5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltasge regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Comprehensive warranty as per bid.		
7.3	Manufacturer should have ISO certification for quality standards.		
7.4	Comprehensive training for lab staff and support services till familiarity with the system.		
7.5	Shall be certified to be meeting safety standard		

	IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	List of important spare parts and accessories with their part number and costing.		
8.3	Certificate of calibration and inspection.		
8.4	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.6	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

SPECIFICATION OPERATIVE GYNECOLOGICAL LAPAROSCOPE SET

Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Laparoscope is used for minimal invasive surgery and comprises of telescope and associated instruments.		

2 Operational Requirements

2.1	System complete with Laparoscopic unit, Video printer, Electrosurgical Unit , Mobile cart and instruments set is required to be quoted.
2.2	Laparoscopic unit consists of :- - Laparoscopic telescope and associated instruments and accessories. -Xenon light source - Electronic Insuffulator. - T.V.Monitor - Camera Control Unit. - Suction devices.
2.3	The Mobile Video cart should be supplied by the company supplying the basic of laparascopic unit.

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders
3.1	A) Laparoscopic Telescopes: Enlarged distortion free view; Autoclavable as well as sterilized by liquid disinfectant; Fiberoptic light transmission incorporated, 1. 10 mm diameter, 0 degree angle of vision (30-36 cm) 2. 4-5 mm diameter, 0 degree (28-30cm). 3.Forward oblique telescope -30degree and 70 degree –enlarged view, diameter 5mm with length 28-30cms and 10 mm with length of 30-36mm. B) Trocar & cannula reusable: Trocar sleeve with insufflation stop – cock: automatic (silicon leaflet valve or flap valve)& manual controlled valve (Multi functional); with pyramidal tip trocar. 1. 5/6 mm diameter endotip cannulas of 6.5 to 10.5cms working length for use with 4/5 mm telescope & instruments. 2.11 mm diameter cannula of working length 10 to 15 cms. for 10 mm telescope & instruments. 3. High flow trocar sleeve with reducer for 5 mm instruments . B). Verres pneumoperitoneum needle. Spring loaded blunt stylet and leur lock –various sizes -7, 10, 13,15cms. C) Accessary instruments: Monopolar, 360 degree rotatable, 5 mm diameter instruments with a working length of at least 30-36cm, having an insulated handle, insulated shaft & jaw inserts which can be easily and quickly assembled in to a complete instrument or dismantled. 1. Atraumatic grasping forceps with double action long tapered jaws		

2. Grasping forceps with teeth and double action jaws .
3. Grasping and dissecting forceps with double action jaws
4. Metzenbaum scissors curved and straight both blades opening, rotating and dismantling.
5. Micro scissors.
6. Punch Biopsy forceps
7. Babcock's forceps, atraumatic jaws and fenestrated.
8. Right angled grasping forceps.
9. Dissecting spatula blunt.
10. High frequency needle retractable, insulated with connector pin.
11.Coagulating electrode L shaped.
12. Grasping and dissecting right angled forceps.

D) Auxiliary instruments: Rotatable 10 mm diameter instruments with a working length of at least 30-36 cms, having a handle, uninsulated shaft & jaw inserts which can be easily and quickly assembled in to a complete instruments or dismantled.
1. Babcock clamp with double action jaws .
2. Grasping forceps with claws/teeth .
3. Large operating scissors with double action jaws
4. Tinaculum forceps
5. Right angle grasping and dissecting forceps
6. Bowel grasping forceps.
7. Vaginal extractor 11mm with insulated ball shaped sphere 35 to 45 mm.
8. Variable curvature suture and sling passer, dismantling large curvature consisiting of handle, outer sheath, inner sling passer.

E) Bipolar instruments: 5 mm diameter instruments with a working length of at least 30 -36cms having a jaw insert, sliding sleeve, outer tube and handle which can be easily and quickly assembled in to a complete instrument or dismantled
1. Take apart bipolar grasping forceps.
2. Grasping forceps long flat non retracting jaws with 3mm width or more.
3. Rotating bipolar grasping forceps wide jaws and slender jaws.
4. Bipolar rotating dismantling curved edge scissors
5. Bipolar coagulating suction tube with coagulating electrode with connector pin with lateral holes and two way stop cock.
6. Bowel Grasper fenestrated, size :5.0mm, length 35-36cm , handle with ratchet, insulated shaft.
7. Heavy Duty Robust Bipolar Forceps 36 cms length, rotating dismantlable, preferably CLEMONT FERRAND, wide jaws with spare insert and handle.

F) Multifunction Suction & Irrigation System
1. Multifunction Suction irrigation handle with provision for using 5mm diameter auxiliary instruments
2. Suction irrigation cannula 5mm diameter for the above
3. Suction irrigation cannula 10 mm diameter for the above
4. Suction irrigation cannula 5 mm diameter for the above for aqua – dissection
5. Reusable suction irrigation tubing set

G) Needle holder: 5 mm diameter instrument with a working length of at least 30-36 cms with carbide tungsten insert tips for straight and curved needles

Assistant needle holder: 5 mm diameter instrument with a working length of at least 30-36cms with carbide tungsten insert tips for straight and curved needless.

	H) Knot pusher and Knot tier.: 5 mm diameter, working length of at least 30 cms. For knotting. I) Monopolar High frequency electrodes of 5 mm diameter and working length of at least 30-36 cms. 1. Needle electrodes straight and L shaped. 2. Spatula electrodes 3. Hook electrodes 4. Knife electrodes J) Clip applicator: 10/5 diameter, working length of at least 30cms should be quoted with adequate no of spare clips K) Injection and puncture cannula: 5 mm diameter and working length of at least 30 cms. with leur connector L) Myoma screw: 5 mm diameter and working length of at least 30 cms. M)Uterine Manipulator for LAVH, for mobilization of uterus, identification of vaginal fornices and sealing of vagina during hysterectomy N)Electronic Morcellator with cutting sleeve and protective sleeve along with spare knife			
3.2	High frequency monopolar cables for the above auxiliary equipments a. Fibre bundle of 4.5 mm diameter b. Length of 230 – 300 cms c. Compatible with A above			
3.3	High frequency Bi- polar cables for the above auxiliary equipment. a. Fibre bundle of 4.5 mm diameter b. Length of 230 to 300 cms c. Compatible with A above			
3.4	Option 2 Full High Definition(HD) Endoscopic camera with T.V. medical grade monitor and printer A.2)Endoscopic High Definition Camera (Digital) 1. 3X1/3 CCD image sensor. 2. Should have progressive scanning and should support 16:9 format 3. Should have option of controlling the compatible endoscopic units in hands of surgeon/ touchscreen 4. Should be compatible with 23- 26 inch monitor 16:9 HD format 5. Upgradeable 6. Resolution should be 1900 x 1080p or more 7. Light weight camera head with programmable function key 8. PAL system/ multimedia as existing in this country 9 Automatic white balancing 10. Freely programmable camera head buttons 11. Cable should have buckling protection 12. Facilities for fine focus for smooth function. Microprocessor controlled. 13. Built in antifogging device. 14. Camera head should be compatible with telescope of any make and light of any make. 15. Integrated universal power supply 16. Compatible with medical grade monitor with multimedia projection available in this country.			

17. Should have specific built in facility for camera functionality automatically optimizing all settings
18. Camera should be ready to use as soon as it is connected to camera control unit.
19 Universal coupler
20. Inbuilt electronic Fibre optic filters

B.2) Camera Control Unit
1. Should have microprocessor control
2. The Camera CCU should be capable of either down-converting HD signals to SD or up-converting SD signals to HD.
3. It should have provision of working / compatible with lower models of camera heads.
4. . It should allow images from one format to be viewed, on displays in different format ie it is the HD system is compatible with both SD and HD.
5. Should have multiple video input and out puts – BNC,RGB,Y/C, DVI-D socket,digitalSDI signal, DV for digital recording etc
6. Should have all necessary connecting cables between camera head and video monitor

C. 2 HD MEDICAL GRADE MONITOR, flat screen,LCD/LED/ TFT MONITOR
1.Desktop or wall mountable
2. Multinorm/PAL system color monitor for different color systems existing in the country.
3. Compatible with endovision camera of any makes
4.Screen size diagonal 23/24/26" Ultra high resolution, more than 2 MP.
5.Aspect ratio 16:10
6. Should preferably have advanced technology feature to perform interlace to progressive conversion of the image.
7. Number of colors should be approximately 16.8 million.
8. Viewing angle should be wide
9. Monitor menu displays all controls, capabilities and operations via curser keys, user defined captions, easy to use and highly dependable.
10. Should be composite, have multiple video input and out puts – BNC, RGB, Y/C, SDI, DVI etc
11. Power supply of 200-240 VAC. 50 /60Hz
12.Should have facilities for recording the data on computer /digital Video recorders/CD
13. On screen menu for monitor setting , Compact and light weight ,Drip water protected dust proof , all connecting cables to be supplied
14. Brightness 400cd/m2, contrast ratio 1000:1
15. Antireflection quoted front glass.
16. Should have consistent illumination level.
17. Should preferably have facility for upgradation and should be compatible with lower models.
18. Should be supplied with power supply, monitor stand and mains cord
19. Camera, CCU, & Monitor should be compatible with each other and preferably should be of same make.

D) Documentation system for storage and transfer of digital data
1- Digital storage of still HD images and video/ audio files. It should have the facility editing/cutting of recorded data.
2 Auto detection of the connected camera system on HD_SD/ SD-SDI input
5 Archiving on DVD CD- ROM or USB stick, Multi- Session and Multi –Patient
6 Network saving
7 Automatic generation of standard reports Approved use of computers and monitors in the or environment as per 60601- 1

D) VIDEO COLOUR PRINTER :-
1-For endovision camera and multi colour systems existing in country

	2-Large colour prints of video images with outstanding quality at least 4 different images can be stored and printed on one sheet. 3-Memories at least 4 frame. Should be compatible with any monitor and should be supplied with all connecting cables, satisfying international quality controls, safety norms and power supply Should preferably have facility for upgradation and should be compatible with lower models			
3.5	A). Xenon light source 1-300 watts bulb minimum 1000 hrs. with at least Four spare bulb of 15V 300 watts 2- Fully automatic with light intensity continuously adjustable from 0-100% automatically by the cameras video output signal 3- Should have display of lamp service life. 4- Stand by mode 5- Monitoring of lamp function. 6- Built in antifog air pump. 7- Universal jaw assembly to adapt cable of any make. 8- Light wt. <10 kg.>9-Certified for international /national safety standard norms+power supply 10- Power supply 220-240 VAC 50/60 Hz. 11- Should be quoted along with spare lamp 12. Fibreoptic light cable 4.8mm in diameter and 230 -300cms in length compatible with cold light source and commonly available telescopes (Necessary adaptors may be provided). B). Specifications CO2 Insufflator: 1.Electronic CO2 insufflator with pin index connection. Should have an adjustable flow rate of 0 to 30 litres per minute and a pressure range adjustable between 0-30 mm Hg. 2.Pressure and flow rate should be displayed on the front panel. Provided with silicon autoclavable tubing with luer lock attachment. 3. Instrument should work on a supply of 220-240 V, with a frequency of 50 HZ single phase. 4. Optical and acoustic warning signals for pressure exceeding set limits. 5. Provision for preheating gas to body temperature. 6. Fully automatic gas refill. 7. Wrench Kit :Suitable for connecting the insufflator to CO2 cylinder 8. High pressure hose of length of 200 to 300cms			
3.6	C). Electrocautery: 1• Should have unipolar cutting and coagulation as well as bipolar cutting and coagulation modes and have the facility of blending cutting and coagulation in different ratios and degree –soft, standard and or forced coagulation and spray coagulation. 2• Arc controlled cutting with a pre selectable power of maximum of 200 watts in both unipolar and bipolar modes. 3• Arc controlled coagulation with a pre selectable power of maximum of 120 watts in both unipolar and bipolar modes. 4• Auto stop function with automatic power – off on completion of coagulation process. 5• Automatic start function for bi- polar coagulation. Should be operable both in hand and foot mode and should have hand control switch on the handle of the electrode. Bipolar application with irrigation with sodium chloride. 6• Endoscopy mode with reduced voltage out put for use with fine endoscopic electrodes.(microfunction) disposable.			

	7• It should have automatic read out panel to display current being used and actual output at distal tip of electrode, simple operation due to clearly arranged control with easy to read symbols. 8• Should be compatible with under water operative procedures 9• It should have neural electrode monitoring through a patient contact system. 10• It should have automatic high frequency power cut off by autocoagulation stop and autostart facility 11• The unit should have the facility of self testing for trouble shooting. 12• Visual and acoustic signs of HF activation by different colored indicators and different acoustic tones for cutting and coagulating. 13• Unit should have safety monitoring circuit in event of malfunction for output monitoring. Neutral electrode connection . Automatic self test and automatic power cutoff in event of malfunction. Ground leakage current(LF/HF) HF application time. 14. Power supply 230VAC, 50/60 Hz. 15• The unit should be supplied with all standard accessories such as Electrode,Foot switch, Twin earth pad , bipolar forceps with Cord, Electrode Handle with switches , neutral plate, ball electrodes, Loop electrodes, variable output power for all types of currents.			
3.7	1. The equipment should have facility for suction evacuation. 2. Electric requirement as per Indian power supply 240 watts. 3. Vacuum pressure/suction pressure of the unit should be 0-800 mmHg minutely adjustable. 4. There should be 2 collection bottles small of 1.5 -2 L and Large of 3-4 L 5. There should be float valve for each bottle. 6. The power control should be by foot switch also. 7. The unit should be mounted on a mobile trolley which is rust proof with a tray to keep the instrument which is made up of stainless steel and should be rust proof. Trolley should have locking device in wheels. 8. The unit should have ISO-9001/2 certificate which should be submitted with tender.			

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	PLASTIC CONTAINERS FOR STERILIZING AND STORAGE:- 1. Plastic / aluminium containers for sterilizing and storage- -Perforated with transparent lid, for use with 30 cm and 36 cm Hand line Instruments. External dimensions approx 550x260x150 mm 2. Plastic container for sterilizing and storage of camera heads :- - for use with steam gas and plasma sterilization . 3.Basket for cleaning sterilizing and storage of 2 rigid endoscopes and one light cable and including holder for adaptors. External dimensions appox. 490x125x60 mm		
4.2	MOBILE VIDEO CART :- -5 Shelves- distance between the shelves should be sufficient to accommodate the equipment comfortably with working space. -4 wheels – antistatic dual wheels, 2 equipped with locking brakes . - one drawer unit with lock, one camera mount.		

	DIMENISIONS ;- -Appropriate Height. -Appropriate standard dimensions, Power Box, socket board with 12 plugs and 12 grounding plugs.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation, spike protection and maintenance free batteries for 60 minutes back up		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Comprehensive training for lab staff and support services till familiarity with the system.		
7.4	Comprehensive warranty as per bid.		
7.5	Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 Particular requirements for the safety of endoscopic equipment.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		

8.2	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		
8.3	Certificate of calibration and inspection.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.6	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for Antepartum and Intrapartum foetal monitor (Cardiotocomachine)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Antepartum and Intrapartum foetal monitor (Cardiotocomachine) is used to monitor Foetus during antepartum period (before labour) or intrapartum period (birth process)"		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The complete unit with printer and all accessories should be offered.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	The monitor should be provided with 1) Battery and main operation facility 2) Should have inbuiltLCD screen /LCD TV monitor with facilities to display on screen fetal heart tracings and toco tracings. 3) Should be compact, light weight and should have inbuilt carrying handle and waterproof transducers. 4) The unit should have Fetal Heart Rate range 50 to 240 bpm External Toco range 0 to 127 relatives units Should have NST timer for antepartum applications 5) Highly sensitive ultra sound transducer which should be 1.5 MHZ for less signal attenuation and good signal acquisition. Ultrasound transducer should be a waterproof unit. Designed with Snap Clasp closure for easy application and cleaning. Should have facility to connect any transducer in any socket for easy use. Preferably there should be facilitv to switch between transducers when		

	more than one transducer is used. 6) Ability to give an accurate continuous trace and should be able to detect sudden beat changes upto 25 bpm 7) Audible alert indication of fetal bradycardia and tachycardia 8) External tocotransducer which should be a sealed waterproof unit. Guard ring designed to reduce maternal respiration artifact. 9) Patients event marker. 10) Capability of automatic fetal movement detector. 11) Digital numeric and text display along with audio signal of fetal movement Should have inbuilt keyboard entry screen for patient data entry, name etc. Minimum 5 hour memory of traces with fast printing. 12)Should provide following accessories – Transducer belts, Belt buckles,Main cables, interconnecting cables, ultrasound gel bottles. 13) Inbuilt high resolution thermal/Laser printer with easily available cost effective paper. 14) Should be provided with trolley with wheels with locking facility for mounting the unit on it with accessories for storage of transducers paper etc or the unit must have the facility for wall mounting and a protective cover with cabinet. 15) Optional (I) Should have facility for intra uterine pressure monitor. (II) Should have facility to record fetal heart rate pattern through fetal ECG. (III) Should have facility to monitor twins. Should have twin offset feature so that both fetal heart traces are clearly visible. (IV) Should have facility of connection of central monitor system.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be supplied		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Comprehensive warranty as per bid document.		
7.3	Comprehensive training for lab staff and support services till familiarity with the system.		
7.4	Manufacturer should have ISO certification for quality standards.		
7.5	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.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English & DVD for the same.		
8.2	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.3	Certificate of calibration and inspection.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.6	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

TECHNICAL SPECIFICATION FOR PORTABLE ULTRASOUND WITH COLOR DOPPLER SYSTEM

DICOM compatible fully digital, compact portable Colour Doppler Ultrasound machine is required with the following technical features:

1. The unit should be compact, lightweight and portable. Weight should not exceed 10kg excluding cart and accessories.

2. It should be suitable for abdominal, small parts and vascular applications in adults and paediatric patients.

3. Multiple preloaded as well as user configurable application presets should be available.

4. It should have 1024 or more digital channels for image formation and acquisition.

5. Transducers:
   (1) Convex 5 - 2 MHz for abdominal imaging.
   (2) Linear 13 - 6 MHz.
   (3) Endocavitory 8 - 5 MHz for transrectal ultrasonography and end firing biopsy, one each.

