



**INSTITUTE OF SCIENCE AND TECHNOLOGY(Autonomous)  
Jawaharlal Nehru Technological University Hyderabad  
Kukatpally, Hyderabad., Andhra Pradesh.-500085**

***Technical Education Quality Improvement Programme , [TEQIP] PHASE – II***

**AGENDA AND NOTES FOR THE SECOND MEETING OF THE GOVERNING BODY OF IST,  
TO BE HELD ON 09.01.2014 AT 11:00AM AT THE MEETING HALL, INSTITUTE OF SCIENCE & TECHNOLOGY, JNTUH**

AGENDA	
Item No	Description
01/ 2BoG_Jan	Ratification of Subcommittee minutes.
02/ 2BoG_Jan	2.1 Ratification of appointment of (i) MIS Staff for duration of the TEQIP-II
03/ 2BoG_Jan	3.1 Approval and ratification of the Procurement plans submitted by the Centers of IST under TEQIP II. 3.2 Ratification of procurement of e-books/Journals/Books.
04/ 2BoG_Jan	4.1 Ratification of workshop organized under TEQIP-II 4.2 Ratification of training programs and Pedagogy programs attended by Faculty and students participation in the National conferences , of the institute 4.3 Approval Faculty & Staff Development Programs
05/2BoG_Jan	5.1 Approval and ratification of workshops planned to organize under TEQIP-II
06/2BoG_Jan	<b>6.1 To ratify the action taken by Director IST.</b>
07/2BoG_Jan	7.1 Approval for giving advertisement for Ph.D fellowships.
08/2BoG_Jan	8.1 To Approve and sanction a Research and development proposal through Industry Institute Interaction Cell .
09/2BoG_Jan	9.1 Any other item with the permission of the Chairperson



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*Technical Education Quality Improvement Programme , [TEQIP] PHASE - II*

2<sup>nd</sup>Meeting of Board of Governors and members

Presided by

Hon'bleChairperson : Dr. K.V. Raghavan

Venue: Meeting Room, New IST Office, JNTUH

Date: Thursday 9<sup>th</sup> Jan., 2014

Time: 11:00 AM

S.No	Name of the member	Designation
1.	Dr.K.V.Raghavan INA Distinguished Prof. and Ex. Director, CIR-IICT	Chairperson
2.	Dr.MuraliK.Tummuru, Managing Director, Virchow Biotech Pvt. Ltd.	Member
3.	Dr.M.SivaKumaran, Director, AurobindoPharma Ltd.	Member
4.	Dr.B.Venkateswara Rao, Professor of WR.,& Director, SCDE, JNTUH	Member
5.	Dr.M.Anji Reddy, Prof. of EST, Centre for Environment, IST, JNTUH	Member
6.	Dr.M.LakshmiNarasu, Prof. of Biotechnology, Centre for Biotechnology, IST, JNTUH	Member
7.	Dr.K.Mukkanti, Prof. of Chemistry, Director, IST, JNTUH.	Member
8.	Dr.K.Vijayakumar Reddy Prof. of Mechanical Engg., , and Director, Academic & Planning, JNTUH	Member
9.	Maj.Gen. R.C.Padhi, Addl. Surveyor General , IISM, Survey of India, HYD	Special Invitee
10.	Dr.S.Vara Prasad Advisor, NIPER	Special Invitee
11.	Dr.C.Radha Krishna Mentor-TEQIP II, IST JNTUH	Special Invitee
12.	Dr JSR Subrahmanyam, Mentor, Innovation Fund, TEQIP II	Special Invitee

