

Annexure-A

**Tender Notice No. 86-Chest/Med/RIMS-15**

**Imphal the 8<sup>th</sup> June 2015**

**(All the item should be US FDA approved/CE Certified)**

**Item no.1:- Multichannel Monitor- 5 nos.**

- I. Monitor should have facility for Monitoring the following parameters - ECG, respiration, SpO<sub>2</sub>, NiBp and Temperature & Dual Invasive Pressure.
- II. Monitor should have be Upgradeable to latest EtCO<sub>2</sub> module like Mainstream/micro stream.
- III. Monitor should have facility to display at least 6 waveforms.
- IV. Should have Integrated high resolution Backlit LED display. The display size should be more than 10.00 inch.
- V. The monitor should operate on scurfy Optical encoder (Rotary Knob) & Touch pads.
- VI. Weight of monitor should not be more than 4 kg.
- VII. At least one of the keys should be user configurable.
- VIII. Monitor should have ST segment analysis and Arrhythmia Detection facility.
- IX. SpO<sub>2</sub> should be branded High acuity Masimo/Nellcor with facility to display Plethysmograph, SpO<sub>2</sub> values and Pulse rate.
- X. The Monitor should have advanced Alarm management system with facility to grade the alarm by priority.
- XI. Monitor should have Reminder alarm and Timer facility.
- XII. Monitor should be able to store & recall trends for at least 160 Hours in both Graphical & Tabular format.
- XIII. Monitor should have facility to store & recall at least 5 pages of ECG for later review.
- XIV. To enable ease of viewing Monitor should have a separate Alarm page for display of at least 30 alarm conditions.
- XV. Monitor should have ease of setting of limits through Auto set as well as manually.
- XVI. Invasive Blood Pressure Zeroing should be easy with facility to Zero either from monitor OR from the cable close to the patient.
- XVII. Monitor should have port for connectivity to devices like IABP for easy synchronization.
- XVIII. Monitor should have facility for connecting High resolution Large displays through latest HDMI ports.
- XIX. Should be able to communicate with the central Station in either Wired OR wireless form.
- XX. Monitor should have USB port for ease of Patient data download as well as software uploads.
- XXI. Monitor should have Demo modes for teaching staff.
- XXII. Should have option for WIFI facility.



**Item No. 2:- Continuous Positive Airway Pressure - 5 nos.**

- (i) Should have back up Respiratory rate of 5-50 bpm
- (ii) Ti Control – Ti Max 0.3 -4 sec Ti Min 0.1- Ti Max
- (iii) Trigger: 5 settings
- (iv) Cycle: 5 settings
- (v) Should have air filter with electrostatic fibre Mesh
- (vi) Air Outlet: 22 mm taper
- (vii) Power supply: 90 W power supply unit  
AC 110 – 240 V 50 -60 Hz 2.2A
- (viii) Accessories- climate control tubing. Face Masks. SD card reader etc

**Item No.3:- DEFIBRILLATOR WITH CARDIAC MONITOR- 1no.**

- i. Biphasic, Manual and AED with voice prompt, compact and light weight
- ii. Energy selection 5J to 200J in steps.
- iii. Momentary energy selection access on front panel.
- iv. Should have adult and pediatric paddles integrated on same handle.
- v. Momentary charge key on front panel and on the apex hand.
- vi. Monitor should display selected and delivered energy
- vii. Should have disarm facility.
- viii. Energy should be delivered within 30ms after the detected R wave in synchronization mode.
- ix. Charging time maximum 5 sec for 200J.
- x. Should have battery back up for 50 discharges of 200J.
- xi. Should have ECG inputs through paddles or 3 lead cables.
- xii. Should have display for selected ECG input source (I, II, III, paddles)
- xiii. Lead off message should appear with alert tone.
- xiv. Amplitude gain of ECG waveform should be adjustable
- xv. Should have display for heart rate.
- xvi. Should have alarm for high and low HR.
- xvii. Should have an inbuilt thermal recorder.
- xviii. Should have enable/disable option for printer.
- xix. Should supply 2 bottle of jelly, 12 roll of thermal paper.
- xx. Should supply three pairs of AED pads
- xxi. Should operate on mains 230V, 50Hz.



Item No.4:- Plyusomnograph (PSG) – 1no.

- (i) Should have sampling Rate (Hz) of 8000
- (ii) With storage rate of (Hz) 500
- (iii) Resolution of 24 bits
- (iv) Recorded channels of 12: Pressure, Sound, Gravity (X/Y/Z) bipolar ExG
- (v) With 7 recorded Pulsoximeter and 7 derived signals
- (vi) Internal Memory of at least 2 GB
- (vii) Recording Time of at least 24 hrs
- (viii) Accessories:- (a) Sampling rate and resolution same as above  
(b) Recorded channels of 16: EEG 8, EOG2, EMG 5, ECG 1  
(c) Independent power source if required.

Item No.5:- Thoracovideoscope/Pleurovideoscope – 1 no.

