(34,023,516)**	**(108,681,584)**

(Ram Phal Dwivedi)	(Col.(Retd.)P.S.Sandhu)	Aparajita Ojha
Dy. Registrar (F&A)	Registrar	(Director)

FORM OF FINANCIAL STATEMENTS

NAME OF THE ENTITY: Pt. DWARKA PRASAD MISHRA INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR

RECEIPT & PAYMENT ACCOUNT FOR THE FINANCIAL YEAR ENDING 31ST MARCH, 2012

SL. NO.	RECEIPTS	(Amount in ₹) CURRENT YEAR (As on 31/03/2012)		(Amount in ₹) PREVIOUS YEAR (As on 31/03/2011)
I	OPENING BALANCES			
a)	Bank Balances			
	i) Canara Bank Grant Account, Jabalpur	5,02,808		6,86,839
	ii) SBI Grant Account, GEC Campus, JBP	18,71,143		93,13,803
	iii) SBI Student Fee A/c, Jabalpur	12,12,048		63,11,030
	iv) SBI Project Account	34,77,810		5,31,718
	v) Allahabad bank (Student Fee A/c)	2,03,47,074		
	vi) Allahabad Bank Current A/c, Jabalpur	3,10,26,259	5,84,37,142	1,65,78,318
II	GRANTS RECEIVED			
a)	From Govt. of India (MHRD) (PLAN)	40,00,00,000		45,00,00,000
b)	From Other Sources			
	Central Sector Scholarship (Receivable)	36,53,707		7,54,500
	Projects	46,26,226		43,60,548
	Financial Assistanceship for Design workshop	0		1,25,000
			40,82,79,933	
III	INVESTMENTS AND DEPOSITS MATURED			
a)	Fixed Deposit Agnst L/c	39,10,603		62,26,269
b)	Fixed Deposit Others	30,50,00,000		26,40,00,000
c)	Earmarked/Endow. Funds	0	30,89,10,603	0
IV	INTEREST RECEIVED			
a)	On Bank Deposits			
	i) On Savings Bank A/c	4,98,767		21,06,710
	ii) On Project A/c	2,07,562		51,593
	iii) On Fixed Deposits	30,33,873		17,13,416
	iv) Interest From MPPWCL	26,970		38,356
b)	Income from Penalty	1,55,293	39,22,465	3,08,835
V	OTHER INCOMES			
a)	Income from Student Fees			
	-Regular Income (2011-12)	1,69,13,279		1,33,72,771
	-Summer Course	2,90,714		1,27,290
b)	Sale of News Paper/Periodicals	1,700		
c)	Sale of Tenders	36,000		1,10,000
d)	Recruitment Form Fees	5,69,600		
e)	Medical Aid Payable	1,65,336		69,777
f)	Guest House Income	38,143		0
g)	Project Overhead Income	28,000		13,488
h)	Income from Bus Service	1,71,017		1,42,500
i)	Library Fine and Late fine	1,39,902		
j)	Admission Form Fees			99,117
k)	Project Consultancy Income			4,941
l)	Other Mise Income	98,564	1,84,52,255	5,08,881