6. All transducers should be lightweight digital phased array broadband type transducers with at least 1024 elements.

7. Detachable needle guide should be available with convex and endocavitory probes.

8. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler and triplex Doppler should be available.

9. Advanced features such as tissue harmonic imaging with contrast media and compound imaging Advance dynamic flow / HD flow should be available.

10. Controls for 2D mode: Total gain, depth, TCG, dynamic range, acoustic power output, number for position of focus.

11. Controls for Colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.

12. Controls for pulsed Doppler: variable sample volume size from 1 to 5mm or more, steer, PRF, baseline, gain angle correction, spectral invert, duplex/triplex on/off.

13. Measurements for 2D mode: Multiple distances, area and volume.

14. Measurements for Doppler modes: Stenosis quantification in percentage, diameter, PSV, EDV, mean, PI, RI, floor volume, acceleration time and index. Automatic and manual measurements and display of pulsed Doppler calculations should be possible.

15. Cineloop memory of minimum 10 seconds on all modes.

16. **Monitor**
Flat LCD/TFT monitor of at last 15inchesor more.

17. **Keyboard**
Alphanumeric soft keys keyboard with easy access scans controls and trackball.

18. **Storage**
Onboard storage of atleast 1000 images. Storage in JPEG and AVI format should be possible.

19. Sorting of data base with patient name and date should be possible.

20. USB port connectivity to printer or computer.

21. Facility for storage on CDR should be available.

22. Unit should function with 200-240 V, 50 Hz AC, 5 amp power outlet. Power requirement to be specified.

23. In built battery back up should be at least one hour or more.

24. The unit should be compatible with and should have facilities for interfacing with the hospital LAN.

25. Essential accessories: Black & White Thermal printer and color laser printer, UPS, mobile cart with transducer holder, jelly bottle holder and space for printer.

26. Paper and cartridges for 1000 image printouts should be provided.

27. The unit offered must be sturdy and should be able to withstand accidental hits and falls during transportation.

28. The unit offered in the tender will require technical demonstration.

29. List of users in India/world wide should be enclosed along with the tender.

30. Price of the main unit and accessories to be quoted separately.

31. Warranty:
The unit, transducers and all accessories should be covered with comprehensive on site warranty for Two (2) years commencing from the date of issue of installation certificate.

32. Photocopy of purchase order along with terms and conditions of contract received from any Govt/Public Sector institution in the last two years for supply of the offered equipment must be enclosed with the price bid

33. Company should have an established Registered Service Centre with address and phone numbers at Delhi.

34. Company should give undertaking regarding the spares availability of the quoted model for next ten years.

35. The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.

36. The shortlisted bidders will have to give demonstration of their quoted ` model before finalizing the evaluation of their bids

Equipment Specifications for Ultrasonic Cutting and Coagulating Device for Open & Laparoscopic Surgery

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Ultrasound is the basis for an efficient surgical instrument: the **Ultrasonic Scalpel** cuts and coagulates by using lower temperatures than those used by electrosurgery or lasers. **Ultrasonic Scalpel** technology controls bleeding by coaptive coagulation at low temperatures ranging from 50ºC to 100ºC: vessels are coapted (tamponaded) and sealed by a protein coagulum.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The system suitable for General as well as Laparoscopic Surgery is required.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Specification: 1•It should have an ultrasonic generator with a frequency of 55 to 60 KHz capable of incising tissue and providing haemostasis with minimal thermal injury. 2• It should have both 5 mm and 10 mm instruments. 3. It should have a vibration range of 50-110 microns. 4•It should be compatible with the following types of shears for open and laparoscopic surgery. 5 mm Laparoscopic Curved coagulating Shears 360 degree rotatable, capable of sealing blood vessels minimum 5mm diameter bilateral integrated hand control to enable precise operation of system by hand. 5•It should have option of attaching rotating hand switch adapter with integrated bilateral switches to enable precise operation of system by hand for hooks and blades.		

	6• The generator should have option to connect two foot switches, which should allow connection and placement of foot switches on either side of the operating table, if required. **7**•It should have standby mode for better safety. **8.**It should have system diagnostics and trouble shooting guide to pinpoint and resolve alert/alarm condition. **9.**It should have well equipped service centre in India. **10**•It should comprise of, Hardware 1. Generator 2. Foot Switch & Cable 3. Cart Accessories: 1. Handpiece 2. 5 mm Blade System Adaptor 3. Adaptor for Shears 4. Hand Switching Adaptor 5. Sterilization tray Open Surgery Instruments : **1.** Hand Activated Coagulating Shears with Clicker- 5mm dia, curved Mode, Capable of sealing blood vessels upto 5 mm, 23 cm long. Endoscopic Surgery Instruments: **1.** Laparoscopic Hand Activated Coagulating Shears- 5mm dia, Curved Mode, 36 cm long, capable of sealing blood vessels upto 5 mm.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All consumables required for installation and standardization of system to be given free of cost.		

5 Environmental factors

Sl	Name	Technical Specs	Bidders Deviation

		quoted by bidder	**if any**
5.1	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.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	**Name**	**Technical Specs quoted by bidder**	**Bidders Deviation if any**
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltasge regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

Sl	**Name**	**Technical Specs quoted by bidder**	**Bidders Deviation if any**
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Comprehensive training for lab staff and support services till familiarity with the system.		
7.4	Comprehensive warranty as per bid.		
7.5	Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment Part 2-2: Particular requirements for the safety of High Frequency Surgical Equipments		

8 Documentation

Sl	**Name**	**Technical Specs quoted by bidder**	**Bidders Deviation if any**
8.1	User/Technical/Maintenance manuals to be supplied in		

	English.		
8.2	List of important spare parts and accessories with their part number and costing.		
8.3	Certificate of calibration and inspection.		
8.4	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet .Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.6	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.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for DELIVERY BED

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Delivery bed is used for Baby Delivery and should incorporate ideal blend of the patient's individual requirements on comfort and the professional needs of the delivery team, focusing on the esthetic and functional design of the entire product.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Delivery bed should be supplied with all accessories as mentioned in the technical specifications.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Delivery Bed Should have following essential specifications: 1• It should have control devise for making height and back adjustments.[manual as well as remote control]. 2• It should have collapsible side rails 3• It should have three sectional mattress and seat section Mattress should have zipped Mckintosh cover, so that all blood stains can be removed & also should have large perineal cut. 4• It should have head board which can be detached. 5• Should have wheels provided with locking system. 6• Should have retractable foot section so as to convert bed into table. 7• Should have infusion rods which have adjustable heights, quick release and attaches to all corners of bed. 8• Should have adjustable leg rests available as an accessory. 9• Should have push grip handles 10• Should have sliding stainless steel bowl at perineal part of table. 11• It should have catheter bag holder which can be attached on either side of bed. 12• It should be able to give trendelenburg, reverse trendelburg and 70 degree sitting position both mechanically and electronically. 13• It should have adjustable foot supports for nursing staff 14• It should be easy to clean, sterilize (especially blood stains) and maintain.		

	15. Frame should be of epoxy powder coated steel 16.Dimensions - Length 6feet and width =2 and half feet.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All consumables required for installation and standardization of system to be given free of cost.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		

7.3	Comprehensive training for lab staff and support services till familiarity with the system.		
7.4	Comprehensive warranty as per bid.		
7.5	Electrical safety conforms to standards for Electrical Safety IEC 60601-2-38 Particular safety requirements for Electrically operated hospital beds.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.3	Certificate of calibration and inspection.		
8.4 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.			
8.5	List of important spare parts and accessories with their part number and costing.		
8.6	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.		

Equipment Specifications for Gynecology Examination Couch

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Required for routine gynaecological exams of patient.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Rugged and comfortable system is required.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Specification Gynecology Examination Couch 1. It should have two sectional mattress base with perineal cut suitable for Gynecological Examination. 2. It should have electric height adjustments from 54 to 97 cm with operating pedals on both the sides. 3. It should have electric trendlenburg tilt facility for accurate positioning from 0-15 degree. 4. It should have Electric Back Rest Adjustment form 0 to 75. degree 5. It should descend low enough to allow pregnant or infirm patients to mount the couch in its lowest position 6. It should have an instrument shelf and debris tray. which can be pushed under the base. 7. It should be supplied complete with Arm support, leg supports, Matching (Operators Stool), head Cushion and Paper Roll Holder. To be supplied with PAPER.PAPER SHOULD BE EASILY AVAILABLE. 8. It should have Retractable Wheels for mobility and lock facility of wheels.		

	9.Should have antistatic castors of diameter 125mm with central braking system.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

Sl	Name	Technical Specs	Bidders Deviation

		quoted by bidder	if any
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Comprehensive warranty as per bid.		
7.4	Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	DOCUMENTATION Should include the following: 1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacture. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, will not be considered.		

Equipment Specifications for Patient transfer trolley

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Required for shifting patients from the operating theatre to the recovery and ICU.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Should be suitable for monitoring sick post – operative patients in the OT recovery room when ICU bed is not available.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	SPECIFICATION PATIENT TROLLEY: Should have facility for the patient to be propped up. a. Should offer trendelenburg and reverse positions. b. All the movements of this trolley should be controlled both mechanically and electronically. 2. Should be about 7ft. long, 2 ½ ft. wide and height of 2 ½ ft. with facility for height adjustment. 3. Should be made of sturdy rust proof material with sturdy swiveling castors and locking device for wheels. 4.Should have a swing away type of safety railing, saline rod, oxygen cylinder cage and steel tray to hold patient notes and drugs.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

4.1	1• Should be provided with at least 8 spare castors and 8 spare saline rods. 2• Price should be quoted with all the accessories so that there is no delay in procuring the equipments once the order is placed.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Environmental factors to be complied: 1. shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi 2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty as per bid.		
7.2	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.		
7.3	Electrical safety conforms to standards for electrical safety IEC-60601-1 General requirements and IEC-60601-2-23 Particular requirements for the safety of Transcutaneous Pressure		

	Monitoring Equipments		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	DOCUMENTATION Should include the following: 1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacture. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, will not be considered.		

EMERGENCY PATIENT TROLLEY

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Emergency Patient Trolley is required for Patient transfer to & from ICU/OT/Emergency		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Demonstration of the equipment is essential.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Should have three sectional mattress base made of X Ray translucent high pressure laminate with facility to insert X Ray Cassette from either sides & ends of the trolley.		
3.2	Should be able to X Ray the patient from positions along the entire length and width of the trolley.		
3.3	Should have pneumatic stepless adjustment for back section, Trendelenburg, reverse Trendelenburg and foot section.		
3.4	Should have hydraulic height adjustment with a foot paddle on either side of the trolley		
3.5	Frame of the trolley should move with mattress base when foot section / back section is adjusted.		
3.6	Frame should be made up of epoxy powder coated steel		
3.7	Should have Central braking system with steering facility		
3.8	Should be equipped with heavy duty castors diameter 150		

	mm		
3.9	Should have bumpers at all the four corners of the trolley		
3.10	Should have facility to fix IV rod at all the four corners and middle of mattress base frame.		
3.11	Should have place for fixing 'B' Type Oxygen Cylinder		
3.12	Dimensions: Max. Length: 2000-2100 mm Max. Width : 730-750 mm Height : 535 – 905 mm Trendelenburg : 10 - 20° stepless Anti Trendelenburg : 7-10 ° stepless weight capacity : upto 200 kg X ray viewing area : entire length		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Anti static Hygienic Mattress (80mm) with pull straps, 01 pc		
4.2	Collapsible Side Rails, 01 pair		
4.3	I.V. Rod 02 pc		
4.4	Cylinder Holder for 'B' Type Oxygen Cylinder.01 pc		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

	None		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Product should be US FDA/CE or ISI approved		
7.2	Manufacturer should be ISO certified for quality standards.		
7.3	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.		
7.4	Comprehensive warranty as per bid.		
7.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User Manual in English		
8.2	Maintenance Manual in English		
8.3	Certificate of Calibration and inspection from the factory		
8.4	List of important spares and accessories with their part number and costing.		
8.5	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.		
8.6	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.7	Must submit user list and performance report as per the bid.		

OPHTHALMOLOGY

SURGICAL OPERATING MICROSCOPE

- Compact microscope body with high quality apochromatic Optics with 1:6 zoom ratio, Retina Protection Device and contrast enhancement aperture.

- Inclinable 180 Deg. Binocular tube with 12.5 X magnification eye pieces

- Objective with 200mm focal length for convenient working distance

- +2 Deg. Retro illumination with continuous fading mechanism of co-axial illumination from 2 Deg. to 2+6 Deg.

- Integrated slit illumination system with horizontal and vertical moving facility.

- Integrated Depth of Focus mechanism for improved depth of focus during surgery.
- Motorized foot controlled X-Y coupling with automatic re-centering and X-Y inversion facility.
- Motorized foot controlled Zoom and focus with recentring of focussing position thru foot control.
- High quality programmable floor stand with magnetic breaks and clutches for easy positioning through handles and suspension arm.

- Stand should have programming facility for setting the speed of XY, Zoom and focus with storage facility of initial setting for multiple users.

- Stand should have cold light fiber Optic illumination with two illumination bulb with semi automatic changeover facility.

- Independent integrated binocular assistant microscope with 5 Step magnification changer and focussing.

- 3CCD Digital camera attachment and digital video recording facility with imported high quality video trolley with isolating transformer.
- 36/42" LED display unit
- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet
  NOTE:

- Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

AUTO REFRACTOKERATOMETER

The unit should be with the following superior features:

1. Automatic radius measurement
2. Automatic peripheral measurement
3. It should have adjustable tilt Colour LCD Monitor • Active accommodation relaxation
4. IOL measuring mode
5. Reliable PD measurement
6. Large cylinder measuring range up to 10 D
7. Measurement as from 2.3 mm pupillary diameter
8. In-built printer with paper cutter function – auto save mode

Technical Specifications: Refraction measurement

1. Sph - 25.0D → + 25.0 0.01 / 0.12 / 0.25 D. steps
2. Cyl 0 to + / - -10D IN 0.1 l 0.2 / 0.5 D. steps
3. Axis 0° to 180° in 1 ° steps
4. Automatic measurement (release) in the case of correct centering
5. 1 to 10 automatic measurements possible

Radius measurement

1. Surface refraction power 33.75 D→67.5 D in 0.01 / 0.12 / 0.25 D. steps
2. Radius 5.0 - 10.0 mm in 0.01 mm steps
3. Cylinder size 0 - 9.0 D(Axis 0° to 180° in 1 ° steps)

Cornea vertex distance 0 1 10 / 12 / 13.5 / 15 mm Min. pupillary diameter 2.3 mm
Pupillary distance Up to 85 mm in 1 mm steps Printer Internal thermal printer with cut-off facility Monitor 14.5 cm colour LC display
Outputs RS232C and Video NTSC

- Motorized table
- C.V.
- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

SLIT LAMP BIO MICROSCOPE.

A Binocular Bimicrosccpe with a slit lamp system for providing desired types of illumination for various types of examination of the eve.

