# झारखण्ड केन्द्रीय विश्वविद्यालय, राँची

## CENTRAL UNIVERSITY OF JHARKHAND, RANCHI

(संसदीय अधिनियम के तहत 2009 में स्थापित केन्द्रीय विश्वविद्यालय)

(A Central University established by an Act of Parliament in 2009)

#### Ref no. CUJ/ P&S/EE/267/2014

Dated:23-04-2014

Sealed quotations are invited for the article enclosed in the separate sheet (Annexure-I) subject to the terms and conditions given below:

The quotation should be addressed to The Stores Officer Central University of Jharkhand, Ratu-Lohardaga Road, Brambe, Ranchi, 835205 and should reach on or before 15-05-2014 Technical bid will be opened on 16-05-2014 at 3:00 pm.

#### **TERMS AND CONDITIONS**

- 1. Quotations without any erasures and overwriting must be submitted in sealed cover addressed to the Stores Officer, Central University of Jharkhand, Ratu- Lohardaga road, Brambe, Ranchi- 835 205 super-scribed Tender/ Enquiry No. and the due date failing which, quotation may be ignored. Tender/ quotation should be sent through Post/ Courier/ By Hand.
- 2. The rate quoted should be inclusive of all packing, forwarding, sales tax, freight and insurance charges and should remain valid for our acceptance for minimum period of three months from the due date of opening of the quotations. The quotation should be CUJ consignee's site basis i.e. Central University of Jharkhand, Ratu- Lohardaga Road, Brambe, Ranchi.
- 3. Manufacturer's name of company of origin of materials offered must be clearly specified. Complete details of illustrated literatures/ or drawings, in original (not photocopies), if any must accompany all quotations.
- 4. The University will not entertain requests for revision in prices once quoted for whatever reason after the tenders are opened during the period of contract.
- 5. All goods must be delivered at our university at Ratu- Lohardaga Road, Brambe, Ranchi for inspection by our inspecting authority.
- 6. Full payment will be made within 30 days of the receipt and acceptance after inspection of supplies at destination, quotations containing different payment terms are liable to be ignored.
- 7. All goods must be delivered at out university at Ratu- Lohardaga road, Brambe, Ranchi (Stores & Purchase Section) free of cost after confirmed order.
- 8. Only Manufacturer/ Authorized dealer/ firms of repute dealing in the items listed in the quotation having experience in sale and repair/ maintenance, need apply.
- 9. Only latest models of items need to be quoted.
- 10. It should be mentioned specifically whether price quoted includes all taxes and duties. Sales tax and/ or other duties legally leviable and intended to be claimed should be distinctly shown in the tender.
- 11. VAT/CST Registration Number and its validity should be indicated. Documentary evidences be supplied/ attached to the tender documents.
- 12. All rates shall be indicated both in words and figures. Where there is difference between the rates quoted in words and figures, rate quoted in words will prevail.
- 13. The supplier shall make delivery of the items within 30 days from the placement of the purchase order. The purchase order would be placed after assessing the requirement and hence, actual quantity may increase/ decrease.

- 14. The Tender Document for items will be Two- Bid system consisting of Technical Bid and Price Bid. The Tender Document will be submitted item-wise in two separate sealed covers clearly mentioning on the envelope the details of items for which Bid is submitted.
- 15. The price of Tender Document is Rs. 1000/- only (One Thousand rupees only) (non- refundable). The Tender Document price may be attached to the Technical Bid in the form of Bank Draft in favour of "Central University of Jharkhand" payable at Ranchi.
- 16. The Tender Documents comprising of Price- Bid, Technical Bid and **Earnest Money Deposit** of Rs.1,50,000 only (Rupees One Lakh Fifty Thousand only) (**refundable**) in the form of Bank Draft in favour of "Central University of Jharkhand" payable at Ranchi kept in the separate envelope super- scribed with the name of the same. The Tender Document must be enclosed with Earnest Money Deposit otherwise the tender document will be rejected. All the documents must be enclosed in a bigger size envelope super-scribed with the tender number and item name.
- 17. Only those Manufacturers liable to participate having ISO 9001 and ISO 14001 certification.
- 18. All legal disputes shall be under the jurisdiction of Jharkhand High court, Ranchi.
- 19. The University reserves the right to accept or reject any Bid, without assigning any reason thereof. No correspondence in this regard will be entertained.
- 20. All the participating firms should attach supporting documents in favour of:
  - (a) Have at least 5 years of experience in the field.
  - (b) Have an annual turnover of at least Rs. 50 Lakh per annum for each of the last 3 years (i.e 2010-11, 2011-12 & 2012-13) (Agency should produce a certificate from their Audit Firm in respect of turnover for the mentioned period)
  - (c) Be registered with Directorate of Industries or Small Scale Industries or any other appropriate authorities.
  - (d) Have valid TIN Number for registration under VAT/CST
  - (e) Have PAN for Income Tax. Supporting documents for Income Tax return for the last Two years (i.e 2011-12, 2012-13).
  - (f) Documents as proof in respect of Technical bid along with supporting documents.
  - (g) Profile and Track Record of the agency. (3 years)
  - (h) Copy of signed Balance Sheets of last three years.
  - (i) Detailed terms and condition regarding performance/ warranty/ Bank guarantee/ inspection/ LD/ Penalty for delayed supplied will be elaborated in our purchase order.
- 21. Details specification of the equipment annexed as Annexure-I.
- 22. For any queries you may contact our University web site <u>www.cuj.ac.in</u>.

