













BIOMEDICAL SPECIFICATIONS






#	ITEM NAME	UNIT	AMOUNT	SPECIFICATIONS	PICTURES
1	Surgeon Control Panel (Item Code : T6-89-106)	nos	4		
2	X-Ray Viewer (Item Code : T6-89-107)	nos	6	Standard size, with led light, durable material of light weight.	
3	Double Door Sterilizer Machine (Item Code : T6-89-401)	nos	1	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 (Item Code : T6-89-402)	nos	2	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 on option for further safety in lieu of the standard castors.	
5	Portable Incubator (Item Code : T6-89-403)	nos	1	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 (Item Code : T6-89-404)	nos	Anaesthesia pendant 4 Surgical pendeant 4	Anesthesia Pendant: -(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 & AGSS-1 No. - Should have 10 electrical sockets and 2 RJ 45 data output connection facility. Surgical Pendant: -(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	
7	Anesthesia Unit (Item Code : T6-89-406)	nos	4	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, PEdiatric ,neonatal and adult modes should be supported	




8	Arthroscopic shaver system	nos	1	generator, handpiece with footswitch control and all accessories.	
9	Portable Scan Machine (Item Code : T6-89-414)	nos	1	Should have good battery backup, Matching trolley compact and lightweight, easy to transport. Cables and other connection accessories. Storage security lock/chain and key 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. 2.Small parts, PV (steered linear) 5.0-10.0 MHz. 3. Adult heart (harmonic echo) 2.1-3.8 MHz	
10	Suction Machine (Item Code : T6-89-415)	nos	5	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 vacuum outputs required,Autoclavable containers that can collect minimum 2x2000 ml.	
11	Patient Monitor (Item Code : T6-89-102)	nos	4	ECG,SPO2,NIBP,Temperature,ETCO2 including gas monitoring, pressure monitoring (ABP ,CVP) are required and should have good battery backup	
12	Patient Monitor (Item Code : T6-89-102)	nos	7	ECG,SPO2,NIBP,Temperature,ETCO2 ,pressure monitoring (ABP ,CVP) are required and should have good battery backup	
13	Syringe Pump (Item Code : T6-68-501)	nos	4	Good accuracy and battery backup is required,Should have stand accessories(Clamp)	
14	Infusion Pump (Item Code : T6-68-502)	nos	4	should have adult, pediatric and neonatal options and good battery backup,Should have stand accessories(Clamp)	
15	Water Distiller (Item Code : T6-86-701)	nos	3	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 (Item Code : T6-88-301)	nos	4	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.Right 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.	nos	7	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	nos	1 for ortho OT	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 inflill sections with auto-locking mechanism Standby control panel situated on the column. High quality mattress that spans table top break for improved patient support . remort control, auxillary control, mannual override control must be there. All attachments for general surgeries and ortho surgeries including armboard, orthopaedic conversion kit, tibia nailing kit and accessories and traction system. All exposed metallic parts shall be made from stainless, acid proof steel. The table base shall be mobile and shall have central brakes	Good battery back up required, All attachments for general surgeries and ortho







19	OT Table	nos	1 for general surgery and ENT OT	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. 90o chair position) and height. Interchangeable head, leg and infill sections with auto-locking mechanism Standby control panel situated on the column. . All attachments for general surgeries and gynae surgeries including armboard and patient safety strap.	
20	OT Table (Item Code : T6-21-903)	nos	for ophthal O	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 degree chair position) and height. Interchangeable head, leg and infill sections with auto-locking mechanism Standby control panel situated on the column. High quality mattress that spans table top break for improved patient support . All attachments for general surgeries and ophthalmic head section must be there.	
21	OT Table (Item Code : T6-21-904)	nos	1 for gynae OT	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.	
22	Bed Pan Washer (Item Code : T6-53-602)	nos	1	Requirements are Holder for 2 bedpans, Water jet nozzles for 4 urine bottles, Fold-down wire shelf for various re-usable items, In-built steam generator, Powerful re-circulation water pump, output 600 L/min, Framework, panels and wash chamber all mVapour condensate of stainless steel, Fully automatic microprocessor control, Independent temperature verification sensor and indicator, Cycle selection & start keys, Cycle complete indication: a green led, Fault indication: red flashing led3 rotating + 8 fixed wash jets, Integrated automatic detergent dosing system, Low level of detergent indication, Load temperature protection and over temperature cut-outs, Automatic foam and washing water pressure control system, Vapour condenser, Height adjustable feet etc	
23	Defibrillator	nos	5	good battery backup, ECG, SPO2, AED mode, manual mode, pacer mode with adult and paediatric paddles with trolley and basket	
24	ECG Machine	nos	1	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.	






