

# ***ANNUAL REPORT***

*(including annual accounts)*

## ***2010-2011***



**NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR – 26, CHANDIGARH –160 019 (INDIA)**

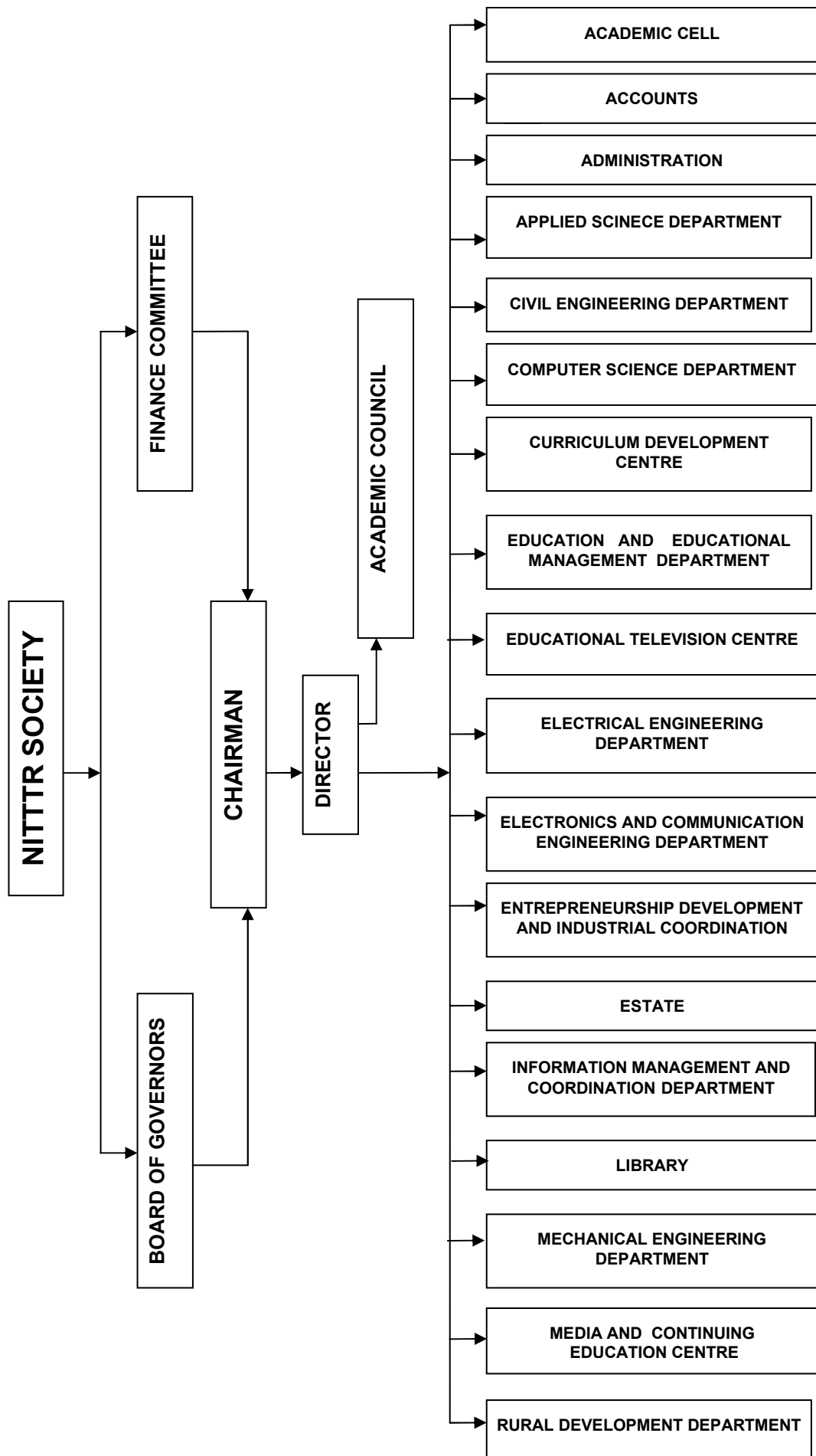
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# ORGANISATIONAL STRUCTURE OF NITTTR CHANDIGARH



**LIST OF MEMBERS OF THE NITTTR CHANDIGARH SOCIETY  
AS ON 31.03.2011**

<b>Sr. No.</b>	<b>Name and Designation with full address of the present incumbent</b>	<b>Status</b>
1.	<p><b>Dr. K.K. Talwar</b> Chairman, Board of Governors, NITTTR, Chandigarh and President, National Academy of Medical Sciences (India), Ansari Nagar, Ring Road, New Delhi – 110 029</p>	Chairman
2.	<p><b>Shri S.K. Ray</b> Financial Adviser (IFD), Department of Higher Education, Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi – 110 115</p>	Member
3.	<p><b>Shri N.K. Sinha, IAS</b> Additional Secretary, Department of Higher Education, Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi – 110 115</p>	Member
4.	<p><b>Shri Madhukar</b> Director, Technical Education Uttar Pradesh, Govt. Polytechnic Campus, Vikas Nagar, Kanpur – 208 024 (UP)</p>	Member
5.	<p><b>Shri Saurabh Bhagat, IAS</b> Director, Technical Education, Govt. of Jammu &amp; Kashmir, <b>(Summer Address)</b> Govt. Polytechnic for Women Campus, Srinagar – 190 001 (J&amp;K) OR <b>(Winter Address)</b> Government Polytechnic Campus, Bikram Chowk, Jammu – 180 001 (J&amp;K)</p>	Member

Sr. No.	Name and Designation with full address of the present incumbent	Status
6.	<b>Shri S.S. Khara, PCS</b> Director, Technical Education Union Territory, Chandigarh Administration (UT) Punjab Engineering College Campus, Sector 12, Chandigarh	Member
7.	<b>Shri I.B. Peerzada, IAS</b> Commissioner, Technical Education, Gujarat State, 2 <sup>nd</sup> Floor, Block No. 2, Dr Jivraj Mehta Bhawan, Gandhinagar – 382 010 (Gujarat)	Member
8.	<b>Dr. Bhagwan Singh</b> Secretary, State Board of Technical Education, Department of Science & Technology, Technology Bhawan, 4 <sup>th</sup> Floor, Baily Road, Patna – 800 015 (Bihar)	Member
9.	<b>Dr. Rajneesh Arora</b> Vice Chancellor, Punjab Technical University, Jalandhar –Kapurthala Highway, Near Pushpa Gujral Science City Kapurthala - 144 601 (Punjab)	Member
10.	<b>Dr. M.K. Hada</b> Member Secretary All India Council for Technical Education, 7 <sup>th</sup> Floor, Chander Lok Building, Janpath, New Delhi – 110 001	Member
11.	<b>Dr. Parijat De</b> Director, National Institute of Technical Teachers Training and Research, Sector 26, Chandigarh – 160 019	Member Secretary

**LIST OF MEMBERS OF THE BOARD OF GOVERNORS  
AS ON 31.03.2011**

Sr. No.	Name and Designation with full address of the present incumbent	Status
1.	<p><b>Dr. K.K. Talwar</b> Chairman, Board of Governors, NITTTR, Chandigarh and President, National Academy of Medical Sciences (India), Ansari Nagar, Ring Road, New Delhi – 110 029</p>	Chairman
2.	<p><b>Shri S.K. Ray</b> Financial Adviser (IFD), Department of Higher Education, Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi – 110 115</p>	Member
3.	<p><b>Shri N.K. Sinha, IAS</b> Additional Secretary, Department of Higher Education, Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi – 110 115</p>	Member
4.	<p><b>Shri Madhukar</b> Director, Technical Education Uttar Pradesh, Govt. Polytechnic Campus, Vikas Nagar, Kanpur – 208 024 (UP)</p>	Member
5.	<p><b>Shri Saurabh Bhagat, IAS</b> Director, Technical Education, Govt. of Jammu &amp; Kashmir, <b>(Summer Address)</b> Govt. Polytechnic for Women Campus, Srinagar – 190 001 (J&amp;K) OR <b>(Winter Address)</b> Government Polytechnic Campus, Bikram Chowk, Jammu – 180 001 (J&amp;K)</p>	Member

Sr. No.	Name and Designation with full address of the present incumbent	Status
6.	<b>Shri S.S. Khara, PCS</b> Director, Technical Education Union Territory, Chandigarh Administration (UT) Punjab Engineering College Campus, Sector 12, Chandigarh	Member
7.	<b>Shri I.B. Peerzada, IAS</b> Commissioner, Technical Education, Gujarat State, 2 <sup>nd</sup> Floor, Block No. 2, Dr Jivraj Mehta Bhawan, Gandhinagar – 382 010 (Gujarat)	Member
8.	<b>Dr. Bhagwan Singh</b> Secretary, State Board of Technical Education, Department of Science & Technology, Technology Bhawan, 4 <sup>th</sup> Floor, Baily Road, Patna – 800 015 (Bihar)	Member
9.	<b>Shri PD Mongia</b> President, Laghu Udhog Bharti 25/8, Industrial Area, Phase II, Chandigarh	Member
10.	<b>Dr. (Mrs.) SK Pandey</b> Director, National Institute of Technology, GE Road, Raipur – 492010 (Chhatisgarh)	Member
11.	<b>Dr. Rajneesh Arora</b> Vice Chancellor, Punjab Technical University, Jalandhar - Kapurthala Highway, Near Pushpa Gujral Science City Kapurthala - 144 601 (Punjab)	Member
12.	<b>Dr. M.K. Hada</b> Member Secretary All India Council for Technical Education, 7 <sup>th</sup> Floor, Chander Lok Building, Janpath, New Delhi – 110 001	Member
13.	<b>Dr. AN Pathak</b> Prof. & Head, Applied Science Department National Institute of Technical Teachers Training and Research, Sector 26, Chandigarh – 160 019	Member
14.	<b>Dr. Parijat De</b> Director, National Institute of Technical Teachers Training and Research, Sector 26, Chandigarh – 160 019	Member Secretary

**LIST OF MEMBERS OF THE FINANCE COMMITTEE  
AS ON 31.03.2011**

<b>Sr. No.</b>	<b>Name and Designation with full address of the present incumbent</b>	<b>Status</b>
1.	<b>Dr. K.K. Talwar</b> Chairman, Board of Governors, NITTTR, Chandigarh and President, National Academy of Medical Sciences (India), Ansari Nagar, Ring Road, New Delhi – 110 029	Chairman
2.	<b>Shri S.K. Ray</b> Financial Adviser (IFD), Department of Higher Education, Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi – 110 115	Member
3.	<b>Shri N.K. Sinha, IAS</b> Additional Secretary, Department of Higher Education, Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi – 110 115	Member
4.	<b>Shri PD Mongia</b> President, Laghu Udhog Bharti 25/8, Industrial Area, Phase II, CHANDIGARH	Member
5.	<b>Dr. Parijat De</b> Director, National Institute of Technical Teachers Training and Research, Sector 26, Chandigarh – 160 019	Member Secretary

**LIST OF MEMBERS OF THE ACADEMIC COUNCIL  
AS ON 31.03.2011**

Sr. No.	Name and Designation with full address of the present incumbent	Status
1.	<b>Dr. Parijat De</b> Director, NITTTR, Sector - 26, Chandigarh 160 019	Chairman
2.	<b>Dr. Abhijit Mukherjee</b> Director, Thapar University, Patiala (PU) 147 004	Eminent Member
3.	<b>Dr. Manoj Datta</b> Director, PEC University of Technology, Chandigarh 160 012	Eminent Member
4.	<b>Dr. Ashok Chitkara</b> Chancellor, Chitkara University, Saraswati Kendra, SCO 160 -161, Sector - 9C, Chandigarh 160 017	Special Invitee
5.	Registrar Panjab University, Chandigarh 160 014	Special Invitee
6.	<b>Dr. (Ms.) PK Tulsi</b> Professor & Head, Education & Educational Mgt. Department, NITTTR, Sector-26, Chandigarh 160 019	Member
7.	<b>Dr. SS Pattnaik</b> Professor & Head, ETV Centre, NITTTR, Sector-26, Chandigarh 160 019	Member
8.	<b>Dr. AN Pathak</b> Professor & Head, Applied Science Department, NITTTR, Sector-26, Chandigarh 160 019	Member



Sr. No.	Name and Designation with full address of the present incumbent	Status
9.	<b>Dr. YK Anand</b> Professor & Head, Media & Continuing Education Centre, NITTTR, Sector-26, Chandigarh 160 019	Member
10.	<b>Dr. S Chatterji</b> Professor & Head, Electrical Engg. Department & Electronics Engg. Department, NITTTR, Sector-26, Chandigarh 160 019	Member
11.	<b>Dr. JS Saini</b> Professor & Head, Rural Development Department, NITTTR, Sector-26, Chandigarh 160 019	Member
12.	<b>Dr. DD Sharma</b> Professor & Head, EDIC Department, NITTTR, Sector-26, Chandigarh 160 019	Member
13.	<b>Dr. SBL Sachan</b> Professor, ETV Centre NITTTR, Sector-26, Chandigarh 160 019	Member
14.	<b>Dr. BS Pabla</b> Professor & Head, Mechanical Engineering Department NITTTR, Sector-26, Chandigarh 160 019	Member
15.	<b>Dr. SS Banwait</b> Professor, Mechanical Engg. & Professor-Incharge, ME & Ph.D. Programmes NITTTR, Sector-26, Chandigarh 160 019	Member

<b>Sr. No.</b>	<b>Name and Designation with full address of the present incumbent</b>	<b>Status</b>
16.	<b>Dr. (Mrs.) S.P. Bedi</b> Professor, Education and Educational Management Department, NITTTR, Sector-26, Chandigarh 160 019	Member
17.	<b>Dr. A.B. Gupta</b> Professor, CDC, NITTTR, Sector-26, Chandigarh 160 019	Member
18.	<b>Dr. Sanjay Sharma</b> Professor & Head, Civil Engineering Department NITTTR, Sector-26, Chandigarh 160 019	Member
19.	<b>Dr. Suresh Dhameja</b> Professor, EDIC & Head, IMCO Department NITTTR, Sector-26, Chandigarh 160 019	Member
20.	<b>Dr. Sunil Dutt</b> Associate Professor & Faculty Incharge, Academic Cell, NITTTR, Sector-26, Chandigarh 160 019	Member
21.	<b>Dr. (Mrs.) Maitreyee Dutta</b> Associate Professor & Faculty Incharge, Computer Sc. & Engg. Department, NITTTR, Sector-26, Chandigarh 160 019	Member
22.	<b>Sh. AK Duggal</b> Associate Professor, Civil Engineering Department, NITTTR, Sector-26, Chandigarh 160 019	Member
23.	<b>Dr. Hemant Sood</b> Associate Professor, Civil Engineering Department, NITTTR, Sector-26, Chandigarh 160 019	Member

<b>Sr. No.</b>	<b>Name and Designation with full address of the present incumbent</b>	<b>Status</b>
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- |     |  |                  |
|-----|--|------------------|
| 24. | <b>Dr. U.N Roy</b><br>Associate Professor,<br>Rural Development Department,<br>NITTTR, Sector-26,<br>Chandigarh 160 019                | Member           |
| 25. | <b>Shri Rajesh Mehra</b><br>Assistant Professor,<br>Electronics & Commn. Engg. Department,<br>NITTTR, Sector-26,<br>Chandigarh 160 019 | Member           |
| 26. | <b>Dr. KM Rastogi</b><br>Professor & Head,<br>Curriculum Development Centre,<br>NITTTR, Sector-26,<br>Chandigarh 160 019               | Member Secretary |

## **1.0 THE INSTITUTE**

National Institute of Technical Teachers Training and Research, Chandigarh, formerly known as Technical Teachers Training Institute (TTTI), was established in 1967 to meet the requirements of training polytechnic teachers for the growth and development of polytechnic education in the northern region of the country. It had the collaboration of Royal Netherlands Government upto 1974. The institute ushered a new era in November 2003, with its changed name and enhanced status as National Institute of Technical Teachers Training and Research (NITTTR). It is one of the four national institutes in the country with focus on the northern region comprising the states of Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, Uttar Pradesh, Uttarakhand, National Capital Territory of Delhi and Union Territory of Chandigarh. Presently, the outreach of the programmes and activities of the institute covers the entire gamut of technical education. It is now reckoned as a resource institute for the technical education system providing services to its clientele covering faculty/staff of technical institutions, officials of directorates/boards of technical education, central and state government departments, industry, students from technical institutes, community and trainees from overseas. NITTTR, Chandigarh is an ISO 9001- 2008 certified.

The institute is an autonomous organisation registered under the Societies Registration Act 1860. It is managed by a Board of Governors. Director is the executive head of the institute. The institute is situated in a well developed campus in Sector 26, Chandigarh covering an area of over 6.85 hectares housing the academic buildings, hostels, guest house and residential accommodation for faculty and staff. The institute also has residential campus in Sectors 29 and 42. The institute is about 10 kms from Inter State Bus Terminus in Sector 43 and 05 kms from Chandigarh Railway Station.

### **The Mission**

The mission of the institute is to dynamically respond, through an integrated package of research and development, education and training and extension services, to the needs of technical and vocational education, industry and community and challenges of advances in technology, including modern communication technology.

### **1.1 Broad Objectives of the Institute**

- ◆ To provide professional education and training for teachers of engineering and technology disciplines in technical institutions for advancement of learning towards promoting excellence in technical education and industry.
- ◆ To strive for continuous improvement in instruction and research in engineering and technology disciplines and research in management of technical education.
- ◆ To actively support the growth and quality improvement of technical education in the country through involvement in activities at national and state levels.

## 1.2 Operational Objectives

- To act as a centre for offering quality training programmes for teachers as per need of the system, covering the entire gamut of technical education including polytechnics, engineering colleges, vocational and management education at national level
- To arrange for practical training of technical teachers in industries
- To undertake systemic research to provide research inputs for development of technical education, training systems and its management
- To undertake action research for development of innovative methods, processes and practices for improvement of teaching learning environment in technical and vocational education institutions
- To design new instructional system and strategies for production of multimedia learning materials
- To develop and disseminate learning resources like Text books, Laboratory Manuals, Video Programmes, Computer Assisted Instructional Multimedia Packages to technical and vocational institutions and other organisations
- To offer programmes for technical and vocational teachers through distance learning mode using state of the art technologies
- To offer courses / programmes for technical and vocational teachers to suit overseas demand especially SAARC and ASEAN countries
- To collaborate with community and industry in organising Continuing and Non-formal vocational education programmes and providing extension and consultancy services
- To undertake consultancy and extension work for industry, technical institutions/ organizations
- To provide support services to Government of India schemes related to technical and vocational education system and as entrusted by MHRD, Government of India, from time to time
- To cooperate with educational or other institutions in any part of the world having objectives wholly or partly similar to those of the institute by exchange of teachers and scholars and generally in such manner as may be conducive to their common objectives

The institute is continually striving to be in the forefront in all the functional areas towards achievement of the stated objectives.

## 1.3 Programmes and Activities

To achieve its stated objectives, the institute undertakes the following spectrum of activities:

- Education and Training Programmes
- Curriculum Development
- Instructional Material Development

- Research and Development
- Extension Services
- Consultancy in Technical Education and Technology Areas

Keeping in tune with the various developing needs of the country, the institute presently extends its services in the following areas as well:

- Media Development including Information Resources, their acquisition, storage and retrieval
- Entrepreneurship Development
- Industry Institute Interaction
- Continuing Education for Working Engineers/Technicians/Managers
- Transfer of Appropriate Technology to Rural Areas
- Integrating Persons with Disabilities in the Mainstream of Technical and Vocational Education.

In addition to the above programmes and activities, the institute offers consultancy services to international, national and state level organisations in the above areas.

#### **1.4 Management**

The Institute is managed by a Board of Governors, which is responsible for its general direction and control, as laid down in the Memorandum of Association and Rules and Regulations of the National Institute of Technical Teachers Training and Research, Chandigarh Society. The Director is the Chief Academic and Executive Authority and also an ex-officio member secretary of the Board/Society. Under provisions of the Memorandum of Association (MoA), the Board of Governors is assisted by the following committees:

- ◇ Academic Council
- ◇ Finance Committee

Dr Parijat De continued to be the Director of NITTTR, Chandigarh w.e.f. 02 July, 2009. In terms of the Memorandum of Association, he discharged the functions of the Academic Council, as its Chairman.

#### **2.0 ACHIEVEMENT HIGHLIGHTS**

Achievements of the institute's programmes and activities are reported under **05** major areas viz; Staff Development; Curriculum Development; Instructional Material Development; Research and Development; Extension Services and Consultancy.

## **Distinctive Programmes and Activities: 2010-2011**

- Master's Degree Programmes (Regular and Modular) in **06** disciplines.
- **53** Students undergoing Ph.D. Programmes in Different Disciplines at the Institute.
- National Conference on Entrepreneurial Innovations: Case Studies of Entrepreneurs, Incubators, Incubatees and Parks
- National Seminar on Organic Farming : Prospects and Challenges for India
- National Workshop on Advances in Water Proofing Materials and Techniques
- Training Programme for Community using Mobile e-Learning Terminals (MeLT) Van
- Offering PG Diploma and Certificate Course in Video and Animation Production
- Design of 70 Curricula for Skill Development Programmes at levels I and II covering five sectors of Indian Economy
- Signed MOU with IIT Roorkee to undertake Joint Projects
- Organization of Ability Fair-2010 for Differently Abled Persons under PWD Scheme
- Up-dating of Laboratories in New and Emerging Areas.
- Installation of Bio-gas Plant in the Institute Campus.

### **2.1 Staff Development**

The institute continued to grow in terms of academic activities, both qualitatively and quantitatively. The qualitative dimensions covered related to continued improvements by way of increased emphasis on applications, case studies and industrial exposure in training programmes besides more efficient and effective use of multi-media in teaching-learning process. During 2010-11, **233** programmes were conducted for faculty/staff of engineering colleges and polytechnics which were attended by **3171** participants from various states of the country.

#### **2.1.1 Long Term Programmes**

##### **2.1.1 (a) Ph.D. Programmes**

Institute is a Research Centre of Panjab University, Chandigarh and Punjab Technical University, Jalandhar for Ph.D. Programmes. As on March 2011, **53** students are undergoing Ph.D. programmes in different disciplines. The Institute is also a Ph.D. Centre under QIP (Poly) Scheme of AICTE. Out of these **53** students, **22** candidates have joined under QIP (Poly) Scheme at this institute.

##### **2.1.2 (b) M.Tech. / M.E. Programmes**

The Institute offers industry-oriented and practice-based Master's Degree Programmes of 02 years duration, affiliated to Panjab University, Chandigarh in the following disciplines:

- Engineering Education

- Manufacturing Technology
- Construction Technology and Management
- Computer Science and Engineering
- Instrumentation and Control
- Electronics and Communication Engineering

The institute is offering these Master's Degree Programmes on modular basis also in the above six disciplines duly approved by AICTE and affiliated to Panjab University.

Admissions made in these programmes during 2010-11 is given below:

Sr. No.	Name of the Programme	No. of Participants			Total	State-wise Break-up
		Polys	Engg. Colleges	Industry/ General		
<b>MASTER'S DEGREE (REGULAR MODE)</b>						
1.	Computer Science and Engineering	01	13	03	17	OR-01, GJ-03, HA-03, PU-04, UP-06
2.	Instrumentation and Control	--	08	05	13	UK-01, HA-03, UP-08, MA--01
3.	Electronics and Communication Engineering	--	06	07	13	CH-01, HA-03, PU-04, DE-01, UP-03, HP-01
	<b>Total</b>	<b>01</b>	<b>27</b>	<b>15</b>	<b>43</b>	
<b>MASTER'S DEGREE (MODULAR MODE)</b>						
1.	Manufacturing Technology	08	20	--	28	AS-01, CH-01, PU-07, HA-04, GJ-1, UP-12, HP-01, UK-01
2.	Computer Science and Engineering	07	30	02	39	PU-04, HA-05, HP-01, UP-20, J&K-01, RA-06, UT-01, OR-01
3.	Instrumentation and Control	08	27	01	36	CH-01, PU-02, HA-04, UP-18, UT-01, AS-01, KE-01, MH-01, RA-01, DE-02, JHK-01, UK-01, J&K-01, HP-01
4.	Electronics and Communication Engineering	08	30	01	39	CH-01, PU-04, HP-04, UP-17, HA-03, RA-05, KE-02, CG-01, BH-01, AS-01
5.	Construction Technology and Management	10	11	10	31	PU-2, HA-01, HP-7, UP-04, J&K-04, RA-06, AS-05, BH-01, UK-01
6.	Engineering Education	05	--	04	09	AS-01, MH-01, UP-03, HA-04
	<b>Total</b>	<b>46</b>	<b>118</b>	<b>18</b>	<b>182</b>	

Note: **99** (regular) and **402** (modular) students of previous batches are also on roll.



