

Tender
For
Equipments required for Department of Pediatrics
At
All India Institute of Medical Sciences, Jodhpur

NIT Issue Date : September 02, 2013
Pre-Bid Meeting : September 12, 2013 at 03:00 PM.
Last Date of Submission : September 26, 2013 at 03:00 PM.



All India Institute of Medical Sciences, Jodhpur
Basni Phase - II, Jodhpur, Rajasthan-342005.
Telephone: 0291- 2740532, email: aoadmin@aiimsjodhpur.edu.in
www.aiimsjodhpur.edu.in

All India Institute of Medical Sciences (AIIMS), Jodhpur, Rajasthan, an apex healthcare institute being established by Parliament of India under aegis of Ministry of Health & Family Welfare, Government of India, invites sealed tenders for supply & installation of the following items at the institute. You

Tender – Supply, Installation and Commissioning of Equipment required in Paediatrics Department
are requested to quote your best offer along with the complete details of specifications, terms & conditions.

ANNEXURE 'A'

S.No	NIT No.	Qty	EMD (in Rs.)	Item Description
1	Admin/General/201/2013-AIIMS-JDH	6	20,400	Neonatal Open Care System
2	Admin/General/202/2013-AIIMS-JDH	1	4,800	Neonatal resuscitation trolley
3	Admin/General/203/2013-AIIMS-JDH	2	1,960	Weighing machine (infant)
4	Admin/General/204/2013-AIIMS-JDH	4	1,36,000	Ventilator(neonatal)
5	Admin/General/205/2013-AIIMS-JDH	4	1,20,000	Pediatric Ventilator
6	Admin/General/206/2013-AIIMS-JDH	4	10,000	Humidifier
7	Admin/General/207/2013-AIIMS-JDH	3	3,300	Phototherapy machine-single surface LED
8	Admin/General/208/2013-AIIMS-JDH	3	3,000	Phototherapy machine-double surface LED
9	Admin/General/209/2013-AIIMS-JDH	4	8,000	Pulse oximeter
10	Admin/General/210/2013-AIIMS-JDH	1	9,000	Pulse oximeter (high end)
11	Admin/General/211/2013-AIIMS-JDH	5	85,000	Neonatal multipara monitors
12	Admin/General/212/2013-AIIMS-JDH	5	85,000	Pediatric multipara monitors
13	Admin/General/213/2013-AIIMS-JDH	5	25,000	Multipara ward monitors
14	Admin/General/214/2013-AIIMS-JDH	1	4,500	Micromethod bilirubin analyzer
15	Admin/General/215/2013-AIIMS-JDH	1	3,500	Transcutaneous bilirubin analyzer
16	Admin/General/216/2013-AIIMS-JDH	2	2,600	Volumetric infusion pump
17	Admin/General/217/2013-AIIMS-JDH	1	1,980	Patient warming system

(Refer Specifications Details as per Annexure-‘B’)

Quotation should be sealed and superscribed with tender number and address to:

“Administrative Officer
All India Institute of Medical Sciences, Jodhpur
Basni, Phase-II
Jodhpur-342005, Rajasthan”.

The sealed quotations should reach the Institute, latest by September 26, 2013 at 03:00 PM and it will be opened on same day at 05:00 PM in the Project Cell, Resident Complex, AIIMS, Jodhpur of the Institute in the presence of the bidder(s) or their authorized representative(s), who will present at the scheduled date and time.

Terms & Conditions:

1. **Earnest Money Deposit:** The bidder shall be required to submit refundable amount as Earnest Money Deposit (EMD) and a non-refundable tender fee for an amount of **1,000/- (Rupees One Thousand only)** for each NIT by way of demand drafts only as mentioned in Annexure 'A'. The demand drafts shall be drawn in favour of **“All India Institute of Medical Sciences, Jodhpur”**. The demand drafts for earnest money deposit must be enclosed in the envelope containing the technical bid.

The EMD of the successful bidder shall be returned after the successful completion of contract / order and for unsuccessful bidder(s) it would be returned after award of the contract. Bid(s) received without demand drafts of EMD shall be liable for rejection.

The firms who are registered with National Small Industries Corporation (NSIC) / OR Small Scale Industrial (SSI) are exempted to submit the EMD (Copy of registration must be provided alongwith).

2. **Rate:** Rates should be quoted in Indian Rupees (INR) on DOOR Delivery Basis at AIIMS, Jodhpur, Rajasthan, Inclusive of all the Charges, with break-ups as:

- Basic Cost.
- VAT /CST as applicable.
- Total Cost (F.O.R at AIIMS Jodhpur).

3. **Validity:** The quoted rates must be valid for a period for 120 days from the date of closing of the tender. The overall offer for the assignment and bidder(s) quoted price shall remain unchanged during the period of validity. If the bidder quoted the validity shorter than the required period, the same will be treated as unresponsive and it may be rejected.

In case the tenderer withdraws, modifies or change his offer during the validity period, bid is liable to be rejected and the earnest money deposit shall be forfeited without assigning any reason thereof. The tenderer should also be ready to extend the validity, if required, without changing any terms, conditions etc. of their original tender.

4. **Delivery & Installation:** The items shall be delivered within 30 days of issue of supply order at AIIMS, Jodhpur. Satisfactory installation / commissioning and handover of the items will be completed within two weeks from the date of receipt of the goods at the AIIMS, Jodhpur premises. The successful tenderer will also provide required training for supplied items at AIIMS-Jodhpur.

The goods should be manufactured after adoption of latest technology.

5. **Sample:** AIIMS Jodhpur reserves the right to ask the tenderers for submitting the sample of each item for which rates have been quoted, Technically Qualified Bidders may be asked to submit samples along with their quoted items nos. and their firm name without indicating any prices before opening of Financial Bid to AIIMS, Jodhpur for Inspection.

- 6. Guarantee / Warrantee Period: For the equipment value upto Rs. 5 Lakh:**
The Tenderers must quote for 2 years comprehensive warranty (Including all Spares, Accessories and Labour) from the date of completion of the satisfactory installation. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. Also the bidders are requested to submit their quote (Rates) for subsequent 3 years Comprehensive Maintenance Contract (CMC) (Including All Spares, Accessories and Labour). Failure to comply this condition will entail the rejection of the bids. The price comparison shall be taking into account on basic price and post warranty CMC.
CMC Charges will be payable separately at the time of start of CMC.
- 7. Guarantee / Warrantee Period: For the equipment value above Rs. 5 Lakh:**
The Tenderers must quote for 5 years comprehensive warranty (Including all Spares, Accessories and Labour) from the date of completion of the satisfactory installation. The warranty charges shall not be quoted separately otherwise the offer shall be summarily rejected. Also the bidders are requested to submit their quote (Rates) for subsequent 5 years Comprehensive Maintenance Contract (CMC) (Including All Spares, Accessories and Labour). Failure to comply this condition will entail the rejection of the bids. The price comparison shall be taking into account on basic price and post warranty CMC.
- 8. Performance Security:** The supplier shall require to submit the performance security in the form of irrevocable Bank Guarantee (BG) / or Fixed Deposit Receipt (FDR) issued by any Nationalised Bank for an amount of which is equal to the 10% of the order value and should be kept valid for a period of 60 day beyond completion of all the contractual obligation including CMC period.
- 9. Payment Term:**
- 90% payment of the total order value shall be released after the successful installation/ commissioning of the ordered goods against the submission of the test report.
 - Balance 10% of the order value shall be released after the submission of the performance security.
- 10.** Bidder shall submit a copy of the tender document and addenda thereto, if any, with each page of this document should be signed and stamped to confirm the acceptance of the entire terms & conditions as mentioned in the tender enquiry document.
- 11.** Signed & stamped compliance sheet of the technical specification of the goods with technical printed literature must be enclosed with the bid.
- 12.** After due evaluation of the bid(s) Institute will award the contract to the lowest evaluated responsive tenderer.
- 13.** Conditional bid will be treated as unresponsive and it may be rejected.
- 14.** The Institute reserves the right to accept in part or in full or reject any or more quotation(s) without assigning any reasons or cancel the tendering process and reject all quotations at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder or bidder(s).
- 15. Quantity:** The quantity of item given in the tender is tentative, which may be increased or decreased as per the institute's requirement.

16. Applicable Law:

- The contract shall be governed by the laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such Commercial dealings / processing.
- Any disputes are subject to exclusive jurisdiction of Competent Court and Forum in Jodhpur, Rajasthan, India only.
- The Arbitration shall be held in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the venue of arbitration shall be at Jodhpur. The decision of the Arbitrator shall be final and binding on both the parties.
- Force Majeure: Any delay due to Force Majeure will not be attributable to the supplier.

"PRE –BID Meeting" with the intending bidders shall be held on 12th Sep 2013 from 03:00 P.M. onwards at AIIMS, Jodhpur.