25	Electrosurgical Unit (Monopolar-bipolar)	nos	4	<p>Electrosurgical unit shall be used to execute monopolar and bipolar surgery in many fields of application where high precision and reliability are essential. Outputs of cut, coagulate and blend</p> <p>Maximum output 300 W for monopolar cut. Activation :</p> <p>Double pedal switch which may be used for the monopolar and bipolar functions .</p> <p>Hand-switch handle</p> <p>Bipolar electrode with pedal switch or with automatic Start/Stop system (for coagulation only).</p> <p>The Unit shall stop automatically in case of internal error which shall be identified on Display and with audible alarm</p> <p>Memorization : User shall be able to use at least 4 working programs</p> <p>Safety :</p> <p>Neutral plate safety circuit shall control connections and contacts of Neutral Plate with Tissues:</p> <p>Defective Contact shall be notified with visual Alarm and immediate reducing of power</p> <p>Output circuit : floating - protected against defibrillator interferences . Shall have HF leakages less than 150mA through each electrode</p>	Control	
26	Fetal heart rate monitor (Doppler)	nos	1	<p>Portable Probe Frequency 2.5 MHz continuous wave Features With Heart-Rate Monitor, Ultrasound Intensity <10mW/sq. cm, FHR Measuring Range 50-240 bpm</p> <p>FHR Resolution 1bpm</p> <p>FHR Accuracy 1bpm</p> <p>Accuracy: $\pm 1\%$ or $\pm 1\text{bpm}$ whichever is great.</p> <p>Audible Output</p> <p>Speaker: Minimum 1W.</p> <p>Battery</p> <p>Should operate minimum continuous 5 hours.</p> <p>Weight</p> <p>Not more than 3kgs including Battery.</p>		
27	Fluids warming unit	nos	2	<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>		
28	Automatic Pressure infuser	nos	2	<p>Must be user firendly, light weight, pole mountable with large pressure infusion cuffs for arthroscopy,laproscopy and hysterescopy use.</p>		

29	Pressure infuser bag	nos	1	Reusable, washable/easy to clean, atleast 1000 ml capacity bag with stoplock valve and piston gauge for rapid infusion of fluids.	
30	Video laryngoscope	nos	1	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.	
31	Fiberoptic bronchoscope	nos	1	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	
32	Vein detector	nos	1	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 VisibleVein ≤ 12 mm ,Battery Working Time should be good with minimum charging time, Should be handheld and light weight.	

33	Surgical clipper	nos	2	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.		
34	Medical graded high-quality spotlight	nos	1	<p>Illumination intensity 50,000 Lux $\pm 10\%$</p> <p>Focus dia 15-20 cm</p> <p>Color temperature 4500 K</p> <p>Rendering Index) 93</p> <p>Brightness control Touch Panel</p> <p>No. of LEDs atleast 15 to 20</p> <p>LEDs lifetime 30000 hrs.</p> <p>Power supply 220V/50Hz AC</p>	CRI (Colour	
35	Portable patient warming unit with cart and all accessories	nos	5	<p>Quiet, easy to use unit Safe, quick temperature response and hose-end temperature sensing for precise temperature delivery provide safe, quick temperature response and greater heat transfer</p>	<p>Must have airflow settings</p> <p>Must have temperature sensors and adjustable airflow</p>	
36	Digital weighing scale for newborn	nos	1	<p>Capacity-0-15 kg</p> <p>Precision-\pm 10 gr.</p>	<p>Graduation-10 gr.</p> <p>Washable surface</p>	
37	UV sterilization units (UV lights)	nos	6	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.		

