	14. The incubator should be mounted on a collapsible trolley so that the same can be easily shifted in any ambulance requiring minimum manpower.		
4	**System Configuration Accessories, spares and consumables**		
4.1	System as specified		
5	**Environmental factors**		
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**		
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**		
7.1	**Product should be US FDA or European CE approved."**		
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**		
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		

Item No. 71

Equipment Specifications for FIBRE OPTIC PHOTOTHERAPY LAMP

1 Description of Function	
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	
2.1	Fibreoptic phototherapy for greater uniformity of radiation
2.2	Compact and smaller sized equipment than conventional phototherapy.
3 Technical Specifications	
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	
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	
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	
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	
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

Item No. 72

EQUIPMENT SPECIFICATIONS FOR PULSE OXIMETER

1 Description of Function	
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	
2.1	Suitable for all types of Patient range: Adult, Pediatric, infant, and/or neonate with minimum motion artifact.
3 Technical Specifications	
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	
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	
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**		
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**		
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**		
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		

Item No. 73

Equipment Specifications for MICROBILIMETER

1 Description of Function

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

2.1	The system should meet all the numerical values given in the technical specifications within a tolerance of +/- 10 %.

3 Technical Specifications

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

4.1	Supplied with 1000 heparinized capillary tubes and 1 set plasticin for sealing capillary tubes

5 Environmental factors

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**
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**
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**
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

Item No. 74

EQUIPMENT SPECIFICATIONS FOR MOBILE AIR ASEPTICIZER

1 Description of Function	
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	
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	
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	
	None
5 Environmental factors	
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	
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

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

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.

PMR

Item No. 75

INTEREFERENTIAL THERAPY UNIT WITH MOBILE TROLLEY

1 Description of Function	
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	
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	
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	
	Jelly as per requirement.
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 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	
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**
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**
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.

Item No. 76

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

1 Description of Function	
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	
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	
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	
4.1	As specified
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	
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	
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

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.

Item No. 77

Equipment Specifications for ULTRASOUND THERAPY UNIT (TWO HEADS)

1 Description of Function	
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	
2.1	Microprocessor based, Continuous & Pulsed modes, adjustable digital timer, auto shut off with buzzer, easy to use & sturdy machine.
3 Technical Specifications	
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	
4.1	All standard accessories desired for proper functioning of the machine. Jelly as per requirement
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	
6.1	Power input to be 220-240VAC, 50Hz as appropriate fitted with Indian plug
7 Standards, Safety and Training	
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	
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.

Item No. 78

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

1 Description of Function	
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	
2.1	Soft Start / stop feature Emergency stop switch LED Displays
3 Technical Specifications	
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	
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	
6.1	Power input to be 220-240 VAC, 50Hz fitted with Indian plug
7 Standards, Safety and Training	
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

Item No. 79

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 15000 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 or more 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(±1).
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- 30cms.
10. The system should have a very high capacity of Hard Disc Drive min.150GB 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 4 steps or more transmitting focusing and adjustable gain should be available up to 100 db for B mode and 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(±1).
    (b) TV/TR probe with frequency range of 5.0-7.5 Mhz (±1). And minimum field of view of 125 degree or more.
    (c) Linear probe with frequency range of 6.0-11.0 Mhz(±1).
    (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. (±1)
    (b) High frequency convex probe of frequency 5-8 Mhz. for pediatric/ Neonatal application.
    (c) Convex probe (4D) probe of frequency 2-7MHz (±1MHz).
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..

Item No. 80

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(±1MHz).
   (3) Endocavitory 8-5 Mhz (±1MHz) for transrectal ultrasonogaphy 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 or more. 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 through inbuilt 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. US FDA and European CE marked product.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..

Item No. 81
Digital Mobile X-Ray

Compact, easily transportable, digital mobile radiograbhic 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 poer supply with plug in facility to any standard wall outlet with automatic adapation to line voltage 220 to 240 volts, 15 Amp plug. Unit should also operate on rechargeable batteries.

2.Geneartor:

I. .Must be microprocessor controlled high frequency, output 30KW or more at national power Rating.
II. It should have a digital display of mAs and KV and an electronic timer.
III. KV range: 40KV to 125KV or more.
IV. Max Current : 400mA or more.
V. it should be capable of delivering up to 200mAs in different steps.
VI. Shortest exposure time: Should be 4 ms 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: 1.3mm and small focus: 0.6mm or better.
IV. Anode heat storage capacity should be more than 100 KHU.
V. Multi leaf collimator rotable +/- 90 degree with off. On timer should be supplied with the system.
VI. Extactable measurable tape should be available.
VII. Detachable remote control with 5 meter coil cord.

4.Flat panel Detector:

I. The Flat Panel detector should be of the size 14x17inch or more Detector scintelator should be CSI.
II. Detector should have DQE of 63% or more.
III.The detector pixel matrix should be 2K*2K or more.
IV. Pixel size/pitch should be 160um 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>5Kg.
VIII. The detector should be designed and calibrated for general Radiography.
IX. Purpose and must be fully intergrated with the mobile unit including the controls.
X. The detector should have a long chord to easily the patient for bedside x-rays.

5. Battery:

I.The machine should be able to run on mains as on battery supply.
II. Please specify number of exposure 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 12 hours, preferably.

6.Inbuilt Console:

1.The machine should have an intergrated/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. Storgae of image with a memory of atleast 3000 images.
V. The touch screen size should be 15 inch or more.

VI. One no. Grid tio 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 postion.

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

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

12.The exposure switch should be supplied with a chord of atleast 5 meters.

13.A grid of 10:1 ratio of appropriate size preferably 14''x17'' should be supplied.

14. Quoted model should have US-FDA or European CE certified. 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.

18.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:

1.Vendor will get approval for the site plan from AERB for installation of the equipment.

2.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.

Item No. 82

Technical Specification for Whole Body Multi Slice CT Scanner (128-Slice)

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

1. 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.

2. 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 minute.
7. The X ray tube Cooler Unit should be in built in the Gantry

3. 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.

4. 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

5. 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.

6. 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.

7. 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

8. 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.

9. Accessories:

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

10. Warranty :

Comprehensive on-site warranty as per bid for CT Scanner System including X ray tube and all accessories.

11. **CMC (Comprehensive Maintenance Contract)**

The Year-wise CMC inclusive of the X-Ray Tube should be quoted from 3rd to 6th year inclusive of labour, spares & X-Ray Tube after 2 years comprehensive warranty. The CMC should cover all vendor items & accessories. CMC charges will be taken into account for evaluation of the bids for ranking purpose and to arrive at the lowest bid.

12. Datasheet:

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

13. Training for a Period of Six Weeks to Radiologists Onsite.

14. 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.

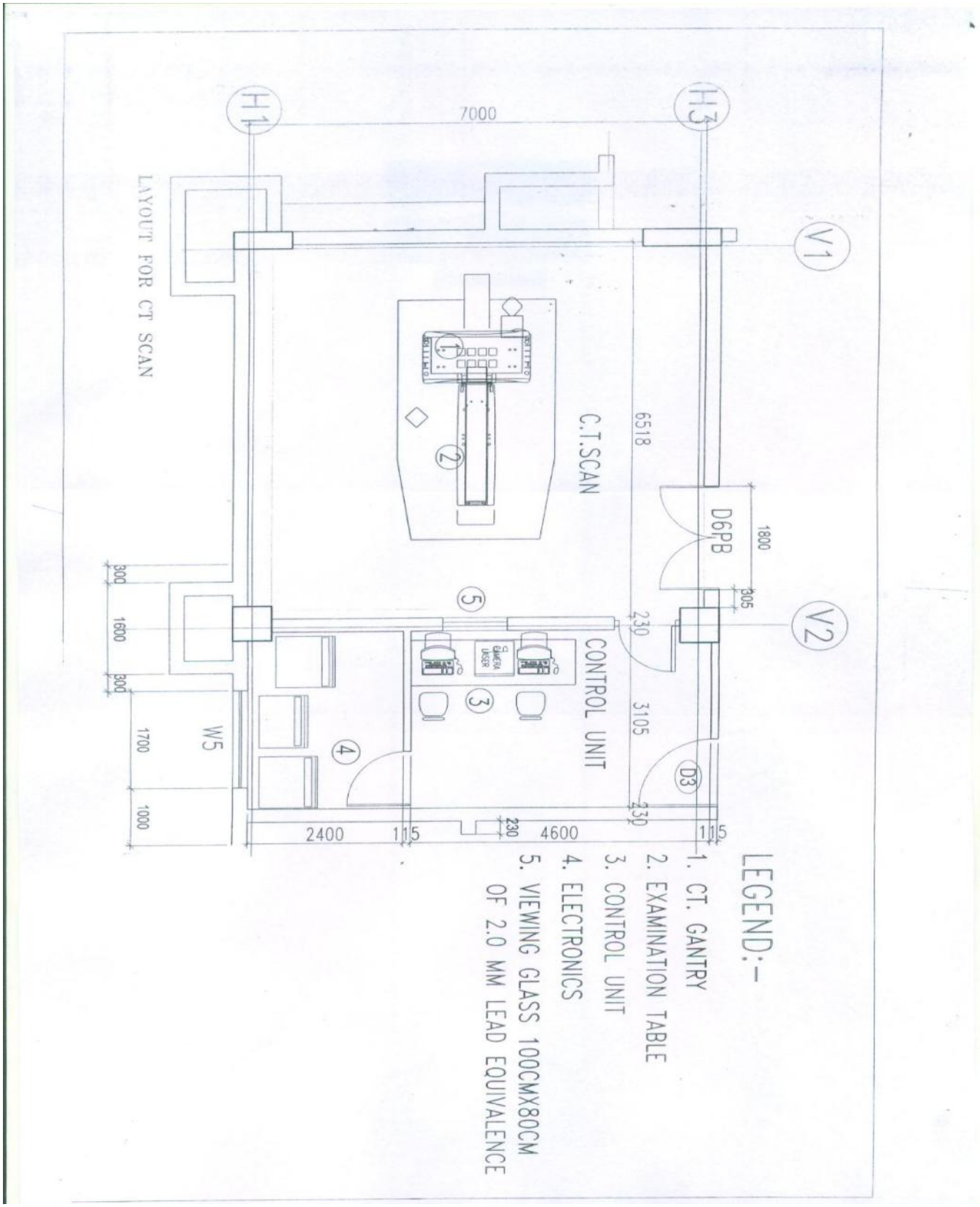
NOTE:

Bidders are requested to visit AIIA, Sarita Vihar, New Delhi to assess the site condition of Equipment placement and installation. 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 type approval of AERB / BARC shall only be considered with documentary evidence. It shall be bidder's responsibility to get the equipment installed and commissioned as per AERB / BARC guidelines and installed and commission on "Turn Key basis.

INSTRUCTIONS:

1. Vendor will get approval for the site plan from AERB for installation of the equipment.
2. Any civil and electrical work required at the site for installation of machine is to be done by the vendor..

LAYOUT PLAN
FOR
CT SCAN


LAYOUT FOR CT SCAN
H1
H3
V1
V2
7000
6518
C.T.SCAN
CONTROL UNIT
D6PB
D3
W5
1800
305
230
3105
300
1600
300
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

Item No. 83

Specification

ULTRASOUND BONE DENSITOMETER

- Measurement Site: Heel (Calcaneus)
- Measurement Method: Ultrasound Pulse Penetration
- Measurement Parameter: Speed of Sound (SOS)
- Measurement Time: Approximately 10 seconds
- Precision: <2.0% CV in osteoporotic person Ultrasound Frequency:
- Center Frequency: 500 kHz
- 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.
- 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)
- It should be European CE and US FDA Approved.
- Parameter display facility
- Weight – 12 Kgs or Less
- Printer –
  - Internal – Thermal printer with graphical output
    External – Inkjet/Laserjet
- USB Port facility
- Measuring Parameters – Stiffness Index from BUA, SOS
- Precision – less than 2% CV in osteoporotic person
- Reference Data – Calcaneum (age, sex and ethnicity).
- Measurement Time – Less than 15 Sec

- Electrical Req. - 100 - 240V AC
- Frequency – 50/60 Hz
- Operating Temp.: 15–35 Degree C

Other Requirements

- System must have a three year standard warranty.
- It should supply with a cover for easy transportation of machine
- It should have reference database to produce T score as per WHO guidelines.

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..

OPERATION THEATRE

Item No. 84

SPECIFICATIONS FOR OPERATION TABLE: HYDRAULIC

1 Description of Function	
1.1	Hydraulic operating Tables are simple tables for performing surgical procedures and they work without electrical power.
2 Operational Requirements	
2.1	OT Table is required for general surgery and should have X-Ray translucent tops.
3 Technical Specifications	
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	
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 f. X-ray cassette tray g. Kidney bridge h. Patient Restraint Strap i. Accessories for operating in prone position j. Optional accessories for endourology work

5 Environmental factors	
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 -40deg C and relative humidity of 15-90%
6 Standards & Safety	
6.1	Should be US FDA , CE, UL or BIS approved product
6.2	Manufacturer and supplier should be ISO certfied for quality standards.
6.3	International Safety standards like IEC 60601-2-46 or equivalent if applicable
7 Training	
7.1	Comprehensive training for staff of user department and support services till familiarity with the system.
8 Warranty & Service	
8.1	Comprehensive warranty for 2 years.

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.

Item No. 85

SPECIFICATIONS OF OPERATING THEATRE LIGHT: MOBILE

1 Description of Function	
1.1	Mobile operating light is required for illuminating the operating field in an emergency environment and the system can be moved from place to place.
2 Operational Requirements	
2.1	State of the art system with shadow less light
3 Technical Specifications	
3.1	a. Mobile light on lockable castors b. Should be LED based microprocessor control technology c. Light output 1,00,000 Lux or more d. Colour temperature 4500K or better e. Colour Rendering Index (CRI) 95 % f. Sterilizable focusing handle g. Should withstand wide voltage fluctuation h. Should have intensity control from 40-100%
3.2	Emergency Power Unit having in-built CVT with automatic change over from Mains to Battery mode in the event of power failure to provide 60 minutes back up
4 System Configuration Accessories, spares and consumables	
4.1	System as specified
4.2	The rates for all the accessories should be quoted individually and separately
5 Environmental factors	
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	
6.1	Power input : 220-240V/ 50 Hz AC Single phase fitted with appropriate Indian plugs and sockets.
7 Standards & Safety	
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 General Requirements (or equivalent BIS Standard
7.4	Shall meet internationally recognised standard for Electro Magnetic Compatibility (EMC) for electromedical equipment; IEC-60601-1-2 ;latest edition Or Equivalent BIS) or should comply with 89/366/EEC: EMC-

	directive as amended
7.5	Certified to be compliant with IEC 60601-2-41: Particular requirements for the safety of Operation Theatre Light or equivalent if applicable

8 Training

8.1	Comprehensive training for staff of user department and support services till familiarity with the system.

9 Warranty & Service

9.1	Comprehensive warranty for 2 years.
9.2	Percentage of uptime guarantee of the equipment during warranty period for which commitment is to be given must be specified with acceptance of applicable penalty clauses in case of failure to do so.
9.3	After sales service must be provided in the city of installation. In situations requiring service/repair of the unit outside the city of installation, the expenditure on account of this will have to be borne by the supplier

10 Documentation

10.1	Product Literature in original along with that of accessories and indigenous components if any. Photocopies/computer generated copies are not acceptable
10.2	Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature/authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature.
10.3	Certificate of compliance with standards and approvals stated above
10.4	Certificate of manufacturer/principal regarding authorisation of service facility provided by the supplier
10.5	List of Equipment available in the Service Centre for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
10.6	List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing.
10.7	Terms and conditions of warranty and CMC including schedules of visit by service personnel with check list of services to be carried out
10.8	Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book.
10.9	List of users of quoted model with performance certificate from major institutions

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.

Item No. 86

ANESTHESIA WORK STATION

A system integrating anaesthetic gases flow delivery vaporization, monitoring and ventilation

1. Anesthesia machine constructed from welded tubular / epoxy powder painted steel. Stainless steel top and 1 no. lockable drawers and electrical outlet to be provided. Should have large castor wheel with foot brake. Gas specific, high pressure forged brass gas blocks with integrated pin indexed yoke for oxygen and nitrous oxide with long leaf metal diaphragm with non interchangeable gas supply inlet (Pipeline connection) for oxygen, N2O and air with color coded HP antistatic tubes.

2. Separate colour coded large gauges to indicate cylinder and pipeline pressure of oxygen, nitrous oxide and C air.

3. Having pneumatic/ mechanical hypoxic guard incorporating nominal basal flow of atleast 100ml for minimal flow anaesthetic techniques with system on / off switch

4. Having reservoir based audible oxygen failure alarm of at least 7 seconds.

5. Dual cascaded flow meter for oxygen, nitrous oxide and single for Compressor Air accurately calibrated with an accuracy of + 2.5 % and range of at least 10 ltr./min.

6. Emergency oxygen flow of at least 35 ltr / min with non locakale push button to be provided.

7. Should have selected twin vaporizer manifold with automatic interlocking facility

8. Having 3 latest vaporizers for halothane sevoflurane and isoflurance all should be temperature, pressure and flow compensated, with key filling arrangement and should be quick mountable .

