

# ANNUAL REPORT

2011-2012

(ENGLISH VERSION)



NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS TRAINING AND RESEARCH  
CHENNAI – 600 113



## FROM THE DIRECTOR

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*National Institute of Technical Teachers Training and Research, Chennai –NITTTR, Chennai is glad to present the treatise on collective efforts in the quest of excellence in technical education through various activities of Institute in the form of Annual Report for the year 2011-12. This report reflects the accomplishments made in the area of technical teachers training (Polytechnics and Engineering colleges), research, curriculum development, overseas training programmes along with other various training programs and activities by the dedicated work of our faculty members. This report also incorporates the Vision, Mission and Objectives of Institute and its functions, co-ordination with State, National and Regional level bodies and activities undertaken by Institute under various National Schemes.*



*We are always striving to take advantage of technological developments that can make our training programmes more effective and accessible to our teachers nationwide. We recognize that not all faculty members have the same reliable access to technology, so we are careful to integrate the latest technological developments into our training, without making our training inaccessible or unaffordable for anyone. The continuous upgradation of laboratory and instructional facilities assure the participants a rewarding learning experience and change in environment through beautification also added pleasant learning experience.*

*This year 2011-12 represented another period of expansion and development. During this year*

- Training of 3564 technical teachers and personnel from industries*
- Training of 132 teachers, policy makers and educational administrators from 45 countries through 8 Overseas Teachers Courses*
- 58 candidates are undergoing Doctoral and Master's Programmes*
- Curricula of 76 trades were developed under National Skill Development Mission*
- Development of 156 instructional resources (print type materials, videos and e-Learning materials)*
- Carrying out 18 Research & Development Projects to tune of Rupee Five crores*

*Although we serve many tens of thousands of individuals worldwide, perhaps the most gratifying part of our work at NITTTR is when we hear directly from individual faculty members who have undergone training in our institute. They participate in discussions and send email to our faculty members. We set out with a commitment and broad vision for our future programmes through your valuable support. It is hoped that the faculty and the management of the polytechnics/engineering institutions will come forward in large numbers to participate in the programmes and derive maximum benefit from our common effort towards improving the quality of technical education.*

*The Institute has received incessant motivation and direction from Dr. S.R.K. Prasad, Chairman, BoG, and other eminent members of the BoG, as well as the Secretary, Additional Secretary, Director, Deputy Educational Advisor and other officials from Ministry of Human Resource Development, Govt. of India. I see this opportunity to express our gratefulness towards them. I would also thank all those who inspired and encouraged us in our search of quality in technical education through moulding the technical teachers for effective teaching during this year. I hope and assure that the Institute will continue to attain higher levels of achievements in the years to come.*

**Prof. Dr. S. MOHAN**  
**DIRECTOR**

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# NITTR CHENNAI SOCIETY AND BOARD OF GOVERNORS

## Chairman

### Dr. S.R. K. Prasad

Chairman & Managing Director  
Krishna Industrial Corporation Ltd,  
R/O 8, 9, 10 Rajeswary Nagar,  
Sowripalayam  
Coimbatore – 641 028 T.N.

## Member-Secretary

### Prof. Dr. S. Mohan

Director  
National Institute of Technical Teachers Training and Research  
Taramani, Chennai-600 113

## MEMBERS

Nominee of the  
Department of Education and Finance,  
Govt. of India

### Additional Secretary (TEL)

Department of Higher Education  
Ministry of Human Resource Development  
Government of India  
Shastri Bhavan  
New Delhi - 110 001

### Financial Adviser (HRD)

Integrated Finance Division  
Ministry of Human Resource Development  
Department of Higher Education  
Government of India  
Shastri Bhavan, New Delhi – 110 001

Five Directors of Technical  
Education

### 1. Commissioner of Technical Education

Directorate of Technical Education  
Government of Tamil Nadu  
Chennai-600 025

### 2. Director

Directorate of Technical Education  
Government of Karnataka  
Palace Road, Bangalore – 560 001



## 1.0 PREAMBLE



The National Institute of Technical Teachers Training and Research (NITTTR) Chennai was established as an autonomous Institute by the Ministry of Human Resource Development, Government of India in the year 1964 to improve the quality of Technical and Vocational Education and Training (TVET) system in India and in the Southern Region in particular. Within this mandate, the institute takes initiatives to offer need based Human Resource Development programmes through appropriate modes and develop curricula and instructional resources. It also fosters research in the core engineering area and also in the inter disciplinary area of Engineering Education and offers consultancy and extension services for the total development of Engineering Colleges, Polytechnics, Vocational institutions, Industry, Service sector and the Community at large.

In carrying out the above mandate, the institute collaborates with national and international Institutes, Universities and other agencies interested in and / or deriving benefits from technical and vocational education and training.

## VISION

NITTTR, Chennai envisions to be a leading institute in promoting excellence in Technical and Vocational Education and Training (TVET) systems by planning, designing, developing, implementing and evaluating quality training programmes, learning resources, research studies and extension services for Technical educational institutions, Industry and Community.

### Our Short Vision Statement:

**"Promoting Excellence in Technical Education"**

## MISSION

NITTTR, Chennai is a resource Institution established by the Government of India for quality improvement of Technical and Vocational Education and Training (TVET) in the Southern Region of the country in particular.

The following are the elements of mission towards which the institute is committed to work:

- \* To offer quality, flexible, relevant and cost-effective training programmes for technical teachers, in various modes including web based one.
- \* To demonstrate leadership by organising dynamic and leading edge programmes to meet the changing needs of the Industry and the Community.
- \* To develop into a Deemed University in order to provide effective and efficient services to the technical teachers.
- \* To help in solving problems in Engineering and Education through research, development and extension activities.
- \* To establish and foster collaboration with industry, state, national and international Institutes, Universities and other agencies committed to the development of Technical Education in the country.

## **CORE VALUES**

The following are the rubrics of our core values of our service to teachers and in turn to students.

- ◆ Quality
- ◆ Team work
- ◆ Staff Development for continuous learning
- ◆ Openness and Transparency
- ◆ Customer focus
- ◆ Social responsibility

## **2.0 OBJECTIVES**

The objectives of the institute are:

- ✓ To act as a centre for offering quality training programmes for teachers as per needs of the client system, covering the entire gamut of technical education including engineering colleges, polytechnics, vocational and management education, at regional and national levels.
- ✓ To arrange for training of technical personnel in industries on a cooperative education plan.
- ✓ To undertake systemic research to provide inputs for development of technical education training systems and their management.

- ✓ To undertake and guide 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 Textbooks, 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 in distance learning mode using state-of-the-art technologies.
- ✓ To offer courses / programmes for technical and vocational teachers to suit overseas demand especially from SAARC & ASEAN countries.
- ✓ To institute and award fellowships, scholarships, prizes and medals.
- ✓ To collaborate with Community and Industries 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 / organisations.
- ✓ To establish Extension Centres of the institute in different States with the approval of Govt. of India, for serving the specific needs of each State.
- ✓ 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 similar 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 objects.

### **3.0 FOCUS OF ACTIVITIES DURING 2011-2012**

As a dynamic organisation, the institute periodically reorients its programmes and activities to proactively respond to the changing needs of the clientele system. During the year 2011-2012 the institute undertook programmes, projects and activities under five major areas namely: (i) Faculty Development, (ii) Curriculum Development, (iii) Instructional Resources Development, (iv) Research & Development and (v) Extension and Consultancy Services.



The institute focused on the following activities during the year 2011-2012:

1. Training of teachers of Engineering Colleges, Polytechnics and personnel from industry and professionals through Short term courses in areas like Engineering and Technology, Applied Science, Instructional Design and Delivery, Educational Technology, Accreditation, Strategic Planning, Educational Management, Institutional development, Human Resource Development, Curriculum Development and Entrepreneurship Development.
2. Conducting Seminars for professional development of teachers and professionals from industries.
3. Developing research capabilities in teachers of Engineering Colleges, Polytechnics and personnel from industries through Inter-disciplinary research leading to Ph.D.
4. Training of teachers of Engineering colleges, Polytechnics and others through long term programmes like M.Tech. (HRD).
5. Providing expertise to overseas participants through specially designed training programmes.
6. Developing curricula for education and training programmes and revising the curricula of existing programmes.
7. Developing instructional resources (materials and media) needed for effective implementation of Polytechnic and Engineering College Curricula.
8. Undertaking research and development projects relevant to technical education system.
9. Developing and offering Virtual learning programmes for training technical teachers and professionals from industries.

10. Conducting finishing schools for engineering graduate students and newly recruited teachers of polytechnics & engineering colleges for enriching their competencies to meet challenges in the professional career.
11. Providing extension & consultancy services for the effective implementation and monitoring of the following schemes / projects:
  - a. Scheme of Community Development through Polytechnics
  - b. Project for Persons With Disabilities
  - c. National Skill Development Mission
  - d. National Mission on Education through ICT
  - e. National Mission on Teachers and Teaching
  - f. Expert committee visit to facilitate accreditation and approval of new polytechnics
  - g. Technical and consultancy service in the area of engineering / technology
  - h. Need based Human Resource Development programmes and projects for Industries, Govt. Departments and Service organizations

#### 4.0 FACULTY DEVELOPMENT PROGRAMMES

Faculty Development Programmes for teachers of Engineering Colleges and Polytechnics is a priority area of the institute. In recognition of this, the institute planned and conducted a variety of short term and long-term training programmes for teachers and staff of the Polytechnics, Engineering Colleges and overseas teachers to enable them to acquire competencies relevant to their respective areas of work.



#### 4.1 LONG TERM TRAINING PROGRAMMES:

##### a) DOCTORAL RESEARCH PROGRAMME:

The institute continued to vigorously promote educational research programmes and encourage technical teachers, working personnel from industries and other education sectors to undertake research work in the areas of Engineering Education (Inter-disciplinary). The institute is a recognised doctoral research centre by Anna University, Chennai and University of Madras.

During this year, 4 candidates registered for Ph.D. in Engineering Education (Inter-disciplinary) programme of University of Madras. Thus to date, 54 candidates have registered for Ph.D. Programme in this institute.

The following five research scholars were awarded Ph.D. degree in Engineering Education by the University of Madras during this year.

**Table 1 Particulars of Ph.D. Degrees Awarded**

S. No.	Name & Institutional affiliation of the candidate	Title of the Thesis	Supervisor	Date of award of Degree
1.	Mr. S. Muthuvellyappan D.G.M. T.V.S. Logistics Services Ltd. 25 A/2 SIDCO Industrial Estate Ambattur, Chennai.	A Study on HRM Challenges faced by Indian Global Corporations in preparing Managerial Personnel for International Assignment	Dr. V. Thanikachalam, Former Professor and Head, Dept. of Correspondence Courses	02.06.2011
2.	Mr. C.V. Suresh Babu Principal Sathyasai B.Ed. College Avadi, Chennai.	A Study on Enactive Learning in Teaching Computer Science in Engineering Colleges	Dr.B.G.Barki Former Professor and Head, Dept. of Education	23.09.2011
3.	Mr. M. Venkata Kameswara Sharma Ramco Systems, Chennai	A Study on Intelligence competencies of Organizations for enhancing Performance	Dr.B.Mukhopadhyay Former Professor and Head, Dept. of Educational Management and Applied Psychology	31.10.2011
4.	Mr.B.Kanagasundaram Assoc. Professor Mohammad Sathak Engg. College, Kilakarai.	Instructional Design and Delivery System for Engineering Graphics of Mechanical Engineering	Dr.T.Gnana Sambanthan EDP Manager and Head Computer Centre.	15.11.2011
5.	Mr. M.Ponnuswamy Vice Principal S.A. Engg. College Chennai.	Performance Management of Heads of Departments in Engineering Institutions	Dr. V. Thanikachalam, Former Professor and Head, Dept. of Correspondence Courses	28.03.2012

So far a total number of 52 scholars have been awarded Ph.D. degree.

### **Ph.D Progress Review Meetings:**

A system of monitoring the progress of Ph.D. Scholars by conducting review meetings, once in six months was introduced in the year of 2009. The purpose of this initiative is to enrich the quality of the research work through formative evaluation and providing constructive feedback. During this year, the Review Committee conducted the fourth Progress Review meetings during 18 - 27, April 2011. A total of 49 scholars presented their work. The fifth progress review meetings were conducted on 18 - 29, October 2011. A total of 47 scholars presented their work to the Review Committee and received very useful feedback and suggestions. The Committee also conducted a Repeat Progress Review meeting for 6 scholars on 13<sup>th</sup> December 2011.

### **b) M.TECH. (HRD) PROGRAMME:**

This programme of four semester aims to produce competent human resource developers for the technical education sector.

This programme includes courses in Management, Organisational Behaviour and Performance, Industrial Sociology, Psychology in Industry, Research Methodology in HRD, Computer Applications & Information Technology in HRD, Organisational Development, Transformation and Re-engineering, Human Resource Development, Strategic Human Resource development, Designing and Managing Human Resource Systems, Institutional Evaluation & Development and Courseware Development for HRD Programmes.

During this year, 4 candidates of the VII Batch continued their studies. So far, a total of 80 candidates had successfully completed this programme in seven batches.

### **c) OVERSEAS TRAINEE COURSES:**

During the year 2011-12, the institute organized eight training programmes for the overseas participants under the ITEC Programme and its corollary SCAAP (Special Commonwealth African Assistance Programme). It is fully-funded by the Government of India, for training civilians from 158 countries in Asia, East Europe (including former USSR), Central Asia, Africa, and Latin America, the Caribbean as well as Pacific and Small Island countries. As a result of various activities under ITEC programme for the past 30 years, there is now a great visibility and growing awareness among other countries about the competence and service provided by NITTTR Chennai. Over the years, the technical and economic assistance

programme of Ministry of External Affairs has generated immense goodwill and substantive cooperation among the developing countries. Centre for International Affairs coordinates the programme with the subject coordinators.

**Table 2: Eight Weeks OTC Programmes during the year 2011-12**

Courses	Coordinators
Curriculum Design and Instructional Material Development	Dr. S. Dhanapal
Water Quality Analysis: Laboratory Practices	Dr. S. Mohan & Dr. G. Janardhanan
Developing Technical Education to meet the National Growth	Dr. G. Kulanthaivel & Dr. G. Janardhanan
Modern Library Practices	Dr. R. Ravichandran
Educational Video Production	Dr. E. S. M. Suresh
Sustainable Development and Environmental Management	Dr. S. Mohan & Dr. G. Janardhanan
Women Empowerment through technical and vocational education	Dr. S. Renukadevi
Human Resource Development	Dr. S. Renukadevi

**Table 3: Enrolment by Nation: 2011-12**

Countries	No. of Participants Enrolled	Countries	No. of Participants Enrolled	Countries	No. of Participants Enrolled
AFGHANISTAN	7	NIGERIA	3	BHUTAN	3
MYANMAR	8	ZIMBABWE	8	EGYPT	1
SUDAN	9	BELARUS	1	ETHIOPIA	2
UZBEKISTAN	3	COAST IVORY	4	REPUBLIC OF FIJI	2
MAURITIUS	6	LEBANAON	1	INDONESIA	1
NAMIBIA	2	MADAGASCAR	1	LAOS	3
TANZANIA	2	SRILANKA	8	NEPAL	2
GHANA	3	YEMEN	4	VIETNAM	3
CAMBODIA	6	BOTSWANA	2	DEMO. REP. of CONGO	1
UGANDA	4	BURKINA FASO	4	GUATEMALA	1
ZAMBIA	5	CHILE	1	JORDAN	2
BANGLADESH	2	PALESTINE	2	GEORGIA	1
SYRIA	2	BULGARIA	1	GUINEA	1
KENYA	3	CHAD	1	OMAN	2
LESOTHO	2	COLOMBIA	1	GAMBIA	1
				<b>Total candidates</b>	<b>132</b>

**i. Advanced Certificate Course on “Curriculum Design and Instructional Material Development”**

The course aims at developing competencies needed for curriculum design and development of appropriate instructional materials. The 30<sup>th</sup> batch of this course was conducted by the Curriculum Development Centre of the institute from 3<sup>rd</sup> August to 27<sup>th</sup> September 2011. Fourteen participants from eight countries viz., Afghanistan, Ghana, Mauritius, Myanmar, Namibia, Sudan, Tanzania and Uzbekistan attended this course. So far (including the 30<sup>th</sup> batch), a total number of 543 Overseas teachers were trained by the institute through this course.



**OTC Inaugural Programme - 2011 -12**

**ii. Advanced Certificate Course on “Water Quality Analysis: Laboratory Practices”**

The objective of this course was to provide innovative and responsive professional development and training in the area of water quality assessment through improved monitoring, good laboratory practice



**Water Quality Analysis - Laboratory Session**

technique, effective application and enforcement of legal and institutional arrangements. The 2<sup>nd</sup> batch of this course was conducted by the Centre for Environmental Management of the institute from 3<sup>rd</sup> August to 27<sup>th</sup> September 2011. Eight participants from five countries viz., Afghanistan, Cambodia, Myanmar, Nigeria and Zimbabwe attended this course. This course was structured into three major units totaling up

to 12 curriculum modules. Course is proper blend of field and lab studies with integrated lectures in preexisting related courses (text or lecture-note based). Training programme explored the subject through resources, development, impact and management.

**iii. Advanced certificate course on Developing Technical Education to meet the National Growth**

Centre for International Affairs, offered the first batch of this course from 5<sup>th</sup> October to 16<sup>th</sup> November 2011. Seventeen participants from 12 countries viz., Afghanistan, Belarus, Botswana, Ivory Coast, Lebanon, Madagascar, Mauritius, Myanmar, Namibia, Sri Lanka, Sudan and Yemen participated in the programme. The main focus of this programme is to assess the human resource needs of the growing industries from skilled workers to engineers / technologists / managers. Outcome was focused towards developing National Education Policy through the participation of stake holders and preparing guidelines for organizing technical education institutions through public private participation.



**DTENG Course - Valedictory Function**

**iv. Advanced Certificate course on Modern Library Practices**

The main objective of this course was to develop competencies for facilitating e access to IT based knowledge – streamlining library processes, promoting and enhancing reading habits among the users –



**Modern Library Practice - Course Participants**

managing and developing collections, services and facilities. The 4<sup>th</sup> Batch of this course was conducted by the Resource Centre of this institute from 13<sup>th</sup> October to 7<sup>th</sup> December 2011. Twenty two participants from 16 countries viz., Bhutan, Egypt, Ethiopia, Ghana, Indonesia, Laos, Mauritius, Myanmar, Nepal, Republic of Fiji, Sri

Lanka, Sudan, Uganda, Vietnam, Zambia and Zimbabwe attended this course.

