










**LIST OF EQUIPMENTS FOR BIOMEDICAL SPECIFICATIONS**







#	ITEM NAME	SPECIFICATIONS	PICTURES
1	Surgical panell (digital image viewing system)	Must have touch screen option, and able to intergrate into the hospital's IT structure and must support variuous workflows. Wall mounting and must be OR compatible and disinfectable. Size atleast 49". Full HD. Must have drop in keyboard and mouse fuction with flexible IT and video management.	
2	X-Ray Viewer	Standard size, with led light, durable material of light weight.	
3	Double Door Sterilizer Machine	AUTOMATED HORIZONTAL/Vertical SLIDING DOOR,chamber capacity 570.56 liters, should safely sterilizes up to 375lbs per cycle,should have double door configuration,Automatic door operation which should be controlled by touch screen,space saving design-Easy loading with automated vertical door/Horizontal door ,Reduce Water Consumption with Water Saving Systems,Electronic Record Management needed,Quantity of Wrapped Trays per Cycle 9 or more	
4	Infant Warmer	Servo control,manual control,APGAR options,Should have complete automatic manual /baby (Servo)/Air modes. In addition, the Skin/Air temperature display is larger than other set temperature displays. Skin temperature display can be converted form °C to °F by the push of a button. A big LCD is provided for more information and visualizations of the heater power in manual and servo modes. A full complement of alarms provides safety and convenience, with both audible and visual indicators in the event of:- High Temp./ Low Temp,System Fail,Probe Failure,Power Failure,TimerHeater fail etc,The spacious baby bed incorporates easy drop down/fold down glasses for maximum access to the patient, X-Ray facility is provided below the baby bed for taking X-ray of the baby without disturbing.If needed the unit can be programmed by the user itself for any of the following features:-Count Up / down Timer,Check baby Alarm,Pre warming mode.The system should be fitted with high quality castors having brakes in front 2 castors. Antistatic castors can be fitted as an option for further safety in lieu of the standard castors.	
5	Portable Incubator	Incubator with air/skin mode heating, collapsible trolley with provision to keep re-fillable oxygen cylinder and battery,Incubator with Double Wall Canopy, Front and Head End Access Doors with Access portholes and Tubing Access Ports. (2 access doors, 2 disposable infant restraint straps, 1 Iris port, 2 Quiet Touch port doors. 6 tubing ports),Digital Displays of Air and Baby Skin Temperatures, set range 22.0° C - 38° C (71° F - 100° F),Indicators for Mains and Battery Modes of Operation ,Indicator for Battery Power Capacity : Battery condition status 4 LED indication of battery charge and heater power condition 25-100%. Maintenance free, re-chargeable. Should support all functions together continuously for at least 2 hours,Examination Light,Power mode Illuminates AC, DC, or external DC, AC and 12VDC Connectors.Comprehensive Alarm System : Alarm indicators for High temp, Power fail, Sensor fault, Heater temp, Air flow, Low DC,Trolley : Sturdy trolley, sturdy & shock absorbing Wheels. Space for accessories,.Power : On mains 230V AC + 10%, 50 Hz + 3%,Should have Optional Features like Accessory shelf, IV pole, High Hood, Pressure Regulator and Flowmeter,In built pressure limited time cycled ventilator preferable.	





