



# University College of Engineering Rajasthan Technical University, Kota-324022

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## TENDER - DOCUMENT

**NIT No: UCE/02/08-09**

Date :- 21-10-2008

**File No: UCE/PUR/F(9) 27/Civil/Material Testing Lab./08-09**

**DUE DATE: 25-11-2008 up to 3:00 PM.**

**TENDER COST: Rs 8.40 Lakhs**

**OPENED ON: 26-11-2008 at 11:30 AM.**

**TENDER FEE : Rs. 200/-**

**EMD : Rs. 16,800/-**

Sealed tenders are invited from the original manufacturer or their authorized distributors/dealers for the supply of **Equipments for Civil, Electrical & Electronics Engineering Laboratories and Chairs & Tables for Computers**. Detailed specifications of the items is given in the QUOTATION FORM-II.

Interested bidders are requested to obtain the Tender Document from the Purchase Section of UCE, RTU in any working day between **10.00 AM to 4.00 PM** after paying Tender Fee of **Rs. 200.00 (Rupees Two hundred only)** in the form of Demand Draft in favor of **Rajasthan Technical University, Kota**. Bidders can also down load the Tender Document from UCE, RTU website [www.rtu.ac.in](http://www.rtu.ac.in).

**In case of downloaded tender form a tender fee of Rs. 200.00 in the form of Demand Draft(Non refundable) in favor of Rajasthan Technical University, Kota is to be paid separately along with the required EMD on the submission of properly filled tender.**

The terms and conditions for the bidders are:-

1. Quoting Firm either should be original manufacturer or authorized Distributors / Dealers of the manufacturer. While submitting the quotation by Authorized Distributors/Dealers enclose the Authorization letter for submitting the offer against UCE, RTU.
2. Tenders without EMD or of those manufacturers who have not purchased the tender documents or submitted the cost of tender will liable for rejection. The tender should be valid for 180 days from the date of opening. The director reserves the right to split, accept or reject any or all the tenders without assigning any reason whatsoever.
3. Firm should submit a Certificate issued by original manufacturer that the quoted firm will supply the genuine item.
4. Detailed profile of the firm along with list of Customers along with the details of contact person, telephone number, faxes number, complete correct address of the organization etc.

5. Photocopy of Certificate of VAT Registration No. duly attested.
6. SALES TAX/VAT/SERVICE TAX:- UCE, RTU is not authorized for submission of Sales Tax concessional form and chargeable amount of Sales Tax/VAT/Service Tax with chargeable percentage may be clearly mentioned in the quotation. If, total amount of tax and percentage of applicable chargeable tax not mentioned in the quotation, it will be presumed that amount quoted by you are inclusive of all taxes and no extra amount will be paid to you in account of taxes apart from the basic cost. TIN number and CST/ST number should be clearly mentioned in your quotation and Bill also.
7. Terms & conditions of the RTU are applicable to the bidder. Un-solicited bids will be straightaway rejected.
8. Packing, forwarding and octroi charges, etc. if any, be clearly mentioned in the quotation otherwise, it will be presumed that these charges are inclusive and no payment will be made to you extra to the basic cost.
9. Quotation will be enclosed in a sealed cover addressed to Director, University College Engineering, Rajasthan Technical University, Kota-324022. The cover should be sealed and super scribed **"QUOTATION IN RESPONSE TO UCE, RTU TENDER FILE NO. -----DATE OF OPENING -----"**.
10. **In case due to any reason Govt. of India/ Govt. of Rajasthan/RTU declared a holiday on date of opening of quotation then the quotation will be opened on the next working day on same time, in that case no separate intimation will be send to you.**
11. **The quotation shall be valid for a minimum period of one hundred eighty days (180 days) from the date of opening of bids.**
12. **UCE, RTU is a reputed institute of Govt. of Rajasthan. Therefore it is requested to quote concessional rates applicable to academic institutions.**
13. Quotation is dropped in the TENDER BOX, which is lying in the Purchase Section of UCE, RTU before the submission date and time. Quotation received by post addressed to the Director, UCE, RTU, Kota must be reached to this office before scheduled opening time of quotation.

**Director**



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## QUOTATION FORM-II

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S. NO.	DESCRIPTION	UNIT	QTY. REQD.	RATE PER UNIT (In Figures)	RATE PER UNIT (In Words)
	(ATTACH LITERATURE / SAMPLE ALSO IF ANY)				
1	<p><b>MATERIAL TESTING LAB.</b></p> <p><b>Compression Testing Machine:</b> Capacity - 3000kN, Operation - Electrical Digital Display &amp; dial gauge display (both) Load measuring device - Digital indicator &amp; local guage for anlogue model &amp; dial guage attached with calibration certificate and proving ring of 3000kN capacity for periodical calibration of the CTM. The proving ring should also be supplied with separate calibration certificate. The calibration certificates should preferebly be of NPL/NCCBM/RRL. The CTM must be supplied with 10 Ltrs of suitable hydraulic oil with appropriate viscosity.</p> <p>Range - 3000kN, Least Count (kN) 0.1, minimum clearance between plates 400mm Distance between side plates - 400mm (approx.), Plates size - 310mm minimum Piston strokes - 50mm, Specimen size - 150mm to 300mm cubes &amp; 300mm dia x 300mm hight cylinder</p> <p>Electric supply - 3 phase electric motor.</p>	1	1		