   The vaporisers should be from the same manufacturer and should require no calibration in its life time to have smooth service backup

9. Agency capacity should be minimum 225 ml of free volatile anesthetic agent.

10. Should be integrally fitted with more than 1.5 kg capacity reversible canister, Single or double chamber type of CO2 absorber system having provision to bypass. Absorber system through a switch and ventilate with bag.

11. All sensor connection shall be internal to help prevent disconnection.

12. Electrically operated pneumatically/electrically driven integrated anesthesia ventilator, bag in bottle type with volume control with pressure limited and integrated PEEP is a must.

13. Ventilator should automatically compensate for fresh gas by adjusting fresh gas flows for changes in fresh gas flow, small system leak changing lung compliance or compression losses.

14. The ventilator should have bellows and be integrally mounted to absorber system. No change of bellows should be required for different patients.

15. Should have large LCD display of atleast 10'' for patient data like, TV, MV frequency 02 conc., P Mix. P Mean and air way bar graph along with set data simultaneously Pressure vol/flow vs time waveform should be present.

16. The display screen should be mounted in alarm for easy viewing
17. Facility to change I:E Ratio should be provided.
18. Alarming setting should be available for low and high and tidal volume, minute volume airway pressure and apnea.

19. The ventilator to have at least 60 minutes battery back up

20. The anaesthesia system should have a integrated passive scavenging system with pressure relief valve.
21. The anesthesia machine should have monitoring facility of following parameter in a suitable single monitor :

22. Monitor should be with multi-parameter module with minimum 15 inches colour TFT display with 8 channels. (Touch is optional). Should be US FDA or CE approved

23. The monitor should not require any, lengthy start-up procedure or calibration. It should be ready to monitor as soon as on / off switch is pressed.

24. Should have 24 hours graphical and numerical trend with split screen facility of all parameters with at least 15 critical alarms summary.

25. Monitor to have ventilation, haemodynamic and oxygenation calculation with drug calculator package

26. Should be able to monitor and display all parameters in single screen.

ECG

5 Lead ECG with simultaneous display of 3 lead with ST measurement. Waveform frequency response should be from 0.5 to 2.5 Hz. Arrythmia detection facility should be provided.

RESPIRATION

1. Range should be 6 to 60 BPM with waveform should have alarm for apnea and high and low alarm limit for respiratory ate.
2. Monitor shall incorporate two temperature channel ranging from 20.0 to 45 C with an accuracy of atleast + 0.1 and resolution of 0.1 C.

NIBP & IBP

1. Should be measured through oscillometric principle with automatic recognition between adult / infant numeric display should show systolic, diastolic and mean pressure values

6. Should have two IBP Channels with suitable compatible accessories.

7. Pulse Oximetry

1. Should be measured through Anti motion and low flow technology.
2. Waveform display should show diagnostic plethysmograph in user adjustable scale.

CO2

1. Should be measured through side stream infrared absorption technique
2. Measurement range should be atleast 0 – 10%
3. Breath by breath capnograph display
4. Numeric display of inspired and end tidal CO2

Patient Oxygen

1. Should be measured through differential paramagnetic sensor or fuel cell technology (to be supplied for 5 years).
2. Measurement range should be at least 0 – 100%
3. Breath by breath oxygram display
4. Numeric display of inspired and expired oxygen.

Agent Monitoring

Agent monitoring for nitrous oxide, halothane, isoflurane and sevoflurane should be provided.

Should have following accessories:

1. 5 Lead ECG clip with cable (4 in No.) [Central Cable as well as ECG clip cable, in 2 parts]
2. central and skin temperature probes (2 each)
3. adult and paediatric SPO2 sensor with cable (4 each),
4. adult , pediatric & neonatal cuffs with hose (4 each),
5. anaesthesia gas / spirometry accessory kit (4 each).
6. IBP reusable transducers with cable (4 in No.)
7. Disposable domes with complete kit (100 in No.)
8. Etco2 sampling kits (20 in No.)
9. Disposable anaesthesia breathing circuits.(20 each)
10. Should have a battery backup of atleast 30 minutes

General Conditions

1. Should enclose compliance statement. The bidder should enclose the original product data sheet, brochure and compliance sheet. 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.
2. Should be US- FDA approved product
3. Should have service facility in Delhi.
4. Must submit printed catalogue and technical data sheet to substantiate the offer.
5. All imported components like machine monitor and ventilator should be from one manufacturer/ principal.

6. Any misinformation regarding the specification of the equipment offered would mean outright technical rejection.
7. Demonstration of the equipment is mandatory.
8. Warranty : 98% uptime warranty period of the complete system with extension of the warranty period by double the downtime period.
9. Comprehensive Maintenance Contract:

(a) For the main equipment along with accessories for five years

(b) With labour and spares after satisfactory completion of warranty period.

(c) The cost of CMC should be quoted along with the taxes as applicable, on the date of tender opening.

(d) Cost of CMC will be added for ranking purposes as per bid document

(e) The payment of CMC will be made as per bid document.

(f) There will be 98% uptime warranty during CMC period for complete system with extension of CMC period by double the downtime period.

10. Back to back warranty to be given by supplier from principal/manufacturer of the equipments to supply spares for a minimum of 10 years.

11. The bidder should enclose the original product data sheet, brochure and compliance sheet, 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.

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.

Item No. 87

EQUIPMENT SPECIFICATIONS FOR DEFIBRILLATOR WITH MONITOR

1	**Description of Function**		
1.1	Defibrillator is required for reviving the heart functions by providing selected quantum of electrical shocks with facility for monitoring vital parameters.		
2	**Operational Requirements**		
2.1	Defibrillator should be Bi- Phasic, light weight (< 8kg) and latest model		
2.2	Should monitor vital parameters (ECG, NIBP, HR, SPO2 and EtCO2[optional] and display them		
2.3	Should print the ECG on thermal recorders.		
2.4	Should work on Manual and Automated external defibrillation (AED) mode. Manual selection maximum upto 360 J.		
2.5	Should be capable of doing synchronised & asynchronised cardioversion		
2.6	Can be operated from mains as well as battery		
2.7	Should have defibrillator testing facility (?)		
2.8	Demonstration of the equipment is essential.		
3	**Technical Specifications**		
3.1	Should be a Low Energy Biphasic defibrillator monitor with Recorder, within a maximum energy of 200 Joules		
3.2	Should monitor ECG through paddles, pads and monitoring electrodes and Defibrillate through pads and paddles.Should have Automatic Lead switching to see patient ECG through paddles or leads		
3.3	Should measure and compensate for chest impedance for a range of 25 to 1500hms		
3.4	Should have a built in 50mm strip printer/ thermal recorder		
3.5	Should have charging time of less than 5 seconds for maximum energy. Charging indicator should be there.		
3.6	Should have Display- TFT coloured LCD at least 8” diagonal for viewing messages and ECG waveform of 5 seconds		
3.7	Should have external paddles with paddles contact indicator – for good paddle contact. Both Adult and pediatric paddles should be available.		
3.8	Should have event summary facility for recording and printing at least 250 events and 50 waveforms.		

3.9	Should have a battery capable of usage for at least 120 minutes and/or 30 discharges.		
3.10	Should be capable of printing Reports on Event summary, configuration, self test, battery capacity etc		
3.11	Should have facility for self test/check before usage and set up function		
3.12	Should have SP02 and NIBP integrated facility, EtCO2 (optional)		
3.13	Should be capable of delivering energy in increments of 1-2 joules up to 10J and increments 5-10 J till 50 and up to a maximum of 50J thereafter.		
3.14	Should have user friendly 1,2,3 color coded operation.		

4 System Configuration Accessories, spares and consumables

4.1	Defibrillator -01		
4.2	Paddles Adult (pair) -01		
4.3	Paddles –Paediatrics(pair) -01		
4.4	Patient cable -02		
4.5	ECG Rolls -50		
4.6	Disposable pads-10 nos.		
4.7	NIBP Cuff Adult - 02 NIBP Cuff Paediatrics- 02 NIBP Cuff Infants- 02		
4.8	SPO2 Finger Probe-Adult -02 SPO2 Ear Probe - -02		
4.9	Complete set of ECG Leads- 02		

5 Environmental factors

5.1	The unit shall be capable of operating continuously in ambient temperature of 0 – 50 °C and relative humidity of 15-90%		
5.2	The unit shall be capable of being stored continuously in ambient temperature of -20 – 60 °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.		

6 Power Supply

6.1	Power input to be 220-240VAC, 50Hz		
6.2	Resettable overcurrent breaker shall be fitted for protection		

7 Standards, Safety and Training

7.1	US FDA / European CE approved.		
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	Drop Test-Withstands 1 meter drop to any edge, corner or surface.		
7.4	Should conform to international test protocols on exposure to shock forces and to vibration forces. The standard should be documented.		
7.5	Should meet IEC 529 Level-2 (IP2X) for enclosure protection solid foreign object ingress.		
7.6	Should meet IEC 529 Level 3 (IP3X)(spraying water) for enclosure protection , water ingress.		
7.7	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.		
7.8	Warranty as per bid document.		