<b>ITEM NO</b>	<b>AGENDA</b>
01/2BoG_Jan	<p><b>1.1 Approval and ratification of minutes of the Subcommittee meeting.</b></p> <p>Subcommittee constituted as per the resolution of the 1<sup>st</sup>BoG meeting. The subcommittee meeting was held on 10<sup>th</sup> Dec., 2013. The subcommittee members along with the Chairman were present for the meeting.</p> <ol style="list-style-type: none"> <li>1. Dr.K.Mukkanti , <b>Chairman</b> Prof. of Chemistry and Director, IST, JNTUH</li> <li>2. Dr.M.LakshmiNarasu, <b>Member</b> Prof. of Biotechnology, CBT, IST, JNTUH</li> <li>3. Dr.B.Venkateswar Rao, <b>Member</b> Prof. of Water Resources, &amp; Director, SCDE, JNTUH</li> <li>4. Dr.M.Anji Reddy, <b>Member</b> Prof. of Environment, &amp; Director, UFR, JNTUH</li> <li>5. Dr.T.Vijaya Lakshmi, <b>Convener</b> Asst. Professor, EST, CEN, IST &amp; Coordinator-TEQIP</li> </ol> <p><b>The subcommittee discussed the following items.</b></p> <ol style="list-style-type: none"> <li>1. Sanction of Budget to each Centre under Procurement head.</li> <li>2. Procedural guidelines to procure books, e-books, journals and text books for P.G. programs.</li> <li>3. To frame guidelines and norms for teaching and research assistanceship (Ph.D) under TEQIP II grants.</li> <li>4. To frame guidelines and norms either to participate or to organize seminars / workshops/ training programs and other academic activities like expert lectures by the faculty of various Centres.</li> <li>5. Approval of sitting allowances of the subcommittee.</li> </ol> <p>The minutes are enclosed as Annexure 1.</p> <p><b>The Governing Council may consider and ratify the same.</b></p>

02/2BoG_Jan	<p><b>2.1 Ratification of appointment of MIS Staff for duration of the TEQIP-II at IST.</b></p> <p>We have received eight applications for the above mentioned post. Mr.Md. Abdul Moid, M.Tech has been selected for the post.</p> <p><b>The Governing Council may approve and ratify the same.</b></p>
03/2BoG_Jan	<p><b>3.1 Approval and ratification of the Procurement plans submitted by the Centers of IST under TEQIP II.</b></p> <p>As per the resolutions of the subcommittee, an amount of Rs 80.00 lakhs, were allotted to each Centre of IST.</p> <p>Within the assigned budget., each Centre has given their procurement plans. (Annexure 2).</p> <p><b>The Governing Council may consider and approve the same.</b></p> <p><b>3.2 Ratification of procurement of e-books/Journals/Books.</b></p> <p>Office of the TEQIP II, has circulated list of books, Journals and e-books to be procured under TEQIP II.</p> <p>The amount allocated for the books and journals is Rs.20 .00 lakhs.</p> <p><b>The members of the Governing Council may consider and approve the same.</b></p>
04/2BoG_Jan	<p><b>4.1 Ratification of workshop organized under TEQIP-II</b></p> <ul style="list-style-type: none"> <li>• One day workshop on “Emerging trends in chemical sciences &amp; Technology” sponsored by TEQIP –II was organized by Centre for Chemical Sciences &amp; Technology on 9<sup>th</sup>, January,2014.</li> </ul> <p><b>The Governing Council may ratify the same.</b></p> <p><b>4.2 Ratification of training programs and Pedagogy programs attended by Faculty and students participation in the National conferences , of the institute</b></p> <ul style="list-style-type: none"> <li>❖ Dr. J.Venkatesh, Prof, CSIT, IST,JNTUH attended the Pedagogical Training (Module-I) on 25th Nov., 2013 at NITTTR, Chandigarh.</li> </ul>

