	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. 45.

Equipment Specifications for FIBRE OPTIC PHOTOTHERAPY LAMP

1 Description of Function

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

2 Operational Requirements

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

3 Technical Specifications

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

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	System as specified		
4.2	All consumables required for installation and standardization		

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

5 Environmental factors

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

6 Power Supply

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

7 Standards, Safety and Training

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
7.1	Should be US FDA , CE,UL or BIS approved product		
7.2	Shall CERTIFIED to be meeting Electrical Safety requirements as per IEC 60601-2-50 Medical Electrical Equipment part-2-50 Particular requirements for the safety of Infant Phoototherapy Equipments		
7.3	Manufactures/Supplier should have ISO certificate to Quality Standard.		
7.4	Warranty as per bid.		

8 Documentation

8.1	User/Technical/Maintenance manuals to be supplied in English.		

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

Item No. 46

EQUIPMENT SPECIFICATIONS FOR PULSE OXIMETER

1 Description of Function	
1.1	Should be light weight convenient handheld device with a long battery life Should have three SpO2 sensitivity modes that would include normal and maximum Should be upgradeable to non invasive co-oximetry Should have rotational screen in the handheld - automatically changes to horizontal or vertical view Should provide 96 hours of trending with a 2 second resolution.
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 with Nellcor technology or equivalent
3.2	Parameters and waveform displayed- SpO2, pulse rate, system status, plethysmogram, menus for user settings
3.3	SPO2 range- 1-100 %. Resolution 1%.
3.4	Accuracy of SPO2- 50-69% (±3%) 70 -100% (±2%)
3.5	Pulse rate range should be 25-240 bpm. Resolution 1BPM
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.
3.12	Perfusion: 0.02% - 20%
3.13	Accuracy Levels Saturation Range 70% to 100% ±3 digits [No Motion], ±2 digits [Motion], ±3 digits [Motion Ped], ±2 digits [Low Perfusion], ±3 digits [Low Perfusion neo].
3.14	Pulse Rate 25 - 240bpm ±3 digits [No Motion], ±5 digits [Motion], ±3 digits [Low Perfusion]
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 or European CE 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. 47

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. 48

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. 49

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. 50

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. 51

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. 52

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. 53

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. 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.
   (4) Sector Probe 4 – 2 Mhz for Echocardiography.
5. All transducers should be lightweight digital phased array broadband type transducers.
6. 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 compound beam froming technology / HD flow quoted as standard.
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 10 inchesor 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/Pen drive 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 light weight.
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.

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, Laser printer.

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. 54

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

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

1. High Frequency Generator with output of 50 KW or more to give 500mA at 100KV.
2. Generator should have KVP Range 40 KV to 150 KV.
3. mAs range should 2-800 mAs.
4. Digital Display of KV and mAs.
5. Integrated console with the table.
6. Fluoroscopy in manual and automatic mode
7. Dual Focus X-ray Tube with Large focus 1.2mm or less and Mention size of small & large Focal Spot.
8. Collimator with adjustable copper filters.
9. Facility of collimation functionality display on the x-ray tube assembly.
10. Table top transversal travel 30cm or more (± 15 cm).
11. Table top longitudinal travel 160 cm or more (± 80 cm).
12. Tiltable table from vertical to -15 Degree or more with automatic stop at Horizontal,
    Vertical and head down position.
13. Microprocessor Controlled Automatic Spot Film Device with facility of different film formats selections with wide range of division in vertical and horizontal.
14. X-ray table should be able to accept all standard type of cassette including CR cassettes
15. Titling speed >3^0/*per* second.
16. Maximum Allowable patient weight 200 kgs.
17. Compressor cone with automatic parking position.
18. Oblique incidence up to +/- 40^0
19. All movement controls of the table available on the SFD also.
20. Under table 12 inch or more image intensifier system with high resolution CCD camera.
    Overview plus 3 zoom levels 65% DQE & 2 No. Monitors of minimum 17" size and minimum 1024 x 1024 resolution or better.
21. Last image hold of fluoroscopy and radiography images
22. Original Data Sheet of technical specification of the equipment quoted to be provided
    along with point wise compliance statement mentioning deviation if any with justification. The original data sheet should indicate reference to technical specification
    point wise by highlighting ink.