A Microscope

1. Type: Slit Lamp Binocular Biomicroscope
2. Angle of optical axis: The offset of the left and right optical axes should be within 40 minutes in up and down direction separately and within 1° in outward. However a Binocular Biomicroscope of which optical axes of left and right oculars are not parallel is excluded.
3. Control of magnification : Should be in steps
4. Objectives : Paired 1x and 1.6x
   Objective lens focal length(100-125mm)
5. Eye Pieces : 10x and 16 x
6. Inter-pupillay distance : 50mm to 75mm
7. Magnification and field of view :

Eye Piece	Objective	Magnification field
10x	1 x	18mm,15mm, 11 mm
16 x	1.6 x	9mm, 4mm, 2mm

B. Slit Illumination Section

1 Slit image width adjustment	: 0 to 8mm step less
2 Slit image length adjustment	: 0-10mm continuous.
3 Diameter of diaphragm approx. or Diameter of illuminate field	: 8mm, 5mm, 3mm, 2mm, 1mm and 0.2mm
4 Angle of Slit (rotation)	: +1-90°
5 Tilt of slit (decentration)	: To horizontal 0° - 15° To vertical 0° - 20°
6 Filters	: Cobalt Blue: Red free and gray (neutral density) Polarizer or other N.D filters may be stated (Optional)
7 Light Source	: Halogen Lamps
8 Intensity Control of Illumination	: Low, Medium and High

D. Chin Rest Assembly

1. Type : Mechanical
2. Fixation Light Assembly :

E. Table Type :

Mechanical - Hydraulic/ Motorised

F. Power Supply

AC-220V-240V, 50 Hz

G. Spare Mandatory

1. No of bulbs : 6 Nos
2. No of fuses : 4 Nos
3. Set of Mirrors : 2 sets
4. Applanation Tonometer : One
5. Hruby lenses : One
6. +90 D lens for posterior segment : one
7. Four mirror gonioscope : one

- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

GENERAL SPECIFICATIONS
A+B scans ultrasound for Ophthalmology
A/B

1. A-scan mode: 10 MHz.
2. B-scan mode : 8-10 MHz
3. Dynamic movie archiving
4. Laser &video CD recording facility
5. Auto &manual measure function
6. Distance &area measurement on B-scan images
7. Vector A-scan measurement
8. Simultaneous B-scan with vector A-scan
9. A-scan dynamic recording with gain adjustments
10. Facility for IOL power calculations(all formulas)

Accessories:

1. Printer
2. Motorized table/ trolley on wheels
3. CVT
4. Extra set of A and B scan probes

- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

NOTE:

- Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

SPECIFICATIONS

VISUAL FIELD ANALYSER

- High quality Goldman standard automated perimeter with working distance 30cm
- Maximum intensity 10,000Asb, Bowl illumination 31.5Asb
- C.D. drive, internal hard disk drive with Magneto Optical Disk (MOD) drive.
- Stimulation duration 200ms,wavelenth Broad band visible light
- Stimulus/Background colour White on White, Blue on yellow (SWAP)
- Maximum temporal range 90Deg.Suitable for central 30 as well as full field testing
- Central field test patterns 30-2,24-2,10-2,Macula
- Peripheral field test pattern 60-4,Nasal Step
- Threshold test strategies full threshold, Fast Pac, SITA or equivalent
- Glaucoma progression analysis and Serial Analysis for patient follow up
- Screening field test P-60, FF-80,FF-120,FF-240,Nasal Step for periphery .
- Screening test strategies Two zone, Three Zone and Quantify Defects
- Kinetic Testing, Custom Test, Automatic Pupil measurement
- Stimulus Size I-V as per Goldman standards
- Glaucoma hemi field test, Hail –Krakau blind spot monitor
- Video eye monitoring, Trial Lens Holder, Gaze tracking System
- Head tracking, Vertex Monitoring, Touch screen on CRT, Keyboard
- Motorized chinrest, Original Manufacturer Motorized table with Laser Jet Printer
- Should have safety certificate from a competent authority CE / FDA (US) / STQC CB certificate / STQC S certificate or valid detailed electrical and functional safety test report from ERTL. Copy of the certificate / test report shall be produced along with the technical bid.
- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

NONCONTACT TONOMETER

1. Air puff non contact tonometer
2. To measure intraocular pressure without actual eye contact
3. Digital display of intraocular ocular pressure
4. Measurement range 4 to 59 mm of Hg
5. Ability to compensate IOP depending upon corneal pachymeter
6. Printer, motorized table
7. CVT

REFRACTION UNIT WITH MOUNTED SLIT LAMP AND DOCTOR STOOL

EXAMINATION CHAIR

1. Seat Height: 550-750 mm
2. Inclination of backrest: 100 to 170 degrees
3. Rotation: 0 to 180 degrees
4. Power source: 220 V A/C 50 Hz
5. Load Lifting capacity: 150 Kg
6. Motorized system

STAND UNIT

1. Power supply: 0 to 12 volt, stepwise, for various table mounted equipments.
2. Tray movement: 0 to 90 degrees
3. Tray for trial lens set
4. Prescription table
5. Space for mounting slit lamp
6. Power source: 220 V

AUTO CHART PROJECTOR

1. Refracting distance: 3 to 6 meters
2. Projection magnification: 30x
3. Charts: English, 'E' chart, 'C' chart, picture charts, Hindi (optional),
4. Automatic shut off
5. Power supply: 220 v
6. Cordless remote control
7. Polarized metal screen
8. Wall mount bracket

DOCTOR STOOL

1. Adjustable seat height: 55-70 cms, hydraulic/motorized
2. 360 degree swivel
3. Cushion seat: with superior quality poly foam
4. Semi sphere adjustable backrest.
5. Good quality wheels for smooth and stable movements

SLIT LAMP BIO MICROSCOPE.

A Binocular Bimicrosccpe with a slit lamp system for providing desired types of illumination for various types of examination of the eye.

A Microscope

5. Type : Slit Lamp Binocular Biomicroscope
6. Angle of optical axis: The offset of the left and right optical axes should be within 40 minutes in up and down direction separately and within 1° in outward.

7. However a Binocular Biomicroscope of which optical axes of left and right oculars are not parallel is excluded.

8. Control of magnification : Should be in steps

9. Objectives : Paired 1x and 1.6x

Objective lens focal length(100-125mm)

5. Eye Pieces : 10x and 16 x

6. Inter-pupillay distance : 50mm to 75mm

7. Magnification and field of view :

Eye Piece	Objective	Magnification field
10x	1 x	18mm,15mm, 11 mm
16 x	1.6 x	9mm, 4mm, 2mm

B. Slit Illumination Section

1 Slit image width adjustment : 0 to 8mm step less
2 Slit image length adjustment : 0-10mm continuous.
3 Diameter of diaphragm approx. or
Diameter of illuminate field : 8mm, 5mm, 3mm, 2mm, 1mm and 0.2mm
4 Angle of Slit (rotation) : +1-90^{o}
5 Tilt of slit (decentration) : To horizontal 0° - 15°
To vertical 0° - 20°
6 Filters : Cobalt Blue: Red free and gray (neutral density) Polarizer or other N.D filters may be stated (Optional)
7 Light Source : Halogen Lamps
8 Intensity Control of Illumination : Low, Medium and High

D. <u>Chin Rest Assembly</u>

1. Type : Mechanical

2. Fixation Light Assembly :

E. Table Type :

Mechanical - Hydraulic/ Motorised

F. Power Supply

AC-220V-240V, 50 Hz

G. <u>Spare Mandatory</u>

1. No of bulbs : 6 Nos
2. No of fuses : 4 Nos
3. Set of Mirrors : 2 sets
4. Applanation Tonometer : One
5. Hruby lenses : One
6. +90 D lens for posterior segment : one
7. Four mirror gonioscope : one

- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

NOTE:

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PATHOLOGY

Equipment Specifications for Automated Slide Stainers

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Automatic Slide Stainer is used for staining histological and cytological slides.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Should be programmable for routine H & E & other special stains with facility for imuno-histochemical stains & memory of various staining procedures		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Should hold about 80 slides per basket		
3.2	Basket chemical capacity 750-1000ml		
3.3	At least 2(two) water stations with 24 work stations,(Programmable) with timing in minutes & second & facility for single & double load.		
3.4	Agitational facility		
3.5	Can be connected with any make automatic cover-slipper		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

4.1	System as specified-		
4.2	Bio chemical baskets - 6 Nos.		
4.3	Slides Hangers - 4 Nos		
4.4	All consumables required for installation and standardization of system to be given free of cost.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		
5.3	A fume hood completely covering the slide plates to prevent hazardous fumes from entering the lab area and an activated charcoal filter to minimize solvent vapors should be provided.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)		
6.3	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

7.1	Should be US FDA or CE approved or ISI marked product		
7.2	Comprehensive warranty for 2 years and 5 years AMC after warranty		
7.3	Should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use.		
7.4	Should comply with International Electromagnetic Compliance standards like IEC OR EMC Directives.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	Certificate of calibration and inspection from factory.		
8.2	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.3	User/Technical/Maintenance manuals to be supplied		
8.4	List of important spares and accessories with their part number and costing.		
8.5	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

SPECIFICATIONS FOR AUTOMATIC TISSUE PROCESSOR 1 No.

- Fully automated Carousel type [stationary reagents with tissue baskets moving from station to station] with at least 12 stations (10 reagent stations, 2 wax baths).
- Desirable: Capability to add one more station.
- Computer controlled flow through tissue processor to automatically perform fixation, dehydration, clearing, and paraffin impregnation of tissue.
- Freely selectable and storable programming facilities at least ten should be available.
- Easy editing and changing of programmes should be possible, even during a processing run.
- Infiltration tie for each station should be separately programmable.
- Ergonomic control panel with fully protected key board and LCD.
- LCD Screen display of timings, warnings and errors.
- Audible warning/ error messages.
- Both immediate and delayed start functions should be available.
- Delayed start function at least up to 72 hours.
- Each reagent station should have metal containers for reagents.
- Capacity of each container should be 1.8 to 2 liters.
- Paraffin stations – Number: 2 (1.8-2 liters each)
- Temperature range of wax baths 45^0 C to 65^0 C.
- Excess temperature cut out 75^0C.
- Preferable: Can be configured for three.
- Metal tissue baskets – At least 2 nos to be run at one go.
- Capacity: Minimum 80 standard small steel cassettes [2.5cms size] and 60 standard larger steel cassettes [3.5 cms size] should fit into each basket.
- The tissue baskets should have firm bottom.
- The base diameter should be smaller as compared to upper diameter to avoid baskets getting stuck inside the containers.
- Bucket hangers should be made of hard steel.
- Equipment should have agitation function to ensure proper processing of tissues.
- Interrupting an automatic process for reloading or removing cassettes before the end of a run should be possible.
- Attached vacuum function device.
- The vacuum device should be attachable both to the whole instrument as well as to individual stations.

- Machine should also be able to cater to short time (quick) processing.
- There should be fume control system.
- Safety device for protection of drying of specimen in case of power failure
- The bucket should go back inside the respective solution when power fails and not hang in mid air,
- The system should have auto start function after power failure.
- UPS for the machine with minimum of two hours.

ACCESSORIES

Wax baths	3 Nos.
Reagent stations	4 Nos.
Metal tissue baskets	6 Nos.
Voltage stabilizers (Compatible to the equipment)	1 No.

Standards & Safety

- Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001applicable to manufacturers and service providers that perform their own design activities.
- Should be compliant with IEC 61010-1: covering safety requirements for electrical equipment for measurement control and laboratory use.
- Should be US FDA or CE (European directive) or ISI approved product
- Comprehensive training for lab staff and support services till familiarity with the system.

Uptime Guarantee: Minimum of 95% of total working hours, failing which penalty will be imposed.

NOTE:

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Equipment Specifications for Autoloading Urine Strip Analyzer

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Urine strip analyzer quickly analyses urine chemistry for diagnosis and screening		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Must have flexible user programmable option available to use lesser parameter strip as and when required		
2.2	Measurement Principle: Reflectance Photometry (Inbuilt)		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Shelf life for the Urine Strips should be more than 12 months.		
3.2	Measured Parameters:(i) Leucocytes, S.G, pH, Glucose, Nitrite, protein, Ketones, Urobilinogen, Blood, Billirubin		
3.3	Throughput (Speed) :Should be more than 350 tests/hour with complete time monitoring be done by system		
3.4	Strip Feeding :Must be automatic feeding and automatic strip detection		
3.5	Reporting :Must have facility to enter sample ID and same should appear on printout		
3.6	Memory :At least 1000 tests results stored automatically		
3.7	Display: (i) LCD module to show all data on screen to		

	show test results and operation status of system. (ii) Display size-approx 40 characters X 12 lines or 20 characters 6 lines.		
3.8	Printer :Built in printer		
3.9	Waste management:Automatic unloading of used strip to separate waste tray		
3.10	RS 232C Interface for datacommunication.		
3.11	At least one year shelf life.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		
4.2	Urine strip start up kit- 1000 strips		
4.3	All consumables required for installation and standardization of system to be given free of cost.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)		

6.3	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA or CE or ISI approved product		
7.2	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.4	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for Semi Automated ESR Analyzer

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	ESR (erythrocyte sedimentation rate) is a nonspecific screening test for various diseases. This 1-hour test measures the distance (in millimeters) that red blood cells settle in unclotted blood toward the bottom of a specially marked test tube.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Semi-Automated ESR Analyzer for quantitative ESR by using of capillary blood with kinetic photometry principle should accept any size of sample tubes and works by using all kind of anticoagulant (EDTA). System should have the following essential features :-		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Thru-put:Over 50-80 sample/ Hours		
3.2	Principle of Measurement: By infra-Red Kinetic photometry		
3.3	Loading of sample: Semi-Automated sample aspiration one by one		
3.4	Reading time for each sample : Maximum 20 to 30 Sec./Sample		
3.5	Sample Collection:Any type of blood collection EDTA tubes / vials		
3.6	Anti-Coagulant: should work with sample collected in EDTA		

3.7	Reading Temperature : 37ºC		
3.8	Safety Features (Blood Sample) :Closed Cycle no touch with blood sample		
3.9	Waste collection: In Safety tank at the end of cycle		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		
4.2	Compatible Barcode Scanner.		
4.3	Vacuum Tubes-1.2 ml(box of 100)- 100 boxes		
4.4	Printer paper- 10 packs.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Resettable overcurrent breaker shall be fitted for protection		
6.3	Suaitable voltage corrector/stabilizer		
6.4	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Sample Reading :As per compliance with ICSH (InternationalCommittee for the Standardization of Hematology)		
7.2	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001applicable to manufacturers and service providers that perform their own design activities.		
7.3	Should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use.		
7.4	Comprehensive training for lab staff and support services till familiarity with the system.		
7.5	Should be US FDA or CE or ISI approved product		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.		

NOTE:

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EQUIPMENT SPECIFICATIONS FOR COAGULOMETER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Cagulometer measures the blood clotting parameters.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Complete system with printer is required.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	16 incubation positions for samples (4 cells x 4 columns).		
3.2	2 measurement channels.		
3.3	2-4 positions for reagents (one with magnetic stirrer) and 2 pipette wells		
3.4	Four independent built in timers for incubation.		
3.5	Measurement possible in plasma		
3.6	Automatic pipette (electronically connected or manual start up)		
3.7	Backlight LCD display, 4 lines of 40 characters with built in printer		
3.8	Results in seconds and in various units (% INR, Ratio, Gm/ L mg/ds, IC/ml)		
3.9	RS 232 interface		
3.10	Incubation and measurement wells at 37ºC +/- 0.5ºC		
3.11	Tests: PT. PTT. TT. FIB (Clauss and PT derived). Factor		

	II, V, VII, VIII, IX, X, XI, XII, Fletcher, VT (Venom time), APCR, AT-III (clot), Protein C (clot), Protein S (clot), Heparin, STAT (PT/PTT)		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		
4.2	The following set of accessories should be offered: Double Cuvettes: 1000 Pcs stage Autopipette: 1 Pc (25/50/100/200µl) Reagent Adaptor: 22,5mm, 1 Pc Reagent Adaptor 22,8mm, 1 Pc Reagent Adaptor 24,2mm, 1 Pc Reagent Adaptor 27,8mm, 1 Pc Reagent Adaptor 25,2mm, 1 Pc Stirring magnets, 4 Pcs Main cable -1 pc Reagent container 22,4mm- 200 Pcs Reagent tubes 16mm, 200 Pcs Thermal Printer, 1 Pc Thermal Paper, 10 rolls Printer Cable, 1 Pc		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian		

	plug		
6.2	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Comprehensive as per Bid.		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Should be US FDA or CE or ISI approved product		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.4	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for Sperm Quality Analyzer

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Sperm quality analyzers (SQA) are used for assessing male fertility..		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	System complete with printer and necessary software should Run on fresh, frozen and washed semen samples. Should not require any sample dilution.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Fully automatic numerical readouts of separate integrated and totalized semen parameters		
3.2	Results to be calculated and displayed within 50-75 seconds		
3.3	Must have self testing and self calibrating facility		
3.4	Built-in printer.		
3.5	RS232/USB output for Printer, PC connectivity and Data acquisition should be there		
3.6	Should report sperm count, motility, normal morphology and additional semen parameters.		
3.7	A built-in memory capable of storing up to 1000 test results		

4 System Configuration Accessories, spares and consumables

4.1	System as specified-		

4.2	All consumables required for installation and standardization of system to be given free of cost.
4.3	Cost of capillaries for1000 tests should be quoted.
4.4	Cost of quality control reagents required for 1000 tests.
4.5	Cost of other reagents required for 1000 tests

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire system		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA or CE or ISI approved product		
7.2	Manufacturer should be ISO certified for quality standards.		
7.3	Comprehensive warranty as per bid.		

