

**HLL LIFECARE LIMITED**  
(A Government of India Enterprise)  
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**INVITATION FOR BIDS (IFB) – AMENDMENT NO: 1**

Sub: Amendment No: 1- Supply, Installation, Testing and Commissioning of EMG Machine and accessories at Diagnostic lab facility, Gurugram as per the tender specifications

Ref: Our IFB Ref No: HLL/CHO/PROJ/HCS/MCG-EQP/EMG/19-20 dated 09-07-2019

**Amendment Date: 02-08-2019**

With reference to the above, the scheduled date for receipt and opening of bids is hereby amended as follows.

- a) Date of issue of tender document - 12-07-2019 onwards
- b) Last date and time for receipt of bids - 09-08-2018 up to 15.00 Hrs.**
- c) Date and time of opening of bids - 09-08-2018, 15.30 Hrs.**

Additionally, Specifications in the tender are amended as follows:

## SCHEDULE II - AMENDED

### SPECIFICATIONS

**Sub:** Supply, Installation, Testing and Commissioning of EMG Machine and accessories at Diagnostic lab facility, Gurugram – reg.

**Item Name: EMG Machine with accessories**

**Quantity: 1 Nos.**

#### Technical Specifications

1. The base unit should have two electrical stimulators, one Auditory stimulator and one visual LED stimulator.
2. Hardware should have connections for a patient response unit, foot switch, control panel, LED goggles, Audio transducer i.e. headphones, bone conductions, ear inserts
3. It should have compact operation panel for easy measurement of waveforms and latency marking.
4. **4 channel system with optical isolation and Ethernet connection for Laptop or Desktop system use.**
5. **It should be upgradable to 12, 16 channel (optional)**
6. **Amplifier should have 4 channels.**  
**Input impedance :- > 100 Mohm.**  
 Low filter setting :- 0.01 – 3KHz or higher  
 High filter setting :- 10 Hz – 20 KHz or higher  
**Noise :- < 0.5  $\mu$ V RMS**  
 AC interference notch filter 50 Hz, 60 Hz or Off  
 Electrode to skin impedance check :- 2 to 20 K ohm  
 Artifact rejection hardware for preventing the stimuli artifact from saturating the amplifier.  
 CMRR :- Above 100 dB isolation mode  
 Sensitivity 1 micro volt per div to 10 milli volt per div or higher  
**Minimum 16 bit A/D convertor**  
 48 Khz sampling rate per channel or higher
7. Auditory stimulator  
 Polarity :- Condensation ,Rarefaction or Alternating  
**Intensity: - Varying from 0 to 100 dBNHL or higher or 30 to 140 dBspl NHL or higher depending upon stimulus type, frequency & transducer type.**  
 Stimulus :- Varying type between click, Tone Pip & Tone Burst
8. Visual stimulator :- LED Goggles & Monitor  
 Should choose pattern stimulus color and pattern intensity.  
**Pattern type should be checks/bars/gratings.**  
 Pattern should be full filed or partial field.  
 Should have provisions to choose the target size, position, color & static or pulsating target.  
 15 “ or higher VEP monitor.

9. Software :-  
 System software should be compatible with Windows 7 or higher operating system.  
 Should have NCS, F wave reflex blink reflex, RNST, Inching studies, tremor analysis, P 300 and other essential study software's.  
 Should have software for motor & sensory NCV with automatic marking & manual marking.  
 The system should have needle EMG & single fibre EMG software.  
 It should be able to record artifact free Insertional /Spontaneous activity for minimum 500 sec on hard disc for unlimited times or unlimited buffer storage with provision for converting EMG files to AVI files.  
 It should have provision for replay of recorded EMG files with audio output.  
 Should have single motor unit analysis, Quantative analysis of single or multiple MUP's & jitter analysis for single fibre EMG.  
 Should have provision for VEP, AEP, Heart rate variability SSR & SEP.  
 The software should have provision to measure the hearing threshold for BERA test.  
 It should be capable of grand averaging the responses for better signal quality in EP tests.  
 It should have Automatic as well as Manual report generating software & Report should be linked to record.
10. Computer specifications:-  
 Hard disc :- 2 TB  
 RAM :- Min 4 GB  
 Processor :- Intel core i5 or higher  
 Operating system :- windows 7 or higher  
 DVD/CD writer  
 21" monitor or higher  
 Good quality laser printer  
 Multimedia speakers inbuilt
11. UPS of min 1 KVA with spike protection & having 60 minutes backup time.
12. Trolley
- 13. Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.**
- 14. The firm should provide a comparative sheet with all points marked in the technical sheet provided by the manufacture.**
15. The Firm should be able provide the necessary guarantee, warranty & AMC for the machine supplied.
16. Accessories :- system should be supplied with following :-  
 Auditory Headphones & Ear Inserts  
 EMG Needle holder  
 15" or higher VEP monitor  
 Temperature probe  
 Sensory ring stimulating electrodes  
 Bar stimulating electrodes ( Pediatric & Neonatal size)  
 Surface Cup electrodes 5 set for EP test  
 Disposable EMG needle 35 mm \_\_\_ 50 No  
 Disposable EMG needle 25 mm \_\_\_ 50 No

- Skin preparation jelly \_\_\_\_\_ 25 No  
10-20 conducting paste \_\_\_\_\_ 25 No  
Disposable Insert earplugs of different sizes
17. Warranty : At least 2 years.
  18. System should be CE certified or BIS approved

**GENERAL CONDITIONS**

1. The equipment should be complete with all accessories and interconnections.
2. The purchaser will be providing the required electrical supply to the equipment. All wiring requirements within the equipment are to be provided by the supplier as per standard.
3. The suppliers should submit 3 copies of the following documents, relevant to their scope of supply, along with delivery & commissioning of the Unit :
  - a) Relevant Test Certificates, Operation & Maintenance Manual, Installation Manual, Troubleshooting Manuals, Guarantee Certificate
  - b) Any other related documents
4. Any deviations from the bid documents shall be clearly indicated.
5. The bid should be complete with all the relevant details.

All other terms and conditions of the tender remain unchanged.

**SENIOR MANAGER (PROJECTS)**