Specifications

Annexure B

S.No	Tender Name	Specification	QTY
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1.	Neonatal Open Care System	1. Essential parts a) Quartz based warming system with microprocessor based controls, probes & alarms b) Cart & bassinet c) Examination light d) Facility of inbuilt baby weighing machine e) Facility for bed height adjustment f) X-ray cassette holder 2. Cart a) Should swivel on 4 wheels of at least 4" diameter with foot operated brakes on at least 2 front wheels 3. Dimensions a) Height - 180- 200 cms b) Width - 60-70 cms c) Depth - 100-120 cms d) Working level - 95-105 cm 4. Bassinet a) Collapsible transparent acrylic side walls 5. Mattress a) Width - 55-60 cms b) Length - 65-75 cms c) Thickness - 3-5 cm d) Material i. Soft and easy to clean ii. X-ray transparent iii. Fire retardant iv. Allows air to pass through but does not allow water to seep in 6. Bassinet tilt a) Should allow tilt for Trendelenburg as well as reverse Trendelenburg position b) Should be swivable on both sides of vertical column to facilitate intubation c) Should have continuous variable bed tilting mechanism for a bed tilt on either side d) Should have motorized variable height adjustment mechanism to vary the cradle/baby bed between from the ground, should be able to adjust height of the bed from either side of the warmer e) Should have inbuilt weighing scale which can weigh up to 10 kg with facility for Tare facility and for data storage of the baby weight (optional only for the data storage) 7. Warming system a) Quartz based heating system b) Control - Microprocessor controlled with soft touch control panel c) Self test function performed at power on d) Digital display should show following parameters i. Set temperature ii. Present temperature of the baby iii. Heater output e) Mode - Manual & skin (servo) f) Manual mode i. Adjustable in steps from 0 to 100% in increments of 10%	6 Nos.
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		ii. Heater power should be reduced to 50 - 60% after 10-15 minutes in manual mode for baby safety g) Skin mode (servo mode) i. Set point range - 32 – 38 degrees C h) Skin temperature display i. Accuracy - ± 0.2 degrees C ii. Resolution - 0.1 degree C i) Temperature probe- Wire should be easy to clean and long lasting j) No need of temperature probe calibration k) Control unit should have facility to convert Centigrade to Fahrenheit conversion l) Should have LCD graphical display with the facility of trending temperature 8. Alarms a) Audiovisual alarms with a display of text messages about the alarms i. Probe failure ii. Heater failure iii. High and low baby temperature (more than 0.5 deg C difference) iv. Power failure v. System failure vi. Silence/reset switch 9. Heating unit - Should be swivable for accommodating X-Ray unit and should have self lock facility. 10. Examination light a) Illuminance - at least 75 foot candles at mattress center b) Should have dual examination lamp with dimming facility 11. Apgar Timer a) Timer with stopwatch facility b) Reset facility 12. I.V. stand a) Strong IV stand (S.S) with height adjustable and facility to fix large number of infusion pumps 13. Monitor shelves - Two in number 14. X- Ray cassette holder a) Sliding holder located just below undersurface of bassinet, with markings to help placement of cassette 15. Power consumption - Less than 1 K.W 16. All metal parts of the equipment should be corrosion resistant and Epoxy/Powder coated 17. All consumables required for installation and standardization of system to be given free of cost 18. Availability of spares for at least 7 years after date of installation 19. Standards, safety and training a) Should be US FDA or European CE approved product and submission of the respective certificate of US FDA or European CE is mandatory b) Manufacturer should be ISO certified for quality standards c) Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard) General requirement for Electrical safety of Medical Equipment d) Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 20. Items covered under warranty/CMC a) Consumables should be available for at least next seven years. b) Prices of consumables should be quoted separately and frozen for the period of warranty and CMC. 21. Power supply a) Power input to be 220-240VAC, 50Hz b) Suitable Autovoltage corrector with spike protector should be available 22. Environmental factors	
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| | <ul style="list-style-type: none"> a) Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive b) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% c) The unit shall be capable of operating continuously in ambient temperature of 20-40 deg C and relative humidity of 15-90% <p>23. Documentation</p> <ul style="list-style-type: none"> a) User/Technical/Maintenance manuals to be supplied in English b) Certificate of calibration and inspection from factory c) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out <p>24. Essential accessories to be supplied at initial purchase with each piece of equipment</p> <ul style="list-style-type: none"> a) Reusable temperature probes (full set) : 5 nos/per equipment. <p>25. The rates of consumable accessories should also be quoted separately</p> <p>26. Onsite physical demonstration/training of the equipment to all the end users with all the requested facilities will be mandatory</p> | |
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2.	Neonatal resuscitation trolley	01. Essential parts - Quartz based warming system with microprocessor based controls, probes & alarms - Cart & bassinet - Examination light - Facility of inbuilt baby weighing machine - Facility for bed height adjustment - In built pulse oximeter - Facility for oxygen supply and negative suction - APGAR timer - X-ray cassette holder 02 Cart - Should swivel on 4 wheels of at least 4" diameter with foot operated brakes on at least 2 front wheels 03 Dimensions - Height - 180- 200 cms - Width - 60-70 cms - Depth - 100-120 cms - Working level - 95-105 cm 04 Bassinet - Collapsible transparent acrylic side walls 05 Mattress - Width - 55-60 cms - Length - 65-75 cms - Thickness - 3-5 cm - Material - Soft and easy to clean - X-ray transparent - Fire retardant - Allows air to pass through but does not allow water to seep in 06 Bassinet tilt - Should allow tilt for Trendelenburg as well as reverse Trendelenburg position - Should be swivable on both sides of vertical column to facilitate intubation - Should have continuous variable bed tilting mechanism for a bed tilt on either side - Should have motorized variable height adjustment mechanism to vary the cradle/baby bed between from the ground, should be able to adjust height of the bed from either side of the warmer - Should have inbuilt weighing scale which can weigh up to 10 kg with facility for Tare and facility and for data storage of the baby weight (optional) 07 Warming system - Quartz based heating system - Control - Microprocessor controlled with soft touch control panel - Self test function performed at power on - Digital display should show following parameters - Set temperature - Present temperature of the baby - Heater output - Mode - Manual & skin (servo) - Manual mode - Adjustable in steps from 0 to 100% in increments of 10% - Heater power should be reduced and maintain at 60% after 10 minutes in manual mode for baby safety - Skin mode (servo mode) - Set point range - 32 – 38 degrees C - Skin temperature display - Accuracy - ± 0.2 degrees C - Resolution - 0.1 degree C - Temperature probe-Wire should be easy to clean and long lasting - No need of temperature probe calibration	1 Nos
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		k) Control unit should have facility to convert Centigrade to Fahrenheit conversion l) Should have LCD graphical display with the facility of trending temperature 08 Alarms b) Audiovisual alarms with a display of text messages about the alarms vii. Probe failure viii. Heater failure ix. High and low baby temperature (more than 0.5 deg C difference) x. Power failure xi. System failure xii. Silence/reset switch 09 Heating unit - Should be swivable for accommodating X-Ray unit and should have self lock facility. 10 Examination light c) Illuminance 100 foot candles at mattress center d) Should have dual examination lamp with dimming facility 11 Apgar Timer c) Timer with stopwatch facility d) Reset facility 12 Oxygen outlet a) Flow range - 0-15 L/min b) Should have an accuracy of at least 0.5 L/min if flow is kept below 5 l/min c) Provision of humidification with a humidifier bottle d) Should have at least 2 meters length hose 13 Suction system with negative pressure of at least 100 mm Hg (or 120 cm H2O) 14 Pulse oximetry a) Should be based on Masimo-SET technology to take care of low perfusion states and motion artifacts b) Range 1-100% c) Accuracy $\pm 3\%$ in 70-100% range 15 I.V. stand b) Strong IV stand (S.S) with height adjustable and facility to fix large number of infusion pumps 16 Monitor shelves - Two in number 17 X- Ray cassette holder b) Sliding holder located just below undersurface of bassinet, with markings to help placement of cassette 18 Power consumption - Less than 1 K.W 19 All metal parts of the equipment should be corrosion resistant and Epoxy/Powder coated 20 All consumables required for installation and standardization of system to be given free of cost 21 Consumables and accessories should be available for at least next seven years 22 Prices of consumables and accessories should be quoted separately and frozen for the period of warranty and CMC 23 Standards, safety and training e) Should be UD FDA or European CE approved product and the corresponding certificate should be submitted at the time of bid f) Manufacturer should be ISO certified for quality standards g) Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment h) Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 24 Items covered under warranty/CMC a) Prices of consumables should be quoted separately and frozen for the period of warranty and CMC. b) Availability of consumables for at least 7 years after date of installation	
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		25 Power supply a) Power input to be 220-240VAC, 50Hz b) Suitable Autovoltage corrector with spike protector should be available 26 Environmental factors a) Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or should comply with 89/366/EEC; EMC-directive b) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% c) The unit shall be capable of operating continuously in ambient temperature of 20-40 deg C and relative humidity of 15-90% 27 Documentation a) User/Technical/Maintenance manuals to be supplied in English b) Certificate of calibration and inspection from factory c) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out 28 Essential accessories to be supplied at initial purchase with each piece of equipment a. Reusable temperature probes (full set) : 5 nos/per equipment. b. Reusable saturation probes with extension cable if any : 5 nos/per equipment 29 The rates of consumable accessories should also be quoted separately 30 Onsite physical demonstration/training of the equipment to all the end users with all the requested facilities will be mandatory	
3.	Weighing machine (infant)	1. Microprocessor based digital electronic weighing scale with facility to weigh lying down as well as standing baby 2. Weight range: 0- 20 kg (0 - 44 lbs) 3. Accuracy +/- 5gms (0.2 oz), resolution 5 gms (0.2 oz) 4. Minimum weight measurement: 20 gms 5. Weighing unit: Standard display in grams and should have kg/lbs switch-over. 6. Functions: • Tare • Automatic switch off • Auto hold 7. Should have Tare range: up to 10 kg/ 22 lbs 8. Automatically switches off after 5-10minutes of non-use 9. Should have a inbuilt handle as well as the carrying case to make the battery powered scale easy to transport and anywhere to use 10. Bassinet: curved surface to prevent fall of baby 11. Basinet size: 600 x 300 mm ±25mm 12. Made up of high quality sturdy plastic/acrylic tray; easy to clean 13. LED display should be large enough to be visible from a distance of 3-4 feet to a normal eye 14. The unit should be able to run on mains and/or inbuilt battery with power supply of 220 / 240 V, 50-60Hz with DC adaptor 15. Should be US FDA and CE approved (certificate to be submitted) 16. ISO 9001 certified manufacturer (certificate to be submitted) 17. Smooth surface/finishing allows for easy cleaning/disinfection 18. The scales are only cleaned with normal disinfectants 19. All vital parts made of rust proof materials 20. Splash proof and shock resistant light-weight body 21. Training and installation at end-user site 22. Should have local service facility and should have the necessary equipments to carry out preventive maintenance test 23. Onsite physical demonstration and training of the equipment to all the end users with all the requested facilities will be mandatory 24. Availability of spares for at least 7 years after date of installation 25. Items covered under warranty/CMC 1. Prices of consumables should be quoted separately and the prices should be frozen for the period including warranty and CMC period	2 Nos

