

# Indira Gandhi Medical College & Research Institute

(Government of Puducherry Institution)

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No.38/IGMC&RI/Purchase/PG-MCI/Equip/2016-17

Date: 11 2 OCT 2018

**Sub:** IGMC&RI – Quotation Call letter for various Equipments required for the department of ENT - Reg.

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The following items are proposed to be procured for Department of ENT of this Institution. It is therefore requested to quote the lowest rate for the supply of the same in prescribed format (Annexure). The quotation shall be submitted by **Hard copy** to the Director, IGMC&RI, Puducherry **on or before 31<sup>st</sup> October 2018.**

SI	NAME OF THE EQUIPMENT	Qty. Reqd. (Aprox.)
1	BRAINSTEM EVOKED RESPONSE AUDIOMETRY (BERA)	1 Nos
2	FLEXIBLE NASOPHARYNGOLARYNGOSCOPE AND ACCESSORIES	1 Nos
3	FORCEPS AND ACCESSORIES & RIGID VENTILATING BRONCHOSCOPES	1 Set
4	FORCEPS & OESOPHAGOSCOPES FOR OESOPHAGOSCOPY	1 Set
5	RIGID OPERATING (DIRECT) LARYNGOSCOPE	1 Set
6	FORCEPS FOR LARYNGEAL SURGERY	2 Sets
7	AUTOMATIC OPERATING TABLE FOR ENT SURGERIES	1 Nos
8	MICRODEBRIDER	1 Nos
9	TEMPORAL BONE LAB EQUIPMENT	1 Nos
10	NERVE STIMULATOR / MONITOR	1 Nos
11	DIGITAL MONOPOLAR AND BIPOLAR ELECTROCAUTERY	1 Nos
12	INSTRUMENTS FOR MAXILLECTOMY AND MANDIBULECTOMY	1 Set
13	ANATOMICAL MODELS AND CHARTS FOR ENT MUSEUM	1 Set
14	ENT TREATMENT UNIT (CONSOLE)	1 Set
15	ENT OPERATING MICROSCOPE FOR MINOR OT (operation theatre)	1 Nos
16	ADULT RIGID NASAL ENDOSCOPE 70°	1 Nos
17	STRAIGHT FORWARD ENDOSCOPE (OTOENDOSCOPE 30°) WITH ACCESSORIES	1 Nos
18	PORTABLE LIGHT SOURCE WITHOUT CABLE FOR RIGID NASAL ENDOSCOPE	2 Nos
19	CAMERA WITH PROCESSOR FOR RIGID NASAL ENDOSCOPE	1 Nos
20	ACCESSORIES FOR RIGID NASAL ENDOSCOPE CAMERA	1 Set

## Encl.: Specification

### Terms and conditions:

1. The supplier should be responsible until the items arrived to this Institution in good condition
2. The rates once quoted and approved will be final and no revision in rates will be allowed
3. Supply should be made within 30 days from the date of receipt of our supply order
4. Delivery should be made on FOR, Puducherry, door delivery basis.
5. The quotation should be based strictly on the specification.
6. **Prices should be inclusive of all taxes.**
7. The material should be supplied strictly in accordance with the specifications mentioned. The items which are not conforming to the specifications should be taken back at their cost.

/ By Order /

  
ADMINISTRATIVE OFFICER

LIST OF EQUIPMENTS – DEPARTMENT OF ENT

SL. NO.	NAME OF THE EQUIPMENT	QUANTITY REQUIRED
1	BRAINSTEM EVOKED RESPONSE AUDIOMETRY (BERA)	1 Nos
2	FLEXIBLE NASOPHARYNGOLARYNGOSCOPE AND ACCESSORIES	1 Nos
3	FORCEPS AND ACCESSORIES & RIGID VENTILATING BRONCHOSCOPES	1 Set
4	FORCEPS & OESOPHAGOSCOPES FOR OESOPHAGOSCOPY	1 Set
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6	FORCEPS FOR LARYNGEAL SURGERY	2 Sets
7	AUTOMATIC OPERATING TABLE FOR ENT SURGERIES	1 Nos
8	MICRODEBRIDER	1 Nos
9	TEMPORAL BONE LAB EQUIPMENT	1 Nos
10	NERVE STIMULATOR / MONITOR	1 Nos
11	DIGITAL MONOPOLAR AND BIPOLAR ELECTROCAUTERY	1 Nos
12	INSTRUMENTS FOR MAXILLECTOMY AND MANDIBULECTOMY	1 Set
13	ANATOMICAL MODELS AND CHARTS FOR ENT MUSEUM	1 Set
14	ENT TREATMENT UNIT (CONSOLE)	1 Set
15	ENT OPERATING MICROSCOPE FOR MINOR OT (operation theatre)	1 Nos
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18	PORTABLE LIGHT SOURCE WITHOUT CABLE FOR RIGID NASAL ENDOSCOPE	2 Nos
19	CAMERA WITH PROCESSOR FOR RIGID NASAL ENDOSCOPE	1 Nos
20	ACCESSORIES FOR RIGID NASAL ENDOSCOPE CAMERA	1 Set