<b>ABBREVIATIONS USED</b>			
AP	Andhra Pradesh	JHK	Jharkhand
AS	Assam	MA	Manipur
BH	Bihar	MH	Maharashtra
CH	Chandigarh	PU	Punjab
CG	Chattisgarh	KE	Kerala
DE	Delhi	OR	Orissa
GJ	Gujarat	RA	Rajasthan
HA	Haryana	UK	Uttarakhand
HP	Himachal Pradesh	UP	Uttar Pradesh
J&K	Jammu & Kashmir	UT	Union Territory

### **2.1.2 Short Term Programmes**

The institute offers need-based and customized short-term courses of one to two weeks duration for faculty/staff of engineering colleges, polytechnics and working professionals from industry. During the year 2010-11, the short term programmes conducted for faculty/staff of polytechnics are as follows:

#### **(i) Faculty / Staff of Polytechnics**

• No. of Short Term Courses conducted for Polytechnic Teachers/Administrators of Polytechnic System/ Working Professionals from industry	:	<b>140</b>
• No. of Participants	:	<b>1697</b>
• No. of Training Workshops	:	<b>37</b>
• No. of Participants	:	<b>1479</b>
• No. of National Seminars/Conferences	:	<b>02</b>
• No. of Participants	:	<b>171</b>
• No. of Curriculum Development Workshops	:	<b>46</b>
• No. of Participants	:	<b>516</b>

The department-wise break-up of short term courses (Table 1), workshops (Table 2), seminars and conferences (Table 3) with duration and number of participants is summarised as follows:

**TABLE 1 - SHORT TERM COURSES FOR POLYTECHNICS**

<b>Sr. No.</b>	<b>Department / Centre</b>	<b>Number of STCs</b>	<b>Duration in weeks</b>	<b>Number of participants</b>	<b>Person weeks</b>
1.	Applied Science	09	09	51	51
2.	Civil Engineering	14	15	88	109
3.	Computer Science	23	23	147	147
4.	Curriculum Development	05	05	183	183
5.	Centre for Physically Challenged Persons	02	02	28	28
6.	Education and Educational Management	14	16	262	292
7.	Educational Television	07	09	144	204
8.	Electrical Engineering	06	06	30	30
9.	Electronics and Communication Engineering	07	07	47	47
10.	Electronics Service Centre	04	04	58	58
11.	Entrepreneurship Development and Industrial Coordination	07	08	79	86
12.	Library	04	04	13	13
13.	Mechanical Engineering	17	17	198	198
14.	Media and Continuing Education Centre	06	06	59	59
15.	Rural Development	15	15	310	310
	<b>Total</b>	<b>140</b>	<b>146</b>	<b>1697</b>	<b>1815</b>

Break-up of Short Term Courses (STCs) for polytechnics as per venue of conduct is an under:

<b>Total number of STCs conducted</b>	<b>=</b>	<b>140</b>
<b>STCs conducted at NITTTR, Chandigarh</b>	<b>=</b>	<b>110</b>
<b>STCs conducted at Engineering Colleges in the States</b>	<b>=</b>	<b>30</b>

**TABLE 2 - TRAINING WORKSHOPS**

<b>Sr. No.</b>	<b>Department / Centre</b>	<b>Number of Workshops</b>	<b>Duration in weeks</b>	<b>Number of participants</b>	<b>Person weeks</b>
1.	Civil Engineering Department	01	0.5	33	16.5
2.	Centre for Physically Challenged Persons	01	0.5	25	12.5
3.	Educational Television Centre	01	0.5	114	57.0
4.	Entrepreneurship Development and Industrial Coordination	02	1.0	69	34.5
5.	Information Management and Coordination Department	09	4.5	356	178.0
6.	Rural Development	23	11.5	882	441.0
	<b>Total</b>	<b>37</b>	<b>18.5</b>	<b>1479</b>	<b>739.5</b>

**TABLE 3 - NATIONAL SEMINARS AND CONFERENCES**

<b>Sr. No.</b>	<b>Title of the Programme</b>	<b>Duration in weeks</b>	<b>Number of participants</b>	<b>Person weeks</b>
1.	Entrepreneurial Innovations: Case Studies of Entrepreneurs, Incubators, Incubatees and Parks, 9-10 Nov, 2010	0.5	29	14.5
2.	Prospects and Challenges of Sustainable Agriculture and Organic Farming in India, 24-25 March, 2011	0.5	142	71
	<b>Total</b>	<b>1</b>	<b>171</b>	<b>85.5</b>

**(ii) Faculty / Staff of Engineering Colleges**

During the year 2010-11, **93** courses were conducted for faculty of Engineering Colleges in which **1474** teachers participated and accounted for **1528** person weeks of training. The department wise break-up of short term courses, total duration and number of participants is given in Table 4.



NATIONAL INSTITUTE OF  
TECHNICAL  
TEACHERS TRAINING  
& RESEARCH



**Dr. K K Talwar, Chairman, BOG** addressing the audience on Annual Day Celebrations at the institute

Recipients of Best Polytechnic Award



Blood donation camp organised at the institute



Trophy won by the institute in Inter-NITTR sports tournament held at NITTR, Kolkata



**TABLE 4 - SHORT TERM COURSES FOR ENGINEERING COLLEGES**

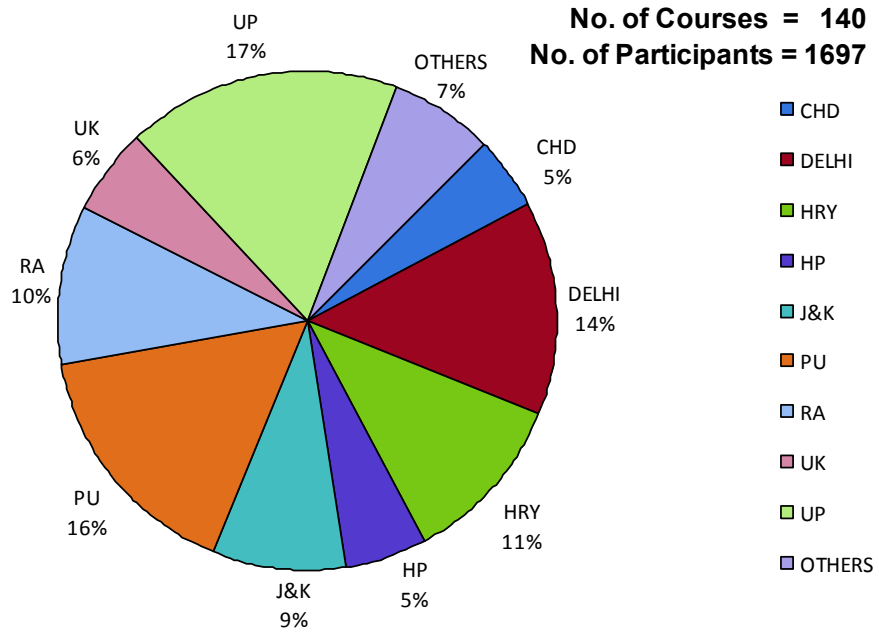
<b>Sr. No.</b>	<b>Department / Centre</b>	<b>Number of STCs</b>	<b>Duration in weeks</b>	<b>Number of participants</b>	<b>Person weeks</b>
1.	Applied Science	14	14	185	185
2.	Civil Engineering	05	05	145	145
3.	Computer Science	22	22	270	270
4.	Curriculum Development	01	01	35	35
5.	Education and Educational Management	06	07	185	224
6.	Educational Television	03	03	51	51
7.	Electrical Engineering	09	09	95	95
8.	Electronics and Communication Engineering	09	09	164	164
9.	Electronics Service Centre	02	02	14	14
10.	Entrepreneurship Development and Industrial Coordination	03	04	60	75
11.	Library	04	04	23	23
12.	Mechanical Engineering	08	08	91	91
13.	Media and Continuing Education	04	04	42	42
14.	Rural Development	03	03	114	114
	<b>Total</b>	<b>93</b>	<b>95</b>	<b>1474</b>	<b>1528</b>

Break-up of Short Term Courses (STCs) for Engineering Colleges as per venue of conduct is as under:

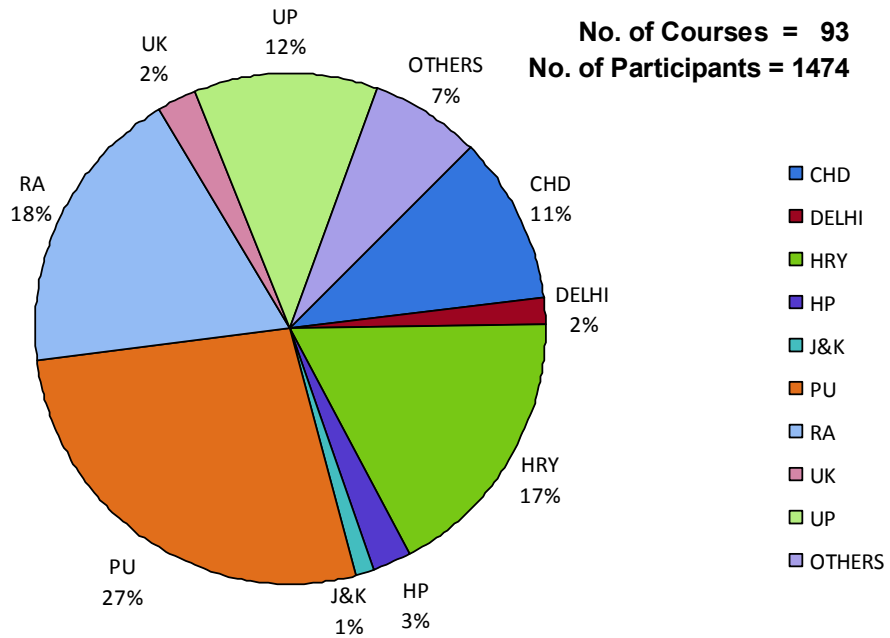
<b>Total number of STCs conducted</b>	<b>=</b>	<b>93</b>
<b>STCs conducted at NITTTR, Chandigarh</b>	<b>=</b>	<b>78</b>
<b>STCs conducted at Engineering Colleges in the States</b>	<b>=</b>	<b>15</b>

The state-wise percentage participation in short term courses conducted for **polytechnics** and **engineering colleges** is shown in **Figure 1** and **Figure 2** respectively.

**Figure 1: Statewise Percentage Participation in Short Term Courses for Polytechnics for the year 2010-2011**



**Figure 2: Statewise Percentage Participation in Short Term Courses for Engineering Colleges for the year 2010-2011**



## 2.2 Curriculum Development

The institute continued to undertake curriculum development activities including the design and review of curricula for courses in engineering and non-engineering areas through a scientific approach which has been considerably internalised by the polytechnic system enabling them to take up similar projects by themselves with some guidance from National Institute of Technical Teachers Training and Research, Chandigarh. During the year 2010-11, **08** curriculum of Diploma Programmes and **01** Certificate course for Haryana State have been designed and **19** diploma programmes for the state of Punjab have been revised by the institute. In addition to above, under the Skill Development Mission of Government of India, **70** curricula for certificate courses under five sectors of Skill Development have also been designed during the year under report. The details of curricula designed and revised are given below:

<b>A.</b>	<b>CURRICULA DESIGNED</b>
1.	<p><b>08 Diploma Courses for the State of Haryana</b></p> <ul style="list-style-type: none"> <li>(i) Textile Chemistry</li> <li>(ii) Mechanical (Metallurgy)</li> <li>(iii) Mechanical (Foundry and Forging)</li> <li>(iv) Printing Technology</li> <li>(v) Packaging Technology</li> <li>(vi) Civil (Construction Management)</li> <li>(vii) Civil (Brick Technology)</li> <li>(viii) Health Care Engineering</li> </ul>
2.	<b>01 Certificate Course in</b> Mobile Repair for the State of Haryana
<b>B.</b>	<b>CURRICULA REVISED</b>
	<p><b>19 Diploma Courses for the State of Punjab</b></p> <ul style="list-style-type: none"> <li>1. Medical Laboratory Technology</li> <li>2. Leather Technology</li> <li>3. Leather Technology(Footwear)</li> <li>4. Library and Information Science</li> <li>5. Architecture Assistantship</li> <li>6. Garment Technology</li> <li>7. Fashion Design</li> <li>8. Modern Office Practice</li> <li>9. Chemical Engineering</li> <li>10. Plastic Technology</li> <li>11. Mechanical Engineering</li> <li>12. Production and Industrial Engineering</li> <li>13. Mechanical Engineering (Refrigeration &amp; Air-conditioning)</li> <li>14. Civil Engineering</li> <li>15. Electrical Engineering</li> </ul>

	16. Electronics and Communication Engineering 17. Electronics Engineering with specialisation in Microprocessors 18. Computer Engineering 19. Information Technology
<b>C</b>	<p><b>CURRICULUM DESIGN FOR SKILL DEVELOPMENT PROGRAMMES</b></p> <p><b>70 Certificate programmes under five sectors</b></p> <p><b>a) Building Construction and Real Estate Sector</b></p> <ol style="list-style-type: none"> <li>1. Rewinding of Three Phase Motors</li> <li>2. Cable Jointing</li> <li>3. Power Wiring</li> <li>4. House Wiring</li> <li>5. Earthing</li> <li>6. Road Roller Operator</li> <li>7. Road Paver Operator</li> <li>8. PA System Technician</li> <li>9. Mason</li> <li>10. Assistant Mason</li> <li>11. Store Keeper (Construction)</li> <li>12. Mechanic (Concreting)</li> <li>13. Carpenter</li> <li>14. Tile Fixer</li> <li>15. Assistant Plumber</li> </ol> <p><b>b) Unorganised Sector/Unorganized Employment in Organized Sector</b></p> <ol style="list-style-type: none"> <li>16. Data Entry Operator</li> <li>17. Beautician</li> <li>18. Food Processing and Preservation</li> <li>19. Carpentry [Furniture Making]</li> <li>20. General Purpose Electrician</li> <li>21. Motor Winding - Single Phase</li> <li>22. Security Guard</li> <li>23. Stitching/Sewing Machine Operator</li> <li>24. Elderly Care</li> <li>25. Videography</li> <li>26. Dental Clinic Attendant</li> <li>27. Hair Stylist</li> </ol>



28. Tailoring
29. Screen Printing [Textiles]
30. Bicycle Repair
31. Upholstery
32. Paper Products
33. Dairy Development Helper
34. Embroidery
35. Dry Cleaning
36. Kitchen Work Assistant
37. Domestic Grinder & Food Processor Repair
38. Book Binding
39. Digital Photography
40. Domestic Cook

**c) Tourism, Travel, Hospitality and Trade Sector**

41. Tour Guide for Domestic Tourists
42. Front Office Assistant
43. Ticket Reservation Assistant
44. Tour Salesman
45. Housekeeping for Room Attendant
46. Head Cook
47. Receptionist and Information Assistant
48. Tour Office Assistant
49. Hotel Billing Clerk
50. Hotel Cashier
51. Tour Guide for International Tourists

**d) Media and Entertainment Sector**

52. Lighting and Cameraman
53. Editor
54. Producer
55. Script Writer
56. Videographer
57. Costume Designer
58. News Editor
59. News Reporter
60. News Reader
61. Radio Producer

	<p><b>e) Gem and Jewellery Sector</b></p> <p>62. Basics of Jewellery Making</p> <p>63. Manual Jewellery Designing</p> <p>64. Diamonds and Diamond Grading</p> <p>65. Gem Identification</p> <p>66. Advanced Stone Setting</p> <p>67. Basic Stone Setting</p> <p>68. Rhodium Plating</p> <p>69. Pearl Identification &amp; Grading</p> <p>70. Jewellery Enameling</p>
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### 2.3 Instructional Material Development

During the year 2010-11, institute continued its efforts to promote development of instructional material, both print (text books, laboratory manuals, modules, readers etc.) and non-print (video programmes, CAI packages, etc).

The following instructional material was produced during the year under report:

• Text Books	:	<b>03</b>
• Laboratory Manuals	:	<b>03</b>
• Modules	:	<b>10</b>
• Readers	:	<b>05</b>
• Other Print Material	:	<b>63</b>
• CAI Packages	:	<b>01</b>
• Educational Video Films	:	<b>92</b>
• Capsules of Video Films for Gyan Darshan	:	<b>365</b>

The information regarding the instructional material developed has been disseminated to the technical institutions of the region and outside to enable them to use the same. **The details are enclosed at Annexure- I.**

### 2.4 Research and Development

Research and development activities in technology and technical education forms an important aspect of the institute's programmes. The following **09** Research Studies were completed during 2010-2011:

1. Competency Profile of an Electrical Engineering Diploma Holder
2. Competency Profile of Civil Engineering Diploma Holder

3. Competency Profile of Mechanical Engineering Diploma Holder
4. Competency Profile of Architectural Assistantship Diploma Holder
5. A Comparative Study of Effectiveness of Government versus Private Polytechnics in the State of Rajasthan
6. Inclusive Technical and Vocational Education for the Differently Abled Persons in India – Current Status, Issues and Challenges
7. Impact Assessment of MeLT Project
8. SWOT Analysis and Training Need Analysis (TNA) of PEC University of Technology, Chandigarh for TEQIP II Project of World Bank
9. SWOT Analysis and Training Need Analysis (TNA) of NIT, Hamirpur (Himachal Pradesh) for TEQIP II Project of World Bank

In addition, **02** Ph.D. thesis and **75** M.E. thesis were submitted under the guidance of faculty of this institute.

The institute publishes a '**Journal of Engineering and Technology Education**' which is referred by teachers and students of technical education and research. This helps the faculty and students of technical institutions from across the country to publish their views and research work in Engineering and Technology and Technical Education. The journal (published twice in a year, i.e. January-June and July-December) provides an interdisciplinary forum to teachers, students, officials/administrators of technical education system and working professionals in industries to discuss and debate theories and applications of educational, technical and training technologies in all sectors and levels of technical education.

## **2.5 Extension Services and Consultancy**

### **Policy Planning and Service to Industry and Community**

The Institute has continued to play a proactive role to influence the planning and development of technical education and also collaborated with institutions and organisations at national and international levels having similar objectives. The institute also provided consultancy services to government, public sector and other national and state level organisations, technical education system and industry in the area of engineering and technology, educational management, curriculum development, entrepreneurship development and rural development.

365 capsules of video programmes prepared by four NITTTRs were sent to EMPC, IGNOU, New Delhi for daily transmission of these programmes in TECH ED Vision on Gyan Darshan Channel. An MOU has been signed with IGNOU, New Delhi for running 10 KWFM station for Gyan Vani transmission.

The institute has also signed MOUs with four partner institutes viz. (i) Sri Sukhmani Institute of Engineering & Technology, Derabassi (PU) (ii) Shree Siddhivinayak Educational Trust Group of Institutions, Bilaspur, Yamuna Nagar, Haryana (iii) Guru Nanak Dev Engineering College, Ludhiana (PU) (iv) Himalayan Group of Professional Institutions, Kala Amb (HP) to run Certificate and PG Diploma programmes on Video and Animation Production from 11 July, 2011.

The institute completed **08** design and testing projects for various industries / organisations and also organized **05** training programmes for students of technical education system. In addition, the institute undertook the following sponsored projects during 2010-2011:

### **MeLT Van-An ETV Education and Training Initiative**

The mobile e-Learning Terminals (MeLT), an IIT, Roorkee project sponsored by the Ministry of Human Resource Development, Government of India, is at present being carried on in the ETV Department of the institute. Training programme using the MeLT facilities were conducted at Sri Sukhmani Institute of Engineering and Technology (SSIE), Derabassi, Punjab; Gurukul Global School, Manimajra and Yuvsatta, Chandigarh; Chinmaya Organisation of Rural Development, Sidhbari, Kangra, (HP); Government Senior Secondary School, Mandal and Khaniyari Khas, Kangra, (HP). Trainees included faculty, students and volunteers studying and working in the remote areas of district Kangra in Himachal Pradesh. They were trained on ICT tools, MS Word, Power Point & MS Excel. On line and practical test were also held at the end. Mobile repair demo and expert lectures from the base station in ETV Studio were shown at SSIET, Derabassi, Punjab, using the video conferencing facility. Around 460 persons have got the benefit of training using the MeLT Van by the ETV Department. Professor HK Verma, Deputy Director, IIT, Roorkee and Principal Investigator (PI) of the project has agreed in principle to handover the MeLT Van to NITTTTR, Chandigarh on permanent basis.

### **Installation of a Bio-Gas Plant in the Institute Campus**

Imparting practical training of masonry skills under DST project "Eco Water Literacy and Sanitation Campaign" was started on 10<sup>th</sup> May, 2010. The department of Rural Development has installed a bio-gas plant sponsored by DST and IIT Delhi in the institute campus for the production of bio-gas. The main purpose of the installation of bio gas plant would be the utilization of kitchen waste (vegetable waste) in the form of bio gas as cooking fuel in the institute's canteen. 4 cubic metre Deen Bandhu Model of Bio Gas Plant was constructed with the help of KVIC Chandigarh and was inaugurated on the eve of World Environment Day. The working model of Bio gas plant would also be used for training and demonstration of the technical teachers and rural youth. The DST project entitled "Eco Water Literacy and Sanitation Campaign" aim to popularize the rural construction technologies in two districts taking one each from western UP and Haryana - an IIT Delhi Project, which is a part of the bigger project, on "Bio Energy: Technology and Business Solution for UK and India". Under the IIT Delhi Project, the institute would be undertaking six

demonstration projects viz:

1. Phytoremediation Unit
2. Anaerobic Digestion for the utilization of kitchen waste
3. Multi-Effect Distillation (MED) System
4. Pelletization Unit for campus waste
5. Improvised Experimental Solar collector
6. Floating Rafters with Hydroponic Plants

## **Ability Fair 2010**

Centre for Physically Challenged, NITTTTR, Chandigarh in collaboration with Northern Chapter of Confederation of Indian Industry (CII), organized an Ability Fair 2010 for differently abled persons in a phased manner. Four such job fairs were organised on 24 April, 28 April, 5 May and 25 May, 2010 at the institute. Two well renowned companies namely Tech Mahindra and IBM visited the institute for the recruitment of differently abled persons. **145** short listed candidates were judged during the four job fairs and **53** Persons were selected for placement.

## **2.6 Other Contributions (Including Individual Contributions)**

The faculty of the institute have also been actively involved in other academic activities like contributing research papers to the various journals, conventions, seminars and conferences. **68** papers of the institute faculty were published in the journals and **88** papers were presented by the faculty in various conferences and seminars. **The details are enclosed at Annexure- II.**

## **2.7 Academic Achievements of the Departments**

### **Applied Science Department**

During the year 2010-11, the department has conducted **9** short term courses for polytechnic teachers and **14** short term courses for engineering college teachers, which were attended by **51** and **185** teachers respectively. These programmes were conducted in the areas of Intellectual Property Rights and Patent System in India, Nanotechnology-Opportunity and Challenges, Optical Fiber Communication and Sensing Application, Laser Technology, Nuclear Radiations & their Application, Nanomaterials: Characterization and Application, Biosciences and Bio-nanotechnology, Nuclear Energy and Power and OFC Systems and Troubleshooting, Technology Development and Management, Biotechnology and Biochemical Engineering. The department has prepared two teaching modules on 'Case Studies-Technology Management', and 'Case Studies on Engineering Applications'. The department faculty published **06** papers in International/National journals and also presented **03** papers in national seminars/conferences.

## Centre for Physically Challenged Persons

The centre organized **02** training programmes for polytechnic teachers which were attended by **28** participants. The centre organized an Annual Review Workshop for polytechnics implementing the PWD Scheme wherein **25** participants participated. These training programmes aimed at making polytechnic faculty, staff and NGOs working in the areas of disability aware about the PWD project. These STCs were conducted in the areas of (i) Rehabilitation, Education and Training of Mentally Retarded and (ii) Communication with the Deaf and (iii) Technical and Vocational Education of the Differently Abled Persons. During 2010-11, the centre collaborated with CII and organized Job Fairs for the qualified differently abled persons and **53** persons with disabilities got placement in various organizations. In addition to this, the centre for Physically Challenged Persons, provided guidance/assistance to polytechnics in implementing the Scheme of integrating persons with disabilities in technical and vocational education (15 institutions) and assistance was provided to MHRD in the effective implementation of the scheme of integrating persons with disabilities in technical and vocational education.

## Civil Engineering Department

The department, during the year the 2010-11, has **39** students on roll for ME programme in Construction Technology and Management (Modular) and **06** Ph.D. Scholars under QIP Scheme.