		26. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% 27. The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70% 28. Supplied with: • 1 x spare set of fuses • User manual with trouble shooting guidance, in English • Technical manual with maintenance and first line technical intervention instructions, in English • List of priced spare parts • Rates of consumables to be quoted separately • List with name and address of technical service providers in India • Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. • The job description of the hospital technician and company service engineer should be clearly spelt out.	
4.	Ventilator(neonatal)	1. The ventilator should be microprocessor controlled designed for neonatal use with possibility to upgrade with additional features. 2. Continues flow, pressure limited, time cycled ventilator deign 3. Ventilator modes: should have following modes available in the unit a) IMV/IPPV b) CPAP including non-invasive ventilation c) SIMV, SIPPV/Assist-control d) High frequency oscillatory ventilation which is oscillating diaphragm based e) Volume targeted/guarantee mode of ventilation with ability to deliver and monitor tidal volume as low as 1-2 ml (Range 2 ml to 50 ml) f) Pressure support mode of ventilation g) Apnea back-up ventilation 4. Should have integrated high resolution LCD screen minimum 12" color display with touch screen facility for real-time display of scalar (Pressure, Flow and Volume against time) and loop (Pressure-volume, volume-flow and pressure-flow). Graphic display of at least 3 waveforms together out of choice of flow, volume and pressure versus time with a facility to freeze these waveforms. Facility for loops together with a facility to freeze the same 5. Should have graphical as well as tabular trend facility of data up to 24 Hrs 6. Digital display of FiO2, peak pressure, mean airway pressure, CPAP/PEEP, Expiratory tidal volume, expiratory minute volume, total frequency, spontaneous frequency, lung function monitoring including compliance, resistance, lung distention coefficient, (C20/C), Lung time constant, Rate volume ratio etc. 7. Should have built-in logbook for recording events like various alarms 8. Integrated monitoring: Integrated volume and pressure monitoring i.e. monitoring of PEEP Pmax, Pmean and VT, VTspont, MV and MVleak. The volume monitoring should have NTPD to BTPS correction. 9. Monitoring of I:E, frequency and Spontaneous Frequency. 10. Settings range: a) Trigger Flow/ volume, leak adapted b) PIP 10 to 80 cm H2O c) PEEP/ CPAP 0 to 25mbar d) I:E ratio1:0 to 1:10 e) Insp. Time 0.1 to 2 Sec f) Exp. Time 0.2 to 30 sec g) Frequency Up to 200 BPM h) Base Flow (VIVE) 1 to 30 LPM i) Synchronization Patient synchronization with adjustable flow trigger j) High frequency amplitude 1-100% k) Integrated blender for Oxygen 21% to 100% l) Integrated nebulization facility m) Integrated monitoring of FiO2	4 Nos.

		11. Monitoring of flow: At the Y piece with facility to activate or deactivate it 12. Should measure parameters in HFOV such as DCO₂, VtHF, MVim and VT_{im} 13. Ventilator should have following features in Pressure Support/ Volume Guarantee: a) It should be possible to give leakage adapted inspiratory trigger during pressure support to spontaneously breathing patients with a set volume guarantee. b) Volume guarantee should be regulated with lowest possible airway pressure within a set PIP. c) It should be possible to adjust the Volume Guarantee manually as per patient requirement 14. Audiovisual alarms with advisory on-screen message: MV high/Low, Apnea, tube obstruction, FiO₂ high/low high PIP, low PEEP/CPAP, fail to cycle, gas supply low, power failure, ventilator inoperative, alarm log book 15. The ventilator should have automatic compensation for leakage and should monitor and display leakages 16. The ventilator should show trends of important parameters viz. C, R, FiO₂, MAP etc. for evaluation of patient improvement 17. Ventilator should be US FDA and European CE approved product and should submit the respective certificate of US FDA and European CE 18. Ventilator should be supplied with Good quality medical air compressor (European CE marked) 19. The Servo Controlled Heated wire Humidifier should be supplied along with Reusable patient circuit. The humidifier must be USFDA approved 20. Battery back-up (at least 30 minutes) Battery should be integrated and should provide backup to both ventilator & Air compressor 21. Should be supplied with ultrasonic nebulizer which should have capability to deliver particle size of < 3 micron and to be used in both off and on line with ventilator. 22. Training CD/DVD 23. List of consumables expected to be used in one year should be provided and quoted separately. Prices so quoted to be frozen for 5 years 24. The department will like to have a live demonstration of the equipment 25. Instruction manual to be supplied with the quotation 26. Company should certify that model quoted is latest and not obsolete, and spares are available for minimum 5 years after warranty. 27. Should have permanent Electronic O₂ Sensor .Company will provide life time warranty on Oxygen sensor 28. Quoted firm should have a functional local service setup for after sales service 29. Ventilator should have Up gradation facility with EtCO₂ 30. Machine should have facility to set exp flow different than inspiratory flow to help in ETCO₂ flush 31. Scope of supply with each ventilator a) Ventilator on trolley with wheels and brake facility b) Integral medical air compressor c) Humidifier: Autoclavable humidifier chamber (2 with each ventilator) d) Circuit support arm e) 2 hose sets for conventional reusable neonatal ventilation circuit f) 5 hose sets of disposable conventional neonatal ventilation circuit g) 1 hose set for reusable HF ventilation h) Bacterial filters i) Flow sensors (20 sets with each ventilator) j) Oxygen cell k) Oxygen connecting hose l) Air connecting hose m) Test lung n) Heater wire (3 each) o) Temperature probe (3 each) p) Expiratory valve (2 with each) q) Nasal interface (3 in number) with nasal mask (4 each of all sizes) and nasal prongs (4 each of all sizes) and bonnet (5 each of only preterm size) with each ventilator.	
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		32. The ventilator should have following options - RS 232C port for data transfer and software compatible with windows - Communication interface with Laptop - PC software for archiving and analysis - Provision for future software/ hardware upgrades should be available 33. Items covered under warranty/CMC - Prices of all consumables should be quoted separately and frozen for the period including warranty and CMC 34. Should have local service facility and should have the necessary equipments to carry out preventive maintenance test 35. Onsite physical demonstration and training of the equipment to all the end users with all the requested facilities will be mandatory 36. Availability of spares for at least eight years after date of installation 37. Original literature, and not the photocopy, to be supplied with the quotation 38. Company should certify that model quoted is latest and not obsolete, and spares are available for minimum 6 years after warranty. 39. Machine should have automatic calibration for O2 sensor 40. Humidifier should also be automated servo controlled and should be US FDA certified	
5.	Pediatric Ventilator	1. Description of function ICU ventilator (Neonatal to adult) provide artificial respiratory support to critical patients 2. Operational Requirement - Should be microprocessor controlled ventilator with integrated facility for ventilation monitoring suitable for neonatal, Pediatric and adult ventilation. - The unit should be compressor based with same make and automatic switch over facility to central air supply (not a turbine/ piston/ blower based ventilator will be accepted). Demonstration of the equipment is a must. - Ventilator and compressor should be operable on mains and battery (upto 60 min) 3. Technical specification - Hinged arm holder for holding the circuit - Should have colored Touch Screen, 10 Inch or more should have facility to measure and display 3 Scalar waves – Pressure and time, volume and time and flow and time. 3.3 c) 2 loops P-V, F-V. - Graphic display to have automatic scaling facility for waves - Status indicator for ventilator mode, battery life, patient data, alarm setting etc. 3.4 Should have trending facility for 24 hours 3.5 Should have Automatic compliance and leakage compensation for circuit 3.6 Should have following settings for all age groups. - Tidal Volume 5 ml to 2000 ml - Pressure (insp) 2 – 80 cmH2O - Pressure Ramp / Flow patterns - Respiratory Rate 1 to 150 bpm, Insp. Time 0.1 to 3 sec, I: E Ratio 4:1 to 1:9 - Insp. Flow (Resultant) 0.2 to 180 LPM, continuous Flow 0-40 lpm - CPAP/PEEP 0-35 cmH2O - Pressure Support 2-80 cmH2O - FIO2 21 to 100% - Pause Time 0 to 2 sec - Flow Trigger 0.2 to 15 lpm or Pressure Trigger 0.5 to 20 cmH2O 3.7 Should have monitoring of the following parameters. - Airway pressure (Peak & Mean) - Tidal Volume (Inspired & Expired) - Minute Volume (Expired) - Spontaneous Minute Volume - Total Frequency	4 Nos.