- ❖ Mr.L.Saida, Head, CBT, IST, JNTUH attended the Pedagogical Training (Module-I) on 25th Nov., 2013 at NITTTR, Chandigarh.
- ❖ Miss. Ch. Shilpa Chakra, Head, CNST,IST,JNTUH attended the Pedagogical Training (Module-I) on 16- 20 Dec., 2013 at NITTTR, Chandigarh.
- ❖ Dr.T.Vijaya Lakshmi, Asst .Professor has attended 13<sup>th</sup> NSDI Annual Meet held at IIT Mumbai, during 29-30 Nov., 2013.
- ❖ Dr.B.Venkateswar Rao, Director, SCDE, and Prof. CWR, and Dr.V.HimaBindu,Asso. Professor , CEN, have attended 2 day workshop on General Management Program, scheduled during 23-24 Dec. 2013.
- ❖ Three M.Tech (EGM) students from Centre for Environment, IST, have participated and presented (Oral) their M.Tech Research work in the National conference organized by ISG and ISRS at Vishakhapatnam, during 4-7<sup>th</sup> Dec., 2013.

**The members of the Governing Council may ratify the above.**

#### **4.3 Approval of Faculty & Staff Development Programs.**

- Dr.T.BalaNarasaiah, Asso.Prof., CCST will be participating in 5<sup>th</sup>Pedagogical Training from 20- 25 Jan., 2014 at ESCI, HYD.
- Miss. Ch. Shilpa Chakra, Head, CNST,IST,JNTUH, wish to participate in the International Conference on Nano and GIGA challenges in Electronics, Photonics and renewable energy, during March., 10-14., 2014. USA.

**The members of the Governing Council may approve the same.**

#### **4.4 Approval of Faculty participation in International Training program on “ Procurement Procedures for World Bank Funded Projects” to be held from 17-28 Feb., 2014, at NIFM, Faridabad.**

The following faculty may be permitted to participate in the above program.

- Dr.K.RamaMohan Reddy, Head, CWR and Nodal Officer Procurement, TEQIPII
- Miss. Ch. Shilpa Chakra, Head, CNST,IST,JNTUH, Nodal officer , Procurement, TEQIPII
- Dr.T.Vijaya Lakshmi, Asst.Prof., CEN and Coordinator, TEQIP II

**The Governing Council may consider and approve the same.**

05/2BoG_Jan	<p><b>5.1 Approval and ratification of workshops planned to organize under TEQIP-II</b></p> <p>The following workshops / training programs are submitted by the faculty.</p> <ul style="list-style-type: none"> <li>• Two day workshop on EIA of developmental projects by Dr.M.Anjireddy Centre for Environment.</li> <li>• Training program on geospatial applications for groundwater management in March 2014.</li> </ul> <p style="text-align: center;"><b>The Governing Council may consider and approve the same.</b></p>
06/2BoG_Jan	<p><b>6.1 To ratify the action taken by Director IST.</b></p> <p>As the SPFU has not released the TEQIP funds to JNTUH, Director, IST has requested University Authorities for permission to transfer funds from IST a/c to TEQIP a/c . An amount of Rs.Ten lakhs has been transferred into TEQIP account.</p> <p style="text-align: center;"><b>The Governing Council may consider and ratify the same.</b></p> <p style="text-align: center;">—</p>
07/2BoG_Jan	<p><b>7.1 Approval for giving advertisement for Ph.D fellowships.</b></p> <p>Advertisement for Ph.D may be given in the 3<sup>rd</sup> week of Jan., 2014. Applications may be invited for registration to Full -Time Ph.D. Programmes in Science and Engineering with TEQIP II, Project funding for the academic year 2014-15.</p> <p><b><u>Eligibility:</u></b></p> <ol style="list-style-type: none"> <li>1. <b>Age Limit:</b> The maximum age for admission as on <b>1. 6.2014</b> shall be 35 years.</li> <li>2. <b>Qualification:</b> Candidates shall possess BE/B.Tech and ME/M.Tech in the concerned discipline of Engineering with a minimum of 55% and above at UG and PG level.</li> <li>3. Admission into the Ph.D program will be as per the University admission procedures.</li> </ol> <p style="text-align: center;"><b>The Governing Council may consider and approve the same.</b></p>