The department conducted **19** short term training programmes, which were attended by **233** polytechnic/engineering college teachers and working professionals from industry. The department conducted training programmes in the areas of Laboratory Practices in Highway Engineering, Application of Water Proofing Material and Techniques, RCC Design using STAAD PRO, Building Defects and Maintenance Management, Industrial Waste Water Management and Pollution Control, Earthquake Retrofitting Solution and Strengthening for Structures, Total Station including Advanced Surveying Instruments, Software Applications in Engineering, Application of Remote Sensing, Digital Mapping and GPS in Civil Engineering, Advances in Cement and Concrete including Mix Design, Modern Building Materials and Construction Practice, Health Monitoring, Strengthening and Rehabilitation of Structures, Demonstration and Application of ANSYS Software, Geotechnical Investigation, Concrete Technology, Special Materials Testing and Earthquake Resistant Design of Structures.

The department conducted an Awareness Programme on the theme “Environment Pollution and Control” in collaboration with Department of Environment, Chandigarh Administration

A National Workshop on “Advances in Water Proofing Materials & Techniques” was conducted and attended by **33** delegates from industry and technical institutions.

The department prepared one reader on “Type of Highway Construction” and also a video film on “Repair and Maintenance of Buildings” -Lecturer Series (8 Nos.) during the year under report.

Under the guidance of department faculty, **12** ME thesis were submitted.

## **Computer Science Department**

During the year 2010-11, the department conducted **23** training programmes for polytechnic teachers and **22** for faculty of Engineering Colleges, which were attended by **147** and **270** participants respectively. Some of the significant programmes included: Computer Animation, Network Security, Linux Administration, Web-based Designing, Advanced Java, E-Commerce, PHP and Open Source Technology, Wireless Communication, Hardware Maintenance and Networking, ASP.Net, VB.Net, Mobile Computing and Matlab Programming etc. In addition, the department imparted practical training to the students of engineering colleges as a part of their curriculum requirement. The department developed instructional material on various topics related to short term courses conducted by the department. The department faculty has published **11** papers in international/national journals and presented **12** papers in International/ National Seminars and Conferences. The department faculty also attended training programmes at outside institutions.

## **Curriculum Development Centre**

Curriculum Development Centre conducted **05** short-term courses for the polytechnics and **01** for the engineering colleges through which **183** polytechnic teachers and **35** teachers of engineering colleges were trained. The centre also conducted **46** Curriculum Development Workshops for design/revision of curricula in which there were **516** participants from industry, institutions of higher learning and polytechnics. During the year under report, the department designed **08** curricula for diploma and **01** curriculum for certificate level course for the state of Haryana and revised **19** curricula at diploma level for the state of Punjab. Services were provided to the states of northern region for effective implementation of their curricula.

The department faculty also produced **03** laboratory workshop manuals namely: (i) Applied Physics-II, (ii) Applied Chemistry-II, (iii) General Workshop Practice-II and presented **02** papers in National Conferences/Seminars.

## **Education and Educational Management Department**

Education & Educational management Department conducts both long term and short term programmes in the area of Education & Educational management. M.Tech. (Engineering Education) programme is offered on modular basis. At present, **31** students are pursuing M.Tech. Engineering Education programme. There are twenty nine faculty members sponsored by polytechnics (10) and Engineering colleges (19). Two students belong to other organizations. The students belong to Chandigarh, Himachal Pradesh, Assam, Uttarakhand, Uttar Pradesh, Rajasthan, Maharashtra and Karnataka.

The department organized **20** short term training programmes, out of which **14** programmes were organized for polytechnic faculty and **06** were organized for the faculty of engineering colleges. **262** faculty members from polytechnics and **185** faculty members from engineering colleges participated in the various programmes.

During the year 2010-11, the curriculum for M.Tech. (Engineering Education) programme was revised. A few new papers namely: Recent Advances in Science and Technology; Learning & Instruction; Institutional Management & Evaluation; Financial Management and Micro Teaching were included in the curriculum. The curriculum has been designed on a credit based pattern. In addition, syllabus for course work for Ph.D in Engineering Education was also designed.

The faculty of the department completed a sponsored research study on “V-SAT enabled Mobile e-learning Terminals : An Evaluation Study”. The report was submitted to Coordinator of the MeLT Project, IIT, Roorkee.

### **Educational Television Centre**

The centre conducted **07** short term training programmes for polytechnics and **03** programmes for engineering colleges and trained **144** and **51** teachers respectively. Significant programmes conducted during the year included Multimedia Tools and Instructional Material Development, Animation and Graphics, Advances in Soft Computing and its Applications in Video and Antenna, Virtual Learning, Material Antenna Design and Analysis, Video Graphy and Studio Light Techniques, Advanced in Soft Computing and Applications, Repair and Maintenance of Electronics Equipment, Open Source for Instructional Material Development, Wireless and Mobile Communication, 3D and Multimedia. The Centre produced instructional material on the above mentioned areas. Centre has also provided practical training to **47** students of various engineering colleges in the areas related to video film production and admitted **05** students in Certificate course on Video Film and animation of three months duration. The department also conducted training programme in collaboration with NGOs under Skill Development Mission of Government of India.

ETV Centre produced **92** Video Films on various educational aspects during the year 2010-11.

Daily transmission of programmes in TECH ED VISION also continued in 2010-2011. **365** capsules of video films were sent to EMPC, IGNOU, New Delhi. The transmission was carried out by ETV Centre of the institute on every working day from 09.30 a.m. to 05.30 pm. Live and video recorded lectures were transmitted to all the networked institutes covering almost all parts of the country.



The department has designed curricula for PG Diploma and Certificate Course in Video and Animation Production and signed MOUs with four partner institutes to run these programmes from July, 2011.

Department faculty has also published **05** papers in international/national journals and presented **11** research papers in various national/international seminars and conferences.

### **Electrical Engineering Department**

During the year 2010-11, the department conducted **06** short term programmes for polytechnic teachers and **09** for faculty of engineering colleges, in which **30** and **95** teachers were trained respectively. The programmes were conducted in the areas of MATLAB, Automation in Industries, Energy Management, Virtual Instrumentation and Power Electronics, Process Instrumentation, Advanced Microprocessor and Micro controller, Computer Aided Power system Analysis, PLC, etc. The department also developed instructional material in these areas.

Under the guidance of faculty **11** M.E. thesis have been submitted by the students. The department faculty has published **09** papers in the national/international journals and presented **07** papers in national/international conferences.

### **Electronics and Communication Engineering Department**

During the year 2010-11, the department conducted **07** training programmes for polytechnics and **09** programmes for faculty of engineering colleges in which **47** and **164** teachers participated respectively. Significant programmes conducted were in the areas of Advanced Digital Communication, 3G Communication, VLSI Design, Wireless LANs, GSM and GPRS & 3G. Computer Networking, MATLAB Programming for Engineer, FPGA Based DSP Applications, Programmable Logic Devices, TCP/IP Based Computer Networking, Induction to Embedded System, Advances in DSP & its Applications, ANN Fuzzy Logic & other Soft Computing Techniques, Wireless Sensor Networks, Bio-Inspired Computational Technology, Wireless LANs, Communication using MATLAB. The department faculty also prepared instructional material on these topics.

Practical training was provided to the students of various engineering colleges by the department. Under the guidance of faculty, **22** M.E. thesis were submitted by the students. The department faculty has published **22** papers in the national/international journals and presented **30** papers in national/international conferences. The department faculty also attended training programmes at outside institutions.

## **Entrepreneurship Development and Industrial Coordination Department**

The department during 2010-11 conducted **07** short term course for polytechnics and **03** for faculty of engineering colleges in which **79** teachers from polytechnics and **60** teachers from engineering colleges were trained respectively. Comprehensive training material modules were prepared for all these programmes and distributed among participating teachers. An Innovation and Web-based Teaching Learning System (ITLS) laboratory is being established by the department for effectively using computers for creative, innovative and interactive teaching-learning during short term and long term courses. Necessary hardware and software have been procured and is being installed for making this laboratory operational.

The department organized 17<sup>th</sup> National conference on “Entrepreneurial Innovations: Case Studies of Entrepreneurs, Incubators, Incubatees and Parks” 9-10 Nov, 2010. **29** participants from all over the country attended and **26** papers were presented in the conference.

The department assisted the engineering colleges, polytechnics, AICTE and MHRD in promotion of entrepreneurship and Industry Institute Interaction as per their requirements.

Faculty of the department published **05** papers in the journal and presented **03** papers and chaired technical sessions in various international, national and regional seminars and conferences organized by various technical institutions and universities.

The department got conducted Internal Audits and External Renewal Audits of ISO 9001-2008 Certificates for effective maintenance of established Quality Management System (QMS) in NITTTR, Chandigarh.

### **Library**

The institute's Library conducted **08** short term courses for the librarians of polytechnics and engineering colleges in the areas of Library and Information Science with special emphasis on use of information technology applications in the Libraries. **36** participants attended these courses.

The Library provides computerized services and internet facilities to its users. The Library has switched over to Liberty - a web based library management system. Now the library catalogue can be accessed over the institute intranet and soon it will be available through the internet. It subscribes to **300** e-journals and **53** print journals. The library has over **36,000** volumes of technical and educational books, **3901** bound journals and **10004** Indian Standards. **545** new books were added to the library during 2010-11. The library imparts extension services to the polytechnics and engineering colleges in setting up and developing their libraries. Apart from providing services to faculty, staff and students of the institute, the library offers special membership and corporate membership facilities to the persons and institutions having academic and professional links with the institute. As a part of expansion programme, a separate e-resource section of the library has been set up this provides internet facilities, access to e-journals and facilities for using CDs/DVDs etc.

## **Mechanical Engineering Department**

The department conducted **17** short term courses for faculty of polytechnics and **08** short term courses for engineering colleges, in which **198** teachers from polytechnics and **91** teachers from engineering colleges were trained in various areas of mechanical engineering. Significant training programmes conducted by the department included CAD using CATA, PLC applications in Mechanical Engineering, CAD/CAM, Repair and Maintenance of Machine Tools, Advanced AutoCAD, Supervisory Development Programme for Workshop Instructors, Enterprise Resource Planning, Mechatronics, Robotics and Automation, CAD using ProE, Modeling & Simulation using MATLAB, CNC Machines: Operation and Programming Advances in Welding Technology, Computer Aided Production Management. The department developed software on Computer Based Tool for Modeling and Simulation using MATLAB. The department also produced instructional material on the above mentioned topics. The department faculty published **07** papers in the national/international journals and presented **04** papers in national/ international conferences. Under the guidance of faculty of the department **02** M.E. thesis were completed.

## **Media and Continuing Education Centre**

During the year 2010-11, Media and Continuing Education Centre conducted **06** training programmes for faculty of polytechnics and **04** programmes for faculty of engineering colleges in which **59** and **42** teachers were trained respectively. Significant training programmes conducted were in the area of e-Governance in Technical Education, Innovation and Creativity Development in Teachers and Students, Managing Yourself, Enhancing Motivation, Self Esteem and Professionalism in Teachers, Business and Soft Skills Development in institutions, Exploring identity, Role and Organization for excellence, Strategic Management and SWOT Analysis for Achieving Excellence. The department faculty produced **04** instructional booklets viz. (i) Business and Soft Skills Development in Technical Institutions, (ii) Exploring Identity, Role and Organization in Institutions, (iii) Institutional Accreditation (New Guidelines) and Quality Improvement and (iv) Enhancing Motivating, Self Esteem and Professionalism in Polytechnic Teachers.

The department undertook two research Studies on (i) Developing Qualification framework for TVET in India and (ii) Education and Training Mapping in the state of Haryana during the year under report. The department also completed two consultancies projects viz. SWOT Analysis and Training Need Analysis of (i) NIT, Hamirpur and (ii) PEC University of Technology, Chandigarh for TEQIP-II project of World Bank. The department faculty published/presented **04** technical papers in various international/national seminars/conferences and also attended training programmes at outside organizations. Dr. Rakesh Kumar Wats attended a Regional Programme on "Total Quality Management in Technical Institutions": organized by CPSC Manila, Philippines at Pokhara, Nepal from March 29 to April 02, 2010.

## **Rural Development Department**

The department conducted **15** training programmes for polytechnics and **3** programmes for engineering colleges in which **310** polytechnic teachers and **114** engineering college teachers participated. The department organized **2** SIRD, Assam sponsored training programmes on Application of Technology and Skill Development for Rural Development functionaries from Assam State. **27** officers participated in these **02** programmes. **18** workshops with respect to implementation of the Scheme of Community Development Through Polytechnics were organized for different states in the northern region in which **884** participants participated. The department also organized one workshop on Skill Development in which **21** officials from NITTTTRs participated.

The training programmes were conducted on the topics of Micro-Enterprise Development and Management; Training of Trainers in Masonry Skills; Appropriate Technology and Skill Development; Orientation to the Scheme of Community Development Through Polytechnics (CDTP); Earthquake Resistant Construction; Renewable Energy Based Technologies; Energy Efficient Buildings; Integrated Rural Development- A Practical Approach; Watershed Management and Rainwater Harvesting; Women Empowerment through Capacity Building; Dissemination of Appropriate Technologies; Low Cost Housing-a Practical Approach; Climate Change, Disasters and Sustainable Development; Earthquake Risk Management for Urban and Rural Housing.

The department has also produced study materials on the above mentioned topics.

The department organized a National Seminar on "Prospects and Challenges of Sustainable Agriculture and Organic Farming in India" on 24 - 25 March, 2011 at NITTTTR, Chandigarh. The major objective of this seminar was to focus on the prospects and challenges of sustainable agriculture and organic farming in India. In this seminar, **142** environmentalists, social scientists, social activists, farmers and technologists from various states participated and deliberated on various issues of organic farming. In this seminar, **34** research papers were presented along with **9** poster presentations. An Organic Mela was also organized as a part of the seminar in which organic agriculture products were displayed by the farmers from different parts of the northern India. Various important recommendations regarding strategies for tackling the problems of organic farming and formulating the path of sustainable development were made during the seminar.

The other achievement of the department was production of a video programme titled "Deen Bandhu Biogas Plant" under IIT-Delhi sponsored project. During the year, **6** papers were published/presented by the faculty of the department in various national seminars/conferences.

## **Instructional Resources Marketing Unit**

Over the years, the institute faculty has produced a good amount of print and non-print instructional resources like books, laboratory manuals, workbooks, data books, video films, slides, charts, trainer models, CAI packages, software etc. With a view to popularising the use of these instructional resources, IRMU was established in 1995 to promote and undertake dissemination and distribution (sale) of instruction resources developed by the institute to users viz. technical institutions in general and polytechnics in particular. IRMU has created awareness among teachers about the development and use of different learning resources and teaching aids for instruction.

## **Electronics Service Centre**

Electronics Service Centre established in the year 1984, has been undertaking repairs of electronics and electrical instruments of technical institutions in the region through training programmes on a no-profit-no-loss basis. During the year under report, centre has conducted **06** programmes for polytechnics and engineering colleges. **70** participants from polytechnics and engineering colleges were trained during these programmes. Besides providing hands-on training to the participants, the centre has also rendered services to technical institutions through repair of **28** equipment/ instruments of their institutes.

## **2.8 Other Significant Activities**

### **(i) Skill Development Mission of Government of India – NITTTR’s Role**

The Ministry of Human Resource Development, Government of India has asked the NITTTRs to help the Ministry in capacity building for skill training in institutions following under its umbrella. Accordingly, NITTTR Chandigarh has been given a gigantic task of preparing **250** curricula documents for offering skill training particularly at skill level I and II covering **05** sectors of Indian Economy. The institute has so far prepared curriculum documents for **70** trades spread over five sectors of Indian Economy. Details of curriculum documents prepared are as under:

<b>Building</b> Construction and Real Estate	=	15
<b>Unorganized</b> Sector/Unorganized Employment in Organized Sectors	=	25
<b>Tourism</b> , Travel, Hospitality and Trade	=	11
<b>Media</b> and Entertainment	=	10
<b>Gems</b> and Jewellery	=	09

## (ii) **Qualification Enhancement Opportunities through Staff Development**

In order to meet the growing need of qualified teachers in the technical education system of the country, the Institute initiated concerted efforts in November, 2003 for offering modular training programmes. This was envisaged as an alternative to the traditional/regular programmes being offered in engineering colleges/universities, in view of the reluctance of the administrative authority/management of technical institutes to relieve the technical teachers for a long duration of two years resulting in disruption of teaching schedule besides the personal and family problems of the faculty.

The institute has this path-breaking innovation to its credit, that for the first time in the country, ME Modular Programmes are being offered by it. During the year under report, **182** teachers were admitted in these Modular Training Programmes. In addition, there are **53** students registered for Ph.D including **22** under Quality Improvement Programme.

### **3.0 INSTITUTIONAL INFRASTRUCTURE**

#### **3.1 Land and Constructed Space**

The Institute's main campus is located in the educational complex in Sector 26 on a plot of about **16.94 acres (6.85 hectares)** of land. The buildings in the main campus include:

- **Homi Bhabha Academic Block** housing the departments of Applied Science, Civil Engineering, Electrical Engineering, Electronics Service Centre, Electronics and Communication Engineering, Mechanical Engineering and Rural Development
- **Ramanujan Centre for Computer Science and Educational Television** housing the departments of Computer Science, Information Management and Coordination, Educational Television and Media Centre.
- **Sir Bose J C Academic and Administrative Block** housing the Director's Office, Administrative and Accounts Section, Institute's Library and the departments of Curriculum Development, Education and Educational Management and Entrepreneurship Development and Industrial Coordination.
- **Visvesvaraya Lecture Hall Complex** includes **08** numbers of Hi-tech Lecture Halls.
- **Chandrasekhar Hall, Amartya Hall and Tagore Hall** (hostel for boys and girls), **Raman Hall** (Post Graduate Students Hostel), and **Student Centre**.
- **Har Gobind Khorana Guest House**.
- Faculty and Staff Residences.

Besides the main campus in Sector 26, there are additional residential campuses in Sectors 29 and 42 with seventy six houses for residential accommodation for staff and faculty. The total built up area is **39325 sqm**. The institute also has a children park in Sector-29 campus and a gym-cum-meditation centre in Sector - 42 campus.

### 3.2 Equipment

Equipment worth **Rs. 234.29 lakh** (Rs.229.49 lakh under main account and Rs. 4.80 lakh under NCP/OSC-OBC scheme) was purchased during the year 2010-2011. Thus the total value of equipment went up to **Rs.1948.19 lakh**. However, after providing applicable depreciation on the assets, the net value of the equipment works out to **Rs. 765.83 lakh** as on **31.03.2011**.

### 3.3 Furniture

Furniture worth **Rs.46.50 lakh** was purchased (**Rs. 45.04** under main accounts and **Rs. 1.46 lakh** under OSC-OBE Scheme) during the year 2010-11. The total value went up to **Rs. 182.70 lakh**. However, after providing applicable depreciation under rules, the net value of furniture works out to **Rs. 100.14 lakh** as on **31.3.2011**.

### 3.4 Expenditure

An expenditure amounting to **Rs. 2453.48 Lakh** [(Rupees **385.92 lakh** under Plan –Non Recurring-Creation of Capital Assets, Rs. 148.26 lakh under Plan (General)-Recurring, **Rs. 194.09 lakh** under Plan -(OSC)-OBC and **Rs. 1725.21 lakh** under Non Plan – (Recurring)] has been incurred during the financial year **2010-2011**.

### 3.5 Library

i)	Number of Books available in Institute Library as on 31.03.2011	36,363
ii)	Books purchased during the Financial year 2010-11	545
iii)	Journals subscribed during the year 2010-11	e-Journals 300 Print Journals 53 Bound Journals 3901 Indian Standards 10004

## 4.0 INSTITUTE STAFF DEVELOPMENT

Staff Development is extremely important for bringing about any qualitative change in the system. It, therefore, needs to be planned in a manner so as to provide for the growth of the individual in accordance with one's innate capabilities and interests, bearing in mind one's job requirements as it is at present and likely to be in the foreseeable future.

In this direction, the institute continued to promote the development of its faculty and staff so as to provide opportunities to upgrade their technological capabilities in terms of knowledge and skills. The activities under this aspect ranged from deputing faculty and staff for short term programmes organised by institutes of higher learning of the country and participation in various conferences and seminars. The institute also organised in-house training programmes for its own faculty/staff.

**The details of training programmes attended by institute faculty/staff are given in Annexure III.**

## 5.0 VISIT OF IMPORTANT PERSONS TO THE INSTITUTE DURING 2010-11

S. No.	Name and Address
1.	Dr. Suman Sahai, Director, Gene Campaign (NGO), New Delhi
2.	Prof. Robert Berry, Dean , Applied Science and Engineering, Aston University, UK
3.	Md. Fazle Rabbi, Deputy Director (Finance), Bangladesh Public Admn. Training Centre, Bangladesh
4.	Ms. Nitiyaporn Imajai, Controller General's Department, Ministry of Finance, Thailand
5.	Ms. Thakshila Ranatunga, Ministry of Industry and commerce, Srilanka
6.	Mr. Joel T. Fagsao, Xijen College of Mountain Province, Bontoc, Mountain Province
7.	Shri Ashok Sharma, Chief Executive, Cleantech International Foundation, 52/1, CR Park, New Delhi – 110 019
8.	Shri S C Kaushik, Chief General Manager, National Bank for Agricultural & Rural Development (Punjab Regional Office), Chandigarh
9.	Shri Devinder Chawla, MD, Smriti Built Chem. Pvt. Ltd., Sector 34, Chandigarh
10.	Dr. S C Jain, Director, SVIET, Banur (Punjab)
11.	Dr. P S Rao, Former Principal, Punjab Engineering College, Sector 12, Chandigarh
12.	Dr. Baljeet Kapoor, Former Principal, Chandigarh College of Engineering and Technology, Sector 26, Chandigarh
13.	Shri Praveen Yadav, DGM (FTS), NTPC, Koldam, Sundernagar

## 6.0 AUDITED ACCOUNTS

The Audited Accounts of the Institute for the year 2010-2011 duly certified by Accountant General's office are enclosed at **Annexure IV**.

