Sealed Quotations/Bids (One Technical and One Financial separately) are invited from manufacturers or their authorized dealers for the following Item which should be sealed by the tenderers in separate covers duly super scribed and both these sealed covers are to be put in a bigger cover, which should also be sealed and duly super scribed, on the terms and conditions mentioned on page No.2

Quotations should reach this office on or before 07.03.2018 by 3:00 P.M.

**Specification for Brainstem Evoked Response Audiometer with VEMP & ASSR**

1. **Amplifier**: Two channels
   a. A/D Converter: 16-bit
   b. Sampling rate: 200 to 40000 Hz
   c. High Pass: 0.1 - 500 Hz
   d. Low Pass: 30 - 5000 Hz
   e. Adjustable artifact rejection level and time region
   f. Line Frequency Notch Filter (-12 dB/Oct)
   g. Common Mode Rejection:
      - $\geq 110$ dB @ 1 kHz
      - $\geq 110$ dB @ 60/50 Hz, notch filter on
   h. Noise Level: $\leq 0.27$ uV RMS
   i. Input Impedance: $> 10$ MOhm

2. **ABR Test Specification**: -
   a. Adjustable Gain: 5K - 200K
   b. Adjustable High Pass and Low Pass filters (-6 dB/Oct)
   c. Stimulus: Clicks, Tones, iChirps,
   d. Complex and user-defined files
   e. Stimulus duration in usec or cycles
   f. Stimulus Envelopes: Rectangular, Blackman, Cosine, Hamming, Hann, Bartlett, Trapezoidal (Rise/fall time),
   g. Extended Cosine (Rise/fall time),
   h. Triangular, Gaussian
   i. Stimulus presented continuously or only while acquiring Ipsilateral and Contralateral noise masking. Specified level or tracking the stimulus level

3. Should have - iChirp stimuli included -The intelligent Chirp for ABR & ASSR
   a. Broadband and narrowband (500, 1000, 2000, 4000 Hz)
   b. Optimized wave V identification
   c. Custom chirp design utility

4. **VEMP Module**: -
   a. Should have both cVEMP and oVEMP
   b. Should be able to perform cVEMP and oVEMP testing on patients of all ages.
   c. Should have integrated EMG monitoring activity with the same recording electrodes.
   d. No additional EMG monitoring electrodes should be required.
   e. Should have user-friendly interface to easily choose the target EMG levels for patient.
   f. Should be able to choose patient specific acceptance amplitudes.
   g. Should automatically calculate the acceptance range.
   h. Should have easy main screen access to test parameters
   i. Should have quickly load preset cVEMP and oVEMP protocols
   j. Should have easy to mark peak labels using mouse or keyboard for VEMP analysis
   k. Baseline should automatically marked to the user-defined acceptance region
   l. Should create a grand average using multiple recordings
   m. Should be able to compare left and right VEMP responses
   n. Should have automatic calculation of corrected amplitude and asymmetry ratios

5. **ASSR - Specifications**
   a. Gain: 100K
   b. High Pass Filter: 30 Hz
   c. Low Pass Filter: 300 Hz
   d. Stimulus: Clicks, Tones, iChirps, and user-defined files
   e. Frequencies: 250, 500, 1000, 2000, 4000, and 8000 Hz
   f. Simultaneous testing of both ears - Test both ears at the same time, four frequencies per ear
   g. iChirp (broadband & frequency specific) for robust amplitudes and harmonic component analysis for improved threshold detection and reduced test times
   h. Automated audiogram generation in SPL and HL

Continued on Page No.2
Optional Upgradable modules
a. P300/MMN
b. eABR
c. Chained-Stimuli ABR
d. ASSR
e. DP+ TE OAE
6. Accessories & Other Requirement :
   a. Should Change most test parameters with a single click
   b. Should be able to set customized display scale
   c. Should be able to mark easily waveforms using over thirty pre-defined peak labels, or can create customized labels
   d. Should be able to view latency and amplitude of peaks directly on the waveform
   e. Latency-Intensity graphs indicating normative data ranges should generate automatically from marked waveforms.
   f. Should be able to Quickly add, subtract, invert, time shift, or cross-correlate recordings
   g. Should have Split-sweep view to visualize single recording repeatability
   h. Report: - Should have Multi-page display and reports facility, Easy PDF report generation, Auto-save reports on program exit, Choose from a variety of stimuli, or generate or import your own custom stimuli
   i. ER-3C Insert Earphones:
   j. TDH Headphones:
   k. Bone Conductor:
   l. Insert Probe:
   m. Sound field amplifier and speakers
   n. Auxiliary output channel for ipsilateral, masking and stimulus mixing
   o. Must have Built-in isolation and shielding.
7. Computer Requirements
   Windows 7, 8, or 10 operating system, Minimum 4 GB RAM, Minimum 5 GB hard drive space, Minimum XGA display, (1024x768 screen resolution), Grounded, 3-prong power supply, Compliant with IEC 60950, Mouse or other pointing device, One available USB Port Removable media, network drive, or secure Internet storage site for data backup (recommended) Printer
8. Standards Compliance
   Safety: IEC 60601-1 Class II, Type BF
   EMC: IEC 60601-1-1-2
   EP: IEC 60601-2-40

Terms & Conditions:
1. Make, Model, Rate and Tax detail MUST BE clearly mentioned in the quotations.
2. Only typed quotations /tenders bearing GSTIN No. on original letter head will be entertained and please provide GST-HSN Code on each item separately.
3. Manufacturers/Authorised dealer’s certificate must be attached with Quotations/Tenders.
4. The firm must be registered supplier in Central Purchase Organization (e.g. DGS & D)/National Small Scale Industries/Central Purchase Office A.M.U, Aligarh.
5. List of users for the quoted item with contact no. should provided, Photocopy of purchase order along with terms and conditions of contract received from any Govt./Public Sector Institution in last 3 years for supply of offered equipment must be enclosed with the price bid.
6. Installation and commissioning will be the responsibility of the supplier and after sales service should provided.
7. Cutting /Over writing on quotations /tenders will not be accepted.
8. The equipment/Instruments might be called for demo, and approval. It is sole discretion of the department to approve or disapprove the quality.
9. The Instruments/Equipments should be rust proof, made from surgical grade stainless steel and should be CE European / US FDA certification
10. Comprehensive onsite warranty 03 Years.

(Medical Superintendent)
J.N. Medical College Hospital
A.M.U., Aligarh

[Signature]