08/2BoG_Jan	<p><b>8.1 to Approve and sanction a Research and development proposal through Industry Institute Interaction.</b></p> <p>Environmental Geomatics Division of Centre for Environment, IST through its Industry partner M/S Mobiterra (I) Pvt Ltd., wish to take up a R &amp;D activity.</p> <p><b>Goal</b> To prepare GIS-ready databases through active participation of JNTUH faculty for the major rivers flowing in Andhra Pradesh using the state-of-the-art geomatics &amp; allied technologies.</p> <p><b>Outcomes of the project</b></p> <p>To introduce the advanced data processing techniques for a real-world application To impart expertise in integrating remote sensing, photogrammetry and GIS tools</p> <p><b>Implementation</b></p> <p>The expertise of the faculty and laboratory resources of the University will be utilized. M.TechProject trainees can be directly benefited through active contributions. The proposing Industry brings in its expertise in developing a quality database and simultaneous training and hand-holding of the University staff.</p> <p>Proposed Budget for execution of the project including data cost and field work will be approximately Rs.6 lakhs.</p> <p><b>The Governing Council may sanction the above proposal and consider for approval.</b></p>
09/2BoG_Jan	9.1Any other item with the permission of the Chairperson

## **Annexure 1**

### **Minutes of the Subcommittee meeting for Ratification.**

**The subcommittee meeting was convened to discuss the following issues.**

1. Sanction of Budget to each Centre under Procurement head.
2. Procedural guidelines to procure books, e-books, journals and text books for P.G. programs.
3. To frame guidelines and norms for teaching and research assistanceship (Ph.D) under TEQIP II grants.
4. To frame guidelines and norms either to participate or to organize seminars / workshops/ training programs and other academic activities like expert lectures by the faculty of various Centres.
5. Approval sitting allowances of the subcommittee.

The resolutions of the subcommittee meeting are given below and for ratification by the BoG.

#### **Agenda 1: Sanction of Budget to each Centre under Procurement head.**

- It is resolved and approved by the subcommittee members, that an amount of Rs 80 lakhs may be allocated to each Centre (six centres) for procurement of Equipment /instruments from the total grants of Rs 5.63 cr., excluding books and minor civil works.
- The respective Centre will give their list of items to be procured as per the requirement and need of the Centre.

#### **Agenda 2: Procedural guidelines to procure books, e-books, journals and text books for P.G. programs.**

- The list of books (e-books and print books) and Journals duly signed by all the faculty members of the Centre and through Head of the Centre may be submitted to the Coordinator TEQIP for further action.
- As few of the publishers have submitted the book catalogues with the Coordinator TEQIP, faculty may refer to the same.
- Springer (India) Pvt. Ltd, also willing to submit their institutional package for e-books and journals subscription, which will be circulated to all the faculty members. Faculty may choose from the catalogue.

#### **Agenda 3: To frame guidelines and norms for teaching and research assistanceship (Ph.D) under TEQIP II grants.**

- It is resolved to give an advertisement for the admission and selection of candidates for Ph.D program under TEQIP II.



- The admission and selection procedure will be as per the JNTUH admission procedures and guidelines. The selection committee will select the suitable candidate for the Ph.D program .
- Depending up on the availability of funds, 3-4 research students may be permitted for each Centre.
- Head of the Centres are requested to submit the list of students for M.Tech / teaching fellowships, for the academic years 2011, 2012, 2013.

The selection committee consists of the following members.

1. Chairman : Director, IST, JNTUH
2. Members :
  - \* Senior Faculty member
  - \* Head of the Centre.
  - \* Chairperson Board of studies
  - \* Subject expert member (external)
  - \* University Nominee (DAP)
3. Nodal Officer TEQIP II : Academic

**Agenda 4: To frame guidelines and norms either to participate or to organize seminars / workshops/ training programs and other academic activities like expert lectures by the faculty of various Centres.**

Members of the subcommittee discussed about the budget sanction towards organizing National and International Conferences, Symposiums, and Workshops.

