

Tender
For
Department of Medicine-II
At

All India Institute of Medical Sciences, Jodhpur

NIT Issue Date : September 10, 2013
Pre-Bid Meeting : September 20, 2013 at 05:00 PM.
Last Date of Submission : October 01, 2013 at 03:00 PM.



All India Institute of Medical Sciences, Jodhpur
Basni Phase - II, Jodhpur, Rajasthan-342005.
Telephone: 0291- 2740532, email: aoadmin@aiimsjodhpur.edu.in
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All India Institute of Medical Sciences (AIIMS), Jodhpur, Rajasthan, an apex healthcare institute being established by Parliament of India under aegis of Ministry of Health & Family Welfare, Government of India, invites sealed tenders for supply & installation of the following items at the institute. You are requested to quote your best offer along with the complete details of specifications, terms & conditions.

ANNEXURE 'A'

S.No	NIT No.	Qty	EMD (in Rs.)	Item Description
1.	Admin/General/162/2013-AIIMS.JDH	01	70,000	Wireless Monitoring System for the Assessment of Autonomic Functions, Respiration and Non Invasive Blood Pressure System for Humans

(Refer Specifications Details as per Annexure-'B')

Quotation should be sealed and superscribed with tender number and address to:

“Administrative Officer
All India Institute of Medical Sciences, Jodhpur
Basni, Phase-II
Jodhpur-342005, Rajasthan”.

The sealed quotations should reach the Institute, latest by October 01 at 03:00 PM and it will be opened on same day at 04:00 PM in the Project Cell, Residential Complex, AIIMS, Jodhpur of the Institute in the presence of the bidder(s) or their authorized representative(s), who will present at the scheduled date and time.

Terms & Conditions:

- 1. Earnest Money Deposit:** The bidder shall be required to submit refundable amount as Earnest Money Deposit (EMD) and a non-refundable tender fee for an amount of **1,000/- (Rupees One Thousand only)** for each NIT by way of demand drafts only as mentioned in Annexure 'A'. The demand drafts shall be drawn in favour of **“All India Institute of Medical Sciences, Jodhpur”**. The demand drafts for earnest money deposit must be enclosed in the envelope containing the technical bid.

The EMD of the successful bidder shall be returned after the successful completion of contract / order and for unsuccessful bidder(s) it would be returned after award of the contract. Bid(s) received without demand drafts of EMD shall be liable for rejection.

The firms who are registered with National Small Industries Corporation (NSIC) / OR Small Scale Industrial (SSI) are exempted to submit the EMD (Copy of registration must be provided alongwith).

- 2. Rate:** Rates should be quoted in Indian Rupees (INR) on DOOR Delivery Basis at AIIMS, Jodhpur, Rajasthan, Inclusive of all the Charges, with break-ups as:
 - Basic Cost.

- VAT /CST as applicable.
 - Total Cost (F.O.R at AIIMS Jodhpur).
- 3. Validity:** The quoted rates must be valid for a period for 120 days from the date of closing of the tender. The overall offer for the assignment and bidder(s) quoted price shall remain unchanged during the period of validity. If the bidder quoted the validity shorter than the required period, the same will be treated as unresponsive and it may be rejected.

In case the tenderer withdraws, modifies or change his offer during the validity period, bid is liable to be rejected and the earnest money deposit shall be forfeited without assigning any reason thereof. The tenderer should also be ready to extend the validity, if required, without changing any terms, conditions etc. of their original tender.

- 4. Delivery & Installation:** The items shall be delivered within 30 days of issue of supply order at AIIMS, Jodhpur. Satisfactory installation / commissioning and handover of the items will be completed within two weeks from the date of receipt of the goods at the AIIMS, Jodhpur premises. The successful tenderer will also provide required training for supplied items at AIIMS-Jodhpur.

The goods should be manufactured after adoption of latest technology.

- 5. Sample:** AIIMS Jodhpur reserves the right to ask the tenderers for submitting the sample of each item for which rates have been quoted, Technically Qualified Bidders may be asked to submit samples along with their quoted items nos. and their firm name without indicating any prices before opening of Financial Bid to AIIMS, Jodhpur for Inspection.

- 6. Guarantee / Warrantee Period: For the equipment value upto Rs. 5 Lakh:** The Tenderers must quote for 2 years comprehensive warranty (Including all Spares, Accessories and Labour) from the date of completion of the satisfactory installation. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. Also the bidders are requested to submit their quote (Rates) for subsequent 3 years Comprehensive Maintenance Contract (CMC) (Including All Spares, Accessories and Labour). Failure to comply this condition will entail the rejection of the bids. The price comparison shall be taking into account on basic price and post warranty CMC.
CMC Charges will be payable separately at the time of start of CMC.