SL. NO.	PAYMENTS	(Amount in ₹) CURRENT YEAR (As on 31/03/2012)		(Amount in ₹) PREVIOUS YEAR (As on 31/03/2011)
I	EXPENSES			
a)	Establishment	6,71,89,076		4,89,17,771
b)	Administrative Expenses	69,621,850	13,68,10,96	5,33,68,649
II	PAYMENTS MADE AGAINST FUNDS FOR VARIOUS PROJECTS			
a)	Central Sector Scholarship (Receivable)	27,34,740		6,68,388
b)	Projects (Other Misc. Expenses)	45,75,274		14,59,616
c)	Financial Assistanceship for Design workshop	0	73,10,014	1,25,000
III	INVESTMENTS AND DEPOSITS MADE			
a)	Out of Earmarked/Endowment Funds	0		0
b)	Out of Other Funds (Investment - Others)	30,50,00,000		25,90,00,000
c)	Out of Other Funds (Investment - Against LC)	42,00,000	30,92,00,000	29,89,798
IV	EXPENDITURE ON FIXED ASSETS & CAPITAL WORK-IN-PROGRESS			
a)	Purchase of Fixed Assets	4,34,54,981		4,81,51,261
b)	Expenditure on Capital Work-in-Progress	5,99,09,499		13,46,87,090
c)	Equipments in Transit (CWC WARE HOUSE)	13,34,468	10,46,98,948	10,68,142
V	REFUND OF SURPLUS MONEY/LOANS			
VI	OTHER PAYMENT			
a)	For Expenses (Last year Provsion paid)	16,559		7,14,203
b)	Security Deposit Refunded	25,16,969		76,15,768
c)	External Scholarship	2,29,667		1,28,700
d)	Payment for Hall Management	34,24,000		28,23,500
e)	Student Benefit Account	15,07,250		12,84,950
f)	Excess Fee Refund	40,54,437		32,49,834
g)	Medical Aid Payable	1,65,336		69,777
h)	EMD and PBG Payable	5,32,305		0
i)	Mess Advance	26,92,000		1,71,000
j)	Caution Money (Refund)	4,66,000		3,84,929
k)	Other Misc Payment (External)			60,000
l)	Work shop		1,56,04,523	2,83,600

Receipts & Payment A/c Contd..

RECEIPT & PAYMENT ACCOUNT FOR THE FINANCIAL YEAR ENDING 31ST MARCH, 2012

SL. NO.	RECEIPTS	(Amount - Rs.) CURRENT YEAR (As on 31/03/2012)		(Amount - Rs.) PREVIOUS YEAR (As on 31/03/2011)	SL. NO.	PAYMENTS	(Amount - Rs.) CURRENT YEAR (As on 31/03/2012)		(Amount - Rs.) PREVIOUS YEAR (As on 31/03/2011)
VI	**OTHER RECEIPTS**				VII	**STATUTORY LIABILITIES DEDUCTED AT SOURCE**			
a)	Security Deposit				a)	Association Fee (Other Institution)			240
	From Contractors	23,79,564		0	b)	GIS (Other Institutes)	14,160		360
	From Others	75,000		60,92,450	c)	GPF (Other institutes)	1,68,000		1,63,000
b)	External Scholarship	3,36,501		1,28,700	d)	GSLIS	1,91,718		1,68,009
c)	Employee Welfare Fund			28,400	e)	Professional Tax Paid	1,83,800		1,73,736
d)	Salary Payable(Contractual Emp.)	500		7,097	f)	WCT Paid	36,75,289		1,19,270
e)	Salary Payable(Regular Emp.)	3,000		45,170	g)	1% Labour Welfare Cess	7,89,677		13,04,853
f)	Honorarium Payable			1,19,180	h)	TDS Paid	70,89,924		63,26,675
g)	Work Shop			2,83,600	i)	New Pension Contribution Paid Institutes Share	34,81,479		0
h)	Audit Fees Payable	65,000		0	f)	New Pension Contribution Paid Employee Share	34,81,479	**1,90,75,526**	59,72,121
i)	JEE Examination 2012	67,500		0					
j)	LEAVE SALARY Payable (R.P.Dwivedi)	1,77,316	**31,04,381**	0	VIII	**LOANS & ADVANCES**			
VII	**STATUTORY LIABILITIES DEDUCTED AT SOURCE**				a)	Advance for Expenses			
						To Staff	1,41,62,137		95,08,104
a)	Association Fee (Other Instituion)	0		240		To Student	2,75,124		1,37,887
b)	GIS (Other Institutes)	7,560		6,960	b)	Other Advances			
c)	GPF (Other institutes)	1,68,000		1,63,000		To CPWD, Bhopal	16,23,00,000		18,20,00,000
d)	GSLIS	1,91,718		1,68,307					
e)	Professional Tax Paid	1,83,800		1,74,732	c)	Secured Advances CWIP	72,21,970		6,24,86,226
f)	WCT Paid	10,91,469		25,64,889	d)	Other Advances	1,00,51,875		29,50,234
g)	1% Labour Welfare Cess	5,45,734		12,82,445	e)	Project Advance	4,10,836	**19,44,21,942**	
h)	New Pension Cont.	69,89,860		59,80,965					
i)	TDS Recovered	70,89,924	**1,62,68,065**	60,22,990					
VIII	**AMOUNT BORROWED**		**0**	0	IX	**CLOSING BALANCES**			
IX	**OTHER RECEIPTS FEE ACCOUNT**				a)	**Bank Balances**			
						i) Canara Bank Grant Account, Jabalpur	1,67,259		5,02,808
a)	Student Caution Money	23,75,000		20,18,000		ii) SBI Grant Account, GEC Campus, Jabalpur	2,32,14,504		18,71,143
b)	Student Mess Advance	24,82,000		14,000		iii) SBI Student Fee A/c, Jabalpur	27,82,498		12,12,048
c)	Hall Mangement A/c	34,24,000		28,23,500		iv) SBI Project Account	36,68,297		34,77,810
d)	Student Benefit A/c	15,07,250		12,84,950		v) Allahabad bank (Student Fee A/c)	2,80,24,834		2,03,47,074
e)	Advance Fees Received	52,54,127		40,35,292		vi) Allahabad Bank Current A/c, Jabalpur	2,27,32,161	**8,05,89,553**	3,10,26,259
f)	Excess Deposit Fee	42,76,051		33,44,539					
g)	Prepaid Expenses	20,782		60,000					
h)	Children EducationPayable (V.K.Dubey)	12,542	**1,93,51,752**	0					
X	**LOANS & ADVANCES**								
a)	Secured Advances CWIP	71,51,575		7,06,60,120					
b)	Project Advance	3,60,836		0					
c)	EMD and PBG Payable	15,03,723		0					
d)	Advance for Expenses								
	From Staff	1,44,34,499		84,31,703					
	From Student	1,12,597		1,92,457					
	Other Advance	74,21,606	**3,09,84,836**	34,80,447					
	TOTAL		**86,77,11,432**	**89,69,69,833**		**TOTAL**		**86,77,11,432**	**89,69,69,833**