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## SPECIFICATIONS

### SI.1.BRAINSTEM EVOKED RESPONSE AUDIOMETRY- 1 NOS

#### A) SPECIFICATION

1. Must be a Single unit with possibility of all tests suitable for screening and measurement of ABR.
2. Should be possible to measure auditory evoked potential with Two Channel ABR/EP system for short latency, middle latency, long latency and cognitive EP (P-300, MMN), VEMP, ECoChg, ASSR for pathway impairments.
3. Should be able to present the stimulus in units of dB SPL, dB nHL and dB HL. Should also be able to have stimulus envelope shapes/envelopes of rectangular, Blackmann, Hamming, Hann, Bartlett windows.
4. Should have different types of Auditory stimulus such as Click, logon, tone pip, tone burst Chirp & Frequency Specific Chirp stimulation with left, right and double sided stimulation
5. Should have stimulation level from 1 to 130 dB SPL and stimulus frequency rate from 0.1 to 50 Hz
6. Should have High Pass Filter, Low Pass Filter and Notch filter, A/D converter 16 bit, Sampling rate per channel 200 to 8000 Hz, CMRR not less than 100 dB
7. Should have three polarities:- Rarefaction, condensation and alternative.
8. Should have transducer of 3 types:- TDH-49, ER-3A and B71 BC.
9. Should have electrode Impedance.
10. Should have Analysis time 1-999ms
11. Should have white noise and contra lateral masking.
12. Should have a table mounted stand for the electrodes.
13. Should create reporting in Microsoft word.
14. Should have the feature of Auto marking.
15. Should create protocols for automatic testing.
16. Accessories to include- cup EP electrodes, new born AEP pre-jelled surface electrode, AgCl/Ag surface electrode kit, conductive paste and abrasive paste .electrode cable, BC vibrator
17. Should have 2 sets of extra EP electrodes.
18. Should be CE / FDA approved
19. **Power Supply**
  - a. Should have Power input to be 220-240VAC, 50Hz fitted with Indian plug
  - b. Should have a Suitable UPS.
  - c. Should have an extension power box.

#### B) DESKTOP COMPUTER

1. Should have processor speed 4.2 GHZ.
2. Should have Cache 8MB.
3. Should have RAM 8GB, RAM type DDR4 and RAM speed 2400MHZ.
4. Should have storage type HDD.
5. Should have original Operating System Windows 10 home.
6. Should have monitor size 22 inches
7. Should have CD/DVD writer.
8. **ACCESSORIES**
  - a. Should have mouse, keyboard
  - b. Should have UPS.
  - c. Connectivity: should have HDMI, USB, Wi-Fi
  - d. Display type full HD screen
  - e. Should have HDD reading speed 5400 RPM, HDD capacity 1 TB
  - f. Should have model type {All in one}.
  - g. Should have a 32 GB pen drive.



### C) Multi function laser PRINTER

1. Should have print speed up to 24 PPM
2. Should have following functions: print, scan, wireless printing
3. Should have duty cycle up to 30,000 images per month.
4. Should have USB 2.0 connectivity.
5. Should have scan file formats: JPEG, PDF, TIFF.
6. Should have maximum Resolution 1200X1200dpi.
7. Should have processor 3000MHz.
8. Should have print features N-up, print from USB, Watermark.
9. Should have 2side output.
10. Should have paper capacity 150sheets

### D) HEADPHONE WITH MICROPHONE (2 nos)

1. Should have the frequencies upto 12KHZ and the speaker range diameter is 40mm.
2. Should be of supraaural type.
3. Should have headphone impedance as 37 ohm.
4. Should have microphone sensitivity -54 dB/mw {power on}.
5. Should have 117 dB/mw as maximum power input.
6. Should have soft replaceable ear pads, padded ear cups and headband.
7. Should have adjustable head bands.
8. Should have 2m cable length.
9. Should have 3.5mm stereo plug.