6	Pendant	<p><b>Anesthesia Pendant:-</b>(To be fitted at the right and Top of the head end of the patient) - Single arm pendant total length of arm should be 1500mm. Should have Horizontal and Vertical movements along with Anesthesia Workstation. Minimum service column length should be 1000mm with load carrying capacity of 350 kg. - It should have a shelf for monitor and 2 CVP pole for min 4 infusion pumps. - Should have 2 x O2, 1x N2O, 2x Vac, 2x Air 4 bar gas outlets &amp; AGSS-1 No. - Should have 10 electrical sockets and 2 RJ 45 data output connection facility.</p> <p><b>Surgical Pendant:-</b>(To be fitted at the left and bottom of the foot end of the patient),Dual Arm of length about 800 mm / 800 mm,The 2 swivel arms, carrying the supply column, should have the maximum degree of rotary motion in the horizontal plane and should be able to hold a weight of minimum 120 Kg,The distribution column should be at least 1000mm in height,Minimum clearance from finished floor to bottom of pendant should be about 700 mm,Should have 3 platforms of about 50cms x 40cms. It should allow flexible gap.,Should have dual IV rod stand with a capacity of about 30 Kg,12 electrical sockets should be provided on the service head (6 on each side).Oxygen-2 nos,N2O-1 no,Air(4bar)-1no,Air(7Bar)-1no,Vaccum-2 no,Co2-1no,Vaccum-2no,ITsocket(RJ45)-2no ,Agss-1no</p>	
7	Anesthesia Unit	Modes of ventilation – included VCV (Volume Control) Mode with tidal volume compensation Modes of ventilation ,PCV (Pressure Control Ventilation) ,PCV-VG (Pressure Controlled Ventilation-Volume Guarantee),SIMV (Synchronized Intermittent Mandatory Ventilation) (volume and pressure) ,PSVPro™ (Pressure Support with Apnea backup), CPAP+PSV (Pressure support mode), SIMV PCV-VG Advanced software options Spirometry ,should have Auto alarm limits, ecoFLOW Pause Gas Vital capacity and cycling,Should have battery backup,AGSS connection required, PEiatric ,neonatal and adult modes should be supported	
8	Arthroscopic shaver system	generator, handpiece with footswitch control and all accessories.	
9	Portable Scan Machine	<p>Should have good battery backup, Matching trolley compact and lightweight, easy to transport.</p> <p>Cables and other connection accessories.</p> <p>Storage security lock/chain and key</p> <p>Wheeled cart (if applicable) with gel bottle holders, drawer or dedicated space for accessories, place for scanner positioning and easy orientation.And should have all transducers including High frequency probe for USG guided block anaesthesia ,Echo option Probes probes: 1.General abdomen OB/GYN 2.5-6.0 MHz.</p> <p>2.Small parts, PV (steered linear) 5.0-10.0 MHz.</p> <p>3. Adult heart (harmonic echo) 2.1-3.8 MHz</p>	
10	Suction Machine	Max Vacuum (adjustable) -0.90 bar -90 kPa -675 mmHg,Max free air flow rate 90 l/min,Duty cycle Non-stop operation,Motor Oilless and maintenance-free piston pump,should have footswitch control,two vaccum outputs required,Autoclavable containers that can collect minimum 2x2000 ml.	
11	Patient Monitor	ECG,SPO2,NIBP,Temperature,ETCO2 including gas monitoring, pressure monitoring (ABP ,CVP ) are required and should have good battery backup	
12	Patient Monitor	ECG,SPO2,NIBP,Temperature,ETCO2 ,pressure monitoring (ABP ,CVP ) are required and should have good battery backup	
13	Syringe Pump	Good accuracy and battery backup is required,Should have stand accessories(Clamp)	







14	Infusion Pump	should have adult, pediatric and neonatal options and good battery backup,Should have stand accessories(Clamp)	
15	Water Distiller	The boil chamber and condensing coils should be high grade 304 Stainless Steel.It should come with a high quality plastic collection bottle, the lid and handle should made of food-grade polypropylene, and the lid should be easily removable for convenience.Distilling should automatically shut-off at the end of the cycle.It should produce pure steam distilled water.Should have distiller output - 4 to 7 litres per hour	
16	Surgical Light Double Dome	OT LIGHT – LED with complete camera and monitor system,Should have Single Color high performance LEDs with life time more than 50,000 hours,LUX intensity 1,40,000 Lux & Satellite 1,40,000 Lux or above,b. Light Field diameter shall be above 25 cm or better,Variable Color temperature should be between Minimum 4000 to 5000 degree K,Color rendering index should not be less than 95,Depth of illumination should not be less than 100 cm,Illumination adjustment 50% to 100%,One of the dome should have high definition 1080 lines resolution camera with optical zoom and focus adjustment. The camera control functions should be either with remote control / wall control panel / dome / arm. The output of the camera shall be taken out and connected to the monitor,Temperature rise at the surgeon head level should be less than 2 degree C,Should have control panel for light focusing adjustment fixed on the dome or arms,Should supply autoclavable handles 4 Nos for each dome,The intensity of light should be uniform during the surgery,Ceiling mounted LED light with swivel arm, spring arm of 360 degree and light head should rotate 360 degree for easy to maneuver during the operation in any direction,Light mixing right inside the LED engines,Space saving design	
17	Medical graded hydraulic, multifunctional patient stretcher beds.	Must be height adjustable, easy to clean durable mattress(atleast 8 cm) with multifunction stretchers. Must have all the functions requiring for different patient positioning with the functions of high and low, Trendelenburg and reverse Trendelenburg positions, controlled by the pedals on both sides of the stretcher and must have break systems. The stretcher must be equipped with infusion rods, drainage hooks and foldable side rails. Large diameter wheels with atleast 8-inch silent casters, flexible and durable.	
18	OT Table (Ortho)	<p>Powered operating table with modular table top sections for general, specialist and orthopaedic surgery. 300kg maximum patient weight. Full length radiolucent top with integral x-ray cassette tunnel accessible from either end. Must have Corded handset controlling Trendelenburg, reverse Trendelenburg, lateral tilt, flexion / extension (inc. 90o chair position) and height. Interchangeable head, leg and infill sections with auto-locking mechanism Standby control panel situated on the column.</p> <p>High quality mattress that spans table top break for improved patient support .</p> <p>Good battery back up</p> <p>All attachments for general surgeries and ortho surgeries including armboard, orthopaedic conversion kit, tibia nailing kit and accessories and traction system.</p> <p>All exposed metallic parts shall be made from stainless, acid proof steel.</p> <p>The table base shall be mobile and shall have central brakes</p>	