		f) FIO2 dynamic g) Intrinsic PEEP (or trapped volume) h) Plateau Pressure i) Resistance & Compliance j) Use Selector Alarms for all measured & monitored parameters 3.8 Should have modes of ventilation a) Volume controlled b) Pressure controlled – BIPAP with/without pressure support with spontaneous breathing c) SIMV with/without pressure support. d) CPAP/ PEEP f) Non Invasive ventilation in all ventilation modes g) PRVC/ Autoflow/PSV + assured tidal volume h) Apnea / backup ventilation in CPAP/ PSV, SIMV mode i) Neonatal mode of ventilation- nasal CPAP with its entire kit (including bonnet, nasal tubing, nasal prongs and nasal mask) 3.9 Expiratory block should be autoclavable and no routine calibration required. 3.10 Should have below advanced monitoring a) Intrinsic Peep b) Occlusion Pressure, Max Inspiratory pressure (p1 Max) c) RSBI d) Patient circuit compensation 3.11 Should have integrated ultrasonic nebulizer with capability to deliver fine particle size of < 3 micron to be used in on line. 3.12 Ventilator should have optional upgradation facility for integrated EtCO2. 3.13 Replacement of oxygen cells should be free within the period of warranty and CMC. 3.14 Should have RS232 port for data transfer and software compatible with windows. Should have facility for network connection and should be HL7 compatible. 3.15 With each ventilator, two sets each of reusable patient interface (masks) for non-invasive ventilation should be provided for infants, children and adolescents (that is total of six patient interfaces for non-invasive ventilation with each ventilator). 4. ICU Ventilator with imported, non corrosive trolley – 01 Adult, Pediatric, Neonatal reusable silicon patient circuit – 02 each Expiratory valve/ expiratory cassette – 02 nos. with each ventilator. Reusable and autoclavable flow sensor -10 nos. with each ventilator. Minimum Warranty on expiration cassette/ expiratory valve should be 3 years. In case it fails, the company/ supplier should replace it without any charge. Proximal flow sensor for neonatal use- 05nos Hinged Support Arm – 1 no Oxygen Hose – 1 no ; Air hose – 2 nos. 4.1 Medical Air compressor USFDA and CE Certified 4.2 Reusable Masks (Small, Medium, Large) with each machine – 02 each 4.3 Humidifier –Automated, Servo Controlled with digital monitoring of inspired gas temperature, complete with heating wire – 01; with reusable infant and pediatric chamber. Should be USFDA and CE approved product. Power and inlet gas pressure requirement 5.1 Power input to be 220 – 240 VAC, 50 Hz 5.2 Gas input (air and oxygen) – 50-100 psi 6 Standards, Safety and Training 6.1 Should be US FDA and CE approved Product. The company should attach valid 510 K and US FDA certificate along with in the technical bid. The supplier must be ISO certified company. 6.2 Demonstration of quoted equipment model is a must.	
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		6.3 Should have local service facility. The service provider should have the necessary equipment recommended by the manufacturer to carry out preventive maintenance test as per guidelines in the service / maintenance manual. 6.4 Availability of consumables for at least 7 years after the date of installation. 6.5 Rates of consumables should be frozen for the full duration of warranty and CMC.	
6	Humidifier	1) Automated, servo controlled humidifiers for delivering air-oxygen mixture through hood, CPAP or ventilator 2) Dimensions: not more than 15 x 18 x 14 cm (without chamber fitted) 3) Weight should be less than 3 kg (without chamber fitted) 4) Display: Should be of LED type with at least three digits 5) Single key selection of optimum temperature levels for invasive and noninvasive therapies. 6) Heating settings: • Heater plate – 150 W • Heater plate over-temperature cutout - 118 +/- 6 °C • Heater with flow resistance up to 1 cmH₂O /L/sec 7) Temperature control settings: • Temperature range: 28-40 deg. C • Invasive mode: Chamber outlet 35 -37 °C, Airway 35-40°C, humidity output >33mg/L • Non-invasive mode: Chamber outlet 31- 36 °C, Airway 28-34 °C, humidity output >10 mg/L • Warm up time less than 30 minutes • Temperature control accuracy: ± 0.5 deg. C 8) Alarm control and settings: • Automatic audible and visual alarms for high and low temperatures • High & low humidity alarm • Visual indicator for water level and digital display for temperatures • Temperature probe faulty/disconnect • Heater wire or heater wire adaptor faulty/disconnect • Chamber probe/airway probe improperly inserted 9) Power supply requirements: • Supply frequency, voltage: 50/60 Hz, 115 V-240 V 10) Should be USFDA and European CE approved and should be certified for neonatal use 11) Detailed operator manual 12) Minimum 4 preventive maintenance visits per year during warranty as well as CMC and visits on call basis 13) Rates of consumables should be frozen for the full duration of warranty and CMC. 14) Accessories to be supplied with each humidifier: • Reusable (autoclavable) chamber, neonatal and pediatric -1 no.each • Heater wire adaptors suitable for a disposable circuit – 2 nos. • Heater wire adaptor suitable for reusable (autoclavable) circuits – 1 no. • Temperature probes – 2 nos	4 Nos.
7	Phototherapy machine-single surface LED	1. Blue light LED which should last for at least 30,000 hours 2. Spectrum: peak at 440 to 470 nm, no irradiance in UV or IR ranges (certificate by recognized lab to be produced) 3. Spectral Irradiance of at least 40 $\mu\text{W}\cdot\text{cm}^{-2}\cdot\text{nm}^{-1}$ at 45 cm distance between bed and light unit 4. Effective surface area should be at least 20 x 40 cm 5. Light head should be compact to use along with the radiant warmer & should be provided with tilting facility (at least 90 degree on each side) so that the unit is not coming directly	3 Nos

		under warmer. 6. Light unit should have white LED's for examination purpose 7. Head height adjustable, approx: 1.30 to 1.75 m 8. Integrated timer for monitoring therapy hours & lamp usage hours. 9. Sturdy mobile stand 10. The base of the unit should be such that it will go beneath any Incubator/radiant warmer/bed. 11. Antistatic castors, 2 with breaks 12. Option of mounting on radiant warmer 13. Option of keeping directly on the roof of incubator 14. Cooling Fan to be provided to dissipate the heat created by LED's 15. Coating: Epoxy/powder coated body for scratch and rust prevention and PU (Poly Urethane) coating for plastic 16. Should have visual and audible alarm indicating the excess of internal temperature and failure of the fan 17. Standards, safety and training a) Should be USFDA or European CE approved product b) Manufacturer should be ISO certified for quality standards c) Equipment Shall CERTIFIED to be meeting Electrical Safety requirements as per IEC 60601-2-50 Medical Electrical Equipment part-2-50 Particular requirements for the safety of Infant Phototherapy Equipments d) Should have local service facility. The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual e) Training and installation at end user site 18. Power supply - Power input to be 220-240VAC, 50Hz 19. Items covered under warranty/CMC a) Prices of consumables should be quoted separately and the prices should be frozen for the period of warranty and CMC. 20. Environmental factors a) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% b) The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90% 21. Documentation a) User/Technical/Maintenance manuals to be supplied in English b) Certificate of calibration and inspection from factory c) List of important spares and accessories with their part number and costing d) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out 22. User manual and technical manual with trouble shooting guidance in English should be provided 23. Company should certify that model quoted is latest and not obsolete, and spares will be available for next 5 years after the completion of warranty. 24. Onsite physical demonstration/training of the equipment to all the end users with all the requested facilities will be mandatory	
8	Phototherapy machine-double surface LED	1. LED's should last for at least 30,000 hours 2. Light unit should have white LED's for examination purpose 3. Light unit should be made of easily cleanable plastic material 4. Spectral Irradiance of minimum $30 \mu\text{W}\cdot\text{cm}^{-2}\cdot\text{nm}^{-1}$ at 45 cm distance between bed and light unit.(for effective PT through closed incubator) 5. Should have multilevel intensity control to a minimum intensity adjustment of $30 \mu\text{W}\cdot\text{cm}^{-2}\cdot\text{nm}^{-1}$ 6. At the tilted position, the irradiance should be at least $30 \mu\text{W}\cdot\text{cm}^{-2}\cdot\text{nm}^{-1}$ at 45 cm distance between bed and light unit. 7. Wavelength should be of 450 – 460 nm, and should be free from UV and IR radiation.	3 Nos

