

## INVITATION FOR QUOTATION

TEQIP-III/2017/gbec/Shopping/3

### Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Brief Description	Quantity	Delivery Period(In days)	Place of Delivery	Installation Requirement (if any)
1	Modernization of Instrumentation Laboratory	1	45	The Director, GBPEC Ghurdauri pauri(Uttarakhand)	Yes

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. Quotation,
  - 3.1 The contract shall be for the full quantity as described above.

3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.

3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.

3.4 Applicable taxes shall be quoted separately for all items.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.

5. Quotation shall remain valid for a period not less than **40** days after the last date of quotation submission.

6. Evaluation of Quotations,

The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

6.1 are properly signed ; and

6.2 confirm to the terms and conditions, and specifications.

7. The Quotations would be evaluated for all items together.

8. Award of contract:

The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.

9. Payment shall be made in Indian Rupees as follows:

**Delivery and Installation - 80% of total cost**

### **Satisfactory Acceptance - 20% of total cost**

10. All supplied items are under warranty of **36** months from the date of successful acceptance of items.
11. You are requested to provide your offer latest by **15:00** hours on **15-Dec-2017** .
12. Detailed specifications of the items are at Annexure I.
13. Training Clause (if any) **Yes. After installing , testing and training has to be provided to the faculty , staff and students.**
14. Testing/Installation Clause (if any) **Yes**
15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
16. Sealed quotation to be submitted/ delivered at the address mentioned below,The Director,  
Govind Ballabh Pant Engineering College Ghurdauri, Pauri Garhwal, Uttarakhand,246194.
- 17. The manufacturer /Authorized dealer should submit three recent purchase order alongwith satisfactory work completion certificate for similar types of items supplied to other engineering college.**
- 18. All manufacture/authorized dealer need to mention the make and model no. for the item quoted and if authorized dealer , he has to submit the recent valid authorization certificate from the original manufacturer.**
- 19. The manufacturer/ Authorized dealer has to provided three years warranty and free service /maintenance if required at the college site.**
20. We look forward to receiving your quotation and thank you for your interest in this project

**Annexure-1**

<b>S. No</b>	<b>Name of items</b>	<b>Specification of items (Attach Separate Sheet if required)</b>	<b>Qty</b>
1.	Electrical Voltage/current/Energy/Watt Measurement & Calibration Trainer	<ul style="list-style-type: none"> <li>• Aluminum rack 4x3 profile sturdy Modular flat panel (table top) system, carrying various high voltage components housed in plastic enclosures (panel) to minimize shock possibility.</li> <li>• Input 3 phase DOL Starter panel</li> <li>• Integrated AC (1phase) measurement panel</li> <li>• Integrated AC (3/1 phase) measurement panel</li> <li>• Potential Transformer (PT) panel</li> <li>• Current Transformer (CT) Panel</li> <li>• Lamp Load</li> <li>• 230V/15/40/60/100Wx3 bulbs with individual ON/OFF using 6A toggle switch.</li> <li>• Resistor Load Panel</li> <li>• AC Resistors: 10K/5K/3.5K/2.5K/2K/1.5K/OFF 200Wx3 phases/6staps.</li> <li>• DC Resistors: 750E/600E/300E/212E/162E/125E/112E</li> </ul>	01

		<p>/100E/400/W/8taps +OFF+ separate 60E tap for DC series Gen.</p> <ul style="list-style-type: none"> <li>• LC Load panel</li> <li>• Variable AC Voltage &amp; Current injector panel</li> <li>• Data logging facility</li> <li>• Data stored into excel.</li> <li>• <b>Sampling Rate:</b> Readings taken automatically every 600 sample/sec to 1sample/week.</li> <li>• <b>Storage Capacity:</b> 1 Million Samples.</li> <li>• <b>Display:</b> 16*2 LCD Display/ Touch Panel.</li> <li>• <b>Communication:</b> GSM/USB/MODBUS</li> </ul>	
2.	Biomedical Instrumentation System	<p><b>System Must be supplied on single PCB:</b>  Microcontroller -Operating Voltage 5v,Digital I/O Pins 54 (of which 6 provide PWM output) PWM Digital I/O Pins 15 Analog Input Pins16 Flash Memory 32 KB (ATmega328P) of which 0.5 KB used by boot loader SRAM 8kB with reprogramming facility through USB.And on board facility for sending sms and through Blue-tooth and ZigBeeIEEE 802.15 and the board has flexibility to add a prosthetic arm and flex sensor interface</p> <p><b>Computer interface/software interface:</b>MATLAB, LAB VIEW, any software</p>	01

