KERALA MEDICAL SERVICES CORPORATION LTD
(A Government of Kerala Undertaking)
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CIN: U24233KL200TSGC021616, PAN : AADCK4029M, GSTIN : 32AADCK4029M1ZK

Running Contract Details	
Equipment Name	Portable ENMG machine
Running Contract Valid Till	06-12-2020
Tender Ref No	KMSCL/EP/T288/1155/2018(R)
Tendered Quantity	5
Supplier Name	M/s Axis Health Care
GST No	32AAQFA7508K1Z9
Installation & Delivery Period	8 Week(s)
Up-time / PM vist	95% & 4 Visits per year
Warranty period	3 Years

Supplier`s Details		
Address	**Contact Details**	
TC No. 2/3031/7 Shop No.G6 Dally's Apartments Chalakuzhy Rd Trivandrum -695004	Contact Person	Anil Kumar T V
	Phone	0471-2552806
	Mobile No	9947425200
	Email	axishealthcare@mail.com

Item-wise Price Details				
#	Item Details	Unit Rate (Incl.all taxes & charges)	Service Charges (Through KMSCL)	Grand Total
1	**Portable ENMG machine** *Model & Make : NICOLET EDX 2CH / NATUS MEDICAL*	2296000 Incl.GST :12%	169330	2465330
		2296000	**169330**	**2465330**

Annual / Comprehensive Maintenance Charges (Exl.Tax)							
Rate	**4th Year**	**5th Year**	**6th Year**	**7th Year**	**8th Year**	**9th Year**	**10th Year**
Portable ENMG machine							
Labour	30,000.00	30,000.00	35,000.00	40,000.00	40,000.00	45,000.00	45,000.00
Comprehensive	60,000.00	60,000.00	65,000.00	65,000.00	70,000.00	75,000.00	80,000.00

Other terms & conditions

1. The supplier shall execute an agreement with the purchaser as per tender conditions (agreement format is given in the tender

document).

2. The supplier shall submit performance security amounting to 5% of the value of the supply order.

3. The labour & comprehensive charges of equipment after the completion of warranty period is finalized by KMSCL as mentioned above.

4. Since discount rate is not applicable for equipment under Running Contract of KMSCL, purchase/supply order can be issued directly to supplier at the given rate with tax & other charges (exclusive of KMSCL service charges).

5. If purchase/supply order is issued directly to the supplier, KMSCL service charge need not be paid. But the copy of the said order may be forwarded to KMSCL for information.

Technical Specification

Equipment :Portable ENMG machine

1. The system and amplifier should have high rent specification to suite for portable ICU recordings.

2. Two electrical stimulators, one auditory stimulator and one visual Led Google Stimulator should be integrated in the base unit.

3. Built-in audio speaker should be available for output of both live signals as well as playback of recorded data

4. The hardware should have one trigger inputs and one trigger outputs for connection to external devices

5. The hardware should also have connections for a patient response unit, footswitch, and control panel. LED goggles, audio transducers (headPhones, bone conductors, ear inserts, etc.), and reflex hammer

6. A safety feature should stop any stimulation after a few seconds of lost communication between the base unit and the computer. Restoring the USB communication will automatically bring the system back to running condition without any need for additional user intervention.

7. The hardware firmware and DSP software can easily be field upgraded to incorporate most recent enhancements and updated functionality.

8. The hardware should have an option to upgrade and perform ultrasound studies on EMG system hardware later

Amplifier

1. 2 channel amplifier with high performance non switching channels any time upgradable with 6 high performance switching channels

2. 24 bit Analog to Digital Converter

3. 48 kHz sampling rate per channel

4. Artifact rejection hardware for prevents the stimuli artifact from saturating the amplifier.

5. Built-in impedance measurement capability should measure the impedance at 20 Hz with a range from 500? 450K ?.

6. Built-in rectangular calibration pulse selectable between 2, 20, 200, 2000, 20000?V.

7. Gain adjustable from 10nV to 100mV/division in 22 steps.

8. Low frequency Hz: 0.2, 1, 5, 10, 20, 30, 50, 100, 200, 250, 300, 500, 1K, 2K, 5K

9. High frequency Hz: 30, 50, 100, 200, 250, 300, 500, 1K, 1.5K, 2K, 3K, 5K, 10K

10. Notch Filter 50Hz. 60Hz, or off.

11. CMII>1000 M Î• (non switched channels)

12. CMRR >110Db

13. Noise <0.7?V RMS.

14. A temperature probe should be connected to the amplifier for automatic recording.

Electrical Stimulator

1. Output intensity should be set wither to constant-voltage or constant-current mode delivering, 0-400V/0-100mA.

2. The stimulus intensity should be stored for each trace.

3. Delivered stimulus should be monitored and “short-circuit” and “open-circuit” conditions, should be indicated.

4. Deviation between requested and delivered stimulus current intensity should be indicated.

5. Duration should be adjustable between 0.02-1ms.

6. Modes should be set to either monophasic or biphasic stimulation using Single, Refractory, Collision, Double or Train.