8 Documentation

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 from factory.		
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 maintenance support as per manufacturer documentation in service / technical manual.		
8.7	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.		
8.8	Must submit user list and performance report within last 5 years from major hospitals.		

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.

Item No. 88

SPECIFICATIONS FOR ELECTRO SURGICAL UNIT (ESU)

1 Description of Function	
1.1	ESUs are used for surgical cutting and for controlling bleeding by causing coagulation (hemostasis) at the surgical site. They deliver high-frequency electrical current through an active electrode tip, causing desiccation, vaporization, or charring by resistive heating in the target tissue.
2 Operational Requirements	
2.1	Microprocessor/Microcontroller technology
3 Technical Specifications	
3.1	Compatible with Argon Plasma Coagulator
3.2	Should provide monopolar output for cut, coagulation (fulguration & spray) & blend
3.3	Should have bipolar cut and coagulation in multiple levels with automatic bipolar coagulation.
3.4	Activation by foot switch and hand switch
3.5	Activation of bipolar by foot switch and automatic start/stop system
3.6	Auto diagnosis on switching on and during working to continuously monitor all parameters
3.7	Automatic stoppage of output in case of malfunction with acoustic and visual signal with display of error code.
3.8	Output powers adjustable automatically or manually from the control panel.
3.9	Programmable memory for output settings
3.10	Simultaneous access to mono and bipolar by 2 or more users
3.11	Should be usable with laparoscopic monopolar and bipolar instruments, for which programmes and accessories must be available
3.12	System for neutral plate safety by continuous monitoring of contact quality and connection
3.13	System for monitoring and control of leakage current
3.14	Frequency Ieakage on the patient should be less than 10 micro Amp.
4 System Configuration Accessories, spares and consumables	
4.1	System as specified
4.2	The accessories should include (a) trolley.

	(b) mains cable with power plug for standard Indian sockets, (c) foot switches for different outputs, (d) reusable and single use neutral electrode for adults and children along with cable for neutral electrode and fixation device wherever required, (e) sterilizable and disposable electrode handle with and without finger switch with cable for electrode handle, (f) set of electrodes (long and short) with electrode container with holder, (g) tip cleaner, (h) bipolar forceps with cable, (i) cable for connecting to standard mono polar and bipolar laparoscopic instruments, (j) dedicated instruments for open and laparoscopic monopolar and bipolar use. *The accessories and their quantity will be chosen from among the ones listed above as well as those listed at 4.4 depending upon actual requirement*.
4.3	The system should be capable of accepting standard accessories of major international brands, which should be specified and for which suitable adaptor, if required, is to be quoted
4.4	The codes and rates of all possible individual accessories should be quoted separately with clear mention of period of validity of rates
5 Environmental Factors	
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 -40deg C and relative humidity of 15-90%
6 Power Supply	
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian power-plug
6.2	Electronic Voltage corrector/stabilizer of appropriate ratings meeting BIS Standards/Specifications.(Input 160-260 V and output 220-240 V and 50 Hz)
7 Standards & Safety	
7.1	Should be US FDA , CE, UL or BIS approved product.
7.2	Manufacturer and Supplier should have ISO certification for quality standards.
7.3	IEC 60101-1 Medical Electrical Equipment, General Requirements for safety
7.4	Shall meet internationally recognised standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2 :latest edition Or Equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended
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: latest edition
8 Training	
8.1	Comprehensive training for staff of user department and support services till familiarity with the system.

9 Warranty & Service	
9.1	Comprehensive warranty for 2 years and 3 years Comprehensive Maintenance Service after warranty. The cost of CMC must be quoted in the price bid.
9.2	Percentage of uptime guarantee of the equipment during warranty and CMC period for which commitment is to be given must be specified with acceptance of applicable penalty clauses in case of failure to do so.
9.3	After sales service must be provided in the city of installation. In situations requiring service/repair of the unit outside the city of installation, the expenditure on account of this will have to be borne by the supplier

10 Documentation	
10.1	Product Literature in original along with that of accessories and indigenous components if any. Photocopies/computer generated copies are not acceptable
10.2	Statement of compliance with tender specifications with clear and unambiguous links to relevant portions of product literature/authentic document, which should be highlighted. Alternatives provided for noncompliant specifications with justification must be described in detail with supporting literature.
10.3	Certificate of compliance with standards and approvals stated above
10.4	Certificate of manufacturer/principal regarding authorisation of service facility provided by the supplier
10.5	List of Equipment available in the Service Centre for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.
10.6	List of important spare parts and accessories, which are required for maintenance and repair, with their part number and costing.
10.7	Terms and conditions of warranty and CMC including schedules of visit by service personnel with check list of services to be carried out
10.8	Commitment for supply of log book with check list for daily, weekly, monthly and quarterly preventive maintenance with contact details of service personnel along with the equipment. The job description of the hospital technician and company service engineer should be clearly spelt out in the log book.
10.9	List of users of quoted model with performance certificate from major hospitals

NOTE:

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Item No. 89

Equipment Specifications for Harmonic Scalpel

1 Description of Function

1.1 Ultrasound is the basis for an efficient surgical instrument: the HARMONIC SCALPEL cuts and coagulates by using lower temperatures than those used by electrosurgery or lasers. HARMONIC 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

2.1 The system is required for laparoscopic & other Surgerical Procedures.

3 Technical Specifications

3.1 1.Ultrasonic generator generating ultrasound frequency in between 45-60 KHz.
2. Hand-piece with in-built transducer & silicon cable
3. Hand-switch activation adopter for blade & hook probe
4. Cart to house the generator and accessories
5. Single/ Dual foot-switch attachment
6. Stand-by mode for better safety
7. System diagnostics and trouble shooting guide
8. Warning system for malfunctioning cable, probe etc
9. Power entry filters to suppress electromagnetic disturbances to monitors
10. It should have a vibration range of 50-100 micrometer.

4 System Configuration Accessories, spares and consumables

4.1 B) Accessories 1. Foot-switch with max and min pedals and cable.
2. 5 mm blade system adopter
3. Hand switch adopter or equivalent like-wave guide
4.Open surgery Instruments:

a. Coagulation shears- 5mm/10mm dia, 20cm long or more
b. Short curved coagulation shears-5mm dia,14cm long
c. Dissecting hooks,5mm dia,10cm long
d. Hand activated coagulation shears with clicker-5mm dia,curved mode 20cm long.

5. Endoscopic surgery Instruments:

a. Dissecting hook, 5mm,32cm long
b. Curved blade,5mm dia,32cm long
c. Laparoscopic coagulating shears 5mm dia, curved mode,36cm long.
d. Laparoscopic hand activated shears, 5mm dia, curved mode, 36cm long
e. Laparoscopic coagulating shears, 5mm dia, curved mode, 45cm long
f. Laparoscopic hand activated coagulating shears with clicker-5mm dia curved mode,36cm long

C) Probes:
1. It should have both 5mm instruments
2. It should have the following types of shears for open and laparoscopic surgery
   a. 10mm coagulating shear capable of working in 3 modes flat, blunt and sharp
   b. 5mm laparoscopic curved coagulating shears,360 deg rotable, capable of sealing blood vessels upto 5mm diameter with clicker and integrated hand control to enable precise operation of system by hand.
3.All hand pieces & Scissors should be steam with ETO/Plasma sterilizer

5 Environmental factors

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

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

7.1 The generator must be CF isolated applied device and defibrillator protection must be available.
7.2 Should be FDA/CE or BIS approved product
7.3 Manufacturer should have ISO certification for quality standards.
7.4Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450
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

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.Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.

NOTE:

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Item No. 90

INSTRUMENTS SETS

General Surgery Instrument Set

A. Adult

Artery Forceps

Mosquito forceps	
Straight 150m	6
200m	6
Curved 150m	6
200m	6

Tissue Forceps

- Kochers Straight 2
- Allis's 2
- Babcock's 2
- Lane's 2
- Sponge holding forceps 240cm 2

Dissecting Forceps

Non tooth 150mm	2
200mm	2
Toothed 150mm	2
200 mm	2

Retractors

Langenbeck	1
Czenry	1
Morison	Set of 3-1 Nos.
Deaver's (Different blades width)	Set of 3-1 Nos.
Park's Annal retractor	2 Nos.