Accessories

65 KV A Servo Voltage stabilizers with spike suppressor to be quoted along with.
Lead Glass of 100 x 120 cm with 12 mm thickness.
Remote controlled compression with three different interchangeable cones
Footswitch for fluoroscopy & exposure in examination room.
Measuring chamber for dose-area product (DAP).
Bucky wall unit with height adjustable catapult bucky cabnet to hold different cassettes sizes from 5"x7" to 14"x 17" with moving greed Pb 10: 1; 40 lines/cm

Footrest, Handgrip angled, Protection strip, Handgrip rail, Shoulder supports one pair
Pediatric immobilizer of standard make.
Zero lead aprons: 4 each with wall mounted stand
Protective shields for Gonads, thyroids: 4 each for Gonads & thyroid.
Slim view boxes of standard make (4 in 1) - 4 nos.

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. 55
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 : 300mA or more.
V. it should be capable of delivering up to 200mAs in different steps.
VI. Shortest exposure time: Should be 1 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 14x14 inch or more Detector scintelator should be CsI
II. Detector should have DQE of 63% or more at 0.05 lp/mm
III.The detector pixel matrix should be 2K*2K or more.
IV. Pixel size/pitch should be 175um 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 and European CE certified. And quoted model should
have AERB type approval or NOC.

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:

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OPERATION THEATRE

Item No. 56

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 (2 Nos. each for Adult and Children) and single use (100 Nos. each for Adult and Children) neutral electrode for adults and Children along with cable for neutral electrode and fixation device wherever required.

	(e) Reusable & sterilizable (5 Nos.) and disposable electrode handle with finger swiitch (f) Set of electrodes (flat tip short, flat tip long & pin point- 5Nos. each) with electrode container with holder (g) tip cleaner, To quote set of standard accessories with quantity which is supplied with Diathermy, (h) bipolar forceps with cable, To quote set of standard accessories with quantity which is supplied with Diathermy, (i) cable for connecting to standard mono polar and bipolar laparoscopic instruments, To quote set of standard accessories with quantity which is supplied with Diathermy, (j) Dedicated instruments for open and laparoscopic monopolar and bipolar use (5 Nos each).. 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 & European CE 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. 57

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 50°C to 100°C: vessels are coapted (tamponaded) and sealed by a protein coagulum. It Should not be combined with any other energy source.

2 Operational Requirements

2.1 The system is required for laparoscopic & open Procedures which should operate at the same frequency.

3 Technical Specifications

3.1 1.Ultrasonic generator generating ultrasound frequency in between 35-70 KHz.
2. Hand-piece with in-built transducer & silicon cable
3. Capability of being operated by hand control or foot switch.
4. Single/ Dual foot-switch attachment
5. Stand-by mode for better safety
6. System diagnostics and trouble shooting guide
7. Warning system for malfunctioning cable, probe etc (Audible/Visual).
8. It should not interfere with other electromagnetic devices.
9. It should have a horizontal/torsional vibration.
10. Should be capable of sealing vessels up to 5mm in diameter.
11. Should have different audible tone setting for different modes.

4 System Configuration Accessories, spares and consumables

4.1 ***Accessories:***1. Foot-switch with cable. 2. Cart to house the generator and accessories 3. Sterlization Box with pad for transducer and instruments

4.Open surgery Instruments:

a. Coagulation shears- 5mm dia, 18-20cm long or more
b. Dissecting grasper 5mm dia for Coagulation 18-20 cms. or more

5. Endoscopic surgery Instruments:

a. Dissector Grasper 5mm diameter 30cm-45cm long
b. Curved Shear,5mm diameter,30cm- 45cms long

6. Any Other compatible Accessories has to be offered if any.

7 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%

8 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.

9 Standards, Safety and Training

7.1 The generator must be CF isolated applied device and defibrillator protection must be available.

7.2 Should be US FDA/European CE 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.

7.6 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. 58

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" D	2

FOUR SUCH SET REQUIRED

TRACHEOSTOMY

SI.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	
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 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)

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 Volsellum 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 ᵡ‹ 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.

ITEM No. 59

RAPID INFUSION PUMP

1. The equipment should have Roller type Peristaltic pump /volumetric pump

2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors.

3. Heating process should be done by an electro magnetic induction heating system.

4. The Equipment should have two infra -red temperature sensors for accurate deliveryof fluids at 37deg.C.

5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved.

6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations.

7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety.