19	OT Table (General and ENT)	<p>Good battery back up required, remote control, auxiliary control, manual override control must be there. 300kg maximum patient weight. Full length radiolucent top with integral x-ray cassette tunnel accessible from either end. Must have Corded handset controlling Trendelenberg, reverse Trendelenberg, lateral tilt, flexion / extension (inc. 90° chair position) and height. Interchangeable head, leg and inflill sections with auto-locking mechanism Standby control panel situated on the column.</p> <p>. All attachments for general surgeries and gynae surgeries including armboard and patient safety strap.</p>	
20	OT Table (Gynae)	<p>Good battery back up required, remote control, auxiliary control, manual override control must be there. 300kg maximum patient weight. Powered operating table, suitable for use in obstetrics and gynaecology. Large wheels for easy table positioning and complete 360° mobility. weight assisted articulated leg sections must be there. all attachments for gynae surgeries must be there. All attachments for general surgeries and gynae surgeries including armboard and patient safety strap.</p>	
21	Defibrillator	good battery backup, ECG, SPO2, AED mode, manual mode, pacer mode with adult and paediatric paddles with trolley and basket	
22	ECG Machine	<p>12 channels with interpretation are required for recording and analyzing the waveforms with a special software, The ECG Machine should be able to acquire all 12 Leads simultaneously and interpret them, Should acquire simultaneous 12 lead ECG for both adult and pediatric patients, Should have Artifact, AC, and low and high pass frequency filters, Should have good battery backup, Chest Electrodes Adult-(set of six) -02 sets, Chest Electrodes Paediatric-(set of six) -02 sets, Limb Electrodes (set of 4) - 02 sets, Power input to be 220-240VAC, 50Hz fitted with Indian plug. Trolley is required with basket, Should be a space saving one.</p>	
23	Electrosurgical Unit (Monopolar-bipolar)	<p>essential. Outputs of cut, coagulate and blend Maximum output 300 W for monopolar cut. Activation : Double pedal switch which may be used for the monopolar and bipolar functions . Hand-switch handle Bipolar electrode with pedal switch or with automatic Start/Stop system ( for coagulation only). The Unit shall stop automatically in case of internal error which shall be identified on Display and with audible alarm Memorization : User shall be able to use at least 4 working programs Safety : Neutral plate safety circuit shall control connections and contacts of Neutral Plate with Tissues: Defective Contact shall be notified with visual Alarm and immediate reducing of power Output circuit : floating - protected against defibrillator interferences . Shall have HF leakages less than 150mA through each electrode</p>	Control 