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## INSTRUCTIONAL MATERIAL DEVELOPMENT

The following instructional material has been developed by the institute faculty during the year 2010-11 :

Sr. No.	Instructional Material Developed	Author(s) Name
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### PRINT MATERIAL

#### TEXT BOOKS

- |    |  |                 |
|----|--|-----------------|
| 1. | Curriculum Innovations in Technical and Vocational Education (Vol. I and II ), M/s Abishek Publisher, Chandigarh | CDC Faculty     |
| 2. | Advances on Frontiers of Entrepreneurship – From Research to Results   | DD Sharma et.al |
| 3. | Women Entrepreneurship and Management of Small and Medium Enterprises  | DD Sharma et.al |

#### LABORATORY MANUALS

- |    |                              |             |
|----|------------------------------|-------------|
| 1. | Applied Physics - II         | CDC Faculty |
| 2. | Applied Chemistry - II       | CDC Faculty |
| 3. | General Workshop Practice-II | CDC Faculty |

#### MODULES

- |     |   |            |
|-----|---|------------|
| 1.  | Case Studies-Technology Management  | AN Pathak  |
| 2.  | Case Studies- Engineering Applications  | AN Pathak  |
| 3.  | Management of Small and Medium Enterprises  | DD Sharma  |
| 4.  | Entrepreneurship Creativity, Innovation and Incubation using Blue Ocean Strategies  | SK Dhameja |
| 5.  | Quality Assurance and NBA Accreditation in Technical Institutions (revised version) | DD Sharma  |
| 6.  | Entrepreneurship Development  | DD Sharma  |
| 7.  | Labour Market Analysis and Industry-Institute Interaction                           | SK Dhameja |
| 8.  | Implementation of TQM and ISO 9001:2008 in Technical Institutions                   | DD Sharma  |
| 9.  | Generic Skills for Industrial Placement of Students                                 | DD Sharma  |
| 10. | Planning and Management of Placement Activities of Technical Institutions           | DD Sharma  |

Sr. No.	Instructional Material Developed	Author(s) Name
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### READERS

1.	Types of Highway Construction	AK Duggal
2.	Team Building	SP Bedi
3.	Managing Conflict in Team	SP Bedi
4.	Adaptability	SP Bedi
5.	Manufacturing Technology -II	PS Rao

### OTHER PRINT MATERIAL

#### BOOKLETS

1.	Guidelines for Selecting Equipment for 1 <sup>st</sup> year Laboratories and General Workshop Practice of 3-years diploma programmes being offered in the state of Punjab	CDC Faculty
2.	Principles and Practices of Management and Organizational Behaviour	DD Sharma
3.	Fundamentals of Entrepreneurship Development	DD Sharma
4.	Abstract of National Conference on Entrepreneurial Innovations: Case Studies of Entrepreneurs, Incubators, Incubates and Parks	SK Dhameja
5.	Business and Soft Skills Development in Technical Institutions	YK Anand/R Wats
6.	Exploring Identity, Role and Organization in Institutions	YK Anand/R Wats
7.	Institutional Accreditation (New Guidelines) and Quality Improvement	YK Anand/R Wats
8.	Enhancing Motivating, Self Esteem and Professionalism in Polytechnic Teachers	YK Anand/R Wats
9.	Technical and Vocational Education of the Differently Abled Persons	JS Saini
10.	Rehabilitation, Education and Training of the Differently Abled Persons	JS Saini

#### COURSE MATERIAL

1.	Reforms in Examination System	CDC Faculty
2.	Integrating Generic Skills with Diploma Curriculum	CDC Faculty
3.	Matlab Programming	Maitreyee Dutta
4.	Image Compression Algorithm	Maitreyee Dutta
5.	Marginalizing Rural Women	Maitreyee Dutta
6.	Wireless Networks	C Rama Krishna

<b>Sr. No.</b>	<b>Instructional Material Developed</b>	<b>Author(s) Name</b>
7.	Network Security	C Rama Krishna
8.	Wireless LANs	C Rama Krishna
9.	Digital Video and its Standards	Shano Solanki
10.	E-Learning Material Development: Tools and Techniques	Shano Solanki
11.	Graphics and Image Data Types	Shano Solanki
12.	CAI and Multimedia Packages	Shano Solanki
13.	Introduction to Digital Camera	Shano Solanki
14.	Introduction to World Wide Web and Internet	Shano Solanki
15.	Preparing Students for Job Interviews	EMGT Faculty
16.	Evaluation and Setting of Question Papers	EMGT Faculty
17.	Competencies for 21 <sup>st</sup> Century	EMGT Faculty
18.	Communication and Presentation Skills	EMGT Faculty
19.	Stress and Time Management	EMGT Faculty
20.	Building Positive Attitudes	EMGT Faculty
21.	Reforms in Examination System	EMGT Faculty
22.	Effective Teaching	EMGT Faculty
23.	Planning for Effective Instruction	EMGT Faculty
24.	Managerial Skills	EMGT Faculty
25.	Institutional Management and Evaluation	EMGT Faculty
26.	Modern Office Management and Evaluation	EMGT Faculty
27.	Pedagogy	EMGT Faculty
28.	Personality Development	EMGT Faculty
29.	Positive Attitude	EMGT Faculty
30.	Emotional Intelligence at Workplace	EMGT Faculty
31.	Motivation, Creativity and Team Building	EMGT Faculty
32.	Building Excellence	EMGT Faculty
33.	Research Methodology	EMGT Faculty
34.	3-G Communication	Garima Saini
35.	Computer Networking	OS Khanna
36.	MATLAB Programming	Swapna Devi

<b>Sr. No.</b>	<b>Instructional Material Developed</b>	<b>Author(s) Name</b>
37.	FPGA Based DSP Applications	Swapna Devi
38.	Programmable Logic Devices	Kanika Sharma
39.	TCP/IP Based Computer Networking	OS Khanna
40.	Introduction to Embedded System	Rajesh Mehra
41.	Advances in DSP and its Applications	Swapna Devi
42.	GSM, GPRS to 3G	Garima Saini
43.	VLSI System Design	Rajesh Mehra
44.	Wireless LANs	OS Khanna
45.	ANN Fuzzy Logic and other Soft Computing Techniques	Swapna Devi
46.	Wireless Sensor Networks	Kanika Sharma
47.	Communication using MATLAB	Garima Saini
48.	Bio-Inspired Computational Techniques	Swapna Devi
49.	Wireless LANs	OS Khanna
50.	Micro-Enterprise Development and Management	RD Faculty
51.	Training of Trainers in Masonry Skills	RD Faculty
52.	Appropriate Technology and Skill Development	RD Faculty
53.	Orientation to the Scheme of Community Development through Polytechnic	RD Faculty
54.	Earthquake Resistant Construction	RD Faculty
55.	Renewable Energy Based Technologies	RD Faculty
56.	Energy Efficient Buildings	RD Faculty
57.	Integrated Rural Development – A Practical Approach	RD Faculty
58.	Watershed Management and Rainwater Harvesting	RD Faculty
59.	Women Empowerment through Capacity Building	RD Faculty
60.	Dissemination of Appropriate Technologies	RD Faculty
61.	Low Cost Housing – A Practical Approach	RD Faculty
62.	Climate Change, Disasters and Sustainable Development	RD Faculty
63.	Earthquake Risk Management for Urban and Rural Housing	RD Faculty

<b>Sr. No.</b>	<b>Instructional Material Developed</b>
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## **NON-PRINT MATERIAL**

### **CAI PACKAGES**

1. Modeling and Simulation using MATLAB

### **VIDEO PROGRAMMES**

1. Virtual Knowledge Grid
2. Global Learning Environment
3. Tele Academic - Technology and Application
4. Video and Computer Technology
5. Specific Gravity of Soil
6. Basics of Wireless Communication
7. Basics of Wireless Communication - Hindi
8. NITTTTR in Service of Technical Education
9. Introduction to Camera-Hindi
10. Introduction to Camera-English
11. Comparison of Wireless Communication
12. Examples and Advantages of Wireless Communication (English)
13. Wireless Communication : Examples and Advantages (Hindi)
14. 3 Ds MAX Poly Modeling - Part I
15. 3 Ds MAX Spline Modeling
16. Wireless Communication System ka Tulnatmak Adhyyan
17. 3 Ds MAX Lighting Part-I
18. 3 Ds MAX lighting II
19. Cooking with the Sun
20. Speaker Recognition Post Graduate Students Hostel
21. Speaker Recognition Part-II
22. Rising Dampness in Walls
23. Retrofit of Water Retaining Structures
24. Sealing of Building Joints
25. Repair & Maintenance of Buildings – A Systematic Approach
26. Toilet Dampness
27. 3 Ds Max Shading Part I
28. 3 Ds Max Shading Part II
29. Tips of Self Motivation
30. Time Domain Models for Discrete Time Systems
31. Principles of Discretization
32. Water/Damp Proofing
33. Water/Damp Proofing (Practical Aspects)
34. Firewalls
35. Types of Firewalls, Pocket Filtering Router and Application

<b>Sr. No.</b>	<b>Instructional Material Developed</b>
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36. Circuit Level Gateway
37. Deen Bandhu Bio Gas Plant - A Boon for Farmers
38. Creativity and Innovation
39. Construction Chemicals
40. Data Warehouse
41. Data Mining
42. Blue Ocean Strategy for Technical Entrepreneurship Development
43. Blue Ocean Strategy for Technical Entrepreneurship Development (Case Study)
44. Good Laboratory Practices
45. 3 Ds Max Basic Animation
46. Implementation of the Optimal Receiver for A WGN Channel
47. Frequency Domain Implementation of the Matched Filter
48. Entrepreneurship-Need of the Time (part- 1)
49. Entrepreneurship-Need of the Time (part- 2)
50. Small Business Management
51. Potential of IT Industry
52. Security Ports and Services
53. Concealed Ports
54. An Introduction to 3 Ds MAX - Part I
55. Current Trends in Cyber Crime and Practicing Cyber Safety
56. 3 Ds MAX Visual Effects and Animation
57. Introduction to 3 Ds MAX Modeling
58. The Role of Enzymes and Microbial Technology in Food Processing Part - I
59. The Role of Enzymes and Microbial Technology in Food Processing Part - II
60. Aspects of Curriculum, Implementation and Evaluation Part - I
61. Aspects of Curriculum, Implementation and Evaluation Part - II
62. Memory Management
63. CMOS, VLSI and Design Tools Part-1
64. CMOS, VLSI and Design Tools Part-2
65. CMOS, VLSI and Design Tools Part-3
66. Liquid Biofuels – An Industrial Perspective
67. MATLAB Part -1
68. Personality Development
69. Climate Change and Sustainable Development – A Case of Himalayan Region
70. Introduction to 3Ds MAX - Part II

<b>Sr. No.</b>	<b>Instructional Material Developed</b>
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71. Computational Swarn Intelligence – A Conceptual Journey from Insects to Robots
72. Artificial Neural Network Part- I
73. Artificial Neural Network Part- II
74. MATLAB-Part 2
75. Yuva Aakankshaen – EK Pratibimb
76. Development of Mixed Forest
77. 3 Ds Max Look Development Part -1
78. 3 Ds Max Look Development Part -2
79. 3 Ds Max Poly Modeling Part -1
80. 3 Ds Max Poly Modeling Part - 2
81. 3 Ds Max Spline Modeling Part - 2
82. 3 Ds Max Lighting & Camera (Standard Lights)
83. Deen Bandhu Bio-Gas Plant Part - 2
84. Stress Management
85. NBA An Introduction and Graduate Competency Profile
86. Production of Biopharmaceuticals; Role of Biotechnology
87. Mobile Repair : Tools and Components
88. Mobile Repair: Fault Finding Part -1
89. Mobile Repair: Fault Finding Part -2
90. Genotype-Phenotype to Genomics & Phenomics : A Journey of 107 years
91. Entrepreneurial Support System
92. Entrepreneurial Activity – Benefits and Pitfalls

**A. PAPERS PUBLISHED BY THE INSTITUTE FACULTY**

Sr. No.	Title of the Paper Published	Author(s) Name
<b>APPLIED SCIENCE</b>		
1.	“Performance Analysis of FTTH at 40 Gbits/s by GEAPON Architecture”, published in International Journal of Computer Science Issues, Vol.7, Issue 5, p. 268.271, Sep. 2010	AN Pathak et.al
2.	“Performance Analysis of FTTH at 10 Gbits/s by GEAPON Architecture”, published in CIIT International Journal , Vol.3, Aug, 2010	AN Pathak et.al
3.	“Expanding Universe – An Incomprehensible Mystery”, published in Everyman’s Science-The Indian Science-Congress Association, Dec, 2010	AN Pathak Parijat De
4.	“Significance of Data Models in Knowledge Discovery”, published in CIIT International Journal, Data Mining Knowledge Engineering, Vol. 4, March, 2011	AN Pathak et.al
5.	“A Study on Selective Data Mining Algorithms”, published in International Journal of Computer Science Issue, Volume 8 Issue 2, March, 2011	AN Pathak et.al
6.	“Higher Order Dispersion Compensation in Different Modulation Formats”, published in International Journal of Applied Engineering Research, ISSN 0973-4562, Vol.5, No.15 (2010), pp 2565-2578	BC Choudhary et.al
<b>CIVIL ENGINEERING</b>		
7.	“Sub-grade Strengthening with Geosynthesis and Non-Biogradable Wastes: A Perspective”, published in journal of Engineering & Technology Education, Vol.4, No.1, Jan-Jun, 2010	SK Sharma et.al
8.	“Effect of Eccentricity on Analysis and Design of Isolated footings”, published in Civil Engineering Portal <a href="http://www.engineering.civil.com">www.engineering.civil.com</a>	H Sood et.al
<b>COMPUTER SCIENCE</b>		
9.	“Comparative Analysis of Gabor Filter based and Gaussian filter Based Fingerprint Recognition System”, published in International Journal of Computer Science, System Engineering and Information Technology, ISSN: 0974-5807 published by Serial Publications, 2010	M Dutta et.al
10.	“Web-based Watermarking for Image Authentication”, published in the International journal of Advances in Computational Sciences and Technology, ISSN No. 0973-6107, Vol.3, Number 1, pp 39-47 , 2010	M Dutta et.al
11.	“Separation of Tabla from Singing Voice using Percussive Feature Detection”, published in International Journal of Computer Science and Communication Vol. 1, No.1, PP 219-222, Jan-Jun, 2010	M Dutta et.al



Sr. No.	Title of the Paper Published	Author(s) Name
12.	"K-Means Clustering Algorithm-Implementation and Analysis", published in International Journal of Computing and Applications, ISSN: 0973-5704, Vol. 5, No.1, PP 9-15, Jun, 2010	M Dutta et.al
13.	"Hough Transform Based Skew Detention", published in International Journal of Computing and Applications, ISSN : 0973-5704, Vol.5, No. 1, PP 27-31, Jun, 2010	M Dutta et.al
14.	"Handwritten English Character Recognition Using New Quadrant Splitting Feature Extraction Technique", published in International Journal of Computer Science and Engineering Technologies (ISSN: 2044-6004) Vol.1, Issue 4, Dec 2010	M Dutta et.al
15.	Multi-Dimensional Analysis of 802.11 Wireless Network Security Protocols", published in International Journal of the Computer, the Internet and Management, Vol. 18, No.2, PP 40-47, Aug, 2010	C Rama Krishna et.al
16.	"Location Management Optimization Schemes for Cellular System", published in International Journal of Computer Applications, Vol.4, No.4, PP 1-5 Jul, 2010	C Rama Krishna et.al
17.	"Prosodic Feature Based Text Dependent Speaker Recognition using Machine Learning Algorithms", published in International Journal of Engineering and Technology, Vol.2, No. 10, PP 5150-5157, Oct, 2010	C Rama Krishna et.al
18.	Article on "Fishing Phishing", published in The Tribune (English Newspaper) in the Science and Technology Section, July 2, 2010	C Rama Krishna
19.	"A Study of Location Aided Routing (LAR) Protocol for Vehicular Adhoc Networks in Highway Scenario", published in International Journal of Engineering and Information Technology (IJEIT), Vol.2, No.2, Waves Publisher, PP 118-124, Sep, 2010	Amit Doegar et.al
<b>EDUCATIONAL TELEVISION CENTRE</b>		
20.	"Simulation of Power Electronic Wave Forms of Single Phase Full Converter Using MATLAB/SIMULINK and ANN", published in International Journal of Resent Trends in Engineering, Vol.3, No.2, May, 2010	SS Pattnaik et.al
21.	"Extrapolated Biogeography-Based Optimization (EBBO) for Global Numerical Optimization and Microstrip Patch Antenna Design", published in International Journal of Applied Evolutionary Computation (IJAEC), Vol.1, No.3, PP. 1-26, 2010	SS Pattnaik et.al
22.	"Metamaterial Embedded Electrically Small Planar Loop Antenna", published in Journal of Telecommunications, Vol. 7, No.1, PP 7-12, Feb, 2011	SS Pattnaik et.al

Sr. No.	Title of the Paper Published	Author(s) Name
23.	“Multimodal Function Optimization Using Synchronous Bacterial Foraging Optimization Technique”, published in IETE Journal of Research, Vol. 56, Issue – 2, pp 80-87, March-April, 2010,	SS Pattnaik et.al
24.	“Electrically Small Patch Antenna Loaded with Metamaterial”, published in IETE Journal of Research, Vol. 56, No.6, pp 373-379, Nov – Dec, 2010	SS Pattnaik et.al
<b>ENTREPRENEURSHIP DEVELOPMENT AND INDUSTRIAL COORDINATION</b>		
25.	“Identifying and Ranking Critical Success Factors for Implementation of Total Quality Management in Indian Manufacturing Industry Using TOPSIS”, published in the Asian Journal of Quality, Vol. 12, Issue 1, PP 124-138, Jan-Apr, 2011	DD Sharma et.al
26.	“Integrated and Management System in Indian Manufacturing Organizations: Some Key Findings from an Empirical Study”, published in the TQM Journal, Vol.22, No. 6, PP 670-686, 2010	DD Sharma et.al
27.	“Quality Management in Indian Manufacturing Organizations: Some Observations and Results from a Pilot Survey”, published in Brazilian Journal of Operations and Production Management, Vol. 7, Issue 1, PP 141-162, 2010	DD Sharma et.al
28.	“A Survey on Indian Experience on Integrated Management Standard (IMS)”, published in International Journal for Quality Research, Vol.3, No.3, PP 1-11, 2010	DD Sharma et.al
29.	“ISO 9000 Implementation in Indian Manufacturing Organizations”, published in International Journal of Global Business and Management Research, Vol.2, Oct, 2010	DD Sharma et.al
<b>ELECTRONICS AND COMMUNICATION ENGINEERING</b>		
30.	“FPGA Based Hardware Co-Simulation of an Area and Power Efficient FIR filter for Wireless Communication Systems”, published in Journal of Technology Management for Growing Economies, pp. 113-122, Vol.1, No.1, April, 2010	Rajesh Mehra et.al
31.	“Efficient Hardware Co-Simulation of Down Convertor for Wireless Communication Systems”, published in International journal of VLSI design & Communication Systems (VLSICS), pp.13-21, Vol. 1, No. 2 ISSN : 0976-1357 (Online); 0976-1527 (print) June, 2010	Rajesh Mehra S Devi
32.	“Reconfigurable Design of an Area Efficient Digital Converter for SDR Based Wireless Communication Systems”, published in Journal of Communication and Computer (JCC), USA, Vol. 7, No.7, Serial No. 68, pp.28.32, ISSN: 1548-7709, July, 2010	Rajesh Mehra S Devi

Sr. No.	Title of the Paper Published	Author(s) Name
33.	“FGPA Based Design of High Performance Decimator using DALUT Algorithm”, published in International Journal of Signal & Image Processing (IJSIP), Volume-1, Issue2, pp 9-13, ISSN: 2152-5056, July 2010	Rajesh Mehra S Devi
34.	“Memetic Algorithm the Meta-heuristic with BFOA’s Chemotaxis as Local Search for Unimodal and Multimodal Function Optimization”, published in International Journal of Computer Sciences, Software Engineering and Electrical Communication Engineering (IJSSEECE), Vol.1 (2), PP 71-76, 2010	S Devi et.al
35.	“Area Efficient & Cost Effectiveness Pulse Shaping Filter for Software Radios”, published in International Journal of Ad hoc, Sensor & Ubiquitous Computing (IJASUC) Vol.1, No.3, pp. 85-91, ISSN: 0976-1764 (Online); 0976-2205 (Print) September, 2010	Rajesh Mehra S Devi
36.	“FPGA Based Design of Digital Wave Generator Using CORDIC Algorithm”, published in International Journal of Computer Technology and Applications (IJCTA), Volume 1, Issue1, pp. 54-58, ISSN: 2229-6093, Nov-Dec, 2010	Rajesh Mehra et.al
37.	“FPGA Design of Optimized CIC Interpolator for DSP Based Wireless Communication Systems”, published in Journal of Innovation, Computer Science Section, Volume -5, Issue-2, pp 43-46, Dec, 2010	Rajesh Mehra
38.	“FPGA Based Efficient WCDMA DUC for Software Radios” Cyber Journals: published in Multidisciplinary Journals in Science and Technology, Journal of Selected Areas in Microelectronics (JSAM), pp 8-13, ISSN: 1925-2676 December, 2010	Rajesh Mehra
39.	Reconfigurable Optimized WCDMA DDC for Software Defined Radios” Cyber Journals: Multidisciplinary Journals in Science and Technology, Journal of Selected Areas in Telecommunications (JSAT), pp 1-6, December, 2010	Rajesh Mehra
40.	“Low Power Design of 64-bits Memory by using 8-T Proposed SRAM Cell”, published in International Journal of Research and Reviews in Computer Science (IJRRCS), Vol1, No.4, pp.168-172, ISSN: 2079-2557, S010	Rajesh Mehra et.al
41.	“High Speed and Area Efficient 2D DWT Processor based Image Compression”, published in International Journal of Signal and Image Processing (SIPIJ), Volume 1, Number 2, PP.22-31, ISSN: 0976-710 C (Online); 2229-3922 (Print), December, 2010	Rajesh Mehra et.al
42.	“FPGA Based Kalman Filter for Wireless Sensor Networks”, published in International Journal of Computer Technology and Applications (IJCTA), Vol. 2 (1), 155-159, ISSN: 229-6093, January, 2011	Rajesh Mehra et.al

Sr. No.	Title of the Paper Published	Author(s) Name
43.	"High Speed and Cost Effective Equalizer for ISI Removal," published in International Journal of Engineering Science and Technology (IJEST), Vol.3, No.1, pp 249-256, ISSSN: 0975-5462, Jan, 2011	Rajesh Mehra et.al
44.	"A New Method for Color Image Quality Assessment", published in International Journal of Computer Applications, Vol.6, Issue.2, Feb, 2011	S Devi et.al
45.	"Full Reference Image Quality Assessment in Spatial Domain", published in International Journal of Computer Science and Applications, Vol. II, Issue.1, PP 8-12, Feb, 2011	S Devi et.al
46.	"Effect of Non-Local Means Filter in Homomorphic Framework Cascaded with Bacterial Foraging Optimization to Eliminate Speckel", published in Ciit International Journal of Digital Image Processing, Vol.3, No.2, PP 129-133, Feb, 2011	S Devi et.al
47.	"Embedded Design of an Efficient Noise Canceller for Digital Receivers", published in International Journal of Engineering Science and Technology (IJEST), Vol.3, No.2, ISSN: 0975-5462, pp.1252-1257, Feb, 2011	Rajesh Mehra et.al
48.	"Optimized Noise Canceller for ECG Signals", published in International Journal of Computer Application (IJCA) ICISD (ISBN:978-93-80749-02-6), Vol.1, PP 0-17, Mar, 2011	S Devi et.al
49.	"Design of RRC Filter for ISI Removal in Software Defined Radios", published in International Journal of VLSI and Signal Processing Applications (IJVSPA), Vol1, Issue:1, pp. 1-5: ISSN 2231-3133, March, 2011	Rajesh Mehra et.al
50.	"Power Interleaver Design for IDMA system", published in International journal of VSRD-TNTJ, Vol.2(1), pp.25-29, ISSN No:0976-7967, 2011	Garima Saini et.al
51.	"Performance Analysis of Blind Source Recovery Multiuser Detector for Varying Number of Samples and Iterations", published in International Journal of Electrical, Electronics and Communication Engineering, Vol.1(1), pp.13-20, ISSN No: 2231-3346, 2011	Garima Saini et.al
<b>ELECTRICAL ENGINEERING</b>		
52.	"Design and Development of a Multi-utility Device for Data Acquisition Monitoring and Control", published in National Journal of Engineering and Technology Education, NITTTR, Chandigarh Vol.4, No.1 January-June, 2010, pp 31-37	S Chatterji et.al
53.	"Ripple-Based Extremum Seeking Control and Optimization of Maximum Power Point Tracking for Photovoltaic System", published in Journal of Engineering & Technology, Management and Applied Science, of Graphic Era University, Vol.2, No.1, March, 2010	S Chatterji et.al

Sr. No.	Title of the Paper Published	Author(s) Name
54.	“Emission Analysis of CI Engine using Soya Oil and their Esters”, published in International Journal of Engineering Research and Industrial Application (IJERIA) Vol.3, NO.IV, November, 2010, pp.247-260	S Chatterji et.al
55.	“Performance Analysis of CI Engine using Jatropa oil and their Esters” published in International Journal of Advanced Engineering and Technology, Vol. 3, No.1, Apr, 2010	S Chatterji et.al
56.	“Emission Analysis of CI Engine using Rice Bran Oil and Their Esters” published in Journal of Engineering Research and Studies , Vol.II, Issue 1, January-March, 2011	S Chatterji et.al
57.	“Performance Analysis of CI Engine using Rice Bran Oil and their Esters” published in International Journal of Recent Trends in Engineering and Technology, Vol.3, No.2, May 2010	S Chatterji et.al
58.	“Automatic Maximum Power Point Tracker for Solar PV Modules using D-space Software”, published in International Journal of Sustainable Energy, Taylor and Francis, U.K. Vo. 29, No.3, PP 151-163, Sep, 2010	S Chatterji et.al
59.	“The Effect of Dreating on Component Selection and Product Design”, published in International Journal of Reliability and Safety, Inder Science Enterprises Ltd., Vol.4 No.1, 2010	S Chatterji et.al
60.	“Performance Evaluation of Digital Grain Moisture Analyser for Indian Wheat” published in Journal of Scientific & Industrial Research, Vol.No.70, pp.41-44, January 2011	Ritula Thakur et.al
<b>MECHANICAL ENGINEERING</b>		
61.	“Cryogenic Process- A Review”, published in International Journal of Engineering Sciences and Technologies, PP 601-605, Vol.3, No.1, Jan, 2011	BS Pabla et.al
62.	“Thermodynamic Analysis of Free Piston Free Displacer Miniature Cryocoder with Real Processes”, published in International Journal of Engineering and Technology, PP 464-470, Vol.3, No.1, Jan, 2011	BS Pabla et.al
63.	“Current Issue in CAD Model Data Exchange - A Review”, published in International Journal of Engineering Studies”, published in International Journal of Engineering Studies, PP 329-336, Vol.2, No.3, 2010	BS Pabla et.al
64.	“Optimization of Column Design Using Real Coded Genetic Algorithm”, published in IUP Journal of Mechanical Engineering, Vol. 3, No. V, PP 26-42,PP 758-780, Nov.6, 2010	BS Pabla et.al
65.	“Performance Evaluation of ERP Implementation in Indian SMEs”, published in Journal of Manufacturing Technology Management, Vol.21, No. 6, 2010	SS Banwait et.al