8. The Equipment should have a recirculate mode for pre - warming of fluids during transport.

9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion, total volume infused, real temperature of fluids, line pressure etc.

10. The equipment should have internal rechargeable battery backup.

11. Consumables should be universal for all flow rates ranging between 2.5ml to 750 ml per minute.

12. Warranty as per tender document.

13. The Principals / supplier firm/ vendor should have 24 hours. Service center facility based at Delhi / NCR.

14. Spares / consumables should be available for a period of at least eight years after expiry of the guarantee / warrantee period.

15. Performance certificates from satisfied customers from Central Govt./State Govt/reputed private hospitals must be appended in respect of the quoted equipment.

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. 60

Equipment Specifications for Antepartum and Intrapartum foetal monitor (Cardiotocomachine)

1 Description of Function	
1.1	Antepartum and Intrapartum foetal monitor (Cardiotocomachine) is used to monitor Foetus during antepartum period (before labour) or intrapartum period (birth process)"
2 Operational Requirements	
2.1	The complete unit with printer and all accessories should be offered.
3 Technical Specifications	
3.1	The monitor should be provided with 1) Battery and main operation facility 2) Should have inbuilt LCD screen /LCD TV monitor with facilities to display on screen fetal heart tracings and toco tracings. 3) Should be compact, light weight and should have inbuilt carrying handle and waterproof transducers. 4) The unit should have Fetal Heart Rate range 50 to 240 bpm External Toco range 0 to 127 relatives units Should have NST timer for antepartum applications 5) Highly sensitive ultra sound transducer which should be 1.5 MHZ for less signal attenuation and good signal acquisition. Ultrasound transducer should be a waterproof unit. Designed with Snap Clasp closure for easy application and cleaning. Should have facility to connect any transducer in any socket for easy use. Preferably there should be facility to switch between transducers when more than one transducer is used. 6) Ability to give an accurate continuous trace and should be able to detect sudden beat changes upto 25 bpm 7) Audible alert indication of fetal bradycardia and tachycardia 8) External tocotransducer which should be a sealed waterproof unit. Guard ring designed to reduce maternal respiration artifact. 9) Patients event marker. 10) Capability of automatic fetal movement detector. 11) Digital numeric and text display along with audio signal of fetal movement Should have inbuilt keyboard entry screen for patient data entry, name etc. Minimum 5 hour memory of traces with fast printing. 12)Should provide following accessories – Transducer belts, Belt buckles,Main cables, interconnecting cables, ultrasound gel bottles. 13) Inbuilt high resolution thermal/Laser printer with easily available cost effective paper. 14) Should be provided with trolley with wheels with locking facility for mounting the unit on it with accessories for storage of transducers paper etc or the unit must have the facility for wall mounting and a protective cover with cabinet. 15) Optional (I) Should have facility for intra uterine pressure monitor. (II) Should have facility to record fetal heart rate pattern through fetal ECG.

	(III) Should have facility to monitor twins. Should have twin offset feature so that both fetal heart traces are clearly visible. (IV) Should have facility of connection of central monitor system.

4 System Configuration Accessories, spares and consumables	
	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 operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%
5.3 The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%	

6 Power Supply	
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug
6.2 Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be supplied	

7 Standards, Safety and Training	
7.1	Should be US FDA, CE, UL or BIS approved product
7.2	Comprehensive warranty as per bid document.
7.3	Comprehensive training for lab staff and support services till familiarity with the system.
7.4	Manufacturer should have ISO certification for quality standards.
7.5	Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual.

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

NOTE:

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

Item no. 61
SPECIFICATION LAPAROSCOPE(SINGLE PUNCTURE):

1 Telescope

a)Telescope 0 degree with parallel/straight eye piece, 10 to 12 mm diameter

Equipment Specifications for Single puncture Laparoscope for female sterilization

UNSPSC Code:
ECRI Code:

1 Description of Function

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

2 Operational Requirements

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
2.1	System complete with Telescope and associated instruments and accessories are required for sterilization in double puncture applications		