38	operating ENT microscope with 250mm & 400MM lenses with video attachment	nos	1	<p>Magnification:- Motorized zoom, 1:6 ratio, adjustable via handgrips or foot control panel</p> <p>Eyeieces :-10x wide-field eyepieces,12.5x wide-field eyepieces.</p> <p>Tubes :-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.</p> <p>Focus:- Internal, motorized, continuously adjustable, triggered via handgrip or foot control panel.</p> <p>Illumination :-Superlux 180 W xenon light source,100 W halogen illumination.</p> <p>System operation:- Multifunctional programmable handgrips,Wired 14 functions foot control panel,Wireless functions foot control panel. Video:- 1Chip HD Camera,HD video recorder,HD monitors,Adaptation of consumer (SLR) photo / video camera.</p> <p>Laser attachment:- Interface for laser micro-manipulator</p>	
39	HEAD LIGHT FIBREOPTIC - COAXIAL	nos	2	<p>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</p> <p>Illumination field Ø: 25 up to 55 mm in 17 cm distance from the lamp, focussable</p> <p>Operating time: approx. 4 h (Eco mode) or approx. 2 h (power mode)</p> <p>Charging time: Should be minimum time</p> <p>Weight: Not more than Headlight: 200 g, battery 80 g</p>	
40	video camera single chip with UNIVERSAL ADAPTOR	nos	1	<p>1.Should have excellent image quality and flexibility 2.Should have video enhancement aperture control</p> <p>3.Image sensor :- 1 CCD chip1/3" 4. Resolution :- > 470 lines(Horizontal)</p> <p>illumination :- 3 Lux 6. Electronic shutter :- (1/50 - 1/100000) sec / 3 window sizes</p> <p>Automatic white balance</p> <p>color adjustment 10. Cable length :- 3.25 m</p> <p>V 12. Power consumption :- 25 VA max 13. Outputs:- SVHS, composite etc..</p> <p>5.Minimum</p> <p>7.Signal to noise ratio :- > 52 dB 8.</p> <p>9. Gain control :- 3 levels, adjustment and</p> <p>11. Power supply :- 230</p>	
41	Video Camera 3 chip	nos	1	<p>1.Integrated Image Processing Module 3 CCD-Chips for separate capture and processing of 3 primary colors for unprecedented color reproduction . 2. Integrated Parfocal Zoom lens. 3.Manual or automatic exposure control (patented) (1/60 s - 1/10000 s). 4.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.</p> <p>5.Automatic white balance with memory function. character generator.6.Composite, S-VHS and RGB compatibility. 7. Two programmable function keys on the camera head for control of camera functions, video printer/recorder functions and other peripheral units. 8.Digital Image Processing by means of an integrated image processing module. 9.Multiple settings to select the preferred level of image enhancement.10.Digital contrast enhancement. 11. Digital anti-moiré/anti-grid filter for use with fiberscopes.</p>	
42	Coablator with bands	nos	1	<p>Requirements are controller which has ablation mode and coagulation mode,foot switch control,flow control unit and ENT system cart(Trolley).Output power:-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</p>	
43	Micro motor	nos	1	<p>1. Speed Variation : Maximum should not be less than 30,000 rpm</p> <p>2. Rotations : Clockwise & Anticlockwise</p> <p>3. Foot Control : Variable speed type</p> <p>4. Surgical type hand pieces suitable for ENT– Straight type & angled type.</p> <p>6. Set of Burrs: Tungsten Carbide Cutting and Diamond Polishing Burrs.</p> <p>(size 2mm. 3mm, 4mm, 5mm, 6mm, 7mm, 1mm and 0.8mm cutting and polishing- 2Nos each)</p>	

44	Medical graded foot operating scrub sink	nos	2	All must be stainless steel 304 Grade with polished, inside corners must be rounded for ease in cleaning. Thermostatically controlled mixing valve for proper water temperature Foot-pedal operated water control and must be with Soap dispenser. Must have atleast two or three bays as the space allows.	
45	suspension laryngoscope	nos	1	need specs	
46	Medical fogger machines with minimum 5 liters capacity	nos	2	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.	
47	Nerve stimulator	nos	1	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	
48	Automatic Instruments washer	nos	1	Cycle should provides 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 arm 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	
49	Burr machine	nos	2	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.	
50	Portable ventilator	nos	1	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	

51	Blood warmer	nos	2	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	
52	Suction with Irrigation system	nos	1	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	
53	ABG machine	nos	1	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, pCO2, pO2, Hematocrit Lactate, glucose, Na+,K+, Ca++. Calculated parameters should include Hemoglobin –cHgb, actual bicarbonate – cHCO2, total Carbon Dioxide – tCO3, base excess of extra cellular fluid.- BE(ecf), base excess in Blood – BE(b), Oxygen Saturation – cSO2. All these parameters should be measured simultaneously	
54	Bubble C PAP	nos	1	Complete set up is required along with stand ,blender ,humidifier etc.	
55	Bed head units for post operative and prooperative areas	nos	6	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.	