24	Fetal heart rate monitor (Doppler)	<p>Portable Probe Frequency 2.5 MHz continuous wave Features With Heart-Rate Monitor, Ultrasound Intensity &lt;10mW/sq. cm, FHR Measuring Range 50-240 bpm  FHR Resolution 1bpm  FHR Accuracy 1bpm  Accuracy: <math>\pm 1\%</math> or <math>\pm 1</math>bpm whichever is great.  Audible Output  Speaker: Minimum 1W.  Battery  Should operate minimum continuous 5 hours.  Weight  Not more than 3kgs Including Battery.</p>	
25	Fluids warming unit	<p>should be user friendly, safe to use. Fast flow fluid infusion system, Fluid warming integrated, Minimum 500 ml/minute flow, . Rigid pressure chambers should accommodate standard blood and crystalloid bag, Pole mounting facility/wheel facility, Touch buttons for control. All consumables for the equipment should be provided with temperature Indicator controller to maintain the temperature of the unit.</p>	
26	Automatic Pressure infuser	<p>Must be user firendly, light weight, pole mountable with large pressure infusion cuffs for arthroscopy,laproscopy and hysterectomy use.</p>	
27	Pressure infuser bag	<p>Reusable, washable/easy to clean, atleast 1000 ml capacity bag with stoplock valve and piston gauge for rapid infusion of fluids.</p>	







28	Video laryngoscope	Display: Reusable full colour TFT LCD display, 2.4", Batteries: 3 AAA batteries, Video adapter: Reusable video adapter with camera and white LED light. Blades: Disposable channelled and non-channelled blades, ET tube size for channelled blades: aBlade™ 2C: 4.5-5.5 mm.	
29	Fiberoptic bronchoscope	Sharp, smooth image with reduced moiré for routine bronchoscopy. Ergonomic control section. Easily insertable. Highly maneuverable. Compatible with high-frequency electrosurgical devices. 600 mm working length	
30	Vein detector	Color: 5 colors adjustable., Brightness: 3 degree brightness adjustable., Size: 3 kinds of image sizes., Mode: Normal model and Enhanced mode., Options for clinicians to highlight the veins or the surrounding tissue., Image Resolution :-720*480, Visible Vein Size ≥ 1 mm, Depth of Visible Vein ≤ 12 mm , Battery Working Time should be good with minimum charging time, Should be handheld and light weight.	
31	Surgical clipper	220-240 V, 55 min battery run time, 2500mAh Lithium battery, energy-efficient design must support patient preoperative hair removal in a single pass. Durable material with all size attachable blades.	
32	Medical graded high-quality spotlight	Illumination intensity 50,000 Lux $\pm 10\%$ Focus dia 15-20 cm Color temperature 4500 K (Colour Rendering Index) 93 Brightness control Touch Panel No. of LEDs atleast 15 to 20 LEDs lifetime 30000 hrs. Power supply 220V/50Hz AC	CRI 
33	Portable patient warming unit with cart and all accessories	Quiet, easy to use unit Safe, quick temperature response settings and hose-end temperature sensing for precise temperature delivery adjustable airflow provide safe, quick temperature response and greater heat transfer	Must have airflow Must have temperature sensors and 







