



INVITATION LETTER

Package Code: TEQIP-III/2019/UP/apju/193

Current Date: 05-Jun-2019

Package Name: AKTU-BT-17-193

Method: Shopping Goods

Sub: INVITATION LETTER FOR AKTU-BT-17-193

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	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	Advance Computerized recording and analysis system for Biomedical/ Biomechanics Lab.	1	AKTU Lucknow	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, initialling, 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 60days 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:

After Satisfactory Delivery, Installation, Training and Acceptance - 100% of total cost
10. Liquidated Damages will be applied as per the below:

Liquidated Damages Per Day Min % :0.05
Liquidated Damages Max % : 5
11. All supplied items are under warranty of **12** months from the date of successful acceptance of items and AMC/Others is .
12. You are requested to provide your offer latest by **14:00** hours on **20-Jun-2019**.
13. Detailed specifications of the items are at Annexure I.
14. Training Clause (if any) **YES**
15. Testing/Installation Clause (if any) **YES**
16. Performance Security shall be applicable: **5%**
17. Information brochures/ Product catalogue, must be accompanied with the quotation clearly indicating the model quoted for.
18. Sealed quotation to be submitted/ delivered at the address mentioned below, **Dr. APJ Abdul Kalam Technical University, Uttar Pradesh, Sec-11, Jankipuram, Vistar Yojna, Lucknow, Uttar Pradesh India, Pin Code-226031**
19. We look forward to receiving your quotation and thank you for your interest in this project.


(Prof. Vineet Kansal)

Coordinator TEQIP-III, AKTU

Annexure I

Sr. No	Item Name	Specifications
1	Advance Computerized recording and analysis system for Biomedical/ Biomechanics Lab.	<p>The complete system should include the following components: -</p> <ol style="list-style-type: none"> 1. Data Acquisition system and software 2. Continuous Beat to Beat Human Blood Pressure monitor 3. Wireless EMG/IMU, FSR sensors 4. Wireless belts for cardiovascular parameters. <p><u>1. Data Acquisition System and Analysis software</u></p> <ul style="list-style-type: none"> • High speed USB based 4 channel data acquisition system. • Range: ± 2 mV to +10 V and sampling rate of 400 KHz (aggregate speed), • ADC resolution = 24 bits. on all gain ranges and variable sampling speed on each channel. • Inbuild Dual channel Bio-potential amplifiers for recording ECG, EMG, EEG, EOG etc. • Inbuild Constant Current & Constant Voltage Isolated stimulator unit with Current range 0-20mA, compliance voltage 100V, Integrated and synchronised with software. • ECG recording with phono cardiogram to record heart sounds and lung sound, SpO2 and GSR recording, correlate the heart sound with the electrical events of the cardiac cycle. Software should controll filtering High Pass, Low Pass filters, AC Coupling, Digital filters, band pass filter & Main filters. • Display Modes: - Must have Simple Chart View, Scope View, XY View, Zoom View, FFT, Spectrum, averaging view etc. • The software should have built in smart analysis features like RMS, power spectrum, template matching, curve fitting, cross correlation etc. • Facility to perform complete heart rate variability analysis (Time & Frequency domains) online and offline, ECG interpretation, PQRST amplitudes and ST elevation, cardiac axis analysis during exercise. • Export formats should allow export Binary, Axon, IGOR, MATLAB, QuickTime, Wav, Excel, Text etc. • Must have a facility for online and offline analysis with MATLAB. • Cardiac & Vector Axis analysis online & offline facility. • Cyclic Measurements: Rate, period, frequency, count, minimum, maximum, height, integral, variance, derivative, Arithmetic & mathematic formulae. • It should have various automatic analysis modules for ECG, HRV, Blood Pressure, Peak analysis, spike histogram for online and offline analysis. • Dedicated computer with i7 , 8GB, 1TB HDD , 28 inch Screen and original OS and 2 Kva UPS to be provided. • Laptop latest i7 8GB, 1TB HDD , 15.6 inch Screen configuration with original OS must be provided. • The different component given below should be able to work simultaneously together as well as independently as required an desired by the user department as per the research protocol. <p><u>2. Continuous Beat to beat Human NIBP system</u></p> <ul style="list-style-type: none"> • Record continuous beat-to-beat blood pressure non-invasively from the human fingers for long term recording. • Should have Volume Clamp Technology that providing accurate finger pressure measurement.

- Should have facility for Height Correction unit
- Should have facility for online and offline recording & Analysis.
- Accuracy 1% for Cuff Pressure (within 3 mmHg) and Heart Rate Accuracy [HR(bpm) / 60]%
- Finger cuffs of small, medium and large sizes. (One Each)
- Dedicated computer with i7 , 8GB, 1TB HDD , 28 inch Screen and original OS and 2 Kva UPS to be provided.

3. Wireless EMG System

- Should be able to work in Lab and Field studies (Portable & easy to carry)
- Should be supplied with a 16 Charging/Receiving console that communicates with the utility software which should automatically recognize the sensor status for charging, recording and signal strength.
- Supplied with EMG with IMU Sensor (Qty 4).
- In-built DOF tri-axial accelerometer, gyro and magnetometer signals.
- Supplied with EMG Mini Sensor (Qty2).
- Supplied with Force Sensitive Resistor Sensor (Qty 1).
- RF Transmitting Range: - 30 meters or more.
- Should be able to record for at least 6 Hrs on a single charge.
- Bluetooth for data transmission for portable mobile devices for field kinematic applications.
- Sensors should have illuminated indicators for video tracking purposes.
- Application programming interface (API) for easy integration to third party applications like MATLAB®, LabView™, Google® Android™ -based mobile devices, Windows (C# or C), and Linux.

4. Wireless Physiological Belts

- Comfortable belts of different sizes to record (online and data logging) for ECG signal, Acceleration (3 axis), Respiration, Skin Temperature, SPO2 and GSR
- The system should provide Real time data recording with online and offline analysis.
- Should have at least 8 hours of operation in full transmission mode.
- Should be supplied with the additional battery Backup to increase upto 13 hours.
- Waterproof device will be preferred.

5. Documentation, Certification warranty

- Technical compliance sheet should be provided with highlighted all the points in the technical brochure of the product along with the page number as per the tender.
- ISO, IEC/CE/FDA and other safety certificate for human use must be provided.
- One Year Warranty on the system.
- Training should be provided by the Experts from Principal company.
- Manual and Training material to be provided along with the equipment.

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)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____ (Amount in figures)

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (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. _____