

## ANNEXURE VI

**Table 36**

**Name of the Institution with location : JNTUH COLLEGE OF ENGINEERING HYDERABAD, ANDHRA PRADESH**  
**Mechanical Engineering Department : Procurement Table**

Package No	SI No.	Activities	Description of Works/Goods	Estimated Cost (Rs. Lakhs)	Method of Procurement	Design/Investigation completion/ specification / finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation Document (Date)	Date of Receipt Bank's No Objection to Bidding Document	Bids		Contract Award (Date / Value)	Date of Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1	<b>New PG Lab – Kinematics and Dynamics Lab</b>	<b>SCOROBT Mechanical arm (5 kg) payload with DC servo gripper and vision software</b>	19.00	NCB	13-12-10 to 20-12-10	19.00 05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11
	2		<b>Vibrating table with exciter beam arrangement</b>	1.5	shopping	13-12-10 to 20-12-10	1.50 05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11
	3		<b>Single DOF viscous damping system</b>	0.8	shopping	13-12-10 to 20-12-10	0.80 05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11

	4		Motorized gyroscope	0.6	shopping	13-12-10 to 20-12-10	0.60	05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11
	5		Motorized rotating balancing apparatus	0.6	shopping	13-12-10 to 20-12-10	0.60	05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11
	6		Inverted metallurgical microscope	5.4	shopping	13-12-10 to 20-12-10	5.40	05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11
	7		Metal spectroscope for qualitative analysis	2.6	shopping	13-12-10 to 20-12-10	2.60	05-02-11 to 15-02-11	20-02-11 to 30-02-11		10-04-10 to 20-04-11	05-05-11 to 15-05-11	30-05-11 to 07-06-11	20-09-11
Total for New PG Lab: Kinematics and Dynamics				30.50										
2	1	Modernization of Existing Lab – Computational	ANSYS – CFX – ICEMCFD – FLUENT (Limited Nodes – 25 Users) Educational Version	10.00	NCB / Shopping	20-12-11 to 30-12-11	10.00	05-01-11 to 15-01-11			15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11

	2		CATIAV5 R13 ED2 full package (25 Users)	10.0	NCG / Shopping	20-12-11 to 30-12-11	10.00	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
	3		ABACUS (5 Users)	5.0	Shopping	20-12-11 to 30-12-11	5.00	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
	4		Casting Simulation ( 1 User )	3.5	Shopping	20-12-11 to 30-12-11	3.50	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
	5		Pro E (50 Users)	4.8	Shopping	20-12-11 to 30-12-11	4.80	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
	6		LS Dyna (1 User )	3.5	Shopping	20-12-11 to 30-12-11	3.50	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
	7		HyperMESH	3.60	Shopping	20-12-11 to 30-12-11	3.60	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
Total for Modernization of Existing Computational and CAD Labs				40.40									

3	1	Research Lab / New Lab	ANSYS – CFX – ICEMCFD – FLUENT (Unlimited Nodes – 5 Users, including 1 user of Turbogrid) Research Version	20.00	NCB	20-12-11 to 30-12-11	3.60	05-01-11 to 15-01-11		15-03-11 to 20-03-11	10-04-11 to 15-04-11	20-04-11 to 05-05-11	30-05-11
Total for New Lab: CFD / Research Lab				20.00									
TOTAL				90.90									

**Civil Engineering Department: Procurement Table**

Package No	SL No	Activities	Description of works/ goods	Estimated cost (Rs in Lakhs)	Method of procurement	Design/investigation completed/specificati on finalization (date)	Estimated Sanctioned (date and value)	Preparation of Bid Documents	Date of Receipt of Bank's no Objection to Bidding Documents(date)**	Bids		Contract Award(date/value)	Date of completion of contract
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	1	1.Infrastructure improvement for teaching, training and learning through: (i) Establishme nt of new laboratories for new and existing PG programs, faculty research etc.	Soil Dynamic Equipment - (Existing PG lab for GTE and GEE)	35.00	NCB	Jan., 2011	July, 2011	Feb., 2011		March , 2011	April,201 1	May,201 1	September, 2011
	2		Rock Coring Machine - (Existing PG lab for GTE and GEE)	5.00	sho ppin g	March., 2011	July, 2011	April, 2011		April,2 011	May,2011	June,201 1	August, 2011
	3		Ultrasonic Testing Equipment with Microprocess ors- For Existing PG courses (Structures and Infrastructure s)	6.00	sho ppin g	Feb., 2011	July, 2011	Feb., 2011		April,2 011	May,2011	June,201 1	August ,2011
			total	46.00									
	4	New Lab:	Schmidits	3.00	sho	Feb.,	July,	Feb.,		April,2	May,2011	June,201	August ,2011