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied
8.2	Certificate of calibration and inspection from factory.
8.3	Inspection Certificate from manufacturer to be complying with WHO specification as specified above.

8.4	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet
8.6	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

EQUIPMENT SPECIFICATIONS FOR MICROTOME

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Rotary microtomes are precision instruments designed to cut uniformly thin sections of a variety of materials for detailed microscopic examination.The microtome operation is based upon the rotary action of a hand wheel activating the advancement of a block towards a rigidly held knife.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Rotary microtome for histopathological section cutting specimen up to 32 x 27 mm		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Specimen advance 1 to 30 µm in 1 µm steps		
3.2	Integrated, smooth hand wheel that locks in any position		
3.3	Fine orientation of specimen with specimen tilt		
3.4	Quick charge for all specimen clamps		
3.5	Option to use both standard knife holder and disposable blade holder		
3.6	Section Waste tray		
3.7	Knife holder takes knives from 110 to 185 mm long by 28 to 35 mm wide and has guards for protection both inside and outside clamp		
3.8	Standard accessories to include the following: Object orientation set, Universal Cassette Clamp, universak knief holding base, Std knief holdr,sharp blade		

	holder, Waste tray, Dust cover, 50 each low and high profile disposable Microtome blades.		
3.9	Automatic and manual operation.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		
4.2	All consumables required for installation and standardization of system to be given free of cost.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA or CE or ISI approved product		
7.2	Manufacturer should be ISO certified for quality standards.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for Hematocrit Centrifuge

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Hematocrit centrifuge is a piece of equipment, generally driven by a motor, that puts an object in rotation around a fixed axis, applying force perpendicular to the axis. The centrifuge works using the sedimentation principle, where the centripetal acceleration is used to separate substances of greater and less density and is used to calculate Hematocrit values.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Hematocrit Centrifuge for Capillary tubes with built in safety system is required.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	On-board Capillary positions :24 Samples in capillary at a time		
3.2	Timer :Built in Timer for up to 0-15 min		
3.3	Safety System:Triple Balance System, Manual Lid Lock, Lift Cover and Power Cut off		
3.4	Speed app. 12,000 RPM		
3.5	Centrifugal Force :app.15000 G		
3.6	Capillary size: 40 mm		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted	Bidders Deviation if any

		by bidder	
4.1	System as specified-		
4.2	All consumables required for installation and standardization of system to be given free of cost.		
4.3	Capillaries- 1000		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating for one hour backup minimum has to be provided.		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Product should be US FDA/CE or ISI approved		
7.2	Should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use.		
7.3	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	Certificate of calibration and inspection from factory.		
8.2	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.3	List of important spare parts and accessories with their part number and costing.		
8.4	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

EQUIPMENT SPECIFICATIONS FOR REFRIGERATOR CUM DEEP FREEZER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Refrigerator cum deep freezer maintains two distinct temperature zones. The refrigerator zone is for chilling above zero and freezer zone is for sub zero temperatures.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Fridge is required at temperatures +5 deg C to +15 deg C and Freezer to maintain -20 deg C to - 35 deg C.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Storage Capacity/Volume: Fridge: 150-260 Litres ; Freezer: 100-150 Litres.		
3.2	Construction: Internal: Stainless steel (9min. 22 g) External: Corrosion Resistance (CR at least 1 mm thickness) Chest type with CFC – free insulation Upright trays Solid door		
3.3	Type:Compression Cycled, CFC-Free Refrigerant R-134a(both for refrigeration and insulation)		
3.4	Compressor starting at 22% below rated voltage(both hot and cold starts).		
3.5	Individual display for temperature inside the freezer and the fridge.		
3.6	Individual alarm for Low/High temperature inside		

	freezer and the fridge.		
3.7	Target holdover time should be 15 hours or more in a continuous external temperature of 43 deg C and 40 hours or more in a continuous external temperature of 32 deg C.		
3.8	Provision for drainage for the waste water. Easy access to this waste water container for disposal of waste water.		
3.9	Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base.		
3.10	Spill proof adjustable shelves/drawers.		
3.11	Control panel with digital display .		
3.12	Humidity controller in both the compartments.		
3.13	Frost free system		
3.14	Internal illumination		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Suitable voltage corrector/stabilizer		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA or CE or ISI approved product		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		
8.3	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for Automatic Cell Counter 5 part with Automatic Reticulocyte Count

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Automated Blood Cell Counter is used to count various types of blood cells in the blood.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Automatic blood cell counter that measures 18 parameters including 5-part differential of WBC is required complete with printer.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Parameters to be measured are -WBC, LYM%, LYM, MON%, MON, GRA%, GRA, RBC, HGB, HCT, MCV, MCH, MCHC, RDW, PLT, MPV, PCT, PDW.		
3.2	Histogram WBC 5-part diff distribution, RBC distribution, PLT distribution .		
3.3	Measurement Principle Electrical impedance method (WBC, RBC, HCT, PLT) Cyanmethemoglobin colorimetric method (HGB)		
3.4	Low Sample Volume of 10µL		
3.5	Throughput > 60 samples per second.		
3.6	Linearity Ranges WBC 0.5-80.0 * 103/µL RBC 0.20-7.50 * 106/µL HGB 2.0-25.0 g/dL HCT 10.0%-70.0% PLT 10-999 * 103/µL		

3.7	Reproducibility (CV) WBC RBC HGB HCT PLT LYM% MON% GRA%		
3.8	The sampling probe should be automatically cleaned off, so that any blood stack doesn't occur.		
3.9	It should take only 60-65 seconds to acquire the measurement result		
3.10	Various sensors should check the condition of the instrument. If any abnormality is detected, an error message be displayed so that occurrence of trouble is prevented		
3.11	Automatic reticulocyte count with no manual step of pre-treatment etc.		
3.12	Integrated thermal printer.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of 80%.		

6 Power Supply

Sl	Name	Technical Specs	Bidders Deviation

		quoted by bidder	if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	Resettable overcurrent breaker shall be fitted for protection		
6.3	Suaitable voltage corrector/stabilizer		
6.4	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

7 Standards and Safety

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be compliant to ISO 13485: Quality systems - Medical devices - Particular requirements for the application of ISO 9001 applicable to manufacturers and service providers that perform their own design activities.		
7.2	Should be compliant with IEC 61010-1:covering safety requirements for electrical equipment for measurement control and laboratory use.		
7.3	Should be US FDA or CE or ISI approved product		
7.4	Comprehensive training for lab staff and support services till familiarity with the system.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.		
8.4	List of important spare parts and accessories with their part number and costing		

8.5	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

PEDIATRICS

EQUIPMENT SPECIFICATIONS FOR BED SIDE MULTIFUNCTION MONITORS

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Bedside monitors are used to monitor the Vital parameters of patients continuously at patient's side in wards and ICU,CCU and other intensive care units.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Monitors should be preconfigured, easy to use, portable, wall mounted and operation by single knob control weight should not be more than 5-6 kg		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1. It should have following parameters. : (a) Monitoring of 5 leads ECG : (I, II, III, AVR, AVL, AVF and chest lead) and pulse detection, display of heart rate with low and high heart rate alarm (adjustable between 30-250 bpM, audio-visual alarms). (b) Pulse Oximetry (SPO2) / pleth and should also to show plethy morgraphic pulse wave form, adjustable audio-visual alarm. (c) Respiration and apnoea : Monitor, rate between 5-100/mt with low and high limit alarms, respiratory graphic and numerical display and audio-visual alarms. (d) Non-invasive blood pressure monitoring : which may be used in very premature baby to adults. (e) Temperature monitoring facility can be used to measure temperature from 30C-42C by skin as well as per-rectally. (f) SPO2 probes – Ear lobule probe, finger probe flexible wrap probe for neonates and one universal Y probe. (g) NIBP cuff of at least 4 sizes disposable for measuring baby from 1 kg to 12 kg (2 cm, 2.5 cm, 3.5 cm, 4.5 cm) and two size non-disposable for grown up of children for measuring BP for children between 2-14 yrs.		

	(h) NIBP measurement must be on a proven Oscillometric reading on deflation of cuffs NIBP should be possible manually or automatic mode through time set intervals ranging from 1-120 minutes. 2. Printer and voltage stabilizer and conversion of voltage (transformer) should be integrated / built in part of the multifunction monitor. Built in battery should work at least for 2 hours without charging. Automatic recharge) Automatic switch from main to batteries in case of power failure. Defibrillator sync & protection. Pacemaker deletion / rejection. 3. Monitors should have at least 10 inch or more high resolution active matrix color display screen having resolution of 640 x 480 or better with at least 4 traces and numeric valves display facilities simultaneously. Ability to change color of trace by user is must. 4. 24 hours tabular trends should be available for all monitors parameters. 5. Display of alpha numeric messages must be available. 6. At least 3 channel thermal recorder. 7. It may be upgradeable to mainstream CO2 and two invasive BP monitoring facility for future. 8. Should be capable of measuring oxygen saturation even in case of motion artifacts. 9. Should have cuff measurement ending chine.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Options for upgrading to mainstream CO2 and two invasive BP monitoring facility for future should be quoted and this will be added for evaluation purposes only.		
4.2	Should be supplied with the following accessories: 1.Patient cable(5 Lead) -02 2. Adult and Paediatric Cuff -02 each 3.Neonatal Cuff-02 4.Adult and Paediatric Probe SPO2 -02 each 5.Finger wrap probe SPO2-02 6.Ear Probe SPO2-02 7.Skin Temp Probe -02 8.ECG Electrodes-1000(Disposable) 9.ECG Jelly Bottle-(200 ml each)- 10 bottles		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire system		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	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.		
7.4	Comprehensive as per bid.		
7.5	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.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

EQUIPMENT SPECIFICATIONS FOR ECG MACHINE SINGLE CHANNEL

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	ECG Machine is primary equipment to record ECG Signal in various configuration		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The ECG Machine should be able to acquire all 12 Leads simultaneously: aVR, AvL AVF, I, II, III and V1 -6		
2.2	Should print all the 12 leads in a single channel mode		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Should acquire simultaneous 12 lead ECG for both adult and pediatric patients		
3.2	Should have Artifact, AC, and low and high pass frequency filters.		
3.3	Should have an integrated-high resolution, thermal array printer for print of ECGs		
3.4	Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		

4.2	Patient cable -02		
4.3	Chest Electrodes Adult-(set of six) -02 sets.		
4.4	Chest Electrodes Paediatric-(set of six) -02 sets		
4.5	Limb Electrodes(set of 4)- 02 sets for Adult and 02 sets for Paediatrics.		
4.6	Thermal print paper : 10 Rolls/Z Fold 1. Automatic and manual printout mode. 2. Reset zeroing, auto base line correction (0.5 Hz) and 1 mv test. 3. Electrode connection quality check. 4. Paper speed, selectable: 5, 25 and 50mm/sec.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		
5.3	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.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be supplied		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms . (OR EQUIVALENT BIS Standard)		
7.3	Warranty as per bid.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

Equipment Specifications for ECG Machine- 12 Channels

UNSPSC Code: 42203504
ECRI Code: 11-411

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	ECG Machine is primary equipment to record ECG Signal in various configuration. 12 channels with interpretation is required for recording and analyzing the waveforms with a special software.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The ECG Machine should be able to acquire all 12 Leads simultaneously and interpret them		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Should acquire simultaneous 12 lead ECG for both adult and pediatric patients		
3.2	Should have Real time Colour display of ECG waveforms with signal quality indication for each lead		
3.3	Should have Artifact, AC, and low and high pass frequency filters.		
3.4	Should have a storage memory of at least 100 ECGs with easy transfer by optional modem and data card.		

3.5	Should have full screen preview of ECG report for quality assessment checks prior to print.		
3.6	Should have interpretation facility of the amplitudes, durations and morphologies of ECG waveforms and associated rhythm for adult and pediatric patients		
3.7	Should have alphanumeric Keyboard for patient data Entry. (virtual or hard keys)		
3.8	Should have High resolution (200 dpix500dpi on 25 mm/sec speed) digital array A4 size printer		
3.9	Should have report formats of 3 x4; 6 x2, Rhythm for up to 12 selected leads; 12 Lead Extended measurements, 1 minute of continuous waveform data for 1 selected lead.		
3.10	Should have battery capacity of at least 30 ECGs or 30 minutes of continuous rhythm recording on single charge		
3.11	Should be able to be connected to HIS /LAN/Wireless LAN(OPTIONAL)		
3.12	Should display ECG on LCD/TFT Display of 640x480 pixel resolution.		
3.13	USB Support (optional) for Storage on external portable memories.		
3.14	Multimode of ECG Storage capability on Floppy(min 2), 150 ECG on Internal Flash Memory		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	ECG Machine 12 Leads with Interpretetion - 01		
4.2	Patient Cable -02		
4.3	Chest Electrodes Adult-(set of six) -02 sets.		

4.4	Chest Electrodes Paediatric-(set of six) -02 sets each of Adult and Pediatrics-Total 4 sets		
4.5	Limb Electrodes(set of 4)- 02 sets of Adult and 02 sets of Paediatrics		
4.6	Thermal Paper A4 Size for 500 patients		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		
5.3	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.		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements and IEC-60601-2-25 Safety of Electrocardiograms . (OR EQUIVALENT BIS Standard)		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User Manual in English		
8.2	Service manual in English		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Certificate of calibration and inspection.		
8.5	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		
8.6	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		

ECG MACHINE

- State of the art 12 channel digital ECG machine with simultaneous acquisition of all leads and an LCD display of the trace prior to printing.
- Should have real time display of ECG wave forms with signal quality indication for each lead. Should have adjustable artifact, AC and low and high pass frequency filters. Should have alphanumeric key board for patient data entry (virtual or hard keys).
- Printing should be possible on inbuilt thermal printer and also on an A-4 sized laser paper of standard makes. Thermal printer prints should last over 5 years when kept in normal conditions.
- The unit should be lightweight and portable, capable of storing at least 100 or 200 electrocardiograms and allow for rapid transfer of this data to a computer through wireless or USB ports. DICOM/HL7 ready for data transfer to a HIS/PACS. Should be possible to collate ECGs based on data like ECGs with QRSd>120ms or QT >450ms.
- Machine should run both on AC current & built in rechargeable batteries and should be provided with a proper bag to carry the equipment and its ancillaries. A movable original CART to which the machine can be fixed has to be supplied in addition.
- The ECG machine should confirm to AHA/ACC guidelines and ANSI/AAMI standards for medical equipment.
- The unit should have the capability for proper self check & calibration.
- One set of adult, pediatric and neonatal clip type electrodes for limb leads and chest bulbs for neonates leads along with necessary cables should be provided.
- The output should have the name, date, time ID no. of ECG printed and have the option to print in multiple formats. Should provide all intervals like, PR, QRS, QT, heart rate, RR etc.
- The unit should preferably be capable of providing continuous single / three/ six channel output in any combination in case of necessity of long rhythm strips.
- In case the machine needs a computer to provide the laser outputs, then computer of a standard make with good RAM/HDD and a high speed B & W laser printer and necessary software should also be provided. These have to be under similar warranty.
- All spares should be quoted separately i.e. ECG clips, bulbs, ECG cables and batteries.
- Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

Each machine should have a spare cable, leads, bulbs etc.

Comprehensive Guarantee for three years for parts and labour. All cables, electrodes, bulbs Battery etc. have to be provided by the vendor during the warranty period.