- 7. Guarantee / Warrantee Period: For the equipment value above Rs. 5 Lakh:** The Tenderers must quote for 5 years comprehensive warranty (Including all Spares, Accessories and Labour) from the date of completion of the satisfactory installation. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. Also the bidders are requested to submit their quote (Rates) for subsequent 5 years Comprehensive Maintenance Contract (CMC) (Including All Spares, Accessories and Labour). Failure to comply this condition will entail the rejection of the bids. The price comparison shall be taking into account on basic price and post warranty CMC.

- 8. Performance Security:** The supplier shall require to submit the performance security in the form of irrevocable Bank Guarantee (BG) / or Fixed Deposit Receipt (FDR) issued by any Nationalised Bank for an amount of which is equal to the 10% of the order value and should be kept valid for a period of 60 day beyond completion of all the contractual obligation including CMC period.

9. Payment Term:

- 90% payment of the total order value shall be released after the successful installation/ commissioning of the ordered goods against the submission of the test report.
- Balance 10% of the order value shall be released after the submission of the performance security.

10. Bidder shall submit a copy of the tender document and addenda thereto, if any, with each page of this document should be signed and stamped to confirm the acceptance of the entire terms & conditions as mentioned in the tender enquiry document.

11. Signed & stamped compliance sheet of the technical specification of the goods with technical printed literature must be enclosed with the bid.

12. After due evaluation of the bid(s) Institute will award the contract to the lowest evaluated responsive tenderer.

13. Equipment should be USFDA or European CE approved / certified.

14. The company should be able to provide the equipment for demonstration as per requirement.

15. It is mandatory for the company to provide the catalogue of the equipment along with the technical bid.

16. Conditional bid will be treated as unresponsive and it may be rejected.

17. The Institute reserves the right to accept in part or in full or reject any or more quotation(s) without assigning any reasons or cancel the tendering process and reject all quotations at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder or bidder(s).

18. Quantity: The quantity of item given in the tender is tentative, which may be increased or decreased as per the institute's requirement.

19. Applicable Law:

- The contract shall be governed by the laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such Commercial dealings / processing.
- Any disputes are subject to exclusive jurisdiction of Competent Court and Forum in Jodhpur, Rajasthan, India only.
- The Arbitration shall be held in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the venue of arbitration shall be at Jodhpur. The decision of the Arbitrator shall be final and binding on both the parties.
- Force Majeure: Any delay due to Force Majeure will not be attributable to the supplier.

"PRE –BID Meeting" with the intending bidders shall be held on 20th Sep 2013 from 05:00 P.M. onwards at AIIMS, Jodhpur.

Specifications

Annexure B

1. Technical Specifications of Wireless Monitoring System for the Assessment of Autonomic Functions, Respiration and Non Invasive Blood Pressure System for Humans

The system should have the following features & components:-

- The system should have the capacity to measure different physiological signals in pairs such as
 - Electrocardiogram & Respiration Pair
 - Pulse plethysmogram & Electrodermal activity Pair
- Required Two-lead and Three-lead sets should come with the system.
- The system should be compatible with Basic Module.
- Data should be transmitted to receiver via RF frequency mode.
- Compatible software should be supplied along with the system for analysis of the data.
- A large and medium jacket should be supplied with the system having twenty two transmitter pockets, four access zippers and four strap bands where transmitter can be placed easily & should be closed to the target acquisition site.
- Operational range-10 meters typical in standard laboratory setups.
- Basic module should have Ethernet-ready sixteen Channel data acquisition and analysis system for recording multiple channels with different sample rates with recording speed at least 400 kHz (aggregate).
- The system should have sixteen analog inputs channel and two independent analog output channels.
- System should provides high resolution (16 bit), variable sample rates for analog outputs, digital I/O lines (automatically control other TTL level equipment), and sixteen on-line calculation channels.
- It should have Ethernet connectivity, and the ability to view and control systems across a network.
- The system should have the facility to connect the receiver module of different parameters.
 - Electrocardiogram & Respiration Pair
 - Pulseplethysmogram & Electrodermal activity Pair

Each of these pairs should have the following Specifications:-

Common Specifications:-

Data transmit rate: 2,000 Hz (between transmitter and receiver)

Operating time: 24-72 hours of continuous operation from full-charge

Transmitter: ultra-low power, 2.4 GHz bi-directional digital RF transmitter

Transmitter LED: Charge when yellow, unit should have approx. 1 hour of power remaining when LED blinks all should turn yellow.