		<b>NDT Lab</b>	recording facility (New NDT Lab)		<b>g</b>								
	<b>5</b>		Determination of cement content in concrete (New NDT Lab)	4.00	<b>shopping</b>	<b>March, 2011</b>	<b>June, 2011</b>	<b>March, 2011</b>		<b>April, 2011</b>	<b>May, 2011</b>	<b>May, 2011</b>	<b>July, 2011</b>
	<b>6</b>		Concrete permeability apparatus (New NDT Lab)	6.00	<b>shopping</b>	<b>April, 2011</b>	<b>July, 2011</b>	<b>April, 2011</b>		<b>April, 2011</b>	<b>May, 2011</b>	<b>May, 2011</b>	<b>August, 2011</b>
	<b>7</b>		Corrosion meter (New NDT Lab)	4.00	<b>shopping</b>	<b>March, 2011</b>	<b>July, 2011</b>	<b>March, 2011</b>		<b>April, 2011</b>	<b>May, 2011</b>	<b>June, 2011</b>	<b>August, 2011</b>
	<b>8</b>		Stress measuring equipment (New NDT Lab)	4.00	<b>shopping</b>	<b>March, 2011</b>	<b>July, 2011</b>	<b>March, 2011</b>		<b>April, 2011</b>	<b>May, 2011</b>	<b>June, 2011</b>	<b>August, 2011</b>
			<b>Total</b>	<b>21.00</b>									
		<b>Grand Total</b>		<b>67.00</b>									

### Department of Metallurgical Engineering : Procurement Table

Package No.	SI.No.	Activities	Description of Works/Goods	Estimated Cost (Rs in Lakhs)	Method of Procurement	Design/Investigation Completion/Specification Finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation of Bid Document (Date)	Receipt of Bank's No Objection to Bidding Document	Bids		Contract Award (Date/Value)	Date of Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1a	New PG Lab: Advanced Physical Metallurgy	Cold/hot rolling mill	10.00	NCB / Shopping	15-01-11	15-02-11 to 20-02-11	20-03-11 to 30-03-11		30-05-11 to 15-06-11	30-07-11 to 15-07-11	15-08-11 to 30-08-11	15-09-11 to 20-10-11
	1b		Digital Vickers hardness tester	5.00	Shopping	15-01-11	15-02-11 to 20-02-11	20-03-11 to 30-03-11		30-05-11 to 15-06-11	30-07-11 to 15-07-11	15-08-11 to 30-08-11	15-09-11 to 20-10-11
	2		Servo hydraulic Material Testing System	70.00	NCB	15-01-11	15-02-11 to 20-02-11	20-03-11 to 30-03-11		30-05-11 to 15-06-11	30-07-11 to 15-07-11	15-08-11 to 30-08-11	15-09-11 to 20-10-11
Total				85.00									

