

ANNEX – B

LIST AND TECHNICAL SPECIFICATION OF THE MEDICAL EQUIPMENT

1- Children Hospital Quetta

Pathology Department

S. No.	Name	Specification
1.	<u>Multi Head Microscope</u>	<p>Multi Head Microscope. Detailed Requirement: Multi Head Microscope with five heads Standard microscope with infinity color corrected optics, Trinocular head, adjustable inter papillary distance, Tube head with an inclination of 30 Degree or more, Rotating quadruple/quintuple nose piece, 2-layer with mechanical sliding stage, XY moving range Condenser carrier, vertically/horizontal adjustable, Bright field condenser, N.A. of 1.25, Aperture iris diaphragm, LED illumination, 220V 50 Hz, AC</p> <p>User Adjustable Settings: Coaxial coarse and fine focusing system, with focusing stop mechanism, Variable intensity control system Eyepiece lenses:- 10x wide field, focusable, FN 20mm. 4xScanning lens, 10X, 20X, 40X, 100X oil immersion</p> <p>Accessories:</p> <ul style="list-style-type: none"> • Complete with standard and operation accessories; • Carrying case • Dust cover • Immersion oil <p>Camera: Built-in or Separate</p> <ul style="list-style-type: none"> • C mount type microscope camera • 8 or more frames per second at 5.0MP • Workable with windows operating system • Medical grade 5 or more mega pixel • Editable software • Memory : 8 GB or more • Compatible PC • Color LCD Display: • 17"inch or above (locally provided) HP, Samsung, Sony or Equivalent • Operating Manual with a Soft Copy • Service Manual with a Soft Copy <p>Optional: Polarizing lens /attachment</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
2.	<u>Fully Automatic Clinical Chemistry Analyzer</u>	<p>Throughput around 600 photometric tests per hour, Non-linear data reduction Positive sample ID In-process quality control analysis capability Refrigerated storage capacity, Multi-tray programming capability Sample capacity of 60 samples per tray, Provides top performance</p>

		<p>Delivers higher precision output rather quickly, Best In class operator interface Productivity and error reducing capabilities, Automated region management Annual proactive maintenance kit</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
3.	<p><u>Hematology Analyzer</u> <u>(5 parts)</u></p>	<p>Detailed Requirements: Automated Hematology Counter, Auto probe cleaning/wiping RS232/USB interface, 220V, 50 Hz operated</p> <p>User Adjustable Settings: Through put 60 samples/hour or more Minimum 24 parameters 5-Part differential including Hb, WBC, RBC, Hct, PLT, and derived values, Histograms for WBC, RBC and Platelet Sample Volume: Max 120 ul of whole blood or less</p> <p>Displayed Parameters: LCD display with touch screen Patient data entry and specimen recognition by keyboard/LCD Touch Screen/Bar Code Patient data and results storage for 10,000 Results or more</p> <p>Accessories: With specimen mixer and auto sampler; <ul style="list-style-type: none"> • With Built-in Thermal Printer or External Laser Printer • Consumables, reagents, calibrators, controls for start up • Compatible Imported Online Sine wave UPS with Battery backup for 30 minutes (Emerson, Liebert, Chloride, MGE, APC or Equivalent) • Operating Manual with a Soft Copy • Service Manual with a Soft Copy </p> <p>Note: Availability of Reagents and Kits must be ensured and guaranteed by the supplying firm in the local market.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
4.	<p><u>Coagulation Profile Machine</u></p>	<p>Operate easily with touching the color LCD. PT-INR result can be obtained within 2 min. Rapid Testing. Principle : Coagulation End Point Detection with magnetic particle, Dry Reagent Card Type, Sample volume: 25 µL Touch panel (Color LCD)</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>