3 Technical Specifications

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
3.1	Specification Laparoscope(single puncture): 1 Telescope a)Telescope 0 degree with parallel/straight eye piece, 10 to 12 mm diameter with operating channel for ring applicator b)Fibre optic light transmission incorporated, should be compatible with the commonly available light cable (necessary adaptors should be provided) c)Can be sterlised by autoclaving,cidex solutions and Formalin Chamber. d)Should have 6 mm instrument channel/built in ring applicator for use with 4 silastic rings. Working length of 270-275 mm. 2. Trocar & Cannula – Stainless Steel Cannula size + 1 mm more than the telescope diameter, should have an automatic silicon leaflet valve and stopcock for insufflation length 10-15 cm. Trocar should have pyramidal tip. 3. Ring Applicator Ring applicator for use with parallel/straight eyepiece telescope compatible with the above telescope, capable of loading four silastic rings		

	4. Cone and pusher made of white plastic (Thick) Suitable cones and pusher for loading rings to the above applicator. 5. Bipolar Grasping forceps rotating with connector pin for bipolar coagulation, size 5mm length 36 -40 cm , atraumatic serrations , fenestrated jaws with long flat non retracting jaws with handle with necessary HF bipolar cord, 300mm length with 2 4mm banana plug.(optional) 6. Unipolar Grasping Forcepswith connector pin for unipolar coagulation, 5mm, length 36-45 mm, atraumatic double action jaws consisting of insulated handle without ratchet with monopolar high frequency cord 300cm or more length with 4mm plug for HF unit(optional) 7. Suction & irrigation cannula 5mm. 30-36cms. two way stop for single hand control and with handle tubings.(optional) 8. Bipolar coagulating and suction tube 5mm with connector pin with pistol grip handle with trumpet valve and silicon tubings with necessary HF cord to fit into above 6mm working channel(optional) 9. Reducer for using the above instruments through 6mm instrument channel of above operating channel of laparoscope. 10. Verees needle with spring loaded blunt stylet, luer lock size10 & 15 cm. Tray for storing the equipment (with cover) 11. Essential Spares i) Spares Washers Spares washers for trocar and cannula and automatic valve. ii) Kits for cleaning- i) Trocar Brush ii) Cannula Brush. iii) Cleaning Oil 100 ml. 3.20. Carbon Dioxide insufflators -Specifications: a).Electronic CO2 insufflator with pin index connection. Should have an adjustable flow rate of 0 to 30 litres per minute and a pressure range adjustable between 0-30 mm Hg. b).Pressure and flow rate should be displayed on the front panel with displays of actual and set values. c. Provided with silicon autoclavable tubing with luer lock attachment. d) Instrument should work on a supply of 220-240 V, with a frequency of 50 HZ single phase. d) Optical and acoustic warning signals for pressure exceeding set limits. Constant monitoring of intraabdominal pressure with safety to reduce overpressure e) Provision for preheating gas to body temperature.(optional) f) Fully automatic gas refill. g) High Pressure Hose suitable to connect the insufflator with pin indexed Standard CO2 cylinder Should be supplied with CO2 cylinder, connecting pipe, main cord and silicon tubing set h.) Autoclovable wrench & CO2 gas filters disposable .		
3.2	B). High intensity Xenon Light Source 1-300 watts bulb minimum 500 hrs. with at least one spare bulb of 15V 300 watts		

	2- Fully automatic with light intensity continuously adjustable from 0-100% manually orautomatically by the cameras video output signal 3- Should have display of lamp service life. 4- Stand by mode 5- Monitoring of lamp function. 6- Built in antifog air pump. 7- Universal jaw assembly to adapt cable of any make. 8- Light wt. 9-Certified for international /national safety standard norms+power supply 10- Power supply 220-240 VAC 50/60 Hz. 11- Should be quoted along with spare lamp 12. Fibreoptic light cable 4.8mm in diameter and 230 - 300cms in length compatible with cold light source and commonly available telescopes (Necessary adaptors may be provided).		

4 System Configuration Accessories, spares and consumables

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

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or should comply with 89/366/EEC; EMC-directive.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

Sl	Name	Technical Specs quoted	Bidders Deviation if any

		by bidder	
6.1	Power input to be 220-240VAC, 50Hz fitted with Indian plug		
6.2	UPS of suitable rating with voltasge regulation and spike protection for 60 minutes back up.		