Scissors

MAYO's straight 200 mm	1
Curved	1
Stich Removal Scissor	1
Needle Holder (20 & 25 cm)	1 each
B. P. handle (No.3 & 4)	1 each

Intestinal Clamps

Crushing (Payer's)	1 set
Non Crushing (Doyen's)	1 set
Right angled artery clamps (20 & 25 cm)	2 each
Cholecystecomy Clamp	2 Nos.
Desjardin's forceps	
Scoop	1 No.

Gastrectomy

Crushng (Payer's Clamp)	2 No.
Non Cushing Stomach Clamp	2 No.

Kidney (Genito Urinary)

Pedical Clamp (Double angled)	1 No.
Stone holders forceps (Randall's)	1 No.
Gilverny retractor's	1 No.
Urethral dilators (Rigid)	1 set
Cyso Lithotomy Forcep	1 No.

CHEST

Finochete retractor	1	
Periosteum elevator – Farabeuf		01 Set
Doyen's Periosteum elevators (L&R+)		02
Bone Cutting double action		02
Rib approximatreu (Bailey's)		02
Trocar & Cannula (33,27,23FC)		01 Each

B. General Surgery Instrument Set Pediatric

Artery Forceps

Mosquito forceps

Straight (5.5 Inches)	6 Nos.
Curved (5.5 Inches)	6 Nos.

Tissue Forceps

- Kochers 4.5 inches 2
- Allis's 4.5 inches 2
- Babcock's 4.5 inches 2
- Dissection Forcep serrated 1 x 2 teeth 4.5 inche 2

Retractors

Czenry	2 Nos.
Finger Retarctor 7 inches	2 Nos.

Hook Retractor

Double Hook 6 inches	2 Nos.
Single Hook 6 inches	2 Nos.
Abdominal (balfour) Trivalve	1 Nos.

Scissors

MAYO's straight 5.5 Inches	1
Curved (5.5 inches)	1
Stich Removal Scissor	1
Metzanbaum 6 inches	2 nos.
Needle Holder (20 & 25 cm) 5.5 inches	1 each
P. Knife Handle (No. 3 & 4)	2
Cheatle Forcep	1 Nos.
Sponge holding forceps 5.5 inches	2 Nos.
Towel Clip Holder	1 Nos.

CHEST

Periosteum elevator – Children size Right & left	2 each
Thoracic retractor – Children Size	2 Nos.
Rib approximatreu (Bailey's)	2 Nos.

Protoscope – Child size 7.5 cm x 3/8 inches dia.

THORACTOMY SET - ONE

SI. No.	Name of Instrument	Quantity
1.	Chest Wall retractor Large	I
2.	Chest Wall retractor Medium	I
3.	Chest Wall retractor Small	1
4.	Kelley Forceps - 20cm	6
5.	Curved Artery Forceps -16cm	20
6.	Mosquito Artery Forceps	12
7.	Right Angled Forceps -14 cm	2
8.	Right Angled Forceps -18 cm	2
9.	Right Angled Forceps -23cm	2
10.	Semb dissecting Forceps	1 each
11.	Lung retractors – 26 cm	4
12.	Lung retractors – 36 cm	2
13.	Duvall Forceps	4
14.	Metzenbaum Scissor	1
15.	Metzenbaum Scissor	2
16.	Mayo Scissors curved	3
17,	Oscillating Electric Sternal Saw	1
18.	Lebsche Knife	1
19.	Periosteal elevator – Farebeuf Straight	2
20.	Periosteal elevator – Farebeuf Curved	2
21.	Rib Shears – I 7 cm and 23cem	1 each
22;	Rib raspatory – Right	2
23.	Rib raspatory – Left	2
24.	Stapling Gun Stainless Steel	1 each
25.	Linear Stapler and Cutter	1 each
26.	Needle Holder 20 cm and 24 cm	2 each
27.	Needle Driver for Sternal Wire	1
28.	Wire cutter and twister	1 each
29	Sternal retractor	I
30	Dissecting Forceps	2each

31.	Dissecting Forceps	2 each

32.	Arotic Clamp - Long angled	1
33.	Cooley's 12.5cms, 12.5,30mm	1
34.	Buldog (4 Assorted Sizes)	1
35.	Sternal and Rib punch	1
36.	Vascular Clamps, Satinsky (27cms & 16.8 Long)	2 eactl set
37.	Bronchus Clamp, Different Sizes	
38.	Sponge Holding Forceps	6
39.	8P Handle Size 3 & 4	2 each
40.	Rib approximeter (Bailey)	2
41.	Pot's Scissor Angled 8"	2
42.	Mixter Shorace 9"	2

D

FOUR SUCH SET REQUIRED

TRACHEOSTOMY

Sl.No.	Name of Instrument	Quantity
1.	Mayo Scissors curved	1
2.	Needle Holder - 20 cm	2
3.	Dissecting Forceps	2
4.	Dissecting Forceps	2
5.	Metzenbaum Scissor	2
6.	Tracheal Dilators	1
7.	Curved artery forcesp - 16 cm	6
8.	Tracheal retractors	1 each
9.	Wound retractors	2
10.	BP Handle	2

VASCULAR SET - MAIN (TWO SUCH SET REQUIRED)

Sl.No.	Name of Instrument	Quantity
1.	Mosquito Artery Forceps Halsted-Mosquito Artery forceps -14cm(5 ½') long German Stainless Steel (GSS) Delicate pattern Straight	
2.	Mosquito Artery Forceps Halsted-Mosquito Artery forceps -14cm(5 ½') long German Stainless Steel (GSS) Delicate pattern Curved	
3.	Artery Forceps – Spencer Wells type German Stainless Steel-16 cm (6 ¼") long Straight	
4.	Artery Forceps – Spencer Wells type German Stainless Steel-16 cm (6 ¼") long Curved	
5.	Artery Forceps – Halsted (Adson) type German Stainless Steel-18cm (7 1/8") long Straight	
6.	Artery Forceps – Halsted (Adson) type German Stainless Steel-18cm (7 1/8") long Curved	
7.	Kelly's clamp 20 cm (7 1/8") long Curved	
8.	Right Angled Clamps – Mixter type German Stainless Steel Very delicate type – 14 cm	
9.	Right Angled Clamps – Mixter type German Stainless Steel Very delicate type – 23 cm	
10.	Right Angled Clamps – Lahey's type German Stainless Steel – 19 cm (7 ½") long	
11.	Right Angled Clamps – Lahey's type German Stainless Steel – 23 cm (9") long	
12.	Vein Hook German Stainless Steel 17 cm long (6 ¼"), 7mm deep	
13.	Nerve Hook Cushing nerve hook German Stainless Steel Ball tip, 19 cm (7 ½") long, 6 mm tip	
14.	Suction tips	

	18 cm long (7 ½"), angled One piece, Thumb plate, Angular 8 F & 10 F	
15.	Tissue Forceps General Inserts of solid tungsten carbide with fine cross serrations for atraumatic tissue grasping German stainless steel- Atraumatic tissue forceps	
16.	Tissue Forceps – Pott's Smith Straight -15cm (6") long	
17.	Tissue Forceps – Pott's Smith Straight -18cm (7 ½") long	
18.	Adsons Tissue Forceps – 12 cm (4 ¾") long	
19.	Adsons Tissue Forcesps Straight (4 ¾")long	
20.	DeBakeys Atraumatic Forceps – 15 cm (6") long	
21.	DeBakeys Atraumatic Forceps – 19 cm (7 ¾") long	
22.	DeBakeys Atraumatic Forceps – 24 cm (9 ½")) long	
23.	Angled Jaws - DeBakeys Atraumatic Forceps – 15 cm (6") long	
24.	Angled Jaws - DeBakeys Atraumatic Forceps – 19.5 cm (7 3/4:") long	
25.	Tissue Forceps – Cushing (taylor)Bayonet Staped 18.5 cm (7 ¼") long	
26.	Scissors Tungesten carbibe inserts in the cutting edge German stainless steel Precision ground for smooth cutting action	
27.	Metzenbaurn Scissors Curved cutting ; edge Blunt tipped – Length 14 cm (5 ½') long	
28.	Metzenbaurn Scissors Curved cutting ; edge Blunt tipped – Length 20 cm (8") long	
29	Metzenbaurn Scissors Curved cutting ; edge Blunt tipped – Length 26 cm (10 ¼") long	
30.	Reynolds Scissors Five rounded points, delicate pattern, Curved, blunt tipped -18cm (7 1/8") long	
31.	Iris Scissors	

