

**Tender**  
**For**  
**Department of Psychiatry -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: [oadmin@aiimsjodhpur.edu.in](mailto:oadmin@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/259/2013-AIIMS.JDH	01	44,000	Wireless Data Acquisition System for EEG and Evoked response studies.

(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 Specification for Wireless Data Acquisition System for EEG and Evoked response studies.**

- The system should be Ethernet-ready 16 Channel data acquisition and analysis system and can record multiple channels with different samples rate.
- The system should be able to work on Mac and Windows both and should be supplied with compatible windows PC.
- System should have 16 analog channels, 16 digital channels, and 16 on-line calculation channels.
- Ethernet connectivity should have the ability to view and control systems across a network and should provide different trigger options at internal, external or signal levels.
- It should come with the latest software which should have Multiple Event Marking system, Cycle (Peak) detector interface , transformations includes most recently used transformation & analysis, calculation measurements includes daisy-chain calculation such as filter and difference, and measurements includes online/offline ,interpolated measurements, new measurements option to optimize event marking system.
- Software should have the facility for online analysis settings, filters, and transformations which provide real time feedback
- Multiple display option should be available during and after acquisition and can be flip between charts, Scope, X/Y, overlapped segments.
- The system should be compatible with wireless implantable telemetry system.
- The system should have equipped with all the required amplifiers, transducers, cables & other accessories for the recording of wireless EEG from Sixteen points ,Evoke response amplifier ,Stimulator for Visual ,auditory and electrical stimulation for various evoke response studies .

#### **Technical Specification of Wireless amplifier**

- 1) The system should consist of matched transmitter & receiver module with transducer.
- 2) The system should be compatible with Ethernet ready Basic Module
- 3) Data should be transmitted to receiver via RF frequency mode
- 4) Compatible software should be supplied along with the system for analysis of the data.
- 5) Battery life of the transmitter should be 70 to 80 hours.
- 6) The transmitting signal range should be between 60 to 100 meters.
- 7) Transmitter should have the intimation feature about the battery discharge an hour before.
- 8) 10/20 EEG Cap System with Medium size of cap should come with the system having following features-

#### **Wireless EEG Specifications for 8 bipolar channels**

Signal type: Dual Channel EEG

Band limits: 0.1 Hz to 100 Hz;

Factory preset .5 Hz to 35 Hz

Filter Options: 0.1 or .5 Hz HP, 35 or 100 Hz LP

Alternative Signal: Delta, Theta, Alpha, Beta

Noise: .2 $\mu$ V rms

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

Fixed Gain: 10,000

Strap of length 137 cm should be included.

Input (signal source): Electroencephalogram Cap Electrode of different size

#### **Evoked response Amplifier – 2 nos**

Gain: 5000, 10000, 20000, 50000

Output Range:  $\pm$ 10 V (analog)

Frequency Response Maximum bandwidth (1.0 Hz – 10 kHz)

Low Pass Filter: 3 kHz, 10 kHz

High Pass Filter: 1.0 Hz, 20 Hz, 100 Hz

Notch Filter: 50 dB rejection @ 50 Hz or 60 Hz

Noise Voltage: 0.5 $\mu$ V rms – (100-3000 Hz)

Signal Source: Electrodes (three electrode leads required) Z (input)

Differential: 2M $\Omega$

Common mode: 1000M $\Omega$

CMRR: 110 dB min (50/60 Hz); see also: Shield Drive Operation

CMIV—referenced to Amplifier ground:  $\pm 10$  V

Mains ground  $\pm 1500$  VDC

With suitable AgCl cup electrodes

### **Simulator Amplifier specification**

#### **Key features**

- Voltage and current stimulator (unipolar or bipolar)
- Linear stimulator
- Voltage (V) mode
- Current (I) mode

#### **Specification**

Control Voltage Input:

$\pm 10$  V maximum input

Control Voltage Input Interface: Male 3.5 mm mono phone plug

Isolation: Control Voltage Ground to Isolated Output Ground: 1000 pF at 1500 VDC HiPot

Isolated Output Ground to Mains Ground: 2000 pF at 1500 VDC HiPot

OUTPUT:

Stimulation Voltage (V) Mode:  $\pm 200$  V with:

Impedance out = 100 ohms:  $\pm 100$  ma compliance; Output Impedance = 100 ohms

Impedance out = 1Kohm:  $\pm 10$  ma compliance; Output Impedance = 1000 ohms

Current (I) Mode:  $\pm 200$  V compliance; Output Impedance - 1 Gohm

Impedance out = 100 ohms:  $\pm 100$  ma

Impedance out = 1K ohm:  $\pm 10$  ma

Input to Output Ratio:

Voltage (V) Mode:

$\pm 10$  V DC input creates output of  $\pm 200$  VDC (1:20 ratio - V/V) for Impedance out either 100 ohms or 1K ohms

Current (I) Mode:

$\pm 10$  V DC input creates output of:

Impedance out = 100 ohms  $\pm 100$  mA (1:10 ratio - V/ma)

Impedance out = 1K ohms  $\pm 10$  mA (1:1 ratio - V/ma)

Timing:

Voltage Rise time: 200 V in 9.5  $\mu$ sec (T10-T90)

Current Rise Time: 100 ma in 9.5  $\mu$ sec (T10-T90)

Max pulse width: 100 msec

Max sine frequency: 30 kHz (-3 dB)

Should be supplied with electrical and auditory stimulus output devices

**The bundled software for data analysis should be able to perform the following:**

#### **Specialized EEG Analysis:**

- Compute Approximate Entropy
- Delta Power Analysis
- Derive Alpha RMS
- Derive EEG Frequency Bands
- EEG Frequency Analysis
- Remove EOG Artifacts

#### **Neurophysiology Analysis**

- Set Episode Width and Offset
- Amplitude Histograms
- Average Action Potentials
- Classify Spikes
- Dwell Time Histograms
- Find Overlapping Spike Episodes
- Generate Spike Trains
- Locate Spike Episodes
- Chaos Analysis
- DE trended Fluctuation Analysis
- Optimal Embedding Dimension
- Optimal Time Delay

- Plot Attractor

**Specification of Programmable Stimulation System**

- 1) The Programmable Stimulation System that allows a user to interface the Data acquisition system with Stimulator to a PC that controls the stimulus frequency and stimulus intensity for real-time stimulus delivery

The system should include the followings with specifications-

- a) Constant Current and Constant Voltage Linear Isolated Stimulator
- b) USB 4-ch D/A Unit
- c) Software Utility (For two way communication between Data acquisition & Stimulus presentation system ) with sample experiment
- d) Interface cables
- e) stimulus presentation software having following features-

- Playing movies
- Stimulus lists
- Support for JPEG, GIF, PNG, and TIFF files
- Built-in support for RSVP and self-paced reading
- Support EEG/ERP
- Trial variables
- Conditional branching (if/then/else)
- Multiple input devices in the same experiment

f). There should be a universal marker interface to deliver markers from the stimulus presentation computer via USB and deliver markers from:

- up to four photocells
- voice key
- two audio channels/speakers
- six TTL input lines

The package should include two (2) photocells for precise event marking and the Isolated Digital Interface with the parallel port cable option

**Digital to Analogue converter Unit:**

High-speed multifunction module with eight 13-bit, 1 MS/s analog inputs and four 12-bit, 1 MS/s analog outputs

Four 12-bit,  $\pm 10$  V analog outputs with 1 MS/s update rate

USB-bus powered (type: 2.0 high speed; compatibility: 1.1 or 2.0)

8 single-ended/4 differential analog inputs

13-bit resolution

1 MS/s sample rate

Single-ended ranges:  $\pm 10$  V,  $\pm 5$  V,  $\pm 2.5$  V or 0 to 10 V

Differential ranges:  $\pm 20$  V,  $\pm 10$  V, or  $\pm 5$  V

16 digital I/O lines

Two 32-bit counters

One 32-bit PWM timer output

**Two Desktop should be provided, one for Recording and one for Stimulating, with following minimum specifications**

- 19 "screen.
- 500 GB Hard disk
- i5 processor – 3Ghz
- 4GB DDR3 RAM
- PCI Free Slots
- Ethernet port
- Com Port /Printer LPT Port
- Windows 8 OS

Annexure-C

Inviting of sealed quotations for supply and installation of Equipments for  
Psychiatry -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)

<b>S.No.</b>	<b>Item Description</b>	<b>QTY</b>	<b>Rate</b>	<b>Vat/ Tax</b>	<b>Amount</b>
1.	Wireless Data Acquisition System for EEG and Evoked response studies.	01			

<b>CMC Charges as applicable (excluding Service Tax)</b>	
1 <sup>st</sup> Year	
2 <sup>st</sup> Year	
3 <sup>st</sup> Year	
4 <sup>st</sup> Year	
5 <sup>st</sup> 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)