		8. Effective surface area should be at least 175 *3750 mm 9. Digital (LCD) Timer for monitoring therapy hours & lamp usage hours 10. Should have visual and audible alarms for the following, a. If internal temperature exceeds b. If cooling fan fails 11. Cooling Fan to be provided to dissipate the heat created by LED's 12. Light head should be compact to use along with the Radiant warmer & should be provided with tilting facility so that the unit is not coming directly under warmer. 13. Smooth Height adjustment mechanism & Adjustable height 14. Minimum height should be at least 1200 ± 20 mm from the floor to use near the mother bed 15. Maximum height should be at least 1700 ± 20 mm from the floor to use with the incubator 16. Coating: Epoxy/powder coated body for scratch and rust prevention and 17. PU (Poly Urethane) coating for plastic 18. Mobility: Three castors; two rear castors provided with brakes 19. The base of the unit should be such that it will go beneath any Incubator/bed/trolley, with minimum of 100 mm floor clearance 20. The manufacturer should be ISO 9001:2008 and ISO 13485:2003 certified 21. Product should be European CE certified and certificate should be submitted. 22. The specification for bottom unit should confirm to the following a) Irradiance : > 30μW/cm²/nm b) Lamp Type : LED's c) Power rating : Maximum – 60 W d) Time totaliser : Digital, Compact and noise free e) Bassinet dimensions : Approximately 75 cm x 50 cm x 15 cm f) Weight of lamp unit : Less than 25 kg g) Bassinet : Transparent acrylic bassinet h) Coating : Epoxy/powder coated body for scratch and rust presentation i) Should conform to IEC-60601 safety standards j) Should occupy only very little bedside space for convenience in observation and procedures. k) The unit should be mobile with 4 swivel castors and at least 2 castors with brake 23. Power supply - Power input to be 220-240VAC, 50Hz 24. Items covered under warranty/CMC a) Prices of consumables should be quoted separately and the prices should be frozen for the period of warranty and CMC. 25. Environmental factors a) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% b) The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90% 26. Documentation a) User/Technical/Maintenance manuals to be supplied in English b) Certificate of calibration and inspection from factory c) List of important spares and accessories with their part number and costing d) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out 27. User manual and technical manual with trouble shooting guidance in English should be provided 28. Company should certify that model quoted is latest and not obsolete, and spares will be available for next 5 years after the completion of warranty. 29. Onsite physical demonstration/training of the equipment to all the end users with all the requested facilities will be mandatory	
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9	Pulse oximeter	1. Desktop sturdy compact model which is light weight 2. Resistant to motion artifact 3. Able to reliably pick up signal in low perfusion states 4. Should have clinically proven track record to work during motion and very low perfusion conditions 5. Masimo-SET signal processing technology. 6. Compatible with reusable and disposable probes 7. Oxygen saturation ▪ Range 1-100 % ▪ Resolution 1% ▪ Accuracy ± 3 at 70-100% range ▪ Averaging time Selectable (2-16 seconds or slow to fast) 8. Pulse rate ▪ Waveform Plethysmographic or bar form ▪ Range 40-230 bpm ▪ Resolution 1 bpm ▪ Accuracy $\pm 3 - 5$ bpm 9. Should have Perfusion Index (PI) 10. Should be able to measure parameters reliably in patient < 1kg of weight 11. Should be defibrillator proof 12. Display should be as follows: a) Large bright LCD display with contrast adjustability b) Readable from at least 3 feet c) Saturation d) Pulse Rate e) Status of battery charging f) Sensor off 13. Alarms ▪ Type of alarm Audible and visual ▪ Alarm volume Adjustable ▪ High SpO2 Range 70-99% ▪ Low SpO2 Range 50-99% ▪ High pulse 40-230 bpm ▪ Low pulse 40-230 bpm ▪ System alarms Probe failure System Failure Low Battery 14. Alarm override facility should be present 15. Trends ▪ Memory At least 48 hours with 2 sec resolution ▪ Data interval 20 sec ▪ Display 2-24 hours ▪ Type of display Graphical & tabular display 16. Power ▪ 220/240 V AC, 50/60 Hz ▪ Rechargeable internal battery ▪ Battery back-up at least 3 hours ▪ Automatic switch from mains to battery in case of power failure 17. RS 232C interface for data communication and transfer. 18. Should have provisions for wireless and blue tooth connectivity 19. Accessories a) Patient extension cables -2 with each monitor	4 Nos.
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		b) Reusable flexible neonatal multi-site probes-4 with each monitor 21. Operator Manual to be provided. 23. Items covered under warranty/CMC a) Prices of consumables should be quoted separately and frozen for the period of warranty and CMC Availability of spares for at least 7 years after date of installation 24. Standards, safety and training a) Should be US FDA and European CE approved product and certificate of the offered model must be submitted with the bid documents b) Manufacturer should be ISO certified for quality standards Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment Should have local service facility c) The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 25. Environmental factors a) Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive b) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% c) The unit shall be capable of operating continuously in ambient temperature of 20-40 deg C and relative humidity of 15-90% 26. Onsite physical demonstration/training of the equipment to all the end users with all the requested facilities will be mandatory 27. Documentation a) User/Technical/Maintenance manuals to be supplied in English b) Certificate of calibration and inspection from factory c) List of important spares and accessories with their part number and costing d) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out	
10	Pulse oximeter (high end)	1. Desktop sturdy compact model which is light weight 2. Resistant to motion artifact 3. Able to reliably pick up signal in low perfusion states 4. Should have clinically proven track record to work during motion and very low perfusion conditions 5. Compatible with reusable and disposable probes 6. Device should be able to continuous monitor the following parameters non-invasively: a) Oxygen saturation b) Pulse rate c) Perfusion index d) Pleth Variability Index e) Total Hemoglobin f) Carboxyhemoglobin g) Methemoglobin h) Oxygen Content 7. Oxygen saturation	1 Nos.

		a) Display Range 0 to 100 % b) Resolution 1% c) Accuracy ± 3 at 70-100% range d) Alarm Range 1% to 99%	
	8. Pulse rate	a) Display Range 25 bpm to 240 bpm b) Resolution 1 beats per minute c) Accuracy ± 3 bpm d) Alarm range 30 bpm to 235 bpm	
	9. Perfusion index	a) Display Range 0.02% to 20% b) Alarm range 0.03% to 19%	
	10. Pleth variability index	a) Display Range 0% to 100% b) Alarm range 1% to 99%	
	11. Total hemoglobin	a) Display Range 0 g/dl to 25.0 g/dl b) Resolution 0.1 g/dL c) Accuracy 8 g/dL to 17 g/dL ± 1 g/dL d) Alarm range 1.0 g/dL to 24.5 g/dL	
	12. Carboxy hemoglobin	a) Display Range 0% to 99% b) Resolution 1% c) Accuracy 1% to 40% $\pm 3\%$ d) Alarm range 1% to 98%	
	13. Methemoglobin	a) Display Range 0% to 99.9% b) Resolution 0.1% c) Accuracy 1% to 15% $\pm 1\%$ d) Alarm range 0.1% to 99.5%	
	14. Oxygen content	a) Display Range 0 ml to 35 ml	
	15. Should be able to measure parameters reliably in patient < 1kg of weight		
	16. Should be defibrillator proof		
	17. Display	a. Large bright LCD display with contrast adjustability b. Readable from at least 3 feet c. Alarms and alarm limits d. Status of battery charging, sensor off	
	13. Alarms	a. Type of alarm Audible and visual b. Alarm volume Adjustable c. System alarms Probe failure, system failure, low battery	
	14. Alarm override facility should be present		
	15. Trends	a. Memory At least 48 hours with 2 sec resolution b. Data interval 20 sec c. Display 2-24 hours d. Type of display Graphical & tabular display	
	16. Power	a. 220/240 V AC, 50/60 Hz b. Rechargeable internal battery c. Battery back-up at least 3 hours d. Automatic switch from mains to battery in case of	