**v. Advanced Certificate course on “Educational Video Production”**

The course aims at enabling the participants to make their own video films in their subjects. The 5<sup>th</sup> batch of this course was conducted by the Educational Media Centre from 13<sup>th</sup> October to 7<sup>th</sup> December 2011.

Fourteen participants from 10 countries viz., Bangladesh, Burkina Faso, Chile, Mauritius, Nigeria, Palestine, Republic of Fiji, Sudan, Yemen and Zimbabwe attended this Programme. So far (including the 5<sup>th</sup> batch), a total number of 43 Overseas teachers were trained by the institute through this course.



**Educational Video Production during the programme**

**vi. Advanced Certificate course on “Sustainable Development and Environmental Management”**

The main objective of this course is to inculcate the values, behaviors and lifestyles required for a sustainable future and for positive societal transformation.

The enabling objectives are:

- a. To provide an understanding on the methods and approaches for sustainable environmental development and understand the interrelationships among socio, economic and environmental issues;
- b. To provide the mode of assess the impact of developmental project on environment and to suggest appropriate remedial measures; and
- c. To foster an increased quality of teaching and learning in education for sustainable development;



**Village visit, stay and interaction**

The 2<sup>nd</sup> batch of this course was conducted by the Centre for Environmental Management from 18<sup>th</sup> January to 15<sup>th</sup> March 2012. Twenty

Five participants from 13 countries

viz., Botswana, Cambodia, Democratic Republic of Congo, Guatemala, Jordan, Kenya, Lesotho, Sri Lanka, Sudan, Syria, Tanzania, Vietnam and Zambia attended this Programme.

Highlight of the course is stay and interaction with village residents regarding the sustainability practices implemented in



**Visit to Thuvakudi Coffee Research Station**

India. Participants are provided wide exposure in the area of Corporate Social Responsibility. So far (including the 2<sup>nd</sup> batch), a total number of 44 Overseas teachers were trained by the institute through this course.

**vii. Advanced Certificate Course on “Human Resource Development”**

The main objective of the course was to train human resource managers of various departments of Government and industries for planning and implementing HRD Programmes and Projects. The 5<sup>th</sup> Batch of this course was conducted by the Department of education of this institute from 18<sup>th</sup> January to 15<sup>th</sup> March 2012. 21 participants from 17 countries viz., Bhutan, Bulgaria, Burkina Faso, Chad, Colombia, Ethiopia, Gambia, Georgia, Guinea, Ivory Coast, Kenya, Laos, Nepal, Nigeria, Oman, Uganda, and Zimbabwe attended this course. So far (including the 5<sup>th</sup> batch), a total number of 88 Overseas teachers were trained by the institute through this course.



**HRD Course Participants**

**viii. Certificate Course on “Women Empowerment through Technical and Vocational Courses”**

The course was designed to enable the participants to evolve appropriate strategies for women empowerment in their respective countries and use these strategies. The 5<sup>th</sup> Batch of this course was conducted by the Department of Education of this institute from 18<sup>th</sup> January – 15<sup>th</sup> March 2012. 11 participants from 9 countries viz., Burkina Faso, Cambodia, Ghana, Laos, Sri Lanka, Sudan, Uganda, Yemen and Zimbabwe attended this course. So far (including the 5<sup>th</sup> batch), a total number of 56 Overseas teachers were trained by the institute through this course.



**WETVC Course Participants**

### Highlights of the Overseas Teachers Courses:

- The participants of the eight courses listed above were sponsored by the Indian Technical and Economic Cooperation Scheme (ITEC) and the Special Commonwealth Africa Assistance Programme (SCAPP) of the Ministry of External Affairs and Technical Corporation Scheme (TCS) of Colombo Plan of Ministry of Finance of Government of India.
- A total of 132 persons (teachers and administrators) from 45 countries participated in these courses.
- Individual presentation of Seminars by the participants and carrying out project work individually.
- Participants were exposed to Indian culture and tradition through visits.
- In their feedback, they have stated that the courses were conducted very effectively & efficiently.
- The logistics and stay in India were found to be very enjoyable by them.
- They have assured that they will utilize the newly acquired competencies in performing their job in their home countries, on their return.

## 4.2 SHORT TERM TRAINING PROGRAMMES:

### a) POLYTECHNIC COLLEGE PROGRAMMES

The institute continued to implement the Government of India's scheme of Quality Improvement Programme (QIP). The main objective of the scheme is improving the competencies of a large number of teachers in a relatively short period through short-term staff development courses of one to two weeks duration. Recognizing the need for teachers and other staff to enrich their knowledge and keep themselves abreast with the latest technologies, the institute organised training and re-training courses of duration varying between one and two weeks. These training courses are continuously reviewed, modified and redesigned so that the ever expanding and changing needs of teachers are met.



Course Participants

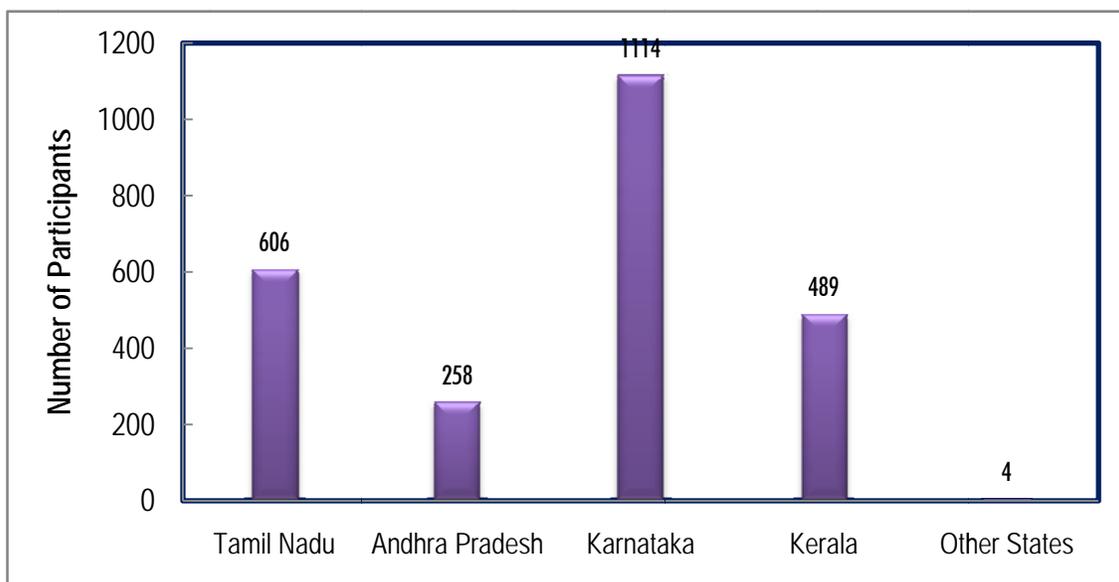
The specific training needs of the teachers of the polytechnics in each of the southern states were identified through customized workshops. Four such workshops were conducted – one in each state. The

course details, duration and venue were finalized in Programme Development Committee meetings attended by the representatives of Directorates of Technical Education and Principals of selected Polytechnics. These meetings ensured that the courses planned, designed and conducted catered to the training needs of teachers. These staff development courses were organized at the institute, its Extension Centres and also in selected polytechnics. The participation of experts from industries and institutions of repute such as IITs and CSIR Laboratories enriched the effectiveness of the training courses. Industrial visits formed an integral component of majority of the training courses.

During this year the courses were conducted in the following areas:

- ▶ Content updating in Engineering and Technology
- ▶ Instructional Design and Delivery System
- ▶ Evaluation of Students Performance
- ▶ Student Services
- ▶ Multimedia Development
- ▶ Library Automation

The performance in this area during the year under report had been impressive as 134 courses were conducted involving a total of **2471** participants (Male: 1718, Female: 753) from the polytechnics. Thus to date **61,720 teachers** have been trained through **3388 courses**.



**Table 4: Enrolment in Polytechnic courses 2011-12**

Sl. No.	TOPIC	No. of Participants
<b>NITTTR CHENNAI CAMPUS</b>		
1	e-Content Development	07
2	Engineering Drawing Using Auto CAD	24
3	Electrical and Electronic Measurements	19
4	Geographical Information System and Mapping	19
5	Java Programming	06
6	Multimedia for Teaching	19
7	Educational Video Production Workshop for Computer Science and Allied Branch Teachers	07
8	Instructional Design and Delivery System	09
9	Advanced Manufacturing Techniques	07
10	Educational Video Production Workshop for Civil and Architecture Teachers	12
11	Soft Skills	29
12	Digital Design using VHDL and Implementation using FPGA	18
13	Electrical CAD	14
14	Surveying using Total Station and GPS	21
15	Educational Video Production Workshop for Electronics and Allied Branch Teachers	09
16	Multimedia for Teaching	15
17	Linux OS and Server Administration	09
18	Power Electronics and Drives	23
19	Web Technology	10
20	Communication Skills	10
21	Guidance and Counselling	32
22	Computer Networking	27
23	Non-Conventional Energy Sources	18
24	Educational Management	06
25	Workshop on Review and Validation of Lab handbook on E&C Engg.	17
26	Environmental Engineering Laboratory Practice	13
27	Development of Graphics and Animations for e-Content	14
28	CNC Machines	18
29	C Programming	25
30	PLC and SCADA	18
31	8051 Micro Controller and Applications	11
32	Construction Materials and Techniques	13
33	Educational Video Production Workshop for Mechanical and Allied Branch Teachers	15

Sl. No.	TOPIC	No. of Participants
34	Instructional Design and Delivery System	11
35	Refrigeration and Air Conditioning	10
36	ASP.Net	14
37	Digital and Mobile Communication	09
38	Question Paper Setting and Evaluation of Students Performance	22
39	Surveying using Total Station and GPS	22
40	Soft Skills	30
41	Tally (Basic)	16
42	Library Automation – Open Source Software	25
43	Embedded Systems	30
44	RDBMS Using Oracle	22
45	Evolving Trends in Educational Technology	22
46	Limit State Design of Steel Structures as per I.S. 800 -2007	16
47	Development of Evaluation Items for e-Content	08
48	MATLAB Programming	30
49	Communication Skills	15
50	Software Engineering	13
51	Computer Aided Design and Manufacturing	11
52	Biomedical Instrumentation and Telemedicine	16
53	VB.net	07
54	Geotechnical Engineering	09
55	e-Content and Learning Management Systems	11
56	Computer Application in Analysis and Design of Structures	13
57	Instructional Design and Delivery System	12
58	ORCAD – Capture, Simulation and PCB layout	18
59	Open Office	33
60	Student Evaluation	12
61	Modern Trends in Automobile Technology	12
62	Industrial Instrumentation and Control	07
63	Research Methodology in Engineering Education	13
64	Projects in Electronics	07
65	Robotics and Mechatronics for Industrial Automation	10
66	Energy Management and Resources	10
67	ARM controller and RTOS	09
68	XML and Web Services	06

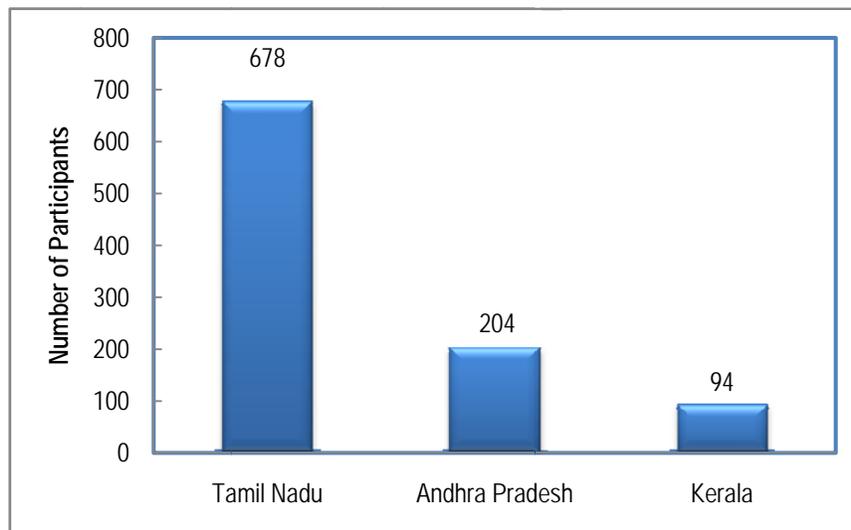
Sl. No.	TOPIC	No. of Participants
69	Educational Video Film Making Workshop for Computer Science / IT Branch Teachers	07
70	Soft Skills	17
71	Instructional Design and Delivery System	42
72	Accreditation and certification of TVET Institution	09
73	Advanced Power Electronics	19
74	Curriculum Development – Methodology	15
75	Mobile Computing	21
76	Heating Ventilation and Air-Conditioning	27
77	Library Automation – Open Source Software	24
78	Green Building Concepts and Sustainable Development	12
79	Computer Applications for project Management	19
80	Educational Video Production Workshop for Science and Humanities Teachers	14
81	Advanced Course on PLC	11
82	Principles of OOP and OOAD	14
83	Instructional Design and Delivery System	09
84	Nanotechnology and Applications	22
85	Solid Waste Management	12
86	Data Communication and Computer Networking	27
87	Repairs and Renovations of Structures	21
88	Non Traditional Machining and Non Destructive Testing	15
89	Instructional Design and Delivery System	13
90	Recent Trends in Power Systems	15
91	Modeling and Animation using 3D Studio max	27
92	Graphics and Animation for Video Production	13
93	Thermal Power Engineering	20
94	Power Electronics	15
95	DSPACE for Digital Content Repository	09
96	Workshop on Development of Curriculum for Skill courses in Automobile Engineering	11
97	LabVIEW Programming	25
98	Professional Development of Faculty	14
99	Design of Earthquake Resistant Structures	21
100	MAT LAB and Lab View Programming	20
101	Computer Aided Manufacturing and Metrology	25
<b>NITTTR - Extension Centre - Bangalore</b>		
102	CASP for Electronics Engineering	18

Sl. No.	TOPIC	No. of Participants
103	Induction Programme	28
104	CASP for Mechanical Engineering / Automobile	25
105	Indian Constitution, Parliament	32
106	CASP for Civil Engineering	27
107	CASP for Electrical Engineering	25
108	Induction Programme	42
109	Indian Constitution, Parliament	32
110	Indian Constitution, Parliament	26
111	Indian Constitution, Parliament	39
112	CASP for Other Technology and Commercial Practice	17
<b>NITTTR - Extension Centre - Hyderabad</b>		
113	Engineering Graphics and CAD 2D	28
114	Computer Hardware and Networking	15
115	Working with Solidedge ST4	22
116	Embedded System Design	21
117	Field practice with Total station	26
118	Designing using CAM Express 8.0	20
119	Advances in Communication Engineering	12
<b>NITTTR - Extension Centre - Kalamerry</b>		
120	Environmental Science (1 <sup>st</sup> Batch)	32
121	Health and Physical Education	43
122	Advances in Concrete Technology	26
123	Environmental Science (2 <sup>nd</sup> Batch)	33
124	Environmental Science (3 <sup>rd</sup> Batch)	29
125	Concrete Technology and Mix design	16
126	Python Programming	22
127	Python Programming	18
128	Python Programming	14
129	Workshop on Accreditation by NBA for Polytechnics	42
130	Soft Skills	25
131	Professional Developments of Faculty	16
132	Environmental Science	26
133	Informatics Practices	26
134	General Engineering	18
	<b>TOTAL</b>	<b>2471</b>

## b) ENGINEERING COLLEGE PROGRAMMES

The institute has also focused its activities to improving the quality of education in engineering colleges through training of teachers. **23** short term courses covering **976** participants (Male: 524, Female: 452) were organised. The courses were conducted in the following areas:

- ▶ Content updating in engineering and technology
- ▶ Instructional Design, Delivery and Evaluation
- ▶ Pedagogy
- ▶ Human Resource Development
- ▶ Student Services
- ▶ Institutional Development and Educational Management



Thus to date, **20,804** teachers have been trained through **531** courses during the past eleven years.

**Table 5: Enrolment in Engineering courses - 2011-12**

Sl. No.	Venue	No. of Participants
<b>INSTRUCTIONAL DESIGN AND DELIVERY SYSTEM (IDDS)</b>		
1	Sree Kavitha Engineering College, Tirupathi	50
2	Velammal Engineering College, Chennai	31
3	Velammal Engineering College, Chennai	29
4	Mailam Engg. College, Tindivanam	45
5	Velammal Engineering College, Chennai	41
6	Velammal Engineering College, Chennai	27
7	SaintGits College of Engineering , Kottayam, Kerala	41
8	Velammal Engineering College, Chennai	34
9	Anna University Technology, Madurai	31
10	Arasu Engineering College	44
11	Chaitanya Bharathi Institute of Technology, AP	50
12	SCAD Group of Institutions, Tirunelveli	50
13	James College of Engineering and Technology, Nagercoil	56
14	Sree Vidyanikethan Engineering College, Tirupathi	50
15	KMEA Engineering College, Kerala	52
16	Accharya College of Engineering, Puducherry	23
17	Agni College of Engineering, Chennai	42
18	DMI College of Engineering, Chennai	50
19	Prist University, Thanjavur	53
20	SRM University, Vadapalani	52
21	Sri Aravindar College of Engineering, Vilupuram	49
<b>TEACHING METHODOLOGY</b>		
22	Brindavan Institute of Technology and Science, Kurnool, AP	51
<b>ACCREDITATION AND CERTIFICATION OF TVET INSTITUTION</b>		
23	NITTTR, Chennai	25

#### 4.3 INDUSTRIES AND OTHER ORGANISATION PROGRAMMES

The institute has established good collaboration with industries. The industries are also availing the experience, expertise and resources of institutions for getting their staff trained. During 2011-12, the Centre



**TNRSP - Induction Training Programme**

for Environmental Management (CEM) of this institute conducted specialized courses to Public Works Department (PWD), Government of Tamil Nadu and Highways Department, Government of Tamil Nadu and trained 117 professionals. During this year the courses were conducted in the following areas:

1. Environmental Impact Assessment
2. Design of Irrigation Structures
3. Computer Applications in Irrigation Water Management
4. Induction Training Programme for Newly Recruited Highways Department Engineers

Thus to date, **2367** persons had been trained through **110** courses during the past twelve years.