## SI.2.FLEXIBLE NASOPHARYNGO LARYNGOSCOPE AND ACCESSORIES -1 NOS

### A. SPECIFICATIONS

1. Working length 340mm
2. Tip deflection 180°/100°
3. Field of view 75° to 95°.
4. Depth of view up to 50mm.
5. Leakage testing device.
6. Direction of view 0°.
7. Rigid distal diameter 4.8mm.
8. Angle if view 100°.
9. Instrument channel 1.5 mm approx.
10. OD at tip 3.7mm approx.
11. Gas sterilizable.
12. Biopsy forceps for above 1.0 mm diameter, 60cm length
13. Grasping forceps for above 1.0mm diameter, 60cm length
14. Cleaning brush

### a. Accessories

- 1) **Suction apparatus**
  - a) Should have own motor mini cabinet- Standard Model Powder coated with SS top.
  - b) Should have wheels for shifting
  - c) Should generate a suction pressure of -600 mm Hg, at 45 litres/min
  - d) Should have an electric diaphragm type pump
  - e) Should have 1.5to2 litre GLASS jar for collection
  - f) Should have tubing of 10 mm ID x 2 metre (PVC)
  - g) Should have a vacuum gauge (0-760 mm Hg)
  - h) Should have noise level of 55 dB A+ 3.
  - i) Should have an overflow safety mechanism
  - j) Should have a power supply of 220 V AC, 50/60 HZ 90 WATT



### **SI.3. FORCEPS AND ACCESSORIES & RIGID VENTILATING BRONCHOSCOPES – 1 SET**

#### **A. BRONCHOSCOPES**

Universal bronchoscope tube with lateral respiratory slit. The bronchoscope should have a light source connector port, a port for instrumentation, a port for attachment for jet ventilation and a port for mechanical ventilation for anesthetic circuit attachment.

##### **1. ADULT**

- A. 6.5 size 43cm length      **1NOS**
- B. 7.5 size 43cm length      **1NOS**
- C. 8.5 size 43 cm length      **1NOS**

##### **2. PEDIATRIC**

- A. 3 size                              26cm length      **1NOS**
- B. 3.5 size                            26cm length      **1NOS**
- C. 3.7 size                            30cm length      **1NOS**
- D. 4.5 size                            30cm length      **1NOS**
- E. 6.0 size                            30cm length      **1NOS**

#### **B. FORCEPS**

1. ALLIGATOR FORCEPS(for adult)-double action jaw, 2mm, 50cm ,working length- **2NOS**
2. ALLIGATOR FORCEPS(for pediatric)-double action jaw, 1.5mm, 35cm ,working length- **2NOS**
3. PEANUT GRASPING(for adult)- double action jaw, 2mm, 50cm working length-**2NOS**
4. PEANUT GRASPING(for pediatric)-double action jaw, 1.5mm, 35cm working length-**2NOS**
5. CIRCULAR CUP BIOPSY FORCEPS(for adult)- double action jaw, 2.5mm, 50cm working length-**2NOS**
6. CIRCULAR CUP BIOPSY FORCEPS(for pediatric)-double action jaw,1.5mm,35cm working length- **2NOS**
7. FENESTRATED FORECEPS FOR SOFT FOREIGN BODIES, Working Length 35cm - **2NOS**
8. UNIVERSAL FORCEPS, Working length 35cm -**2NOS**
9. UNIVERSAL FORCEPS, Working length 50cm - **2NOS**
10. SPONGE HOLDER(length 35 cm)      **-2 NOS**
11. FOREIGN BODY BASKET (35cm length      **-2NOS**
12. SPONGE HOLDER(length 50 cm)      **-2 NOS**
13. FOREIGN BODY BASKET (50cm length)      **-2NOS**

#### **C. ACCESSORIES**

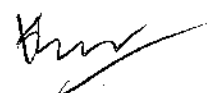
1. FLUVOG ADAPTOR, sliding glass window plug, sealing cap, notched lens, movable for above mentioned adult and pediatric bronchoscopes **-2NOS EACH**
2. INJECTION CANNULA for positive pressure assisted ventilation(for above mentioned adult and pediatric bronchoscopes), OD3.5mm **-2NOS EACH**
3. SEALING PLUGS for respiratory connector(for above mentioned adult and pediatric bronchoscopes)-**4NOS**
4. GLASS WINDOW PLUGS(for above mentioned adult and pediatric bronchoscopes)-**2NOS**
5. ADAPTORS for connection to ventilators(for above mentioned adult and pediatric bronchoscopes)-**2NOS**
6. FLEXIBLE BRUSH For Cytology-**2NOS**
7. SUCTION TUBES, RIGID, 4mm diameter, 50cm length- **3NOS**
8. SUCTION TUBES, RIGID, 2.7mm diameter, 35cm length -**3NOS**
9. COAGULATION SUCTION TUBES, insulated 50cm length-**2NOS**