	Curved, sharp tipped, angled to side – 11.5 cm long	
32.	Mayo Noble – Scissors Straight – 17 cm (6 ¾") long	
33.	Mayo Noble – Scissors Curved – 20 cm	
34.	DeBakey vascular scissors Rounded blades with semi-solid tips Angled to side, Semiblunt tips- 45^0 angle 16 cm (6 ¼") long	
35.	DeBakey vascular scissors Rounded blades with semi-solid tips Angled to side, Semiblunt tips- 45^0 angle 23 cm (9") long	
36.	DeBakey vascular scissors Rounded blades with semi-solid tips Angled to side, Semiblunt tips- 60^0 angle 16 cm (6 ¼") long	
37.	Needle Holder Inserts of solid tungsten carbide at tips German Stainless steel Beleved edges to present catching of suture material Fine sereation 0.4-0.5 mm For delicate /small needle/ suture size German Stainless Steel	
38.	Wright (Derf) type – Needle holder 12.5 cm (5") long	
39.	Crile – Wood DeBakey type of needle holders -15cm (6") long	
40.	Crile – Wood DeBakey type of needle holders -18cm long	
41.	Crile – Wood DeBakey type of needle holders -25cm long	
42.	Crile – Wood DeBakey type of needle holders -30cm long	
43.	Bozemann Wertheim type S-Shaped; 24 cm (9 ½") long	
44.	Satinsky Clamps	

	German Stainless Steel Cross sereated jaws 27 cm long (10 ¾"), 45 mm long jaws	
45.	DeBakey Satinsky German Stainless Steel Cross serrated jaws – 23.5 cm long	
46.	Baby Satinsky German Stainless Steel 16cm long (6 ¼')	
47.	DeBakey Atramautic vascular clamps German stainless steel Ring handles 12 cm S-shaped, 45mm long jaws	
48.	Cooley's vascular clamps German Stainless Steel 12.5 cm (5") long 12.6 30" Angled, jaws 30 mm long	
49.	Debakey Multipurpose vascular clamps German Stainless Steel Angled on flat, 30^0 angle 16 cm long, (16 ¼") jaws 30mm long	
50.	Debakey Multipurpose vascular clamps German Stainless Steel Angled on flat, 30^0 angle 22 cmlong (8 ¾")	
51.	Debakey Multipurpose vascular clamps German Stainless Steel Angled on flat, 60^0 angle 16 cm long (6 ¼")	
52.	Debakey Multipurpose vascular clamps	

German Stainless steel
Angled on flat 60° angle
22cm long (8¾'')

General Surgery

2. **Minor General Surgical Instruments Set**	**Qty.**
SS Tray with Lid –Length 350mm, Width 250mm, Height 50 mm	1 No.
Kidney Tray –Length 200 mm, Width 90mm, height 40mm	1 No.
Gallipot 1 nos.)$2_{1/2}$" Diameter	1 No
Towel Clips (Mayo's/Bcakhaus) length 10 cms	4 Nos.
Allis Forcep 6"	2 Nos.
Needle Holder 6" ans 8" (Mayos Hegar)	1 each
Scalpel Handle No.4	1 No.
Artery Forceps Mosquito-6"	6Nos.
Artery Forceps (Spencerwell"s/crile)-6"	6 Nos.
Kockers artery Forceps Straight-6"	2 No.
Forceps (Toothed and Planin)	2 each
Czemy Retractor	2 Nos.
Langenbek Retractor Blade Size 1 ¾' x ½"	2 Nos.
Scissor Dissecting (Metzenbaum)-7"	2 Nos.
Scissor Suture Cutting Mayos -150mm	1 No.
Sponge Holding Forceps -240mm	2 Nos.

3. **Venesection Set .**	
SS Tray with Lid-Length 250mm, width 200mm, Height 50mm	1
Gallipots (10 cm Diameter)	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Sponge Holding Mosquito Forceps – Length 240 mm	1
Artery Forcep Mosquito Curved – Length 150mm	6
Retractor (Kilner/Sengreen) –Length 150mm	2
Needle Holder (15 cm) Hegar's	1
Scalpel Handle No.3	1
Dissection Forcep – 150mm with Tooth	1
Dissection Forcep-150mm without Tooth	1

Towel Clips – Mayos/Backhaus –length 10cms	4
Mayos Scissor – Length 150mm	1
Aneurism Needle – Symes pattern-Length 180mm	1

4. **Incision & Drainage**

Tray SS with Lid –Length 250mm Width 200mm, Height 50mm	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Scalpel Handle No.3	1
Sinus Forcep – 180mm	1
Artery Forcep-150mm	6
Sponge Holding Forceps – Length 240mm	2
Towel Clips –Mayos/Backhaus- length 10cms	4
Currete	1
Galliots – Diameter 10 cms.	1

5. **Suture Removal Set**

SS Tray with lid –Length 250mm, Width 200mm, Height 50mm	1
Tooth Forceps Dissecting -150mm	2
Galliots (10cms)	1
Artery Fprce {straogit6"}	
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Stich Removal Scissors	2
Towel Clips (Mayos / Backhaus) –Length 10 cms	2
Sponge Holding Forceps – 240mm	1

6. **Suture Set**

SS Tray with lid –Length 250mm, Width 200mm, Height 50mm	1
Kidney Tray (Length 150mm, Width 70mm, Height 30mm)	1
Galliots (10cms)	1
Scalpel Handle No.4	1
Sponge Holding Forceps –8"	1

Tooth Forceps	1
Needle (1/2 Circel, Cutting) (Size 20mm, 30mm)	1
Scissor Mayos – 150mm	1
Towel clip (Mayos/Back haus) – Length 10 cms	1
Needle Holder (Hegar's) -150mm	1
Artery Forceps (Mosquito)- 150mm	6

7. **Catheterisation Set**

SS Tray with lid –Length 300mm, Width 200mm, Height 50mm	1
Cathers Foleys 16, 18, 20	1each
Bladder Syringe 150cc, Disposable Syringe	1
Metal catheter Sizes 1-12	1 Set
Introducer for Foleys catheter	1
Sponge Holding Forceps – 240mm	2
Towel Clips Mayos/Backhaus –Length 10 cms	4
Sponge Holding Forceps – 240mm	1
Catheter Tray Stainless Steel Over all Size -17x4 ¾' x2 ¼"	1

8. **Scissors Set**

Mayos Straight Scissors 6 ½" & 7 ½"	1,1
Mayos Straight Curved 6 ½" & 7 ½"	1,1
Metzenbaum Scissors 8" & 9 ½"	2,2
Mclachilan Scissors 6 ½'	2
Stich Removal Scissors (Mayos Clinic Stich Scissors)	4
Instruments Tray Stainless Steel with Lid –Length 300mm, width250mm,	1
Height 50mm.	1

1. GENERAL ORTHOPAEDIC INSTRUMENTS

QTY.

- Langenback Retractors - 10 each of following

  i. Mini Langenback Retractor 10mm x 6mm 1 each
  ii. Mini Langenback Retractor 22mm x 8mm
  iii. Kocher Langenback Retractor 40 x 11 mm x 21 cm
  iv. Langenback Retractor 30 x 11

- Hohmann' s Retractors

  i. 8mm Blade 1 each
  ii. 10mm Blade
  iii. 17mmBlade (15-20mm)
  iv. 43mm Blade (40-45mm)
  v. 25mm Blade (20-25mm)

- BP knife handles

  No.3 size 2
  No.4 size 2
  No 7 size 2

- Bone levers

  Small size 2
  Medium size 2

- Hammer

  i. Collin Mallet 2
  ii. Nylon Faced Hammer 20 Nos. 2

- Bone holding reduction forceps with locking device

  Small for forearm bones 2
  Large for leg bones 2

- Bone Holding Forceps

  Lane's - Small, Medium, large size one each 1 set

- Bone forceps with wire passer (two blunt blades With hole

  For passing K wire to fix phalanx fractures) 4

- Wire holding forceps 2

- Wire holding pliers 2
  Small 2
  Large
- Wire bending pliers – 2 each of blunt tip and sharp tip One all
- Bending Iron for 3.5 mm plates 5
- Bending Irons for 4.5 mm plates 5
- K wire traction set complete
  a) Each set should contain
     i) Kirschner stirrup of wire extension 5 nos.
     ii) K-wire double ended 200mm 10 nos.

  b) Each set should contain
     i) Gissane stirrup for wire extension 2 nos.
     ii) K-wire double ended 200mm 5 nos.

- Bohler's stirrups of assorted size 10
- Bachaus towel forceps 5" 16

- Skin Hooks
  Gillies for size 1 & 3 - 2 each 1 set

  Bone curette
  i. Volkman all size 1 each
  ii. Maartini curettes all size 2 sets.

A.O type damaged plating instruments with implant 2
Set complete 2 sets

Should consist of following

i) Small fragment instrument set (3.5mm) in autoclavable box 1 No.

ii) Small screw box

Contain the following:

Cortical screw 3.5mm	
10 mm	5 units
12 mm	5 units
14mm to 40mm	8 units each
Cancellous screws 4mm	
10mm to 50mm	2 units each
Screw holding forceps	1
Storage & sterilization case with tray	1 no

Box containing small plates.