34	Digital weighing scale for newborn	Capacity-0-15 kg  Precision-+/- 10 gr. Washable surface  Graduation-10 gr.	
35	UV sterilization units (UV lights)	Bacterial Lamp for Air Sterilization by means of UV Beams , UVC Category or Far UV (200nm< >280nm) with Strong bactericide effectiveness with a maximum strength situated at 265nm (253.7nm Mercury Spectra ) UVC shall be emitted thru vacuum ionizing Tube ( Weak permeation ) Useful power shall be at least 45% of nominal power (30W) LifeTime shall be at least 7500 Hrs Radiation shall be witnessed by means of blue Light emission Encased in Steel Sheet casing , Epoxy-painted. Ceiling or wall fixation Power supply:220V.AC50 Hz.	
36	operating ENT microscope with 250mm & 400MM lenses with video attachment	<b>Magnification:-</b> Motorized zoom, 1:6 ratio, adjustable via handgrips or foot control panel <b>Eyeieces :-</b> 10x wide-field eyepieces,12.5x wide-field eyepieces. <b>Tubes :-</b> Tilttable Tube 0 – 180°, f = 170 mm,Straight Tube, f = 170 mm,Foldable Tube f170/f260, including PROMAG function for additional 50 % magnification and integrated rotate function. <b>Focus:-</b> Internal, motorized, continuously adjustable, triggered via handgrip or foot control panel. <b>Illumination :-</b> Superlux 180 W xenon light source,100 W halogen illumination. <b>System operation:-</b> Multifunctional programmable handgrips,Wired 14 functions foot control panel,Wireless functions foot control panel. <b>Video:-</b> 1Chip HD Camera,HD video recorder,HD monitors,Adaptation of consumer (SLR) photo / video camera. <b>Laser attachment:-</b> Interface for laser micro-manipulator	
37	HEAD LIGHT FIBREOPTIC - COAXIAL	Very bright LED:-with a high service life(approx. 50,000 h),should be focusable for optimal illumination,Double-joint for perfect light positioning,Lithium-Ionic battery( 2 batteries required) -integrated and exchangeableWith charging indication andselector switch for power andeco mode, Holding clip for Lithium-Ionic battery required,Adjustable bow- should fits every head,LED Brightness: 50 Lumen / 60 kLux Illumination fi eld Ø: 25 up to 55 mm in 17 cm distance from the lamp, focussable Operating time: approx. 4 h (Eco mode) or approx. 2 h (power mode) Charging time: Should be minimum time Weight: Not more than Headlight: 200 g, battery 80 g	
38	video camera single chip with UNIVERSAL ADAPTOR	<b>1.</b> Should have excellent image quality and flexibility <b>2.</b> Should have video enhancement aperture control <b>3.</b> Image sensor :- 1 CCD chip1/3" <b>4.</b> Resolution :- > 470 lines(Horizontal) illumination :- 3 Lux <b>6.</b> Electronic shutter :- (1/50 - 1/100000 ) sec / 3 window sizes <b>8.</b> Automatic white balance adjustment and color adjustment <b>10.</b> Cable lenth :- 3.25 m <b>11.</b> Power supply :- 230 V <b>12.</b> Power consumption :- 25 VA max <b>13.</b> Outputs:- SVHS, composite etc..	<b>5.</b> Minimum <b>7.</b> Signal to noise ratio :- > 52 dB <b>9.</b> Gain control :- 3 levels,
39	Video Camera 3 chip	<b>1.</b> Integrated Image Processing Module 3 CCD-Chips for separate capture and processing of 3 primary colors for unprecedented color reproduction . <b>2.</b> Integrated Parfocal Zoom lens. <b>3.</b> Manual or automatic exposure control (patented) (1/60 s - 1/10000 s). <b>4.</b> Extraordinarily high horizontal image resolution of more than 750 lines, therefore even the finest variations in tissue structures are now perceivable on a high-resolution monitor. <b>5.</b> Automatic white balance with memory function. character generator. <b>6.</b> Composite, S-VHS and RGB compatibility. <b>7.</b> Two programmable function keys on the camera head for control of camera functions, video printer/recorder functions and other peripheral units. <b>8.</b> Digital Image Processing by means of an integrated image processing module. <b>9.</b> Multiple settings to select the preferred level of image enhancement. <b>10.</b> Digital contrast enhancement. <b>11.</b> Digital anti-moiré/anti-grid filter for use with fiberscopes.	









40	Coablator with bands	Requirements are controller which has ablation mode and coagulation mode, foot switch control, flow control unit and ENT system cart (Trolley). <b>Output power</b> :- Fundamental frequency 100 kHz, Voltage range 0-300 Vrms @ 100 kHz, Max output power 400 W @ 250 Ω, Operation temperature 10° C to 40° C	
41	Medical fogger machines with minimum 5 liters capacity	Must be electrical medical graded for aerial fumigation of OT, with high density fog droplets size. Capacity must be at least 2 to 5 liters with homogeneous fogging through 360° rotation. Must be of plastic material for easy cleaning.	
42	Nerve stimulator	Complete selection of stimulus patterns: twitch, train of four, double burst or tetanus, Twitch: 1 Hz or 2Hz, Tetanus: 50Hz: 50 pulses/second, 100Hz: 100 pulses/second, Train-of-Four: Repetitive 2 Hz train of four pulses with 10 second intervals, Double Burst: 2 groups of 3 pulses at a 20 millisecond repetition rate with the second 3-pulse burst beginning 750 milliseconds after the first burst. Repeat separated by 10 seconds, Instantaneous Constant Current Output Control, repeat or on-demand functions, Automatic Shut Off, Audible Response, good battery backup	
43	Automatic Instruments washer	Cycle should provide heavy duty cleaning, disinfection & drying in about an hour, touch control panel with easy read display, high pressure pump with pressure drop monitoring required, Double spray arm monitoring to ensure that the arms are rotating during the process which is critical to cleaning and disinfection performance, Reusable water filter, Built-in water softener - crucial to ensure that the cleaning performance is the same, whatever cold mains water is supplied. Active, closed door drying, Integral detergent dosing and monitoring system, Waste water outlet required, Can be run on mains cold water alone, Option to connect wireless autolog cycle data manager and e-Logbook or printer, Water Pressure: Min: 1.0 bar, Max: 10 bar. All accessories should be provided to use the machine	
44	Burr machine	Must be an advanced multi-speciality system which incorporates state of the art electronics, it must feature a powerful micro motor combined with an irrigating system. Must be foot pedal-controlled operating up to speeds of 40,000rpm, this system has to be suitable for all small bone surgery in the following specialities; Maxillo Facial, ENT and Spinal. All commonly available intra fitting hand pieces must be compatible for use together with this system with burs for Oral Surgery & ENT burs packed in boxes of either 5 or 10 Burs. A range of surgical handpieces both straight and angled with intra fitting must be available to fit the system.	
45	Portable ventilator	Need NIV, IV options with all modes including pressure and volume modes and Adult, neonatal pediatric options needed, should have good battery backup and all accessories required	