		power failure 17. RS 232C interface for data communication 18. Should have provisions for wireless and blue tooth connectivity 19. Accessories i. Patient extension cables -2 with each monitor ii. Reusable flexible neonatal multi-site probes-4 with each monitor 21. Operator Manual to be provided. 23. Should have local service facility and should have the necessary equipments to carry out preventive maintenance test 24. Onsite physical demonstration and training of the equipment to all the end users with all the requested facilities will be mandatory 25. Availability of spares for at least 7 years after date of installation 26. Items covered under warranty/CMC a) Prices of consumables should be quoted separately and frozen for the period including warranty and CMC period 27. Standards, safety and training a) Should be US FDA and European CE approved product and certificate of the offered model must be submitted with the bid documents b) Manufacturer should be ISO certified for quality standards Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment Should have local service facility c) The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 28. Environmental factors a) Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive. b) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% c) The unit shall be capable of operating continuously in ambient temperature of 20-40 deg C and relative humidity of 15-90% 29. Onsite physical demonstration/training of the equipment to all the end users with all the requested facilities will be mandatory 30. Documentation a) User/Technical/Maintenance manuals to be supplied in English b) Certificate of calibration and inspection from factory c) List of important spares and accessories with their part number and costing d) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out	
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11	Neonatal multipara monitors	Distribution outline: • Basic parameters (ECG/heart rate, O₂ saturation, NIBP, respiration & temperature) – in all monitors • Invasive BP module: in all monitors • Microstream end tidal CO₂ module: in 2 monitors • EEG module: in one monitor General: • Upgradable Modular system, capable of being connected to a central station • The equipment should come with all standard accessories required to run all parameters. • Waveform display: at least 6 channels, user selectable • Digital display: Heart rate, respiratory rate, oxygen saturation, temperature, Blood Pressure (systolic, diastolic, mean), EtCO₂(wherever applicable) • Should be upgradable for measurement of cardiac output/SvO₂ • Should be possible to move the Microstream end tidal CO₂ and EEG modules from one monitor to another. • Should be able to remotely access the patient monitoring system via internet • System should be compatible with HIS and be HL-7 compliant • Ready to run web based applications like HIS, PACS, RIS, LIS etc on patient monitor screen itself without need of additional server/PC hardware and software as standard supply. Individual Monitors : • Wall mountable and pivotable • Medical grade, TFT Flat screen, slim size, at least 17" display • Screen resolution at least 1280x1024 pixels • Clear bright color display with large character size • Should have both remote/ mouse control and knob control/ touch screen • Viewing angle at least 90° • Adjustable contrast and brightness • Ability to zoom any parameters • Ability to adjust individual alarms • Ability to change color of the trace by user • RS 232C interface for data communication • UPS system with at least 1 hour backup time • Should provide a high quality thermal recorder interchangeable module, 1 no with each monitor. • Store and review trends for at least 24 hours 1. Parameters monitored : The following modules complete with their accessories: • Heart rate/ECG • Respiration • Oxygen saturation • Temperature • Noninvasive Blood pressure • Invasive blood pressure • EEG (2 monitors), 'microstream' EtCO₂ (2 monitors) 2. Heart rate/ECG: • At least 3-lead selectable ECG • Built in arrhythmia monitoring in all leads	Total Five (5) only
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		• Inbuilt ST segment analysis and arrhythmia detection facility • Display of 2 ECG leads simultaneously at a time • Heart rate range 20-240 bpm • Accuracy ± 5 bpm • Display sweep speeds 12.5, 25 mm/sec (user adjustable) • Averaging time: user selectable up to 8 seconds • ECG amplitude user adjustable • Defibrillator protected 3. Respiratory rate • Measured by transthoracic impedance using the same ECG lead • Range 0 to 150 breaths/min • Accuracy ± 2 bpm • Display sweep speeds 6.25, 12.5 & 25 mm/sec (user adjustable) • Averaging time: user selectable up to 8 seconds • User selectable apnea alarm time 4. Oxygen Saturation • Masimo-SET technology to take care of low perfusion states and motion artefacts. • Dual wavelength LED pulse oximetry • Range 1 to 100% • SpO₂ accuracy : ± 2 % (70-100% range) • Averaging time: user selectable up to 8 seconds • Plethysmographic waveform display 5. Temperature • Skin type capable of recording both central and peripheral skin temperature • Continuous digital display of two site temperatures • Range: 25-50 degree Celsius • Resolution: ± 0.1 degree Celsius • Accuracy: ± 0.1 degree Celsius 6. Non-invasive Blood pressure : • Capable of measuring blood pressure in neonates weighing 400 g to 5000 g • Microprocessor software with unit in mmHg • Oscillometric technique • Manual, auto and time limited stat modes • User selectable automatic time intervals • Display systolic, diastolic and mean BP • Blood pressure range - Systolic BP : 30-150 mm Hg - Diastolic BP : 10-100 mm Hg - Mean: BP 20 – 100 mmHg • Pulse rate range : 20-240 bpm • Cuff : auto deflate with over pressure protection • Should automatically establish zero reference after each reading 7. Invasive Blood pressure • At least 2 channels • Compatible with reusable and disposable pressure transducers • Transducer should allow continuous infusion into the artery through an infusion pump while pressure is simultaneously displayed	
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		• Input through pressure transducer that functions through a fluid filled catheter system • Unit: mmHg • Should allow continuous fluid infusion into the artery /vein through an infusion pump without any volume limitation • Compatible with arterial BP, CVP, pulmonary artery pressure and intracranial pressure monitoring catheters • Range 0-300 mmHg • Display resolution: ± 1 mmHg • Accuracy ± 1 mmHg • Digital waveform display • User selectable pressure channel display 8. EEG • EEG module should be interchangeable with any of the 6 monitors • Input: 3 lead (Std, left, right) • Sensitivity: 20, 50, 100, 250/μV/cm • Display: Left or right sided waveform • Small, cup type EEG electrodes and lead set kit suitable for neonatal use with a low impedance 9. Microstream end tidal capnography (EtCO₂) • Module should be interchangeable with any of the 6 monitors • Microstream technology with neonatal mode • Display of both waveform and numerical values • Should be usable in intubated as well as non-intubated neonates • Measured parameters: EtCO₂, CO₂ waveform, Respiratory rate • CO₂ range – 0-150 mmHg • Respiratory rate – 0-150 breaths / min • Display – in mmHg and % • Accuracy - ± 2 mmHg (0-38 mmHg) 10. User selectable alarms • High and low heart rate • High and low respiratory rate • Apnea with adjustable time 5-20 seconds • High and low saturation • High and low SBP • High and low DBP • High and low MAP • High and low EtCO₂ • Probe failure • Poor signal • Power failure • Audio & visual alarms with message 11. Trends • Memory storage : at least 24 hours • Data display interval : not more than 20 sec • Display range : last $\frac{1}{2}$ hour to 24 hours • Graphical and tabular format of display of variables 12. Power 220/240 V	
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		50/60 Hz AC Rechargeable internal battery with a back up of at least 1 hr 13. Communications with Information Management Systems: a. To provide HL-7 compatible server for sending and receiving information to and from the monitoring network to and from Hospital Information System, Laboratory information etc for integration of various information b. To provide suitable facility for sending and receiving DICOM Compatible Radiological Images like Ultrasound, X-Ray etc to and from the monitoring network to and from Hospital Information System, Radiology Information System etc for integration of various information 14. Manuals : Operator & service manuals 15. Should be approved & certified <u>by FDA (USA) and European CE</u> (certificate to be submitted) 16. Manufacturer should have ISO certification for quality standards 17. Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment 18. Availability of spares for at least 7 years after date of installation 19. Warranty and CMC would include the periodic calibration of all parameters strictly as per manufacturer's recommendations and any spares or standards required for that. 20. Onsite physical demonstration of the monitor with all the requested modules will be mandatory 21. Should have local service facility and should have the necessary equipments to carry out preventive maintenance test 22. Essential Accessories The following quantities are to be supplied with the initial order: ECG/Respiration • ECG patient cable : 10 • ECG lead wires set (at least 3 leads) : 10 sets • Disposable small ECG electrodes for preterm neonates: 200 sets (set of 3) Oxygen saturation • Patient extension cables: 10 • Reusable neonatal wrap around probes: 12 • Reusable ear probe - 2 Temperature • Reusable surface (skin) temperature probes: 10 NIBP • Patient extension cable – 10 • Disposable NIBP cuffs of sizes suitable for neonates (<1000g, 1000-2000g, and >2000g): 50 no of each size (total 450 no) IBP • Transducer connecting cables: 6 • Reusable pressure transducer: 4 • Disposable pressure dome kit with neonatal flush device: 50	
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		Microstream capnography (EtCO₂) - Disposable EtCO₂ sensors: Through ET tube: 50 EEG - Patient cable: 2 - Small, cup type EEG electrodes suitable for neonates with lead set kit: 2 23. Prices of above consumables should be quoted separately and frozen for the period including warranty and CMC period. 24. Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. Or should comply with 89/366/EEC; EMC-directive 25. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% 26. The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90% 27. Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 28. User/Technical/Maintenance manuals to be supplied in English. 29. Certificate of calibration and inspection. 30. List of important spare parts and accessories with their part number and costing 31. Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. 32. The job description of the hospital technician and company service engineer should be clearly spelt out	
12	Pediatric multipara monitors	1. Distribution outline: - Basic parameters (ECG/heart rate, O₂ saturation, NIBP, respiration & temperature) – in all monitors - Invasive BP module: in all monitors - Microstream end tidal CO₂ module: in two monitors - EEG module: in 1 monitor - Monitor should have upgradeable facility of transcutaneous ETCO₂. Please also quote units price in price bid so that in future can be purchased. 2.General: - Upgradable Modular system, with network lan port to connect to a central station. - The equipment should come with all standard accessories required to run all parameters suitable for all patient categories, ie. Infants, children and adolescents. - Waveform display: at least 6 channels, user selectable - Digital display: Heart rate, respiratory rate, oxygen saturation, temperature, Blood Pressure (systolic, diastolic, mean), EtCO₂. - Should be upgradeable for measurement of cardiac output/SvO₂ - Should be possible to move the EEG modules from one monitor to another, Should be able to remotely access the patient monitoring system via internet - System should be compatible with HIS and be HL-7 compliant - Ready to run web based applications like HIS, PACS, RIS, LIS etc on patient monitor screen itself without need of additional server/PC hardware and software as standard supply. 3.Individual Monitors : - Wall mountable and pivotable - Medical grade, TFT Flat screen, slim size, at least 19" touchscreen display	Total Five (5) only