- (i) Should have distal end diameter of 7.00 mm
- (ii) Should have insertion tube diameter of 7.00 mm
- (iii) Should have working length of  $\approx 270$  mm
- (iv) With total length of  $\approx 520$  mm
- (v) With angulation range of UP  $160^\circ$  DOWN  $130^\circ$
- (vi) Should have a working channel diameter of 2.8 mm
- (vii) Should be laser compatible: YAG, 810 NM Diode
- (viii) The Pleurovideoscope should be compatible with EVIS EXERA III Videoprocessor and light source

Item No.6:- Video bronchoscope – 1 no.

- (i) Should have field of view of  $120^\circ$
- (ii) With working length of  $\approx 600$  mm
- (iii) Instrument channel of 2.8 mm
- (iv) With insertion tube rotary function of  $\approx 120^\circ$
- (v) With distal end and insertion tube outer diameter of  $\approx 6$  mm
- (vi) Should have tip angulation range- equal or more than  $180^\circ$  UP and  $130^\circ$  DOWN
- (vii) Should have narrow band imaging capability
- (viii) Should be compatible with the proposed EBUS driver and probe
- (ix) The videobronchoscope should be compatible with the EVIS EXERA III video processor and light source.

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Item No.7:- **ICU VENTILATOR** - 5 nos.

**SPECIFICATIONS:-**

- 1.1) Ventilation modes
- VC-CMV/VC-AC
  - VC-SIMV
  - PC-BIPAP
  - SPN-CPAP
  - APRV
  - NIV (Noninvasive ventilation)

**Displayed values**

- 1.2) Colour touch LCD/TFT screen, 12 inch or more
- 1.3) Airways pressure measurement
- 1.4) Max. airway pressure, plateau pressure, mean airway pressure, PEEP 0 to 99 mbar (or hPa or cmH<sub>2</sub>O)
- 1.5) Minute volume (MV) Total \MV, spontaneous MV 0 to 99 L/min, BTPS
- 1.6) Tidal Volume VT Inspiratory VT, expiratory VT 0 to 3999 mL, BTPS
- 1.7) Leakage -compensation
- 1.8) Paramagnetic oxygen sensors
- 1.9) Inspiratory measured tidal volume VT pat
- 1.10) Breathing frequency Total and spontaneous respiratory rate, 150/min
- 1.11) Inspiratory O<sub>2</sub> - concentration 21 to 100 % Vol.
- 1.12) End tidal CO<sub>2</sub> with capnography integrated in ventilator with display of values and EtCO<sub>2</sub> waveform on the screen (preferred).
- 1.13) Breathing gas temperature 18 to 48oC (64.4 to 118.4 oF)
- 1.14) Curve displays Airway pressure, flow, tidal volume.
- 1.15) Ventilation ratio (I:E) 150:1 to 1:150



1.16) Patient type	ADULT, PEDIATRIC
1.17) Respiratory rate	2/min to 80/min
1.18) Inspiration time	0.2 to 10 s
1.19) Tidal volume	0.05 to 2.0 L, BTPS2
1.20) Inspiratory pressure	1 to 99 mbar (or hPa or cmH2O)
1.21) PEEP/interm. PEEP	0 to 35 mbar (or hPa or cmH2O)
1.22) Pressure support/ASB PEEP)	0 to 35 mbar (or hPa or cmH2O) (relative to PEEP)
1.23) Flow acceleration	5 to 200 mbar/s (or hPa/s or cmH2O/s)
1.24) O2 – concentration	21 to 100 Vol. %
1.25) Trigger sensitivity	1 to 15 L/min

### Alarms

1.26) Airway pressures	high/low
1.27) Expiratory minute volume	high/low
1.28) Tidal volume	high/low
1.29) Apnea-alarm time	15 to 60 sec
1.30) Spontaneous breathing frequency	high
1.31) Inspiratory O2 – concentration	high/low
1.32) Inspiratory breathing gas temperature	high

### Performance data

1.33) Maximum continuous flow for pressure Assit/spontaneous breathing	180 L/min
1.34) Valve response time T0 ... 90	5 ms
1.35) Control principle	time-cycled, volume –controlled pressure.
1.36) Safety valve opening pressure	120 mbar (or hPa or cmH2O)

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1.37) Emergency valve

Automatically enables spontaneous breathing with filtered ambient air if air and O<sub>2</sub> supply should fail.

1.38) Automatic gas switch-over function

if O<sub>2</sub> supply fails

1.39) Output for pneumatic medicament nebulizer Synchronized with inspiration.

**Power supply**

1.40) Mains power connection

100 V to 240 V, 50/60 Hz AC

1.41) Current consumption

Max. 1.3 A at 230 V, max. 3.4 A at 100 V

1.42) Internal battery

approx. 1 hour (optional extension up to

5 h)

**Gas supply**

1.43) Air

Turbine technology

1.44) O<sub>2</sub> gas supply

3 bar (43.5 psi) to 10 % up to 6 bar (87 psi).



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