46	Blood warmer	Intended for use in operation theatre and ICU to deliver normothermic and warm blood and fluids at a very high infusion rate ,Fast flow fluid infusion system,. Fluid warming integrated , Air detection system integrated- ultrasonic air detection technology preferable , Automatic stoppage of flow when air is detected , Minimum 500 ml/minute flow ,Rigid pressure chambers should accommodate standard blood and crystalloid bag, Providing a constant pressure for rapid infusion ,On/Off toggle switch to quickly and easily pressurize chambers , Dual bag connection facility , Pole mounting facility/wheel facility ,Touch buttons for control , All consumables for the equipment should be provided for 20 usage.Operational Requirements:. The Blood Warming and Infusion Set should be user friendly, safe to use	
47	Suction with Irrigation system	Flow :- 0.01 to 1.0l/min,Pressure :- 50 to 400 mmHg,Suction:- 0.65 bar,Control -Touch screen, Remote control option,Predefined suction and irrigation parameters,Compatibility with various models of laparoscopic suction-irrigation instruments, Acoustic and visual warning in case of incorrect tubing placement, Non-Disposable sterilizable tubings, Large numerical and symbolic display of intra-cavity pressure., Disposable tubings D EHP-free,Fast and more accurate pressure control,Fluid flow rate management,Dedicated Priming Control and should have all accessories	
48	ABG machine	Should have good accuracy,printer is required,Fully automatic, upgradeable, fast electrolyte & blood gas analyzer,Fast analysis time – less than 60 sec,Back up of 6 hours with Rechargeable battery,Calibration – Auto Calibration before every sample is inserted. Essential Measured parameters; pH, pCO <sub>2</sub> , pO <sub>2</sub> , Hematocrit Lactate, glucose, Na <sup>+</sup> ,K <sup>+</sup> , Ca <sup>++</sup> . Calculated parameters should include Hemoglobin –cHgb, actual bicarbonate – cHCO <sub>2</sub> , total Carbon Dioxide – cTCO <sub>3</sub> , base excess of extra cellular fluid.- BE(ecf), base excess in Blood -- BE(b), Oxygen Saturation – cSO <sub>2</sub> . All these parameters should be measured simultaneously	
49	Bubble C PAP	Complete set up is required along with stand ,blender ,humidifier etc.	
50	Bed head units for post operative and preoperative areas	A universal Bed Head Unit suitable for Operation theatre, fixed on wall with delivery of medical gases, compressed air and vacuum to the patient's bed. Adequate light source and electrical sockets (atleast 3) must be present. Material must be durable, easy to clean and must withstand frequent vigorous cleaning.	