		• Screen resolution at least 1280x1024 pixels • Clear bright color display with large character size • Should have both remote/ mouse control and knob control/ touch screen • Viewing angle at least 90° • Adjustable contrast and brightness • Ability to zoom any parameters • Ability to adjust individual alarms • Ability to change color of the trace by user • RS 232 serial data output provision (peripheral printer or network), analogue output for ECG • UPS system with at least 1 hour backup time • Should provide a high quality thermal recorder interchangeable module ,1 no with each monitor. • Store and review trends for at least 24 hours 4.Parameters monitored : The following modules complete with their accessories: • Heart rate/ECG • Respiration • Oxygen saturation • Temperature • Noninvasive Blood pressure • Invasive blood pressure • 'Microstream' EtCO₂ (two monitors) • EEG (1 monitor) 5.Heart rate/ECG: • At least 3-lead selectable ECG • Built in arrhythmia monitoring in all leads • Inbuilt ST segment analysis and arrhythmia detection facility • Display of 2 ECG leads simultaneously at a time • Heart rate range 30-300 bpm • Accuracy ± 5 bpm • Display sweep speeds 12.5, 25 mm/sec (user adjustable) • Averaging time: user selectable up to 8 seconds • ECG amplitude user adjustable • Defibrillator protected 6.Respiratory rate • Measured by transthoracic impedance using the same ECG lead • Range 6 to 120 breaths/min • Accuracy ± 2 bpm • Display sweep speeds 6.25, 12.5 & 25 mm/sec (user adjustable) • Averaging time: user selectable up to 8 seconds • User selectable apnea alarm time 7.Oxygen Saturation • Masimo-SET technology to take care of low perfusion states and motion artifacts • Dual wavelength LED pulse oximetry • Range 1 to100% • SpO₂ accuracy : ± 2 % (70-100% range) • Averaging time: user selectable up to 8 seconds • Plethysmographic waveform display 8.Temperature • Skin type capable of recording both central and peripheral skin temperature:2 temperature sensors available,1 for central and one for peripheral skin • Continuous digital display of two site temperatures • Range: 25-50 degree Celsius • Resolution: ± 0.1 degree Celsius	
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		• Accuracy: ± 0.1 degree Celsius 9.Noninvasive Blood pressure : • Capable of measuring blood pressure in infants, children upto 18 years of age • Microprocessor software with unit in mmHg • Oscillometric technique • Manual, auto and time limited stat modes • User selectable automatic time intervals • Display systolic, diastolic and mean BP • Blood pressure range - Systolic : 20- 250 mm Hg - Diastolic : 10-120 mm Hg - Mean: 20 – 100 mmHg • Pulse rate range : 30-300 bpm • Cuff : auto deflate with over pressure protection • Should automatically establish zero reference after each reading 10.Invasive Blood pressure • At least 2 channels • Compatible with reusable and disposable pressure transducers • Transducer should allow continuous infusion into the artery through an infusion pump while pressure is simultaneously displayed • Input through pressure transducer that functions through a fluid filled catheter system • Unit: mmHg • Should allow continuous fluid infusion into the artery /vein through an infusion pump without any volume limitation • Compatible with arterial BP, CVP, pulmonary artery pressure and intracranial pressure monitoring catheters • Range 0-300 mmHg • Display resolution: ± 1 mmHg • Accuracy ± 1mmHg • Digital waveform display • User selectable pressure channel display 11. EEG • EEG module should be interchangeable with any of the 6 monitors • Input: 3 lead (Std, left, right) • Sensitivity: 20, 50,100,250/μV/cm • Display: Left or right sided waveform • Small, cup type EEG electrodes and lead set kit suitable for pediatric and adult use with a low impedance 12.Microstream end tidal capnography (EtCO₂) • Module should be interchangeable with any of the 6 monitors • Microstream technology with pediatric and adult mode • Display of both waveform and numerical values • Should be usable in intubated as well as non-intubated children • Measured parameters: EtCO₂, CO₂ waveform, Respiratory rate • CO₂ range – 0-150 mmHg • Respiratory rate – 0-150 breaths / min • Display – in mmHg and % • Accuracy - ± 2 mmHg (0-38 mmHg) 13.User selectable alarms • High and low heart rate • High and low respiratory rate • Apnea with adjustable time 5-20 seconds • High and low saturation • High and low SBP	
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		• High and low DBP • High and low MAP • High and low EtCO₂ • Probe failure • Poor signal • Power failure • Audio & visual alarms with message 14.Trends • Memory storage : at least 24 hours • Data display interval : 1 minute • Display range : last ½ hour to 24 hours • Graphical and tabular format of display of variables 15.Power 220/240 V 50/60 Hz AC Rechargeable battery with a back up of at least 1 hr 16. Manuals : Operator & service manuals 17. Should be approved & certified <u>by FDA (USA) and European CE</u> 18. Manufacturer should have ISO certification for quality standards 19. Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment 20. Availability of spares for at least 7 years after date of installation. Cost of consumables should be frozen for 7 years. 21. Warranty and CMC would include the periodic calibration of all parameters strictly as per manufacturer's recommendations and any spares or standards required for that. 22. Onsite physical demonstration of the monitor with all the requested modules will be mandatory. 23. Quote separate price for web browsing facility in price bid. Also mention that how many beds can be connected with a single server. 23.Essential Accessories for 5 monitors The following quantities are to be supplied with the initial order: ECG/Respiration • ECG patient cable : 10 • ECG lead wires set (at least 5 leads) : 10 sets • Disposable ECG electrodes for infants, pediatrics and adults:100 sets of each (set of 3) Oxygen saturation • Patient extension cables: 10 • Reusable wrap around probes: 10 • Reusable Y shaped finger probe:10 • Reusable ear probe - 4 Temperature • Reusable surface (skin) temperature probes: 10 • Reusable rectal probe with cover kit: 10 NIBP • Patient extension cable – 10 • Disposable NIBP cuff of size suitable for neonates (>2000g): 100 no. • Reusable cuffs of pediatric and adult size- 3 each with each monitor IBP	
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		• Transducer connecting cables: 6 • Reusable pressure transducer: 4 • Disposable pressure dome kit with flush device :50 Microstream capnography (EtCO2) • Disposable EtCO2 sensors: Through ET tube: 100 EEG • Patient cable: 1 • Small, cup type EEG electrodes suitable for infants with lead set kit: 1 24. Prices of the above consumable and their validity should also be quoted separately. 25. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% 26. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90% 27. Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 28. User/Technical/Maintenance manuals to be supplied in English. 29. Certificate of calibration and inspection. 30. List of important spare parts and accessories with their part number and costing 31. Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. 32. The job description of the hospital technician and company service engineer should be clearly spelt out	
13	Multipara ward monitors	1. Distribution outline: • Basic parameters (ECG/heart rate, O₂ saturation, NIBP & respiration) – in all monitors 2.General: • The equipment should come with all standard accessories required to run all parameters, suitable for all patient categories, ie. infants, children and adolescents. • Waveform display: at least 5 channels, user selectable. • Digital display: Heart rate, respiratory rate, oxygen saturation, Non Invasive Blood Pressure. 3. Individual Monitors : • Wall mountable and pivotable • Medical grade, TFT Flat screen, slim size, at least 15” display • Screen resolution at least 1280x1024 pixels • Clear bright color display with large character size • Viewing angle at least 90° • Adjustable contrast and brightness • Ability to zoom any parameters • Ability to adjust individual alarms • Ability to change color of the trace by user 4. Parameters monitored : The following modules complete with their accessories: • Heart rate/ECG • Respiration • Oxygen saturation • Noninvasive Blood pressure 5. Heart rate/ECG:	5 Nos.

		• At least 3-lead selectable ECG • Built in arrhythmia monitoring in all leads • Inbuilt ST segment analysis and arrhythmia detection facility • Display of 2 ECG leads simultaneously at a time • Heart rate range 30-300 bpm • Accuracy ± 5 bpm • Display sweep speeds 12.5, 25 mm/sec (user adjustable) • Averaging time: user selectable up to 8 seconds • ECG amplitude user adjustable • Defibrillator protected 6. Respiratory rate • Measured by transthoracic impedance using the same ECG lead • Range 6 to 120 breaths/min • Accuracy ± 2 bpm • Display sweep speeds 6.25, 12.5 & 25 mm/sec (user adjustable) • Averaging time: user selectable up to 8 seconds • User selectable apnea alarm time 7. Oxygen Saturation • Dual wavelength LED pulse oximetry • Range 1 to 100% • SpO₂ accuracy : $\pm 2\%$ (40-100% range) • Averaging time: user selectable up to 8 seconds • Plethysmographic waveform display 8. Noninvasive Blood pressure : • Capable of measuring blood pressure in infants, children and adolescents. • Microprocessor software with unit in mmHg • Oscillometric technique • Manual, auto and time limited stat modes • User selectable automatic time intervals • Display systolic, diastolic and mean BP • Blood pressure range - Systolic : 30- 250 mm Hg - Diastolic : 10-120 mm Hg - Mean: 20 – 100 mmHg • Pulse rate range : 20-300 bpm • Cuff : auto deflate with over pressure protection • Should automatically establish zero reference after each reading 9. User selectable alarms • High and low heart rate • High and low respiratory rate • Apnea with adjustable time 5-20 seconds • High and low saturation • High and low SBP • High and low DBP • High and low MAP • Probe failure • Poor signal • Power failure • Audio & visual alarms with message 10. Trends • Memory storage : at least 24 hours • Data display interval : not more than 20 sec • Display range : last $\frac{1}{2}$ hour to 24 hours • Graphical and tabular format of display of variables 11. Power	
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		220/240 V 50/60 Hz AC Rechargeable internal battery with a back up of at least 1 h 12. Manuals : Operator & service manuals 13. Should be approved & certified <u>by FDA (USA) and European CE</u> 14. Manufacturer should have ISO certification for quality standards 15. Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring equipment 16. Availability of consumables for at least 7 years after date of installation 17. Warranty and CMC would include the periodic calibration of all parameters strictly as per manufacturer's recommendations and any spares or standards required for that. 18. Onsite physical demonstration of the monitor with all the requested modules will be mandatory 19. Essential Accessories for five (05) monitors The following quantities are to be supplied with the initial order: ECG/Respiration • ECG patient cable : 20 • ECG lead wires set (at least 3 leads) : 20 sets • Disposable ECG electrodes for infants, pediatrics and adolescents: 300 sets of infants and pediatrics each and 100 sets of adolescents . Oxygen saturation • Patient extension cables: 20 • Reusable wrap around probes: 15 • Reusable Y shaped finger probes: 15 NIBP • Patient extension cable – 20 • Disposable NIBP cuff of size suitable for neonates (>2000g): 25 no. • Reusable cuffs of infant, pediatric and adult size- 2 each with each monitor 20. Cost of consumables/accessories should be frozen for the period of warranty and CMC. 21. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90% 22. The unit shall be capable of operating continuously in ambient temperature of 10 -50 deg C and relative humidity of 15-90% 23. Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 24. User/Technical/Maintenance manuals to be supplied in English. 25. Certificate of calibration and inspection. 26. List of important spare parts and accessories with their part number and costing 27. Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. 28. The job description of the hospital technician and company service engineer should be clearly spelt out	
14	Micromethod bilirubin Analyzer	• Bench top point-of-care bilirubin meter • Gives total bilirubin in serum or plasma from a micro volume of blood • Should have sample centrifuged whole blood & serum of minimum volume: 10µl • Direct reading photometry determining total bilirubin in serum / plasma • On switch and auto-off	1 Nos.