### ECE Department: Procurement Table Annexure:

Package No	SI.No	Activities	Description of work/Goods	Estimation cost	Method of procurement	Design/ Investigation completion/speci alization finalization (Date)	Estimation sanctioned(Date and value)	Preparation of Bid Document (Date)	Date of receipt of banks no objection to bidding document	Bid		contract award(Date/value )	date of completion of contract
1	1	Modernization Of Existing PG course ( Simulation Laboratory)	MEA-1 MEA-2 Annexure- -I  MEB-1 MEB-2 Annexure- -A	4.00 6.00  4.00 6.00	Shopping	Dec-2010	April-2011 20 Lakhs	1 <sup>st</sup> Jan-2011	15 <sup>th</sup> Jan-2011	1 <sup>st</sup> Feb-2011	1 <sup>st</sup> Mar-2011	April-2011	June-2011
2	2	New Laboratory for Existing PG Course (Advanced)	NEA-1 NEA-2 NEA-3 NEA-4 Annexure —B	7.60 3.00 4.85 7.66	Shopping	Feb-2011	June -2011 22 Lakhs	1 <sup>st</sup> Mar-2011	15 <sup>th</sup> Mar-2011	1 <sup>st</sup> April 2011	1 <sup>st</sup> May-2011	June -2011	Aug-2011
3	3	New Laboratory for Existing PG Course (Advanced Communication)	NEB-1 NEB-2 NEB-3 Annexure- -C	8.60 10.00 6.00	Shopping	May-2011	Sep-2011 25 Lakhs	1 <sup>st</sup> June-2011	15 <sup>th</sup> June-2011	1 <sup>st</sup> July 2011	1 <sup>st</sup> Aug-2011	Sep-2011	Nov-2011
Total Rs. 67.71 Lakhs													

**Annexure - A**

**Modernization and Strengthening of Laboratories For Existing PG course**



**1. Name of the Laboratory: Simulation Laboratory**

**Course: M. Tech – Systems and Signal Processing and Digital  
Systems & Computer Electronics**

**List of Equipment**

**CODE –MEA**

<b>S. NO</b>	<b>Equipment &amp; Specification</b>	<b>Experiments that can be performed</b>	<b>Cost</b>
<b>1</b>  <b>MEA-1</b>	Signal Generator Dynamic Signal Analyzer Synthesized sweep and function generators High Resolution Image Scanner.	<ul style="list-style-type: none"><li>• Image enhancement using spatial &amp; transform domain filters.</li><li>• Image compression using lossy &amp; lossless techniques.</li><li>• Extraction of image frames from video.</li><li>• Filtering operation on video signals.</li></ul>	5 Lakhs
<b>2</b>  <b>MEA-2</b>	Micro phones/Speakers TIMIT Database Audio Recorder Xilinx HW kits (Spartan/Vetrtext) DSP Kits (TI/ADSP).	<ul style="list-style-type: none"><li>• Framing &amp; windowing of speech signal.</li><li>• Enhancement of speech signal using spectral subtraction methods.</li><li>• FFT of speech signal on DSP processor.</li></ul>	5 Lakhs

**Total Expenditure: Rs. 10 lakhs**

**2. Name of the Laboratory: Signal Processing Lab**

**Course: M. Tech – Systems and Signal Processing**

## List of Equipment

### CODE – MEB

S. No	Equipment & Specification	Experiments that can be performed	Cost
1  <b>MEB-1</b>	DSP starter kits(TI&ADSP DSP evaluation modules Storage Oscilloscopes Logic analyzers Video cameras	<ul style="list-style-type: none"><li>• Signal acquisition, Analysis, Filter design, and simulation.</li><li>• correlation, compression and enhancement</li></ul>	4 Lakhs
2  <b>MEB-2</b>	Processor, ROM and voice synthesizer. Connectors and interfacing devices power supplies. Electronic components (PCB, switching equipment). Mechanical equipment. Mobile computing equipment. Output devices. Simulation software.	<ul style="list-style-type: none"><li>• Embedded Applications using signal processing.</li><li>• Pitch, frequency analysis and acquisition of audio samples</li><li>• Simulation experiments.</li></ul>	6 Lakhs

