



Date: - 24<sup>th</sup> February 2016

**Corrigendum  
for**

**Equipment required in Pediatrics Department**

NIT Issue Date	:	21 <sup>st</sup> January 2016.
NIT No.	:	Admn/Tender/Pediatrics/2015-AIIMS.JDH
Pre Bid Meeting held on	:	09 <sup>th</sup> February 2016 at 03:00 PM
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**1. The following revised and additional specification will be added:-**

**1. Page No. 02, Chapter-I, Patient warming system, EMD (Rs.):**

**For**

Rs. 3,000

**Read**

Rs. 3,500

**2. Page No. 11, Item No. 1, Transport Incubator, Point No. 7:**

**For**

Should have external head up/down positioning facility.

**Read**

Deleted

**3. Page No. 11, Item No. 1, Transport Incubator, Point No. 8:**

**For**

Should have servo-control humidification system with humidity indicator, for ventilator module, inlet for oxygen and intravenous tubings.

**Read**

Should have passive humidification system, inlet for oxygen and intravenous tubings.

**4. Page No. 11, Item No. 1, Transport Incubator, Point No. 14:**

**For**

Should have heater output display in %.

**Read**

Should have heater output display

**5. Page No. 11, Item No. 1, Transport Incubator, Point No. 20:****For**

Should have forced air circulation system with a HEPA filter to remove airborne particles

**Read**

Should have air intake micro-filter to remove airborne particles

**6. Page No. 11, Item No. 1, Transport Incubator, Point No. 31:****For**

Should have option for humidification

**Read**

Should have option for passive humidification

**7. Page No. 14, Item No. 6, Technical Specification of Pediatrics Intubating Mannequin:****For**

1. Model of Seamless Limbs, pediatric patient for practicing various procedures.
2. It should have seamless upper and lower limbs and should be able to be positioned in sitting, and sleeping position as in real patients.
3. Should have capability of practicing airway suction, oral, nasal or tracheostomy suction.
4. Practice of percutaneous Endoscopic Gastrostomy (PEG) care.
5. Feeding tube management should be possible.
6. Catheterization practice of male and female.
7. Intravenous line insertion, intraosseous needle insertion, central venous line insertion and arterial line insertion should be possible.
8. The equipment should be USFDA or European CE approved.

**Read**

1. It should be designed with a unique hygienic system.
2. It should have protection from cross contamination.
3. It should be maintenance free.
4. It should be made of high quality material that ensure long life.
5. The head should be rotatable and extendable
6. Airway should open in the correct (sniff) position.
7. Stomach ventilation should be visual.
8. Realistic anatomy should allow the trainee to find correct compression point, making the chest/ abdomen rise realistically.
9. Brachial pulse should provide correct realistic training.
10. Obstruction of the airway by an on/ off slider can be stimulated by the instructor.
11. It should have provision of comfort and safety through look listen-feel concept.
12. Intubation trainer for teaching intubation techniques with laryngoscopes, airways, endotracheal tubes, LMA (Laryngeal mask Airway) and other Auxiliary aids for airway management should have following features:
13. Accurate simulation of mouth, nostrils, teeth tongue, pharynx, larynx, epiglottis, vocal cords, trachea, oesophagus and lungs.
14. Realistic lifting and tilting of head.
15. Realistic movement of the head, cervical spine and jaw to stimulate relevant anatomical changes during intubation.
16. The left side of the head should be open to permit supervision of the student's performance.
17. Training should be possible with endotracheal tube, Nasotracheal tubes, fibre optic intubation, LMA, Oropharyngeal airway, nasopharyngeal tubes etc.

18. Should have sensitivity adjustable Acoustic audio alarm triggered by excess pressure on the upper teeth.
19. The model should provide thoracic movement by positive pressure ventilation with the help of bag valve mask.
20. The following training should be practised in the model:
  - One-side lung intubation
  - Nasal and oral suction
  - Chest compression
21. The model should be made of silicon rubber and should have similar appearance like human body.
22. The main body should be supplied with silicon spray and storage.
23. The equipment should be USFDA or European CE approved.
24. Rates of consumables and accessories should be quoted separately in the financial bid.

**8. Page No. 18, Item No. 13, Technical Specification of Heated humidified high flow nasal cannula:**

**For**

1. Microprocessor controlled system
2. Type of airflow: Horizontal
3. 70% of air should be recirculated to the cabinet work area through HEPA filter and the 30% balance should be exhausted through HEPA. The balance should be dynamic to ensure the 70/30 recirculation/exhaust air
4. The instrument must have HEPA filters on down flow as well as exhaust with an efficacy of 99.99% for particles sized of 0.3 $\mu$ . (Calibration certificates along with DOP test report shall have to be submitted at the time of supply of instrument)
5. The dimensions of the working chamber should be in the following range:
  - a. Length : 90-120 cm
  - b. Width : 40-60 cm
  - c. Height : 50-80 cm
6. The main body and working chamber of the cabinet should be made of stainless steel, rigid and rustproof with removable trays
7. The cabinet should have an electrically operated sliding front sash made of safety (UV) glass with a provision for manual operation of the sliding front window. Also, the sliding front sash should have true air and aerosol tight electrical shahs.
8. Front door: clear transparent sturdy material
9. Work chamber should be fitted with a Fluorescent lamp for illumination and should have programmable UV light cycle.
10. The unit should have microprocessor control keys with large icons and a large graphical display with provision for the permanent display of the following key cabinet conditions.
 