Sr. No.	Title of the Paper Published	Author(s) Name
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| 66. | "Systematic Failure Mode Effect Analysis: Applications and Weak Spots", published in the Indian Journal of Technical Education, Vol.33, PP 58-68, Sep, 2010                       | SS Banwait et.al |
| 67. | "ERP Benefits and Critical Success Factors: A Case Study", published in journal of Emerging Technology in Mechanical Science and Engineering, Vol.1, No.2, PP 41-51, Aug-Dec,2010 | SS Banwait et.al |

### **RURAL DEVELOPMENT**

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| 68. | "Assessment of Water Quality for Drinking and Irrigation Purposes in Selected Watersheds of Himachal Pradesh, India", published in International Journal of Applied Environmental Sciences, Volume 5, Number 3 (2010), pp 411-420 | UN Roy et.al |
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## **B. PAPERS PRESENTED/ACCEPTED AT IMPORTANT CONFERENCES AND SEMINARS**

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
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### **APPLIED SCIENCE**

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|----|---|--------------|
| 1. | "Power Calculation in Advanced Modulation Formats", Paper ID-300 presented in National Conference BEATS 2010 at NIT Jalandhar, 17-19 Dec, 2010  | BC Choudhary |
| 2. | "NO <sub>2</sub> Sensing by Zinc Tetraphenyleporphine-Resource Raman and Infrared Studies", presented in International Conference on Advances in Condensed and Nanomaterials (ICACNM 2011) at Department of Physics, PU Chandigarh, 23-26 Feb, 2011 | BC Choudhary |
| 3. | "Resonance Raman and Infrared Study of Diethyl Amine Sensing by Zinc Tetraphenyleporphine Thin Films", presented in Chandigarh Science Congress CHASCON 2011 at Panjab University, Chandigarh, 26-28 Feb, 2011                                      | BC Choudhary |

### **COMPUTER SCIENCE**

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| 4. | "Performance Evaluation of Routing Protocols for MANETs Under Different Traffic Conditions", published in the proceedings of 2 <sup>nd</sup> IEEE International Conference on Computer Engineering and Technology, Chengdu, China, PP 79-82, 16-18 Apr, 2010       | C Rama Krishna et.al |
| 5. | "Performance Evaluation of Routing Protocols Based on Wormhole Attack in Wireless Mesh Networks", published in the proceedings of 2 <sup>nd</sup> IEEE International Conference on Computer and Network Technology, Bangkok, Thailand, PP 102-104, 23-25 Apr, 2010 | C Rama Krishna et.al |
| 6. | "Performance Analysis of Cross-layer MAC and Routing Protocols in MANETs" published in the proceedings 2 <sup>nd</sup> IEEE International Conference on Computer and Network Technology, Bangkok, Thailand, PP 53-59, 23-25 Apr, 2010                              | C Rama Krishna et.al |

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
7.	“Antecedence Graph Approach to Checkpointing for Fault Tolerance in Multi Agent Systems”, published in the proceedings of 12 <sup>th</sup> International Conference on Enterprise Information Systems, Funchal, Madeira, Portugal, 8-12 Jun, 2010	C Rama Krishna et.al
8.	“Integrated Mechanism to Prevent Agent Blocking in Secure Mobile Agent Platform System”, published in the proceedings of IEEE International Conference on Advances in Computer Engineering, Bangalore, PP 158-162, 21-22, Jun, 2010	C Rama Krishna et.al
9.	“Comprehensive Performance Analysis of MAC Protocols for Wireless Sensor Networks”, published in the proceedings of IEEE International Conference on Computer and Communication Technology, PP 342-347, 17-19 Sep, 2010	C Rama Krishna et.al
10.	“Antecedence Graph Based Checkpointing and Recovery for Mobile Agents”, published in the proceedings of IEEE International Conference on Communication, Control and Computing Technologies, PP 419-424, 7-9 Oct, 2010	C Rama Krishna et.al
11.	“New Fault Tolerance Approach using Antecedence Graphs in Multi Agent Systems”, published in the proceedings of International Conference on Advanced in Computer Science, Trivandrum, India, PP 28-32, 20-23 Dec, 20110	C Rama Krishna et.al
12.	“New Distributed Initialization Protocols for IEEE 802.11 Based Single Hop Ad Hoc Networks”, published in the proceedings of Springer First International Conference on Computer Science and Information Technology, Bangalore, India PP 179-189, 2-4 Jan, 2011	C Rama Krishna et.al
13.	“Performance Evaluation of Fine Tuned Fuzzy Token Bucket Scheme for High Speed Networks”, published in the proceedings of Springer First International Conference on Computer Science and Information Technology, Bangalore, India, PP 126-136, 2-4 Jan, 2011	C Rama Krishna et.al
14.	“New Techniques of Key Expansion, Edge-Detection and Impulse Noise Removal for Encrypting and Processing Digital Image”, published in International Conference on Advanced Computing and Communicating Technologies at APIIT, Panipat, Haryana 30 Oct, 2010	Amit Doegar
15.	“Content Based Video Retrieval using Mobile Agent”, published in International Conference on Advanced Computing and Communication Technology at RG Education Society, Rohtak, PP 406-409, 20-22 Jan, 2011	Sangeeta Gupta
<b>CURRICULUM DEVELOPMENT CENTRE</b>		
16.	“An Empirical Plan for Setting up Fish Farming Enterprise – A Case for Opportunity Recognition”, presented in the 17 <sup>th</sup> Annual EDIC National Conference on Entrepreneurial Innovations, Case Studies of Entrepreneurs, Incubators, Incubatees and Parks at NITTTTR Chandigarh 9-10 Nov, 2010	PK Singla

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
17.	“Role of Education and Information and Communication Technology in Enhancing Human Potential”, presented in the International Conference on Enhancing Human Potential – Biopsychic Social Perspective at Department of Psychology, Panjab University, Chandigarh 15-17 Nov, 2010	PK Singla
<b>EDUCATIONAL TELEVISION CENTRE</b>		
18.	“Enhanced Biogeography-Based Optimization using Modified Clear Duplicate Operator”, published in proceedings of Second World Congress on Nature and Biologically Inspired Computing (NaBIC2010), pp 722-727, Japan, 15-17 Dec, 2010	SS Pattnaik et.al
19.	“Electrically Small Rectangular Microstrip Patch Antenna Loaded with Metamaterial” published in the proceedings of 9 <sup>th</sup> International Symposium on Antennas, Propagation and EM Theory (ISAPE,2010), Guangzhou, China, PP 247-250, 29 Nov – 02 Dec, 2010	SS Pattnaik et.al
20.	“Discrete Variables Function Optimization using Accelerated biogeography-based optimization”, published in the proceedings of B K Panigrahi et al. (Eds.): SEMCCO 2010, LNCS 6466, PP 322-329, Springer-Verlag Berlin Heidelberg, 2010, DOI: 10.1007/978-3-642-17563-3_39	SS Pattnaik et.al
21.	“Optimal Load Dispatch Using Accelerated Biogeography-Based Optimization”, published in the proceedings of Joint International Conference on Power Electronics, Drives and Energy Systems (PEDES) & Power India, 21-23 Dec, 2010	SS Pattnaik et.al
22.	“Metamaterial Antenna for Aircraft’s Ice Detection Sensor” presented in National Symposium on New Horizons in Avionics Display Systems (NHADS-2010) at CSIO Chandigarh 23 Oct, 2010	SS Pattnaik et.al
23.	“Soft Computing Techniques for Aircraft Engine Health Estimation: A Brief Review”, presented in National Symposium on New Horizons in Avionics Display Systems (NHADS -2010) at CSIO, Chandigarh, 23 Oct, 2010	SS Pattnaik et.al
24.	“Memetic Algorithm for Unimodal and Multimodal Function Optimization”, presented in National Symposium on New Horizons in Avionics Display Systems (NHADS -2010) at CSIO, Chandigarh, 23 Oct, 2010 ( <b>Best paper awarded</b> )	SS Pattnaik et.al
25.	“Microstrip Patch Antenna Loaded with Magnetoinductive Waveguide”, presented in 12 <sup>th</sup> National Symposium on Antennas and Propagation (APSYM 2010), Department of Electronics, Cochin University of Science and Technical (CUSAT), Cochin, India, PP 101-105, Dec, 2010	SS Pattnaik et.al
26.	“Textile Based Metamaterial Antenna using Offset Split Ring Resonator and Extended Stubs”, presented in 12 <sup>th</sup> National Symposium on Antennas and Propagation (APSYM 2010), Department of Electronics, Cochin University of Science and Technical (CUSAT), Cochin, India, PP 101-105, Dec, 2010	SS Pattnaik et.al



Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
27.	“Metamaterial Loaded Wearable Microstrip Patch Antenna”, project presented in IEEE MTTS Student Branch Chapter, Department of Electronics Engineering, Rajasthan Technical University, Kota, 26-27 Feb, 2011	SS Pattnaik et.al
28.	“Offset Cut Circular Split Ring Resonator with Extended Stubs as Planar Wearable Metamaterial Antenna”, project presented in IEEE MTTS Student Branch Chapter, Department of Electronics Engineering, Rajasthan Technical University, Kota, 26-27 Feb, 2011	SS Pattnaik et.al
<b>EDUCATION AND EDUCATIONAL MANAGEMENT</b>		
29.	“Emotional Intelligence and Occupational Stress among College Teachers”, presented in International Conference on Enhancing Human Potential: Bio-Psychological Perspectives’ PU, Chandigarh 15-17 Nov, 2010	PK Tulsi et.al
30.	“Preparedness of Institutions of Higher Learning for Autonomy”, presented in National Conference on Re-Engineering and Benchmarking in Higher Education Sector in India: A Way Forward through ICT, PGGC, Chandigarh, 19 March, 2011	PK Tulsi et.al
31.	“Develop Soft Skills among Prospective Engineers: Prospective Approach to Enhance Quality of Work Life”, presented in International Conference on Enhancing Human Potential: Bio-Psychological Perspectives’ Panjab University, Chandigarh 15-17 Nov, 2010	SP Bedi et.al
32.	“Enhancing Quality of Work Life in Technical Institutions’ Strategies to cope with Stress” during International Conference on Enhancing Human Potential: Bio-Psychological Perspectives’ PU, Chandigarh 15-17 Nov, 2010	SP Bedi et.al
<b>ELECTRICAL ENGINEERING</b>		
33.	“Frequency and Moisture Dependence of the Electrical Properties of Indian Wheat” presented in National Conference on Agrionics and Food Processing Instrumentation” at CSIO during 26-28 September, 2010	Ritula Thakur et.al
34.	“Soil Apparent Electrical Conductivity Measurement using Virtual Instrumentation”, published in the proceedings of IEEE sponsored International Conference on Computer and Electrical Engineering-(ICCEE 2010), Chengdu, China, 16-18 November, 2010	Ritula Thakur
35.	“Programmable AC Current Source using Mixed Signal Microcontroller for Reliable and low cost Soil Conductivity Sensor”, published in the proceedings of IEEE sponsored International conference on Embedded System and Microprocessors (ICESM 2010) Manila, Philippines, 04-05 December, 2010	Ritula Thakur
36.	“Pyroelectric Infrared (PIR) Sensor: Characteristics and Applications”, presented in National Conference on Advance and Futuristic Trends in Material Science at Department of applied Physics, Faculty of Engineering and Technology, M.J.P.Rohilkhand University, Bareilly, 26-27 March, 2011	S Chatterji et.al

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
37.	“Measurement and Analysis of Harmonics & Efficacy of Different Types of Luminaries and Filtering Solution”, presented in National Conference on Innovative Projects, NCIP 2011, Baddi University, Baddi, 25-26 March, 2011	S Chatterji et.al
38.	“LabVIEW based simulation of UPFC in Single Machine Infinite Bus System”, presented in National Conference on Challenges to Indian Power Scenario by 2020 (NCCIPS 2020-11) at Padmshri Dr. Vithalrao Vikhe Patil College of Engineering, Ahmednagar, India, 24-25 February, 2011	Lini Mathew et.al
39.	“Lab VIEW BASED Simulation of Multi Machine System Incorporated with SVC”, presented in International Conference on Emerging Trends in Engineering and technology (IETET-2010)” at Geeta Institute of Management and Technology, Kurukshetra, during 14-16 October, 2010	Lini Mathew et.al
<b>ELECTRONICS AND COMMUNICATION ENGINEERING</b>		
40.	“Grayscale Image Quality Measure in Spatial Domain”, published in the proceedings of IEEE International Conference on Computer and Communication Technology, pp 224-229, AllahabadSep, 2010	S Devi et.al
41.	“Image Quality Metric for Coupled Noise and Distortion” published in the proceedings of 4 <sup>th</sup> IEEE International Conference on Advance Computing and communication Technologies, pp 301-305, PanipatOct, 2010	S Devi et.al
42.	“Neural Computation of Equivalent- Circuit Parameters for Designing the Matematerials Based Rectangular and Square MSRR Structures” published in the proceedings of National Seminar of Wireless Communication and Mobile Computing, PP 41-43, Bhubaneswar, Orissa 8-9 Oct, 2010	S Devi et.al
43.	“Modified Memetic Algorithm for the Removal of Power Line Interference in ECG Signals” published in the proceedings of 4 <sup>th</sup> IEEE Conference on Advanced Computing and Communication Technologies, (ICACCT 2010), PP 754-759, Panipat30 Oct, 2010	S Devi et.al
44.	“Speckle Denoising using Non-Local Means Filter Cascaded with Bacterial Foraging Optimization Technique” published in the proceedings of International Conference on Information and Communication Technology (ICICT 2010), PP 285-288, Chennai 16-17 Dec, 2010	S Devi et.al
45.	“Combination of Wavelet Analysis and Non-Linear Enhancement Function for Computer Aided Detection of Microcalcifications”, presented in International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2010), PP 44, NIT, Jalandhar, 18-20 Dec, 2010	S Devi et.al
46.	“Automatic Image Contrast Enhancement Using PSO”, presented in International Conference on Biomedical Engineering and Assistive Technologies (BEATS-2010), PP 44, NIT, Jalandhar, 18-20 Dec, 2010	S Devi et.al

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
47.	“Adaptive PSO Algorithm with Non-Linearly decreasing Inertia Weight” presented in International Conference Biomedical Engineering and Assistive Technologies (BEATS-2010), PP 44, NIT, Jalandhar, 18-20 Dec, 2010	S Devi et.al
48.	“Memetic Algorithm the Meta-heuristic for Better Convergence with Chemotaxis as Local Search”, published in the proceedings of International Conference on Swarm, Evolutionary and Memetic Computing (SEMCCO-2010) India, pp. 45-46, (SRM University), Chennai, 2010	S Devi et.al
49.	“Mammographic Image Enhancement using Double Sigmoid Transformation Function”, published in the proceedings of International Conference on Computer Applications (ICCA-2010) – Computer Applications-1, PP 259-264, Pondicherry, 24-27 Dec, 2010	S Devi et.al
50.	“Denoising of ECG Signals Using Modified Memetic Algorithm” presented in the International Conference of Intelligent Systems and Data Processing (ICISD 2011) Gujarat, PP 105-110, GH College of Engineering Technology 24-25 Jan, 2011 <b>(Best paper award)</b>	S Devi et.al
51.	“Modified PSO Algorithm with high exploration and exploitation Ability” presented in International Conference on Advance Computing and Communication Technology, Rohtak, Jan, 2011	S Devi et.al
52.	“FPGA Based Design of an Optimized Digital Down Converter for Software Radio Wireless Applications”, published in the proceedings of Innovative Conference on Embedded Systems, Mobile Communication and Computing (ICEMC2), pp. 43-51, Andhra Pradesh, India-2010	Rajesh Mehra S Devi
53.	“System Generator Based Design of Equalizer for ISI Removal in Wireless Applications”, published in the proceedings of National Conference on Advances in Digital Signal Processing (NCADSP), pp 52-54, Chitkara Institute of Engineering and Technology, Rajpura (Punjab),22-23 Oct, 2010	Rajesh Mehra et.al
54.	“Particle Swarm Optimization for DSP Based Adaptive Filtering” published in the proceedings of National Conference on Advances in Digital Signal Processing, (NCADSP), 58-60, Chitkara Institute of Engineering and Technology, Rajpura (Punjab), 22-23 Oct, 2010	Rajesh Mehra et.al
55.	“Design of a Reconfigurable Optimized Alias Free WCDMA Decimator”, published in he proceedings of National Conference on Advances in Digital Signal Processing, (NCADSP), pp 136—137, Chitkara Institute of Engineering and Technology, Rajpura (Punjab), 22-23 Oct, 2010	Rajesh Mehra et.al
56.	“FPGA Implementation of High Speed Pulse Shaping Filter for SDR Applications”, published in the proceedings of Springer International Conference Volume 90, Part 1, ISBN: 978-3-642-14493-6-23 pp.214-222, Springer, Chennai (Tamil Nadu), 23-25 Jul, 2010	Rajesh Mehra S Devi

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
57.	"Reconfigurable Area & Speed Efficient Interpolator using DALUT Algorithm for Wireless Communication Systems", published in the proceedings of Springer International Conference (CCIS), Volume 132, Part 1, 117-125, ISBN:978-642-17878-8-13 Springer, Chennai (Tamil Nadu), 27-29 Dec, 2010	Rajesh Mehra et.al
58.	"An FPGA Implementation Efficient Equalizer for ISI Removal in Wireless Applications", published in the proceedings of International Conference on Emerging Trends in Robotics and Communication Technologies (INTERACT), pp. 96-99, IEEE-2010, Chennai (Tamil Nadu), 13-15 Dec, 2010	Rajesh Mehra et.al
59.	"Low Power Design of an SRAM Cell for Portable Devices", published in the proceedings of International conference on Computer and Communication Technology (ICCCT), pp. IEEE 2010, Allahabad, (UP), 17-19 Sep, 2010	Rajesh Mehra et.al
60.	"Optimized Design of Decimator for Alias Removal in Multirate DSP Applications", published in the proceedings of 10 <sup>th</sup> WSEAS International Conference on WAVELET ANALYSIS & MULTIRATE SYSTEMS (WAMUS), PP.100-113, Kantaoui, Sousse, Tunisia 2010, 3-6 May, 2010	Rajesh Mehra S Devi
61.	"FPGA Based Hardware Co-Simulation of Digital Wave Generator for Wireless Communication Receivers", published in he proceedings of International Conference on Advances and Emerging Trends in Computing Technologies (ICAET), pp.391-394, Chennai (Tamil Nadu), 21-24 June, 2010	Rajesh Mehra S Devi
62.	"Optimized Design of CIC Decimator using Embedded LUTs of FPGA for Wireless Communication Systems", published in the proceedings of International Conference on Control (CCPE), Communication and Power Engineering, pp.207-209, Chennai (Tamil Nadu), 28-29 July, 2010	Rajesh Mehra S Devi
63.	"Effect of Onboard GSM Mobile Communication on Avionics Display and Communication Equipments", presented in National Conference on NAHADS 2010, at CSIO Chandigarh, 23 October, 2010	Garima Saini
64.	"A New Approach to OFDM System with Improved Processing Time and Reduced Bit Error Rate", presented in National Seminar on 'Wireless Communication and Mobile Computing' at Cuttack, India 08-09 October, 2010	Garima Saini et.al
65.	"Neural Computation of Equivalent-circuit Parameters for Designing the Metamaterials Based Rectangular and Square MSRR Structures", presented in National Seminar on Wireless Communication and Mobile Computing at Cuttack, India 08-09 October, 2010	Garima Saini et.al
66.	"SER performance of Reed-Solomon Codes with & without Interleaver using 16 QAM", presented in National conference on Computing Communication & Information Technology (CCIT-2010), SLIET Longowal, Sangrur, pp.37, 28-29 May, 2010	Garima Saini et.al

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
67.	“Performance Evaluation of DQPSK & QPSK with Reed-Solomon Codes”, published in the proceedings of 5 <sup>th</sup> International Multi-Conference on Intelligent Systems, Sustainable, New & Renewable Energy Technology & Nanotechnology (IISN-2011), Institute of Science & Technology (ISTK) Klawad, pp 83-85, 18-20 <sup>th</sup> Feb, 2011	Garima Saini et.al
68.	“PAPR Analysis of OFDM based 4G Mobile Communication (Hindi)”, presented in “National Scientific and Official Language Technical Seminar on Modern Scientific Equipment and Systems”, Chandigarh, Paper ID:26, pp 89, 3 BRD Air Force March 9, 2011	Garima Saini
69.	“Low Complexity MMSE Based Channel Estimation Technique In OFDM systems” published in 2010 IEEE International Conference on Computational Intelligence and Computing Research, pp.749-752, Tamil Nadu College of Engineering Coimbatore (TN) 28-29 Dec.2010	Garima Saini
<b>ENTREPRENEURSHIP DEVELOPMENT AND INDUSTRIAL COORDINATION</b>		
70.	“Industry-Institute Interaction in Present Day Context”, presented in National Conference on A Paradigm Shift in Engineering and Technology: Need Industry-Institute Interaction, Apex Institute of Management and Technology, Indri, Karnal, Haryana 24 Apr, 2010	SK Dhameja
71.	“Blue Ocean Strategy for Entrepreneurs and Entrepreneurship Promotion”, presented in National Workshop on Entrepreneurship Development at JMIT Radaur, Haryana 28-29 Apr, 2010	SK Dhameja
72.	“Motivation Factors of Indian Entrepreneurs for Business Creation”, accepted for presentation in International Conference of Arts and Sciences Conference at Rome, Italy 22-25 Nov, 2010	DD Sharma et.al
73.	“Mapping of HR Skill Gaps and Training Requirements in Tourism Industry in India”, accepted for presentation in “International Conference on International Trade, Education and Marketing CITEM 2010” at Bohemia University, Ceske Budejovice, Czech Republic, Europe, 7-10 Dec, 2010	DD Sharma
74.	“Curricula Interventions: Doing Good is Essential for Reforming Well in Organisations”, presented in International Conference of Business Ethics being organized by University Business School, Panjab University, Chandigarh 22-23 Dec, 2010	DD Sharma
<b>MECHANICAL ENGINEERING</b>		
75.	“Evaluation of ERP implementation in an Indian Company: A Case Study”, accepted in Annual conference of Global Institute of Flexible System Management (GLOGIFT-2010), Keio University, Japan, 26-27 July 2010,	SS Banwait et.al
76.	“Impact of ERP on performance of SMEs: A study of Indian Company”, accepted in International Conference on Advanced Management Perspectives in Asia, Suzho, China, 15-17 October, 2010	SS Banwait et.al

Sr. No.	Title of the Paper Presented/Accepted	Author(s) Name
77.	“An Investigation of Enterprise Resource Planning Implementation: Empirical Evidence from Indian Companies”, accepted in ASME 2010 International Mechanical Engineering Congress & Exposition, Cancouver, Canada, 12-18 November 2010	SS Banwait et.al
78.	“Modeling and Simulation of a 2-link, 3-DOF Robotic Manipulator using Vector Loop Method”, presented in 2 <sup>nd</sup> International Conference on Production and Industrial Engineering, National Institute of Technology, Jalandhar, INDIA, 3-5 Dec, 2010	SS Dhami et.al
<b>MEDIA AND CONTINUING EDUCATION CENTRE</b>		
79.	“Strategic Planning for Sustainable Development”, presented in National Conference on “Environmental Degradation and its Impact on Mankind” organized by Punjabi University, Patiala, 19-20 Nov, 2010	RK Wats
80.	“Dribbling Psychology of Indian Youth” presented in International Conference on Enhancing Human Potential Bio-Psycho-Sociology Perspective at Punjab University, Chandigarh, 15-17 Nov, 2010	RK Wats
81.	“Sick Building Syndromes-An Impact of Indoor Pollution”, presented in National Conference on Recent Advances in Chemical and Environment Sciences” organized by MM Modi College, Patiala 23-24 Feb, 2011	RK Wats et.al
82.	“Antagonistic Relationship between Mycology and Civil Engineering” presented in National Conference on Application of Mycology at Punjabi University, Patiala 19-20 March, 2011	RK Wats
<b>CENTRE FOR PHYSICALLY CHALLENGED</b>		
83.	“Inclusive Technical and Vocational Education for Differently Abled Persons in India-Current Status, Issues and Challenges”, submitted to International Symposium scheduled to be held during the 8 <sup>th</sup> International Abilympics at Seoul in September, 2011	JS Saini
<b>RURAL DEVELOPMENT</b>		
84.	“Promotion of Green Technology and Green Entrepreneurship for Sustainable Development : An Experiment at NITTTR, Chandigarh” presented in National Conference on entrepreneurial Innovations: Case Studies of Entrepreneurs, Incubators, Incumbatees and Parks, organized by NITTTR, Chandigarh on 9-10 November 2010	UN Roy et.al
85.	“Transfer of Appropriate Technology for Sustainable Rural Development”, presented in the International Seminar on Technology, Energy and Sustainable Rural Environment organized by Dept. of Geography, BHU Varanasi on 23-25 February, 2011	UN Roy
86.	“Prospects and Challenges and Sustainable Agriculture and Organic Framing in India”, presented in National Seminar on Prospects and Challenges and Sustainable Agriculture and Organic Farming in India, at NITTTR, Chandigarh, 24-25 March, 2011	UN Roy / JS Saini