Equipment Specifications for NEONATAL OPEN CARE SYSTEM

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Quartz heater based radiant warmer with integral bed used for clinical management of neonatal hypothermia. The equipment can be operated in servo or manual modes. Facility for halogen based phototherapy		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Units are provided to use the equipment in the labor ward, NICU or general nursery. The equipment electronic control panel should have key lock facility, celcius to Farhenheit change over facility and battery back up to 20 minutes.		
2.2	Epoxy / Powder coated body for scratch and rust prevention		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	SPECIFICATIONS NEONATAL OPEN CARE SYSTEM 1.Working temperature: 26.4 to 40 deg C 2.Accuracy: +/-0.2 deg C 3.Resolution 0.1deg C 4.Accuracy of probe interchangeability: +/-0.2 deg C 5.Need for probe calibration: Not required 6.Temperature probe:Thermistor based interchangeable probe. Wire should be easy to clean, long lasting, Teflon coated with silicon rubber sleave. 7.Set temperature range: 32 deg C to 38 deg C 8.Power: Less than 1 K.W. 9.Heating element: Quartz encapsulated heater with parabolic reflector 10.Temperature display: Bright numerical LED display at 1” for viewing from distance 11.Alarms :High temperature (more than 0.5 deg C difference)		

	Low temperature (more than 0.5 deg C difference). Temperature probe failure. Power failure. System failure. Heater failure. Time out alarm (manual mode). 12. Table surface with mattress with infant head/ shoulder support. 13. Mattress padding: foam density approximate 21-25kg/m³. 14. Side board acryl, drop down a lockable. 12.Maximum mattress tilt: +80 (continuously variable) both side .Maximum mattress swivel on both sides of vertical column +45deg C 13.The unit is mobile with 4 swivel castors fixed to the base. .Diameter of castors: 4" (front 2 wheels lockable. Imported castors with antistatic wheel 14.Observation lamp: Halogen based lamp focusable any where on the bed 15.Bed: Oval-suitable for preterms and LFD babies 16.Facility of stand – for I.V. fluids. 17.Phototherapy / Halotherapy(optional): Should be placed on the both sides of overhead heaters bulbs on each side angled for effective treatment Supply to each unit irridiance :12V 12A 50 Hz;6-8 w/cm2/nm at bed level		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All consumables required for installation and standardization of system to be given free of cost.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz		
6.2	Suitable Autovoltage corrector with spike protector should be available.		
6.3	Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certified for quality standards.		
7.3	Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.		
7.4	Comprehensive warranty as per bid.		
7.5	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.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of important spares and accessories with their part number and costing.		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

PHOTOTHERAPY UNIT (NEONATAL PHOTOTHERAPY UNIT – CFL)

1 Description of Function

Phototherapy units are used to treat hyperbilirubinemia, a condition characterized by high bilirubin concentrations in the blood. These units are also called: bilirubin lamps, bilirubin lights, fiberoptic phototherapy blankets, neonatal phototherapy units

2. Operational requirements

i) Should be Compact Florescent lamp (CFL) based Phototherapy unit used for clinical management of neonatal hyperbilirubinemia
ii) Lamp unit should be made with plastic lamp module with metallic top cover for efficient heat dissipation to reduce radiant heat on infant.
iii) Should occupy very little bedside space, offer convenience in observation and procedures
iv) The unit should be mobile with 3 swivel castors of 2" diameter fixed to a T shaped base to be accommodated beneath trolley/bed with adjustable height.

3. Technical Specifications

i) Irradiance at 430-480nm effective to the baby at least 18mw/cm2/nm at 45 cm from the lamp.
ii) Lamps: compact florescent lamps
iii) Height adjustable (app +/- 5 cm): 138cm(min)-190cm(max)
iv) Lamp tiltability: horizontal to vertical at any angle.
v) Time totalizer: Mechanical/Electronic
vi) Therapy duration timer: resettable – optional
vii) Height of the base app: 6-8cm(at the front)
viii) Size of the lamp unit(LxBxH): 47x40x9 +/-5cm
ix) Coating: epoxy/Powder coated body for scratch and rust prevention.

4. System Configuration Accessories, spares and consumables

i) System as specified
ii) All consumables required for installation and standardization of system to be given free of cost.
iii) 100 bulbs should be supplied along with each unit.
iv) Phototherapy eye pads 100 each for preterm and term babies to be provided free

5. Environmental Factors

i) The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%
ii) The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%

6. Power Supply

i) Power input to be 220-240VAC, 50Hz fitted with Indian plug
ii) UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.

7. Standards, Safety and Training

i) Should be US FDA,CE,UL or BIS approved product
ii) Shall be certified to meet Electrical safety requirements as per IEC 60601-2-50 Medical Electrical Equipment part-2-50. Particular requirement for the safety of Infant Phototherapy equipment
iii) Manufacturer/supplier should have ISO certification for quality standards.
iv) Comprehensive warranty as per bid document.
v) CMC would include all electrical, electronic and mechanical items.
vi) The CMC should provide at least 100 CFL lamps every year per unit.

8. Documentation

i) User/Technical/Maintenance manuals to be supplied in English.
ii) Certificate of calibration and inspection.
iii) List of equipments available for providing calibration and routine preventive Maintenance support as per manufacturer documentation in service/technical manual.
iv) List of important spare parts and accessories with their part number and costing
v) 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.
Vi) Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

Equipment Specifications for PHOTOTHERAPY UNITS(DOUBLE SURFACE)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Phototherapy units are used to treat hyperbilirubinemia, a condition characterized by high bilirubin concentrations in the blood.These units are also called: bilirubin lamps, bilirubin lights, fiberoptic phototherapy blankets, neonatal phototherapy units		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The system should meet all the numerical values given in the technical specifications within a tolerance of +/- 10 %.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Technical Specifications: 1. It should be two-way of phototherapy unit i.e. one phototherapy lamp should be from top and the other from below (both overhead and undersurface). 2. There should be option to use either of the lamps. In other words, whenever only overhead exposure is desired, the attending health care provider may have option to operate only the overhead lamp and not the lamp below the bed, and vice versa. 3. Each lamp unit should be provided with 4 CFL tubes emitting blue radiation between 450-480 nm wavelengths. 4. One each side of the panel of overhead tubes, day light tube should be provided to facilitate observation of baby and for performing practical procedures whenever required. 5. It should have height adjustment facility. 6. It should allow easy swiveling of box to allow positioning of portable x-ray machine		

	7. The unit should be mounted on stand having lockable wheels (castors) for easy transportation from one place to other. 8. At the baby's surface, the exposure should be 18-20 microW/cm2/nm.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	Spare Bulb and White CFL		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire system		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certfied for quality standards.		
7.3	Comprehensive warranty as per bid.		

7.4	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 Phoototherapy Equipments		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

Equipment Specifications for Radiant Warmer with Baby Bassinet

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	A radiant warmer is used to keep the patient's core temperature stable at 37°C		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	It should be microprocessor controlled radiant warmer with manual and servo options		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1. It should have facility to display both skin and air (ambient) temperature separately. 2. It should have audiovisual alarm facility for overheating beyond set temperature range. 3. it should have alarm facility for patient temperature less than or greater than the required temperature i.e. above or below the set range. 4. It should rotate and swivel in different direction, so as to allow taking X-ray. 5. The light should be dazzle free. 6. It should have alarm for power failure. 7. It should have alarm for heater failure. 8. It should have alarm for probe failure. 9. It should have time out alarm in manual mode. 10. It should have inbuilt or provided along rechargeable battery to run equipment in case of power failure for at least ½ hour. 11.Table surface with mattress with infant head/ shoulder support. 12. Mattress padding: foam density approximate 21-25kg/m^3. 13. Side board acryl, drop down a lockable. 14. It should have manual setting for high and low alarm setting. 15. In servo mode, the heater output should be controlled to maintain the baby at the required set temperature. 16. In manual mode, the heater output should be directly controlled by a setting on the front panel.		

	17. The desired temperature range from 25 to 40 degree C. 18. The resolution should be 0.1 degree C. 19. The height of the warmer should be adjustable for different types of bed. 20. Halogen based observation light should be provided for observing the baby. 21. It should be mounted on a pole with sturdy base with lockable castors.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		
6.2	Suitable Autovoltage corrector with spike protector should be available.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		

7.2	Manufacturer should be ISO certfied for quality standards.		
7.3	Certified to be compliant with IEC 60601-2-21, Medical Electrical Equipments part-2-21 particular requirements for Electrical Safety of Infant Radiant Warmers.		
7.4	Comprehensive warranty as per bid.		
7.5	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.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of Calibration and inspection from the factory		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings, Electrical points of suitable ratings, water connection, water drainage, plumbing & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs.

EQUIPMENT SPECIFICATIONS FOR TRANSPORT INCUBATOR

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Required for transportation of premature babies and neonates and it can be used for long distance transportation .		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	It should be mobile intensive care station including transport ventilator, incubator, and power supply unit and infusion stand		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Technical Specifications 1 It should be mounted on collapsible trolley having lockable rust free castors of the size 4 inches or more and with two A type Aluminum oxygen cylinders on rack under the Incubator . 2 Single walled incubator with at least two large port holes for access. Iris ports for ventilator & other tubings. Bed level at least 80 cms. above ground level. Two shelves cabinet with door. 3 Width: app 80 cm+ 5 cms. , Depth 30 cm + 5 cm, height 115 + 5 cms, Mattress to hood distance at least 30 cms. 4.Air Mode: adjustable set temperatures between 20 – 39 C. Display of set temperatures with resolution of 0.1 C. Skin mode adjustable set temperatures between 34 – 38 C. Display of set temperatures with resolution of 0.1 C. 5. Alarms of High , Low and Probe failure for the set air mode up to +2.5 C and skin mode of + 0.5 C of temperatures 6. Oxygen monitor in incubator hood with display of 21 – 100% Oxygen alarms for high, low and probe failure. 7. Heart and Oxygen saturation monitor: Fixed, built monitors, dual wavelength probe for Oxygen saturation with Digital LED display for Heart rate and Oxygen saturation. Alarms for high and low for Heart Rate, Oxygen saturation and probe failure		

	8.The system should have an internal rechargeable maintainence free battery to ensure continued functioning of the unit for at east 4 hours during transport. It should have automatic switch circuit for change over from battery to AC and vice versa. 9.One suction apparatus with negative suction pressure of 5- 120 mm Hg should be provided. IV fluid stand should support two infusion bottles 10.One Syringe infusion pump with stand compatible with 10, 20, and 50 ml syringes compatible with locally available brand of syringes. Range of infusion rate 1 – 99 ml / hr.in steps of 0.1ml. Display infusion rates, Alarms for occlusions, end of infusion with internal rechargeable battery should be provided along with the quoted price 11. Height less than 60", depth less than 30", width 33"-36". Weight 90-100 kg. With wheel mounted. (All dimensions in approximation of +/-10%) 12. Bacterial air filter to remove air born particles 13. Two 10 L integrated oxygen cylinders regulator and flow meters.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

6.1	Power input to be 220-240VAC, 50Hz		
6.2	Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufactures/Supplier should have ISO certificate to Quality Standard.		
7.3	Comprehensive warranty as per bid.		
7.4	Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450		
7.5	Electrical safety conforms to standards for electrical safety IEC-60601-2-19:Medical Electrical Equipment part 2 Particular Requirements of Safety of Baby Incubator.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out		
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

EQUIPMENT SPECIFICATIONS FOR AMBU BAG

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	An Ambu Bag (also known as a Bag Valve Mask or BVM or Ambu bag) is a hand-held device used to provide ventilation to a patient who is not breathing or who is breathing inadequately		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Ambu bag must be autoclavable at 121°C (Except O2 reserve bag)		
2.2	Should be adaptable to all 3 cushioned neonatal type of face masks.		
2.3	Ambu bag should be self inflatable and should have pop up valve, attachment for oxygen tube & oxygen reservoir		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1.Bag should be made up of Silicon, latex free double layered rubber and should retain sensivity and should be resistant to rough use. 2.Inlet end of the bag should have separate port for Oxygen supplement. 3.Outer port should be such that re-breathing valve or non return valve can be attached. 4.Should be supplied with Oxygen reservoir bag and should deliver tidal volumes of 250/500/750 and 1000 mL.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted	Bidders Deviation if any

		by bidder	
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certfied for quality standards.		

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing.		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

Equipment Specifications for FIBRE OPTIC PHOTOTHERAPY LAMP

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Phototherapy units are used to treat hyperbilirubinemia, a condition characterized by high bilirubin concentrations in the blood.These units are also called: bilirubin lamps, bilirubin lights, fiberoptic phototherapy blankets, neonatal phototherapy units		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Fibreoptic phototherapy for greater uniformity of radiation		
2.2	Compact and smaller sized equipment than conventional phototherapy.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Bili light lamp with fibre optic cable and optic fibre pad.		
3.2	Halogen lamp optic assembly with 150Watts lamps..		
3.3	Special group of filters to screen heat and filter ultra violet rays		
3.4	Emitted radiation to have wave length between 425-475 nm.		
3.5	Light beam to be conveyed to patient through optic fibre cable and a pad.		
3.6	The pad to be sealed, waterproof and hygienic.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified		

4.2	All consumables required for installation and standardization of system to be given free of cost.		
4.3	10 Extra 150 Watts halogen lamp with each phototherapy		
4.4	Phototherapy mask (100 in number) can be used in preterms as well as fullterms to protect eyes of neonates.		
4.5	Bili light lamp should be with a trolley with pivoting casters and basket for storing disposable and optic fibre pad		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation,spike protection and maintenance free batteries for 60 minutes back up		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	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 Phoototherapy Equipments		
7.3	Manufactures/Supplier should have ISO certificate to Quality Standard.		
7.4	Warranty as per bid.		

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied in English.
8.2	Certificate of calibration and inspection.
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
8.4	List of important spare parts and accessories with their part number and costing
8.5	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet

EQUIPMENT SPECIFICATIONS FOR PULSE OXIMETER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	A pulse oximeter is a medical device that indirectly measures the amount of oxygen in a patient's blood (as opposed to measuring oxygen saturation directly through a blood sample) and changes in blood volume in the skin, producing a photoplethysmograph		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Suiatable for all types of Patient range :Adult, pediatric, infant, and/or neonate		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Display- LCD, Backlight illuminated		
3.2	Parameters and waveform displayed- SpO2, pulse rate, system status, plethysmogram, menus for user settings		
3.3	SPO2 range- 30-100 %, minimal graduation 1%.		
3.4	Accuracy of SPO2- 50-69% (±3%) 70 -100% (±2%)		
3.5	Pulse rate range should be 30-240 bpm		
3.6	Audiovisual Alarms- High/low SpO2 and pulse rate, sensor off, sensor failure, low battery		
3.7	Alarm override facility Audio visual alarm for Spo2 and Pulse rate in case measurement are outside present range.		
3.8	Cable length should be minimum 1 metre		
3.9	RS 232C Interface for datacommunication.		
3.10	Integrated Printer		
3.11	Battery back-up operating time 5 hours.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified-		
4.2	SpO2:Adult SpO2 sensor with cable- two nos per monitor and Pediatric SpO2 sensors- one no. per monitor, Neonatal Sensor-01 per monitor		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be supplied		
6.2	Rechargeable battery operated system. Charger to be provided if integrated charger is not there		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer/Supplier should have ISO certification for quality standards.		
7.3	Comprehensive warranty as per bid.		
7.4	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

EQUIPMENT SPECIFICATIONS FOR SYRINGE INFUSION PUMP

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	The Syringe Infusion Pump provides uniform flow of fluid by precisely driving the plunger of a syringe down its barrel. It provides accurate and continous flow rate for precise delivery of I.V. medication in critical medical care.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The syringe pupm should be programmable, user friendly , safe to use and should have battery back up and comprehensive alarm system. This should be able to integrate in the HIS		
2.2	Demostration of the equipment is a must.		

3 Technical Specifications

3.1	SAVE last infusion rate even when the AC power is switched OFF.		
3.2	Bolus rate should be programmable to 400 – 500 ml/hr or more with infused volume display. SAVE last Bolus rate even when the AC power is switched OFF.		
3.3	Display of Drug Name with a provision of memorizing 10~15 names by the operator		
3.4	Keep Vein Open (KVO) must be available 1.0 ml/hr or set rate if lower than 1.0 ml. User should have choice to disable KVO whenever desired.		
3.5	Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg		
3.6	Must Work on commonly available ISI/CE/FDA APPROAVED/CERTIFIED 20, 50/60 ml Syringes with accuracy of minimum of +/-2% or better.		
3.7	10, 20, 50 ml Syringe		
3.8	Rate adjustable 1-999ml/hr, steps of 1ml/hr accuracy 1% of total volume delivered.		
3.9	Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc.		
4.0	Anti bolus system to reduce pressure on sudden release of occlusion		
4.1	Should have comprehensive alarm package including:Occlusion limit exceed alarm ,Near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm,KVO rate flow,Low battery pre-alarm and alarm,AC power failure,Drive disengaged and preventive maintenance.		

4.2	Rechargeable Battery having at least 5~6 hour backup for about 5ml/hr flow rate with 50ml syringes. Larger battery life and indication of residual life will be preferred.
4.3	Audi video alarm.