(Ram Phal Dwivedi)
Dy. Registrar (F&A)

(Col.(Retd.)P.S.Sandhu)
Registrar

Aparajita Ojha
(Director)

OFFICE OF THE DIRECTOR GENERAL OF AUDIT
(CENTRAL RECEIPT), NEW DELHI,
BRANCH- GWALIOR: AUDIT BHAVAN, JHANSI ROAD
GWALIOR-474002 (M.P.)

No. Central/AMG-II/SAR/PDPM/IIITDM/2011-12/D 280 *Dated:-5/11/2012*

To,

The Director,
Pt. Dwarka Prasad Mishra
Indian Institute of Information Technology, Design & Manufacturing,
Dumna Airport Road, PO- Khamaria,
Jabalpur-482005 (M.P.)

Subject :- Seperate Audit Report on the accounts of Pt. DPM-IIIT DM, Jabalpur for the year 2011-12

Sir,

Please find enclosed herewith Separate Audit Report on the accounts of Pt. D.P.Mishra-IIIT DM, Jabalpur for the year 2011-12. You are requested to ensure that the audited accounts are adopted by the Board of Governors before placing the same before the Parliament.

The date of placement of the above Report on the table of both houses of the Parliament may please be intimated and a copy of the printed material may be provided to the undersigned for information.

Encl:- **Separate Audit Report**

Yours faithfully,

Director/Central

Separate Audit Report of the Comptroller and Auditor General of India on the accounts of Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing, Jabalpur for the year ended 31 March 2012

We have audited the attached Balance Sheet of Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (PDPM-IIIT DM), Jabalpur as at 31 March 2012, Income & Expenditure Account and Receipt & Payment Account for the year ended on that date under Section 20 (1) of the Comptroller and Auditor General's (Duties, Powers & Conditions of Service) Act, 1971. The Audit has been entrusted to the Comptroller and Auditor General of India for the period up to 2013-14. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This Separate Audit Report contains the comments of the Comptroller and Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum-performance aspects etc. if any, are reported through Inspection Reports/ CAG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. Based on our audit, we report that:

(i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit;

(ii) The Balance Sheet and Income & Expenditure Account and Receipts & Payment Account dealt with by this report have been drawn up in the format approved by the Ministry of Finance.