<b>Sr. No.</b>	<b>Title of the Paper Presented/Accepted</b>	<b>Author(s) Name</b>
87.	“Organic Framing : Boon for Agriculture and Horticulture Production in Himachal Pradesh”, presented in National Seminar on Prospects and Challenges and Sustainable Agriculture and Organic Farming in India, , organized by NITTTR, Chandigarh, 24-25 March, 2011	UN Roy
88.	“Technology Park at NITTTR, Chandigarh – Bio-energy : Technology and Business Solutions for UK and India under Science Bridge Project”, presented in Dissemination Seminar on Enhanced Biomass Production and Energy Conversion for use in Water Scarcity Area of India and Bio-energy, at Indian Institute of Technology, Delhi, September 9-11, 2010	JS Saini

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**TRAINING PROGRAMMES ATTENDED BY INSTITUTE FACULTY/ STAFF**

<b>Sr. No.</b>	<b>Area and Place of Training</b>	<b>Period</b>	<b>Attended by Shri/Ms</b>
1.	Regional Programme on Total Quality Management in Technical Institutions organized by CPSC Manila at Pokhara, Nepal	Mar 29 – 02 Apr, 2010	Rakesh Wats
2.	Residential Training Programme on RTI ACT 2005 at Bhubneshwar, organized by institute of Public Administration, Bangalore	12-14 Apr, 2010	Sunil Dutt
3.	CE and QIP on “Advances in Geotechnical Engineering at IIT Bombay	12-16 Apr, 2010	V K Sonthwal
4.	Quality Improvement Programme on Theory and Practices in Construction Project Management at IIT Delhi	5-9 Jul, 2010	V K Sonthwal
5.	Design and Analysis using FEM, XFEM and Meshfree Method, IIT Roorkee	12-16 July, 2010	PS Rao
6.	AICTE/MHRD Programme on Intelligent Environment at NIT Hamirpur	15-19 Jul, 2010	SD Jassal V K Sonthwal
7.	Highway and Pavement Engineering – Challenges and Opportunities at IIT Kharagpur	30-31 Jul, 2010	AK Duggal
8.	Research and Data Analysis using SPSS 18.0' organized by department of Statistics, Panjab University, Chandigarh and SPSS South Asia Pvt. Ltd., Bangalore	16-17 Dec, 2010	SP Bedi
9.	Six-SIGMA and Research Methodology, PEC University of Technology, Chandigarh	20-24 Dec, 2010	SS Dhami
10.	Micro Scale Engineering, IIT, Kanpur	03-07 Jan, 2011	SS Dhami
11.	Winter School on Digital Art and Design at IIT Kharagpur	10-22 Jan, 2011	Swapna Devi
12.	Building Integrated Photo Voltiac Thermal System (BIPTS) at IIT, Delhi	8-14 Feb, 2011	BC Choudhary
13.	AICTE sponsored STC on “Robotic Vision and Image Processing at IIT Roorkee	21-25 Feb, 2011	Amit Doegar
14.	Rapid Prototyping and Manufacturing at IIT Bombay	23-25 Feb, 2011	SS Banwait



<b>Sr. No.</b>	<b>Area and Place of Training</b>	<b>Period</b>	<b>Attended by Shri/Ms</b>
15.	Quality Improvement Programme on Software Project Management at IIT Kharagpur	23-27 Feb, 2011	C Ramakrishna
16.	Geotechnical Aspects of Earthquake Engineering, IIT, Gandhinagar	08-11 Mar, 2011	Amit Goyal
<b>IN-HOUSE TRAINING PROGRAMME</b>			
1.	DST Sponsored Programme on Entrepreneurship Development at NITTTR Chandigarh	16-27 Aug, 2010	Rakesh Wats Sunil Dutt BC Choudhary Hemant Sood SD Jassal V K Sonthwal

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# INDIAN AUDIT & ACCOUNTS DEPARTMENT

## भारतीय लेखा तथा लेखा परीक्षा विभाग



Office Of The Principal Accountant General (Audit) Punjab & U.T.  
(U.T. OFFICE) Plot No.21 (New Audit Building)  
Sector-17, Chandigarh-160 017

प्रधान महालेखाकार (लेखा परीक्षा), पंजाब एंव यू.टी.०

यू.टी.० कार्यालय, चण्डीगढ़- १६० ०

☎- 2543370, 2546368

No. T/OAD(C)/SAR/NTTTR/2010-11/309  
Date: 24-11-2011

To

The Director (T),  
Government of India,  
Ministry of Human Resource Development,  
Department of Secondary and Higher Education,  
Shastri Bhawan, New Delhi - 110 001.

**Subject:-** Audit Report on the Accounts of National Institute of Technical Teachers Training and Research, Chandigarh for the year 2010-11.

Sir,

I am enclosing a copy of Audit Report (English), on the annual accounts of National Institute of Technical Teachers Training and Research, Chandigarh for the year 2010-11 to be placed before both the houses of Parliament. The date of presentation of this report before both the houses of Parliament may please be intimated to this office. Kindly send us five copies of the above report after presentation. Please acknowledge the receipt of this letter.

Yours faithfully,

*Sd/x*

Sr. Deputy Accountant General

**Encls:** 1 Audit Report (English) Draft SAR

✓ A copy of Audit Report forwarded to the Director, National Institute of Technical Teacher's Training and Research, Sec 26, Chandigarh for information and necessary action please.

*[Signature]*  
Sr. Deputy Accountant General

**Separate Audit Report of the Comptroller & Auditor General of India on the Accounts of the National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh for the year ended 31 March 2011.**

- 1 We have audited the attached Balance sheet of National Institute of Technical Teachers' Training and Research, Chandigarh as at 31 March 2011 and the Income & Expenditure Account/Receipts & Payment Account for the year ended on that date under Section 20(1) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971. The audit has been entrusted upto 2012-13. 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 & 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 disclosure 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/Receipts & Payment Account dealt with by this report have been drawn up in the format approved by the Government of India, Ministry of Finance.

iii) In our opinion, proper books of accounts and other relevant record have been maintained by the National Institute of Technical Teachers' Training and Research, Chandigarh as required under Clause 19 (a) of the Memorandum of Association of the Institute in so far as it appears from our examination of such books.

iv) We further report that:

**A Balance Sheet**

**1. Liabilities**

**1.1 Current liabilities and Provisions (Schedule-2)**

**Provision for Pension Fund**

Provision for liability towards pension on superannuation of employees needs to be made on actuarial basis as per the requirement of the Form of financial statements prescribed for autonomous bodies by the Government of India. The same has not been done.

**2 Assets**

**2.1 Fixed Asset (Schedule-4)**

**Land: ₹ 24.81 lakh**

- i. Above does not include ₹ 15.68 lakh (including stamp duty ₹ 1.16 lakh) paid (April 1979) for free hold land measuring 15 Acre in Sector 26 in possession of the Institute. It has resulted in understatement of fixed assets as well as Corpus/ Capital fund by ₹ 15.68 lakh.
- ii. The Institute has amortized the lease premium of lease hold land on the basis of period of lease land amounting to ₹ 5.91 lakh during the year 2010-11. However, the institute has shown the amount of ₹ 5.91 lakh as Deduction/ Transfer during the year 2010-11 from gross block of land instead of amortization. This has also resulted in understatement of gross block of Fixed Assets (Land) by ₹ 5.91 lakh.

**2.2 Assets under GOI Projects (Schedule 4A): ₹ 53.37 lakh**

These assets were created out of Grants for Specific purpose/ projects as such these assets should have been shown separately as utilization under Earmarked/ Endowment Funds as required in Form of Financial Statements for the Central Autonomous Bodies. This has resulted in overstatement assets as well as liabilities (Earmarked/ Endowment Funds) by ₹ 53.37 lakh.

**B Receipts and Payments Account**

**Grants received from Government of India**

**On Capital Account-Creation of Capital Assets: ₹ 412.00 lakh**

**On Revenue Account: ₹ 1965.00 lakh**

The Institute received grants of ₹ 2377.00 lakh (Plan: ₹ 628.00 lakh and Non-Plan: ₹ 1749.00 lakh including Grant-in-transit of ₹ 739.50 lakh) from the Government of India during the year 2010-11. The Institute bifurcated the same into 'On Capital Account-Creation of Capital Assets': ₹ 412.00 lakh and 'On Revenue Account': ₹ 1965.00 lakh. However, the basis/methods of bifurcation/presentation in the financial statements as required in AS-12 "Accounting for Government grants" issued by the Institute of Chartered Accountants of India, have not been disclosed.

**C General**

**C.1** Broadsheet(s) in respect of Provident Fund (₹ 1127.89 lakh) has not been maintained in the format prescribed in the para 6.8 and the closing has also not been done in the manner prescribed in the para 6.9 of Civil Accounts Manual.

**C.2 Net impact of Audit comments on the Annual Accounts**

Net impact of Audit comments on the Annual Accounts of NITTTR for the year ending 31 March 2011 is as under:

- i Asset overstated by ₹ 37.69 lakh.
- ii Capital/ Corpus Fund understated by ₹ 15.68 lakh.
- iii Liabilities overstated by ₹ 53.37 lakh.

**D. Grants in aid**

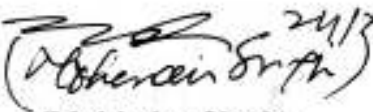
Out of the grant in aid of ₹ 23.40 crore (Plan: ₹ 5.91 crore and Non Plan: ₹ 17.49 crore) received during the year and ₹ 2.77 crore (Plan: ₹ 0.09 crore and non Plan: ₹ 2.68 crore) generated from internal resources, the organization could utilize a sum of ₹ 24.53 crore (Plan: ₹ 7.28 crore and Non Plan: ₹ 17.25 crore) leaving a balance of ₹ 8.42 crore (Plan: ₹ 2.29 crore and Non Plan: ₹ 6.13 crore) as unutilized grant as on 31<sup>st</sup> March 2011. The opening balance of grants was ₹ 6.78 crore (Plan ₹ 3.57 crore and non Plan: ₹ 3.21 crore).

**E. Management letter**

Deficiencies which have not been included in the Audit report have been brought to the notice of the Institute's management through a management letter issued separately for remedial / corrective action.

- v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and Income & Expenditure Account/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-I 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 National Institute of Technical Teachers' Training and Research, Chandigarh as at 31<sup>st</sup> March 2011; and
- b. In so far as it relates to Income & Expenditure Account of the surplus for the year ended on that date.

**For and on behalf of the C & AG of India.**

 24/12/2011  
(Mohinder Singh)

**Principal Accountant General (Audit)  
Punjab & UT, Chandigarh**

**Place: Chandigarh**

**Date:**



## **Annexure-I to Audit Report**

### **1 Internal Audit System:**

The Institute had an internal audit wing. However, the internal audit was deficient to the following extent:

- i. The scope of internal audit and audit programmes were not specified. Internal audit reports were also not generated.
- ii. There was no system in the Institution to ensure independence of the internal audit from accounting functions as persons dealing with accounts were also conducting the internal audit.

### **2 Internal Control System:**

The internal Control is considered adequate and commensurate with size and activities of the Institute except in respect of following areas which needs to be further strengthened:

- i. Accounting manual had not been prepared by the Institute.
- ii. There was no plan of rotation of duties of employees dealing with cash, stocks and other valuables.
- iii. Security deposits/ fidelity guarantees were not obtained in respect of employees handling valuables such as cash and stocks.
- iv. Separate Register had not been maintained for recording issue of cheques.
- v. Register/list of title deeds for the landed properties and buildings was not being maintained.

### **3 Physical verification of Fixed Assets/ Inventory:**

Institute has been conducting physical verification of fixed assets/ Inventory, and no material deficiency was noticed on physical verification.

### **4 Regularity in payment of statutory dues:**

Institute is depositing undisputed statutory dues with the appropriate authorities.

  
Audit Officer

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR-26, CHANDIGARH**

**BALANCE SHEET AS AT 31.3.2011**

<b>LIABILITIES</b>	<b>SCHEDULE</b>	<b>CURRENT YEAR</b>	<b>PREVIOUS YEAR</b>
CORPUS/CAPITAL Fund	1	2022.41	1346.20
Current Liabilities and Provisions	2	1271.14	1481.50
Deposits	3	1383.64	1252.94
<b>Total Liabilities</b>		<b>4677.19</b>	<b>4080.64</b>

**ASSETS**

Fixed Assets - Net Block	4	2350.65	2030.76
Assets under GOI Projects	4A	53.37	62.76
Other Assets	5	10.46	10.03
Advances Account	6	25.81	24.20
Provident Fund /NPS etc.	7	1233.21	1078.09
Cash and Bank Balance	8	1003.69	874.80
<b>Total Assets</b>		<b>4677.19</b>	<b>4080.64</b>

**Sd/-  
Accounts Officer  
NITTTR, Chandigarh**

**Sd/-  
Director  
NITTTR, Chandigarh**



**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR-26, CHANDIGARH**

**INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.3.2011**

INCOME	SCHEDULE	CURRENT YEAR		PREVIOUS YEAR	
		Plan	Non Plan	Plan	Non Plan
		(RUPEES IN LAKH)			
Income from Sales/Service	9	0.00	0.00	0.00	0.00
Grant received under Revenue Account	10	216	1009.50	215.26	1285.00
Grant in Transit		0.00	739.50	0.00	0.00
Grant under (OSC)-OBC Scheme		0.00	0.00	0.00	0.00
Fee Subscription/Sundry Debtors	11	6.09	240.08	50.95	188.43
<b>Total</b>		<b>222.09</b>	<b>1989.08</b>	<b>266.21</b>	<b>1473.43</b>
<b>Grand Total Plan/ Non Plan</b>			<b>2211.17</b>		<b>1739.64</b>
<b>EXPENDITURE</b>					
Establishment Expenditure	12	80.08	1033.6	78.48	905.08
Other Expenses		50.27	30.26	79.97	21.07
Liabilities & Provisions	13	8.59	524.46	8.06	1036.52
Administrative Expenses	14	20.23	41.82	5.46	39.63
Operation & Maintenance		0	145.3	25.77	73.31
<b>Total</b>		<b>159.17</b>	<b>1775.44</b>	<b>197.74</b>	<b>2075.61</b>
Total Plan and Non Plan			<b>1934.61</b>		<b>2273.35</b>
<b>Balance being surplus carried over</b>			<b>276.56</b>		<b>-533.71</b>

Sd/-  
Accounts Officer  
NITTTR, Chandigarh

Sd/-  
Director  
NITTTR, Chandigarh

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH**  
**SECTOR-26, CHANDIGARH**  
**SCHEDULE FORMING PART OF BALANCE SHEET AS AT 31.3.2011**

<b>LIABILITIES</b>	<b>CURRENT YEAR</b>	<b>PREVIOUS YEAR</b>
	<b>RUPEES</b>	<b>IN LAKH</b>
<b>Schedule-1-Corpus/Capital Fund:</b>		
i Opening balance at the beginning of the year	1,263.14	1,568.11
ii Opening balance - Govt. of India Projects	83.06	114.02
iii Grant-in-aid received during the year-main account	375.00	91.74
iv Grant-in-aid received under (OSC)-OBC scheme	-	100.00
v Draft in transit	-	37.00
vi Add : Balance of Income/Expenditure Account	276.56	-533.71
vii Add prior period adjustments - Salary Arrear	57.73	-
viii Add prior period adjustments - Interest on CPF/GPF	1.60	-
ix Less prior period adjustments - Ammortization Charges	-5.66	-
x Less prior period adjustments - Property Tax	-28.58	-
xi Add prior period adjustments - PHD Fee	13.21	-
xii Less refund to GOI under sponsored projects	-	-15.23
xiii Net Capital/Corpus fund under GOI Projects	-13.65	-15.73
<b>Total</b>	<b>2,022.41</b>	<b>1,346.20</b>
<b>Schedule-2-Current Liabilities and Provisions</b>		
i Sundry Creditors-written off securities	2.90	2.90
ii Sundry creditors (time barred cheques)	2.24	0.86
<b>Provisions</b>		
i Leave Encashment	510.10	454.16
ii Gratuity	647.86	599.54
iii Pension & Leave Salary Contributions	4.34	0.30
iv Maintenance Student Centre, AC & Refrigerator/ Building	4.72	-
v Salaries	70.90	65.84
vi Dearness Allowance	8.27	10.83
vi Telephone & Trunkcall	0.29	0.17
viii Electricity & Water Charges	2.66	-
ix Pension to Retirees	13.95	1.80
x Interest on CPF/GPF	-	1.60
xi Property Tax	2.55	-
xii Arrears to faculty due to pay commission report	-	343.30
xiii Audit, Legal & Professional Charges	0.36	0.20
<b>Total</b>	<b>1,271.14</b>	<b>1,481.50</b>
<b>Schedule- 3- Deposits</b>		
<b>Recovery &amp; Deductions/Security Deposits etc</b>		
(as annexure-I)	<b>118.96</b>	<b>139.59</b>
Sponsored Projects- Plan	31.47	35.26
Provident Fund- (as per annexure-II)	1,127.89	1,078.09
New Pension Scheme- (as per annexure-III)	105.32	-
<b>Total</b>	<b>1,383.64</b>	<b>1,252.94</b>
<b>Total Liabilities</b>	<b>4,677.19</b>	<b>4,080.64</b>

**ASSESTS****Schedule - 4**

Assets Value-Net Assets as per schedule	2,092.15	967.97
Advance Account	87.78	416.19
Exp on building-OBC -work on progress	170.72	646.60
<b>Total</b>	<b>2,350.65</b>	<b>2,030.76</b>

**Schedule - 4 A**

Fixed Assets as per GOI Balance sheet	53.37	62.76
<b>Total</b>	<b>53.37</b>	<b>62.76</b>
<b>Total Fixed Assets</b>	<b>2,404.02</b>	<b>2,093.52</b>

**Schedule-5- Other Assets****Advance Securities**

Security of LPG	0.07	0.07
Security of LPG for PG Hostel	0.45	0.45
Security -SDO Electrical	0.01	0.01
Security of Electrical Meter	0.01	0.01
Security of Water Meter	0.01	0.01
Security of telephone - (EPABX)	0.15	0.15
Security of Meter at Principal's lodge	0.01	0.01
<b>Total</b>	<b>0.71</b>	<b>0.71</b>

**Postal Account**

Franking Machine-Postage- Opening Balance	0.96	0.39
Received during the year	1.80	3.25
Less consumed during the year	-2.40	-2.68
<b>Total</b>	<b>0.36</b>	<b>0.96</b>

**Printing & Stationery Account**

Opening Balance	3.63	3.12
Add during the year	5.48	5.57
Less consumed during the year	-5.06	-5.06
<b>Total</b>	<b>4.05</b>	<b>3.63</b>

**Consumable Stores**

Opening Balance	2.71	2.42
Add during the year	8.32	14.36
Less consumed during the year	-8.43	-14.07
<b>Total</b>	<b>2.60</b>	<b>2.71</b>

**Library Books/Journals**

Journals (Advance Account)-Opening balance	2.02	2.26
Add during the year	2.51	2.57
Less journals capitalized during the year	-1.91	-2.81
<b>Total</b>	<b>2.62</b>	<b>2.02</b>

<b>Sundry Debtors</b>		
Opening Balance	-	0.05
Add during the year - Rent Mess/Canteen	0.12	-
Less written off during the year	-	-0.05
<b>Total</b>	<b>0.12</b>	<b>-</b>
<b>Total Schedule - 5</b>	<b>10.46</b>	<b>10.03</b>

<b>Schedule- 6- Advance Account</b>		
Loans & Advances to Staff-Opening Balance	23.14	26.42
Paid during the year	8.17	4.34
Less recovered during the year	-6.55	-7.62
<b>Total</b>	<b>24.76</b>	<b>23.14</b>

<b>Permanent Imprest</b>		
Opening Balance	0.06	0.03
Add paid during the year	-	0.03
Less received during the year	-0.01	-
<b>Total</b>	<b>0.05</b>	<b>0.06</b>

Advance to Firms/TAX appeal	1.00	1.00
<b>Total</b>	<b>1.00</b>	<b>1.00</b>
<b>Total Schedule- 6</b>	<b>25.81</b>	<b>24.20</b>

<b>Schedule -7</b>		
Provident Fund -as per annexure-II	1,127.89	1,078.09
New Pension Scheme -as per annexure-III	105.32	-
<b>Total</b>	<b>1,233.21</b>	<b>1,078.09</b>

<b>Schedule - 8</b>		
Cash & Bank Balance-(with Nationalized Banks)		
Cash & Bank Balance as per GOI balance sheet	16.04	20.30
<b>Institute Grants Account</b>		
Cash in hand	1.48	1.81
Temporary Imprest	0.24	0.81
Balance at Bank	210.13	423.34
FDR- Deposits Account	36.30	391.54
Draft in transit	739.50	37.00
<b>Total</b>	<b>1,003.69</b>	<b>874.80</b>
<b>Total Assets</b>	<b>4,677.19</b>	<b>4,080.64</b>

Sd/-  
Accounts Officer  
NITTTR, Chandigarh

Sd/-  
Director,  
NITTTR, Chandigarh

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH, CHANDIGARH**

**FIXED ASSETS AS AT 31.3.2011**

**FIXED ASSETS- NET BLOCK - SCHEDULE -4**

	PARTICULARS	Rate %	GROSS BLOCK				DEPRECIATION			NET BLOCK		
			Cost/evaluation as at the beginning of the year	Additions before 30.9.2010	Additions after 30.9.2010	Deductions/Transfer during the year	cost/value at the year end	As at the beginning of the year	On Additions during the year	Total at the year end	As at the current year end	As at the previous year end
A	<b>Fixed Assets</b>											
1	<b>Institute Account</b>											
	Land	0	24.81	-	-	5.91	18.90	-	-	-	18.90	24.81
ii	Buildings- Residential	5	384.43	10.00	-	-	394.43	287.44	5.35	292.79	101.64	96.99
iii	Buildings- Office Block	10	396.10	4.69	-	-	400.79	286.76	11.40	298.16	102.63	109.34
iv	Buildings- Hostel	5	188.01	1,021.71	-	-	1,209.72	140.59	53.46	194.05	1,015.67	47.42
v	Equipments	15	1,708.54	90.51	107.97	2.68	1,904.34	1,097.85	112.88	1,210.73	693.61	610.69
vi	Computer	60	35.61	36.29	44.72	-	116.62	27.09	40.30	67.39	49.23	8.52
vii	Books	100	72.13	4.83	0.46	-	77.42	72.13	5.29	77.42	-	-
viii	Technical Journals	100	43.91	-	1.91	-	45.82	43.91	1.91	45.82	-	-
ix	Furniture	10	136.20	12.20	32.84	0.23	181.01	71.54	9.33	80.87	100.14	64.66
x	Vehicle	15	19.07	-	-	-	19.07	16.55	0.38	16.93	2.14	2.52
2	<b>Continuation Education</b>											
i	Equipments	15	4.40	-	-	-	4.40	4.09	0.05	4.14	0.26	0.31
3	<b>Sponsored Projects</b>											
	Equipments	15	7.42	-	3.11	-	10.53	6.50	0.37	6.87	3.66	0.92
4	<b>Assets under OBC-OSC</b>											
i	Equipments	15	2.27	1.69	-	-	3.96	0.48	0.52	1.00	2.96	1.79
	Furniture	10	-	1.45	-	-	1.45	-	0.15	0.15	1.31	-
ii	Books	100	1.27	-	-	-	1.27	1.27	-	1.27	-	-
	<b>Total - A</b>		<b>3,024.17</b>	<b>1,183.37</b>	<b>191.01</b>	<b>8.82</b>	<b>4,389.73</b>	<b>2,056.20</b>	<b>241.38</b>	<b>2,297.58</b>	<b>2,092.15</b>	<b>967.97</b>
B	<b>Advances Account</b>											
i	Capital Work in Progress with Chd Admn		416.19	-	-	385.61	30.58	-	-	-	30.58	416.19
ii	Capital Work in Progress with Chd Admin. - New Lab		-	57.20	-	-	57.20	-	-	-	57.20	-
iii	Expenditure on building-work in progress- OBC		646.60	63.11	-	646.60	63.11	-	-	-	63.11	646.60
	Expenditure on building-work in progress - OBC-OSC		-	107.61	-	-	107.61	-	-	-	107.61	-
	<b>Total - B</b>		<b>1,062.79</b>	<b>227.92</b>	<b>-</b>	<b>1,032.21</b>	<b>258.50</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>258.50</b>	<b>1,062.79</b>
	<b>Grand Total</b>		<b>4,086.96</b>	<b>1,411.29</b>	<b>191.01</b>	<b>1,041.03</b>	<b>4,648.23</b>	<b>2,056.20</b>	<b>241.38</b>	<b>2,297.58</b>	<b>2,350.65</b>	<b>2,030.76</b>