		<p>which has serial interface</p> <p><b>ADC resolution:</b> 10 bit resolution ,</p> <p><b>SENORS interface:</b></p> <p>(a) Patient Position sensor (Accelerometer)</p> <p>    • 1.95V to 3.6V supply voltage,</p> <p>    • 1.6V to 3.6V interface voltage</p> <p>    • ±2g/±4g/±8g dynamically selectable full-scale</p> <p>    • Output Data Rates (ODR) from 1.56 Hz to 800 Hz</p> <p>    • 99 g/çHz noise</p> <p>    • 12-bit and 8-bit digital output</p> <p>    • I2C digital output interface</p> <p>(b) Pulse and Oxygen in Blood Sensor (SPO2)</p> <ul style="list-style-type: none"> <li>• Measurement Range SpO2 0 - 100 %</li> <li>• Pulse Rate 20 - 300 1/min</li> <li>• Accuracy SpO2 +/- 2 % (70 - 100 %)</li> <li>• Pulse Rate +/- 1 digit (up to 100 1/min), +/- 1 % (&gt; 100 1/min)</li> </ul> <p>(c)lood Pressure Sensor (Sphygmomanmeter)</p> <ul style="list-style-type: none"> <li>• Power: DC:5.0V 1.0A</li> <li>• Battery: 1*3.7V Li-ion400mAh</li> <li>• Cuff pressure range: 0-300mmHg</li> <li>• Pressure accuracy: ±3mmHg</li> <li>• Pulse rate range: 40 -180 beats/min, accuracy: ±5%</li> </ul> <p>(d) Galvanic Skin Response Sensor (GSR-Sweating)</p> <p>operating voltage 5v and differential</p>	
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		<p>amplifier is used to obtain the difference in resistance</p> <p>(e) Airflow Sensor (Breathing)</p> <p>(f) Electrocardiogram(ECG) 3 lead measurement system with 5v power supply Measurement of the systolisis and distolisis of the heart</p> <p>(g) Electromyography(EMG 5v power supply measurement of the contraction and expansion of the heart</p> <p>(h) Body Temperature Sensor POWER -5V TEMPERATURE -0-50 DEGRSS</p> <p><b>Wireless interface:</b> Bluetooth, Zigbee, GSM</p> <p><b>Wired interface:</b> Ethernet, USB 2.0 interface</p> <p><b>facility for transfer of data through</b></p> <p>Bluetooth,GSM,Ethernet must be transfer to PC/smart device.</p>	
3.	TEMP. ,Humidity,	The system must be provided in aluminum rack. Data acquisition control trainer for data	01

<p>Pressure Development workbench Trainer System</p>	<p>logging. Facility to Log the Data into PC using USB PC interface with reprogrammable facility. PC Interface having the 6 Analog and 12 Digital Channels to Interface the Data into Pc. Software to output of the Data into Excel Sheet and Plots the Waveforms for Real Time Variable Data. Multimeter/Voltmeter controller for accurate reading of the following modules. System with user manual, connecting cables and power supply</p> <p><b>Temperature Module</b></p> <p><b>Specification:</b> - System comes with Temperature sensors LM35, RTD, THERMISTOR and J type thermocouple sensor. Switches facility to switch from one sensor to other,Operational amplifier and signal conditioning circuit to compulsive output Inbuilt ADC conversion. LCD 16*2 display to observe temperature of different temperature sensors using Input banana sockets. On board power jack Pic16f/18f compatible hardware Over/under temperature alert indicator Plastic enclosure, ON board programming facility of PIC18F452</p> <p><b>Humidity Module</b></p>	
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		<p>Specification: - System comes with Humidity sensor module with resistance type Linear dc Output voltage for 0-100% RH On board SYH-2/SYHW-2 Sensor Wide temp. Compensation range, Microcontroller 8051 based humidity control system 16*2 LCD display Unit to show output System comes with user manual, connecting cables and power supply .ON board programming facility of 8051</p> <p><b>Pressure Measurement Module</b></p> <p>On Board Pressure Sensor with 2PSI fs. Output is Ratio metric to the Power Supply Facility to generate and monitor Pressure. In Both Engineering Units mmHg as well as Psi Units. Wide Temperature Compensation Range. Based On 8051 microcontroller. LED indicators, On Board LCD Display. Each section is having testing point. On board signal conditioner. Output data on PC using USB Based Data Acquisition system.</p>	
4.	Strain Gauge Trainer, LVDT	The system must be provided in aluminum rack. Data acquisition control trainer for data logging. Facility to Log the Data into PC using USB PC interface with reprogrammable facility.	01