4 System Configuration Accessories, spares and consumables

4.1	Syringe Infusion Pump -01
4.2	Mounting device/ Docking Station for two or four pumps as per requirement so as to enable to power up to 2-4 pumps with one power cord when mounted on IV pole. -01

5 Environmental factors

5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.
5.2	The unit shall be capable of operating continuously in ambient temperature of 10 - 40deg C and relative humidity of 15-90%
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg. C and relative humidity of 15-90% .

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz

7 Standards, Safety and Training

7.1	Should be US FDA or CE approaved product
7.2	Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements
7.3	Manufacturer should be ISO certfied for quality standards.
7.4	Certified for meting IEC60601-2-24:Particular requirements for the safety of infusion pumps and controllers
7.5	Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection , water ingress.
7.6	Electrical Safety Classification Class I/II, Type CF and Internally powered equipment.
7.7	Certified for meeting IEC 60601-1-4 Medical electrical equipment - Part 1-4: General requirements for safety - Collateral Standard: Programmable electrical medical systems
7.8	Comprehensive warranty as per bid..
7.9	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.

8 Documentation

8.1	Certificate of calibration and inspection from factory.
8.2	List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual.
8.3	User Manual in English

8.4	Service manual in English		
8.5	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		
8.6	List of important spare parts and accessories with their part number and costing.		
8.7	User list to be provided with performance certificate .		
8.8	Performance report as per bid.		

Equipment Specifications for MICROBILIMETER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Microbilimeter is a unit specially designed to follow the progress of neonatal jaundice by having rapid information on the level of total bilirubin in serum from a micro-volume of blood.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	The system should meet all the numerical values given in the technical specifications within a tolerance of +/- 10 %.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	SPECIFICATIONS FOR MICROBILIMITER WITH BUILT IN PRINTER WITH MICROCENTRIFUGING MACHINE 1. Equipment is portable. 2. Requires only two drops of peripheral capillary finger puncture blood. 3. It measures bilirubin value directly, accurately, quickly, easily and automatically without any manipulation. 4. Scale range 0 to 30 mg/dl or 0-500 micromol/Litre. 5. The influence of Hemoglobin in the sample is automatically corrected. 6. should use disposable capillary tubes. 7. Provision for automatic calibration setting between measurement. 8. Horizontal loading of capillary tubes. 9. It gives total bilirubin in serum of plasma form a micro volume of blood. 10.Correction of HB at 550nm 11. Total error less than 3% of reading. 12. The bilirubin concentration is determined from the difference in the absorbance of 455 nm and 575 nm. 13. Prompt determination of bilirubin value.		

	14. Analysis time < 5 sec. 15. Easily available capillary tube. 16. The instrument carries out photometric analysis of total bilirubin in undiluted serum plasma by means of 17. Haematocri Capillary tubes as an optical cell. 18. Built in printer for hard copy documentation. 19. Supplied with hematocrit centrifuge and hematocrit reader.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Supplied with 1000 heparinized capillary tubes and 1 set plasticin for sealing capillary tubes		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltasge regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certfied for quality standards.		
7.3	Comprehensive warranty as per bid document.		

7.4	Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of important spare parts and accessories with their part number and costing.		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		
8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet		

EQUIPMENT SPECIFICATIONS FOR MOBILE AIR ASEPTICIZER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Mobile Air Asepticizer is an ideal equipment for treating air borne nosocomial infection in operation theatres, ICUs, wards and nurseries. Mobile Air Asepticizer uses ultra violet light for asepticization of air and ozone for deodourisation.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	A mobile system is required for disinfection and deodorization of different rooms.		
2.2	The system should meet all the numerical values given in the technical specifications within a tolerance of +/- 10 %.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Mobile Air Asepticizer should have the following essential specifications 1. The device should be suitable for disinfection and deodorization of different rooms 2. It should have four ultra violet sources for disinfection of room by producing emission in geometrical band at 2537A, without risk of radiation. 3. It should be equipped with ozone lamp to provide ozone treatment. 4. It should have lamp guard shutters to enable it to be used in presence of personnel. 5. It should be equipped with an atomizer to spray the bactericide. 6. It should have an elapsed time counter to monitor the operative time of the UV sources. 7. It should have fans to provide treated Air flow rate of approximately 340 cu mm/hr. 8. It should be on castors for easy movement from one room to another and simple to operate.		

	9. Should have suitable filters to remove physical impurities as well (carbon, Particulate arrestance filters) 10. Should be able to disinfect and deodorise an area of at least 4000 cu ft size.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz		
6.2	Suitable Autovoltage corrector with spike protector should be available.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Comprehensive warranty as per bid document.		
7.3	Manufacturer should be ISO certfied for quality standards.		

7.4	Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of Calibration and inspection from the factory		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.5	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

EQUIPMENT SPECIFICATIONS FOR NEBULISER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Nebulizer is a device used to administer medication to people in forms of a liquid mist to the airways. It is commonly used in treating cystic fibrosis, asthma, and other respiratory diseases		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Heavy duty compact Nebuliser is required.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Technical Specifications Nebuliser 1. Compact, light weight, low noise 2. Durable long life compressor. Suitable for heavy duty/ institutional (hospital) use, should be able to run uninterruptedly for one hour, Max Press= 2.0-2.5 bars 3. Should produce particle of size 1-5 micron 4. Aluminium cabinet painted with epoxy powder. 5. Piston-type electric aspirator that offers high performance and great durability. 6. Protective thermal cut out relay 7. Air delivery rate app.15 L/min. 8. 24 hours continuous work for hospital use.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation,spike protection and maintenance free batteries for 60 minutes back up		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA, CE, UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	DELETED since training is not required.		
7.4	Comprehensive warranty as per bid document.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	List of important spare parts and accessories with their part number and costing.		
8.3	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		

8.4	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.5	Certificate of calibration and inspection.		
8.6	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

Equipment Specifications for WEIGHING MACHINE WITH HEIGHT MEASURING SCALE

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Used for routine height and weight measurements of patients.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	It should be a platform type of weight and height measuring scale on which the patient can stand for measurement of weight and height.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1. It should be a robust model for day to day rough use in wards and OPD. 2. It should measure the weight in kilogram. 3. There should be LCD display of weight. 4. It should measure the height in centimeter. 5. It should be equipped with tare function to allow a baby to be weighed in its mother's arms. 6. The graduation of measuring weight should be 50 gm. 7. The height measuring rod should be attached with it. 8. The scale should also have BMI function. 9. It should measure the height from 60 cm onwards. In other words, the minimum height which it can measure should be 60 cm. 10. It should be mounted on transport castors to allow free mobility from one place to other.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any

	None

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	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.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be supplied		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certified for quality standards.		
7.3	Comprehensive warranty as per bid.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection from factory.		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

Equipment Specifications for ELECTRONIC WEIGHING SCALE(Infant)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Required for routine measurements of infant, neonates and premature babies weight.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Microprocessor based electronic weighing with facility to weight lying down as well as standing babies		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1.Weight range 0-20 kg (minimum weight to be weigh 20 gm). 2. Accuracy +/- 5gms, resolution 5 gms. 3. Unit should have facility accurately weighs the hectic / active baby and retain the digital display for 30 sec. Even baby is removed from the scale. 4. Zeroing facility (when disposable sheets are used above the tray). Display should show negative reading when linen is removed. 5. Unit should have facility to “Freeze” display to show reading even whom baby is removed. 6. Durable HIP moulded baby tray, it should be detachable, to weigh standing babies. Baby construction do not allow baby to be injured or slip from the scale. 7. Large bright red display for strain free reading. 8. Reading time max 5 sec.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		
5.2	The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should be ISO certified for quality standards.		
7.3	Comprehensive warranty as per bid.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of Calibration and inspection from the factory		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

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Equipment Specifications for EXERCISER STAIR CASE

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Stair case is used for exercising in physiotherapy.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Staircase as specified with approx. capacity 200 kgs.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Sturdily built Step arrangement : four 15 cm steps on one side leading to a platform 75 x 75 cm first step moves into the second to make it a bus step of 30 cm height Eight 7.5 cm steps on the other side Steps 75 cm wide and 25 cm deep hard wood hand rails at different heights to accommodate adults and children steps and platform covered with non- slip material		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	As specified		

5 Environmental factors

Sl	Name	Technical	Bidders

		Specs quoted by bidder	Deviation if any
5.1	None		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		

Equipment Specifications for CERVICAL AND LUMBAR TRACTION UNIT WITH COUCH

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Cervical and lumbar traction units are useful in relieving back and neck pain by causing a gentle stretch to the muscles and joints.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Intermittent & static traction. Variable speed control. Patient safety switch. LED displays.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Weight- 20-45 kg. Each 5 kg Steps. Hold time - 10, 20, 40, 60, 80 sec. with LED indicator. Rest Time - 1, 5, 10, 15, 20 Sec. with LED indicator. Digital Treatment Timer - 60 Minutes. Patient Safety Switch.		
3.2	The unit should be supplied with traction couch of the following specifications : Positive/Negative head section with breathing hole and plug. Fitted with retractable wheels. Friction frees roll top. Floor level adjuster. Adjustable angled backrest Top Dimensions of the traction couch. Head: 24-30 inches MID: 6-12 inches Foot: 35-38 inches Height from the ground: 24-30 inches WIDTH: 24-30 inches Head Section should be adjustable from 0° to 90°		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Traction Unit Traction Couch Adjustable stool Thoracic spine belt Lumbar spine belt Head halter Main Cable Spreader bar Cervical Pillow and Cover		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		
5.2	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Comprehensive training for lab staff and support services till familiarity with the system on site.		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Should be US FDA , CE,UL or BIS approved product		

7.4	Comprehensive warranty & CMC as per bid.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.		
8.3	List of important spare parts and accessories with their part number and costing		
8.4	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.		
8.5	Certificate of calibration and inspection.		
8.6	User/Technical/Maintenance manuals to be supplied in English.		

Equipment Specifications for PARALLEL BARS

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	These are used for gait training.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Platform bars having capacity of approx 200 Kgs. The one piece stainless steel bar diameter is approx 1.5".		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Two stainless steel handrails. For adult adjustable height 60-100 cm For children adjustable height 40-60cm Fixed width 61 cm, tapered ends mounted on wooden board with uprights 64cm apart . Length of board and Rails 3 meters.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	None		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	None		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive warranty for 2 years.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	User/Technical/Maintenance manuals to be supplied in English.		

EQUIPMENT SPECIFICATIONS FOR SHOULDER WHEEL

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	It is used for exercise of arm and shoulder.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	As specified		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	1. All steel construction 2. Fitted with 8 handles on a tubular circle of 100 -110 cm diameter 3. Mounted on bush bearing and fitted with calibrated sensitive controllable resistance mechanism 4. 360 degree scale allows revolution to be read from either direction 5. Variable arc of motion caliberated from 30 cm to 80cm dia attachment to raise or lower the wheel by 50 cm 6. Mounted on hardwood wall boards		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All standard accessories desired for proper functioning of the machine.		

5 Environmental factors

Sl	Name	Technical Specs quoted	Bidders Deviation if any

		by bidder	
5.1	None		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	None		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive warranty for 2 years.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	Service manual in English		
8.2	List of important spare parts and accessories with their part number and costing		

Equipment Specifications for FOUR CHANNEL TENS

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	T.E.N.S. (Transcutaneous Electrical Nerve Stimulation) units are widely used in hospitals for effective drug free pain relief. Use to treat shoulder pain, back/neck pain, aching joints, rheumatic pain, migraines /headaches, sports injuries, period pain etc.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	TENS works by stimulating nerves close to the skin releasing endorphins (natures anaesthetics) and helping to block the pain signals sent to the brain. The TENS four Channel machine deliver the pulse rate, pulse width and treatment time.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Table model unit Continuous and interrupted pulse generation with rate , width and amplitude controls Digital timer 0 – 99 minutes Output leads four nos. Output rubber electrodes eight nos. Jelly		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Jelly as per requirement		

5 Environmental factors

Sl	Name	Technical	Bidders

		Specs quoted by bidder	Deviation if any
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Comprehensive training for lab staff and support services till familiarity with the system on site.		
7.4	Comprehensive warranty for 2 years and 3 years CMC after warranty		

8 Documentation

8.1	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.2	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.3	User/Technical/Maintenance manuals to be supplied in English.		
8.4	List of important spare parts and accessories with their part number and costing.		
8.5	Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		
8.6	Certificate of calibration and inspection.		

Equipment Specifications for TWO CHANNEL TENS

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	T.E.N.S. (Transcutaneous Electrical Nerve Stimulation) units are widely used in hospitals for effective drug free pain relief. Use to treat shoulder pain, back/neck pain, aching joints, rheumatic pain, migraines /headaches, sports injuries, period pain etc.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	TENS works by stimulating nerves close to the skin releasing endorphins (natures anaesthetics) and helping to block the pain signals sent to the brain. The TENS two Channel machine has number of preset programmes that deliver the pulse rate, pulse width and treatment time.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Double channel Table model with solid state circuit Pulse width , pulse frequency and amplitude controls Electronic timer – 0-99 minutes Output leads –Two nos. Output rubber electrodes- Four nos. Operating voltage 220/50Hz Jelly 1 bottle (250 ml)		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	Jelly as per requirement.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Manufacturer should have ISO certification for quality standards.		
7.3	Comprehensive training for lab staff and support services till familiarity with the system on site.		
7.4	Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment.		
7.5	Comprehensive warranty for 2 years and 3 years CMC after warranty		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	User/Technical/Maintenance manuals to be supplied in English.		
8.2	Certificate of calibration and inspection.		
8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.4	List of important spare parts and accessories with their part number and costing.		

8.5	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		
8.6	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.		

INTEREFERENTIAL THERAPY UNIT WITH MOBILE TROLLEY

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Interferential therapy is basically a current therapy used in the treatment of circulatory disorders, range of motion, edema and muscle spasms. Interferential current is a form of electrical therapy that delivers currents to deep tissues through the use of kilohertz-carrier-frequency pulsed or sinusoidal currents to overcome the impedance offered by the skin.It is a deeper form of TENS.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	A choice of two or four pole treatment and have a facility to enable the user to set the "beat" frequency according to the condition being treated with rechargeable internal battery.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Should have low & medium frequencies current for electrotherapy 2 & 4 pole with dipole vector field with TENS, Galvanic ,faradic MF surge & NME stimulation Large programmable memory with preset programme Carrier wave frequency adjustable between 2-10 KHz Large LCD display for treatment parameter & option of CC/CV mode With standard essential Accessories.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
	Jelly as per requirement.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Comprehensive warranty for 2 years and 3 years CMC after warranty including UPS.		
7.3	Manufacturer should have ISO certification for quality standards.		
7.4	Comprehensive training for lab staff and support services till familiarity with the system on site.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	Certificate of calibration and inspection.		
8.2	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.		

8.3	List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
8.4	User/Technical/Maintenance manuals to be supplied in English.		
8.5	List of important spare parts and accessories with their part number and costing.		
8.6	Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		

Equipment Specifications for PARAFFIN WAX BATH (SIZE – LARGE & SMALL)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Uses melted paraffin wax under moderate temperature for mobilization of stiff joints, scars and to relieve pain.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Large Size approx 22"x16"x12" and small size approx. 12"x12"x10".		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Should be made of heavy gauge stainless steel sheet Top should have anodized aluminum cover Should be covered with laminated wood rim all around Mounted on ball bearing rubber castors for easy mobility Strip heaters of 2kw should be fitted at the bottom of the tank Three levels of power control with thermostat of temperature from 30 to 110^0 C . Indicator lamps for mains and temperature		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All standard accessories desired for proper functioning of the machine.		

5 Environmental factors

5.1	Environmental factors to be complied: 1. shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi		

	2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA, CE, UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive warranty for 2 years.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support as per manufacturer service/ maintenance manual. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of hospital technician and company service engineer should be clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue / manual. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.		

Equipment Specifications for SHORT WAVE DIATHERMY UNIT (CONTINOUS AND PULSED)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Short Wave diathermy produces high frequency alternating current. The heat energy obtained from the wave is used for giving pain relief to the patient.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	A device using electromagnetic energy in the shortwave frequency range (3-30 MHz) for therapeutic purposes. The unit includes electrodes, the shortwave generator, and all associated electronics, controls and enclosures.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Output of 400 to 500 Watt in continuous mode and 800 to 1100W in Pulse mode. Pulse repetition frequency of 20 to 200Hz adjustable in 10 steps. LCD Screen Display of parameter. Treatment timer with all standard accessories, condenser pad with cable. Disc electrodes with arms and cables. Patient safety switch		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	As specified		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Environmental factors to be complied: 1. Shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi 2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	1.Power input to be 220-240VAC, 50Hz fitted with Indian plug 2.UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty for 2 years and 3 years CMC after warranty including UPS.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and		

	routine Preventive Maintenance Support. as per manufacture. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of hospital technician and company service engineer should be clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, without which it will not be considered.		