**Total Expenditure: Rs. 10 lakhs**

### Annexure-B

#### Proposed New Laboratory for Existing PG Course

**Name of the Laboratory: Advanced Communications and Networks Lab.**  
**Course: Systems and Signal Processing**

**List of Equipment**

**CODE - NEA**

<b>S. No</b>	<b>Equipment &amp; Specification</b>	<b>Experiments that can be performed</b>	<b>Cost</b>
<b>1</b>  <b>NEA-1</b>	RF Communications Trainer Kit.  Wireless Digital Communication Trainer System.  Wavelength Division Multiplexing Trainer Kit.	<ul style="list-style-type: none"> <li>• Implementation of front end transmitter and receiver modules</li> <li>• Implementation of IP demodulator</li> <li>• Implementation of Audio processes circuit, wireless transceiver</li> <li>• To evaluate the performance of FSK, ASK QPSK, PSK, QAM, M-ary modulation schemes.</li> <li>• To implement wavelength division multiplexing.</li> </ul>	7.6 Lakhs
<b>2</b>  <b>NEA-2</b>	LAN Training System.  LTS –01 Local Area Network Trainer Hardware , L-SIM LAN protocol simulator and analyzer software.  Data communication Trainer.  Communication techniques  Satellite communication trainer.	<ul style="list-style-type: none"> <li>• To simulate the performance of various topologies like star, ring, bus, mesh networks.</li> <li>• Serial communication using Rs 232 interface,</li> <li>• Flow control in serial communication.</li> <li>• To analyze synchronous and asynchronous protocol.</li> <li>• To study transmitting &amp; receiving stations.</li> <li>• To study the up-linking and down linking process.</li> </ul>	3 lakhs
<b>3</b>  <b>NEA-3</b>	CDMA - DSSS Trainer with Bit Error Rate Measurement.  GSM Trainer.	<ul style="list-style-type: none"> <li>• To study theory of direct sequence spread spectrum modulation and demodulations.</li> <li>• To study the effect of synchronization sequential, code research in dispreading.</li> <li>• Real time study of GSM07.05 &amp; 07.07 commands</li> </ul>	4.85 lakhs

<p><b>4</b></p> <p><b>NEA - 4</b></p>	<p>GPS Trainer.</p> <p>ISDN Trainer.</p> <p>Radar Trainer.</p> <p>Transmission line Trainer.</p> <p>EPABX Trainer,</p>	<ul style="list-style-type: none"> <li>• Measurement of latitude and longitude.</li> <li>• Study of PRN code.</li> <li>• Analysis of elevation: Azimuth, SNR</li> <li>• To capture, and print packet headers, call control messages and information elements form the D- channel.</li> <li>• To study the working of Doppler radar.</li> <li>• To determine the velocity of the object moving in the radar range.</li> <li>• Matched ,short and open line measurement</li> <li>• Impedance matching.</li> <li>• Study and analysis of various circuits- line, junction, tone, signal processing, and data power supply.</li> <li>• Study and analysis of switching mechanism between extension &amp; trunk/ direct lines.</li> </ul>	<p>7.66 lakhs</p>
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**Total Expenditure: Rs. 23.11 Lakhs**

### Annexure-C

#### Proposed New Laboratory for Existing PG Course

**Name of the Laboratory: Advanced Communications and Networks Lab.**

**Course: Systems and Signal Processing**

S. No	Equipment & Specification	Experiments that can be performed	Cost
1 <b>NEB-1</b>	Routers , L3 Switches, L2 Switches, Firewall / IDS & WLAN Access points Cryptography & Network Security Assurance Unit. Network Emulator Unit (NEU) Network Emulator Unit (NEU) Network Interface Unit (NIU)	<ul style="list-style-type: none"><li>To perform experiments on shortest path, adaptative and non-adaptative routing protocols.</li><li>To simulate network security and cryptography protocols.</li><li>Software to simulate ALOHA, CSMA, CSMA/CD, Stop &amp; Wait, Sliding Window, Token Bus and Token Ring protocols</li></ul>	8.6 Lakhs
2 <b>NEB-2</b>	Qualnet Software Qualnet 5.0 Teaching License Perpetual Simulation Software for optical Networks	<ul style="list-style-type: none"><li>To perform simulation on FIFO, RED, RIO, AODV, DYMO, H323 in VOIP, SIP in VOIP</li><li>To evaluate the performance of WDM networks.</li></ul>	10 Lakhs
3 <b>NEB-3</b>	Fiber optic instruments/ tools/ accessories. Fiber Optics Trainers MULTILAB. EMI/EMC trainer.	<ul style="list-style-type: none"><li>To perform experiments on Single mode, multimode glass and plastic fibers.</li><li>To measure coupling loss, bending losses and dispersion in fibers.</li><li>To test and analysis various analog and digital circuits.</li><li>TINA circuit development, troubleshooting.</li><li>To study the difference between electric and magnetic fields.</li></ul> To study the directional characteristics of a magnetic field.	6 lakhs