### **SI.4.FORCEPS & OESOPHAGOSCOPES FOR OESOPHAGOSCOPY – 1 SET**

A. RIGID OESOPHAGOSCOPE; ROBERT JESBERG type with Fiber optic light carrier for distal illumination, stainless steel.

Sizes: **EACH 1 NOS**

1. 50cm, 12x16mm
2. 50cm, 10x14mm
3. 45cm, 19x14mm
4. 45cm, 8x12mm
5. 30cm, 7x10mm



6. 30cm, 8x12mm
  7. 30cm, 10x14mm
  - B. ADULT-Working length 55cm, diameter 2.5mm -2 NOS EACH
    1. Alligator
    2. Universal Grasping
    3. Circular Cup
    4. Peanut
  - C. PEDIATRIC-Working length 35cm, diameter 2mm -2 NOS EACH
    1. Alligator
    2. Universal Grasping
    3. Circular Cup
    4. Peanut
  - D. RIGID SUCTION TUBES:5 NOS EACH
    1. 55cm length
    2. 35cm length
- OPTIONAL
- E. DENTURE CUTTING FORCEPS(Working Length 55cm)-2 NOS

## **SI.5.RIGID OPERATING (DIRECT) LARYNGOSCOPE – 1 SET**

### **A. SPECIFICATIONS**

1. RIGID LARYNGOSCOPE for adult, large, length 18cm, with fibreoptic carrier- 1NOS
2. RIGID LARYNGOSCOPE for adult, medium, length 18cm, with fibreoptic carrier-1NOS
3. RIGID LARYNGOSCOPE for adult, small, length 18cm, with fibreoptic carrier-1NOS
4. RIGID LARYNGOSCOPE for adolescent, length 14-16cm for use with 4mm, with fibreoptic carrier-1NOS
5. RIGID LARYNGOSCOPE for children, length 12-14cm for use with 4mm, with fibreoptic carrier-1NOS
6. LARYNGOSCOPE HOLDER WITH RING CHEST SUPPORT (preferably KLIENSASSER):
  - a) Adult: approx 9.5 cm- ring size, 34cm rod length- 1NOS
  - b) Children: approx 9.5cm- ring size, 24cm rod length- 1NOS
7. DIRECT RIGID DIAGNOSTIC LARYNGOSCOPE:
 

Anterior commissure Kleinsasser with fibre optic light carrier-1NOS EACH

  - a) Small - 13cm.
  - b) Medium-15cm.
  - c) Large-18cm.

## **SI.6.FORCEPS FOR LARYNGEAL SURGERY – 2 SETS**

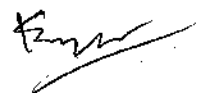
1. Cutting forceps with round cup, curved-2mm, 23 cm long
2. Cutting forceps with round cup, curved-2mm, 18 cm long
3. Alligator forceps-23 cm long
4. Alligator forceps-18 cm long
5. Cutting forceps with round cup, straight-2mm, 23 cm long
6. Cutting forceps with round cup, straight-2mm, 18 cm long
7. Cutting forceps with round cup, curved upwards-2mm, 23 cm long
8. Cutting forceps with round cup, curved upwards-2mm, 18 cm long
9. Cutting forceps with round cup, curved right-2mm, 23 cm long
10. Cutting forceps with round cup, curved right-2mm, 18 cm long
11. Cutting forceps with round cup, curved left-2mm, 23 cm long
12. Cutting forceps with round cup, curved left-2mm, 18 cm long
13. vocal cord holding forceps, for right side, 23 cm
14. vocal cord holding forceps, for left side, 23 cm
15. vocal cord holding forceps, for right side, 18 cm
16. vocal cord holding forceps, for left side, 18 cm
17. Microlaryngeal scissors-23cm long, curved right