The allocation of budget for various programs is given blow.

S.No	No. of Days and Type and participation (Conferences, Symposiums, and Workshops)	Amount in lakhs in INR
1.	One day workshop : Minimum 50 members	1.00
2.	National : 2 days with minimum 100 participants	2.00
3.	International : 3 days with minimum participants 150	3.50

**Agenda 5: Approval sitting allowances of the subcommittee.**

It is resolved to pay an amount of Rs 1000/- as sitting allowance to the members of the subcommittee members.

The above issues were discussed and approved and will be submitted to the Governing body for ratification.

**ANNEXURE :2****Procurement Plans under TEQIP II**

Centre for Biotechnology

**1. Procurement Plans: (80 Lakh)****Heat Transfer Lab (Manual Operating System):-**

S.No	Code	Name of the Equipments	Price Per Unit (Rs.)
1.	HT-101	HEAT TRANSFER THROUGH COMPOSITE WALL	56,780
2.	HT-102	HEAT TRANSFER THROUGH LAGGED PIPE	56,780
3.	HT-104	THERMAL CONDUCTIVITY OF INSULATING POWDER	56,780
4.	HT-105	THERMAL CONDUCTIVITY OF METAL ROD	56,780
5.	HT-109	HEAT TRANSFER IN FORCED CONVECTION	74,780
6.	HT-110	HEAT TRANSFER IN NATURAL CONVECTION	54,780
7.	HT-113	DROPWISE & FILMWISE CONDENSATION APPARATUS	86,780
8.	HT-114	PARALLEL FLOW/COUNTER FLOW HEAT EXCHANGER	65,780
9.	HT-121	SINGLE EFFECT EVAPORATOR	206,780
10.	HT-111	EMISSIVITY MEASUREMENT APPARATUS	56,780
12.	HT-115	SHELL & TUBE HEAT EXCHANGER	102,780
		<b>TOTAL</b>	<b>8,75,580</b>

**Fluid Mechanics Lab (Data Logging Facility System): -**

S.No	Code	Name of the Equipments	Price Per Unit (Rs.)
1.	HT-101	BERNOULLI'S THEOREM APPARATUS (With Stainless Steel Tanks)	63,780
2.	HT-103	DISCHARGE OVER NOTCHES (With Stainless Steel Tanks)	63,780
3.	HT-105	LOSSES DUE TO FRICTION IN PIPE LINES (With Stainless Steel Tanks)	68,780
4.	HT-106	LOSSES DUE TO PIPE FITTINGS, SUDDEN ENLARGEMENT & CONTRACTION (With Stainless Steel Tanks)	66,780

5.	HT-108	DISCHARGE THROUGH VENTURIMETER, ORIFICEMETER & ROTAMETER (With Stainless Steel Tanks)	78,780
6.	HT-110	REYNOLD'S APPARATUS (With Stainless Steel Tanks)	45,780
7.	HT-119	DARCY'S LAW APPARATUS	78,780
		<b>TOTAL</b>	<b>4,66,460</b>

**Mass Transfer Lab (Manual Operating System):-**

S.No	Code	Name of the Equipments	Price Per Unit (Rs.)
<b>Extraction Column</b>			
1.	MT-101	LIQUID-LIQUID EXTRACTION IN A PACKED TOWER Optional: Air ompressor ½ Hp, 2 CFM With Standard Make Motor & Automatic Pressure Swith	150,780 24,780
2.	MT-113	PACKED BED DISTILLATION COLUMN Optional: Refractometer	231,780 24,780
<b>Diffusion</b>			
3.	MT-131	VAPOUR IN AIR DIFFUSION APPARATUS	57,780
<b>Drying</b>			
4.	MT-142	FORCED DRAFT TRAY DRYER	107,780
<b>Crystallization</b>			
5.	MT-151	BATCH CRYSTALLIZER	90,780
<b>Miscllneous</b>			
6.	MT-162	VAPOUR-LIQUID EQUILIBRIUM SET-UP Optional: Refractometer	96,780 24,780
		<b>TOTAL</b>	<b>8,10,020</b>