#### **4.4 MEMORANDUM OF UNDERSTANDING**

The following are the list of institutes, with whom NITTTTR signed MOU during the year 2011-12.

- a) Vellore Institute of Technology, Vellore 632 014
- b) Sri Aravindar Engineering College, Sedarapet PO, Vanur, Villupuram 605 111
- c) Everonn Technical Education India Ltd., Perungudi, Chennai 600 096

#### **4.5 INTERNATIONAL / NATIONAL SEMINAR / WORKSHOPS CONDUCTED**

A total of twelve seminars / workshops were conducted during this year. 1094 persons from Engineering colleges, Polytechnic colleges, Industries, Government departments and professionals participated in them. The details of each of these programmes are given below.

##### **a) National Workshop on “Global Positioning Systems – Principles and Applications”**

The National Seminar was organized by Educational Media Centre and Department of Civil Engineering on 29<sup>th</sup> & 30<sup>th</sup> September 2011. The broad objectives of the workshop were to (i) understand the importance of GPS instrument, (ii) explain the working principle of GPS, (iii) conduct the surveying using GPS and process the data. 48 participants from various Engineering Colleges, Universities, Polytechnics, Practicing Professions of Tamilnadu, Karnataka, Andhra Pradesh and Union Territory of Puducherry participated in the Seminar.



**GPS Workshop - Hands on Practice**

**b) International Workshop on “Sustainable Education in Global Engineering Curricula”**

International Workshop was organized by Curriculum Development Centre (CDC) and Centre for Environmental Management (CEM) on 15<sup>th</sup> September 2011 in collaboration with PSNA College of Engineering and Technology, Dindigul. The broad objectives of the workshop were to (a) review the curricula of Engineering education in developing countries in Asia, Africa, Middle East and South America to achieve sustainability, (b) identify the areas of technical programmes which need modification, improvement and upgradation, (c) suggest ways and means of creating appropriate additional courses in technical education in developing countries and (d) create sustainable linkages among the developing countries for exchanging innovative curricula and instructional packages. 21 international participants and 50 participants from various Engineering Colleges, Universities, Polytechnics, Industries, Practicing Professions of Tamilnadu participated in this workshop.



**Inaugural Address in the Workshop**

**c) International Workshop on “Role of Technical Education in Developing Countries”**

National Institute of Technical Teachers Training and Research (NITTTR), Chennai organized an



**Workshop Participants @ VIT Vellore**

International Workshop on “Role of Technical Education in Developing Countries” in collaboration with Vellore Institute of Technology, Vellore on 18<sup>th</sup> October 2011. The main focus of the workshop is to emphasis the need of technical education for country upliftment. How technology and engineering

education plays an important role in developing countries to raise the standard of livelihood. Workshop concluded with the function on inauguration of VIT - USA institute of advance study. A total of 20 participants participated in the workshop.

**d) International Workshop on “Development of Technical Education to Meet Millennium Development Goals”**

The National Institute of Technical Teachers Training and Research (NITTTR), Chennai organized an



**Chairman Address to the Workshop Participants**



**Workshop Participants**

International Workshop on “Development of Technical Education to meet Millennium Development Goals” in collaboration with Muthayammal Engineering College, Rasipuram, Nammakal Dist. on 11th November 2011. The objectives of the workshop were (a) to effectively innovate and apply engineering and technologies solutions to global issues and challenges, (b) to understand the role of engineering for sustainable socio-economic development as a driver of innovation, (c) to transform education, curricula and teaching methods with emphasize on Millennium Development Goals, (d) to create sustainable linkages among the developing countries for exchanging innovative practices in capacity building of nations through knowledge and

skill based technical education. 48 participants from Engineering colleges including 17 participants from different countries namely Afghanistan, Belarus, Botswana, Ivory Coast, Lebanon, Madagascar, Mauritius, Myanmar, Namibia, Sudan, Yemen participated in this International Workshop.

**e) International Workshop on Development of e Resources in Engineering Education**

The National Institute of Technical Teachers Training and Research (NITTTR), Chennai organized an international Workshop on “Development of E-Resources for Engineering Education” in collaboration with Sri Jayachamarajendra College of Engineering, Mysore on 28<sup>th</sup> November 2011. The objectives of the seminar were (i) To design & develop Educational Video films for Engineering Education, (ii) To use open source tools for Library Management System and Digital Library and (iii) To broadcast developed

educational films using the latest technologies. Around 80 participants including 40 foreign participants from different countries namely Nigeria, Zimbabwe, Mauritius, Yemen, Fiji islands, Chile, Palestine, Burkina Faso, Sudan and Bangladesh etc. and 40 participants from National level participated in the deliberation.



#### **f) National Workshop on “Cloud Computing”**

This Workshop was conducted by the Department of Computer Centre on 8th and 9th Dec 2011. The objective of the workshop was to introduce the technical concepts, recent trends and research issues in



Cloud Computing. 26 Teachers from Engineering and Polytechnic colleges participated in this Workshop. The Workshop was inaugurated and keynote address was delivered by Dr. C R Muthukrishnan, Advisor, TCS. Presidential address was delivered by Dr. S Mohan, Director, NITTTR, Chennai. Experts from reputed Institutions and Industries namely Anna University, CDAC, NIC, WIPRO, Orangescape were served

as the resource persons. The contents of the workshop were well received and it was appreciated by everyone as it was an eye opener to most of the participants. The research issues and Challenges in Cloud security was very much useful and appreciated.

#### **g) In-country Programme on “Accreditation and Certification of TVET Institutions”:**

The institute conducted an In-Country programme on “Accreditation and Certification of TVET Institutions” from 9<sup>th</sup> to 13<sup>th</sup> January 2012 in collaboration with Colombo Plan Staff College (CPSC) for Technician Education, Manila, Philippines at our institute. A total of 34 participants comprising teachers of engineering colleges, polytechnic colleges, NITs, Deemed Universities and faculty of our institute attended the programme. The programme enabled the participants to understand the criteria, parameters and processes

used for Accreditation of Technical Education Programmes and Institutions by National Agencies such as NBA and NAAC and International Agencies such as APACC and ABET.



Prof. Dr. S. Mohan, Director, NITTTR, Chennai inaugurated the in country programme. Dr. Mohammad Naim Yaakub, Director General, CPSC, Manila, Philippines; Prof.T.J. Tesoro Gayondato, Faculty Member, CPSC, Manila; Prof. Rajesh P. Khambayat, Chairman, Training and Development Division,

CPSC, Manila; Dr.R.Murugesan, Vice-Chancellor, Anna University of Technology, Madurai; Dr. C. Muthamizhchelvan, Director (Engineering & Technology), SRM University, Chennai; Prof. B. Nandagopal, Principal, Murugappa Polytechnic College, Chennai; Dr. D. Brahadeeswaran, Professor and Head, Department of Policy Planning & Educational Research, NITTTR, Chennai and Dr. G. Kulanthaivel, Associate Professor of Electronics Engineering & Head in-charge of Centre for International Affairs, NITTTR, Chennai were served as resource persons for the programme.

#### **h) International Seminar on “Enhancing Quality of Technical Education through Accreditation”**

A one day International Seminar on “Enhancing Quality of Technical Education through Accreditation” was conducted by the institute in collaboration with Colombo Plan Staff College (CPSC) for Technician Education, Manila, Philippines on 12<sup>th</sup> January, 2012. A total of 95 participants comprising Chairpersons / Secretaries / Correspondents / Directors / Deans / Principals / Senior Teachers of Technical Universities, Engineering Colleges & Polytechnics, Officials of Directorates of Technical Education and faculty and research scholars of NITTTR, Chennai attended the Seminar. Prof.Dr.M.Anandakrishnan,



Chairman, IIT, Kanpur inaugurated the seminar. Dr. S.R.K. Prasad, Chairman, Board of Governors, NITTTR Chennai Society presided over the function. Mr. B.S.Ponmudiraj, Assistant Advisor NAAC, Bangalore; Dr. Z.C.Alex, Director of Accreditation & Academics, VIT University, Vellore; Dr. K.A. Bhaskaran, Former Professor of IIT, Madras; Dr.Mohammad Naim Yaakub, Director General, CPSC, Manila; Prof.T.J. Tesoro Gayondato, Faculty Member, CPSC, Manila and Dr.A.Kalanidhi, Former Vice-Chancellor of Anna University, Chennai, Vice-Chairman, C-STAR, Chennai were served as resource persons for the seminar.

The programme enabled the participants to understand the criteria, parameters and processes used for Accreditation of Technical Education Programmes and Institutions by National Agencies such as NBA and NAAC and International Agencies such as APACC and ABET.

**i) International Seminar on “Human Resource Development in Technical Education”**

An International seminar on “Human Resource Development in Technical Education” was jointly organised by NITTTR, Chennai and Karpagam University, Coimbatore on 2nd March 2012 at Karpagam University, Coimbatore. The objectives of the seminar were (i) Know the International Human Resource development practices in Technical Education, (ii) Develop strategies for strengthening Human Resource practices in Technical Education and (iii) Develop strategies for empowering women through technical education. A total of 65 Participants from different countries namely Bulgaria, Burkina Faso, Chad, Colombia, Georgia, Guinea, Ivory Coast, Laos, Nepal, Oman, Ethiopia, Gambia, Kenya, Nigeria, Uganda, Zimbabwe, Bhutan, Sudan, Yemen, Ghana and Sri Lanka attended this Seminar, in addition to Indian Delegates.

**j) Workshop on Preparing Next Generation Designers and Engineers for Mechanical and Civil Engineering Industries**

Department of Civil Engineering of the institute organized a one day workshop on “Preparing Next Generation Designers and Engineers for Mechanical and Civil Industries” in collaboration with Autodesk INC, Bangalore on 12th March 2012. Objective of the workshop was to Empower educators to prepare the students for successful careers in manufacturing and construction industries and Expose educators and students to Advanced Digital Technologies used in Mechanical and Civil Engineering sectors.

83 participants comprising Principals and HoDs from Mechanical, Civil, Architecture and related engineering disciplines of Polytechnics from Tamilnadu and Engineers from Industries. Presidential address was delivered by Dr. S Mohan, Director, NITTTR, Chennai. Inaugural address was delivered by Shri L.C. Raghavan - Consultant, Waterjet Germany Private Limited, Chennai. Prof. Dr. S. Mohan – Director, NITTTR, Chennai, Shri L.C. Raghavan - Consultant, Waterjet Germany Private Limited, Chennai, Prof. Dr. Ramanathan - Centre for Engineering Design, IIT, Chennai, Dr. Arun Menon – Department of Civil Engineering, IIT, Chennai, Shri Anand Pillai – Program Manager – India & SAARC Education Programs, Autodesk India Limited and Shri Ramesh Pudale – Manufacturing Solution Specialist – Autodesk India Limited were served as resource persons of this workshops.

**k) International Seminar on “Sustaining Development and Environmental Management”**

Centre for Environmental Management, NITTTR and Rural Technology Centre, Gandhigram organized three days (4 - 6 March 2012) International Seminar on “Sustainable Development and Environmental Management”. About 26 delegates from Cambodia, Democratic Republic of Congo, Guatemala, Jordan,



**International Workshop SDEM Participants**

Lithuania, Sri Lanka, Sudan, Syria, Vietnam, Botswana, Kenya, Lesotho, Tanzania and Zambia participated in this seminar and total 209 participants registered in this seminar. The main objective is to (a) assess

the problems and prospects in Sustainable Habitat Development, (b) issues Related to Sustainability, (c) Innovative Technologies and Methodologies, (d) Sustainable Environmental Management, (e) Sustainable Practices, (f) Education & Training tools for Sustainable Development and Environmental Management and (g) Housing and Environment. Seminar is the culminating event of the one week stay in Gandhigram village. International delegates participated PRA exercises, video conferencing from Sirumalai tribal village, visit to sustainable coffee plantation, organic farming and Gandhian Museum in thought of sustainable education.

### **I) 33<sup>rd</sup> International Annual Conference of School Psychology Association (ISPA)**

The 33<sup>rd</sup> Annual International School Psychology Association (ISPA) Conference was organized by VIT University, Vellore, in association with National Institute of Technical Teachers Training and Research (NITTTR), Chennai, Indian School Psychology Association (InSPA), and Indian Academy of Applied Psychology (IAAP) from 19<sup>th</sup> to 23<sup>rd</sup> July, 2011 with the focal theme “Educational Psychology in the context of Globalization, Diversity and Societal challenges”.



**33<sup>rd</sup> ISPA Conference Participants**

A total number of 315 delegates from 25 countries participated in the Conference. Delegates from following countries viz., USA, UK, Germany, Estonia, India, Canada, Ireland, Netherlands, Lebanon, Poland, Italy, Turkey, Israel, Australia, France, Nepal, Srilanka, South Africa, Brazil, Malta, Japan, Nigeria, Indonesia, Bangladesh and Iran participated in the deliberation.

The Inaugural function was presided over by Dr.G.Viswanathan, Chancellor, VIT University, Vellore. Dr.S.Narayanan, Pro Vice Chancellor welcomed the gathering. Dr.S.Renukadevi, Organizing Secretary presented the report of the conference. Dr.S.Mohan, Director, NITTTR, Chennai, Dr.Bill Pfohl, President, ISPA, Dr.Habib Ahmad, President, IAAP and Dr.G.P.Thakur, Chair, Local Organizing Committee(LOC) of ISPA Conference offered felicitations. Inaugural address was delivered by Dr.G.Viswanathan Chancellor, VIT University and the Conference Abstract book was released by the Chancellor. The valedictory function was presided over by the Chancellor Dr.G.Viswanathan. Dr.S.Mohan, Director, NITTTR, Chennai, Dr.Jurg Foster, and Dr.G.P.Thakur offered felicitations.

### **5.0 INSTRUCTIONAL MATERIALS DEVELOPMENT**

During 2011-12, the institute developed 4 lab materials and 46 print type materials in various Engineering subjects, Pedagogy and Management for use by teachers of technical institutions.

## 6.0 INSTRUCTIONAL MEDIA DEVELOPMENT

### Video programmes:

The institute has developed, over the years excellent facilities for the production of Educational Video Programmes in the areas of technical education and teacher training. During the year under report 28 video programmes were produced for teachers and students of technical education institutions.

### Other types of Instructional Media:

The institute developed 78 MMLP Simulations during the year 2011-12.

**Table 6: Title on which simulations developed- 2011-12**

Circle generating algorithm	Data Transmission Modes
Pattern Fill	Sine wave
Soft Fill	UTP Performance
Computer Art	Transmission Impairment
Internet messaging	Gateway
Electronic messaging	Network Devices
Mobile Messaging	Introduction and Summary of OSI Layers
Image Processing and Image Recognition	Polynominals
Graphical User Interface	Check sum
Sampling Method	Hamming Distance
Stop and wait protocol	Refresh Cathode Ray Tubes
DDA Algorithm	Bresenham's Line Algorithm
Midpoint Circle Algorithm	Pattern Fill
Soft Fill	Image processing & Image Recognition
Translation, Rotation & Scaling	Electronic Messaging – one to one communication
Transformation between coordinate systems	Electronic Messaging – one to many communication
RGB Color Model	Stop and wait ARQ (Flow Diagram)
Motion Specifications	File Formats for Multimedia Systems
Apple's Quick Time	Image Scanner
Overview of Data & File Format Standards	Mobile Messaging
Hypermedia Message Component	Network Topologies(BUS, STAR, RING, MESH)
Data Flow	Organization of the OSI layers
Summary of Layers	Sine Wave
Transmission Impairment	Sampling Methods for PCM
Unshielded vs Shielded Twisted Pair Cable	Fiber-Optic Cable (Fiber Construction)
Gateway	Checksum

Hardware Implementation	Token Passing
Messages	Accounting Management
Determination of PH	Determination of Sulphates
Determination of Turbidity	Determination of Dissolved Oxygen
Determination of Conductivity	Determination of Residual Chlorine
Determination of Chlorides	Determination of Chemical Oxygen Demand
Determination of Total Hardness	Determination of Biochemical Oxygen Demand
Determination of Calcium Hardness	Determination of Total Solids in Water
Determination of Total Dissolved and Suspended Solids	Determination of Total Organic and Inorganic Solids

## 7.0 PROJECTS RELATED TO RESEARCH & DEVELOPMENT AND EXTENSION & CONSULTANCY SERVICES:

During 2011-12, the following 18 projects sponsored by various agencies were undertaken by the faculty of the Institute:

**Table 7: Particulars of Ongoing Research & Development Projects**

S. No.	Title of the Project	Sponsoring agency	Coordinators/ Members	Funds allotted
1.	Integrating Persons with Disabilities into the Main stream of Technical and Vocational Education	MHRD	Dr. S. Mohan Dr. S. Reunka Devi	27,00,000
2.	National Faculty Development Centre for Industrially Relevant areas of Technology	AICTE	Dr. S. Mohan Dr. S. Dhanapal	20,00,000
3.	Establishment of Rain water Harvesting unit in the institute's campus	CGWB	Civil Department	40,00,000
4.	Establishing e-Training Environment for Training Technical Teachers & Students	NME-ICT MHRD, Gol	Dr. S. Mohan Dr. V. P. Sivhakumaar Dr. G. Kulanthaivel	28,00,000
5.	Production of Video film on "South Indian Foods"	NIMI, Chennai	Dr. S. Mohan Dr. E. S. M. Suresh	1,00,000
6.	DVD Preparation of Digitized Old Tamil Manuscripts	CICT, Chennai.	Dr. S. Mohan Dr. V. P. Sivhakumaar	12,00,000
7.	Enriching Content with Multimedia for Web Delivery for CICT*	CICT, Chennai.	Dr. S. Mohan Dr. V. P. Sivhakumaar Dr. G. Janardhanan	11,00,000
8.	Development of Web Portal for CICT	CICT, Chennai.	Dr. S. Mohan Dr. G. Kulanthaivel	12,00,000
9.	Macro level ground water flow modelling of NLC mines area & its expansion	RWE. Germany	Dr. S. Mohan Er. K. S. A. Dinesh Kumar	9,00,000
10.	Ground Water Modeling Study for the Multi-Layer Coastal Aquifer System of Neyveli Hydro-Geological Basin	NLC Ltd., Neyveli	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	25,00,000