18. Microlaryngeal scissors-23cm long, curved left
19. Microlaryngeal scissors-23cm long, curved up
20. Microlaryngeal scissors-23cm long, straight, horizontal cutting
21. Micro laryngeal scissors-18cm long, curved left
22. Microlaryngeal scissors-18cm long, curved up
23. Microlaryngeal scissors-18cm long, straight, horizontal cutting
24. Kleinsasser knife, sickle shaped, working length 23 cm
25. Kleinsasser knife, sickle shaped, working length 18 cm
26. Kleinsasser Cord retractor( hook), working length 23 cm
27. Handle for micro laryngeal instruments
28. Insulated suction and coagulation probe, length 23 cm, diameter 3 mm
29. Grasping forceps, delicate, serrated, working length 23 cm
30. Grasping forceps, fenestrated, working length 23 cm
31. Rigid Suction Tube, approx working length 23cm, 2.5mm diameter
32. Rigid Suction Tube, approx working length 23cm, 4.0mm diameter
33. Rigid Suction Tube, approx working length 18cm, 2.5mm diameter
34. Rigid Suction Tube, approx working length 18cm, 4.0mm diameter

## **SI.7. OPERATING TABLE (AUTOMATIC) FOR ENT SURGERIES-1NOS**

Electro Mechanical, remote control operated Operation Theatre Table for ENT surgeries.

1. Table Top: 4 section table top, should be radiolucent & C-arm compatible
  - a) Length : Minimum 78" including leg board and detachable Head Rest
  - b) Width : 19"
  - c) Side Rails: Sturdy Stainless side rails fitted on both sides.
  - d) Table base: The table base must have a non- metallic molded plastic exterior for easy maintenance & for dent free long life.
  - e) Load capacity: The tables should be sturdy with a patient load bearing capacity of 125 kgs.
2. Table Movements : All movements must be fully remote control operated, precise & jerk free
  - a) Vertical: 28" minimum with a height increase adjustment of 200mm.
  - b) Trendelenberg & Rev. Tr.: 30 °
  - c) Lateral Tilt : 20 ° left & right
  - d) FLEX/REFLEX: 75 ° up to 45 ° down
3. Longitudinal Slide : 200mm minimum  
Auto level function: There must be an auto level function so that the tilts of the table can be brought back to neutral level flat zero position with the press of a single button on the remote control handset.
4. Attachments-
  - a) Head Rest : Detachable
  - b) Wide Side Arm Table: Table should have a wide side arm table. The side arm table should be rigid and in line with the table top, without having to use any support stand, which causes hindrance to the surgeon.
5. Clamps & Brackets: All clamps, brackets and handlocks must be made of stainless steel.
6. Table Controls: Should operate on 230V AC mains supply. The motors should operate on 24V DC.
7. Remote Control: All functions should operate by corded remote control, with clear indications for all the different positions.
8. Emergency override Control: The table must have an independent control panel system apart from remote Control handsets, so that it should be possible to operate the table even without the remote handset unit.
9. Cordless Remote Control: The table must have an independent cordless remote control handset operating on Bluetooth technology, so that there is no interference to other equipment inside the operation theater. This should facilitate the anesthetist to operate the table from a distance without causing interference to the surgeon and his team.
10. Mobility: Fitted with castor wheels for free table mobility, & floor lock. The floor lock for table must have a central locking facility which can be locked by a single lever.
11. Standard Accessories: Shoulder supports-2 nos., Body Side supports - 2nos. Arm rests-2 nos, Mattress. Patient body straps must be provided for safety, Anesthesia Screen Frame.



## **SI.8. MICRODEBRIDER – 1 NOS**

### **A. CONSOLE**

1. Should be a versatile powered ENT system, that lets to choose just the power required for various ENT and Head & Neck surgeries.
2. Should have straight forward function selection key with optimal user interface.
3. Should have an optimal display for operating elements which are single and clear to read.
4. Should have the capacity to store the settings of last session.
5. Should be able to operate different kinds of Hand pieces (sinus shaver, micro-debrider, high speed drills, micro saws, intra-drill & Stapes drill).
6. Should have soft start function and formulated error messages.
7. Should have inbuilt adjustable irrigation control.
8. The system should have multi-function two pedal foot switch.
9. The system should have the parameters to adjust from the control panel and the display should suggest operating parameters for a variety of ENT procedures.
10. The system should be suitable for wide variety of procedures ranging from Frontal Sinusotomies, Maxillectomy and other skull base surgeries to ultra –low speed oscillation for delicate airway cases.

### **B. DEBRIDER HANDPIECE- 2 nos**

1. Should have a powerful motor with silent and smooth running.
2. Should have straight suction path to reduce clogging and allow efficient tissue removal.
3. Should be able work up to the speed of 12000 RPM in forward rotation and 5000RPM in oscillation mode.
4. The debrider Hand piece should be capable of accepting various types of blades and burs.