Equipment Specifications for ULTRASOUND THERAPY UNIT (TWO HEADS)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Ultrasound uses a high frequency sound wave emitted from the sound head when electricity is passed through a quartz crystal. The sound waves cause the vibration of water molecules deep within tissue causing a heating effect. When the sound waves are pulsed, they cause a vibration of the tissue rather than heating. The stream of sound waves helps with nutrition exchange at the cellular level and healing. Ultrasound is helpful for ligament healing and clinically, for carpal tunnel syndrome, and muscle spasm.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Microprocessor based, Continuous & Pulsed modes, adjustable digital timer, auto shut off with buzzer, easy to use & sturdy machine.		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Frequency of 1 & 3 MHz Intensity of 0-3 w/cm² with display of output parameters along with timer and two water proof treatment heads, one large up to 5 cm and second small up to 1.0 cm		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All standard accessories desired for proper functioning of the machine. Jelly as per requirement		

5 Environmental factors

Sl	Name	Technical Specs quoted	Bidders Deviation if any

		by bidder	
5.1	Environmental factors to be complied: 1. Shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi 2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive warranty for 2 years and 5 years AMC after warranty.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer service/ maintenance manual. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, without which it will not be considered.		

Equipment Specifications for WHIRL POOL BATH (for arm, foot and leg)

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	Immersion of a body part into water with small "agitators" to provide a gentle massaging motion. A warm whirlpool provides relief from pain and muscle spasm and is often preparatory to stretching or exercise. Cold whirlpool is used to decrease inflammation and swelling.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Made of 20 gauge SS 304, should have complete accessories with removable inside aluminium Seat & Arm rest. Size approx. 90cm x 50cm x 70 cm (L x W x D).		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Heavy gauge stain less steel tank Fitted with one motorized turbine ejector and aereator Digital thermometer , thermostat and heater Mounted on heavy duty 10 cm wheels		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All standard accessories desired for proper functioning of the machine.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Environmental factors to be complied: 1. shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General		

	Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi 2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA,CE,UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with lthe system on site. 4. Comprehensive warranty for 2 years and 3 years AMC after warranty.		

8 Documentation

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
8.1	1. User/Technical/Maintenance manuals to be supplied in English. 2. List of important spare parts and accessories with their part number and costing. 3. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of company service engineer should be clearly spelt out. 4. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual, without which it will not be considered.		

Equipment Specifications for TREADMILL (T.M.T.) JOGGER

1 Description of Function

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
1.1	A treadmill that runs continuously in a circular pattern. It has multiple use in Exercise training , adult fitness programme and obesity control management.		

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	Soft Start / stop feature Emergency stop switch LED Displays		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Rugged two level heavy duty Structure Speed range 0-12 km/h. Elevation – 0-12 % Walking area – 48x20 inches. Ergonomically designed front and side handles. Emergency stop switch Powder coated body. User weight capacity 150 kg. Soft start/stop feature. Digital display of speed elevation. Display of stage number, stage time, distance covered, pace, calories/minute METS		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	All standard accessories desired for proper functioning of the machine.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Environmental factors to be complied: 1. Shall meet IEC-606-1-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC,EMCdi 2. The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 3. The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug		

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	1. Should be US FDA, CE, UL or BIS approved product. 2. Manufacturer should have ISO certification for quality standards. 3. Comprehensive training for lab staff and support services till familiarity with the system on site. 4. Comprehensive for 2 years and 3 years CMC after warranty.		

8 Documentation

8.1	DOCUMENTATION Should include the following: 1. User/Technical/Maintenance manuals to be supplied in English. 2. Certificate of calibration and inspection. 3. List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacture. 4. List of important spare parts and accessories with their part number and costing. 5. Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of hospital technician and company service engineer should be clearly spelt out. 6. Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number with authenticated catalogue/manual. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.

RADIOLOGY

Specification for Ultrasound Machine

The system should be latest fully Digital Color Doppler Ultrasound System and can be used for applications like Abdominal, Obs. / Gynae , small parts, Endocavitary, Pediatric & Vascular applications. The system should have following essential features:

1. The system should have the following image modes:2D,M mode ,PW, Tissue Harmonic mode , Color Doppler, Power Doppler mode.
2. The system should have minimum 1500 or more digital processing channels and 256 or more grey shades.
3. The system should have a very high dynamic range of 170dB or more and should independently selectable in B & M mode. Please specify the range.
4. The system should have a very high frame rate for B-mode & Colour mode. Maximum frame rate should be greater than 350 fps for B-mode & colour mode. Please specify the maximum frame rate in B-mode & M-mode.
5. The system should be able to support all type of transducers (Convex, Endocavitary, Linear, Phased array and Intraoperative Transducers).Frequency range of all transducers should be 2-14Mhz.
6. The system should have Advanced measurement packages for all applications.
7. The system should an integrated high resolution TFT/LCD of 15 inches or more with facility of tilt and swivel facility alongwith convenient grip.
8. The system should have minimum three active universal ports & two parking ports. Active ports can be directly selectable from the control panel.
9. The system should have scanning depth in the range of 2- 24cms.
10. The system should have a very high capacity of Hard Disc Drive min.80GB for storage of images.
11. The system should have inbuilt CD/DVD R/W and USB ports for image export.
12. The system should have zoom facility both in real time and frozen image and it should be minimum 6 times or more in both real time & frozen modes.
13. The system should have minimum 6 steps transmitting focussing (transmit focal zones) and adjustable gain should be available up to 100 dB for B-mode & M-mode.
14. The system should have Directional Power Doppler to define the low blood flow directions.
15. The system should have HD-flow/Advanced dynamic flow to acquire the blood flow with directions in the deeper region at a very high frame rate.
16. The system should have automatic optimization in B-mode and auto adjustment of Doppler base-line & velocity range.
17. The system should have B-mode image steering & Color Doppler steering . Please mention the angle.
18. The system should have the facility of on-screen adjustment for Dynamic range, Frequency selection, Presets, Name of the patient,etc.
19. The system should have the facility to view the Thumbnail images and system can be programmed for various users with the facility of user passwords.
20. The system should have the Trapezoid scan facility for linear probes.
21. The system should have Compound Imaging and Contrast Harmonic Imaging.

22. The system should have the facility of having direct image print out through a B/W thermal printer.
23. The system should be upgradeable to real time 3D (4D) package. Please quote optionally for convex volume probe.
24. System should be offered with the following probes and accessories:
    (a) Convex probe with frequency range of 3.0-6.0 Mhz.
    (b) TV/TR probe with frequency range of 5.0-7.5 Mhz. And minimum field of view of 140 degree.
    (c) Linear probe with frequency range of 6.0-11.0 Mhz.
    (d) 1 KVA On-line UPS
    (f) B/w Thermal Printer with 10 paper rolls.
    Above mentioned probes must have multifreqency selection and THI.
25. Please quote optionally for the following:
    (a) Linear probe 8-14 Mhz.
    (b) High frequency convex probe of frequency 5-8 Mhz. for pediatric/ Neonatal application.
    (c) Convex volume (4D) probe
26. Quoted system should be installed in minimum two reputed GOVT. Institutions in Delhi/NCR Please attach the user list of quoted system mentioning address and contact numbers.
27. Two years complete warranty for the entire equipment, probes and accessories which should include service as well as parts.
28. Three years comprehensive maintenance charges (Machine + probe) including after Two year warranty to be quoted separately
29. Please attach the original manufacture's product catalog and datasheets. Photocopied, computer generated catalogue and datasheet will not be accepted.
30. List of installation – the bidders to provide list of installation of the quoted model in (National and International).
31. The shortlisted bidders will have to give demonstration of their quoted model before finalizing the evaluation of their bids.
32. The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.
33. Other accessories: Jelly Bottles (5 Nos.), Patient Examination Table, Doctor's chair, Patient Chair, curtains for changing room.

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings from the source, Electrical points of suitable ratings, water connection, water drainage, plumbing, air-conditioning & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs..

TECHNICAL SPECIFICATION FOR
PORTABLE ULTRASOUND WITH COLOR DOPPLER SYSTEM

DICOM compatible fully digital, compact portable Colour Doppler Ultrasound machine is required with the following technical features:

1. The unit should be compact, lightweight and portable. Weight should not exceed 10kg excluding cart and accessories.

2. It should be suitable for abdominal, small parts and vascular applications in adults and paediatric patients.

3. Multiple preloaded as well as user configurable application presets should be available.

4. It should have 1024 or more digital channels for image formation and acquisition.

5. Transducers:
   (1) Convex 5 - 2 MHz for abdominal imaging.
   (2) Linear 13 - 6 MHz.
   (3) Endocavitory 8 - 5 MHz for transrectal ultrasonography and end firing biopsy, one each.

6. All transducers should be lightweight digital phased array broadband type transducers with at least 1024 elements.

7. Detachable needle guide should be available with convex and endocavitory probes.

8. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler and triplex Doppler should be available.

9. Advanced features such as tissue harmonic imaging with contrast media and compound imaging Advance dynamic flow / HD flow should be available.

10. Controls for 2D mode: Total gain, depth, TCG, dynamic range, acoustic power output, number for position of focus.

11. Controls for Colour Doppler: PRF, colour gain, position and size of ROI, steering of ROI, colour maps and colour invert.

12. Controls for pulsed Doppler: variable sample volume size from 1 to 5mm or more, steer, PRF, baseline, gain angle correction, spectral invert, duplex/triplex on/off.

13. Measurements for 2D mode: Multiple distances, area and volume.

14. Measurements for Doppler modes: Stenosis quantification in percentage, diameter, PSV, EDV, mean, PI, RI, floor volume, acceleration time and index. Automatic and manual measurements and display of pulsed Doppler calculations should be possible.

15. Cineloop memory of minimum 10 seconds on all modes.

16. **Monitor**
Flat LCD/TFT monitor of at last 15inchesor more.

17. **Keyboard**
Alphanumeric soft keys keyboard with easy access scans controls and trackball.

18. **Storage**
Onboard storage of atleast 1000 images. Storage in JPEG and AVI format should be possible.

19. Sorting of data base with patient name and date should be possible.

20. USB port connectivity to printer or computer.

21. Facility for storage on CDR should be available.

22. Unit should function with 200-240 V, 50 Hz AC, 5 amp power outlet. Power requirement to be specified.

23. In built battery back up should be at least one hour or more.

24. The unit should be compatible with and should have facilities for interfacing with the hospital LAN.

25. Essential accessories: Black & White Thermal printer and color laser printer, UPS, mobile cart with transducer holder, jelly bottle holder and space for printer.

26. Paper and cartridges for 1000 image printouts should be provided.

27. The unit offered must be sturdy and should be able to withstand accidental hits and falls during transportation.

28. The unit offered in the tender will require technical demonstration.

29. List of users in India/world wide should be enclosed along with the tender.

30. Price of the main unit and accessories to be quoted separately.

31. Warranty:
The unit, transducers and all accessories should be covered with comprehensive on site warranty for Two (2) years commencing from the date of issue of installation certificate.

32. Rates for comprehensive maintenance as per bid.

33. Photocopy of purchase order along with terms and conditions of contract received from any Govt/Public Sector institution as per bid supply of the offered equipment must be enclosed with the price bid

34. Company should have an established Registered Service Centre with address and phone numbers at Delhi.

35. Company should give undertaking regarding the spares availability of the quoted model for next ten years.

34. The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.

35. The shortlisted bidders will have to give demonstration of their quoted model before finalizing the evaluation of their bids.

36. Other accessories: Jelly Bottles (5 Nos.), Patient Examination Table, Doctor's chair, Patient Chair, curtains for changing room.

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings from the source, Electrical points of suitable ratings, water connection, water drainage, plumbing, air-conditioning & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs..

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SPECIFICATION OF DIGITAL MOBILE X-RAY UNIT

Compact, easily transportable, digital mobile radiographic unit with articulated/telescopic arm, suitable for bedside X-Ray for ward patients, intensive care units and operation theatres. The unit should be a digital system with flat panel detector and must include the following:

1. **Power Line Connection**:
   The unit should operate on single-phase power supply with plug-in facility to any standard wall outlet with automatic adaptation to line voltage 200 to 240 volts, 15 Amp plug. Unit should also operate on re-chargeable batteries

2. **Generator:**

   I. Must be microprocessor controlled high frequency, output 30 KW or more at Nominal Power Rating
   II. It should have a digital display of mAs and KV and an electronic timer.
   III. KV range: 40 KV to 125 KV or more
   IV. Max. Current: 400 mA or more
   V. It should be capable of delivering up to 300 mAs in different steps
   VI. Shortest exposure time: Should be 1ms or less.

3. **X-Ray Tube:**

   I. Output should match the output of the generator.
   II. It must have a rotating anode with 3000 rpm or more.
   III. It should have dual focus. Large Focus : 1.3 mm and small Focus 0.6 mm or better.
   IV. Anode heat storage capacity should be more than 100KHU.
   V. Multi leaf collimator rotatable+/-90 degrees with off,on timer should be supplied with the system.
   VI. Exractable measurable tape should be available.
   VII. Detachable remote control with with 5 metre coil cord.

4. **Flat panel detector**:

   I. The flat panel detector should be of the size 14 x 17 inch or more.
   II. Detector should have DQE of 63% or more.
   III. The detector pixel matrix should be 2k x 2k or more.
   IV. Pixel size / pitch should be 160 µm or less.
   V. The machine should have a detector storage compartment..
   VI. The image viewing time after exposure should not be more than 5 sec.
   VII. Weight of the detector should not be > 5 Kg.
   VIII. The Detector should be designed and calibrated for General Radiography

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IX. Purposes and must be fully integrated with the mobile unit including the controls.

X. The Detector should have a long chord to easily reach the patient for bedside x-rays

5. **Battery**
   I. The machine should be able to run on mains as well as on battery supply.
   II. Please specify number of exposures which can be done on battery.
   III. The battery should also provide power for the motor to move the machine.
   IV. The battery should be able to be charged from a normal 15A, 220-240V single phase socket in less than 6 hours, preferably.

6. **Inbuilt Console:**
   I. The machine should have an integrated/inbuilt console with a TFT touch screen.
   II. The console should enable to view the image, and provide post processing features, using touch screen.
   III. The post processing features should include zoom, contrast and brightness adjustment, panning, annotate ,mark and reporting.
   IV. Storage of image with a memory of at least 3000 images.
   V. The touch screen size should be 15 inches or more.
   VI. One no. Grid to be provided as standard (8:1 or better)

7. **Connectivity:**
   The machine should be fully network ready and it should be possible to transfer images and patient data from and to hospital network using LAN connectivity or wireless LAN.

8. The unit must have an effective braking system for parking, transport and emergency braking. The tube stand must be fully counterbalanced with rotation in all directions. It should have inch Mover function.

9. It must have an articulated or telescopic arm for maximum positioning flexibility in any patient position.

10. The machine should have a small foot print and should be able to fit in a small space.

11. The cables should preferably be concealed in the arm system.

12. The exposure release switch should be detachable with a chord of at least 5 meters.

13. A grid of 10:1 ratio of appropriate size preferably 17"x17" should be supplied.

14. Company/ supplier should have CE/FDA approval certificate and quoted model should have AERB type approval.
15. The unit should a minimum warranty for 2 years for both the X-ray unit and the Detector.
16. Comprehensive warranty as per bid.
17. Minimum of 2 week of onsite training at the Hospital should be provided to radiographers and radiologists.

19. The bidder should enclose the original product data sheet, brochure and compliance sheet, without which the bid will be rejected. Computer generated data sheet and brochure will not be accepted. The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.

INSTRUCTIONS:

3. Vendor will get approval for the site plan from AERB for installation of the equipment.
4. Any civil and electrical work required at the site for installation of machine is to be done by the vendor including dismantling of preexisting machine if any at the site.

NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation in this Section. Bidders must take into consideration in its bid costs to be incurred for any additional work viz. Electrical cabling of suitable ratings from the source, Electrical points of suitable ratings, water connection, water drainage, plumbing, air-conditioning & allied requirement for the equipment etc. required for successful installation, commissioning and running of the Equipment and the "All inclusive lump sum price" should include all such costs. Bidders who have approval / authorisation of AERB / BARC shall only be considered with documentary evidence. It shall be bidders responsibility to get the equipment installed and commissioned as per AERB / BARC guidelines and installed and commission on "Turn Key basis.

500 ma High Frequency X-ray unit with Image intensifier.

The x-ray machine quoted by the firm should have AERB Approval & CE / US FDA approval.