S. No.	Title of the Project	Sponsoring agency	Coordinators/ Members	Funds allotted
11.	Preparation of Social Economic Survey, Identity Capture, Slum MIS, Topographical Survey, GIS Based Slum Mapping in Tirunelveli Region Under RAY	TNSCB, Chennai.	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	69,78,680
12.	Preparation of Social Economic Survey, Identity Capture, Slum MIS, Topographical Survey, GIS Based Slum Mapping in Trichy Region Under RAY	TNSCB, Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar Dr. E.S. M. Suresh Er. V. Shanmuganeethi	1,03,27,390
13.	Preparation of Social Economic Survey, Identity Capture, Slum MIS, Topographical Survey, GIS based Slum Mapping Coimbatore Region under RAY	TNSCB, Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar Dr. R. Ravichandran	1,11,87,730
14.	Design Check and monitoring Cell II Phase II Landfills at Gummidipoondi	TNWML Chennai	Dr. S. Mohan Dr. G. Janardhanan	4,00,000
15.	Training Need Analysis - Induction Training Programme to Newly Recruited to Highways Engineers, Highways Department, Govt. of Tamil Nadu	TNRSP Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	23,72,000
16.	TNSCB – Pillayarpaty Ph. II Computation of Volume of filling earth	TNSCB Tiruchy	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	1,00,000
17.	End Term Impact Evaluation of Resettlement and Rehabilitation Implementation for Milestones Nos. I, II, III and IV and ongoing road works under TNRSP Projects	TNRSP Chennai	Dr. S. Mohan Dr. V. K. Natarajan	16,54,500
18.	Road User Satisfaction Survey – III	TNRSP Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	33,10,000
<b>TOTAL</b>				<b>5,48,30,300</b>

**Table 8: Particulars of Completed Research & Development Projects**

S. No.	Title of the Project	Sponsoring agency	Coordinators/ Members	Funds allotted
1.	Preparation of Detailed Project Report for including non engineering graduates into Apprenticeship Training Scheme MHRD, GOI	Director, BOAT (SR)	Dr. S. Mohan Dr. V. Thanikachalam	9,95,000
2.	TNSCB Soil Testing for Construction of 240 Nos. Tenements – Muthammalpuram – Orathanadu.	TNSCB Tiruchy	Dr. S. Mohan Dr. G. Janardhanan	3,30,900
3.	Production of Video film on "Computer Networking"	NIMI	Dr. S. Mohan Dr. E. S. M. Suresh	1,00,000
4.	Checking the design and monitoring the Project of Second Cell of the Landfill at Common Hazardous Waste Treatment, Storage and Disposal Facility	TNWML Chennai	Dr. S. Mohan Dr. G. Janardhanan	2,50,000
5.	Preparation of Blue print for strengthening of Tamil Nadu Pollution Control	TNPCB	Dr. S. Mohan Dr. S. Dhanapal	3,39,000
6.	Preparation of DPR for establishing Polytechnic Colleges at Lakshadweep	Lakshadweep Govt.	Dr. S. Mohan Dr. B. G. Barki Dr. B. Mukhopadaya	2,00,000
7.	Video recording and editing of virtual classroom lectures	CICT Chennai	Dr. S. Mohan Dr. E.S.M. Suresh	93,755
8.	A Study on Evaluation of Resettlement Action Plan Implementation	TNRSP Chennai	Dr. S. Mohan Dr. V. K. Natarajan	9,72,000

S. No.	Title of the Project	Sponsoring agency	Coordinators/ Members	Funds allotted
9.	Environmental Impact Assessment Training Programme	PWD, Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	1,07,000
10.	Design of Irrigation Structures Training Programme	PWD, Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	1,07,000
11.	Computer Application in Irrigation Water Management Training Programme	PWD, Chennai	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	1,07,000
12.	Computation of Volume Fill - JJ Nagar, Tiruchy	TNSCB Tiruchy	Dr. S. Mohan Dr. G. Janardhanan Er. K. S. A. Dinesh Kumar	1,00,000
13.	VANBAY Scheme - Building Status Opinion	TNSCB Tiruchy	Dr. S. Mohan Dr. G. Janardhanan	10,000
14.	Deleterious Content in Soil	RITES	Dr. S. Mohan Dr. G. Janardhanan	24,000
15.	Optimum Coagulant dosage	L&T Chennai	Dr. S. Mohan Dr. G. Janardhanan	8,000
16.	TNPCB – Examination for the recruitment of Assistant Engineers	TNPCB, Chennai	Dr. S.Mohan, Dr. V.P.Sivhakumar Dr. G.Janardhanan	2,75,750
17.	TNPCB – Examination for the recruitment of Environmental Scientist	TNPCB, Chennai	Dr. S.Mohan, Dr. V.P.Sivhakumar Dr. G.Janardhanan	1,50,008
<b>TOTAL</b>				<b>41,69,413</b>

## 8.0 NATIONAL SKILL DEVELOPMENT PROGRAMME

### Rationale

The continued growth of the Indian Economy requires a large number of skilled workforce across a variety of sectors of economy including manufacturing, construction and service. The skill shortage is evident in every sector of the economy. The National Skill Development Mission aims at creating a pool of trained and skilled workforce, sufficient to meet the domestic requirements of a rapidly growing economy, with surpluses to cater to the skill deficits in other ageing economies so that India can effectively leverage its competitive advantage and harness the demographic dividend.

The Govt. of India has ambitious plans for providing skill training for about 10 million youth every year and has identified about 21 priority areas through a process of extensive survey and prioritisation. The Ministry of Human Resource Development has taken up a major role in imparting the skill development at various levels involving formal and non-formal education and training institutions.

India has over 350 million young people in the age of 15 to 35 years. At present, the country has the capacity to train only about 2% of its youth through formal vocational training, and another 8% through non-formal vocational training.

The AICTE has developed a National Vocational Education Qualification Framework (NVEQF). Under this framework, the following aspects are addressed:

- Definition of qualification at different constituent levels.
- Strengthening of vocational education in the school system
- Providing vertical progression opportunities for vocational school passouts
- Multipoint entry and exit options for enabling movement between job and learning

As part of the initiative of the Ministry of Human Resource Development of Govt. of India, the institute has taken up the following activities towards the National Skill Development Programme.

- Develop curricula and training modules involving experts from industry and training institutes.
- Organise Training of Trainers programmes for identified master trainers.
- Strive to establish Centre of Excellence with state of art equipment for Training of Trainers.
- Contribute to the Curriculum and instructional material for implementing NVEQF compliant training programmes.
- Plan a strategy for a scheme of Credit Accumulation for training modules leading to award of Diploma or Certificate.

As the first step, the process of identifying and prioritising the training needs and trades for which curricula are to be developed has been completed.

The curricula for a total 76 trades in the following five sectors have been developed so far:

**Name of the Sectors**

- i) Textiles and Clothing
- ii) Health Care Services
- iii) Electronics and IT Hardware
- iv) Leather & Leather Goods
- v) Auto / Auto Ancillary

The validation of the curricula developed through review by experts from industry and higher academic institutions are currently being carried out. Preparation of Trainers Manual and Learners Manual for some of the identified trades are being undertaken.

#### **9.0 SCHEME OF COMMUNITY DEVELOPMENT THROUGH POLYTECHNICS:**

As a Direct Central Assistance Scheme, the CDTP scheme sponsored by MHRD, Govt. of India, New Delhi in February 2009 is being implemented in 205 polytechnics in the Southern Region as on date.

The number of polytechnics in each state implementing the Scheme of CDTP are presented in the following table:

Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	Puducherry	Total
53	60	35	56	1	205

The Scheme aims to uplift the rural youth, the school dropouts, the poor, the downtrodden, etc.

#### **Activities:**

The major areas of activities under the scheme are:

##### Socio-Economic Survey

- Skill Development Training Programmes
- Dissemination and Application of Appropriate Technologies
- Technical and Support Services
- Awareness Programmes

#### **Role of NITTTR:**

To enable the project personnel associated with the implementation of the Scheme in their respective polytechnics, the Centre for Sustainable Development (CSD) of the institute serves as a Resource Centre. It conducts Orientation Training Programmes, Statewise workshops, Annual Review of the Scheme and other subject related short courses regularly.

During the year 2011-12, a Three day Orientation Training Programme for the Principals and the Internal Co-ordinators of the Polytechnics in Kerala and Karnataka each under the Scheme of Community Development Through Polytechnics (CDTP) was conducted for the selected Project personnel of the polytechnics implementing the scheme. Totally 160 participants attended these programmes.

A series of Nine Two day Orientation Training Programmes on the Scheme of CDTP for the Middle and the Lower level Project staff of the Polytechnics in the Southern Region were conducted during the August and September 2011. Totally 354 participants attended these programmes.

## **10.0 INTEGRATING PERSONS WITH DISABILITIES INTO THE MAIN STREAM OF TECHNICAL AND VOCATIONAL EDUCATION**

In accordance with the Persons with Disabilities Act – 1995 and the National Policy of Education (1986) the Ministry of Human Resource Development, Govt. of India has launched a Centrally Sponsored Scheme for upgrading selected polytechnics in the country to integrate Persons with Disabilities (PWDs) into the main stream of technical and vocational education.

### **Objectives of the Scheme:**

- Promoting education and training of PWDs in the main stream of technical and vocational education and skill development programmes through formal and non- formal programmes.
- Identifying PWDs in the suitable geographic catchments of the polytechnics.
- Identifying suitable education and training programmes for PWDs with special emphasis on non formal skill development programmes for illiterate youth with disabilities, for promoting wage or self employment as far as possible at their place or residence.
- Designing need and competency based curricula for PWDs
- Preparing / procuring / developing suitable resources, including physical, human and informational, for effective implementation of the programme.
- Developing norms and standards for different phases of the Scheme, wherever needed.
- Networking and collaborating with resource institutions and other organizations and take their assistance for manpower training, guidance and effective implementation of the scheme.
- Sensitizing administrators, planners, faculty, staff and students and community at large about the problems and capabilities of the students with disabilities and to create suitable environment in the polytechnics.
- Developing innovative educational technologies and approaches for education, training and rehabilitation of youth with disabilities.

- Strengthening the existing placement cells of polytechnics to help for providing guidance and counseling and placement of youth with disabilities for wage and self employment opportunities.
- Evolving suitable methods and practices for monitoring the scheme.

**Polytechnics in the Southern region implementing the Scheme:**

- Dr. Dharmambal Govt. Polytechnic College for Women, Chennai
- Government Polytechnic College for Women, Coimbatore
- Arasan Ganesan Polytechnic College, Sivakasi
- Government Polytechnic, Belgaum
- Government Polytechnic for Women, Mangalore
- Smt. LV Government Polytechnic, Hassan
- Sree Rama Government Polytechnic, Thriprayar
- Government Polytechnic, Kottayam
- Women's Polytechnic, Lawspet, Pondicherry

**Achievements:**

The particulars of Persons with Disabilities trained during the year 2011 - 12 are given below:

<b>PWD STUDENTS TRAINED</b>	
<b>FORMAL DIPLOMA PROGRAMMES</b>	<b>NON- FORMAL COURSES</b>
<b>160</b>	<b>168</b>

The Non-Formal courses were conducted in the following areas :

- Data Entry Operator
- Desk Top Publishing
- Office Automation
- Tailoring and Dress Making
- Embroidery
- Chair Knitting
- Coir Knitting
- Basic Computer Skills

NITTTR, Chennai assisted the Polytechnics in preparing the action plans. The implementation of the scheme was monitored through constant interaction as well as through participation in advisory committees.

### **11.0 VIRTUAL NITTTR:**

Offering teacher training programmes through Virtual mode is a priority area of the institute. The institute continues to exploit the potential of ICT and computer-network compatibility to provide the benefits of e-learning. In order to cater to a large number of technical teachers the institute is working with the concept of Virtual NITTTR to offer training programmes on-line. The Department of Educational Technology & Multimedia (ET&MM) of the institute has taken up, on mission mode, a variety of initiatives for developing digital resources in the form of Self-Learning Packages (SLPs), Multimedia Learning Packages (MMLPs) and Computer Based Tutorials (CBTs).

#### **Objectives:**

The main Objective of Virtual NITTTR is to provide quality training to technical teachers through online virtual mode and in turn make students learn effectively through trained teachers.

The enabling objectives are:

- To design and develop e-learning environment, which exploits the capabilities of the Internet and multimedia to provide on-line learning opportunities to technical teachers.
- To provide continuous learning opportunities to technical teachers by extending training from centralised training institutions into the teacher trainee's own working environment.
- To train a large number of technical teachers in pedagogical competencies, classroom management, guidance and counselling and content related areas.
- To provide e-learning opportunities to students from rural and backward areas as well within a reasonable period of time.
- To facilitate technical institutions encourage teachers to utilize training opportunities through e-learning environment in the present day situation of shortage of faculty.
- To provide e-learning resources in engineering courses to students studying in engineering colleges and polytechnics.
- To offer on-line programmes for community and for teachers and educational administrators from overseas countries.

### **Activities completed during 2011-12:**

- (i) Under the centrally sponsored Plan Scheme of National Mission on Education Through Information and Communication Technology (NME-ICT) a project pertaining to 'Establishing e-Training Environment for Training Technical Teachers and Students' with an amount of Rs.28.00 lakhs has been awarded as grant-in-aid for creation of 4 courses and is in progress from March 2010 onwards.

### **Methodology**

The four quadrants approach is being adopted for the course development under this project, as advocated by the NME-ICT.

The following steps are involved in the methodology:

- Identification of Courses
- Content Structuring
- Content development for the 4 courses
- Presentation Design
- Customization with Moodle
- Providing Web Link
- Quality Control
- Content Updating Mechanism
- Testing by target group

The content as prescribed in the curriculum is structured into Course Objectives, Course Plan, Content Outline, Unit Objectives, Modules and Teaching Points.

### **Outcomes of the Project**

The e-Content development caters to knowledge creation and dissemination which supports the core objective of the mission. The following are the outcomes accomplished:

- Providing life-long learning to technical teachers, students and society and also provide the potential for education to be moved out of centralized educational institutions into the teachers' / students' door steps.
- Covering a large population; distance and time factors are being eliminated gradually if not immediately and completely.

- The problem of deputing teachers for external training programmes get minimized.
- Providing learning opportunities with quality content in the present day situation of shortage of faculty in the technical institutions.
- Minimizing the digital divide.

Web-based Courses/ Webcasting is planned to be organised during the next year to offer training to a larger population of Technical Teachers. Technical Institutions with suitable infrastructure facilities are being identified for serving as nodal centres for Webcasting.

### **12.0 INFRASTRUCTURE FACILITIES DEVELOPMENT**

Based on the increase in the number of Overseas Teachers Programmes, additional accommodation / facilities have been developed in the institute's Guest House.

### **13.0 IMPLEMENTATION OF THE e-GOVERNANCE PROJECT**

The Institute is in the process of developing an e-Governance Application covering the Academic, Accounting, Purchase and Administrative processes of the Institute. The e-Governance application is aimed to help improving the productivity and accessibility of these processes. The Institute prepared a Request For Proposal (RFP) document outlining the scope and requirement of e-Governance application to be developed. Open Tender was initiated and technical and commercial bids were submitted by the vendors in April 2011. As an outcome of the Open Tender Process the firm HTC Global Services Pvt. Ltd., Chennai has been selected as the vendor for the development of the e-Governance application.

A Service Level Agreement (SLA) has been signed between NITTTTR, Chennai and HTC Global Services Pvt. Ltd., Chennai on 24.11.2010. The agreement involves development of e-Governance based automation for the functional requirement of (i) Academic Processing System, (ii) Finance, Purchase, Inventory and Assets Management and (iii) Payroll & Human Resource Management System and (iv) Hostel and Guest House Management.

1. The Vendor made presentations on the following modules on the dates indicated, explaining the broad features:

- (i) Academic Processing System on 08-12-2010 for Heads of Department
- (ii) Overview of e-Governance Project on 09-12-2010 for faculty and support staff
- (iii) Sample modules on Finance, Purchase, Inventory and Assets Management on 10.12.2010 for Accounts staff

Faculty members, Accounts and Administration staff attended the presentations.

2. The e-Governance Group and Review Committee for each of the four modules have been formulated by the Director on 13<sup>th</sup> January 2011, comprising of Faculty members, Senior Administrative Officer and Supporting staff of Accounts and Administration section.
3. A briefing meeting was organised on 7<sup>th</sup> January 2011 for the office staff who are the members of e-Governance group for Academic Processing System and Finance, Account and Purchase, Inventory and Assets Management to prepare them for the ensuing System Study Activity that would be carried out by the Vendor. The members were appraised of the need for system study, the members responsibility in providing needed forms, receipts, ledgers and other reports to the System Analysts, in addition to the workflow information.
4. The Vendor's staff carried out requirement study / discussion with the faculty / staff concerned for the following processes during 11 – 27 Jan 2011.

Pay Bill Processing	Accounts – Cash Book
PF Processing, Pension Processing, HR Organization	Overseas Teaching Course
Purchase – General	Ph.D. Scholars & Long Term Courses
Recruitment, Allowances & Other Establishment	Hostel and Guest House Management
Vehicle Management	Accounts
Purchase Department, Leave Management, Medical Bill Processing	HRMS – Pending
Estate Management	Short Term Course

5. The Vendor after carrying out Round 1 of the System Study, has prepared the First Draft of the SRS documents – Version 0.0a and these were made available for review in March 2011.

The project will be completed in June 2012.

#### **14.0 IMPLEMENTATION OF THE USE OF HINDI LANGUAGE**

To Promote the use of Hindi in the Institute as envisaged by the Official Language Implementation Committee, a number of activities are being implemented. During the year the following activities were conducted :

- (i) A one day Hindi workshop on “Official Language Past, Present & Future” was organized by Hindi Cell of our Institute on 29/08/2011. 21 participants attended this Workshop.

(ii) On 14/09/2011 a Painting, Elocution & Essay Competition in Hindi on "Corruption Free India" for School Children's in and around Chennai was invited. Around 5 Schools and 48 students are participated and the prizes for the winners awarded on (Hindi Day) the occasion of celebration held on 20/09/2011.