DC plates small 4 hole	4 No.
DC Plates small 5 hold	8 No.
DC Plates small 6 hole	12 No.
DC Plates small 7 hole	8 No.
DC Plates small 8 hole	5 No.
Storage and sterilization Box	1 No.

- Femoral Nail Extractor set
- Long handled bone curette

Non serrated edge	2
Serrated edge	2

- Gigli Saw instruments Set

  Each set should contain

  i. Gigli saw handle 1 pair — 2
  ii. Gigle saw wires 100 nos.

- Patella reduction clamp — 2
- Patella wire passer — 2
- Ring cutter — 4
- K-wire cutter (Capacity 4mm) with

  Replaceable tungsten carbide blades with rubber jaws set should consist of

  i. K-wire cutter 28mm
  ii. Spare blades — 4 pairs with screws
  iii. Spare robber jaws — 4 pairs with screws
  iv. Allen keys — 4 nos.

- Stienmann pin cutter capacity up to 6mm — 10
- Bone curette double ended round / oval

  i. Small — 1
  ii. Medium — 1
  iii. Large — 1

- Loute wire tightener cum wire cutter — 1
- Wire bending cum cutter plier length 15cm — 1

- Osteotomes
  i. Straight 3/8'', ¾'' (inches) 2
  ii. Curved 3/8'', ¾'' (inches) 2

- Gouzes
  ST Thomas ¼'', 3/8'', ¾'' 1 each

- Chisel straight with Teflon handle 2 of each size
  7, 10, 15, 20mm 1 each

- Retractors
  i. Wullstein –weitlaner self – retaining retractor 3x3 teeth blunt length 13 cm 2
  ii. Weitlaner self –retaining retractor 3x4 teeth blunt Length 16.5 cm 2
  iii. Weitlaner self –retaining retractor 3x4 teeth blunt Length 26 cm 2
  iv. Adson Self retaining retractor 3x4 teeth blunt Length 26cm 2
  v. Gelpi self retaining retractor with balls, blunt Length 18cm. 2

- Elevators
  Farabeuf periosteal elevator, straight 13mm, length 15 cm 1
  Farabeuf periosteal elevator, curved 13mm length, 15 cm 1

- Jacobs Chuck with Handle
  Jacobs drill three jaw chuck with key, mix Dia 6.35 mm length 14 cm 5

- Screw driver 3.5mm screw 2
- Screw driver 4.5mm screw 2
- Manual Tourniquet set
  Should consist of the following
  1. Pump 1 No.
  2. Pressure regulator 1 No.
  3. Small medium and large size of cuffs 2 each

- Artery Forceps
  i. Mosquito forceps 5'' 12
  ii. Spencer well forceps 5'' 12

- Forceps 6'' 2
  i. Plain forceps 6'' 2
  ii. Toothed 6''

- Bone cutting forcep
  i. Liston straight 7'' 1
  ii. Liston double action 10-½'' 1
- Sponge holding forcep 25cm 4
- Tissue forceps (Kocker's)
  i. 5'' 2
  ii. 8'' 2

Lane forceps
i. 5'' 2
ii. 7½'' 2

Allis 6'' and 7½''
Scissor MAYO' straight 6'' 2

- Scissor dissecting 7'' 2

GYNECOLOGICAL - OBST

I. Normal Delivery Sets

S.No.	Item	Qty in each kit
1)	Steel basin IS 5522, 1992	1 No.
2)	Kidney Tray IS 3992	1 No.
3)	Artery Forceps IS : 3645	2 No.
4)	Needle Holder IS 7870	1 No.
5)	Sponge Holding Forceps IS 7735	2 No.
6)	Cord Clamp	2 No.
7)	Straight (Big) Artery Forceps IS 3643	2 No.
8)	Dissecting Forceps (Tooth) IS 3643	1 No.
9)	Dissecting Forceps (Non Tooth) IS 3643	1 No.
10)	*Scissors* (Mayo's) IS 9146	1 *No.*
11)	Scissors Cord Cutting IS 7117	1 No
12)	Scissors Cord Cutting IS 7103	1 No.
13)	Surgeon's (Operation) Cap	2 Nos.
14)	*Surgeon's Face* Mask	*2 Nos.*

23) Mo

IV. **M.T.P Set**

S.No.	Item	Qty in each kit
1)	Sponging Holding Forceps IS 7735	1 *No.*
2)	Sim's Speculum IS 6112	1 No.
3)	Anterior Vaginal Wall Retractor IS 5849	1 No.
4)	Ovum Forceps IS 6578	1 No
5)	Dissecting Forceps (Tooth) IS 3643	1 No.
6)	Dilators (Hegar's Pattern) IS 6584	1 Set
7)	Stainless Steel Bowl	1 No.
8)	Uterine Sound IS 5829	1 No.
9)	Vulsellum IS 6114	1 No.
10)	Curette (Double ended) sharp/blunt IS 6505	1 No
11)	Suction Machine IS 7080 (Part 2)	1 No.
12)	Karman's Cannulas (No.6, & & 8), IS 8313	4 Sets each

VI. **LSCS Set (Caesarian Set)**

S.No.	Item	Qty in each kit
1)	Sponge Holding Forceps IS 7735	4 Nos.
2)	Green Armytage (Forcep Caesarean) IS 7964	6 Nos.
3)	Curved Artery Forceps IS 3645	12 Nos.
4)	Straight Artery Forceps IS 3645	5 Nos
5)	Allis Tissue Forceps (small) IS 7388	6 Nos.
6)	Allis Forceps (big) IS 7388	5 Nos.
7)	Babcocks Tissue Forceps IS 8584	2 Nos.
8)	Toothed Forceps IS 3643	2 Nos.
9)	Toothed Forceps IS 3634	2 Nos.
10)	Needle Holder (Mayo's Heger) IS 7870	3 Nos.
11)	Kelly's Clamps	5 Nos.
12)	Suction Tip	1 No.
13)	Tissue Cutting Scissor	1 No.
14)	Knife Handle IS 3319	4 Nos.
15)	Needles, suture, round bodied, 3/8 circle, No. 12 packet of 6	2 Nos.
16)	Needles, % circle, taper point, size 6 packet of 6	2 Nos.
17)	Needles, suture, straight irregular point, 7 3 cms, packet of 6	2 Nos.
18)	Towel clips	8 Nos.
19)	Stainless Steel Bowl (18-20"Diameter)	3 Nos.
20)	Harrington Retractor	2 Nos.
21)	Doyen Retractor - Single Blade	2 Nos.
22)	Kidney Tray IS 3992	1 No.

24)	Copper Retractor	1 No.
25)	Self Retaining Abdominal Retractor	1 No.
26)	Suction Tube	1 No.
27)	Foetoscope (Pinard's Pattern) IS 6565	1 No.

V. Abdominal Hysterectomy Set

S.No.	Item	Qty in each kit
1)	Dissecting Forceps (Toothed) IS 3643	2 Nos.
2~	O~s.s.ectmg Fo("ceps. (Non-toothed~ lS 3643	'2 Nos.
3)	Artery Forceps Straight Big (200mm) IS 3645	4 Nos.
4)	Artery Forceps Straight Small (160mm).IS 3645	,8 Nos.
5)	Artery Forceps Curved Small (160mm) IS 3645	12 Nos.
6)	Sponge Holding Forceps IS 7735	2 Nos.
7)	Allis Forceps Small IS 7388	6 Nos.
8)	Allis Forceps Big IS 7388	4 Nos.
9)	Lane's Tissue Holding Forceps	2 Nos.
10)	Heaney's Hysterectomy Clamps	
	Single Tooth	2 Nos.
	Double Tooth	2 Nos.
11)	Richard's Retractor (Bladder Retractor)	1 No.
12)	Morris Retractor IS 7522	2 No
13)	Copper Retractor	2 Nos.
14)	Harrington Retractor	2 Nos.
15)	Intestinal Depressor - Deaver's Retractor	1 No.
16)	Self Retaining Retractor - BELFOUR	1 No.
17)	3rd blade to Retractor	1 No.
18)	Kelley's Clamp Straight	4 Nos.
19)	Kelley's Clamp Curved	8 Nos.
20)	Aneurism Needle IS 8340	1 No.
21)	Towel Clips	10 Nos.
22)	Intestinal Clamps (Crushing)	2 Nos.
23)	Intestinal Clamps (Non-Crushing)	2 Nos.
24)	Needle, Suture Round Bodied, *3/8* Circle, No 12, packet of six	2 Nos.
25)	Needle, Suture ~ Circle, taper point, Size 6, packet of six	2 Nos.
26)	Needle, Suture, Straight 5 5cm, triangle point, packet of six	2 Nos.
27)	Stainless Steel Kidney Tray IS 3992	1 No.
28)	Stainless Steel Bowl IS 5782	3 Nos.
29)	Suction Tip	2 Nos.
30)	Currete (Double ended) Blunt & Sharp IS 6505	1 No.
31)	Needle Holder (Mayos Heger) IS 7870	3 Nos.
32)	Green Armytage IS 7964	6 Nos.