56	wall suction unit with pressure regulator for central suctioning in bed heads	nos	6	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 stirilizing 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.	
57	Emergency trolley	nos	5	For all ORs and post op area	
58	Closed stainless-steel large size transportation trolley to carry sterilized items to and fro to the autoclave room	nos	2	to carry sterilized items from this room to sterile store and from washing area to autoclave room	
59	Digital adult weighing machine	nos	2	For patient receiving area and preop	
60	wheelchair	nos	1	for patient transfer	
61	patient shifting roller board	nos	4	For each OR	
62	portable IV stands	nos	12	For all ORs and other patient areas	
63	Small SS mayo trolley	nos	10	For each OR and baby side + PACU and preop	
64	SS dressing trolley	nos	1	For preop area	
65	Adult laryngoscope with all size blades	nos	5	For all patient areas	
66	Paediatric laryngoscope with all size blades	nos	2	For baby area	
67	Dressing drums small size (sterilizable)	nos	10	For autoclave items	
68	Thermoscan	nos	6	For all ORs	
69	Digital thermometer	nos	2	For all ORs and patient area use	
70	Adult Stethoscope	nos	6	For all ORs and patient area use	
71	Paediatric stethoscopes	nos	3	For all ORs and patient area use	
72	Neonatal stethoscopes	nos	3	For all ORs and patient area use	
73	BP apparatus	nos	4	For all ORs and patient area use	
74	Glucometers	nos	6	For all ORs and patient area use	
75	Diagnostic kit.	nos	1	For all ORs and patient area use	



76	SS trolleys (2 tiers) for keeping surgical sets/kits	nos	8	For all ORs and patient area use	
77	SS mayo trolleys medium	nos	8	For all ORs and patient area use	
78	SS mayo trolleys small	nos	8	For all ORs and patient area use	
79	SS mayo trolleys large	nos	8	For all ORs and patient area use	
80	SS curved instrument trolley	nos	4	For all ORs and patient area use	
81	SS cidex chamber medium size	nos	10	For all ORs and patient area use	
82	Bougie for adult	nos	4	For all ORs and patient area use	
83	Paediatric bougie	nos	2	For all ORs and patient area use	
84	Adult size stylet	nos	5	For all ORs and patient area use	
85	Paediatric size stylet	nos	2	For all ORs and patient area use	
86	SS kick basins with wheels	nos	10	For all ORs and patient area use	
87	Cardiac table height adjustable	nos	4	For all ORs and patient area use	
88	Double side Linen hamper with lid	nos	4	For all ORs and patient area use	
89	Bed lockers (plastic)	nos	6	For all ORs and patient area use	
90	Foot stool (SS)	nos	8	For all ORs and patient area use	
91	Foot board (wooden)	nos	4	For all ORs and patient area use	
92	Rotating stools (surgeon)	nos	10	For all ORs and patient area use	
93	Narcotic cupboard (large)	nos	1	For controlled drugs	
94	Lead apron stand with multiple arms (at least 10-12 arms)	nos	1	For ortho OR	
95	Lead aprons (large size)	nos	10	For ortho use	
96	Adult ambu bag	nos	6	For all ORs and patient area use	
97	Paediatric ambu bag	nos	2	For Gynae OT	
98	Neonatal ambu bag	nos	1	For Gynae OT	
99	MVA kit	nos	2	For Gynae OT	
100	Thyroid collar	nos	10	For use in ortho OT	
101	Pulse oximeter	nos	1	For use in OT	

102	Pulse oximeter	nos	15	For autoclaving and storing sterile instruments	
103	Sterile container system (medium)/ instruments sterilization container	nos	15	For autoclaving and storing sterile instruments	
104	Sterile container system (small) /instruments sterilization container	nos	10	For autoclaving and storing sterile instruments	
105	Crib/Baby Cradle (Item Code : T6-21-801)	nos	2		