(iii) A one day Hindi workshop on "Functional Hindi-Simple Sentences-Writing & Conversational" was organized by Hindi Cell of our Institute on 30/11/2011. 22 participants are attended this Hindi Workshop.



(iv) A one day Hindi workshop on "Situational Hindi" was organized by Hindi Cell of our Institute on 29/02/2012. 29 participants are attended this Hindi Workshop.

(v) Hindi Pakhwada was celebrated in the Institute between 12<sup>th</sup> to 14<sup>th</sup> of September, 2011 and Hindi Day was celebrated on 20<sup>th</sup> September, 2011. Various Competitions in Hindi - Simple conversation / Interaction in Hindi, Copying a given paragraph in Neat Handwriting (for Group 'D'), Hindi Quiz and Hindi Anthakshari - were conducted for the staff and trainees of the Institute. Dr. K. Ramasamy, M.A., Ph.D., (Linguistics), Officer In-charge, Central -Institute of Classical Tamil - Chennai & (Formerly Professor cum Deputy Director) of Central Institute of Indian Languages, Mysore - was the Chief Guest of the Function.

### 15.0 INTER NITTTR SPORTS MEET

Participation in sports and culture would promote fraternity among the NITTTRs at all levels leading to development of desired team spirit and synergy required for holistic development of the NITTTR system. To achieve this aim, Inter NITTTR Sports Meet is being conducted since 2005, every year by rotation at Chandigarh, Bhopal, Kolkata and Chennai. So far we have successfully conducted seven Sports meets.

The 8th Inter NITTTR Sports Meet – 2012 was held at NITTTR, Chennai from 22nd to 25th January 2012.

The following games/events were conducted during this sports meet.

Badminton	Carrom
Table Tennis	Volleyball
Chess	Auction Bridge
Running -100 meters	

In addition to the above games, the following carnivals were also organized viz. spoon race, musical chairs, sudoku, rangoli and tug of war. All sports persons, members of their families, faculty and staff of our institute were enthusiastically participated. A total of 78 participants from four NITTTRs participated in this sports meet. From NITTTR Chennai, 23 persons participated in this Sports Meet and all participants won medals.

The inauguration of the sports meet started on 22<sup>nd</sup> January 2012 with a march past by the participants. Dr. R. Theagarajan, Sports Coordinator, NITTTR, Chennai welcomed the gathering. Prof. Dr. S. Mohan, Director, NITTTR, Chennai delivered the presidential address. Prof. L. S. Ganesh, Dean Student Affairs, IIT Madras was the chief guest, and he inaugurated the sports meet and administered the oath of this sports to the participants. Prof. Dr. K. M. Rastogi, Director, NITTTR, Chandigarh, Prof. Dr. B. L. Gupta, NITTTR, Bhopal and Prof. Dr. R. Srinivasan, NITTTR, Kolkata offered felicitations.



The valedictory function was presided over by the Prof. Dr. S. Mohan, Director, NITTTR, Chennai. Dr. Nagesh R. Iyer, Director, CSIR-Structural Engineering Research Centre (CSIR-SERC), CSIR Madras Complex, Chennai was the Chief guest. Shri. S. Rajasekar, Officer In-Charge of Sports, NITTTR, Chennai presented the Report of the sports Meet, Shri. M. Ramkumar, General Manager, Canara Bank, Shri. V. Somakumar,

Chief Manager, IOB, Thiruvannamipur Branch and Prof. G. P. Thakur, President, InSPA, New Delhi offered felicitations. Shri. V. Veerasamy, Sr. Administrative Officer, NITTTR, Chennai proposed vote of thanks. NITTTR, Bhopal won the Championship trophy.

## 16.0 FACULTY NEWS

Most of the Faculty members of the institute have served as members of various expert committees constituted by AICTE, MHRD, ISTE, Directorates of Technical Education, Universities and Autonomous Colleges.

### Training and Development programmes attended:

1. Dr. G. Janardhanan and Shri. K. S. A. Dinesh Kumar attended training program on Autodesk Products and Building Information Modeling (BIM), conducted by Autodesk Centre, Bangalore from 16<sup>th</sup> - 18<sup>th</sup> February 2012 at Autodesk Centre, Bangalore.
2. Dr. T. Jagathrakshakan, Dr. R. Santhakumar, Dr. G. Janardhanan and Shri. K. S. A. Dinesh Kumar attended training program on Autodesk Products and Building Information Modeling (BIM), conducted by Autodesk Centre, Bangalore from 9<sup>th</sup> – 13<sup>th</sup> January 2012 at Autodesk Centre, Bangalore.
3. Shri. M. Senthilkumar, Dr. S. Somasundaram, Shri. V. Sivakumar and Shri. M. Ganesan attended the training programme on AutoCAD and Autodesk Inventor 2012, organised by Autodesk Centre, Bangalore from 21.11.2011 to 25.11.2011 at Autodesk Centre, Bangalore.

### Papers Presented in Seminars and Conferences:

1. Brahadeeswaran, D. (2012, January). "Issues and Intervention Areas in Accreditation and Certification of TVET Programmes and Institutions: India's experience". Paper Presented in the International Seminar on Enhancing Quality of Technical Education through Accreditation held at NITTR, Chennai in collaboration with CPSC, Manila, Philippines on 12<sup>th</sup> January 2012.
2. Brahadeeswaran, D. (2011, August). "Faculty Development and Training". Paper Presented in the Symposium on Excellence in Technical Education held at Anna University, Chennai on 3<sup>rd</sup> August 2011.
3. Brahadeeswaran, D. & Lakshminarayanan, D. (2011, July). "Development and Validation of a Diagnostic Test in C Programming Language for Low Achievers". Paper Presented in the 33<sup>rd</sup> Annual International Conference of International School Psychology Association (ISPA) held at Vellore Institute of Technology, Vellore on 22<sup>nd</sup> July 2011.
4. Brahadeeswaran, D. (2011, April). "Case Study of a Sustainable Technical Education Programme conducted by Nachimuthu Polytechnic College, Pollachi in Partnership with TVS Motor Company, Hosur". Paper Presented in the National Conference on Excellence in Higher Education held at IIT, Delhi from 1<sup>st</sup> to 3<sup>rd</sup> April 2011.
5. Dekson, D.E. & Suresh, E.S.M. (2011, December). "Learner Centered Adaptive and Intelligent E-Portfolio Architecture for Learning (AIEPAL)". Paper presented in the International Conference on Advanced Computing (ICoAC-2011) held at MIT Chennai, 14-16, December, 2011.
6. Dhanapal, S. (2011, July). "Reaction Evaluation of NPTEL courses using Youtube Responses". Paper presented in the 33<sup>rd</sup> ISPA Conference held at VIT University, Vellore from 19-23<sup>rd</sup> July, 2011.

7. Kulanthaivel, G. (2012, January). "Leveraging Digital Technologies in Training". Paper Presented in the in the ISPA conference 2012 held in Aravindar College of Engineering, Puducherry on 27 & 28<sup>th</sup> January 2012.
8. Kulanthaivel, G. (2012, March). "Diagnostic Classification of Renal Lesions using Wavelet-based Texture Descriptors in WEB Environment". Paper Presented in the International Conference on Emerging Trends in Computer and Electronics Engineering (ICETCEE'2012) held at Dubai, UAE during March 24-25, 2012, Dubai, UAE.
9. Janardhanan, G. (2012, March). "Sustainable Development Indicators" Paper Presented in the International Workshop on Sustainable Development and Environmental Management, organised by NITTTR, Chennai and GRI, Gandhigram on 6-8, March 2012.
10. Janardhanan, G. (2011, November). "Peril of Higher Education in Developing Countries". Paper Presented in the International Workshop on Development of Technical Education to Meet Millennium Development goals, organised by NITTTR, Chennai and Muthayammal Engineering College, Rasipuram on 11<sup>th</sup> November 2011.
11. Janardhanan, G. (2011, September) Sustainable Education - Global Perspective. Paper Presented in the International Workshop on Sustainable Education Global Engineering Curricula, organised by NITTTR, Chennai and PSNA Engineering College, Dindigul on 15<sup>th</sup> September 2011.
12. Malliga, P. (2011, September). "Problem centric approach for e-content development in Computer and Engineering". Paper Presented in the International Conference on Educational Technology (ICET – 2011) held at Bhuvanewar on 18<sup>th</sup> – 19<sup>th</sup> Sep 2011.
13. Parameswaran, A. & Suresh, E.S.M. (2011, December). "An Overview of Institute- Industry Collaboration In Engineering Institutions". Paper Presented in the 41<sup>st</sup> ISTE National Annual Convention and Conference on Role and Relevance of Regulatory Bodies in Higher Education, Baba Banda Singh Bahadur Engineering College (BBSBEC), Fatehgarh Sahib, Punjab during 16-18 December 2011.
14. Rajasekar, S. (2011, July). "A study on Teacher Motivation as one of the Non Technical Competencies". Paper Presented in the 33<sup>rd</sup> ISPA Conference held at VIT University, Vellore from 19<sup>th</sup> to 23<sup>rd</sup> July, 2011.
15. Rathy, G.A. & Brahadeeswaran, D. (2011, July). "Assessment of Students' Achievement of objectives of Power Electronics course using Criterion Referenced Tests". Paper Presented in the 33<sup>rd</sup> Annual International Conference of International School Psychology Association (ISPA) held at Vellore Institute of Technology, Vellore on 22<sup>nd</sup> July 2011.
16. Renukadevi, S. (2012, March). "Counselling for HRD". Paper presented in the Seminar on Human Resource Development in Technical Education held at Karpagam University, Coimbatore on 2<sup>nd</sup> March, 2012.

17. Renukadevi, S. (2011, July). "Women Empowerment through Technical and Vocational Education - A Multinational Training perspective". Paper presented in the 33<sup>rd</sup> ISPA Conference held at VIT University, Vellore from 19-23<sup>rd</sup> July, 2011.
18. Renukadevi, S. (2011, July). "Management of Student Motivation in Engineering College Classrooms". Paper presented in the 33<sup>rd</sup> ISPA Conference held at VIT University, Vellore from 19-23<sup>rd</sup> July, 2011.
19. Renukadevi, S. (2011, July). "Career Exploration needs of IT students in Engineering Education". Paper Presented in the 33<sup>rd</sup> ISPA Conference held at VIT University, Vellore from 19-23<sup>rd</sup> July, 2011.
20. Shanmuganeethi, V. (2011, July). "SQLIVD-AOP: Preventing SQL injection Vulnerabilities using Aspect Oriented Programming through Web services". Paper Presented in the International conference on High performance architecture and Grid computing, held at Chandigarh, India on 19<sup>th</sup> and 20<sup>th</sup> July 2011. This paper selected and published in "Communications in Computer and Information Science, Springer, Germany".
21. Shanmuganeethi, V. (2011, July). "XIVD: Runtime Detection of XPath Injection Vulnerabilities in XML Databases through Aspect Oriented Programming". Paper Presented in the First International Conference on Advances in Computing and Information Technology held at Chennai, India on 15<sup>th</sup> to 17<sup>th</sup> July 2011. This paper selected and published in "Communications in Computer and Information Science, Springer, Germany".
22. Sivasankar, P. (December, 2011). Frequency domain Estimation and Compensation of Inter carrier Interference in OFDM system. Paper presented in the IEEE International conference on Computational Intelligence and computing Research.
23. Sivhakumar, V. P (July, 2011). "Psychological Theories & Principles in the Design of Multimedia". Paper Presented in the 33<sup>rd</sup> Annual International Conference of International School Psychology Association (ISPA) held at Vellore Institute of Technology, Vellore on 22<sup>nd</sup> July 2011.
24. Suresh, E.S.M. & Dekson, D.E. (2011, October). "Neural Network based Performance Evaluation System for Adaptive E-learning Portal". Paper presented in the International Conference on Measurement and Evaluation in Education (ICMEE) Organised by University Sains Malaysia during 9-12, October 2011.

#### **Papers published in Journals:**

1. Brahadeeswaran, D. (2011). Performance Appraisal of Faculty of higher Educational Institutions in India. *AMET Journal of Management*, Vol. 2, No.1, 27-31.
2. Mohan S & Janardhanan G (2011). Faculty Development programme to suite the need of millennial, ISTE Special. Publication.
3. Reddy, K.R., Janardhanan G., and Bogner, J.E., "Geotechnical Properties of Municipal Solid Waste at Different Phases of Degradation," *Waste Management*, Vol.31, No.11, 2011, pp.2275-2286

4. Jenila, L. M. & Brahadeeswaran, D. (2011). Development of a diagnostic test on doubly linked lists in data structures for low achievers. *International Journal of Action Research & Engineering to Eradicate Poverty*, Vol. 2, No.11, 609-616.
5. Malliga, P., Vekatesh, N. & Sambanthan, T.G. (2011). Problem Centric Instructional Approach for Computer Science & Engineering E-content Development. *International Journal of Internet Computing (IJIC)*, ISSN No: 2231-6965, Vol .1, Issue -2.
6. Purushothaman, P. & Suresh, E.S.M. (2011). Our Picture Book and Learning through Reflection. *Journal of Engineering, Science & Management Education*, NITTTR, Bhopal, Vol. 4, Issue-III, 186-188.
7. Rajendran, R. & Sivasakthi, M. (2011). Learning Difficulties of Object Oriented Programming Paradigm Using Java: Students' Perspective. *Indian Journal of Science and Technology*, Vol.4, Issue 8, pp.983-985.
8. Rajendran, R. & Sivasakthi, M. (2011). Co-authored an article Application of Revised Bloom's Taxonomy for Java Programming Assessment. *International Journal of Research in computer Application and Management*, Vol. 1, Issue.7, pp.84-87.
9. Shanmuganeethi, V., Ravichandran, R., & Swaminathan, S. (2011). XPath V: Preventing XPath Injection Vulnerabilities in Web Applications. *International Journal on Web Services Computing (IJWSC)*, Vol.2, No.3, September 2011, pp 57-64.
10. Shanmuganeethi, V. (2011). A Robust Defence Mechanism to Prevent Phishing Attack Using Parse Tree Validation. *Springer- Lecture Notes in Computer Science*, Vol. 7135 , pg 551, 16-18.
11. Sivasankar, P. (2011). Performance evaluation of Energy efficient Routing Protocols for MANET. *IJCA international Journal*, August 2011.
12. Sivasankar, P. (2011). Energy efficient Routing algorithms and Performance comparison for MANET. *CIIT international Journal*, July 2011.

#### **Awards Won:**

1. Dr. G. Janardhanan was awarded with "**YOUNG ENGINEER AWARD - 2012**" by Institution of Engineers (India).
2. Dr. D. Brahadeeswaran was conferred "**PROF.A.GNANAM BEST TEACHER AWARD – 2011**" by Pondicherry Psychology Association on 27<sup>th</sup> January 2012.
3. Dr. R. Ravichandran was conferred Autolib-Tamilnadu-**BEST LIBRARIAN AWARD for the year 2010** by Society for the Advancement of Library and Information Science (SALIS), Chennai.

## **17.0 ACKNOWLEDGEMENTS:**

The institute would like to place on record its deep sense of appreciation and gratitude to:

- the Government of India, Ministry of Human Resource Development (Department of Secondary Education & Higher Education) for its continued support to all its programmes and activities;
- the Board of Governors and its sub-committees for their contribution to the Governance of the institute;
- the State Governments of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu and Union Territory of Puducherry for their continued cooperation by deputing teachers for various programmes and activities of the institute;
- Industries and their managements for their cooperation and assistance in conducting various programmes effectively;
- the faculty and staff of the institute for their hard work and dedication in making the reporting year an eventful one;
- the Press, All India Radio, Doordarshan for publicity and support for the institute's programmes and activities.

## **18.0 BOARDS SUBCOMMITTEES**

The composition of the various committees of the Board are given in Appendices (i) and (ii) of this report

## APPENDICES

### Appendix I

#### FINANCE COMMITTEE

##### Chairman

**Dr. S.R. K. Prasad**  
Chairman & Managing Director  
Krishna Industrial Corporation Ltd,  
R/O 8, 9, 10 Rajeswary  
Nagar, Sowripalayam  
Coimbatore – 641 028 T.N.

##### Members

**Joint Secretary (T)**  
Department of Higher Education  
Ministry of Human Resource Development  
Government of India  
Shastri Bhavan  
New Delhi - 110 001

**Financial Adviser**  
Integrated Finance Division  
Ministry of Human Resource Development  
Department of Higher Education  
Government of India  
Shastri Bhavan, New Delhi – 110 001

**Commissioner of Technical Education**  
Directorate of Technical Education  
Government of Tamil Nadu  
Guindy, Chennai-600 025

##### Member-Secretary

**Prof. Dr. S. Mohan**  
Director  
National Institute of  
Technical Teachers Training and Research  
Taramani, Chennai-600 113

**SUB COMMITTEES OF THE BOARD****1. STAFF SELECTION COMMITTEE  
[As per AICTE Norms]****Members**

Chairman  
Board of Governors  
NITTTR, Chennai – 600 113

Director  
NITTTR, Chennai – 600 113

Head of the Department in the rank of Professor  
NITTTR, Chennai – 600 113

Nominee of AICTE in the rank of Professor  
Two subject Experts

**2. BUILDINGS COMMITTEE****Chairman**

Commissioner of Technical Education  
Directorate of Technical Education  
Government of Tamil Nadu  
Guindy, Chennai-600 025

**Members**

Superintending Engineer  
Central PWD  
Chennai – 600 006

Superintending Engineer  
(Technical Education Division)  
Public Works Department  
Government of Tamil Nadu  
Sardar Patel Road,  
Chennai-600 025

**Member / Secretary**

Director  
NITTTR, Chennai – 600 113

### 3. DEPARTMENTAL PROMOTION COMMITTEE

#### Chairman

Nominated by the Director, NITTTR Chennai.