7 Standards, Safety and Training

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

8 Documentation

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

	job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

NOTE:

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

Item nos. 62

SPECIFICATION OPERATIVE GYNECOLOGICAL LAPAROSCOPE SET

Description of Function			
Sl	**Name**	**Technical Specs quoted by bidder**	**Bidders Deviation if any**
1.1	Laparoscope is used for minimal invasive surgery and comprises of telescope and associated instruments.		
2 Operational Requirements			
2.1	System complete with Laparoscopic unit, Video printer, Electrosurgical Unit , Mobile cart and instruments set is required to be quoted.		
2.2	Laparoscopic unit consists of :- - Laparoscopic telescope and associated instruments and accessories. -Xenon light source - Electronic Insuffulator. - T.V.Monitor - Camera Control Unit. - Suction devices.		
2.3	The Mobile Video cart should be supplied by the company supplying the basic of laparascopic unit.		
3 Technical Specifications			
Sl	**Name**	**Technical Specs quoted by bidder**	**Bidders Deviation if**
3.1	A) Laparoscopic Telescopes: Enlarged distortion free view; Autoclavable as well as sterilized by liquid disinfectant; Fiberoptic light transmission incorporated, 1. 10 mm diameter, 0 degree angle of vision (30-36 cm) 2. 4-5 mm diameter, 0 degree (28-30cm). 3.Forward oblique telescope -30degree and 70 degree –enlarged view, diameter 5mm with length 28-30cms and 10 mm with length of 30-36mm. B) Trocar & cannula reusable: Trocar sleeve with insufflation stop – cock: automatic (silicon leaflet valve or flap valve)& manual controlled valve (Multi functional); with pyramidal tip trocar. 1. 5/6 mm diameter endotip cannulas of 6.5 to 10.5cms working length for use with 4/5 mm telescope & instruments. 2.11 mm diameter cannula of working length 10 to 15 cms. for 10 mm telescope & instruments. 3. High flow trocar sleeve with reducer for 5 mm instruments . B). Verres pneumoperitoneum needle. Spring loaded blunt stylet and leur lock –various sizes -7, 10, 13,15cms. C) Accessary instruments: Monopolar, 360 degree rotatable, 5 mm diameter instruments with a working length of at least 30-36cm, having an insulated handle, insulated shaft & jaw inserts which can be easily and quickly assembled in to a complete instrument or dismantled. 1. Atraumatic grasping forceps with double action long tapered jaws 2. Grasping forceps with teeth and double action jaws . 3. Grasping and dissecting forceps with double action jaws 4. Metzenbaum scissors curved and straight both blades opening, rotating and dismantling.		

5. Micro scissors.
6. Punch Biopsy forceps
7. Babcock's forceps, atraumatic jaws and fenestrated.
8. Right angled grasping forceps.
9. Dissecting spatula blunt.
10. High frequency needle retractable, insulated with connector pin.
11.Coagulating electrode L shaped.
12. Grasping and dissecting right angled forceps.

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

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

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

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

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

H) Knot pusher and Knot tier.: 5 mm diameter, working length of at least 30 cms. For knotting.

I) Monopolar High frequency electrodes of 5 mm diameter and working length of at least 30-36 cms.
1. Needle electrodes straight and L shaped.
2. Spatula electrodes
3. Hook electrodes
4. Knife electrodes

	J) Clip applicator: 10/5 diameter, working length of at least 30cms should be quoted with adequate no of spare clips K) Injection and puncture cannula: 5 mm diameter and working length of at least 30 cms. with leur connector L) Myoma screw: 5 mm diameter and working length of at least 30 cms. M)Uterine Manipulator for LAVH, for mobilization of uterus, identification of vaginal fornices and sealing of vagina during hysterectomy N)Electronic Morcellator with cutting sleeve and protective sleeve along with spare knife			
3.2	High frequency monopolar cables for the above auxiliary equipments a. Fibre bundle of 4.5 mm diameter b. Length of 230 – 300 cms c. Compatible with A above			
3.3	High frequency Bi- polar cables for the above auxiliary equipment. a. Fibre bundle of 4.5 mm diameter b. Length of 230 to 300 cms c. Compatible with A above			
3.4	Option 2 Full High Definition(HD) Endoscopic camera with T.V. medical grade monitor and printer A.2)Endoscopic High Definition Camera (Digital) 1. 3X1/3 CCD image sensor. 2. Should have progressive scanning and should support 16:9 format 3. Should have option of controlling the compatible endoscopic units in hands of surgeon/ touchscreen 4. Should be compatible with 23- 26 inch monitor 16:9 HD format 5. Upgradeable 6. Resolution should be 1900 x 1080p or more 7. Light weight camera head with programmable function key 8. PAL system/ multimedia as existing in this country 9 Automatic white balancing 10. Freely programmable camera head buttons 11. Cable should have buckling protection 12. Facilities for fine focus for smooth function. Microprocessor controlled. 13. Built in antifogging device. 14. Camera head should be compatible with telescope of any make and light of any make. 15. Integrated universal power supply 16. Compatible with medical grade monitor with multimedia projection available in this country. 17. Should have specific built in facility for camera functionality automatically optimizing all settings 18. Camera should be ready to use as soon as it is connected to camera control unit. 19 Universal coupler 20. Inbuilt electronic Fibre optic filters B.2) Camera Control Unit 1. Should have microprocessor control 2. The Camera CCU should be capable of either down-converting HD signals to SD or up-converting SD signals to HD. 3. It should have provision of working / compatible with lower models of camera heads. 4. . It should allow images from one format to be viewed, on displays in different format ie it is the HD system is compatible with both SD and HD. 5. Should have multiple video input and out puts – BNC,RGB,Y/C, DVI-D socket,digitalSDI signal, DV for digital recording etc			