### **C. DEBRIDDER BLADES AND BURRS**

1. Blades tip should rotate 360°
2. Blades for FESS - 5 nos each
  - a) 4.0 mm, tricut blade, 13 cm long with straight shaft
  - b) 4.0 mm, 11 cm long, with curved shaft 12°
  - c) 4.0 mm, 11 cm long, with curved shaft 40°
3. Laryngeal blades - 2 nos each
  - a) 2.9 mm skimmer blade, Length 13 cm, 18 cm, 22 cm, 15° curved shaft
  - b) 3.5 mm, skimmer blade, Length 13 cm, 18 cm, 22 cm, 15° curved shaft
  - c) 4.0 mm, tricut blade, Length 13 cm, 18 cm, 22 cm, 15° curved shaft
4. Tonsillectomy and Adenoidectomy blades - 4 nos each
  - a) 4.0mm, RADenoid blade, 13 cm length, 45° curved shaft
  - b) 4.0 mm, tonsillectomy balde, 13 cm length, 12° curved shaft
5. Sinus burrs – 3 nos each
  - a) 4.5 mm, round burr, 12.5 cm length, straight shaft
  - b) 4.0 mm, round burr, 15 cm length, 15° curved shaft
  - c) 5.0 mm, diamond burr, 15 cm length, 15° curved shaft
6. Should be provided with appropriate irrigation tubing for blades and burrs.

1 year warranty to be provided for the equipment.

## **SL.9. TEMPORAL BONE LAB EQUIPMENTS –1 NOS**

( ENT temporal bone work station)

1. The workstation should be mobile with sturdy wheels and lock
2. It Should be incorporated with the following components

### **A. MICROSCOPE – 1 NOS**

- I. Should be mounted on the workstation
- II. Shoud have three step magnification
- III. Should have fibreoptic illumination system



- IV. Should have provisions- C mount adapter and adapter for connecting to endoscope cameras
- 3. Should have provision for connecting a flat screen monitor for teaching purposes
- 4. Should be provided with 32 inch flat screen monitor with HDMI & USB port.
- 5. The console should have an inbuilt xenon light source. (dual light source optional)
- 6. Should have a in built console for connecting micromotor
- 7. Should have in built suction apparatus with twin glass jars of strong quality for collection
- 8. Should have a detachable temporal bone holder
- 9. 2 additional temporal bone holders to be provided
- 10. Should have an inbuilt drawer to keep the equipments
- 11. 2 straight and 2 contrangle micromotor handpieces to be provided
- 12. Burrs

- a. Standard Straight Burrs-
  - i. CUTTING Type: Set of Dia 0.6mm to 7mm, Length 7cm - 3 sets
- b. Diamond Burrs (Polishing)
  - i. STRAIGHT SHAFT: Set of Dia 0.6 to 7mm, Length 7cm -3 sets
- c. Oblong Burrs,
  - i. CUTTING: Set of Dia 1mm,1.5mm,5mm,6mm,7mm.Length 7cm -3 sets

**13. REVOLVING CHAIR WITH BACK SUPPORT – 3 NOS**

- a. The back rest should be C shaped.
- b. Both back rest and seat should be cushioned.
- c. Should be height adjustable.
- d. Should have a swivel of 360 degree.
- e. Should have sturdy wheels for moving on all sides

1 year warranty to be provided for the microscope.

**SI.10. NERVE STIMULATOR / MONITOR – 1 NOS**

- A. Current range from 0 .0 to 10mA.
- B. Should have a resolution of 0.01mA
- C. Should have a pulse frequency 0.200 secs (5 Hz) +5milliseconds
- D. Should have a pulse width of 0.0002sec + 20 milliseconds
- E. Should have a pulse off time of 0.1998 seconds
- F. Should have short stimulus pulse duration of 0.1ms.
- G. Should be provided with appropriate leads and cables
- H. 1 year warranty to be provided for the equipment.

**SI.11. ELECTROCAUTERY FOR ENT SURGERIES (DIGITAL) - 1 NOS**

**A. SPECIFICATION:**

- 1) Should be microprocessor based electro surgical unit with digital display for all power settings.
- 2) Should have facility to operate without stabilizer.
- 3) Should have Memory of previous activated power settings – last activated power settings are available on “Power On”
- 4) The machine should have a facility for power setting in Monopolar Cut – Pure cut 400watts, Low cut 300 watts, Blend cut 250 watts
- 5) The machine should have a facility for power setting in Monopolar Coagulation –Fulgurate 150 watts, Spray 120 watts, Desiccate 120 watts
- 6) The machine should have a facility for power setting in Bipolar Mode – Bipolar cut 120watts, Force (Macro) 100 watts and Micro 100 watts
- 7) Independent Mono-polar & Bipolar Output Can be used without Any Switch over from the Machine :- This facility Enables the operating surgeon to perform surgery without any Hassle.
- 8) Should have Patient Plate Contact Quality Monitoring system - With This Silicon Dual Type Patient Plate Contact Quality Monitoring Takes Place , the moment the contact between Plate & Patient reduces it stops the HF delivery with an audio visual indications