51	Wall suction unit with pressure regulator for central suctioning in bed heads	It must consists of suction regulator and suction container. With connecting to vacuum outlet of hospital and as regulating pressure properly, Must endures high pressure of sterilizing disinfection and ihave alarm sound operated before the substance overflows. Use gas : Vacuum for medical care. Standard pressure : 600 mmHg Maximum pressure : 760 mmHg Noise : below 60db in 1m streets. Lightweight construction. High impact plastic body Easy to clean.	
52	Emergency trolley	Must be made of aluminium and high density polythene. Atleast 5 drawers with. Accessories like sharp dispenser, mounted waste container, cardiac board, oxygen tank mount with security straps, IV poles must be there.	
53	Closed stainless-steel large size transportation trolley to carry sterilized items to and fro to the autoclave room	must be a medical graded stainless steel closed trolley suitable for transportation of sterilized items with atleast 2 shelves. Must have smooth interior without sharp corners and backcuts. Doors must close smoothly, handles on both sides for easy transportation.	
54	Digital adult weighing machine	Material must be durable and easy to clean with weighing capacity upto 150kg.	
55	wheelchair	Standard folding wheel chair with good quality and durable material.	
56	Patient shifting roller board	Must be made of good quality aluminium and other durable and easy to clean material. Maximum weight capacity mist be atleast 500 lbs with dimensions 71.5" x 20.5" (180 cm x 52 cm)	
57	portable IV stands	Must be made of SS (corrosion and rust free) and should be height adjustable, with wheels and atleast two hooks.	
58	Small SS mayo trolley	Must be of stainless steel, tray should be removable for easy cleaning.	
59	SS dressing trolley	SS trolley with smooth edges and wheels. Must have atleast two drawers to store items.	
60	Adult laryngoscope with all size blades	should have stainless steel baldes of all adult sizes with removable bulbs.	
61	Paediatric laryngoscope with all size blades	should have stainless steel baldes of all paediatric size with removable bulbs.	
62	Dressing drums small size (sterilizable)	dimension: 9" X 9" , round shape stainless steel drums with perforations and handle on lid for easy carriage.	
63	Thermoscan	Dimensions: 5.7" x 1.3" x 2.2" read temperature in Farenheit or Celcius. Fast, gentle, easy & accurate, making it great for checking for fevers in infants & kids with last temperature memory recall.	

64	Digital thermometer	Measurement Range: 32°C (89.6°F) ----- 42°C (89.6°F) Accuracy: 35°C (95°F) ----- 39°C (102.2°F) ±0.1°C (0.2°F)	
65	Adult Stethoscope	Musr have dual-sided chestpiece with small diaphragm that would make it ideal for pediatric patients, anatomically designed headset angled to meet the path of the ear canal, natural rubber latex-free materials to accommodate allergy sensitive users along with non-chill rim and diaphragm provide patient comfort	
66	Paediatric stethoscopes	Musr have dual-sided chestpiece with small diaphragm that would make it ideal for pediatric patients, anatomically designed headset angled to meet the path of the ear canal, natural rubber latex-free materials to accommodate allergy sensitive users along with non-chill rim and diaphragm provide patient comfort	
67	Neonatal stethoscopes	Musr have dual-sided chestpiece with small diaphragm that would make it ideal for pediatric patients, anatomically designed headset angled to meet the path of the ear canal, natural rubber latex-free materials to accommodate allergy sensitive users along with non-chill rim and diaphragm provide patient comfort	
68	BP apparatus	msut have high level accuracy. Cuff circumference must be atleast 45 cm. must be of light weight and made with an esy to clean material.	
69	Glucometers	must be a small, portable and battery operated device. The resultts must be displayed in no longer than 5 seconds.	
70	Diagnostic kit.	must be of a small sized packed kit which consists of autoscope, ophthalmoscope and all the required accessories.	
71	SS cidex chamber medium size	Must be made with stainless steel 202 grade with thickness of 0.50mm without having any sharp edges ,also , resistant to corrosion and free from cracks & leaks. The tary must have lid and perforated inside tray. The tray capacity must be atleast 10 liters: size 27"x6"x5"	