	6. Should have all necessary connecting cables between camera head and video monitor C. 2 HD MEDICAL GRADE MONITOR, flat screen,LCD/LED/ TFT MONITOR 1.Desktop or wall mountable 2. Multinorm/PAL system color monitor for different color systems existing in the country. 3. Compatible with endovision camera of any makes 4.Screen size diagonal 23/24/26" Ultra high resolution, more than 2 MP. 5.Aspect ratio 16:10 6. Should preferably have advanced technology feature to perform interlace to progressive conversion of the image. 7. Number of colors should be approximately 16.8 million. 8. Viewing angle should be wide 9. Monitor menu displays all controls, capabilities and operations via curser keys, user defined captions, easy to use and highly dependable. 10. Should be composite, have multiple video input and out puts – BNC, RGB, Y/C, SDI, DVI etc 11. Power supply of 200-240 VAC. 50 /60Hz 12.Should have facilities for recording the data on computer /digital Video recorders/CD 13. On screen menu for monitor setting , Compact and light weight ,Drip water protected dust proof , all connecting cables to be supplied 14. Brightness 400cd/m2, contrast ratio 1000:1 15. Antireflection quoted front glass. 16. Should have consistent illumination level. 17. Should preferably have facility for upgradation and should be compatible with lower models. 18. Should be supplied with power supply, monitor stand and mains cord 19. Camera, CCU, & Monitor should be compatible with each other and preferably should be of same make. D) Documentation system for storage and transfer of digital data 1- Digital storage of still HD images and video/ audio files. It should have the facility editing/cutting of recorded data. 2 Auto detection of the connected camera system on HD_SD/ SD-SDI input 5 Archiving on DVD CD- ROM or USB stick, Multi- Session and Multi –Patient 6 Network saving 7 Automatic generation of standard reports Approved use of computers and monitors in the or environment as per 60601- 1 D) VIDEO COLOUR PRINTER :- 1-For endovision camera and multi colour systems existing in country 2-Large colour prints of video images with outstanding quality at least 4 different images can be stored and printed on one sheet. 3-Memories at least 4 frame. Should be compatible with any monitor and should be supplied with all connecting cables, satisfying international quality controls, safety norms and power supply Should preferably have facility for upgradation and should be compatible with lower models			
3.5	A). Xenon light source 1-300 watts bulb minimum 1000 hrs. with at least Four spare bulb of 15V 300 watts 2- Fully automatic with light intensity continuously adjustable from 0-100% automatically by the cameras video output signal 3- Should have display of lamp service life. 4- Stand by mode 5- Monitoring of lamp function. 6- Built in antifog air pump. 7- Universal jaw assembly to adapt cable of any make. 8- Light wt. <10 kg.>9-Certified for international /national safety standard norms+power supply 10- Power supply 220-240 VAC 50/60 Hz.			