5.	<u>Blood Bag Shaker</u>	<p>Detailed Requirement: Accept all major brands of bag available in the local market, Mixing of blood bags, LCD/LED Display of parameters, Self-Calibration Measuring and shaking of blood bags, Battery operated</p> <p>User Adjustable Settings: Weight range 1-999 gr/ml</p> <p>Displayed Parameters: Accuracy +/- 2 % Error Indication</p> <p>Accessories: With all Standard Accessories</p> <p>Optional: Bi-directional communication</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
6.	<u>Deep Freezer</u> <u>(-40 C) used for FFP storage</u>	<p>Detailed Requirement: Vertical type, Temperature Control, Control of temperature for freezer with interior light, Powerful cooling, Fan cooled condenser, Better cooling retention, Rust resistant body, 220V 50 Hz, AC</p> <p>User Adjustable Settings: Deep Freezer Temperature Range: -40 Deg C Capacity: 12 CFT</p> <p>Displayed Parameters:</p> <p>Accessories: Complete with standard and operation accessories; <ul style="list-style-type: none"> • 3-4 shelves adjustable polyurethane/Nylon coated wire shelves • Handle with lock • Front drain • Servo Controlled Voltage Stabilizer with surge protection facility </p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
7.	<u>Water Bath</u>	<p>Detailed Requirement: Microprocessor PID-temperature controller, Exterior body of steel sheet Double skinned tank, inner case made of stainless steel, Perforated stainless steel bottom tray, Temperature control for regulation of temperature, Gabled lid, Power Source 220V, 50HZ AC</p> <p>User Adjustable Settings: Capacity of 20-25 Liters Adjustable temperature range from +5C above ambient up to 100C Temperature accuracy of + 1%</p> <p>Displayed Parameters: Built in thermometer Digital display of temperature and time Adjustable timer for time setting</p>

		<p>Fault indication system Over temperature protection system</p> <p>Accessories:</p> <ul style="list-style-type: none"> • Three Racks of different sizes • Servo Controlled Voltage Stabilizer with surge protection facility • With drain tap <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
8.	<u>Blood Bank Refrigerator</u>	<p>Specifications: Stainless Steel Interior& exterior, Capacity: 180-200 blood bags of 450ml To have a seven day chart recorder, Automatic closing of the door Controlled fan cooling, Glasss door made with three layers of glass Digital LCD/TFT display, Temperature can be set at point of +4°C low and high alarm, Acoustical and visual alarm for temperature and power failure, Alarm system with battery backup, Operatable at 35 C ambient temperature Noise level ≤50 Dba, Interior lighting, Door opening alarm, Automatic defrosting, 5 or more blood bag storage drawers 100 chart papers</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
9.	<u>PLATELET INCUBATOR WITH AGITATOR</u>	<p>Detailed Requirement: Internal made of stainless steel Dual Pane, Tempered glass door Bacteria resistant Forced air circulation Key Lock RS 232 or USB Interface 220V 50 Hz, AC</p> <p>User Adjustable Settings: 40-50 Bags Storage Continuous control of temperature</p> <p>Displayed Parameters: Digital display for temperature Motion Failure Alarms</p> <p>Accessories: Complete with standard and operation accessories; • Chart Recorder</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
10.	<u>Digital Weight Machine</u>	<p>Detailed Requirement: Top loading balance, Changeable Battery</p> <p>User Adjustable Settings: Capacity 200 gm, Sensitivity 1mg</p> <p>Displayed Parameters: Digital display, Set zero or calibration</p> <p>Accessories: Complete with standard and operation accessories; • Spare Battery</p> <p>All prices must be Inclusive of installation</p>