Sd/  
Accounts Officer  
NITTR, Chandigarh

Sd/  
Director,  
NITTR, Chandigarh

**Detail of Lease Hold Land of NITTTR  
Detail of Ammortization up to the Financial Year 2009-2010**

Land	Acre (Sq.Yard)	Date of Commencement of Lease	Period of Lease	Cost	Registry Charges	Total	Amount Amortized Per year	Amortized years	Amount to be ammortized	Amount Ammortised up to previous year
Sector 42-B, Chandigarh	6057.969	2.3.1988	99	1,428,706.00	47,985.00	1,476,691.00	14,916.00	22	328,154.00	313,238.00
Sector 29, Chandigarh	3622.958	15.6.1988	99	613,375.00	20,670.00	634,045.00	6,404.00	22	140,899.00	134,495.00
Sector 26, Chandigarh	4755.5555	23.10.1984	99	356,667.00	12,315.00	368,982.00	3,727.00	26	96,904.00	93,177.00
	14,436.48			2,398,748.00	80,970.00	2,479,718.00	25,047.00		565,957.00	540,910.00

**Detail of Lease Hold Land of NITTTR  
Detail of Ammortization up to the Financial Year 2010-2011**

Land	Acre (Sq.Yard)	Date of Commencement of Lease	Period of Lease	Cost	Registry Charges	Total	Amount Amortized Per year	Amortized years	Amount to be ammortized	Amount Ammortised up to previous year
Sector 42-B, Chandigarh	6057.969	2.3.1988	99	1,428,706.00	47,985.00	1,476,691.00	14,916.00	23	343,070.00	328,154.00
Sector 29, Chandigarh	3622.958	15.6.1988	99	613,375.00	20,670.00	634,045.00	6,404.00	23	147,303.00	140,899.00
Sector 26, Chandigarh	4755.5555	23.10.1984	99	356,667.00	12,315.00	368,982.00	3,727.00	27	100,631.00	96,904.00
	14,436.48			2,398,748.00	80,970.00	2,479,718.00	25,047.00		591,004.00	565,957.00

Sd/  
Accounts Officer  
NITTTR, Chandigarh

Sd/  
Director  
NITTTR, Chandigarh

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR-26, CHANDIGARH  
SCHEDULE FORMING PART OF INCOME & EXPENDITURE ACCOUNT FOR THE  
YEAR ENDED 31.3.2011**

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR	
	PLAN	NON PLAN	PLAN	NON PLAN
	(RUPEES		IN	LAKH)
<b>INCOME</b>				
<b>Schedule-9</b>				
Income from sales/service	-	-	-	-
<b>Schedule-10-Grants</b>				
<b>From Government of India</b>				
i Revenue Account	216.00	1,009.50	215.26	1,285.00
ii Grant in transit	-	739.50	-	-
iii Grant under (OSC)-OBC scheme	-	-	-	-
<b>Total</b>	<b>216.00</b>	<b>1,749.00</b>	<b>215.26</b>	<b>1,285.00</b>
<b>RECEIPTS</b>				
<b>Schedule-11</b>				
<b>a Internal Resources</b>				
<b>Interest Account</b>				
i Interest earned/accrued on S/B Account & FDRs	-	20.24	-	33.75
ii Interest received on advances to staff	-	4.08	-	2.03
<b>Total</b>	<b>-</b>	<b>24.32</b>	<b>-</b>	<b>35.78</b>
<b>b Rental Receipts</b>				
i Rent from Residential Houses	-	3.47	-	3.03
ii Rent from Hostel	-	36.47	-	16.74
iii Rent from AICTE	-	0.98	-	0.77
iv Rent from Mess/ Canteen	-	0.12	-	0.15
<b>Total</b>	<b>-</b>	<b>41.04</b>	<b>-</b>	<b>20.69</b>
<b>c Fee Receipts</b>				
i Fee from ME Students	-	103.10	-	79.37
ii Fee under various courses	6.09	25.12	4.97	18.93
<b>Total</b>	<b>6.09</b>	<b>128.22</b>	<b>4.97</b>	<b>98.30</b>
<b>d Receipt from other sources</b>				
i Institute Receipts -misc.-Tender fee/IPOs etc.	-	5.62	-	9.46
ii Infrastructural receipts	-	-	-	4.44
iii Postal Receipts	-	-	-	0.09
iv Recovery against lost of Library books	-	0.01	-	0.01
v Receipt from Publication	-	1.17	-	1.61
vi Receipt on consultancy share	-	20.52	-	11.82
vii Royalty share	-	1.14	-	1.06

viii	Sale proceeds of Prospects	-	7.27	-	4.51
ix	Receipt on Summer Schools -AICTE	-	-	38.50	-
x	Receipt from Winter Schools-AICTE	-	-	7.48	-
xi	Receipt on sale of Newspapers	-	0.15	-	-
xii	Fee from RTI	-	0.02	-	0.01
xiii	Overhead Charges	-	10.15	-	-
xiv	Receipt from photocopy charges	-	0.45	-	0.65
<b>Total</b>		-	<b>46.50</b>	<b>45.98</b>	<b>33.66</b>
<b>Total Receipts</b>		<b>6.09</b>	<b>240.08</b>	<b>50.95</b>	<b>188.43</b>
<b>Grand Total</b>		<b>222.09</b>	<b>1,989.08</b>	<b>266.21</b>	<b>1,473.43</b>
<b>Total Plan and Non Plan</b>			<b>2,211.17</b>		<b>1,739.64</b>

## EXPENDITURE

### Schedule -12

#### Establishment Expenses

##### a Salaries-Pay & Allowances

i	Faculty	45.92	349.52	23.75	219.33
ii	Technical Non Teaching/C&D Staff	32.59	384.87	41.84	364.08
iii	Arrear 6th pay commission	-	-	9.32	88.64
iv	Interim payment to faculty	-	-	-	2.50
v	Bonus	0.35	3.94	0.55	4.45
vi	Dearness allowance	-	13.60	1.19	2.97
vii	LTC	1.19	12.60	1.10	5.25
viii	Medical treatment charges	-	29.29	0.70	17.32
ix	Reimbursement of cost of books	0.03	0.72	0.03	0.30
x	Institute Share-(CPF)	-	1.46	-	1.05
xi	Incentive to staff	-	-	-	0.39
xii	Pension & Retirement benefits	-	222.90	-	198.80
xiii	Arrear MACP	-	4.80	-	-
xiv	Stipend	-	0.19	-	-
xv	Leave Encashment for LTC	-	9.71	-	-

<b>Total</b>		<b>80.08</b>	<b>1,033.60</b>	<b>78.48</b>	<b>905.08</b>
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##### b Other Payments

i	Over Time Allowance	0.13	0.56	0.08	0.75
ii	Traveling Allowance	50.14	6.63	37.19	8.29
iii	Summer School-AICTE	-	-	31.37	-
iv	Winter Schools-AICTE	-	-	1.87	-
v	Fee & Honorarium	-	23.07	9.46	12.03

<b>Total</b>		<b>50.27</b>	<b>30.26</b>	<b>79.97</b>	<b>21.07</b>
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**Schedule-13****c Liability & Provisions**

i Depreciation-Net Block (as shedule-4)	-	241.38	-	136.56
ii Salaries to Staff	8.59	62.31	6.92	58.92
iii Arrears to faculty due to Pay Commission report	-	-	-	343.30
iv Dearness Allowance	-	8.27	1.14	9.69
v Leave Encashment	-	88.17	-	241.47
vi Gratuity	-	99.80	-	244.41
vii Maintenance Student Centre, AC & Refrigerator	-	4.72	-	-
viii Telephone & Trunkcall charges	-	0.29	-	0.17
xix Property Tax	-	2.55	-	-
xx Electricity & Water charges	-	2.66	-	-
xxi Pension to retirees	-	13.95	-	1.80
xxii Audit Fee, Legal /Professional charges	-	0.36	-	0.20
<b>Total</b>	<b>8.59</b>	<b>524.46</b>	<b>8.06</b>	<b>1,036.52</b>

**Schedule-14****d Administrative Expenses-Contingencies**

i Office Expenses	-	1.93	0.07	3.06
ii Printing & Stationery	-	5.06	-	5.06
iii Liveries	-	0.63	0.05	0.28
iv Hindi Day	-	-	0.32	-
v Independence/Vishkarma Day	-	-	0.04	-
vi Contingencies various labs(Academic)	-	8.43	-	14.07
vii Advertisement	-	14.44	4.21	4.77
viii New Paper & Periodicals	-	0.72	-	0.04
ix Annual Day expenses	-	1.28	-	0.90
x Postage & Telegram	-	2.40	-	2.68
xi Telephone/Trunk call charges	-	2.60	-	2.80
xii Entertainment & Contingencies	-	0.84	-	1.10
xiii Reference Books	-	0.05	-	0.03
xiv Purchase of Medicines	-	0.02	-	0.05
xv Legal & Professional Charges	-	1.75	-	0.69
xvi Library Contingency	-	0.05	-	0.21
xvii Library Membership	-	0.17	-	-
xviii Ground Rent	-	0.59	-	0.59
xix Amortization of Lease Hold Land	-	0.25	-	-
xx Printing of Newspaper	-	0.25	-	0.41
xxi Written off - Sundry Debtors	-	-	-	0.05
xxii Audit Fee	-	0.28	-	0.24
xxiii Annual Sports	-	-	0.48	2.60
xxiv Contingencies Under (OSC)-OBC Scheme	20.23	-	0.03	-
xxv Vigilance Day	-	0.02	0.10	-
xxvi Teachers Day	-	-	0.12	-
xxvii National Education Day	-	0.06	0.04	-
<b>Total</b>	<b>20.23</b>	<b>41.82</b>	<b>5.46</b>	<b>39.63</b>

<b>e Operation &amp; Maintenance</b>					
i	Mtc. Student Centre	11.57	0.42	1.59	
ii	Mtc. Electrical	10.95	-	6.22	
iii	Mtc. Electrical Lab.	0.33	0.30	1.29	
iv	Mtc Rural Development	0.23	0.59	-	
v	Mtc. Media Centre	1.11	0.29	2.01	
vi	Mtc. ETV Lab.	0.97	1.25	0.17	
vii	Mtc. Civil Lab.	1.42	-	1.51	
viii	Mtc. Phones & Communications	0.04	0.52	1.34	
ix	Mtc. Electronics & Communications	0.48	0.15	0.29	
x	Mtc. Guest House	0.71	-	0.79	
xi	Mtc. Furniture	1.92	-	1.99	
xii	Mtc. Buildings	42.67	9.01	12.95	
xiii	Mtc. Campus	0.35	-	0.26	
xiv	Mtc. Vehicle	3.04	0.38	3.12	
xv	Mtc. Curriculum Development Centre Lab.	4.68	-	-	
xvi	Mtc Ref. & Air Condition Lab.	8.68	2.97	2.87	
xvii	Electricity & Water Charges	26.70	5.89	17.19	
xviii	Repair of Machinery		-	0.37	
xix	Mtc. EDIC Lab.		0.10	-	
xx	Mtc. Computer Science Lab.	1.79	1.31	-	
xxi	Mtc. Mechanical Engg. Lab	1.05	0.21	0.24	
xxii	Mtc Education & Educational Lab.	0.19	-	0.02	
xxiii	Mtc Sports	2.92	-	-	
xxiv	Mtc. Internet	16.32	2.09	19.01	
xxv	Mtc. IMCO		-	0.08	
xxvi	Mtc Hostel	5.87	-	-	
xxvii	Mtc. Library	1.04			
xxviii	Mtc Applied Science Lab.		0.29	-	
xxix	Mtc. Electronics Service Centre	0.27	-	-	
<b>Total</b>		-	145.30	25.77	73.31
<b>Grand Total</b>		159.17	1,775.44	197.74	2,075.61
<b>Total Plan and Non Plan</b>			<b>1,934.61</b>		<b>2,273.35</b>
<b>Balance being surplus carried over</b>			<b>276.56</b>		<b>-533.71</b>

Sd/-  
Accounts Officer  
NITTTR, Chandigarh

Sd/-  
Director  
NITTTR, Chandigarh

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR-26, CHANDIGARH**

**RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.3.2011**

<b>RECEIPTS</b>	<b>CURRENT YEAR</b>		<b>PREVIOUS YEAR</b>	
	<b>PLAN</b>	<b>NON PLAN</b>	<b>PLAN</b>	<b>NON PLAN</b>
	<b>(RUPEES IN LAKH)</b>			
Balance at the beginning of year	814.34	0.00	620.47	0.00
Grant received during the year	628.00	1749.00	506.00	1316.94
Grant under -(OSC)OBC Scheme	0.00	0.00	100.00	0.00
Deposits including consultancies	0.00	499.89	0.00	396.02
<b>Other Receipts</b>				
Interest receipts	0.00	25.18	0.00	32.62
Rental Receipts	0.00	40.92	0.00	20.69
Fee Receipts	6.09	128.22	4.97	98.30
Fee from other sources	0.00	49.41	45.98	34.14
Other Receipts	2.98	7.62	5.18	3.38
Sponsored Projects	58.36	0.00	37.19	0.00
<b>Total Receipts</b>	<b>1509.77</b>	<b>2500.24</b>	<b>1319.79</b>	<b>1902.09</b>
<b>Grant total Plan/ Non Plan</b>	<b>4010.01</b>		<b>3221.88</b>	

**PAYMENTS**

Non Recurring	562.89	0	633.60	0.00
<b>Recurring -Payments</b>				
Establishment Expenses	89.40	1472.15	83.42	1069.11
Other Expenses	57.75	30.58	84.57	21.45
Administrative Expenses	20.23	70.23	18.99	27.88
Operation & Maintenance	1.11	152.24	28.28	75.21
Sponsored Projects	62.15	0	19.06	0.00
Deposits including consulties	0	505.93	0.00	345.97
Cash and Bank Balance	985.35	0	814.34	0.00
<b>Total</b>	<b>1778.88</b>	<b>2231.13</b>	<b>1682.26</b>	<b>1539.62</b>
<b>Grand total Plan/Non Plan</b>	<b>4010.01</b>		<b>3221.88</b>	

Sd/-  
Accounts Officer  
NITTTR, Chandigarh

Sd/-  
Director  
NITTTR, Chandigarh

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR-26, CHANDIGARH  
SCHEDULE FORMING PART OF RECEIPTS AND PAYMENTS ACCOUNT FOR THE  
YEAR ENDED 31.3.2011**

A RECEIPTS	CURRENT YEAR		PREVIOUS YEAR	
	(RUPEES IN LAKH)			
<b>I Balance at the beginning of the year</b>				
i Cash in hand	1.81		0.16	
ii Temporary Imprest	0.81		4.64	
iii Balance with Bank	423.34		231.38	
iv Deposit Account	388.38		384.29	
<b>Total Cash</b>	<b>814.34</b>	-	<b>620.47</b>	-
	<b>PLAN</b>	<b>NON PLAN</b>	<b>PLAN</b>	<b>NON PLAN</b>
<b>II Grants received from Govt. of India</b>				
i On Capital Account-Creation of Capital Assets	412.00	-	506.00	-
ii On Revenue Account	216.00	1,009.50	-	1,316.94
iii Grant in transit	-	739.50		
<b>Total</b>	<b>628.00</b>	<b>1,749.00</b>	<b>506.00</b>	<b>1,316.94</b>
<b>Grant under (OSC)-OBC scheme</b>				
i Non-Recurring	-	-	100.00	-
ii Recurring	-	-	-	-
<b>Total</b>	-	-	<b>100.00</b>	-
<b>Total Grants</b>	<b>628.00</b>	<b>1,749.00</b>	<b>606.00</b>	<b>1,316.94</b>
<b>III Deposits (including consultancies) (as Annexure-I)</b>	-	<b>499.89</b>	-	<b>396.02</b>
<b>IV Internal Resources</b>				
<b>a Interest Account</b>				
i Interest earned on S/B Account	-	21.10	-	30.59
ii Interest received on advances to staff	-	4.08	-	2.03
<b>Total</b>	-	<b>25.18</b>	-	<b>32.62</b>
<b>b Rental Receipts</b>				
i Rent from Residential Houses	-	3.47	-	3.03
ii Rent from Hostel	-	36.47	-	16.74
iii Rent from AICTE	-	0.98	-	0.77
iv Rent from Mess/Canteen	-	-	-	<b>0.15</b>
<b>Total</b>	-	<b>40.92</b>	-	<b>20.69</b>
<b>c Fee Receipts</b>				
i Fee from ME Students	-	103.10	-	79.37
ii Fee under various courses	6.09	25.12	4.97	18.93
<b>Total</b>	<b>6.09</b>	<b>128.22</b>	<b>4.97</b>	<b>98.30</b>

**d Receipt from other sources**

i	Institute Receipts -misc.-Tender fee/IPOs etc.	-	5.62	-	9.46
ii	Infrastructural charges	-	-	-	4.44
iii	Postal receipts	-	-	-	0.09
iv	Recovery against lost of Library books	-	0.01	-	0.01
v	Receipt from Institute Publication	-	1.17	-	1.61
vi	Sale of Newspaper	-	0.15	-	-
vii	Sale proceeds of Fixed Assts	-	2.91	-	0.48
viii	Receipt from consultancy share	-	20.52	-	11.82
ix	Royalty share	-	1.14	-	1.06
x	Sale proceeds of Prospects	-	7.27	-	4.51
xi	Receipt of Exp on Summer Schools from AICTE	-	-	7.48	-
xii	Receipt of Exp. on Winter School from AICTE	-	-	38.50	-
xiii	Overhead charges	-	10.15	-	-
xiv	RTI Fee	-	0.02	-	0.01
xv	Photocopy charges	-	0.45	-	0.65
<b>Total</b>		-	49.41	45.98	34.14

**e Other Receipts**

i	Recovery of Loans & Advances from staff	2.98	3.57	5.18	2.44
ii	Sundry Creditors	-	-	-	0.64
iii	Permanent Imprest	-	0.01	-	-
iv	Pension & Leave Salary Contribution	-	4.04	-	0.30
<b>Total</b>		2.98	7.62	5.18	3.38
<b>Total Receipt</b>		9.07	251.35	56.13	189.13

**V SPONSORED PROJECTS**

i	6.17- ME	0.09	-	1.44	-
ii	AICTE QIP Poly	38.46	-	8.19	-
iii	IT-Bionery Project	6.30	-	-	-
iv	DST NIMAT	1.22	-	-	-
v	Sc.& Tech-Rural Development	-	-	-	-
vi	1.2.224-SIRD-Assam-RD	-	-	-	-
vii	NCP-Nationally Coordinated Project-AICTE	-	-	20.00	-
viii	National Conference-EDIC-AICTE	-	-	0.50	-
ix	GATE scheme under AICTE QIP	10.12	-	1.92	-
x	1.2.221 SIRD _Rural Dev	-	-	1.10	-
xi	1.2.207-SIRD Rural Development	2.17	-	4.04	-
<b>Total</b>		58.36	0.00	37.19	-
<b>Grand Total</b>		1,509.77	2,500.24	1,319.79	1,902.09
<b>Total Plan and Non Plan</b>		<b>4,010.01</b>		<b>3,221.88</b>	

<b>B PAYMENTS</b>	<b>CURRENT YEAR</b>		<b>PREVIOUS YEAR</b>	
	<b>Plan</b>	<b>Non Plan</b>	<b>Plan</b>	<b>Non Plan</b>
<b>I Non Recurring</b>				
i Land	-	-	-	-
ii Renovation of Buildings	4.69	-	9.29	-
iii Advance renovation with CPWD (8 works)	57.20	-	-	-
iv Equipment purchased during the year	282.60	-	264.97	-
v Advance equipment account-adjusted during year	-0.50	-	0.50	-
vi Furniture purchased during the year	45.04	-	12.84	-
vii Expenditure under OSC-OBC - Hostel Block	63.11	-	<b>346.00</b>	-
viii Expenditure under OSC-OBC - Advance Const. - Lab	107.61	-	-	-
ix Expenditure under OSC-OBC - Equipment	1.69	-	-	-
x Expenditure under OSC-OBC - Furniture	1.45	-	-	-
<b>Total</b>	<b>562.89</b>	<b>-</b>	<b>633.60</b>	<b>-</b>
<b>II RECURRING</b>				
<b>a Establishment Expenses</b>				
<b>Salaries-Pay &amp; Allowances to:</b>				
i Faculty	49.32	392.04	28.69	261.97
ii Technical Non Teaching/C&D Staff	36.11	401.27	41.84	364.08
iii Arrear 6th Pay Commission	-	285.57	9.32	88.64
iv Interim payment to faculty	-	-	-	2.50
v Bonus	0.35	3.94	0.55	4.45
vi Dearness Allowance	2.40	22.03	1.19	10.56
vii Leave Travell Concession	1.19	12.60	1.10	5.25
viii Medical treatment charges	-	29.29	0.70	17.32
ix Remibursement of cost of books to Faculty	0.03	0.72	0.03	0.30
x Institute Share-(CPF)	-	1.46	-	1.05
xi Pension - Faculty	-	144.75	-	212.23
xii Pension - C & D	-	62.62	-	-
xiii Pension & Retirement benefits	-	16.08	-	-
xiv Gratuity	-	51.48	-	69.07
xv Stipend to Apprenticeship Trainees	-	0.19	-	-
xvi Arrears of Pension	-	1.25	-	-
xvii Leave encashment-for LTC	-	9.71	-	-
xviii Leave encashment to retirees	-	32.23	-	31.30
xix Festival Advance to staff	-	0.12	-	-
xx Arrear MACP	-	4.80	-	0.39
<b>Total</b>	<b>89.40</b>	<b>1,472.15</b>	<b>83.42</b>	<b>1,069.11</b>
<b>b Other Payments</b>				
i Over Time Allowance	0.13	0.56	0.08	0.75
ii Library Books	4.97	0.32	2.03	0.38
iii Library Journals	2.51	-	2.57	-
iv TA including STC	50.14	6.63	37.19	8.29
v Summar Schools	-	-	31.37	-
vi Winter Schools	-	-	1.87	-
vii Fee & Honorarium	-	23.07	9.46	12.03
<b>Total</b>	<b>57.75</b>	<b>30.58</b>	<b>84.57</b>	<b>21.45</b>