	11- Should be quoted along with spare lamp 12. Fibreoptic light cable 4.8mm in diameter and 230 -300cms in length compatible with cold light source and commonly available telescopes (Necessary adaptors may be provided). B). Specifications CO2 Insufflator: 1.Electronic CO2 insufflator with pin index connection. Should have an adjustable flow rate of 0 to 30 litres per minute and a pressure range adjustable between 0-30 mm Hg. 2.Pressure and flow rate should be displayed on the front panel. Provided with silicon autoclavable tubing with luer lock attachment. 3. Instrument should work on a supply of 220-240 V, with a frequency of 50 HZ single phase. 4. Optical and acoustic warning signals for pressure exceeding set limits. 5. Provision for preheating gas to body temperature. 6. Fully automatic gas refill. 7. Wrench Kit :Suitable for connecting the insufflator to CO2 cylinder 8. High pressure hose of length of 200 to 300cms			
3.6	C). Electrocautery: 1• Should have unipolar cutting and coagulation as well as bipolar cutting and coagulation modes and have the facility of blending cutting and coagulation in different ratios and degree –soft, standard and or forced coagulation and spray coagulation. 2• Arc controlled cutting with a pre selectable power of maximum of 200 watts in both unipolar and bipolar modes. 3• Arc controlled coagulation with a pre selectable power of maximum of 120 watts in both unipolar and bipolar modes. 4• Auto stop function with automatic power – off on completion of coagulation process. 5• Automatic start function for bi- polar coagulation. Should be operable both in hand and foot mode and should have hand control switch on the handle of the electrode. Bipolar application with irrigation with sodium chloride. 6• Endoscopy mode with reduced voltage out put for use with fine endoscopic electrodes.(microfunction) disposable. 7• It should have automatic read out panel to display current being used and actual output at distal tip of electrode, simple operation due to clearly arranged control with easy to read symbols. 8• Should be compatible with under water operative procedures 9• It should have neural electrode monitoring through a patient contact system. 10• It should have automatic high frequency power cut off by autocoagulation stop and autostart facility 11• The unit should have the facility of self testing for trouble shooting. 12• Visual and acoustic signs of HF activation by different colored indicators and different acoustic tones for cutting and coagulating. 13• Unit should have safety monitoring circuit in event of malfunction for output monitoring. Neutral electrode connection . Automatic self test and automatic power cutoff in event of malfunction. Ground leakage current(LF/HF) HF application time. 14. Power supply 230VAC, 50/60 Hz. 15• The unit should be supplied with all standard accessories such as Electrode,Foot switch, Twin earth pad , bipolar forceps with Cord, Electrode Handle with switches , neutral plate, ball electrodes, Loop electrodes, variable output power for all types of currents.			
3.7	1. The equipment should have facility for suction evacuation. 2. Electric requirement as per Indian power supply 240 watts. 3. Vacuum pressure/suction pressure of the unit should be 0-800 mmHg minutely adjustable. 4. There should be 2 collection bottles small of 1.5 -2 L and Large of 3-4 L 5. There should be float valve for each bottle. 6. The power control should be by foot switch also. 7. The unit should be mounted on a mobile trolley which is rust proof with a tray to			

	keep the instrument which is made up of stainless steel and should be rust proof. Trolley should have locking device in wheels. 8. The unit should have ISO-9001/2 certificate which should be submitted with tender.		

4 System Configuration Accessories, spares and consumables

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
4.1	PLASTIC CONTAINERS FOR STERILIZING AND STORAGE:- 1. Plastic / aluminium containers for sterilizing and storage- -Perforated with transparent lid, for use with 30 cm and 36 cm Hand line Instruments. External dimensions approx 550x260x150 mm 2. Plastic container for sterilizing and storage of camera heads :- - for use with steam gas and plasma sterilization . 3.Basket for cleaning sterilizing and storage of 2 rigid endoscopes and one light cable and including holder for adaptors. External dimensions appox. 490x125x60 mm		
4.2	MOBILE VIDEO CART :- -5 Shelves- distance between the shelves should be sufficient to accommodate the equipment comfortably with working space. -4 wheels – antistatic dual wheels, 2 equipped with locking brakes . - one drawer unit with lock, one camera mount. DIMENISIONS ;- -Appropriate Height. -Appropriate standard dimensions, Power Box, socket board with 12 plugs and 12 grounding plugs.		

5 Environmental factors

Sl	Name	Technical Specs quoted by bidder	Bidders Deviation if any
5.1	Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or should comply with 89/366/EEC; EMC-directive.		
5.2	The unit shall be capable of operating continuously in ambient temperature of 10-40 deg C and relative humidity of 15-90%		
5.3	The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%		

6 Power Supply

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

7 Standards, Safety and Training

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

8 Documentation

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

NOTE:

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