a.	Inflow and down flow air velocity
b.	Exhaust and recirculated airflow
volumes	
c.	Time and date
d.	Residual lifetime of filters & total
time of cabinet operation (optional)	
11. Alarm notification in the following situations:
 

a.	Low inflow velocity
b.	Low down flow air velocity
c.	HEPA filter life
d.	Alarms for clogged filters
e.	Other malfunction
12. Compatible at a power supply of 220 V, 50Hz
13. Noise level: < 65 dB

14. Basic cabinet should be termite and insect resistant and washable
15. Accessories: Manometer, gas inlet, castors
16. The cabinet should be with a stand with lockable castors
17. The spares and accessories which are not covered under warranty and CMC must be mentioned clearly and price should be quoted separately and frozen during the warranty and CMC period.
18. Operator and technical manual
19. Should be USFDA approved or European CE certified. Certification documents with validity dates should be submitted along with technical bid. In case, no certificate is submitted, the quotation shall be considered invalid.
20. The company should give the certificate that the model quoted is the latest and not obsolete; & spares will be easily available for next 5-7 years.

**Read**

1. Delivers servo controlled, humidified, heated, air oxygen blended gas.
2. It should have integrated motor/turbine to deliver air flows with flow settings of 2 to 25 L/min (in increments of 1L/min).
3. Inbuilt O<sub>2</sub> sensor to deliver the Fio<sub>2</sub> from 21% to 100%
4. It should have inspiratory tubing with inbuilt spiral heater wire for superior condensate control in varying environments.
5. The tubing should light weight and flexible.
6. Graphical/numerical display menu for settings of Fio<sub>2</sub> & temperature.
7. Visual alarm of malfunctioning of temperature and FiO<sub>2</sub>.
8. Should be supplied with pole/trolley to install the machine
9. The system should have inbuilt disinfection mode to disinfection the internal blower of the machine to prevent cross infection.
10. Should be supplied with a suitable voltage stabilizer with the machine.
11. Accessories to be supplied: Nasal cannula for premature neonates: 20, Nasal cannula for neonates: 20, Nasal cannula for infants and pediatric patients: 20; Circuit: 30
12. Electrical rating: 50-60 Hz 100-220V ~ 2.2 A (2.4 A max).
13. Original literature, and not the photocopy, to be supplied with the quotation.
14. List of essential spares, accessories, expendables and consumables expected to be used in one year should be provided and quoted separately. Prices so quoted to be frozen for 7 years including warranty. Frozen rate should not be more than price of the quoted rate at the time of purchase.
15. All Items should comply with the international safety regulation and certification and should be US FDA approved.

**9. Page No. 19, Item No. 14, Technical Specification of Fibreoptic bronchoscope:**

**For**

1. Device for stimulation and collection of sweat for analysis in the diagnosis of cystic fibrosis.
2. It should operate on principles of Pilocarpine iontophoresis for sweat induction by using electric current and Capillary action for sweat collection.
3. Delivery of Pilocarpine drug should be through pre-dosage ready to use discs.
4. Sweat collection process should be easily visible to estimate rate of sweat production and amount collected.
5. Sweat collection should be possible in clean sealable vials with volumes of 10 – 50 microliter.
6. Adequate Iontophoresis current to be automatically adjusted by the device to prevent burns on the skin.
7. Iontophoresis Time to be automatically regulated between 4 minutes - 7 minutes at operating current.
8. Should give audible signal in case of fault or error in device performance.
9. Should be portable to use at near patient bed-side, operating on batteries.
10. Low Battery Indicator required.

11. Equipment should be capable of operating at 5° to 35 °C & maximum relative humidity of upto 80%
12. Device to be supplied with attachment straps of small (child) and large (adult) sizes.
13. Preventive maintenance contract should be available after warranty period, which should include supply of atleast 20 sweat collection capillary discs.
14. The equipment should be USFDA or European CE approved.

**Read**

**a) Adult Fibre optic Bronchoscope -2.8 mm**

1. Field of View should be 120 degree or more
2. Depth of field should be 3 – 50 mm or better
3. Distal end diameter should be 6 mm or less
4. Insertion tube diameter should be 6 mm or less
5. Channel diameter should be 2.8 mm or more
6. Should be light weight and easy to use
7. Working length should be 600 mm or more
8. Total length should be 890 mm or better
9. UP and DOWN Angulation should be 180 degree and 130 degree or better
10. Should have telescopic eye piece
11. Can be fully immersed in disinfectant solution and water
12. Should have autoclavable suction valve to avoid cross-contamination risk.
13. Should have facility to check leakage by automatic pressure regulated leak tester.
14. Should be compatible with 150 watt halogen light source.