		<p>Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
11.	<u>Centrifuge Machine</u>	<p>Detailed Requirement: Bench top centrifuge machine with angle rotor Built in speedometer, variable speed control, lid locking and braking device Maintenance free motor, Lid safety interlock, Noiseless and vibration free 220V 50 Hz, AC</p> <p>User Adjustable Settings: Speed 4500–5000 rpm. Maximum capacity 8/12 x 15ml Digital control of Timing up to 60min</p> <p>Displayed Parameters: Digital display of speed, timing Rotor Imbalance detection</p> <p>Accessories: Complete with standard and operation accessories • Servo Controlled Voltage Stabilizer with surge protection facility</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
12.	<u>Rolling Mixer</u>	<p>Detailed Requirement: Roll mixer for biological and hematological fluids with 6 or more rollers Double action system for rolling and rocking should be available 6 roller rocking and rolling motion for complete mixing, Continuous or timer operation, Drip tray contains accidental spillages, Can be used in cold rooms or incubators, DC brushless motor is quiet and maintenance free Cold room and incubator compatible, 220V 50 Hz, AC</p> <p>User Adjustable Settings: Selectable speed from 10-70 RPM Digital speed control Unit should be capable of handling tubes up to 35mm</p> <p>Displayed Parameters: LCD display Speed and timer can be viewed simultaneously</p> <p>Accessories: Complete with standard and operation accessories; • Servo Controlled Voltage Stabilizer with surge protection facility</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
13.	<u>FULLY AUTOMATIC MULTI WASH AND ELISA TEST READER</u>	<p>Detailed Requirement: Open system fully automated Microprocessor Controlled Micro Plate/Batch ELISA Analyzer with LCD Monitor and data recording system Unit with automatic sample identification, dilution, incubation, conjugation, washing and reading facility (The Reader should be open and programmable, selectable interpretation facility with LCD display, Optical density 3.0 or more) System should have programmable incubation and micro-plate shaking System Should be able to work in sessions, At least 3 integrated liquid buffer tanks, The washer should be of have multiple heads, LAN/ WLAN port to share the data with hospital network, RS 232 or USB Interfac, 220V 50 Hz, AC</p>

		<p>User Adjustable Settings: Programmable for 4 Plates of 96 wells with filters 405-620 nm with at least 6 filters, Throughput 4x96 samples test i.e. Infectious profile, Hormones Profile, Auto antibodies, Vit-D level, Immunoglobulin, Tumor markers, Auto immuno panel, 12 or more assays for micro-plate, Up to 12 assays profile Unit based on at least 2 micro-plate principal and 2 incubation positions System should have possibility to detect clot and to check volume intake The facility for Auto clot detection, sensor probes for reagent and samples have been added, System should have possibility to run 24 or more controls with 18 or more position for reagents, 8 or more suction channels and at least 8 dispensing channel</p> <p>Displayed Parameters: Digital display for results</p> <p>Accessories: Complete with standard and operation accessories; • Built-in or External Laser Printer • Imported Compatible Sine wave UPS for back up of up to 30 minutes (Emerson, Liebert,Chloride, MGE, APC or Equivalent)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
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Operation Theatre Department

S. No.	Name	Specification
1.	<p><u>Sterilizer Small Size.</u> <u>MEDIUM STEAM STERILIZER</u></p>	<p>High pressure Steam Sterilizer each with external steam supply as primary source with integrated steam generator as backup. Fully automatic, programmable, microprocessor type. Touch screen colored display and integrated printer. Automatic motorized/pneumatic two doors pass through system. Time cycled, working pressure 32 psi. Safety interlock. Temperature & Pressure recorder. Chamber pressure indicator. Cycle indicator to determine the phase of sterilization cycle. Program/Cycle selection. Complete with standard accessories and removable shelves, capable of taking both packets and containers of all standard sizes. Chamber capacity 04 STU, rectangular shape. Chamber, jacket and doors made of AISI 316 L/Ti. The system complete with built-in water saving system, automatic heat exchanger and Air detector. Two loading / unloading trolleys and one loading carts compatible with system. UPS of suitable capacity with minimum 15 minutes for Controller cum display for monitoring and controlling of parameters during power shedding provided/ installed by the manufacturer.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
2.	<p><u>Bipolar Diathermy Machine</u></p>	<ul style="list-style-type: none"> • Microprocessor based electrosurgical unit for normal and under water cutting usages. • Automatic self-test function.