34) Uterine Vollsellum Forceps 3 x 4 1 No.

35) Knife & Blades IS 3349 4 Nos.

VI. **Minirap Abdomina Tubal Litigation Set**

S.No.	Item	Qty in each kit
1)	Toothed Dissecting Forceps JS 3643	1 No.
2)	Babcock's Tissue Forceps IS 8584	2 Nos.
3)	Sponge Holding Forceps IS 7735	2 Nos.
4)	Allis Forceps (Big) IS 7388	5 Nos.
5)	Artery Forceps, small, curved IS 3644	5 Nos.
6)	Artery Forceps, small, straight IS 3644	4 Nos.
7)	Artery Forceps, big (200mm) straight IS 3645	2 Nos.
8)	Lane's Tissue Holding Forceps	1 No.
9)	Towel Clips	4 Nos.
10)	Needle Holder IS 7870	1 No.
11)	Lagenbeck Retractor	1 No.
12)	Copper Retractor	2 No
13)	Self Retaining Retractor	1Nos.
14)	Morris Retractor (Blade size 10 cm) IS 7522	1 No.
15)	Morris Retractor (Blade size 6.5 cm) IS 7522	:2 Nos.
16)	Abdominal Retractor (Double blades at the ends)	1 No.
17)	S.S Kidney Tray IS 3992	1 No.
18)	Cuscos Speculum IS 5906	1 No.
19)	BP Handle (No.3 & 4) IS 3319	2 No.
	One each with blades No. 15 - 4 packets of 12 each No. 23 - 4 packets of 12 each	
20)	Sims Speculum IS 6112	1 No.
21)	S.S Bowl (18-20" diameter)	: 2 Nos.
22)	Double Hook Tenaculum IS 6114	1 No.
23)	Non Toothed Forceps IS 3643	1 No.
24)	Blunt & Sharp Curette IS 6505	1 No

D & C SET

1. Tray size 25 X 30 cm
1. Sponge holding forceps 25 cms (2 Nos.)
   Sims speculum 65 X 26/72 X 0 mm - 1
   70 32175 X 35 mm - 1
3) Sims uterine depressor (Anterior vaginal wall Retractor)
   Double ended toothed - 26 cms.
4. Uterine volsellum forceps 25cms Toothed 3 x 4
5) Sims uterus sound (Probe) : Curved with tip 4 mm, length 33 cms
6) Hegars Uterine dilator Double ended set of 8 (3 x 4 ·-17 x 18) length 20.5 cms
7) Sims uterus curette (sharp & blunt) 27.5 cms long X<5mm/10 x 7 mm

Vaginal Hysterectomy Set

1) Sponge holding forceps 25 cms - 4 Number
2) Knife with handle Scalpel No.3 - One Number
Scalpel No.4 - One Number
3) Artery forceps (Hartmann's) : Straight 15 cm - 2 Numnber
Curved 15 cm - 6 Nurnber
10cm (Mosquito) - 2 umber
4) Operating scissors with TC cutting edge
Standard uterine scissors Blunt x Blunt
Straight 15 cm - 1 Number
Mayo Stille curved scissors 17 cm - 1 Number
Metzenbaum dissecting scissors curved 20 cm -1 Number
5) Allis Tissue Grasping Forceps 18 cm - 4 Number
20 cm - 2 Number
6) Doyen's Retractor, length, 25 cm Blade 65 x 85 mm - 1 Number
7) Morrison Retractor, length 23 cm Blade 55 x 65 mm - 1 Number
8) Babkock grasping forceps 18 cm - 2 Number
9) Dissecting forceps Plain 15cm - Number
20 cm - 1 Number
10) Dissecting forceps toothed 15cm - 1 Number
20 cm -1 Number
11) Bonney's myomectomy clamp angled on flat screw' joint
25 cm - 1 Number
12) Somer uterine holding forceps 23.5 cm - 1 Number
13) Doyen's Myoma screw with ring handle with 4 spirall
length 18 cm - 1 Number
14) Needle holder
Hegar Mayo 20cm long - 1 No.
Wertheim 24cm long 1 No.
15) Towel clips (Backhau's) 13 cm - 6 No.

SECTION-VII

TECHNICAL SPECIFICATIONS
GENERAL TECHNICAL SPECIFICATIONS

GENERAL POINTS:

1. Warranty:

   a) Two years Comprehensive Warranty as per Conditions of Contract of the TE document for complete equipment (including X ray tubes, Helium for MRI, Batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey Work from the date of satisfactory installation, commissioning, trial run & handing over of equipment to Hospital/Institution/Medical College.
   b) 98% up time Warranty of complete equipment with extension of Warranty period by double the downtime period on 24 (hrs) X 7 (days) X 365 (days) basis.
   c) All software updates should be provided free of cost during Warranty period.

2. After Sales Service:

   After sales service centre should be available at the city of Hospital/Institution/Medical College on 24 (hrs) X 7 (days) X 365 (days) basis. Complaints should be attended properly, maximum within 8 hrs. The service should be provided directly by Tenderer/Indian Agent. Undertaking by the Principals that the spares for the equipment shall be available for at least 10 years from the date of supply.

3. Training:

   On Site training to Doctors/ Technicians/ staff is to be provided by Principal/ Indian Agents (if they have the requisite know-how) for operation and maintenance of the equipment to the satisfaction of the consignee.

4. Annual Comprehensive Maintenance Contract (CMC) of subject equipment with Turnkey:

   a) The cost of Comprehensive Maintenance Contract (CMC) which includes preventive maintenance including testing & calibration as per technical/ service /operational manual of the manufacturer, labour and spares, after satisfactory completion of Warranty period may be quoted for next 3 years on yearly basis for complete equipment (including X ray tubes, Helium for MRI, Batteries for UPS, other vacuumatic parts wherever applicable) and Turnkey (if any). The supplier shall visit each consignee site as recommended in the manufacturer's technical/ service /operational manual, but at least once in six months during the CMC period
   b) The cost of CMC may be quoted along with taxes applicable on the date of Tender Opening. The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such taxes and no claim for the same will be entertained later.
   c) Cost of CMC will be added for Ranking/Evaluation purpose.
   d) The payment of CMC will be made on six monthly basis after satisfactory completion of said period, duly certified by end user on receipt of bank guarantee for 2.5 % of the cost of the equipment as per Section XV valid till 2 months after expiry of entire CMC period.
   e) There will be 98% uptime warranty during CMC period on 24 (hrs) X 7 (days) X 365 (days) basis, with penalty, to extend CMC period by double the downtime period.

f) During CMC period, the supplier is required to visit at each consignee's site at least once in 6 months commencing from the date of the successful completion of warranty period for preventive maintenance of the goods.

g) All software updates should be provided free of cost during CMC.

h) Failure of the above [4. e) to 4. g)] by the supplier, may lead to the forfeiture of the Bank Guarantee for Annual CMC.

i) The payment of CMC will be made as stipulated in GCC Clause 21.

Turnkey:

Turnkey is indicated in the technical specification of the respective items, wherever required. The Tenderer shall examine the existing site where the equipment is to be installed, in consultation with HOD of Hospital/Institution/Medical College concerned. Turnkey details of each Hospital/Institution/Medical College are given at the end of Technical Specification. The Tenderer to quote prices indicating break-up of prices of the Machine and Turnkey Job of each Hospital/Institution/Medical College. The Turnkey costs may be quoted in Indian Rupee will be added for Ranking Purpose.

The taxes to be paid extra, to be specifically stated. In the absence of any such stipulation the price will be taken inclusive of such duties and taxes and no claim for the same will be entertained later.

The Turnkey Work should completely comply with AERB requirement, if any.

Note 1: Tenderer's attention is drawn to GIT clause 18 and GIT sub-clause 11.1(c). The tenderer is to provide the required details, information, confirmations, etc. accordingly failing which it's tender is liable to be ignored.

Note 2: General: Bidders are requested to make sure that they should attach the list of equipments for carrying out routine and preventive maintenance wherever asked for and should make sure that Electrical Safety Analyzer / Tester for Medical equipments to periodically check the electrical safety aspects as per BIS Safety Standards IS-13540 which is also equivalent to IEC electrical safety standard IEC-60601 is a part of the equipments. If the Electrical Safety Analyzer/Tester is not available they should provide a commitment to get the equipments checked for electrical safety compliance with Electronic Regional Test Labs / Electronics Test and Development Centres across the country on every preventive maintenance call.

Note 3: OPTIONAL ITEMS: Deleted.