		• Automatic calibration setting between measurements • It should have silicon photodiode • Dual wavelength measurement: 455 nm and 575 nm • The influence of Hemoglobin in the sample is automatically corrected • Compatibility for all type of capillaries; should not require any special capillary tubes • Measuring range: 85 to 510 $\mu\text{mol/l}$ or 5 to 30 mg/dl with photometric measure system. • Accuracy equivalent to laboratory spectrophotometer (approx $\pm 5\%$) • Read-out switchable between mg/100 ml of $\mu\text{mol/l}$ • Fast analysis time <5 sec • Supplier would be responsible for periodic calibration (using its own solutions) of the machine as recommended • Large LED display readable in low light working situations, display cover durable plastic • Power requirements: 220 V / 50 Hz (with adapter) • Should have data storage of last 100 results, interface USB port, built in calendar, printer and timer • Device is safety certified according European CE or US FDA (Certificate to be submitted) • Manufacturer should be ISO certified for quality standards • Should have local service facility and should have the necessary equipments to carry out preventive maintenance test • Items covered under warranty/CMC a) Prices of consumables should be quoted separately and the prices should be frozen for period including warranty and CMC period • List of important consumables with their part number and costing • Availability of consumables for at least 7 years after date of installation • Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out • Certificate of calibration and inspection • Onsite physical demonstration and training of the equipment to all the end users with all the requested facilities will be mandatory • Supplied with: ➤ Supplied with 1000 heparinized capillary tubes and 1 set plasticin for sealing capillary tubes ➤ 2 x spare lamps ➤ 2 x dust covers ➤ 10 x spare set of fuses ➤ User manual with trouble shooting guidance, in English ➤ 30 columns of thermal paper	
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15	Transcutaneous bilirubin Analyzer	1. Light weight: portable unit 2. Multi wavelength spectral reflectance meter 3. Provides measurement of total serum bilirubin reported in mg/dL or micromol/L. 4. Measurement range 0 to 20 mg/dL (0-340 micromol/L) 5. Light source should be pulse xenon arc lamp 6. Silicon photodiodes detector 7. Should have a reusable measuring probe which can be cleaned with disinfectant 8. Should have an in-built battery 9. Large easy to read display 10. Should have a charging station 11. Should work with all skin colour 12. Should be European CE and US FDA approved product and the certificate must be submitted 13. The price quoted in the financial bid should include the cost of the equipment along with the cost of the first three thousands measurements of jaundice done with the equipment 14. Items covered under warranty/CMC a) Prices of consumables should be quoted separately and frozen for the period of warranty and CMC period 15. The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 30-90% 16. The unit shall be capable of operating in ambient temperature of 20-40 deg C and relative humidity of less than 70% 17. Should have local service facility and should have the necessary equipments to carry out preventive maintenance test 18. Onsite physical demonstration and training of the equipment to all the end users with all the requested facilities will be mandatory 19. Availability of spares for at least 7 years after date of installation Supplied with 1. Charging unit with calibration checker 2. User manual with trouble shooting guidance, in English 3. Technical manual with maintenance and first line technical intervention instructions, in English 4. List of priced spare parts 5. Rates of spare parts to be quoted separately 6. List with name and address of technical service providers in India	1 Nos.
16	Volumetric infusion pump	1) Application: Peristaltic infusion pump for pediatric use, should work with any standard grade PVC IV sets 2) Alarms: - Visual and acoustic alarm with automatic pump stop function - Occlusion alarm with user-adjustable occlusion pressures - Air alarm - Door open alarm - Standby alarm - Volume infused alarm - Invalid rate - Low battery - Power supply failure 3) Delivery rate: 0.1 ml/hr to 999.9 ml/hr, smallest increment of 0.1 ml/hr	2 Nos.

		4) Control On/off Start/Stop infusion Flow rate Volume Prime/bolus Alarm silence 5) Display: Flow rate in large LCD display Alarms AC mains indicator Battery on, battery capacity display in hrs and min Occlusion pressure 6) Additional features: Automatic delivery rate calculation in ml/hr 9 drugs can be stored 7) Audible alarm Sound intensity user-adjustable Rechargeable, maintenance free battery Life when fully charged: up to 10 hrs 8) Mains power supply: 220V, 50/60Hz Cable length: more than 2 m 9) Clamp: Pole clamp (adjustable to fit stands of all widths) 10) Manual: Operator manuals 11) Safety system: Flow clamp- prevents free flow when pump door is opened Air detector- minimizes the risk of air 12) Data lock: This function locks the keypad against unwanted alteration of the parameter entered. 13) Prices of consumables should be quoted separately and frozen for the period of warranty and CMC 14) The company should provide at least 4 preventive maintenance visits/yr. 15) Company must agree to an on-site demonstration of the equipment if called for by the expert committee 16) Quotation must include a compliance statement and in addition, each of the above points is marked in the technical brochure. Points not covered in the brochure must be specifically addressed in a separate certificate. 17) Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility 18) The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90% 19) The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg. C and relative humidity of 15-90% 20) Should be USFDA or European CE approved product 21) Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements 22) Manufacturer should be ISO certified for quality standards 23) Certified for meeting IEC60601-2-24:Particular requirements for the safety of infusion pumps and controllers 24) Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection , water ingress 25) Electrical Safety Classification Class I/II, Type CF and Internally powered equipment 26) Certified for meeting IEC 60601-1-4 Medical electrical equipment - Part 1-4: General requirements for safety - Collateral Standard: Programmable electrical medical systems	
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		27) Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual 28) List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual 29) User Manual in English 30) Service manual in English 31) Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out 32) List of important spare parts and accessories with their part number and costing. 33) Demonstration of quoted equipment model is a must. 34) Availability of consumables for at least 7 years after the date of installation	
17	Patient warming system	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 lighter 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, 20 pediatric 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°C with in 30 sec. 3. The warming system should have temperature range settings of 30° to 34°C, 36° to 40°C and 42°C to 46°C. 4. The warming system should have an automatic step down facility. After 45 min temperature will come down from high mode to medium mode. 5. Should be USFDA or European CE certified. 6. Should have Hepa filter of 0.03 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 pressure and sensors to prevent patient burn. 9. Machine should have hour meter to understand total run time. 10. Demonstration of quoted equipment model is a must. 11. Should have local service facility. The service provider should have the necessary equipment recommended by the manufacturer to carry out preventive maintenance test as per guidelines in the service / maintenance manual. 13. Availability of consumables for at least 7 years after the date of installation. 14. Rates of consumables should be frozen for the full Duration of warranty and CMC.	1 Nos.

Annexure-C

**Inviting of sealed quotations for supply and installation of Equipments for
Pediatrics Department of AIIMS, Jodhpur**

TECHNICAL BID

Name of Firm/Contractor/Supplier	
Complete Address & Telephone No.	
Name of Proprietor/Partner/Managing Director/Director.	
Phone & Mobile No.	
Name and address of service centre near by Jodhpur.	
Whether the firm is a registered firm Yes/No (attached copy of certificate)	
PAN No. (enclose the attested copy of PAN Card)	
Service Tax No. (enclose the attested copy of Service Tax Certificate)	
VAT No. (enclose the attested copy of VAT Certificate)	
Whether the firm has enclosed the Tender Fees as per Annexure 'A'	
Whether the firm has enclosed the Bank Draft/Pay Order/Banker's cheque as Earnest Money Deposit as per Annexure 'A'	
Whether the Firm/Agency has signed each and every page of Tender/NIT	
Please provide full list of consumables.	
Any other information, if necessary	

Authorized signatory of the bidder with seal.

Annexure-D

Financial Bid

(To be submitted on the letterhead of the company / firm separately for each item)

S.No.	Item Description	QTY	Rate	Vat/ Tax	Amount

CMC Charges as applicable (excluding Service Tax)	
1 st Year	
2 st Year	
3 st Year	
4 st Year	
5 st Year	

1. I/We have gone through the terms & conditions as stipulated in the tender enquiry document and confirm to accept and abide the same.
2. No other charges would be payable by the Institute.

(Authorized signatory of the bidder with seal)