**b) Pediatric Fibre optic Bronchoscope- 4.4 mm**

1. Large Field of View should be 120 degree or more
2. Depth of field should be 3 – 50 mm or better
3. Distal end diameter should be 3.4 mm or less
4. Insertion tube diameter should be 3.6 mm or less
5. Channel diameter should be 1.2 mm or more
6. Should be light weight and easy to use
7. Working length should be 550 mm or more
8. Total length should be 840 mm or better
9. UP and DOWN Angulation should be 180 degree and 130 degree or better
10. Can be fully immersed in disinfectant solution and water
11. Should have autoclavable suction valve to avoid cross-contamination risk.
12. Should have facility to check leakage by automatic pressure regulated leak tester.
13. Should be compatible with 150 watt halogen light source.

**c) Ultra slim Bronchoscope -6mm**

1. Field of view : 90 degree or more
2. Direction of view : 0 degree, forward viewing
3. Depth of field : 2 to 50 mm or better
4. Distal end outer diameter : 2.8 mm or less
5. Insertion tube outer diameter : 2.8 mm or less
6. Tip Bending range : Up 180 deg or more, Down 130 deg or more
7. Working length : 550 mm or more
8. Channel inner diameter : 1.2 mm or more
9. Minimum Visible distance of : 1.5 mm or closer from distal end.
10. Leakage tester should be provided along with the system.
11. 4 halogen bulbs should be supplied with the bronchoscope.
12. 4 biopsy forceps should be supplied with bronchoscope.
13. All standard accessories must be quoted separately and should be USFDA and European CE approved. Standard accessories should contain eyepiece cap, ETO cap and carrying case, cleaning brush, cylinder cleaning brush, rubber inlet seals etc.

**Specification for Halogen Light Source**

1. Should be compatible with semi-automatic leakage tester

2. Unit should be compact and light weight.
  3. Light source –150 watt halogen.
  4. Should have Inbuilt air pump.
  5. Compatible with all Fibre optic Bronchoscope
- The equipment should be USFDA and European CE approved.

#### **10. Page No. 19, Item No. 15, Technical Specification of Patient Warming system:**

##### **For**

1. Delivers servo controlled, humidified, heated, air oxygen blended gas.
2. It should have integrated motor/turbine to deliver air flows with flow settings of 2 to 25 L/min (in increments of 1L/min).
3. Inbuilt O2 sensor to deliver the Fio2 from 21% to 100%
4. It should have inspiratory tubing with inbuilt spiral heater wire for superior condensate control in varying environments.
5. The tubing should light weight and flexible.
6. Graphical/numerical display menu for settings of Fio2 & temperature.
7. Visual alarm of malfunctioning of temperature and FiO2.
8. Should be supplied with pole/trolley to install the machine
9. The system should have inbuilt disinfection mode to disinfection the internal blower of the machine to prevent cross infection.
10. Should be supplied with a suitable voltage stabilizer with the machine.
11. Accessories to be supplied: Nasal cannula for premature neonates: 20, Nasal cannula for neonates: 20, Nasal cannula for infants and pediatric patients: 20; Circuit: 30
12. Electrical rating: 50-60 Hz 100-220V ~ 2.2 A (2.4 A max).
13. Original literature, and not the photocopy, to be supplied with the quotation.
14. Company should certify that model quoted is latest and not obsolete, and spares are available for minimum 7 years including warranty.
15. List of essential spares, accessories, expendables and consumables expected to be used in one year should be provided and quoted separately. Prices so quoted to be frozen for 7 years including warranty. Frozen rate should not be more than price of the quoted rate at the time of purchase.
16. All Items should comply with the international safety regulation and certification and should be US FDA approved.

##### **Read**

##### **Technical specifications for blankets for convective air patient warming system**

1. The blankets for convective air patient warming system should be compatible with the basic warming system.
2. The blankets should be light and resistance to puncture and fluids.
3. The blankets should be latex free, made of 2 ply material - non woven outer layer and polyethylene inner layer. They should be precision dye cut to have an even airflow and smooth surface.
4. The blankets should be disposable, 150 pediatric full body blankets to be provided with each warming system.

##### **Specifications for convective air patient warming system**

1. The convective air patient warming system should have a basic warming unit and disposable blankets.
2. The convective air patient warming system should have fast warming reaching 38 deg C within 30 sec.
3. The warming system should have temperature range settings of 30 to 34 deg C, 36 to 40 deg C and 42 to 46 deg C.
4. The warming system should have an automatic step down facility. After 45 min temperature should come down from high mode to medium mode.
5. Should be USFDA or European CE certified.
6. Should have Hepa filter of 0.2 to 0.3 micron filtration efficacy.

7. Multiple mounting options: Cart, bedrail, IV pole, floor & Stainless steel trolley is also available for easy transportation in ICU/Post OP.
8. Machine should have auto power cut facility to control the set temperature and sensors to prevent patient burn.
9. Machine should have hour meter to understand total run time.

**Administrative Officer**  
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