Chairman (Academic Purchase)

### **DETAILS OF ARTICLE**

Electric Machine, control system and Power system labs		
Sl. No.	Description of the Item with specification	Quantity
1	Electric Machine Lab	
	a) 3 phase induction machine trainer with mechanical load.	
	b) 1 phase transformer parameters calculation trainer.	
	c) series dc machine trainer with mechanical load.	
	d) shunt dc machine trainer mechanical load.	1
	e) compound dc machine trainer mechanical load.	
	f) 3 phase alternator trainer with variable electrical load.	
	g) measuring instruments for all of the labs (Voltmeters, ammeters, wattmeters and tachometers	
2	Control Systems Lab	
	<ul> <li>a) Inverted pendulum trainer.</li> <li>b) Rectilinear plant for demonstration of rigid body PID control, lead/lag compensators, phase and gain margin, trajectory tracking, and regulation. Spring mass systems.</li> <li>c) Torsional Apparatus.</li> <li>d) Servo Trainer.</li> </ul>	1
	e) FPGA based real time control system trainer.	
3	1) Matlab simulink Power system I ab	
5	Tower system Lab	1
	<ul><li>a) Power system transmission, distribution trainer.</li><li>b) Belay system trainer</li></ul>	
4	Power Electronics Lab	
	<ul> <li>a) Converter trainer with variable firing angle (1 phase and 3 phase).</li> <li>b) Inverter trainer with variable firing angle((1 phase and 3 phase).</li> <li>c) Chopper trainer with variable firing angle.</li> <li>d) Cycloconverter trainer.</li> <li>e) Dc link trainer.</li> </ul>	1
5	Controllers	
	<ul> <li>a) FPGA extreme DSP kit.</li> <li>b) BeagleBoard-xM featuring TI's 1 GHz ARM Cortex-A8 processor, provides stereo audio and digital video connectivity, and supports USB, RS-232, and Ethernet.</li> <li>c) Arduino Uno board.</li> <li>d) Arduino Due board.</li> </ul>	1
6	Energy Simulation Lab	
	<ul><li>a) Lab View (15 users)</li><li>b) Matlab with simulink and other toolboxes related to energy engineering</li></ul>	1

	<ul> <li>(10 user)</li> <li>c) Trnsys simulation software (10 user)</li> <li>d) PV Syst (10 users)</li> <li>e) Accelrys Materials Studio (02)</li> </ul>	
7	Analog Oscilloscope	
	Bandwidth-30MHz	
	No. Of Channel-2	
	1mV/div High Vertical Sensitivity	5
	Internal 5 Digits Real-Time Frequency Counter	5
	LCD Readout Display for Vertical/ Horizontal/Frequency Measurement	
	XY Mode	
	Z-Axis Input and External Trigger Input	
8	Digital Storage Oscilloscope Bandwidth- 50 MHz No. Of Channels-2 Sampling Rate-1GSa/s Maximum Memory Depth-16kpts Simultaneous viewing of main and zoomed waveforms 5.7-inch colour LCD display with wide viewing angle USB connectivity	2
9	Digital Storage OscilloscopeBandwidth- 100 MHzNo. Of Channel-4Sampling Rate- 1GSa/sRecord Length-2 Mega points8 inch 800*600 High Resolution TFT LCD Display1mV /div to 10V/div of Vertical Range1ns/div to 100s/div of Time Base Range80,000 wfm/s of Waveform Update Rate	1
10	Function generatorSpecificationsFrequency Range-0.1Hz-10MHzDDS Technique and FPGA Chip DesignFrequency Resolution : 100mHzBuilt-In 9 Digits,150MHz/High Resolution CounterHigh Frequency Accuracy : ± 20ppmINT/EXT AM/FM ModulationLIN/LOG Sweep Mode	1
11	Function Generator DDS Technique and FPGA Chip Design Frequency Range:0.1Hz~3MHz Max. Frequency Resolution : 100mHz High Frequency Accuracy : ± 20ppm High Frequency Stability : ± 20ppm Low Distortion Sine Wave : -55dBc,0.1Hz~200kHz Voltage Display	3
12	Wind Turbine Technology Panel Trainer Wind Turbine Experiment Panel Electrical Service Enclosure, Breakers Transformer, Panel Mount AC Meters Emergency Stop Switches, Terminal Blocks	01

	Load Diverter/Regulator	
	Inverter/Grid Ties	
	Load Lamp Fixtures and Lamps	
	Switches Water Proof Electrical Boxes	
	Wind Turbines	
	Water Proof Connectors	
	Screws, Nuts and other Assorted Hardware	
	Panel Mount AC Amp Meters	
	Panel Mount DC Amp Meters	
	Security Batteries	
	Wind Turbine Toolkit	
	Wind Turbine Instructor Guide	
	Comprehensive Student Text and Lab Guide	
13	Power Analyzer	
	(Watts, Volts, Amps, VA, V, A, rs, Vdc, Adc, Vac, Aac, Vpk, Apk, asurge,	
	power factor, frequency, phase, impedance, harmonics, fundamentals accuracy	01
	0.2%	
	With computer interface	