**Process Control & Instrumentation Lab. (Manual Operating System):-**

S.No	Code	Name of the Equipments	Price Per Unit (Rs.)
1.	PC-108B	CONTROL VALVE CHARACTERISTICS (Linear, Equal Percent & Quick Opening) Optional: Mini Air Compressor with Standard Make Motor and automatic switch	1,08,780 22,780
2.	PC-111	TIME CONSTATNT OF THERMOCOUPLE & THERMOMETER	66,780
3.	PC-117	INTERACTING & NON INTERACTING SYSTEM	68,780
		<b>TOTAL</b>	<b>2,67,120-00</b>

**Downstream Processing:-**

S.No.	Code	Name of the Equipments	Price Per Unit (Rs.)
1.		ACTA-Prime Plus – GE Health Care	12,00,000
2.		Chromatography Column- GE Health Care VL11X250 , VL22X250 , V133X250	1,50,000
3.		Resins: DEAE Sepharose – SS – 200ml FP Sepharose –SS – 200 m. Sephadex – G25- 200g	45,000
4.		Conductivity Meter – Cyber Lab	15,000
5.		Tangential Flow Filtration( MICRO, DIA, ULTRA)	4,00,000
7.		Homoginizer	6,50,000
<b>TOTAL</b>			<b>24,60,000</b>

**Upstream Processing:-**

S. No	Code	Name of the Equipments	Price Per Unit (Rs.)
1.		Pilot Scale Fermentor	25,00,000
<b>Total</b>			<b>25,00,000</b>

**Chemical Reaction Engineering:-**

S. No	Code	Name of the Equipments	Price Per Unit (Rs.)
1	CRE-101	CONTINUOUS STIRRED TANK REACTOR (C. S. T. R.) Optional: Air Compressor ½ HP, 2 CFM with Standard Make Motor and Automatic Pressure Switch	66,780 24,780
2	CRE-103	CASCADE C. S. T. R. Optional: Air Compressor ½ HP, 2 CFM with Standard Make Motor and Automatic Pressure Switch	90,780 24,780
3	CRE-106	ISOTHERMAL PLUG FLOW REACTOR (COILED TUBE TYPE) Optional: Air Compressor ½ HP, 2 CFM with Standard Make Motor and Automatic Pressure Switch	68,780 24,780
4	CRE-107	ISOTHERMAL BATCH REACTOR	59,780
5	CRE-108	ISOTHERMAL SEMI-BATCH REACTOR Optional: Air Compressor ½ HP, 2 CFM with Standard Make Motor and Automatic Pressure Switch	75,780 24,780
6	CRE-110	PACKED BED REACTOR Optional: Air Compressor ½ HP, 2 CFM with Standard Make Motor and Automatic Pressure Switch	81,780 24,780
7	CRE-113	KINETICS OF DISSOLUTION OF BENZOIC ACID	68,780
8	CRE-114	RTD STUDIES IN C. S. T. R. Optional: Air Compressor ½ HP, 2 CFM with Standard Make Motor and Automatic Pressure Switch	53,780 24,780
<b>TOTAL</b>			<b>7,14,920.00</b>
<b>Grand Total Amount:</b>			<b>80, 00,000</b>

**Proposed Procurement for Centre for Chemical Sciences and Technology**

Proposed equipment/s	Cost in Rs.	No of units	Total in Rs.
Mass Spectrometer	35,00,000.00	1	35,00,000.00
Rheometer	24,00,000.00	1	24,00,000.00
Benchtop NMR	21,00,000.00	1	21,00,000.00
<b>TOTAL in Rs</b>			<b>80,00,000.00</b>