72	Bougie for adult	For all ORs and patient area use	
73	Paediatric bougie	For all ORs and patient area use	
74	Adult size stylet	For all ORs and patient area use	
75	Paediatric size stylet	For all ORs and patient area use	
76	SS kick basins with wheels	Stainless Steel tubular framework fitted with three 125 mm diameter castors with synthetic body, Bowl diameter must be at least 13" .	
77	Cardiac table height adjustable	must be height adjustable and made of hard plastic. Also, it must be easy to clean and durable. Dimensions : 85 X 44 X 100 cm	
78	Double side Linen hamper with lid	Must be made of stainless steel tubings and must have lids and foot pedal.	
79	Bed lockers (plastic)	Must be made of high quality plastic. Must have at least one pull out drawer and two shelves in it.	
80	Foot stool (SS)	Dimensions: 510*460*350mm. Stainless steel, two layers with anti slip rubber.	
81	Foot board (wooden)	For all ORs and patient area use	
82	Rotating stools (surgeon)	must be foot operating along with the features : Control: manual hydraulic foot pump, Backrest: ratcheting curved body support, Seat Width: 16.5", Seat Height: 21.25-28", Weight Capacity: 325 lbs and 5 Casters: hard rubber	
83	Narcotic cupboard (large)	Dimensions: 29.5"H x 23.5"W x 10.5"D (74.9 cm H x 59.7 cm W x 27.7 cm D) High security pick-resistant tubular lock, Unique lock sequences, full length stainless steel pinned door hinges and durable hard-baked powder coat finish.	
84	Lead apron stand with multiple arms (at least 10- 12 arms)	Dimensions: 940x110x1280 mm, Frame Material Mild Steel, Wheel Diameter 100mm. Coating, epoxy Powder.	

85	Lead aprons (large size)	Must be of large size, with full back cover and front overlapping design. 0.55 mm lead eq. apron that can weigh 3-7 kg with attenuation of 99%, material must be impervious to fluids, comfortable and easy to clean.	
86	Adult ambu bag	Material:silicone,PC,PVC,PE. Size: adult. Bag volume : 1500 - 2000ml. Stroke volume: 800ml. Weight 600gms. Each set must include all the accessories required along with it.	
87	Paediatric ambu bag	Material:silicone,PC,PVC,PE. Size: adult. Bag volume : 550ml. Each set must include all the accessories required along with it.	
88	Neonatal ambu bag	Material:silicone,PC,PVC,PE. Size: adult. Bag volume : 280ml. Each set must include all the accessories required along with it.	
89	MVA kit	The kit must contain: 1 Double Valve Syringe, Connectors, Lubricating Oil and 4, 5, 6, 7, 8, 9, 10, 12mm Cannula. Cannulas must be made from a non-toxic plastic, must have smooth catheter surface with round tip and must have universal connectors in the cannulas for connecting to the apparatus.	
90	Thyroid collar	Light weight lead core for protection; Velcro enclosure. 0.5mm Lead (pb) Equivalency Protection. Stain resistant and washable material. Easy to wear ; One size fits all.	
91	Pulse oximeter	Pulse Rate Measurement Range 25 BPM ~250 BPM. Blood Oxygen Saturation (SpO2) Range: 35%~100%. Battery power type with LED display	
92	Sterile container system (Large)/ instruments sterilization container	Lightweight aluminum construction,dimension: L23"X W11"X H5 1/2". Must have the following features like: 90° Stop handle protects staff from finger injuries during handling. Single motion latch design to secure container quickly to reduce time and hassle in OR. One step retention plate with audible "click" to secure filter to simplify operations and improve processing time. Accessories like full size stainless steel baskets with perforations, silicone mesh mats and silicone holding mats with perforations must be provided.	

93	Sterile container system (medium)/ instruments sterilization container	Lightweight aluminum construction.dimension: L18 1/2" X W11" X H6". Must have the following features like: 90° Stop handle protects staff from finger injuries during handling. Single motion latch design to secure container quickly to reduce time and hassle in OR. One step retention plate with audible "click" to secure filter to simplify operations and improve processing time. Accesories like full size stainless stell baskets with perforations, silicone mesh mats and silicone holding mats with perforations must be provided.	
94	Sterile container system (small) /instruments sterilization container	Lightweight aluminum construction.dimension: L11 3/4" X W11 1/4" X H6". Must have the following features like: 90° Stop handle protects staff from finger injuries during handling. Single motion latch design to secure container quickly to reduce time and hassle in OR. One step retention plate with audible "click" to secure filter to simplify operations and improve processing time. Accesories like full size stainless stell baskets with perforations, silicone mesh mats and silicone holding mats with perforations must be provided.	
95	Crib/Baby Cradle	Must have the folowing features: mobile baby cot with removable bassinet, Mounted on 4 swivel castors, heavy duty, 2 with brake.Must be with padded mattress, detachable for easy cleaning. Mattress cover must be removable via side zipper.	