	<p>&amp;Load Cell Developm ent work bench Trainer System</p>	<p>PC Interface having 6 Analog and 12 Digital Channels to Interface the Data into Pc. The Software to output the Data into Excel Sheet and Plots the Waveforms for Real Time Variable Data. Multimeter/Voltmeter controller for accurate reading of the following modules. System with user manual, connecting cables and power supply</p> <p><b>Strain Gauge Module</b></p> <p>Self-Contained and Easy To Operate. Sensitive, Linear, Stable &amp; Accurate. Test-Points to Observe Input Output of Each Block. Onboard Offset Null Adjustment. Built In DC Power Supplies +5V,-5V DC.3½ Digits LED Display.PIC 18F452 µCr based trainer system. Strain Gauge (350Ω): 2 Nos. Gauge Factor: 2.11, ±1%. Maximum Weight Capacities: 1.5kg. Cantilever Material: Stainless Steel. Bridge Voltage: +5 V DC. External Cantilever Arrangement. High Repeatability and Reliability. Bridge Configuration: Half Bridge. Display: 3½ Digits LED/16X2 LCD Display. Power Supply: 230 V 50 Hz. Study of strain, stress measurement using strain gauges using cantilever method. Study of linear range of operation of strain measurement. Pressure</p>	
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		<p>measurement using strain gauge sensor method.</p> <p><b>Load Cell Module</b></p> <p>Load Cell with Capacity of 10 kg. Easy to plug and play unit. Load cell input connection and test points, 5V operated system. Power On/ Off switch with LED indication. Operational amplifier and signal conditioning Circuit. LCD 16 X 2 based unit to display load status. Test point to measure different signals and voltage. Based On PIC18F452 microcontroller. Mechanism to keep weight on platform (9Lx7Wx5H) inch.</p> <p><b>Load Cell Sensor :-</b></p> <table data-bbox="787 885 1365 1096"> <tr> <td>Excitation Voltage</td> <td>9 -12 (DC)</td> </tr> <tr> <td>Rated Output (mv/v)</td> <td>2±0.2</td> </tr> <tr> <td>Input Resistance (Ω)</td> <td>400±10</td> </tr> <tr> <td>Output Resistance (Ω)</td> <td>350±2</td> </tr> <tr> <td>Cable</td> <td>4mm,0.42mtr.</td> </tr> </table> <p><b>LVDT Measurement Module</b></p> <p>Specification: - System comes with AC-AC spring loaded 20mm LVDT PIC microcontroller based system LCD 16*2 display unit to show LVDT output results 4.2KHZ Frequency generator with test points to adjust frequency Test points for test LVDT</p>	Excitation Voltage	9 -12 (DC)	Rated Output (mv/v)	2±0.2	Input Resistance (Ω)	400±10	Output Resistance (Ω)	350±2	Cable	4mm,0.42mtr.	
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		calibration using Multimeter. On board power reset switch with LED indicator Buzzer indicator for finding LVDT null point Operational amplifier and signal conditioning circuit with test points. PIC18F452 WITH ALL SUPPRT CIRCUITRY ON BOARD	
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**Annexure-2**

**FORMAT FOR QUOTATION SUBMISSION**

(In letterhead of the supplier with seal)

Date: \_\_\_\_\_

To:

\_\_\_\_\_  
\_\_\_\_\_

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	GST (CGST/ SGST/IGST) and other taxes payable(if any)	
						In %	In figures (B)
<b>Total Cost</b>							

Gross Total Cost (A+B): Rs. \_\_\_\_\_

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. \_\_\_\_\_ (Amount in figures) (Rupees \_\_\_\_\_ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ————— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact No: \_\_\_\_\_