Transmitter Battery: L-ion battery

Receiver Power: Basic Data Acquisition Unit

Size & Weight: Transmitter (approx.): 6 cm x 4 cm x 2 cm; 54 grams

Receiver (approx): 4 cm x 11 cm x 19 cm; 380 grams

Individual Specifications:-

Wireless PPG/EDA Specifications

Signal type: Pulse plethysmograph (PPG) plus Electro dermal Activity (EDA)

Bandlimits: Max: both DC to 10 Hz;

Factory preset: PPG 0.5 Hz to 3 Hz; EDA DC to 3 Hz

Filter Options: both DC, 0.5 Hz HP, 3 or 10 Hz LP; EDA 1 Hz LP

Noise (resolution): PPG FSR/4096; EDA 0.012 μ S (min step)

Signal range: PPG \pm 10 V (at output); EDA 0 to 50 μ S

Signal excitation: EDA 0.5 V constant voltage

Notch filter: 50/60 Hz user-controlled switch

Strap of length 33 cm should be included.

Input (signal source): Pulse transducer

Wireless RSP/ECG Specifications

Signal type: Channel A- Respiration (RSP), Channel B- Electrocardiography (ECG)

Band limits: Max: RSP DC to 10 Hz; ECG 0.05 to 150 Hz;

Factory preset: RSP DC to 1 Hz; ECG 1 to 35 Hz

Filter Options: RSP DC, 0.5 Hz HP, 1 or 10 Hz LP

ECG 0.05 or 1 Hz HP, 35 or 150 Hz LP

Notch filter: 50/60 Hz user-controlled switch

Noise: RSP (Noise resolution): FSR/4096; (4.88 mV)

ECG (Noise voltage, shorted input): 0.9 μ V rms (bandwidth .05-150 Hz)

Signal range: RSP \pm 10 V (receiver output); ECG up to 10 mV P-P

Fixed Gain: ECG only 2,000

Strap of length 137 cm should be included.

Input (signal source): Respiration Transducer

Pulse and Respiration Transducers should come with the System.

All should be Sterilizable and cable length should be 30cm.

Pulse Transducer

Emitter/Detector Wavelength: - 890 nm (nominal maximum)

Optical Low Pass Filter Cutoff Wavelength: - ambient visible light filter 800-1,000 nm

Nominal Output: 20 mV (peak-peak)

Power: - 10 m A drive current

Dimensions (L x W x H): 16 mm x 17 mm x 8 mm

Transducer Weight:-4.5 grams

Respiration Transducer

True DC Response: Yes

Circumference Range: 15 cm x 150 cm (increase with a longer strap)

Dimensions: 66 mm (long) X 40 mm (wide) X 15mm (thick)

Weight: 18 grams

Variable Resistance Output: 5-125KOhm

Non invasive Blood Pressure System for Human

The system should have the following things as below with specification

Double Cuff Finger Sensor Size Diameter

- L 24 - 28 mm dark red
- M 18 - 24 mm Dark blue
- S 10 - 18 mm Light blue

Blood Pressure Cuffs *Latex free*

- Child (12 – 19 cm) *works starting at 20 kg (44 lbs), age 6 years*
- Small Adult (17 – 25 cm)
- Adult (23 – 33 cm)
- Large Adult (31 – 40 cm)

NIBP continuous noninvasive arterial pressure

- Parameter classification
 - Sys, Dia, Mean [mmHg]
 - Pulse [bpm]
- Measuring range
 - Sys: 40 - 250 mmHg (5.3 – 33.3 kPa)
 - Dia: 30 - 210 mmHg (4 - 28 kPa)
 - Mean: 35 - 230 mmHg (4 – 30.6 kPa)
 - Heart rate indication range 20-200 bpm
 - Accuracy ± 5 mmHg (0,6 kPa)
- Display resolution 1 mmHg (0.1 kPa)
- Inflation pressure
 - Typ.: 120 mmHg (16 kPa)
 - Min.: 30 mmHg (4 kPa)
 - Max.: 300 ± 10 mmHg (41.3 kPa ± 1.3 kPa)
- Excess pressure limit
 - 300 ± 10 mmHg (40 kPa ± 1.3 kPa)
 - Response time: < 3 sec.
 - Deflation time: < 15 sec
 - Protection against electric shock: Type BF