(iii) In our opinion, proper books of accounts and other relevant records have been maintained by the Institute in so far as it appears from our examination of such books.

(iv) We further report that: -

A. Balance Sheet

1. Assets

Fixed Assets - Rs.71.71crore

1.1 Overstatement of Assets- Rs. 8.33 lakh

Study tables were purchased and an amount of Rs.1.00 lakh paid to M/s Ironman Industries Jabalpur, but instead of Rs.1.00 lakh, Rs.10.00 lakh has been booked in schedule-8 - Fixed Assets. Thus Fixed Assets (Furniture & Fixtures) were overstated by Rs.8,32,500.00.

Similarly depreciation was charged on the amount of Rs. 10.00 lakh instead of Rs.1.00 lakh, thus the depreciation was also charged in excess by Rs.67500 (75000-7500). This resulted in overstatement of expenditure to that extent.

1.2 Overstatement of Assets by Rs. 1.08 lakh due to double booking in ledger account.

An amount of Rs.1,17,233.00 was paid to M/s M.P. Sports, Jabalpur vide voucher no 2055 dated 31.03.2012 (cheque no 353677), but this payment was shown twice in ledger. This resulted in overstatement of fixed assets by Rs.1,08,440.00 and of expenditure/depreciation amounting to Rs.8,793.00.

1.3 Incorrect depiction of E-Journal subscription in Fixed Assets

It is understood from the comment read with the Significant Accounting Policy No. D]. 2 that the Institute has been subscribing for the access of E-Journals for a period of one year. Since the subscription was being paid for access only and ownership of these E-Journals had never been transferred to the Institute, the entire amount incurred in this regard should be accounted for as revenue expenditure irrespective of its magnitude.

Hence the significant accounting policy No. D].2 and accounting of E-Journals as fixed assets of the Institute is not correct. However in view of matching concept of the

accounting, the amount of the subscription for unexpired period at the end of the year could be treated as current assets, prepaid expenses.

B Income & Expenditure Account

Expenditure

1 Overstatement of Expenditure by Rs.26.37 lakh

Expenditure of Rs.26,36,687.00 pertaining to the year 2010-11 was included in the current year's figures, This resulted in overstatement of expenditure of the year by Rs.26.37 lakh and understatement of prior period adjustment.

Effect of Audit Comments on Accounts

The net impact of the comments given in the preceding paras is that the Assets and Expenditure were overstated by Rs.9.41 lakh and Rs.27.14 lakh respectively.

C Grant in aid

During the year 2011-12, the Institute received Grant in aid (Plan) of Rs.40.00 crore. In addition to the above, it had unspent balance of Rs.0.44 crore of the previous year. Thus out of the total available grant of Rs. 40.44 crore an amount of Rs. 40.14 crore had been utilized leaving unspent balance of Rs.0.30 crore at end of the year.

(v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and Income & Expenditure Account and Receipt & Payment Account dealt with by this report are in agreement with the books of accounts.

(vi) In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts and subject to the significant matters stated above and other matters mentioned in Annexure to this audit report give a true and fair view in conformity with accounting principles generally accepted in India:

(a). In so far as it relates to the Balance Sheet, of the state of affairs of the Pt. D.P. Mishra IIIT DM, Jabalpur as at 31 March 2012; and

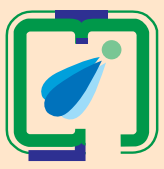
(b). In so far as it relates to Income & Expenditure Account of the deficit for the year ended on that date.

For and on behalf of the C&AG of India

Place : New Delhi

Dated : 05.11.2012

Director General of Audit



PDPM
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
DESIGN & MANUFACTURING JABALPUR

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