		<ul style="list-style-type: none"> • Operation in Radio Frequency range. • Controls for cutting, coagulation, spray and blends. • Mono polar cutting power of 300 watts. • Bipolar cutting power of 80 watts. • Mono polar coagulation power of 100 Watts. • Bipolar coagulation power of 50 Watts. • Spray coagulation mode. • Floating output with bipolar coagulation. • Different gradations of blending of cutting and coagulation power. • Digital display of all controls and set values of cutting and coagulation power. • Audio and visual alarms on fault occurrence. • Earth free patient circuit. • Reusable Silicon patient plate. • Double paddle foot switch, explosion proof. • Monopolar handle with cord. • Bipolar forceps with cord. • Trolley with two shelves having anti-static lockable wheels. • 220V, 50 Hz. • Accessories/ electrodes: • Attachment for Monopolar Coagulation • Handle with 2 Activating Buttons • Knife Electrode, 25mm Long • Surgical Electrode, Ball-Shaped, 4mm Dia • Wire Loop Electrode, 10mm Dia • Needle Electrode, Str. Isolated, 125 mm • Ball Electrode, 5mm Dia • Needle Electrode, 100mm • Bipol. Cable for Forceps with Flat Socket <p>Bipolar Coagulation Forceps, 220mm</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
3.	<u>SPO2 Sensors</u>	<p>D-type 7 Pin, Count on Nellcor™ pulse oximetry to help, with SpO2 measurements that are tied to true arterial oxygen saturation and cardiac-induced pulse — Comfortable fit and light weight for patient satisfaction with highly reliable measurement, SpO2 sensor with stabilizing clamp on the sides to prevent accidental removal – to reduce technical alarms</p> <p>Multi-site sensor, P225G can be used for neonate foot as well as adult fingers</p> <p>Finger-tip sensor, P311C, covers less area of the finger and gives the patient more freedom for finger movement</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
4.	<u>Cardiac Monitors</u>	<p>For Peads</p> <p>For monitoring patients vital signs.</p> <p>Operating Features and Characteristics:</p> <p>Non fade TFT color display, Electro-surgical interference suppression/protection, Defibrillator protection, Freeze and cascade facility.</p> <p>Waveform trace speed; 12.5,25 / 50mm/sec. At-least 8 waveform display.</p> <p>Screen size: min. 15" TFT/LCD touch screen colour display.</p> <p>Parameters:</p> <p>ECG :</p> <p>Numeric: heart rate.</p> <p>3/5 and 10 lead ECG cable</p>

		<p>Numeric heart rate: 15 to 350 bpm or more. Waveform : real time and freeze ECG trace NON-INVASIVE BLOOD PRESSURE (NIBP): Method: oscillometric principle Numeric: systolic, diastolic and mean pressure Selectable auto inflate interval settings Rising cuff/continuous pressure display. TEMPERATURE: Numeric: temperature selectable in °C/°F. PULSE OXIMETRY: Numeric: 0-100% oxygen saturation measuring range. Waveform-plethysmograph pulse with pulse strength indication. Pulse Rate Range: 25 to 300bpm or more. Reusable sensor electrode. Reusable cuff. ARRHYTHMIA ANALYSIS: More than 23 Arrhythmia analysis RESPIRATION: Breathe rate display and settable apnea alarms. RR measuring and alarm range: 0 to 150 rm or more Sweep speed; 6.25, 12.5 mm/sec. Ac 220v/50HZ Built-in rechargeable battery for at least 1-2 hours. Accessories: The system must be complete with all sensors, probes, cables or any other accessories required for measuring all the above selected parameters. OTHER FEATURES: Trend data; graphical and tabular. Trend Data, Graphical data and tabular approx. 72 Hours. High & low Visual and audible indication of alarms. Built in Printer 3 Channel or more. Capability to interface with LAN/WLAN for Central Monitoring system. Connectivity with HL7 for transfer of Patient Vital sign or monitoring data. Monitors can be connected with Central station wirelessly / wired Optional Qty of Reusable sensors Mounting Local/Original</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least two (02) certificates are mandatory) Country of Manufacturing and Origin : USA , Europe , Japan All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
5.	<u>Laryngoscope</u>	<p>Complete set (4) With proper packing Set of 4Bulbs Rechargeable cells Imported and branded Certifications: CE/MDD,FDA, JIS/MHLW (At-least one certificate mandatory)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory)Country of manufacturer and Origin :USA / Europe/ JAPAN</p>