Output

- Sensor bridge voltage: 2 - 10V (external monitor)
- Sensitivity: 5 μ V/V/mmHg
- BP Wave Out: transducer cable 0.3m; connector RJ11 6P4C (e.g. Abbott IBP catheter)
- Maximum delay of analog out signal: 80 msec (means the BP waveform may be delayed with respect to other waveforms acquired by the DAQ unit, such as ECG, by max 80 msec)

NIBP Monitor

- Dimensions 280 x 270 x 250 mm (11 x 10.6 x 9.8 in.)
- Weight 7.5 Kg (16.6 lbs) including components and accessories necessary for operability of device
- Battery Sealed lead gel, operating time = 2 hours (fully charged battery, normal conditions)

Electrical properties

- Nominal voltage: 18 VDC \pm 10%
- Nominal current: 3A
- Operability: No time-limit if powered by external mains adapter, at least 2h if on battery-operation (fully charged battery)

External mains adapter

- Nominal voltage: 100 – 240 VAC
- Power frequency: \sim 50/60 Hz
- Power output: 18 V, 3.3 A
- Safety class: Class II with functional earth
- Earth leakage current: < 500 μ A

Software Features for the Assessment of Autonomic Functions in Humans

Should come with analysis feature for all the parameters such as ECG, RESP, PPG, GSR, NIBP etc.

Automated routines for ECG interval extraction, HRV, Blood pressure analysis with its marking should be available in the software.

TIME DOMAIN ANALYSIS

- Statistics: Max., Min., Max./Min., Range, Mean NN, Mean dNN (MSD), Median, 95% Conf. Interval, 99% Conf. Interval, lnHRV, Coef. of Variance, Variance, SDNN, SENN, SDDSD, RMSSD, NN50 Count, pNN50, SDANN, SDNN Index, SDASD.
- Segmented statistics: SDANN, SDNN Index, SDASD, t-test between segments; Mean, STD, SE, 95% and 99% Confidence Interval, RMSSD, pNNxx Index (pNN50, pNN27 or custom) for each segment.
- Linear regression
Coefficients A and B, R^2 , SEE for each segment.
- **Histogram:**
Mean, SD, Median, Modus, Dispersion, Upper F(X), Uncertainty, Skewness, Kurtosis and Variability Index (HRV Triangular Index with a freely adjustable Class Interval (bin value)).
- **Poincare Analysis**
: SD1, SD2 in both absolute and normalized units, SD1/SD2 Ratio, CSI (Cardiac Sympathetic Index), CVI (Cardiac Vagal Index), dRRt, dRRr in both absolute and normalized units, dRRt/dRRr, Centroid, Ellipse Area, R2 and SEE.

FREQUENCY DOMAIN ANALYSIS

- **Based on non-linear analysis: CZF (Conte, Zbilut, Federici) analysis:**
- Based on the FFT Algorithm (non-parametric method)

BAROREFLEX SENSITIVITY ANALYSIS

The Sequence Method and the Spectral Method

Annexure-CInviting of sealed quotations for supply and installation of Equipments for
Medicine-II Department of AIIMS, Jodhpur**TECHNICAL BID**

Name of Firm/Contractor/Supplier	
Complete Address & Telephone No.	
Name of Proprietor/Partner/Managing Director/Director.	
Phone & Mobile No.	
Name and address of service centre near by Jodhpur.	
Whether the firm is a registered firm Yes/No (attached copy of certificate)	
PAN No. (enclose the attested copy of PAN Card)	
Service Tax No. (enclose the attested copy of Service Tax Certificate)	
VAT No. (enclose the attested copy of VAT Certificate)	
Whether the firm has enclosed the Tender Fees as per Annexure 'A'	
Whether the firm has enclosed the Bank Draft/Pay Order/Banker's cheque as Earnest Money Deposit as per Annexure 'A'	
Whether the Firm/Agency has signed each and every page of Tender/NIT	
Please provide full list of consumables with rates.	
Any other information, if necessary	

Authorized signatory of the bidder with seal.

Annexure-D

Financial Bid

(To be submitted on the letterhead of the)

S.No.	Item Description	QTY	Rate	Vat/ Tax	Amount
1.	Wireless Monitoring System for the Assessment of Autonomic Functions, Respiration and Non Invasive Blood Pressure System for Humans	01			

CMC Charges as applicable (excluding Service Tax)	
1 st Year	
2 st Year	
3 st Year	
4 st Year	
5 st Year	

1. I/We have gone through the terms & conditions as stipulated in the tender enquiry document and confirm to accept and abide the same.
2. No other charges would be payable by the Institute.

(Authorized signatory of the bidder with seal)