**Total Rs 24.6 Lakhs**

**Computer Science & Engineering Department: Procurement Table**

Package No	SI No.	Activities	Description of Works/Goods	Estimated Cost (Rs)	Method of Procurement	Design/Investigation completion/ specification / finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation Document (Date)	Date of Receipt Bank's No Objection to Bidding Document	Bids		Contract Award (Date / Value)	Date of Completion of Contract
1 Adhoc and Sensor Networks lab	1	New PG Lab	CROSSBOW WSN-EDU2110CA Wireless Sensor Network CLASSROOM Kit : 2.4 GHz IRIS	5.74	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		Invitation (Date)	Opening (Date)		
	2		CROSSBOW WSN-IMOTE2 Hardware Bundle Kit – 2.4GHz	1.66	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24--01-11 to 20-02-11	21--02-11 to 27-02-11	28--02-11 to 03-04-11	04--04-11 to 23-05-11
	3		Qualnet 5.0.1 Teaching License Perpetual(20 in No.)	4.0	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24--01-11 to 20-02-11	21--02-11 to 27-02-11	28--02-11 to 03-04-11	04--04-11 to 23-05-11
2 Information Security	1	Modernization of Existing	VM ware Workstation Licensed Software	1.0	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24--01-11 to 20-02-11	21--02-11 to 27-02-11	28--02-11 to 03-04-11	04--04-11 to 23-05-11

	2		VM ware Server Licensed Software	2.0	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	3		WorkStation Operating System Licensed Software	0.2	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	4		High End Server	3.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	5		5 Workstations	3.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	6		Firewall	0.6	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	7		IDS Tools	1.5	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11

	8		Router	0.6	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	9		24 port Switch	0.3	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	10		Attack Simulator Tools	1.5	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	11		Multipurpose Printer	0.2	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	12		1 HP Laptops	0.5	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	13		UPS System	1.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11



	14		Server Rack	0.3	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
3 WIRELESS & MOBILE COMPUTING Lab	1	New PG Lab	Workstations with <i>Wireless Network Cards</i> 5no	3.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	2		High end server with <i>Wireless Network Cards</i>	2.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	3		Power Backup (UPS) System	2.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	4		Access Points (4 in No.)	1.0	Shopping	13-12-10 to 26-12- 10	27-12-10 to 09-01- 11	10-01-11 to 16-01- 11		24-01-11 to 20-02- 11	21-02-11 to 27-02- 11	28-02-11 to 03-04- 11	04-04-11 to 23-05- 11
	5		GSM Software & Hardware	2.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11

	6		CDMA Software & Hardware	4.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	7		Simulation Software such as NS2	3.0	Shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	8		Multipurpose Printer (4-in-1)	0.2	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
4 Data Warehousing and Data Mining Lab	1	Modernization of existing Lab	10 Workstations	6.0	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	2		High end database server	2.0	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	3		Network Attached Storage Device	0.25	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11

5 Software engineering	4		UPS System	0.9	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	5		Multipurpose Printer	0.2	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	1	New PG lab	Workstations and laptop	5.0	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	2		15 port Switch	0.1	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	3		UPS System	0.9	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	4		Multipurpose Printer	0.2	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11

	5		MS Project Software	0.8	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	6		HP Quality Centre Software	2.0	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	7		HP QuickTest Professional Software	2.5	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	8		TIMIT Acoustic-Phonetic Continuous Speech Corpus	0.15	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
6 Computer networks and security lab	1	New lab	Fire wall, Layer 3 Switches for 10 work benches	2.25	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
7 Multicore technologies	1	New Lab	master node	2.48	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11

	2		compute nodes (2 no)	8.96	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	3		switch	0.86	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	4		CUDA programming software	2.5	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	5		console and rack	0.45	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	6		UPS	2.0	shopping	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
	7		multi purpose printer	0.2	DC	13-12-10 to 26-12-10	27-12-10 to 09-01-11	10-01-11 to 16-01-11		24-01-11 to 20-02-11	21-02-11 to 27-02-11	28-02-11 to 03-04-11	04-04-11 to 23-05-11
<b>TOTAL</b>				<b>85.00</b>									

