

Annexure-A

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

Imphal the 22/02/16

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

Item no.1:- Multichannel Monitor (non-invasive)- 5 nos.

- I. Monitor should have facility for Monitoring the following parameters – ECG, respiration, SpO2, NiBp and Temperature & Dual Invasive Pressure.
- II. Monitor should have EtCO2 module with necessary accessories.
- 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. SpO2 should be branded High acuity Masimo/Nellcor with facility to display Plethysmograph, SpO2 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:- **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 cmH₂O)
- 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 O₂ – concentration 21 to 100 % Vol.
- 1.12) End tidal CO₂ with capnography integrated in ventilator with display of values and
EtCO₂ waveform on the screen (preferred).
- 1.13) Breathing gas temperature 18 to 48°C (64.4 to 118.4 °F)
- 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 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

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|--|--|
| 1.34) Valve response time T 0 ... 90 | S 5 ms |
| 1.35) Control principle | time-cycled, volume –controlled pressure. |
| 1.36) Safety valve opening pressure | 120 mbar (or hPa or cmH2O) |
| 1.37) Emergency valve | Automatically enables
spontaneous breathing with
filtered ambient air if air and O2
supply should fail. |
| 1.38) Automatic gas switch-over function
if O2 supply fails | - |
| 1.39) Output for pneumatic medicament nebulizer | Synchronized with inspiration. |

Power supply

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|------------------------------|--|
| 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

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|---------------------|--|
| 1.43) Air | Turbine technology |
| 1.44) O2 gas supply | 3 bar (43.5 psi) to 10 % up to 6 bar (87 psi). |



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