#### Members

Senior Faculty Member

One member  
(from outside organizations)

Senior Administrative Officer  
NITTTR,  
Chennai – 600 113

Accounts Officer  
NITTTR,  
Chennai – 600 113

## 1. ACADEMIC COUNCIL

### Chairman

Director  
National Institute of  
Technical Teachers Training and Research  
Taramani, Chennai-600 113

### Members

All Professors / Heads of Departments  
Two Associate Professors  
Two Assistant Professors  
Two Eminent persons from the field of Technical education and  
Two from Industries

## 2. BOARD OF STUDIES FOR OVERSEAS TEACHERS COURSE

- |                         |   |          |                    |
|-------------------------|---|----------|--------------------|
| 1. Prof. Dr. S. Mohan   | - | Chairman |                    |
| 2. Dr. V. Thanikachalam | - | Member   | (up to 30.09.2011) |
| 3. Dr. S. Dhanapal      | - | Member   |                    |
| 4. Dr. V.K. Natarajan   | - | Member   |                    |
| 5. Dr. V.P. Sivhakumaar | - | Member   |                    |
| 6. Dr. G. Kulanthaivel  | - | Member   |                    |

### **3. BOARD OF STUDIES FOR M.TECH. (HRD) PROGRAMME**

1. Prof. Dr. S. Mohan - Chairman
2. Dr. B.G. Barki - Member (up to 30.04.2011)
3. Dr. V. Thanikachalam - Member (up to 30.09.2011)
4. Dr. D. Brahadeeswaran - Member (up to 28.02.2012)
5. Dr. G. Kulanthaivel - Member
6. Dr. S. Renukadevi - Member (from 01.05.2011)
7. Two student representatives

### **4. BOARD OF STUDIES FOR DOCTORAL PROGRAMME (Research Studies)**

1. Prof. Dr. S. Mohan Chairman
2. Dr. D. Brahadeeswaran Co-ordinator (up to 28.02.2012)
3. Dr. B.G. Barki Member (up to 30.04.2011)
4. Dr. V. Thanikachalam Member (up to 30.09.2011)
5. Dr. B. Mukhopadhyay Member (up to 31.08.2011)
6. Dr. T. Gnanasambanthan Member
7. Dr. P. Arunkumar Member
8. Dr. S. Dhanasekaran Member
9. Dr. S. Dhanapal Member
10. Dr. V.P. Sivhakumaar Member
11. Dr. E.S.M. Suresh Member
12. Dr. S. Renuka Devi Member
13. Dr. R. Rajendran Member

**GRIEVANCE REDRESSAL COMMITTEE**

Dr. D. Brahadeeswaran Professor & Head, Dept. of Policy Planning & Edl. Research	<b>Chairman</b> (up to 28.02.2012)
Dr. S. Dhanapal Professor & Head Curriculum Development Centre	Member
Dr.V.P.Sivhakumaar Professor & Head Dept. of Educational Technology & Multimedia	Member
Shri. V. Veerasamy Senior Administrative Officer	Member (up to February 2012)

**PUBLIC INFORMATION OFFICER**

Shri. V. Veerasamy - (up to February 2012)  
Senior Administrative Officer

Dr. G. Kulanthaivel - (from March 2012)  
Associate Professor

**COMMITTEE FOR PREVENTION OF SEXUAL HARASSMENT  
OF WOMAN AT WORK PLACE**

Dr. S. Renukadevi Chairperson  
Associate Professor of Education

Dr. S. Dhanapal Member  
Professor of Curriculum Development

Shri. V. Veerasamy Member (up to February 2012)  
Senior Administrative Officer

Smt. R. Vanajakumari Member  
Senior P. A to Director

**PARTICULARS OF COMMITTEE MEETINGS**

	No.	
<b>Board of Governors</b>	22 <sup>nd</sup>	18.07.2011
	23 <sup>rd</sup>	05.11.2011
	24 <sup>th</sup>	11.02.2012
<b>NITTTR Chennai Society</b>	8 <sup>th</sup>	05.11.2011
<b>Finance Committee</b>	19 <sup>th</sup>	18.07.2011
	20 <sup>th</sup>	05.11.2011
	21 <sup>st</sup>	11.02.2012
<b>Academic Council</b>	9 <sup>th</sup>	26.04.2011
<b>DPC</b>	37 <sup>th</sup>	19.04.2011

**LIST OF FACULTY AND STAFF**

<b>DIRECTOR</b>	<b>Prof. Dr. S. Mohan, M.E., Ph.D., F.N.A.E.,</b>
<b>Administrative Office</b>	<b>Shri.V.Veerasingam, M.Com. PGDLA, PGDMKtgM, PGDMM</b> Senior Administrative Officer (up to February 2012)
<b>Centre for Environmental Management</b>	<b>Prof. Dr. S. Mohan, M.E., Ph.D., F.N.A.E.,</b> Director & Head
	<b>Dr. G. Janardhanan, M.E., Ph.D. (USA)</b> Visiting Faculty
<b>Centre for Sustainable Development</b>	<b>Dr. V.K. Natarajan, M.A., M.A., Ph.D.,</b> Professor
<b>Civil Engineering</b>	<b>Dr. T. Jagathrakshakan, B.E (Hons.), M.E., Ph.D.,</b> Associate Professor
	<b>Shri. K.S.A. Dinesh Kumar, M.E.,</b> Assistant Professor
<b>Computer Centre</b>	<b>Dr. T.G. Sambanthan, M.E., Ph.D., PGDPM</b> EDP Manager
	<b>Dr. P. Malliga, B.E., M.S.,</b> Sr. System Analyst
	<b>Shri. V.Shanmuganeethi, M.E.,</b> Assistant Professor
	<b>Shri. D.V. Suryanarayana, B.E.,</b> Programmer
<b>Correspondence Courses</b>	<b>Dr. V. Thanikachalam, M.Tech., MS (Ed) (USA), Ph.D, FIE., FIGS.,</b> Professor (up to 30.09.2011)
<b>Curriculum Development Centre</b>	<b>Dr. S. Dhanapal, B.E., M.Sc. (Engg.) Ph.D.</b> Professor
	<b>Dr. R. Santhakumar, M.E., Ph.D.</b> Associate Professor in Engineering
<b>Education</b>	<b>Dr. B. G. Barki, M.Sc., M.Ed., Ph.D., RBV,</b> Professor (up to 30.04.2011)

**Dr. S. Renukadevi, B.Sc, MCA, M.Phil., Ph.D.,**  
Associate Professor

**Dr. R. Rajendran, M.Ed., M.B.A., Ph.D.,**  
Associate Professor

**Shri. K.S. Giridharan, B.E., M.Tech.,**  
Assistant Professor

**Educational Management &  
Applied Psychology**

**Dr. B. Mukhopadhyay, M.A., M.Ed., M.Phil., Ph.D., PGDPrM**  
Professor (up to 31.08.2011)

**Educational Media Centre**

**Dr. R. Theagarajan, M.E., M.Sc. (I.T., UK), Ph.D.**  
Professor

**Dr. E.S.M. Suresh, B.E., M.E., Ph.D.,**  
Associate Professor

**Educational Technology &  
Multimedia**

**Dr.V. P. Sivhakumaar, M.E., PGDHE., Ph.D.,**  
Professor

**Shri A. P. Felix Arokiya Raj, B.Sc., M.Sc.,D.F.Tech.,**  
Assistant Professor

**Electrical Engineering**

**Dr. G.A. Rathy, M.E., PGDCA ., Ph.D.,**  
Assistant Professor

**Electronics Engineering**

**Dr. S. Dhanasekaran, B.E., M.Sc. (Engg.), Ph.D.**  
Professor

**Dr. G. Kulanthaivel, M.E., PGDCA., Ph.D.**  
Associate Professor

**Shri. P. Sivasankar, M.E.,**  
Assistant Professor

**Extension Centre, Bangalore**

**Dr. P. Arunkumar, M.Sc., M.Ed., Ph.D.**  
Professor

**Shri. V. Sivakumar, M.E.**  
Assistant Professor

**Shri M. Senthilkumar, B.E., M.Tech.,**  
Assistant Professor (from Jan 2012)

**Extension Centre, Hyderabad**

**Dr. C.R. Nagendra Rao, B.Tech.Ed., M.Tech., PGDTCA, Ph.D.,**  
Professor

**Shri. U.S. Sahu, B.E., M.Tech.,**  
Associate Professor

**Extension Centre, Kalamassery**

**Dr.V. Syam Prakash, M.E., Ph.D.,**  
Professor (on Deputation)

**Shri. Philip Kurian, M.Sc. (Engg.)**  
Associate Professor

**Mechanical Engineering**

**Shri. M. Senthil kumar, B.E., M.Tech.,**  
Assistant Professor (up to December 2011)

**Dr. S. Somasundaram, M.E., Ph.D.,**  
Assistant Professor

**Policy Planning &  
Educational Research**

**Dr. D. Brahadeeswaran, M.Sc., M.Ed., Ph.D., D.HRM.,**  
Professor (up to 28 Feb 2012)

**Shri. S. Rajasekar, B.E. M.Tech (HRD)**  
Research Assistant in Education

**Resource Centre**

**Dr.R.Ravichandran, M.Sc., M.LIS., M.Ed., M.B.A., Ph.D.,**  
Sr. Librarian

## HOSTEL

### Warden

**Prof. Dr. S. Mohan**  
Director

### Deputy Warden

**Dr. E.S.M. Suresh**  
Associate Professor  
Educational Media Centre

### Assistant Warden

**Dr. P. Malliga,**  
Sr, System Analyst  
Computer Centre

**Dr. R. Ravichandran**  
Sr. Librarian  
Resource Centre

### Medical Officer (Part-time)

**Dr. J.S.N. Murthy, M.D. (Medicine)**  
DNB (Cardiology)

**Part – II**

**REPORT ON ACCOUNTS  
2011 – 12**

**As Audited by the  
DIRECTOR GENERAL OF AUDIT (CENTRAL),  
CHENNAI**

**Separate Audit Report of the Comptroller and Auditor General of India on the  
Accounts of National Institute of Technical Teachers Training and Research, Chennai  
for the year ended 31<sup>st</sup> March 2012**

We have audited the attached Balance Sheet of National Institute of Technical Teachers Training and Research, Chennai as at 31<sup>st</sup> March 2012, the Income & Expenditure Account and 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 for the period 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 Report / CAG's Audit Report 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, Income & Expenditure Account and Receipt & Payment Account dealt with by this report have been drawn up in the format approved by Government of India, Ministry of Finance.
- iii. In our opinion, proper books of accounts and other relevant records subject to the comments included in the Annexure have been maintained by National Institute of Technical Teachers Training and Research, Chennai as required, in so far as it appears from our examination of such books.
- iv. We further report that:

## **A Balance Sheet**

### **1. Assets**

#### **1.1 Fixed Assets**

Capital expenditure incurred towards acquiring new assets/expansion of existing facilities amounting to Rs.24,37,168 was charged as revenue expenditure. This resulted in overstatement of Revenue Expenditure and understatement of Fixed Assets to the extent of Rs.24,37,168.

## **B Income & Expenditure Account**

### **2.1 Income**

- (i) The entire capital grant of Rs.3.70 crore was transferred to Income & expenditure account as Income instead of transferring the same to Corpus Fund. This has resulted in overstatement of Income and surplus by Rs.3.70 crore.
- (ii) Accountal of Interest on endowment Funds as Income has resulted in overstatement of Income Over Expenditure (Income & Expenditure account) and consequent overstatement of Capital Fund Account and understatement of Earmarked/Endowment funds to the extent of Rs.15,31,616.
- (iii) Non-transferring of Rs.10,400 per course from the Course Fee collected to Corpus Fund had resulted in overstatement of Income by Rs.2,28,800 (Rs.10,400 x 22) and understatement of corpus Fund to the same extent.
- (iv) In the Project Account, Interest earned on Fixed Deposits of Rs.26,47,865 (Rs.26,82,865 – Rs.35,000) was not separately exhibited as Income for the year in the Income and Expenditure Account which resulted in understatement of Income and overstatement of 'Excess of expenditure over income' in the Project Account.

## **C Grants in Aid**

Out of the Grants in aid of Rs.15.60 crore including a sum of Rs.0.45 crore being internal receipts and unspent balance of Rs.4.21 crore of the previous year, the Institute could utilize Rs.18.88 crore leaving a balance of Rs.1.38 crore as unutilized grant as on 31<sup>st</sup> March 2012.

**D Effect of audit comments on Accounts**

The net impact of the comments given in the preceding paragraphs is that the assets as on 31.03.2012 were understated by Rs.0.24 crore and the excess of income over expenditure overstated by Rs.3.88 crore.

**E Management letter**

Deficiencies which have not been included in the Separate Audit Report have been brought to the notice of Institute 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, Income & Expenditure Account and Receipt & Payment Account dealt with by this report are in agreement with the books of accounts.
- vi. In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in Annexure to this Separate 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 National Institute of Technical Teaches Training and Research, Chennai as at 31<sup>st</sup> March 2012, 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**



**Director General of Audit (Central), Chennai**

**Place: Chennai  
Date: 06-02-2013**

## Annexure to Separate Audit Report

### **Adequacy of Internal Audit System:**

The Institute had no internal audit system.

### **Adequacy of Internal Control System:**

The Institute had not prepared its Accounting Manual. In its absence, there are possibilities of non-adherence to accounting procedure and systems. The accounting records are not upto date, though separate general ledger, cash book and subsidiary records are maintained.

### **Physical verification of Fixed Assets and Inventory:**

Physical verification of Fixed Assets and Inventory was not conducted during 2011-12.

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

Service tax of Rs.78,280 (Rs.4,120 per programme) was collected during 2011-12 but the same was not remitted to the Government.



**Audit Officer**

**NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI, CHENNAI – 600 113**

**ANNUAL ACCOUNTS  
2011-12**

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**

**Balance Sheet as at 31.03.2012**

<b><u>Corpus / Capital Fund and Liabilities</u></b>	<b>Schedule</b>	<b>Current Year 2011-2012</b>	<b>Previous Year 2010-2011</b>
Corpus / Capital Fund and Liabilities	<b>1</b>	225,176,489.25	210,719,957.71
Reserves and Surplus	<b>2</b>		
Earmarked / Endowment Funds	<b>3</b>	18,711,783.00	18,711,783.00
Secured Loans and Borrowings	<b>4</b>		
Unsecured Loans and Borrowings	<b>5</b>		
Deferred Credit Liabilities	<b>6</b>		
Current Liabilities and Provisions	<b>7</b>	25,169,135.98	11,692,504.98
<b>Total</b>		<b>269,057,408.23</b>	<b>241,124,245.69</b>
<b><u>Assets</u></b>			
Fixed Assets	<b>8</b>	119,822,721.00	128,592,374.00
Investments - from Earmarked / Endowment Funds	<b>9</b>		
Investments - Others	<b>10</b>		
Currents Assets, Loans, Advances etc	<b>11</b>	149,234,687.23	112,531,871.69
Miscellaneous Expenditure			
<b>Total</b>		<b>269,057,408.23</b>	<b>241,124,245.69</b>
Significant Accounting Policies	<b>24</b>		
Contingent Liabilities and Notes on Accounts	<b>25</b>		

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**  
**Income & Expenditure Account for the Year ended 31.03.2012**

	Schedule	Current Year 2011-2012	Previous Year 2010-11
<b><u>Income</u></b>			
Income from Sales / Service	12	1,060,853.00	1,847,394.00
Grants Subsidies	13	156,000,000.00	127,114,000.00
Fees Subscriptions	14	1,321,432.00	111,133.00
Income from Investments	15	4,043,609.00	1,972,878.00
Income from Royalty, Publication etc	16	79,835.54	175,281.24
Interest Earned	17	6,804.00	0.00
Other Income	18	871,430.00	-391,447.00
Increase/ (decrease) in stock of Finished goods and works-in-progress	19		
<b>Total (A)</b>		<b>163,383,963.54</b>	<b>130,829,239.24</b>
<b><u>Expenditure</u></b>			
Establishment Expenses	20	86,476,960.00	78,049,438.00
Other Administrative Expenses	21	30,986,960.00	18,419,433.75
Expenditure on Grants, Subsidies etc	22	15,427,134.00	15,576,411.25
Interest	23	0.00	0.00
Depreciation	8	16036378	17664692
<b>Total (B)</b>		<b>148,927,432.00</b>	<b>129,709,975.00</b>
Balance being excess of income over expenditure (A-B)			
Transfer to Special Reserve (Specify each)			
Transfer to / from General Reserve			
<b>Balance being Surplus / (Deficit) carried to corpus (B-A)</b>			
<b>Capital Fund</b>		<b>14,456,531.54</b>	<b>1,119,264.24</b>