2	<p><b>Bar Bending Apparatus:</b>  The apparatus should be made as per the specifications provided in IS:1786:1985 for bend test and rebend test. Mandrel diameter of steel rod for bend test as provided in IS:1786:1985 should cover nominal dia upto 22mm &amp; over 22mm with steel Fe415 &amp; Fe500. Also mandrel diameter of steel rod should be provided for rebend test as provided in IS 1786:1985 upto 10mm &amp; over 10mm for steel grades Fe415 &amp; Fe500. The apparatus should be supplied complete with the wooden platform to facilitate bending/ rebending with proper fixing of steel mandrel.</p>	1	1		
3	<p><b>Digital Extensometer Indicator:</b>  Digital Extensometer Indicator - is to be a instrument for generating high level single frame electronic transducer for display of minute movement encountered in material testing with extensometer. The instrument is to be mains as well as battery power A-12 Volt external battery of 1 or 2A is required though the current requirement is in the range of 100 watt amp only.</p> <p>Input - Electronic displacement sensor.  Excitation - 1-2V 5KHz (approx) sine wave  Display - 3-½ digit display  Transducer Zero - single turn pot with lock  Power source - 230 V ± 10% 50Hz / 12V DC external control  Front Panel - Zero to make the display to read zero initially.</p>	1	1		
4	<p><b>Torsion Testing Machine:</b>  The machine is designed for conducting Torsion and Twist Tests on various metal wires, tubes, sheet, materials etc. Torque measurement is by pendulum dynamometer system. The machine comprises of:</p> <ol style="list-style-type: none"> <li>1. Bed</li> <li>2. Control Panel - Which houses the mechanism pendulum dynamometer system etc.</li> <li>3. Gear box trolley</li> <li>4. Gear motor</li> </ol>	1			

	<p>5. Chucks for samples  6. Graduated dial for angle of twist  7. Load dial indicator  8. Autographic recorder : pen and drum type  9. Hanger weight: for pulling back the trolley after specimen/sample rupture/fracture/failure.  10. Knob for auto load range change.  11. Specimen sample  12. Cord for actuating recorder mechanism</p> <p>Operation of the Machine:  The machine is operable electrically, on 3 phase 400/400 volts 50Hz AC supply. First provide 3 phase AC connection to the machine. Select the right type of grips according to the sample. Tighten the sample tight on the chucks securely. Bring the graduated dial to zero. select the range on the dial according to the sample fixed for testing. set the lugless pointer connection to the machine. Select the right type of grips accoding to the sample. Tighten the sample tight on the chucks securely. Bring the graduated dial to zero. Select the range on the dial according to the sample fixed for testing. Set the lugless pointer along the live pointer. Operate the machine with the electric lever. As the chuck on the gear motor side starts rotating the specimen under test twists and the load on the dial indicator increases. When the sample fractures, the lugless pointer stops as the load where the specimen has fractured. The gear box trolley with the chuck at its end slides back with the help of the hanger weight provided under the bed.</p> <p>The graph obtained provides the relation between the torque and the angle of twist obtained by the graduated dial fixed at the gear box side of the machine.</p>				
5	<p><b>Data Acquisition System:</b>  It to be a 16 channel, 16 bit system of IBM-PC. To be an integrated hardware system which provides user-friendly datalogging facility up to 16 channels. The software to be supplied together with it to enable the user to calibrate transducers by direct measurement from the laboratory standards. The user should also be able to enter transducer sensitivities and look-up</p>	1			

tables. Groups of transducers should be associated into sets corresponding to specific locations called stations. Data acquisition from each station should be independently controlled. User should be able to view the acquired data on-line.

Hardware Specifications:

Number of channels: 16 single Ended/8 differential

Resolution: 16 bits for plus full range or minus full range

Input voltage ranges:  $\pm 10v$ ,  $\pm 5v$ ,  $\pm 1v$  or  $\pm 100mV$

Input Impedance: Normal Power ON -  $7G\text{-}\Omega$

Power OFF -  $820\Omega$

Accuracy: Minimum  $\pm 0.5$  LSB (Typical),  $\pm 1$  LSB (Maximum)

Temperature Coefficient:  $\pm 5\text{PPM/degC}$

It should have following features:

- >Flexible channel assignment and configuration. (channel assignment based on engineering parameters).
- >Calibration using external sources as well as from reference tables supplied by the manufacturers.
- >Flexible channel grouping to take care of multiple tests.
- >Flexible data acquisition control using GUI.
- >Simultaneous and independent data acquisition from different test stations.
- >User definable high and low alarms for all channels. Visual alarms for each channel exceeding limits with acknowledgement facility.
- >On-line display of acquired data in engineering units - Textual and Graphical.
- >Flexible data logging methods - periodic.
- >Square foot of time, Log of time, and change in value.
- >Password protection for the system.
- >Password protection and locking during the experiment
- >User friendly system configuration commands.
- >context sensitive of line help.
- >Data output in engineering units in standard spreadsheet compatible format.

>Support multiple test configuration.  
System Components:  
The system comprises the following:  
>A-D Converter Card - 01No.  
>Transducer Input Panel and Ribbon Cable.  
>Data Acquisition Software Package.  
>User's Handbook.  
With following Extras Accessories:(cost to be included in total cost)  
>LVDT Transducers - 02Nos.  
>Signal Conditioners (Digital Indicators with filtered output)  
>Active Filters for outputs from Digital Indicators

**PLACE:**

**SIGNATURE:**

**DATE:**

**SEAL:**