<b>Procurement, TEQIP II Centre for Environment, IST, JNTUH</b>		
<b>S.No.</b>	<b>Make</b>	<b>Price (Rs.)</b>
1	PCB ELIX/ RiOs Interface for Millipore unit	74,000=00
2	KEL PLUS automatic distillation & digestion system	4,38,690=00
3	Stack Monitoring Instruments	1,02,000=00
4	Liquid Nitrogen cylinder	2,00,000=00
5	SilcoCan Canister	2,01,232=00
6	Ozone generator	1,55,300=00
7	Fuming cupboard	50,000=00
8	Organic sampler	60,000=00
9	Incinerator	1,00,000=00
10	microscope	1,00,000=00
11	Chemical standards	2,00,000=00
12	COD reactor	1,00,000=00
13	Rota vapour	2,50,000=00
14	Electrodes for Ion analyser (CN, NH <sub>4</sub> , NO <sub>3</sub> )	1,50,000=00
15	Gacification unit	1,00,000=00
16	HPLC (binary) with PDA and fluorescence detectors	20,00,000=00
17	Gradient PCR	4,00,000=00
18	Upgradation of Datum	3,00,000=00
19	DGPS	20,00,000=00
20	Hi-end computers (20 number): 3 <sup>rd</sup> generation Intel® Core™ i5-3340s processor (6M cache, upto 3.3 GHz), 4 GB DDR3 SDRAM, 1600MHz-1x4GB, 3.5" 1TB 7200RPM SATA hard drive, 1x1TB, Nvidia GeForce GT 620, HH SATA tray load DVD=-/ RW, 19 monitor, E1914H, 18.5 inch VIS, VGA, Windows 8	10,00,000=00
21	UPS 8kv 2 hour back up	1,00,000=00
22	ARCGIS Spatial Analyst	6,00,000=00
	Total	85,81,222=00

**Centre for Nano-Science and Technology**

S.No	Item	Price (Rupees)
1.	LCR meter with Zig	15,00,000/-
2.	Four probe point instrument	10,00,000/-
3.	Cyclic voltammetry	15,00,000/-
4.	Solar Simulators	10,00,000/-
5.	Laminar air flow	1,50,000/-
6.	Digital Autoclave	2,00,000/-
7.	Incubators	4,00,000/-
8.	Refrigerators	40,000/-
9.	Digital incubation shakers	2,00,000/-
10.	Turbidimetry	1,00,000/-
11.	Air conditioner	70,000/-
12.	Hot air oven	70,000/-
13.	Digital weighing machine	1,00,000/-
14.	Laptops	1,50,000/-
15.	Deionized water plant	2,20,000/-
16.	Nano fluid Ultrasonic Interferometer	3,00,000/-
17.	Thin film deposition unit	10,00,000/-
	Total	80,00,000/-

**Center for Spatial Information Technology**

S.No	Item	Price (Rupees)
1.	Intel Core 7 Computers 40 No's	22,00,0000/-
2.	ERDAS Imagine bundle IP software (20 license)	29,00,0000/-
3.	ARC VIEW lab kit Ver 10.1 30 users	4,50,000/-
4.	A0 scanner (VIDAR )	6,00,000/-
5.	Hand held GPS (10 nos)	8,00,000/-
6.	Java, VB, Oracle and . Net SW	5,00,000/-
	Total	80,00,000/-



**Centre for Water Resources**

S.No.	Name of the equipment	Estimation approx.
1.	AAS 6300	12,00,000/-
2.	Gas Chromatograph	6,00,000/-
3.	FLOCCULATOR JAR TEST APPARA	2 ,00,000/-
4.	TOC ANALYSER 5000A	6 ,65,000 /-
5.	Radio Spectrometer	10,00,000/-
6.	MIKE basin Software	6,00,000/-
7.	MIKE SHE Basin Software	6,00,000/-
8.	Ground Penetrating Radar	25,00,000/-
9.	4 winches each 21 takeouts of 10 m. interval existing Terrameter	6,50,000/-
10.	Total	80,15,000/-