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI PO., CHENNAI 600 113.**

**RECEIPTS AND PAYMENTS FOR THE PERIOD/YEAR ENDED 31st MARCH 2012**

RECEIPTS	2011-2012 Rs. P	2010-2011 Rs. P	PAYMENTS	2011-2012 Rs. P	2010-2011 Rs. P
<b>I. Opening Balances</b>			<b>I. Expenses</b>		
a) Cash in hand	325000.00	99600.00	a) Establishment Expenses	74427381.10	78915446.00
b) Bank Balances			b) Administrative Expenses	28361943.90	20557325.75
i) In current accounts	19922258.29	9786952.05	<b>II. Payments made against funds for various projects</b>		
ii) In deposit accounts	23308983.00	42120000.00	Rajivi Gandhi National Fellowship UGC		289000.00
iii) Project Balance	3663.00		Regular Projects		3335664.00
Rajiv Gandhi National F/s			Plan Recurring	7870734.00	18174663.25
<b>II. Grants Received</b>			Sceme for persons with disabilities		
a) From Government of India			<b>III. Investments and deposits made</b>		
Non-Plan	99000000.00	59021000.00	a) Out of Earmarked/Endowment funds		
Non-Plan Due	29793000.00	29754000.00	b) Out of Own Funds (Investments-others)		
Plan (Capital Assets)	37000000.00	22500000.00	<b>IV. Expenditure on Fixed Assets &amp; Capital WIP</b>		
Plan (Capital Assets Due)	10000000.00		a) Purchase of Fixed Assets	4324969.00	12230880.00
Plan	20000000.00	5800000.00	b) Deposit to CPWD	48644000.00	
b) From State Government					
c) From other sources (details)					
AICTE PG Grant					
(Grants for capital & revenue					
exp. to be shown separately)					
d) Project Grants:					
Rajivi Gandhi National fellowship		<b>294856.00</b>			
<b>III. Income on Investments from</b>					
a) Earmarked/Endow Funds		<b>18166.00</b>			
b) Own Funds (Other Investment)					
<b>c/o</b>	<b>239352904.29</b>	<b>169394574.05</b>		<b>163629028.00</b>	<b>133502979.00</b>

	b/f	239352904.29	169394574.05		163629028.00	133502979.00
<b>IV. Interest Received</b>				<b>V. Refund of surplus money/Loans</b>		
a) On Bank deposits		3347518.00	1945443.00	a) To the Government of India		
b) Loans Advances etc.				b) To the State Government		
<b>V. Other Income (Specify)</b>				b) MHRD project Balance refunded		
Recovery of Loans & Advances				<b>VI. Finance Charges (Interest)</b>		
Rent Receipts		1018229.00	1264429.00	<b>VII. Other Payments (Specify)</b>		
Misc.Receipts		1789455.00	5628515.04	Refundable Deposit	4921063.00	2484081.80
Royalty & sale of Books		92613.54	392750.00	Loans & Advances		8226246.00
Course fee		1227432.00	353867.00	SDR Deposits	125773130.00	
Apprenticeship				Central Ground Water Board		
Research Scholar FIP		170000.00		National Institute of media Instrn		
Stipend to Apprenticeship Trainees		24269.00	44079.00	IDDS	281500.00	453000.00
Stipend to Long Term Trainees			13429.00	Scholarship for M.Tech HRD	150000.00	86150.00
TA / DA			26948.00	Research Study Tech Ed III		
Journal of Technical & VOC. Edu		400.00		Overseas Training Course	12799070.00	8938843.00
Kent for Seminar Hall/ Guest House / Hostel			96693.00	International Seminar		
AICTE				Finishing School		1610.00
AICTE Summer School				Induction Training Prog.-AICTE		
Boarding charges (Hostel)				Rajiv Gandhi National F/w		
Caution Deposit for Staff Quarters				National Skill Development	14624.00	
Caution Deposit for Ph.D				Guest House Expenses		
CD-1 TNRS Project				NIMI Project	38074.00	
Community Hall Deposit		1500.00	12000.00			
Deposit with Telephones						
SDR Deposit		112017609.00				
DPR Lakshwadeep Project						
Earnest Money Deposit		85800.00				
	c/o	359127729.83	179172727.09	<b>Total</b>	<b>307606489.00</b>	<b>153692909.80</b>

	b/f	359127729.83	179172727.09		307606489.00	153692909.80
Finishing School			35000.00			
Ground Water Managt.& Regulation						
GSLIS	184896.00		86082.00			
Guest House Expenditure						
IDDS	760000.00		970790.00			
Pension Paid	315109.00					
Leave Travel Concession			817.00			
Project Account	80400.00					
Multimedia Training Course						
ISPA Conference	13331.00					
OTC receivable from Min.of External	25008931.00					
National Skill Development	7385.00					
CPSC Course	69750.00					
Scholar.for M.Tech.HRD Trainees			846150.00			
Security Deposit	5000.00		136440.00			
Staff Development Prog.	41197.00		58050.00			
National Workshop	35250.00					
<b>VI. Amount Borrowed</b>				<b>VIII. Closing Balances</b>		
<b>VII.Any other receipts (give details)</b>				a) Cash in hand	398900.00	325000.00
Refundable Deposits				b) Bank Balances		
Regular Projects Receipts			113210.00	i) In current accounts	18157745.83	19922258.29
Setting up of VNITTTTR Edusat				ii) In deposit accounts	59482113.00	23308983.00
NIMI Project			100000.00	iii) Rajivi Gandhi National F/w	3731.00	3663.00
Research Fellowship			926600.00			
Library Books						
International Seminar						
Overseas Training Course			14806948.00			
<b>Total</b>	<b>385648978.83</b>	<b>197252814.09</b>		<b>Total</b>	<b>385648978.83</b>	<b>197252814.09</b>

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI, CHENNAI - 600 113.

**SCHEDULE - 1**

SCHEDULE - CORPUS/CAPITAL FUND:	Current Year 2011-12	Previous Year 2010-11
	Rs. P.	Rs. P.
Balance as at the beginning of the year	210719957.71	209582527.47
Add: Contributions towards Corpus/Capital Fund		
Capitalization of project/Equipments		
Plan Grant Capital Expenditure		
ISTE Booked in earlier year		
Deposit with TNEB reconciled		
Rajiv Gandhi National Fellowship UGC		18166.00
Add: Balance of net expenditure transferred from the Income and Expenditure Account	14456531.54	1119264.24
Deduct: Balance of net expenditure transferred from the Income and Expenditure Account		
<b>BALANCE AS AT THE YEAR - END</b>	<b>225176489.25</b>	<b>210719957.71</b>

SCHEDULE 3 - EARMARKED / ENDOWMENT FUNDS	PLAN	PWD	AICTE/	Rajiv Gandhi	OSC	TOTAL(A)
	GRANT	SCHEME	SDP	N F/W	Spl. Grant	
<b>a) Opening balance of the funds</b>	<b>17151632.00</b>	<b>293029.00</b>	<b>43100.00</b>	<b>24022.00</b>	<b>1200000.00</b>	<b>18711783.00</b>
<b>b) Additions to the Funds</b>						
I Donations/grants						0.00
ii Income from investments made on account of funds						
iii Other additions (specify nature)						
<b>TOTAL (a + b)</b>	<b>17151632.00</b>	<b>293029.00</b>	<b>43100.00</b>	<b>24022.00</b>	<b>1200000.00</b>	<b>18711783.00</b>
<b>c) Utilisation/Expenditure towards objectives of funds</b>						
I Capital Expenditure						
- Fixed Assets						
- Others						
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
ii Revenue Expenditure						
- Salaries, Wages and allowances etc						
- Rent						
- Others Administrative expenses						
<b>Total</b>						
<b>TOTAL Utilisation / Expenditure</b>						
<b>NET BALANCE AS AT THE YEAR END (a + b - c)</b>	<b>17151632.00</b>	<b>293029.00</b>	<b>43100.00</b>	<b>24022.00</b>	<b>1200000.00</b>	<b>18711783.00</b>

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING & RESEARCH, CHENNAI  
Schedule attached to and forming part of Balance Sheet as on 31st March 2012  
**CURRENT LIABILITIES AND PROVISIONS**  
**Schedule – 7**

S. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
<b>1</b>	<b>Outstanding Expenses:</b>		
	Staff Salaries	3247269.70	4719836.00
	Pension payment	1467789.00	
	Vehicle Maintenance	4959.00	4959.00
	Electrical Maintenance	5975.00	5975.00
	NPS Contribution Due	52547.00	
	<b>Total A</b>	<b>4778539.70</b>	<b>4730770.00</b>
<b>2</b>	<b>Refundable Deposits:</b>		
	Earnest Money Deposit	369244.98	392260.98
	Caution Deposits for Staff Quarters	35000.00	35000.00
	Caution Deposits for Ph.D.	27000.00	27000.00
	Caution Deposits for Canteen	6000.00	1000.00
	Security Deposit	874772.00	874772.00
	Scholarship for M.Tech. - HRD Deposit	224875.00	374875.00
	GSLIS	10971.00	35650.00
	Boarding Charges - Hostel	42480.00	42480.00
	Research Scholar - FIP	170000.00	
	<b>Total B</b>	<b>1760342.98</b>	<b>1783037.98</b>
<b>3</b>	<b>Other liabilities:</b>		
	Emerging area course fees refundable	2000.00	2000.00
	Cofmow Equipment	81889.00	81889.00
	Tamil Nadu Book House	2731.00	2731.00
	Community hall deposit	29391.00	27891.00
	OTC	16905125.00	4695264.00
	LIC of India - GSLIS		63920.00
	Salary Deductions Due	1422445.30	
	Property Tax payable	130382.00	130382.00
	Audit Fees payable	56290.00	174620.00
	<b>Total C</b>	<b>18630253.30</b>	<b>5178697.00</b>
	<b>Grand Total (A + B + C)</b>	<b>25169135.98</b>	<b>11692504.98</b>

**SCHEDULE - 8  
FIXED ASSETS**

Description	GROSS BLOCK					DEPRECIATION				NET BLOCK	
	Cost/ valuation as at beginning of the year(Gross)	Additions during the year before Sept	Additions during the year after Sept	Deduc- tions during the year	cost/ valuation during the year	As at the beginning of the year	Additions during the year	Deduc- tion during the year	Total at the year end	As at the current year ended 31.3.12	As at the previous year ended 31.3.11
	1	2	3	4	5 (1+2+3+4)	6	6	8	9 (5+6+7+8)	10 (5-9)	11
<b>Land</b>											
Free Hold	268500				268500					268500	268500
Lease Hold											
Buildings	64461344		3169351		67630695	26565866	3302301		29868167	64328394	64461344
Plant, Machinery & Equipment	26054133	178410	211123		26443666	58149765	5267621		63417386	21176045	26054133
Vehicles	695606				695606	1054380	139121		1193501	556485	695606
Furniture & Fixtures	4941463	125812	159236		5226511	4979569	514689		5494258	4711822	4941463
Office Equipments	457905		423679		881584	672484	133949		806433	747635	457905
Computer Peripherals	22122824	355000	1479771		23957595	63087455	4643542		67730997	19314053	22122824
Electrical Installations	222834				222834	269849	44567		314416	178267	222834
Library Books	4826322	6000	229837		5062159	2740988	989448		3730436	4072711	4826322
Smart Classroom Ac	3908343				3908343	459855	781669		1241524	3126674	3908343
Other Assets	633100		928506		1561606	795339	219471		1014810	1342135	633100
<b>Total</b>	<b>128592374</b>	<b>665222</b>	<b>6601503</b>		<b>135859099</b>	<b>158775550</b>	<b>16036378</b>		<b>174811928</b>	<b>119822721</b>	<b>128592374</b>

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING & RESEARCH, CHENNAI  
Schedule attached to and forming part of Balance Sheet as on 31st March 2012  
**CURRENT ASSETS AND LOANS AND ADVANCES**  
Schedule – 11

S. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
1	<b>(A) Current Assets:</b>		
	Closing Cash Balance (Permanent advance)	102600.00	99600.00
	<b>Bank Balances</b>		
	Closing Bank Balances	77639858.83	49631241.29
	Non-Tech competencies		
	Development of LR PWD		
	Modern Drive		
	Comm Engg Lab		
	Rajiv Gandhi National fellowship	3731.00	3663.00
	<b>Total A</b>	<b>77746189.83</b>	<b>49734504.29</b>
2	<b>(B)Closing Stock:</b>		
	Postage	14625.00	9767.00
	Electrical Maintenance	41650.00	168024.00
	Building Maintenance	6376.00	6376.00
	<b>Total B</b>	<b>62651.00</b>	<b>184167.00</b>

S. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
3	<b>(C) Loans and advances:</b>		
	<b>Staff</b>		
	Festival advances	242449.00	74639.00
	Conveyance advances	146060.00	146060.00
	Housing Building advances	552923.00	552923.00
	Flood loan advance	3800.00	3800.00
	Persons with Disabilities	13893.00	13893.00
	Others - Temporary Advances	296300.00	225400.00
	Medical Advances	154848.00	118348.00
	<b>Advances and amount receivable in cash or kind</b>		
	Security deposit with Industry	275.00	275.00
	Security deposit with MES	371170.00	371170.00
	EC Security Deposit	2551.00	2551.00
	ECH Deposit	1000.00	1000.00
	Deposit with Telephones	112893.00	112893.00
	Deposit with SE PWD	152.40	152.40
	Deposit with Indian Oil Corporation	500.00	500.00
	Deposit with Post Office	100.00	100.00
	Deposit with CPWD	48644000.00	
	Deposit with PWD	18638668.00	18638668.00
	Deposit with Fuel Firm	25000.00	25000.00
	MLNN Deposit	10000.00	10000.00
	Prepaid Vehicle Insurances		10866.00
	Interest Accrued in SDR		27435.00
	Web Charges prepaid		198016.00
	<b>Income Receivable</b>		
	AICTE Summer School	131303.00	131303.00
	AICTE Winter School	522332.00	522332.00
	Board of apprenticeship Training	66414.00	66414.00
	Project Account	-50790.00	26457.00
	AICTE Induction Training Programme	146686.00	146686.00
	Interest HBA - Accrued	239822.00	239822.00
	Consultancy Charges Receivable	1153497.00	1153497.00
	Grants in aids Non-Plan		29793000.00
	GOI Grant in Plan (Capital Assets)		10000000.00
	<b>Total C</b>	<b>71425846.40</b>	<b>62613200.40</b>
	<b>Grand Total = (A + B + C)</b>	<b>149234687.23</b>	<b>112531871.69</b>

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING & RESEARCH, CHENNAI  
Schedule attached to and forming part of Balance Sheet as on 31st March 2012  
INCOME Schedules (12-18)

Sch. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
12	<b>Income from sales/Services</b>		
	Staff Quarters Rent	954655.00	1242632.00
	Guest House Room Rent	91520.00	90693.00
	Hostel Room Rent	1500.00	123319.00
	Sale of Books & CD's	13178.00	390750.00
	Rent for Institute premises/Film Shooting charges		
	<b>Total</b>	<b>1060853.00</b>	<b>1847394.00</b>
13	<b>Grants Subsidies:</b>		
	GOI Grants in aid Non plan	99000000.00	88814000.00
	GOI Grants in aid Plan recurring	20000000.00	5800000.00
	GOI Grants in aid Plan (Capital Assets)	37000000.00	32500000.00
	<b>Total</b>	<b>156000000.00</b>	<b>127114000.00</b>
14	<b>Fees and subscriptions:</b>		
	Stipend to apprentice ship Trainees –BOAT		
	Overseas Teachers Training Course Income		
	Course Fee	1321432.00	111133.00
	<b>Total</b>	<b>1321432.00</b>	<b>111133.00</b>
15	<b>Income from Investments:</b>		
	Interest on Special Fixed deposit	4043541.00	1962759.00
	Interest on Bank Accounts	68.00	10119.00
	<b>Total</b>	<b>4043609.00</b>	<b>1972878.00</b>
16	<b>Income from Royalty and publications</b>		
	Royalty	79435.54	174581.24
	Journal of Technical and vocational education	400.00	700.00
	<b>Total</b>	<b>79835.54</b>	<b>175281.24</b>
17	<b>Interest earned:</b>		
	Interest on Conveyance advance		
	Interest on House building advance	6804.00	
	Interest on House building advance-Accured		
	<b>Total</b>	<b>6804.00</b>	<b>0.00</b>

Sch. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
	<b>Other Income</b>		
18	Misc Revenue Receipts	194752.00	1504601.00
	Parliamentary Committee		
	ISPA Conference	13331.00	
	License Fees	77793.00	
	National Workshop	38250.00	
	NIT, Trichy		
	AICTE Income		
	AICTE Summer School		
	AICTE Winter School		
	NIMI Project Account		91000.00
	DPR Lakshadweep Project		200000.00
	TA/DA National Conference		1772.00
	Finishing School		33390.00
	IDDS	477554.00	517790.00
	M-Tech HRD Examination Fees		60000.00
	CPSC Course 2011-2012	69750.00	
	Multimedia Training Course		-2800000.00
	Suzlon Energy Ltd.		
	<b>Total</b>	<b>871430.00</b>	<b>-391447.00</b>

Sch. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
20	<b>Establishment Expenses</b>		
	Salaries and Wages	60,268,502.00	59,175,227.00
	Contribution to PF	3,569,446.00	372,546.00
	Contribution to CPF Interest		208,493.00
	Commutation of Pension		
	Pension Paid	18,818,879.00	17,964,767.00
	DCR Gratuity		
	EL Encashment	3,495,129.00	64,174.00
	Adhoc Bonus	325,004.00	264,231.00
	NPS Contribution		
	LS & PC to AG Audit		
	<b>Total</b>	<b>86,476,960.00</b>	<b>78,049,438.00</b>
21	<b>Other Administrative Expenses</b>		
	Electricity Charges	2,499,430.00	2,611,707.00
	Water Charges	301,218.00	394,513.00
	Water Tax	53,493.00	28,263.00
	Property Tax	95,071.00	130,282.00
	Vehicle Maintenance	488,016.00	439,373.00
	Building Maintenance (Non Plan)	13,663,015.00	5,717,759.00
	Electrical Maintenance	1,664,540.00	532,241.00
	Furniture Maintenance	73,701.00	7,060.00
	Gratuity	4,869,453.00	1,643,339.00
	Garden Maintenance		785.00
	TA & DA Internal	381,695.00	127,031.00
	Leave Travel Concession	171,423.00	762,234.00
	Telephone and Trunk Calls	400,672.00	418,623.00
	Postage	117,080.00	127,436.00
	Advertisement	138,350.00	444,715.00
	Children Educational Allowance	811,024.00	683,718.00
	Medical Reimbursement	1,390,871.00	1,314,004.00
	Uniforms	6,274.00	59,622.00
	Legal Charges	144,500.00	203,115.00
	Consumable Stores	214,543.00	47,922.00
	Contingencies & Bank Charges	693,490.00	463,119.75
	Audit Fees		417,710.00
	Inter Sports Meet	976,045.00	96,254.00
	Security Charges	1,650,251.00	1,501,209.00
	Professional Development Expenses	163,055.00	247,299.00
	Republic Day Celebrations	19,750.00	
	<b>Total</b>	<b>30,986,960.00</b>	<b>18,419,433.75</b>