- 9) Should have flexible reusable single silicon patient plate
- 10) Should have Time out function facility in both Foot Switch & Hand Pencil to avoid the continuous delivery of power
- 11) Pedals should be explosion proof / water proof
- 12) Should have Audible / visual indication on cutting & coagulation
- 13) Should have self test facility provided
- 14) 1 year warranty to be provided for the equipment.

**B. STANDARD ACCESSORIES:**

- 1) Three Pedal Foot Switch with Auto lock plug – 1 NOS
- 2) Bipolar forceps with silicon cable – 2 NOS
- 3) Monopolar handle & four electrodes -1 NOS
- 4) Hand switch pencil ( re-useable) – 2 NOS
- 5) Silicon patient plate Single type with cable – 2 NOS
- 6) Bipolar Forceps Straight Long – 2 NOS
- 7) Bayonet Bipolar forceps Long – 2 NOS
- 8) Power Cord – 1 NOS

**SI.12. INSTRUMENTS FOR MAXILLECTOMY AND MANDIBULECTOMY – 1 SET**

- A. Light weight hand piece(saw) working in-
  1. Sagittal pattern- 1NOS
  2. Oscillating pattern- 1NOS
- B. Soft water resistant foot switch
- C. Light weight micro motor unit (generator console).
- D. Should be supplied with blades -

PROCEDURE	CUTTING EDGE	CUTTING DEPTH	THICKNESS	REQUIREMENT
1. MAXILLECTOMY	7-10mm	10-15mm	0.35-.40mm	10NOS
2. MANDIBULECTOMY	12-15mm	20-35mm	0.35-.40mm	10NOS

- E. Hand piece sterilisation case- 1NOS
- F. Racks for blades-1 NOS
- G. Nasal chisel, single guard, blunt round tip, straight, stainless steel-1 NOS
- H. Nasal chisel, single guard, blunt round tip, curved right, stainless steel-1 NOS
- I. Nasal chisel, single guard, blunt round tip, curved left, stainless steel-1 NOS
- J. Osteotome, with handle, 19 cm long, tip 2mm wide, stainless steel-2 NOS
- K. Osteotome, with handle, 19 cm long, tip 4mm wide, stainless steel-2 NOS
- L. Osteotome, with handle, 19 cm long, tip 9mm wide, stainless steel-2 NOS
- M. AUFRICHT nasal rasp, upward stroke, stainless steel-1 NOS
- N. AUFRICHT nasal rasp, downward stroke, stainless steel -1 NOS
- O. COTTLE'S stainless steel Mallet, 190mm, 7.5" one plane surface, one convex surface & light weight (approx 230-250 gm)- 2 NOS
- P. Giggle's saw with handle-2 NOS

**SI.13. ANATOMICAL MODELS AND CHARTS FOR ENT MUSEUM- 1 SET**

- A. Anatomical Ear with Pinna - 1 NOS
- B. Labyrinth with auditory Ossicles and tympanic membrane-1NOS
- C. auditory Ossicles-1NOS
- D. Ear Labyrinth-1NOS
- E. Nose with Paranasal sinus-1 NOS
- F. Interior model of Nose, Pharynx, & Larynx-1NOS
- G. Functional model of Larynx-1 NOS
- H. Cavities of Nose, Mouth and Pharynx with Larynx-1NOS

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- I. Head & neck with blood vessels and Brain-1 NOS
- J. Classic Skull with opened Lower jaw-1NOS
- K. Chart Of The Ear –Big Size-30x 50"Approx-1NOS
- L. Chart Of Muscles Of Neck Lateral View--30x 50"Approx-1NOS
- M. Chart Of Vessels Of Neck--30x 50"Approx-1NOS
- N. Chart Of Fascial Layers Of Neck -30x 50"Approx-1NOS