7. The stimulus rate should be varied between: 0.06-200 stimuli per second (Hz)

8. Auditory Stimulator

9. Type should be selected between Click, Tone Pip, and Tone Burst.

10. Intensity should be set between 0 to 130 dBnHL pSPL or-31 to 109 dBSPL

11. nHL, depending on stimulus type, stimulus frequency, and transducer type.

12. Increment steps should be selected between 1 to 30 dB.

13. Polarity should be set to: Condensation, rarefraction, or alternating.

Visual Stimulator

1. Through LED Goggles, LED flash rate should be set between 0.1-100 per second (Hz) with a duration between 1-500ms.

System Software

1. System must support Microsoft® Windows® 10

2. Motor Nerve Conduction (MNC), Sensory Nerve Conduction (SNC),

3. Combined Sensory Index, Combined Motor and Sensory Nerve Conduction

4. Inching Studies, F-Wave, H-Reflex, Blink Reflex, Repetitive Nerve Stimulation

5. Reference Help

6. Needle EMG

7. Multi-MUP Analysis, Interface Pattern analysis

8. Upgradable Application software for Ultrasound Studies

1. AEP, SEP, VEP

2. P300/CNV

3. Upgradable to Tremor at anytime by adding a software

4. R-R Interval

5. Sympathetic Skin Response (SSR)/Galvanic Skin Response (GSR).

6. Data should be repositioned, superimposed, or shown in a rastered mode.

7. The same data should be simultaneously displayed with different filters, sensitivity, and time base for optional review of results.

8. Free run EMG data and sound should be recorded for up to 600 seconds for 2 channels

9. Stored data should be reanalyzed, digitally filtered, smoothed, inversed, summed, replayed, displayed as trends, in plots, frequency analysis, etc.

10. The data should store in the standard WAV format making it simple to export to other research or analysis programs.

11. Should have averaging techniques (for the following tests such as motor conduction studies, sensory conduction studies , RNS studies , Evoked potential studies, S waves studies & H reflex studies) to optimize the averaging results such as mean exponential, median, threshold.

12. The Artifact Reject function should automatically exclude artifacts that exceed as user definable amplitude threshold.

13. There should be facility to go back and see the previously recorded responses and choose the best result for reporting. Up to 4 replications should be available

14. One-line result should give a compact clinical overview.

15. Should highlight results that are outside of reference values

16. Generate a summary of findings

17. Should be setup by the user according to specific needs

18. Should have capability to capture the test screen both as a picture and as a movie that should be incorporated into reports, training material, publications, presentations etc.

19. Should has an integrated data base with user defined patient demographics and visit information.

Electrical Stimulator Probes

1. Comfort to hold & optimize to reach all sites

2. Interchangeable probe heads adult/pediatric with angled, straight & touch proof

3. One probe direct interface with all controls on probe with start/stop/polarity/intensity/duration/move to next site etc

4. Second robe with indirect interface and control from control panel/mouse

System should be supplied with

1. 230V isolation power supply

2. LED goggles

3. 300 ?TDH-39 Headphones

4. Electrical Stimulator probes direct and indirect interface

5. Computer with Core i5/ i7, HDD 1 TB, RAM 4 GB, 21” TFT, Windows 10

6. Laser Printer good quality

7. UPS with back up time of at least 30 minutes

8. Trolley good quality with portability

9. EMG/EP/NCS/Standard Electrode Kit

10. 25 numbers 37mm, 25 numbers 50mm & 25 numbers 25mm needles should be supplied

Compliance/Regulatory Standards

1. UL60601-1 Medical Electrical Safety Standard (USA)/ IEC

2. European Community (CE Mark)

3. Class 2B, Medical Device Directive (MDD) product should provide additional following things.

4. Should have safety certificate from a competent authority CE issued by a notified body registered in European Commission/ 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.