Sch. No.	Particulars	Current year 2011-12	Previous year 2010-11
		Rs.P.	Rs.P.
22	<b>Expenditure on Grants, Subsidies etc.</b>		
	Staff Development Programme	8,972,139.00	8,044,285.00
	Stipend to Apprenticeship Trainees	117,278.00	45,340.00
	Stipend to Long Term Trainees		168,823.00
	Development Expenses	277,173.00	163,162.00
	Development Expenses (Hindi Sahalkar)		50,682.00
	Documentation	225,939.00	226,210.00
	GSI Mapping Tools		
	Membership Fees for Teaching Faculty		
	Periodicals	69,145.00	110,389.00
	Printing & Stationery	29,583.00	47,151.00
	Maintenance of Lab / Office Equipments	1,142,880.00	1,921,788.25
	Research Fellowship	2,720,571.00	1,565,865.00
	Reimbursement of cost of books to teaching faculty		318,516.00
	Reimbursement of cost of computer to teaching faculty		44,600.00
	Reimbursement of cost of Prof: Body Membership Fee		34,911.00
	Journal of Technical & Vocational Education	36,019.00	31,772.00
	Community Polytechnics		
	Contingent Grant to Trainees		
	TA & DA National Conferences		
	Remuneration to Guest Lecturers	634,175.00	659,355.00
	Review Committee Meeting		
	Consumables for Lab		
	National Seminar		77,206.00
	National Symposium		
	Course Fees Receivable		
	VNITTTTR Edusat		
	Web Charges	782,771.00	1,196,292.00
	<b>Total (A)</b>	<b>15,007,673.00</b>	<b>14,706,347.25</b>
	<b>Other Expenses</b>		
	OTC Expenditure		
	GIS (CGWB)		
	IDDS		
	Guest House Expenditure	162,105.00	631,286.00
	EQPT (Plan DSC)		
	CPSC Manila		
	National Skill Development & NIMI	257,356.00	231,682.00
	International Seminar		7,096.00
	<b>Total (B)</b>	<b>419,461.00</b>	<b>870,064.00</b>
	<b>Total (A + B)</b>	<b>15,427,134.00</b>	<b>15,576,411.25</b>

**National Institute of Technical Teachers Training and Research**  
**Taramani, Chennai - 600 113**  
**Overseas Training Course (OTC)**  
**Balance Sheet as on 31.03.2012**

<b>LIABILITIES</b>	<b>Amount Rs. P.</b>	<b>ASSETS</b>	<b>Amount Rs. P.</b>
Profit & Loss Account	25382317.00	SDR	5055645.00
		Temporary Advances	290780.00
		NITTTTR Contribution	11849480.00
		<b>Closing Balance</b>	
		Axis Bank	8186412.00
<b>Total</b>	<b>25382317.00</b>	<b>Total</b>	<b>25382317.00</b>

**National Institute of Technical Teachers Training and Research  
Taramani, Chennai - 600 113  
Overseas Training Course (OTC)  
Income & Expenditure Account for the year ended 31.03.2012**

Books & Periodicals	491417.00	Project Receipts	25439723.00
CDIMD - XXIX Batch	47688.00	Interest Bank	252434.45
Consumables	36385.00		
MLP OTC Expenses	92205.00		
Guest House Boarding & Lodging	229849.00		
OTC HRD Course	68298.00		
OTC WETE Course	41496.00		
Meeting Expenses	7743664.00		
Study Tour Expenses	357685.00		
SDEM Batch	321134.00		
Vehicle Maintenance	7550.00		
Travelling & Conveyance	271138.00		
WQA-1 Batch	57929.00		
Excess of Income over Expenditure	15925719.45		
<b>Total</b>	<b>25692157.45</b>	<b>Total</b>	<b>25692157.45</b>

**National Institute of Technical Teachers Training and Research**  
**Taramani, Chennai - 600 113**  
**Overseas Training Course (OTC)**  
**Receipts & Payments Account for the year ended 31.03.2012**

<b>Opening Balance</b>		OTC Expenses	4962780.00
Axis Bank	4739276.55	Temporary Advances	5068321.00
Project Receipts	547660.00	Vehicle Maintenance	7550.00
Interest Bank	252434.45	TDS Paid	25910.00
NITTTTR Contribution	12711602.00	<b>Closing Balance</b>	
		Axis Bank	8186412.00
<b>Total</b>	<b>18250973.00</b>	<b>Total</b>	<b>18250973.00</b>

**National Institute of Technical Teachers Training and Research**  
**Taramani, Chennai - 600 113**  
**Project Account**  
**Balance Sheet for the year ended 31.03.2012**

LIABILITIES	Amount Rs. P.	ASSETS	Amount Rs. P.
<b>Financial Year 2010 - 2011 Projects</b>			
Analysis of Brine Sludge 10	46037.00	Receivables for Projects	
Asian Coastal Eco Systems 8	579083.43	Macro Level Ground Water Flow Modeling of NLC Mines	16883.00
Basics of Flood Modeling Training Program for L&T	34519.00	NITTTTR Contribution	53943.00
Cheking the Design and Monioring Ph II Cel 1 AT G	115353.00	NLC - GWM 30	7108.00
Design Check and Monitoring of Cell 2 Phase 1	78728.00	TNA - Kerala	196939.00
Design of Rain Water Harvesting	168540.00	CEM / RAY - CBE / SMOH	166925.00
Development of Web Portal	517139.00	CEM / RAY - TRY / SMOH	750223.00
Development Study on Problem Centric	66819.00	CEM / RAY - TVL / SMOH	623966.00
Dpr for Inclsion of Non-Engg(Art&Scei and Commerce	599730.00	RWE / GWE	10919.00
DPR - LAKSDP 25	158886.00		
DVD Preparation of Digitized Old Tanil Manuscpnts	208799.00	Excess of Expenditure over Income 01.04.2011	1425.00
Enriching Content with Multimedia for Web Delivery	363960.00	Excess of Expenditure over Income	150532.00
Environemental Impact Asses TR 2 - 28	54031.00		
Environmental Impact Assessment for Engineers - 5	28859.00		
Environmental Impact Asses TR 1 - 27	13249.00		
ETETTTTS 13	1507344.00		
Fiduciary Assesment of Rakstriya Madhyamik - 29	49208.00		
Integrity Assessment of Sludge Storage Pit	19243.00		
Ministry of Environment and Forest	500.00		
NLC	281608.00	Fixed Deposits	2682865.00
Tamilnadu Road Sector Project	199333.00		
TNPCB - Handout Preparation on Climate Change - 2	29502.00	<b>Closing Balance</b>	
TNSCB - TSS	315851.00	Indian Overseas Bank	5041938.43
TNWML - 17	122683.00	Cash	596000.00
Training in GIS & Mapping Tools	200000.00		
Water Testing for Constraction Purpose As Per IScod	1382.00		

<b>Financial Year 2011 - 2012 Projects</b>			
CDC / TNPCB / BP /SDP	296817.00		
CEM / LT-02 / SMOH	7250.00		
CEM/ PWD / CIAWM-R / SMOH	88771.00		
CEM / PWD / DIS-R/ SMOH	75156.00		
CEM / RAMKY - P2C2 / SMOH	220600.00		
CEM / SPAC-EIA / SMOH	90037.00		
CEM/ TNRSP - TRG / SMOH	1897600.00		
CEM / TNSCB/ SOIL - TRY / SMOH	174420.00		
CEM / WRD / PWD / SMOH	98461.00		
CICT - VIDEO / ESMS	51423.00		
LT - JAR / SMOH	8000.00		
MKU / TGSA	75000.00		
NCP / SDP / CDC	1000000.00		
PWD / DIS- NR	38488.00		
TNRSP / CSP / SMOH	330900.00		
Miscellaneous Receipts	86357.00		
<b>Total</b>	<b>10299666.43</b>	<b>Total</b>	<b>10299666.43</b>

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**

**Project Account**

**Receipts & Payments Account for the year ended 31.03.2012**

<b>Opening Balance</b>			
Indian Overseas Bank	6480674.15		
		Analysis of Brine Sludge 10	14628.00
		Cheking the Design and Monioring Ph II Cel 1 AT G	46773.00
Asian Coastal Eco Systems 8	186329.28	Development of Web Portal	32861.00
Dpr for Inclson of Non-Engg(Art&Scei and Commerce	427603.00	Development Study on Problem Centric	5466.00
Temporary Advances	116171.00	DVD Preparation of Digitized Old Tanil Manuscpts	90445.00
CDC / TNPCB / BP /SDP	296817.00	Enriching Content with Multimedia for Web Delivery	97963.00
CEM / LT-02 / SMOH	7250.00	Environemental Impact Asses TR 2 - 28	1000.00
CEM / RAMKY - P2C2 / SMOH	220600.00	Environmental Impact Asses TR 1 - 27	34304.00
CEM/ TNRSP - TRG / SMOH	1897600.00	ETETTTTS 13	484201.00
LT - JAR / SMOH	8000.00	Macro Level Ground Water Flow Modeling of NLC Mines	15424.00
MKU / TGSA	75000.00	Nittrr A/c	80400.00
NCP / SDP / CDC	1000000.00	NLC	21368.00
TNRSP / CSP / SMOH	330900.00	Tamilnadu Road Sector Project	190000.00
CEM / SPAC-EIA / SMOH	110037.00	TNSCB - TSS	254296.00
CEM / TNSCB/ SOIL - TRY / SMOH	174420.00	TNWML - 17	12767.00
CEM / WRD / PWD / SMOH	168461.00	RWE / GWE	10919.00
CICT - VIDEO / ESMS	51423.00	CEM / RAY - CBE / SMOH	166925.00
PWD / DIS- NR	107000.00	CEM / RAY - TRY / SMOH	638056.00
CEM/ PWD / CIAWM-R / SMOH	160200.00	CEM / RAY - TVL / SMOH	507913.00
CEM / PWD / DIS-R/ SMOH	127059.00	Bank Charges	150730.00
Interest Fixed Deposit	198.00		
		Temporary Advances	1364500.00
		Fixed Deposits	2682865.00
		<b>Closing Balance</b>	
		Indian Overseas Bank	5041938.43
<b>Total</b>	<b>11945742.43</b>	<b>Total</b>	<b>11945742.43</b>

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**  
**Project Account**  
**Income & Expenditure Account for the year ended 31.03.2012**

Expenditure	Amount Rs. P.	Amount Rs. P.	Income	Amount Rs. P.	Amount Rs. P.
Bank Charges	150,730.00	150,730.00	Interest Fixed Deposit	198.00	198.00
			Excess of Income over Expenditure		150,532.00
		<b>150,730.00</b>			<b>150,730.00</b>

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING & RESEARCH  
TARAMANI P.O., CHENNAI – 600 113.**

**Schedule-25**

**NOTES ON ACCOUNTS – 2011-2012**

1. The figures for previous years have been regrouped and reclassified wherever necessary.

2. DEPRECIATION:

Depreciation is provided on written down value, @ rate of 20% for Plant & Machinery, Computer peripherals, Equipments, Library Books and other assets, 10% for Furniture and 5% for Buildings since 1998-99 onwards. In respect of additions to / Deductions from Fixed Assets during the year, full depreciation is considered for assets purchased prior to 1<sup>st</sup> October of every year, for assets purchased after 1<sup>st</sup> October depreciation at 50% of normal rate. Assets costing Rs.1,000/- or less each are fully provided.

3. RETIREMENT BENEFITS:

Liability towards Gratuity payable on Death / Retirement is discharged on payment basis.

4. VALUE OF LAND:

The value of land is not shown as the State Government as not yet assigned the land to the Institute.

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI, CHENNAI 600 113

FORM GFR 19A  
(See Rule 212(1) of GFR 2005)

**UTILISATION CERTIFICATE  
FOR 2011-12 – NON – PLAN**

**FINAL**

Sl. No	Lr.No. and Date	Amount Rs.	Certified that out of Rs9,90,00,000/- of Grant in-aid sanctioned during the year 2011-12 in favour of Director, NITTTR, Chennai under this Ministry /Department Letter No. given in the margin and Rs2,13,65,052/- on account of unspent balance of the previous year, a sum of Rs.45,00,000/- being Internal Revenue Generation, a sum of Rs.11,78,83,381/- has been utilized for the purpose of meeting the Non- Plan expenditure for which it was sanctioned and that the balance of Rs.69,81,671/- remaining unutilized Non-Plan Grant will be adjusted towards the Grant-in-aid payable during the next year 2012-13
1	Lr.No.6-8/2011 TS.IV,dt:21.07.2011	4,70,00,000	
2	Lr.No 6-8/2011 TS.IV,dt 29.09.2011	3,30,00,000	
3	Lr.No.6-8/2011 TS.IV,dt: 16.01.2012	1,90,00,000	
	Total	9,90,00,000	

Certified that I have satisfied myself that the conditions on which the Grant-in-aid as sanctioned have been duly fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised

1. Monthly Expenditure
2. Quarterly Expenditure
3. Bank Reconciliation

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI, CHENNAI 600 113

FORM GFR 19A  
(See Rule 212(1) of GFR 2005)

**UTILISATION CERTIFICATE  
FOR 2011-12 – PLAN (GENERAL)**

**FINAL**

Sl. No	Lr.No. and Date	Amount Rs.	
1	Lr.No.6-10/2011 TS.IV, dt: 10.08.2011	1,00,00,000	Certified that out of Rs. 2,00,00,000/- of Grant-in-aid sanctioned during the year 2011-12 in favour of Director, NITTTR, Chennai under this Ministry/ Department Letter No. given in the margin and Rs.14,84,388/- on account of unspent balance of the previous year, a sum of Rs.1,50,07,673/- has been utilized for the purpose of meeting the Plan expenditure for which it was sanctioned and the excess amount of Rs.64,76,715/- remaining unutilized Plan Grant will be adjusted towards the Grant-in-aid payable during the next year 2012-13.
2	Lr.No 6-10/2011 TS.IV,dt 29.09.2011	35,00,000	
3	Lr.No.6-10/2011 TS.IV,dt: 16.01.2012	65,00,000	
	Total	2,00,00,000	

Certified that I have satisfied myself that the conditions on which the Grant-in-aid was sanctioned have been duly fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised

1. Monthly Expenditure
2. Quarterly Expenditure
3. Bank Reconciliation

NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI, CHENNAI 600 113

FORM GFR 19A  
(See Rule 212(1) of GFR 2005)

**UTILISATION CERTIFICATE  
FOR 2011-12– PLAN (CAPITAL ASSETS)**

**FINAL**

Sl. No	Lr.No. and Date	Amount Rs.	
1	Lr.No.6-10/2011 TS.IV, dt: 16.01.2012	3,70,00,000	Certified that out of Rs. 3,70,00,000 /- of Grant-in-aid sanctioned during the year 2011-12 in favour of Director, NITTTR, Chennai under this Ministry / Department Letter No. given in the margin and Rs.1,92,33,145/- on account of unspent balance of the previous year, and a sum of Rs.5,59,10,725/- has been utilized for the purpose of meeting the Plan (Capital Assets) expenditure for which it was sanctioned and the excess amount of Rs.3,22,420/- remaining unutilized Plan Grant will be adjusted towards the Grant-in-aid payable during the next year 2012-13..
	Total	3,70,00,000	

Certified that I have satisfied myself that the conditions on which the Grant-in-aid was sanctioned have been duly fulfilled and that I have exercised the following checks to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of checks exercised

1. Monthly Expenditure
2. Quarterly Expenditure
3. Bank Reconciliation

**NATIONAL INSTITUTE OF  
TECHNICAL TEACHERS TRAINING AND RESEARCH  
TARAMANI, CHENNAI – 600 113**

**PROVIDENT FUND ACCOUNTS  
2011-12**

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**  
**Provident Fund Account**  
**Balance Sheet as on 31.03.2012**

LIABILITIES	Amount Rs. P.	Amount Rs. P.	ASSETS	Amount Rs. P.	Amount Rs. P.
<b>Subscribers Account</b>			<b>Temporary Advance</b>		
GPF Balance as on 01.04.11	20,063,904.76		GPF Balance as on 01.04.11	2,421,955.30	
Add: Subscription during 2011-12	5,125,790.00		Add: Advance during 2011-12	793,060.00	
Add: Interest on Subscription	1,363,510.00			3,215,015.30	
Add: Arrears			Less: Recovery of Advances	765,456.00	2,449,559.30
	26,553,204.76				
Less: Part / Final Payment	2,594,100.00	23,959,104.76			
<b>CPF-G</b>			CPF Balance as on 01.04.2011		6,816.00
CPF Balance as on 01.04.11	3,738,505.00				
Add: Subscription during 2011-12	459,936.00		<b>Investment</b>		
Add: Interest on Subscription	297,397.00				
	4,495,838.00		Special Deposit - IOB	1,500,000.00	
Less: Part / Final Payment	4,495,838.00	0.00	Special Deposit - SBI	1,400,000.00	
			RDP	7,000,000.00	
NPS as on 01.04.2011	3,683,390.00		STD	4,000,000.00	13,900,000.00
Add: Subscription	1,186,162.00				
Add: Interest on Subscription	102,711.00				
	4,972,263.00		<b>Income from Investment</b>		
CPF Unclaimed Balance		3,286.45	IOB	1,304,732.00	
<b>Employers Contribution</b>		-231,862.00	SBI	1,220,393.00	2,525,125.00
Unclaimed Balance		11,170.00	<b>Short Term Deposit - IOB</b>		5,000,000.00
<b>Excess of Income over Expenditure 01.04.2012</b>	1,892,133.00		<b>Closing Balance</b>		7,533,474.41
Add: excess of income over expenditure	808,879.50	2,701,012.50			
		<b>31,414,974.71</b>			<b>31,414,974.71</b>

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**  
**Provident Fund Account**  
**Income & Expenditure Account for the year ended 31.03.2012**

Expenditure	Amount Rs. P.	Amount Rs. P.	Income	Amount Rs. P.	Amount Rs. P.
<b>Interest to Subscribers</b>			<b>Interest from Investments</b>		
NPS	593,081.00		SDR Interest	1,252,483.00	
Bank Charges	87.50	593,168.50	Normal Interest	149,565.00	1,402,048.00
Excess of Income over Expenditure		808,879.50			
		<b>1,402,048.00</b>			<b>1,402,048.00</b>

**National Institute of Technical Teachers Training and Research, Taramani, Chennai - 600 113**  
**Provident Fund Account**  
**Receipts & Payments Account for the year ended 31.03.2012**

Receipts	Amount Rs. P.	Amount Rs. P.	Payments	Amount Rs. P.	Amount Rs. P.
<b>Opening Balance</b>		5,895,095.91	Bank Charges		87.50
<b>Subscription</b>			<b>Temporary Advances</b>		
GPF	6,590,416.00		GPF		790,529.00
NPS	696,592.00				
		<u>7,287,008.00</u>	<b>Part / Final Payment from Subscription</b>		
Transfer from Current Account to NPS			GPF Part Final Withdrawal		4,347,745.00
			CPF - G		3,912,316.00
<b>Income from Investments</b>			Special Deposit		
IOB Short Term Deposit		2,000,000.00			
Normal Interest		149,565.00			
SDR Interest		1,252,483.00	<b>Closing Balance</b>		7,533,474.41
		<b>16,584,151.91</b>			<b>16,584,151.91</b>