<b>c Administrative Expenses</b>					
i	Office Expenses	-	1.93	0.07	3.06
ii	Property Tax		28.58		
iii	Printing & Stationery	-	5.48	1.78	3.79
iv	Liveries	-	0.63	0.05	0.28
v	Hindi Day	-		0.32	-
vi	Independence/Vishkarma day etc.	-		0.04	-
vii	Contingencies various labs.(Academic)	-	8.32	11.75	2.61
vii	Advertisement	-	14.44	4.21	4.77
ix	Teachers Day	-		0.12	-
x	Annual Sports	-		0.48	2.60
xi	Vigilance Day	-	0.02	0.10	-
xii	National Education Day	-	0.06	0.04	-
xiii	News Paper & Periodicals	-	0.72	-	0.04
xiv	Annual Day celebrations	-	1.28	-	0.90
xv	Postage & Telegramme	-	1.80	-	3.25
xvi	Telephone/Trunkcall charges	-	2.77	-	2.97
xvii	Entertainment & Contingencies	-	0.84	-	1.10
xviii	Reference Books	-	0.05	-	0.03
xix	Purchase of Medicines for Institute Dispensary	-	0.02	-	0.05
xx	Legal /Professional charges	-	1.95	-	0.83
xxi	Library Contingency	-	0.05	-	0.21
xxii	Ground Rent	-	0.59	-	0.59
xxiii	Printing of Publication	-	-	-	0.41
xxiv	Audit Fee	-	0.28	-	0.24
xxv	Advance Securities-EPABX	-		-	0.15
xxvi	Library Membership	-	0.17	-	-
xxvii	Contg. Under (OSC)-OBC Scheme	20.23	-	0.03	-
xxviii	Printing of News Paper	-	0.25	-	-
	<b>Total</b>	<b>20.23</b>	<b>70.23</b>	<b>18.99</b>	<b>27.88</b>
<b>d Operation &amp; Maintenance</b>					
i	Mtc. Student Centre	-	11.57	0.42	1.59
ii	Mtc. Electrical	-	10.95	-	6.22
iii	Mtc. Electrical Lab.	-	0.33	0.30	1.29
iv	Mtc. Rural Development	-	0.23	0.59	-
v	Mtc. Media	-	1.11	0.29	2.01
vi	Mtc. ETV Lab	-	0.97	1.25	0.17
vii	Mtc. Civil Lab	-	1.42	-	1.51
viii	Mtc. Phones & Communications	-	0.04	0.52	1.34
ix	Mtc. Electronics & Communications	-	0.48	0.15	0.29
x	Mtc. Guest House	-	0.71	-	0.79
xi	Mtc. Furniture	-	1.92	-	1.99
xii	Mtc. Buildings	-	42.67	9.01	12.95
xii	Mtc. Campus	-	0.35	-	0.26
xiv	Mtc. Vehicle	-	3.04	0.38	3.12
xv	Mtc. Curriculum Development Centre Lab	-	4.68		
xvi	Mtc. Ref. & Air conditioning Lab.	-	8.68	2.97	2.87
xvii	Electricity & Water Charges	-	26.70	5.89	17.23
xviii	Repair of Machinery	-		-	0.37

xix	Mtc EDIC Lab	-		0.10	-
xx	Mtc Electronics Service Centre	-	0.27		
xxi	Mtc New Hostel Block	-	5.87		
xxii	Mtc Computer Sc. Lab.	-	1.79	1.31	-
xxiii	Mtc Mechanical Engg Lab	-	1.05	0.21	0.24
xxiv	Mtc Education & Educational Lab	-	0.19	-	0.02
xxv	Mtc Applied Science Lab.	-		0.29	-
xxvi	Loans & Advances to staff	1.11	6.94	2.51	1.83
xxvii	Permanent Imprest	-		-	0.03
xxviii	Mtc sports	-	2.92	-	-
xxix	Mtc. IMCO	-		-	0.08
xxx	Mtc Hostel	-		-	-
xxxi	Internet Connectivity	-	16.32	2.09	19.01
xxxii	Mtc Library	-	1.04	-	-
	<b>Total</b>	<b>1.11</b>	<b>152.24</b>	<b>28.28</b>	<b>75.21</b>
	<b>Total Payments</b>	<b>731.38</b>	<b>1,725.20</b>	<b>848.86</b>	<b>1,193.65</b>
<b>e Sponsored Projects</b>					
i	NCP-AICTE	5.52		5.77	-
ii	3.2.14 Video Films -PWD			0.04	-
iii	3.2.6 Viklangta Se Takkar Video film	0.03		-	-
iv	IT Binary- AICTE Project-RD	4.76		0.59	
v	Eco-Water literacy- RD	2.17		-	-
vi	AICTE QIP Poly	<b>34.33</b>		9.22	-
vii	National Conference -EDIC-AICTE	0.50		-	-
viii	6.17-ME Activities	0.45		1.42	-
ix	Estt of Edusat-ETV	0.85		-	
x	1.2.224-SIRD-Assam-RD	0.72		-	-
xi	1.2.221-SIRD Guwahati -RD	1.09		0.15	-
xii	1.2.207-SIRD Assam-RD	4.42		-	-
xiii	GATE -AICTE Project	7.23		1.87	-
xiv	5.27- ETV	0.08		-	-
	<b>Total</b>	<b>62.15</b>	<b>-</b>	<b>19.06</b>	<b>-</b>
<b>f</b>	<b>Deposits (including consultancies)-Annex-1</b>	<b>-</b>	<b>505.93</b>	<b>-</b>	<b>345.97</b>
<b>g Cash Balance</b>					
i	Cash in hand	1.48		1.81	
ii	Temporary Imprest	0.24		0.81	
iii	Bank Balance	210.13		423.34	
iv	Fixed Deposits	34.00		388.38	-
v	Draft in transit	739.50			
	<b>Total Cash</b>	<b>985.35</b>		<b>814.34</b>	<b>-</b>
	<b>Grand Total</b>	<b>1,778.88</b>	<b>2,231.13</b>	<b>1,682.26</b>	<b>1,539.62</b>
	<b>Total Plan and Non Plan</b>		<b>4,010.01</b>	<b>3,221.88</b>	

Sd/-  
Accounts Officer  
NITTTR, Chandigarh

Sd/-  
Director  
NITTTR, Chandigarh



**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
CHANDIGARH**

**BALANCE SHEET FOR THE PROJECTS SPONSORED BY THE GOVERNMENT  
OF INDIA- MHRD, NEW DELHI AS AT 31.3.2011**

PARTICULARS	CURRENT YEAR		PREVIOUS YEAR
	RUPEES	IN	LAKH
<b>LIABILITIES</b>			
Capital/Corpus Fund	83.06		114.02
Less excess of expenditure over income	-13.65		-15.72
Grant received during the year	-		-
Less : Refund to GOI	-		-15.24
<b>TOTAL LIABILITIES</b>	<b>69.41</b>		<b>83.06</b>
<b>ASSETS</b>			
Assets created under the Projects	53.37		62.76
Cash & Bank Balance	0.42		1.30
Deposits (including interest accrued)	15.62		19.00
<b>TOTAL ASSETS</b>	<b>69.41</b>		<b>83.06</b>

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NITTTR, Chandigarh**

**Sd/-  
Director  
NITTTR, Chandigarh**

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
SECTOR -26, CHANDIGARH  
INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.3.2011  
FOR THE PROJECTS SPONSORED BY THE MHRD, GOVT OF INDIA.**

<b>INCOME</b>	<b>CURRENT YEAR</b>	<b>PREVIOUS YEAR</b>
	<b>(RUPEES IN LAKH)</b>	
Grant/subsidies From Government of India	-	-
Interest receipts	3.61	2.59
<b>Total</b>	<b>3.61</b>	<b>2.59</b>
 <b>EXPENDITURE</b>		
Establishment Expenses	1.47	0.69
Contingencies /Consumables	5.68	5.16
T.A.	0.65	0.76
Honorarium	0.07	0.66
Depreciation	9.39	11.04
<b>Total</b>	<b>17.26</b>	<b>18.31</b>
<b>Balance being deficit carried over</b>	<b>-13.65</b>	<b>-15.72</b>

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NITTTR, Chandigarh

Sd/-  
Director  
NITTTR, Chandigarh

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
CHANDIGARH**

**RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.3.2011  
FOR THE PROJECTS SPONSORED BY GOVT. OF INDIA, MHRD.**

<b>RECEIPTS</b>	<b>CURRENT YEAR</b>	<b>PREVIOUS YEAR</b>
	<b>RUPEES IN</b>	<b>LAKH</b>
Opening Balance	20.30	40.22
Grants received during the year	-	-
Interest receipt	2.99	2.59
<b>Total Receipts</b>	<b>23.29</b>	<b>42.81</b>
<b>PAYMENTS</b>		
Equipments	-	-
<b>Recurring Expenses</b>		
Establishment expenses	1.47	0.69
Contingencies/Consumables	5.68	5.16
T.A.	0.65	0.76
Honorarium	0.07	0.66
Project unspent balance refund to GOI	-	15.23
Bank charges-adjustable	-	0.01
<b>Total</b>	<b>7.87</b>	<b>22.51</b>
Cash Balance	-	1.30
FDRS	15.00	-
Bank Balance	0.42	19.00
<b>Total payments</b>	<b>23.29</b>	<b>42.81</b>

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NITTTR, Chandigarh**

**Sd/-  
Director  
NITTTR, Chandigarh**

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH, CHANDIGARH**  
**FIXED ASSETS UNDER GOI PROJECTS AS AT 31.3.2011**

**FIXED ASSETS- NET BLOCK AS PER SCHEDULE - 4**

		(RUPEES IN LAKH)										
PARTICULARS	Rate %	GROSS BLOCK					DEPRECIATION			NET BLOCK		
		Cost/evaluation as at beginning of the year	Additions before 30.9.2010	Additions after 30.9.2010	Deductions during the year	cost/ Value at the year end	As at the beginning of the year	On Additions of the year	Total at the year end	As at the current year end	As at the previous year end	
<b>Fixed Assets</b>												
i	Equipments	15	164.49	-	-	-	164.49	102.24	9.34	111.58	52.91	62.25
ii	Furniture	10	0.99	-	-	-	0.99	0.48	0.05	0.53	0.46	0.51
iii	Books	100	0.21	-	-	-	0.21	0.21	-	0.21	-	-
	Gifted equipment	15	0.07	-	-	-	0.07	0.07	-	0.07	-	-
<b>Grand Total</b>			<b>165.76</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>165.76</b>	<b>103.00</b>	<b>9.39</b>	<b>112.39</b>	<b>53.37</b>	<b>62.76</b>

Sd/-  
**Accounts Officer**  
**NITTTR, Chandigarh**

Sd/-  
**Director**  
**NITTTR, Chandigarh**

## **ACCOUNTING POLICIES**

The Accounts have been maintained in the format as prescribed by the Government of India, Ministry of Human Resource Development vide its letter No. F-1-1/2002- TS-IV dated 15<sup>th</sup> March, 2002, issued by the Joint Secretary & Financial Adviser vide his DO No. 1703/JS (HRD)/2/2002 dated 18<sup>th</sup> February, 2002.

2. The Accounts have been prepared on accrual basis.
3. Depreciation on fixed Assets has been provided on written down value method on the rates specified in the Income Tax Act. Rules, 1962.
4. The Fixed Assets have been valued as per book value.
5. The Institute receives grants-in-aid from Government of India under Plan (General)-Recurring and Plan-(Non-Recurring)-Creation of Capital Assets, Plan(OSC)-OBC and Non-Plan schemes to meet the expenditure on salaries of employees, pension to retirees, traveling expenses for training of technical teachers, purchase of store/equipments and maintenance, etc. as per Institute's annual budget approved by the Board of Governors. The funds, if remained unutilized at the end of the financial year, are carried over to the next following financial year with the approval of the Government of India.  
  
(ii) For specific projects, unspent balance/funds, if any, are refunded to the concerned sponsoring agencies/departments after the completion of the Project.
6. The Board of Governors delegated powers jointly to the Director and the Accounts Officer of the Institute to approve and sign the Annual Accounts of the Institute before submission to Audit Officer vide Item No. B.4.4.8 in their meeting held on 27.1.2006.

**Sd/-  
Accounts Officer  
NITTTR, Sector-26, Chandigarh**

**Sd/-  
Director  
NITTTR, Sector-26, Chandigarh**

## NOTES ON ACCOUNTS

1. This is a non-commercial organization and Income Tax is not applicable as in the case of Universities or other Educational Institutions existing solely for education purpose and not for the purpose of profit and which are wholly or substantially financed by the Government under Section 10(23C) (iiiab).

2 .The Goods including equipments, furniture etc. valuing Rs.78.64 lakh were identified as obsolete/ unserviceable during the year 2009-10. Store/ equipment declared as obsolete/unserviceable during the year 2006-07, 2007-08 and 2008-09 amounting to Rs. 59,79,472.52 and Rs. 52,80,331.69 lakh and 34.44 lakh respectively including Rs. 78.64 lakh for the year 2009-10 are in the process for disposal and the sale proceeds shall be reported shortly.

3. The construction work relating to Administrative Block and the Hostel Block was allotted to Shri Vijay Kumar Garg & Company. Due to certain irregularities on the part of the contractor, the contract was terminated. The contractor filed a claim amounting to Rs. 90.71 lakh and the Institute also filed counter claim. The award of the Arbitration case has been announced after a gap of 08 years after completion of hearing. The Institute has moved the court challenging the merit of the award through Institute Counsel. The effect will be given in the Accounts after the decision is announced by the Court.

(ii) An amount of Rs. 34.00 lakh (including interest earned from time to time) towards security from the contractor has been withheld and is kept in the shape of Fixed Deposit.

4. Balance Sheet for the Project sponsored by Government of India, MHRD has been drawn separately and is attached with the Balance sheet of main Account.

5. This is to certify that there is an unspent balance of Rs. 1001.39 lakh (under GOI Projects Rs. 16.04 and under grant Rs. 985.35 lakh) as on 31.3.2011.

6. Institute is in possession of land measuring 18.863 acres out of which 15.883 acres is held as free hold.

7. Amortization of lease premium on the basis of period of lease has been charged as suggested in Audit

### **Building Account**

1. Building advance of Rs. 10.69 lakh represents the amount deposited with Chandigarh Administration for construction of Staff Quarters. The work has since been completed and buildings handed over to the Institute. The certificate for having received the final payment from this Institute has been obtained from the Sub Divisional Engineer, W/s Sub Div. -3 Chandigarh. However, accounts in support of this expenditure are awaited from UT, Administration since 1995-96. This has been capitalized in this year's accounts.

2. PUDA has filed a civil suit for recovery of Rs. 85.00 lakh against the Institute. No provision as liability has been made in the Accounts as it is a contingent liability and provision shall be made as per award/deed to be decided by the Arbitrator. However, The Institute has also filed a counter claim worth Rs. 17.00 lakh against PUDA.

**Sd/-  
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NITTTR, Chandigarh**

**Sd/-  
Director  
NITTTR, Chandigarh**

**ANNEXURE -I**

<b>March. 2011</b>					
<b>A</b>	<b>Consultancy Project</b>	<b>Opening Bal.</b>	<b>Receipt</b>	<b>Paid</b>	<b>Net Balance</b>
1	5.14 Civil consultancy	0	5061410.00	5061410.00	0.00
2	5.18 Civil consultancy	175391.75	0	175391.75	0.00
3	5.5 Swift analysis QIP Media	0	68937	0	68937.00
4	1.2.222 IMCO	-82.00	82.00	0.00	0.00
5	IMCO- SPIC	190832.00	0.00	1033.00	189799.00
6	Hindi Annual Report	-6671.00	6671.00	0.00	0.00
7	Study Visit	96621.00	0.00	0.00	96621.00
8	World Assisted Project	30000.00	0.00	0.00	30000.00
9	Hindi Consultancy 5.17	0	71243.00	57797.00	13446.00
10	1.3.3 Civil	0	29918.00	0.00	29918.00
11	5.5 Consultancy -Media	0.00	68938.00	0.00	68938.00
<b>Total</b>		<b>486091.75</b>	<b>5307199.00</b>	<b>5295631.75</b>	<b>497659.00</b>
<b>B Other Deposit</b>					
1	Alumni Association	96930.00	29500.00	96930.00	29500.00
2	Distribution Fund	773992.83	1024027.00	767564.00	1030455.83
3	Earnest Money	3874978.86	1512203.00	3452217.00	1934964.86
4	Examination Fee	398389.00	14250.00	0.00	412639.00
5	Income Tax Firms	416.00	147202.00	147618.00	0.00
6	Misc. Deposit Auditorium	150071.00	67000.00	3700.00	213371.00
	Ph.D Fee	1320729.00	0.00	1320729.00	0.00
7	Royalty to Authors	646756.38	165957.50	503604.00	309109.88
8	Service Tax 5.15	0.88	783511.00	782893.88	618.00
9	Staff Welfare Fund	97289.00	200553.00	0.00	297842.00
11	Sundry Creditors.	0.00			
<b>Total</b>		<b>7359552.95</b>	<b>3944203.50</b>	<b>7075255.88</b>	<b>4228500.57</b>
<b>C Recovery and Deductions</b>					
1	CTD	-300.00	507100.00	506800.00	0.00
2	Group Insurance	-1600.00	754200.00	752600.00	0.00
3	Income Tax Staff	-4305.00	15193325.00	15189020.00	0.00
4	LIC-NP	0.00	738124.00	738124.00	0.00
5	New Pension Fund Matching	5935.00	2503404.00	2509339.00	0.00
6	New Pension Fund Subscription	6002.00	2533999.00	2540001.00	0.00
7	Welfare Faculty C and D	0.00	88360.00	88360.00	0.00
8	Farewell Faculty	0.00	8800.00	8800.00	0.00
9	GPF	0.00	16913060.00	16913060.00	0.00
<b>Total</b>		<b>5732.00</b>	<b>39240372.00</b>	<b>39246104.00</b>	<b>0.00</b>
<b>D SECURITY DEPOSIT</b>					
1.	Sec./ Retention Money of Vijay Garg	95875.00	0.00	0.00	95875.00
2.	Sec. of Sanchi Security Co.	3383.00	0.00	0.00	3383.00
3.	Sec. of AK Fire.	1535.00	0.00	1535.00	0.00
4.	Sec. of Anil Kumar.	3959.00	9592.00	0.00	13551.00
5.	Sec. of Anil Malhotra.	1031.00	0.00	0.00	1031.00

6.	Sec. of BD Kataria	500.00	0.00	0.00	500.00
7.	Sec. of Binder	1000.00	1000.00	0.00	2000.00
8.	Sec. of Canteen	5000.00	0.00	0.00	5000.00
9.	Sec. of Deepak Mital	-780.00	0.00	0.00	-780.00
10.	Sec. of Golden Eagle	68824.00	28945.00	0.00	97769.00
11.	Sec. of Gurdeep Singh	58423.00	0.00	0.00	58423.00
12.	Sec. of Harbhajan Singh	505.00	0.00	0.00	505.00
13.	Sec. of Hardeep Singh	18429.00	0.00	0.00	18429.00
14.	Sec. of Harjeet Singh	4000.00	0.00	0.00	4000.00
15.	Sec. of Kanaj Nath	5000.00	0.00	0.00	5000.00
16.	Sec. of Kanwar Enterprises	10799.00	0.00	0.00	10799.00
17.	Sec. of Krishan Kr. Washerman	2000.00	0.00	0.00	2000.00
18.	Sec. of Mann Electrical Works	10000.00	0.00	0.00	10000.00
19.	Sec. of ME Students.	2185051.00	1195000.00	253850.00	3126201.00
20.	Sec. of Project Associates	12521.00	5500.00	3000.00	15021.00
21.	Sec. of Ph.D Students.	182066.00	15000.00	0.00	197066.00
22.	Sec. of PK Electrical	-1100.00	0.00	0.00	-1100.00
23.	Sec. of Satish Aggarwal	13770.00	0.00	0.00	13770.00
24.	Sec. of Sheltra Consultant.	731.00	0.00	0.00	731.00
25.	Sec. of Vijay Garg.	3399907.72	0.00	0.00	3399907.72
26.	Less FDR of Vijay Garg	0.00	0.00	0.00	0.00
27.	FDR of Institute Account	0.00	0.00	0.00	0.00
28.	Sec. of Krishna Stationers.	4700.00	0.00	0.00	4700.00
29.	Sec. of Anoop Enterprises	17431.00	0.00	17431.00	0.00
30.	Sec. of Sukhwinder Singh	0.00	4329.00	0.00	4329.00
31.	Sec. of Punj Sec. & House Keeping	0.00	25482.00	0.00	25482.00
32.	Sec. of Daksh Detective & Security]	0.00	12507.00	0.00	12507.00
33.	Sec. of Glass Palace	0.00	2775.00	0.00	2775.00
34.	Sec. of Kings Furnishing	0.00	23152.00	0.00	23152.00
35.	Sec. of National Small Industries	0.00	15472.00	0.00	15472.00
	<b>Total</b>	<b>6104560.72</b>	<b>1338754.00</b>	<b>275816.00</b>	<b>7167498.72</b>
	<b>FDR of Institute Account</b>	<b>-38838477.00</b>	<b>230444464.00</b>	<b>191605987.00</b>	<b>0.00</b>
	<b>FDR of Vijay Garg</b>	<b>0.00</b>	<b>0.00</b>	<b>3399908.00</b>	<b>-3399908.00</b>
<b>E</b>	<b>Sundry Creditors.</b>	<b>0.00</b>	<b>158679.00</b>	<b>20752.00</b>	<b>137927.00</b>
	<b>ABSTRACT</b>				
	<b>Total -A</b>	<b>486091.75</b>	<b>5307199.00</b>	<b>5295631.75</b>	<b>497659.00</b>
	<b>Total -B</b>	<b>7359552.95</b>	<b>3944203.50</b>	<b>7075255.88</b>	<b>4228500.57</b>
	<b>Total -C</b>	<b>5732.00</b>	<b>39240372.00</b>	<b>39246104.00</b>	<b>0.00</b>
	<b>Total -D</b>	<b>6104560.72</b>	<b>1338754.00</b>	<b>275816.00</b>	<b>7167498.72</b>
	<b>Total -E</b>	<b>0.00</b>	<b>158679.00</b>	<b>20752.00</b>	<b>137927.00</b>
	<b>Grand Total</b>	<b>13955937.42</b>	<b>49989207.50</b>	<b>51913559.63</b>	<b>12031585.29</b>
		139.56	499.89	519.14	120.31
	Less : Previous year PHD Fee Trf. To Corpus Fund			13.21	
		<b>139.56</b>	<b>499.89</b>	<b>505.93</b>	<b>120.31</b>



**Annexure-II**

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH,  
SECTOR-26, CHANDIGARH  
BALANCE SHEET GPF/CPF AS AT 31.3.2011**

<b>LIABILITIES</b>		<b>ASSETS</b>	
		<b>( Rupees in lakh)</b>	
GPF as per ledger	760.81	FDRs	1,052.47
CPF as per ledger	169.51	Saving Bank Account	16.72
Dead Account	0.06	Interest accrued on	58.70
Institute contributions	105.26	FDR up to 31.3.2011	
Excess of Interest	92.25		
<b>Total</b>	<b>1,127.89</b>	<b>Total</b>	<b>1,127.89</b>

Sd/-  
Accounts Officer  
NITTTR, Chandigarh.

Sd/-  
Director  
NITTTR, Chandigarh

**CASH BOOK ACCOUNT GPF/CPF AS AT 31.3.2011**

(Rupees in lakh)

Opening Balance as on 1.4.2010		1,021.20
Subscription during the year		
GPF as per ledger	167.02	
CPF as per ledger	2.10	
Instt. Contribution	1.46	
	170.58	170.58
Interest allowed by bank during the year		68.47
Less advances allowed to subscribers during the year		-191.07
<b>Total</b>		<b>1,069.18</b>

**Sd/-  
Accounts Officer  
NITTTR Chandigarh**

**Sd/-  
Director  
NITTTR Chandigarh**

**INTEREST ACCOUNT - GPF/CPF AS AT 31.3.2011**

**( Rupees in lakh )**

Opening Balance	99.67
Interest allowed by Bank during the year	68.47
Interest accrued during the year	58.70
Less Interest allowed to the subscriber during the year	-77.70
Less interest accrued on FDR. during previous year	-56.89
<b>TOTAL</b>	<b>92.25</b>

**Sd/-  
Accounts Officer  
NITTTR, Chandigarh**

**Sd/-  
Director,  
NITTTR, Chandigarh**

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH,  
SECTOR-26, CHANDIGARH  
BALANCE SHEET New Pension Scheme upto 31.3.2011**

<b>LIABILITIES</b>		<b>ASSETS</b> ( Rupees in lakh)	
NPS as per ledger	101.50	FDRs	96.20
		Saving Bank A/c	0.01
Excess of Interest	3.82	Interest accrued on FDR up to 31.3.2011	9.11
<b>Total</b>	<b>105.32</b>	<b>Total</b>	<b>105.32</b>

**Sd/-  
Accounts Officer  
NITTTR, Chandigarh**

**Sd/-  
Director  
NITTTR, Chandigarh**

**CASH BOOK ACCOUNT NPS AS AT 31.3.2011**

(Rupees in lakh )

Opening Balance as on 1.4.2010		0.00
Subscription during the year		
Cont + matching upto 2010-11	90.35	90.35
Interest allowed by bank up to 31.3.11		5.95
Less advances allowed to subscribers up to 31.3.11		-0.09
<b>Total</b>		<b>96.21</b>

**Sd/-  
Accounts Officer  
NITTTR, Chandigarh.**

**Sd/-  
Director  
NITTTR, Chandigarh**

**INTEREST ACCOUNT - NPS AS AT 31.3.2011**

**( Rupees in lakh )**

Opening Balance	0.00
Interest allowed by Bank up to 31.3.11	5.95
Interest accrued up to 31.3.11	9.11
Less Interest allowed to the subscriber up to 31.3.11	-11.24
Less interest accrued on FDR. during previous year	0.00
<b>TOTAL</b>	<b>3.82</b>

**Sd/-  
Accounts Officer  
NITTTR, Chandigarh**

**Sd/-  
Director  
NITTTR, Chandigarh**