ALL CHARTS SHOULD BE PRINTED ON TEAR AND WATER RESISTANT PAPER WITH PLASTIC ROLLERS

#### **SL.14. ENT TREATMENT UNIT (CONSOLE) – 1 NOS**

1. Should have spraying device with built in automatic micro switch and spray directly coupling with compressor motor for Nasal spray.
2. Should have water irrigation system for aural and sinus irrigation.
3. Suction device should be operated by an automatic switch system
4. Should have an examination lamp and arm set assembled on the post pole
5. Should have an instrument tray which can be pulled out for checking the inside of the console
6. Should have a waste container for used instruments
7. Should have a mirror warmer
8. Should have inbuilt endoscope light source (xenon, preferably dual light source)
9. Should have a head light with adjustable head band with fibreoptic cable
10. Should have a hydraulic height adjustable and 360° revolving Doctor's chair with sturdy wheels
11. Should have a hydraulic patient chair, which is height adjustable (using a pedal switch), adjustable back rest ( from horizontal to vertical), adjustable head rest, foldable leg rest, foldable and rotatable arm rest and 360° revolving.
12. Should have an x-ray viewer
13. Should be equipped with 2 instrument tray
14. Should have an endoscope tray
15. Should have 32 inch LED flat screen monitor
16. Should be provided with 30°, 4mm oto- endoscope and 45°, 4mm, rigid nasal endoscope
17. should have a single chip camera which should be compatible with all standard rigid endoscopes and connectable to the monitor.
18. 1 year warranty to be provided

#### **SL. 15. ENT OPERATING MICROSCOPE FOR MINOR OT – 1 NOS**

1. Manual 5-step magnification changer
2. Objective lenses f=250mm, 300 mm and 400 mm
3. Tilttable, inclinable, binocular tube f=170 mm, interpupillary distance adjustment from 55 mm to 75 mm
4. Pair of widefield push-in eyepieces 10x or 12.5x.
5. Integrated Manual Fine focusing adjusting knob, focusing range should be 40mm approx
6. 120 degrees inclined coupling with brake
7. Handgrips on either side.
8. Coaxial fiber optic illumination system 12V 100W, halogen reflector lamps
9. Dual lamp system with quick change over
10. Continuously lamp intensity adjustment by control knob
11. Stable and sturdy floor stand on lockable castors, H shaped .
12. Sterilizable rubber caps for all knobs and dust cover
13. Should have an endoport to connect to a camera and monitor
14. Single chip camera c mount camera to connect to the microscope and monitor
15. 1 year warranty to be provided for the equipment.

### **SL.16. ADULT RIGID NASAL ENDOSCOPE 70° - 1 NOS**

1. 4mm, 18cm length, 70°, autoclavable, fiber optic light transmission incorporated.
2. Protection tube-sheath for telescope

### **SL.17. FORWARD OBLIQUE ENDOSCOPE (OTOENDOSCOPE 30°) -1 NOS**

1. Forward oblique telescope 30°, diameter 3mm, length 6cm, autoclavable, with fiberoptic light transmission incorporated.
2. Protection tube-sheath for telescope

### **SL.18. PORTABLE LIGHT SOURCE WITHOUT CABLE FOR RIGID NASAL ENDOSCOPE- 2 NOS**

1. Should have a light regulator.
2. Should be attachable to all standard nasal endoscopes.
3. Should have a Stainless steel body which is easy to clean.
4. Should be light weight and ergonomically designed.
5. Should have a rechargeable battery

### **SL.19. CAMERA WITH PROCESSOR FOR RIGID NASAL ENDOSCOPE-1NOS**

1. Full High Definition Camera Processor
2. Resolution of HD Camera should be 1920X1080P pixels
3. Should have Image sensor of 1 CCD Chip 1/3"
4. Should have Video recording/still images on USB stick
5. Resolution should be equal to 725 CCD or more than 725
6. Should have Anti moiré filter when used with fiber optic endoscopes
7. Light sensitivity should be 0.4 lux – 3 lux
8. Electronic shutter movement should be 1 / 50~1/100000 sec
9. Should have camera settings (Windows) for various types of endoscopes & surgeries
10. Should have 3 outputs, HDMI, S-video output, Composite output
11. Length of the cable should be 3 mtr
12. Should have the facility to freeze the picture via push buttons on the camera head
13. Should have the safety standards certificate like CE (or) FDA

### **SL.20. ACCESSORIES FOR RIGID NASAL ENDOSCOPE**

#### **A. ENT endoscopy Trolley- 1 Nos**

1. Trolley with wheel lock.
2. Multi plug point with power cord
3. Should have facility for fixing a TV monitor on the rack
4. 4- 5 racks

#### **B. LED TV Monitor - 1 NOS**

1. 40 INCH LED Monitor
2. Flat screen
3. Full HD resolution
4. Should have HDMI Port, USB port.
5. Should have built in Wifi, Ethernet and android operating system
6. Should have an inbuilt processor with 1 GB RAM and internal storage