1. High Frequency Generator with output of 50 KW or more to give 500mA at 100KV.
2. Generator should have KVP Range 40 KV to 150 KV.
3. mAs range should 2-800 mAs.
4. Digital Display of KV and mAs.
5. Integrated console with the table.
6. Fluoroscopy in manual and automatic mode
7. Dual Focus X-ray Tube with large focus 1.0mm and small focus-0.6 mm or smaller
8. Collimator with adjustable copper filters.
9. Facility of collimation functionality display on the x-ray tube assembly.
10. Table top transversal travel 30cm or more (± 15 cm).
11. Table top longitudinal travel 160 cm or more (± 80 cm).
12. Tiltable table from vertical to -15 Degree or more with automatic stop at Horizontal, Vertical and head down position.
13. Microprocessor Controlled Automatic Spot Film Device with facility of different film formats selections with wide range of division in vertical and horizontal.
14. X-ray table should be able to accept all standard type of cassette including CR cassettes
15. Titling speed $>3^0$*/per* second.
16. Maximum Allowable patient weight 200 kgs.
17. Compressor cone with automatic parking position.
18. Oblique incidence up to *+/- 40º*
19. All movement controls of the table available on the SFD also.
20. Under table 12 inch image intensifier system with high resolution CCD camera. Overview plus 3 zoom levels 65% DQE & 2 No. Monitors of minimum 17" size and minimum 1024 x 1024 resolution or better.
21. Last image hold of fluoroscopy and radiography images
22. Original Data Sheet of technical specification of the equipment quoted to be provided along with point wise compliance statement mentioning deviation if any with justification. The original data sheet should indicate reference to technical specification point wise by highlighting ink.

Accessories

1. 65 KV A Servo Voltage stabilizers with spike suppressor to be quoted along with.
2. Lead Glass of 100 x 120 cm with 12 mm thickness.
3. Remote controlled compression with three different interchangeable cones
4. Footswitch for fluoroscopy & exposure in examination room.
5. Measuring chamber for dose-area product (DAP).
6. Bucky wall unit with height adjustable catapult bucky cabnet to hold different cassettes sizes from 5"x7" to 14"x 17" with moving greed Pb 10: 1; 40 lines/cm
7. Footrest, Handgrip angled, Protection strip, Handgrip rail, Shoulder supports one pair
8. Pediatric immobilizer of standard make.
9. Zero lead aprons: 4 each with wall mounted stand
10. Protective shields for Gonads, thyroids: 4 each for Gonads & thyroid.
11. Slim view boxes of standard make (4 in 1) - 4 nos.

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WHOLE BODY MULTI SLICE CT SCANNER
(ONE HUNDRED TWENTY EIGHT SLICE CT SCANNER)

The Model offered should be High end model under current production , should be Slip Ring Technology. The Offer should meet the Specifications as follows

Gantry :

1. The CT Scanner should have low Voltage Slip Rings incorporated in the Gantry
2. The Minimum scan time for a 360 Degree rotation should be less than or equal to **0.4 seconds. (400 Milli Seconds)** .
3. The gantry should have a minimum tilt of 30 degrees on either side and remote tilt should be available as standard.
4. The gantry should be provided with User control panels on either side for easy positioning
5. **The sub millimeter Slice @ 0.63 mm or less should be available . The system should have suitable technology to generate 128 Slice/ rotation.**
6. The Gantry should have 3D Positioning Laser lights.
7. The Scan field of view (FOV) in acquisition mode should be at least from 200 mm to 500 mm with intermediate Steps for scanning different anatomies.
8. Aperture should be at least 70 cm diameter.

X ray Section :

1. The X ray Generator should be compact and inbuilt in the Gantry.
2. The System X ray power should be **70 kw and above**
3. **The MA range available should be between 20 to 600 MA or more with increments in steps of not more than 10 mA .**
4. **The X ray Tube should be essentially Dual Focus with capacity of at least 7 MHU. Any special feature of the X ray tube to be highlighted with literature.**
5. Specify the focal Spots of the X ray tube.
6. The X ray tube should have a cooling rate of not less **than 1000 KHU per MIN**
7. The X ray tube Cooler Unit should be in built in the Gantry

Detectors :

1. The Detector Offered should have facility to acquire 128 slices or more.
2. The detector should be solid state type. Specify the material.
3. Specify the Fan Angle of the X rays and the geometry
4. The detectors should not require frequent calibration.

Patient Couch :

1. The patient table offered should have a minimum load bearing capacity of at least 200 KG.
2. Table Top: Please Specify dimensions.
3. The range of metal free scan should be atleast 150 cm or more.
4. The vertical range should be atleast 55 cms (max height – min height)
5. Specify the reproducing accuracy of the table.
6. Remote UP/DOWN , FWD/BWD of the Patient Couch should be standard

Spiral / Helical Section :

1. **The system offered should have Spiral Capability of at least 100 seconds & above. Real Time Spiral @ 8 f/s should be standard.**
2. The range of Spiral facility in Axial Direction should be more than 100 cm.
3. The Reconstruction Time in Spiral scan should not be more than 100 Milli seconds.
4. The system should have the facility to track contrast medium to trigger scan using **Multiple ROI** should be included in the scope of Supply. **Real Time Monitor of the Contrast Trigger Mechanism should be available.**
5. **Hi Resolution scan package of 0.63 mm or less should be offered as standard**
6. **Multi Slice CT Fluroscopy with at least 3 Slice positions & Reconstruction @ 8 Images / Sec should be available large LCD monitor of 24 inch or more must also be there in Gantry room.**

Computer Section:

1. The Computer offered should be the Latest Multi tasking Processors and a menu driven platform with a RAM size of at least 4 GB
2. The Monitor should be the latest Color of at least 18 inches and flat screen. There should be two monitor independent console.
3. The display matrix should be at least 1024 / 1024.
4. The reconstruction time for a Axial scan should not be more than 100 Milli seconds.
5. The Hard disk Capacity for both Image and Raw data should be more than 500 GB
6. It should have facility to store at least 500,000 Images
7. The system should be supported with archiving facility of DVD & CD Main Console
8. DICOM facility to send , store , print , receive, Query / Retrieve , MWM , MPPS etc should be standard .
9. PC Based connectivity should be standard for easy transfer of Images & Report.

Image Processing section :

1. The system should have standard software like 3D Volume rendering , MIP , CT Angio, .Color Angio Display, Virtual Endoscopy, Colonoscopy, CT Neuro Perfusion , Dental scan , Prospective ECG Gated scan , Colon View should be available as standard on the System
2. The following soft ware should be offered as standard (MPR , ROI , VOLUME CALCULATION , CT NUMBER DISPLAY , WINDOW WIDTH , WINDOW LEVEL , TOPOGRAM DISPLAY , CINE DISPLAY , HRCT LUNG, DYNAMIC SCAN)
3. Cardiac Scan Attachment with ECG Gated Segmented Recon , Calcium score , Plaque Analysis , Cardiac Function Analysis , Vessel Flythrough of the Coronaries should be included in the Scope Of Supply in the Work Station & in the Main Console. Additional Standard softwares: Lung Nodule Calculation, Colonography. Image fusion of Different modalities. Advanced Vessel Analysis.
4. Automatic display of MPR Images after scan will be preferred**.**
5. There Should be State Of the Art Work stations with at least 6 GB RAM , CD / DVD Archival / DICOM Viewer Two work stations included in the Scope Of Supply and it should support all the Software as listed on the Main Console

Resolution :

1. The System Spatial Resolution should be mentioned with parameters.
2. The low contrast resolution should not be more than 3 mm at 0.5 %. Shoulder, Pelvis Streak Artefact suppression Software should be standard.
3. Noise Suppression protocols to maintain LCR at low dose should be standard.
4. Special Softwares (Like MA Modulation in Routine & Cardiac Mode) to ensure Dose efficiency should be standard.
5. Specify the CT Dose Index.

ACCESSORIES :

1. Multi size Dry Laser Imager of any reputed make with 600 dpi or more.
2. Color Laser Printer.
3. Lead Glass of at least 3 ft by 5 ft or more.
4. UPS with half an hour back up of suitable capacity to handle the Complete CT Scanner.
5. Laser Colour Printer.
6. Dual Head Pressure Injector of reputed make with 100 No: Syringes & Tubings. Suitable ECG Monitor.

Warranty :

Warranty as per bid for CT Scanner System including X ray tube and all accessories.

Datasheet:

All compliance to the tender should be in form of Original Data Sheet or Original Certificate from the Manufacturer.

Training for a Period of Six Weeks to Radiologists Onsite.

TURNKEY

Air-conditioner of 10 ton split or ductable AC for whole area including workstation area.
-False ceiling of Gypsum board
-Flooring of Vitrified antistatic floor tiles
-Wall tiles upto false ceiling
-Crash Medicine Cart Trolley(1no.)
-Patient Trolley (1no.)
-Wheel Chair (1no.)
-Doctor's Chair (1no.)
-View Boxes: High Luminal Intensity (LCD) double panel (4x2) – (2nos.)
-Steel cupboard branded)-2no.
Turn Key works to be executed as per drawing provided (As Is & Proposed Plan) by user department.
Thickness of Lead in Lead lined door-2mm.

- The bidder should enclose the original product data sheet, brochure and compliance sheet, The serial number of specifications must be indicated against the relevant portion of the compliance sheet and data sheet.

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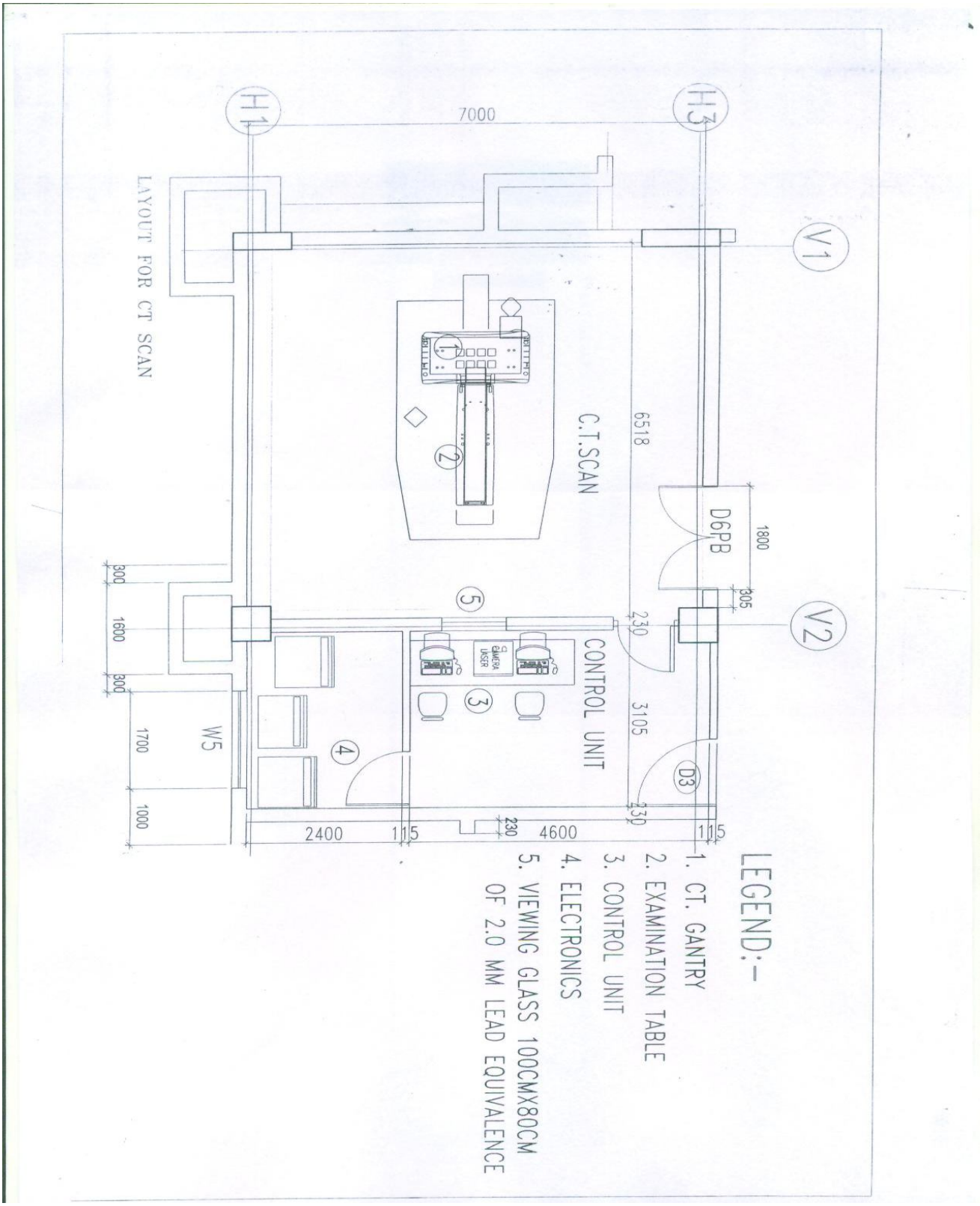
LAYOUT PLAN
FOR
CT SCAN


LAYOUT FOR CT SCAN
H1
H3
V1
V2
7000
6518
C.T.SCAN
CONTROL UNIT
D6PB
1800
305
230
3105
D3
W5
300
1600
800
1700
1000
2400
115
230
4600
115
LEGEND:-
1. CT. GANTRY
2. EXAMINATION TABLE
3. CONTROL UNIT
4. ELECTRONICS
5. VIEWING GLASS 100CMX80CM
OF 2.0 MM LEAD EQUIVALENCE

Specification
ULTRASOUND BONE DENSITOMETER

- Measurement Site — Heel (Calcaneus)
- Measurement Method: — Ultrasound Pulse Penetration
- Measurement Parameter: — Speed of Sound (SOS)
- Measurement Time: — Approximately 10 seconds
- Measurement Precision:%CV: — 0.5% or better (in Measurement of Phantom)
- Ultrasound Frequency: — Center Frequency: 500 kHz
- Ultrasound Output: — Isptp: 1.8mW/cm2
- Measurement Block: — Dry Type (Acoustic gel used)
- Display Screen: — Color LCD
- External Connection: — RS-232C available for External PC
- Print out Details: — Serial No., Date and time,Age,Sex, Foot Size, SOS value,

  T-score, Z-score, graph, %YAM and %AGE.
- Operating Environmental Condition: — Temperature:-10-35ºC
- Humidity: — 35-85%RH (No Codensation.)
- Atmospheric pressure: — 700 to 1060 hPa
- Power Supply Voltage: — 220-240 V AC ±10%,50/60 Hz, 0.3A Maximum
  100-110 V AC ±10%,50/60 Hz, 0.6A Maximum
- Classification: — According to the type of protection against electric shock: Class 1

  According to the degree of protection against electric shock: Type B
- Dimensions: — W510mm x D300mm xH210mm
- Mass: — Approximately 11kg.
- CM-200 Utility Software (CMDS) Operating Environment
- OS Windows Latest
- Memory installed 4 GB or higher
- Display 800x600 dots or more 32768 colors or more (High Color 16 bits)
- USB Port Required for connection of the HASP
- RS-232C port Required for use in On-line mode
- Printer Windows-compliant printer (Color Printer)

NOTE:

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OPERATION THEATRE

SPECIFICATIONS FOR OPERATION TABLE: HYDRAULIC

1 Description of Function

Sl	Name
1.1	Hydraulic operating Tables are simple tables for performing surgical procedures and they work without electrical power.

2 Operational Requirements

Sl	Name
2.1	OT Table is required for general surgery and should have X-Ray translucent tops.

3 Technical Specifications

Sl	Name
3.1	a. Four/five section table top with divided foot section b. Table top should permit x-ray penetration and fluoroscopy c. All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and anti-trendelenburg, except foot and head section should be operated hydraulically d. Should have a manual position selector e. The casings on the frame and centre supporting column should be made of hygienic stainless steel f. Mattress should be radioluscent and suitable for fluoroscopy
3.2	Measurements:(approximate) a. Height: 730-1040 mm b. Side tilt: + 15-20 degrees c. Back section adjustment: - 15 degrees to 70 degrees d. Foot section adjustment: - 90 to 0 degree, detachable e. Trendelenburg: 25-30 degree f. Anti trendelenburg: 25-30 degree g. Head section adjustment: -40 to -30 degree, detachable h. Width: 550 mm i. Length: 1950 mm

4 System Configuration Accessories, spares and consumables

Sl	Name
4.1	System as specified
4.2	ACCESSORIES: All accessories including the ones listed below should be quoted. The specific accessories and their quantity will depend upon actual requirement a. Padded arm rest with straps - pair with clamps b. Anaesthesia screen with clamps c. Side supports: pair with clamps d. Shoulder supports: pair with clamps e. Knee crutches for lithotomy position: pair with clamps