**EEE department Procurement Table**

Package No	SI No.	Activities	Description of Works/Goods	Estimated Cost (Rs) in lakhs	Method of Procurement	Design/Investigation completion/ specification / finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation Document (Date)	Date of Receipt Bank's No Objection to Bidding Document	Bids		Contract Award (Date / Value)	Date of Completion of Contract
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1	New PG lab - Power systems Lab	Microcontroller based IDMT Over Current Relay	0.3335	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010
	2		Electromechanical based IDMT Over Current Relay	0.3335	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010

	3		Microcontroller based IDMT Under Voltage Relay	0.2778	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010
	4		Electromechanical based IDMT Under Voltage Relay	0.2223	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010
	5		Microcontroller based Earth Fault Relay	0.2223	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010
	6		Electromechanical based Earth Fault Relay	0.2778	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010
	7		Microcontroller based Reverse Power Relay	0.4445	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010

	8		Microcontroller based Directional Power Current Relay	0.389	Shopping	15-01-2011 to 20-01-2010	15-04-2011 to 20-04-2011	15-01-2011 to 20-01-2010		12-02-2011 to 18-2-2011	12-03-2011 to 18-03-2011	20-04-2011 to 26-04-2011	15-10-2011 to 30-10-2010
	9		Electromechanical type Directional Over current Relay	0.4445	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	10		Microcontroller based 3- $\Phi$ Differential Relay	0.6667	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	11		Microcontroller based 1- $\Phi$ Differential Relay	0.3335	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012



	12		Bucholz's Relay – Study Trainer	0.3335	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	13		AC Transmission line Analyser	0.5556	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	14		DC Network Analyser	0.4445	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	15		Cable Fault Locator study	0.1667	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012

	16		Determination of Sequence Impedance of an Alternator	1.25	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	17		3- $\Phi$ Fault Analysis	0.289	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	18		AC Motor Protection Relay Test	2.3335	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	19		Transformer Protection Test	3.4445	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012

	20	Microcontroller based Negative Sequence Current Relay	0.6667	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2-12 to 30-03-2012
	21	Electromechanical type Negative Sequence Current Relay	0.4445	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	22	Differential Protection of 3- $\Phi$ Transformer	3.1111	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	23	SVC, UPFC, SSSC, TCSC, TSSC, STATCOM	15.0	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	24	UPS (10 KVA)	9.0	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012

	25	Relay Software	1.5	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011		14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012										
	26												Reliability Software	7.5	Shopping	10-06-2011 to 15-06-2011	10-09-2011 to 16-09-2011	10-06-2011 to 15-06-2011	14-07-2011 to 20-07-2011	14-08-2011 to 20-08-2011	14-09-2011 to 20-09-2011	15-03-2012 to 30-03-2012
	27												SABER Software									
Total for new PG lab – Power Systems lab			55.085																			
2	1	Modernisation of Existing lab - Power converters	Virtual lab	10.0	NCB	12-10-2011 to 17-10-2011	12-01-2012 to 17-10-2012	12-10-2011 to 17-10-2011		13-11-2011 to 19-11-2011	13-12-2011 to 19-12-2011	12-01-2012 to 20-01-2012	15-03-2012 to 30-03-2012									

	2		Virtual Lab View	14.0	NCB	12-10-2011 to 17-10-2011	12-01-2012 to 17-10-2012	12-10-2011 to 17-10-2011		13-11-2011 to 19-11-2011	13-12-2011 to 19-12-2011	12-01-2012 to 20-01-2012	15-03-2012 to 30-03-2012
	3		Power Quality Analyzers	6.0	Shopping	12-10-2011 to 17-10-2011	12-01-2012 to 17-10-2012	12-10-2011 to 17-10-2011		13-11-2011 to 19-11-2011	13-12-2011 to 19-12-2011	12-01-2012 to 20-01-2012	15-03-2012 to 30-03-2012
Total for existing PG lab – Power Electronics & Drives lab				30.0									
<b>Total for EEE</b>				<b>85.085</b>									