S. No.	Name	Specification
1.	<u>Patient Monitors</u>	<p>Specifications: For Adults , Peads and infants, For monitoring patients vital signs. Operating Features and Characteristics: Non fade TFT color display Electro-surgical interference suppression/protection Defibrillator protection Freeze and cascade facility. Waveform trace speed; 12.5,25 / 50mm/sec. At-least 8 waveform display. Screen size: min. 15" TFT/LCD touch screen colour display. Parameters: ECG : Numeric: heart rate. 3/5 and 10 lead ECG cable Numeric heart rate: 15 to 350 bpm or more. Waveform : real time and freeze ECG trace NON-INVASIVE BLOOD PRESSURE (NIBP): Method: oscillometric principle Numeric: systolic, diastolic and mean pressure Selectable auto inflate interval settings Rising cuff/continuous pressure display. TEMPERATURE: Numeric: temperature selectable in °C/°F. PULSE OXIMETRY: Numeric: 0-100% oxygen saturation measuring range. Waveform-plethysmograph pulse with pulse strength indication. Pulse Rate Range: 25 to 300bpm or more. Reusable sensor electrode. Reusable cuff. ARRHYTHMIA ANALYSIS: More than 23 Arrhythmia analysis RESPIRATION: Breath rate display and settable apnea alarms. RR measuring and alarm range: 0 to 150 rm or more Sweep speed; 6.25, 12.5 mm/sec. Ac 220v/50HZ Built-in rechargeable battery for at least 1-2 hours. Accessories: The system must be complete with all sensors, probes, cables or any other accessories required for measuring all the above selected parameters. OTHER FEATURES: Trend data; graphical and tabular. Trend Data, Graphical data and tabular approx. 72 Hours. High & low Visual and audible indication of alarms. Built in Printer 3 Channel or more. Capability to interface with LAN/WLAN for Central Monitoring system. Connectivity with HL7 for transfer of Patient Vital sign or monitoring data. Monitors can be connected with Central station wirelessly / wired Optional Qty of Reusable sensors, Mounting Local/Original</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least two (02) certificates are mandatory) Country of Manufacturer and Origin : USA /Europe /Japan All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
2.	<u>Phototherapy Unit</u>	<p>Overhead infant phototherapy unit; LED type</p> <ul style="list-style-type: none"> • Spectral irradiance High irradiance mode: 45-50µW/cm2/nm • Low irradiance mode: 20-25µW/cm2/nm • Wavelength range between 430-465 nm • LED lamps life 40,000 – 50,000 hours

		<ul style="list-style-type: none"> • Maximum noise level 35 dB (A) • Height adjustment 1200 mm to 1600 mm from light • Lamp unit dimensions 350 mm x 225 mm Approx • Lamp unit tilting position • Effective surface area 50 cm x 30 cm at 35 cm Approx , from the light source • Operating Voltage 220 V/ 50 Hz <p>Accessories:</p> <ul style="list-style-type: none"> • Eye protector pads <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
3.	<u>Incubator</u>	<p>Specifications: Primary Care Incubator Comprises Microprocessor controlled unit Infant incubator with cabinet stand consisting of: hood, front and rear access panel, 4 access ports and 2 iris ports. Mattress size: 15 inch x 25 inch approx. Tilt able mattress up $\pm 13^\circ$ continuously variable. Cabinet having 4 casters, 2 casters with friction brake. Front loading cabinet 2 doors with locking mechanism. Integrated X ray tray. Servo control system. The continuous measurement of temperature. LCD display with Touch panel, Weight monitor, skin temperature monitoring. Air mode control temperature range 23.0 °C to 37.0 °C or better Skin mode control temperature range 34.0 °C to 37.0 °C or better</p> <p>24-hour trends of Air temperature, Skin temperature (1 and 2), humidity, Oxygen concentration and Heater power, 1 week trends for weight gain and lost, Operating noise level in hood 45 dB or less, Micro air intake filter Servo control oxygen and humidity, Humidity control range 30% to 90% Reservoir capacity 1 liter, Oxygen control range 21% to 65% , Weighing scale: 300g to 7 Kg capacity</p> <p>Accessories: Gas tank mount. Shelf. IV pole.</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least two (02) certificates are mandatory) Country of Manufacturer and Origin : USA/ Europe/Japan All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
4.	HFO Ventilator	<ul style="list-style-type: none"> • Pre Mature Infant & Peads Ventilator System with High Frequency Ventilation • Microprocessor controlled ventilation system with HF ventilation • LCD/TFT color Monitors 10/ 12" (Procuring agency to specify) • Patient Range: Pre Mature Infant and Peads • Body weight range 0.3kg. – 20kg • Modes of Ventilation: <ul style="list-style-type: none"> ○ CMV ○ Pressure Control/PS ○ CPAP ○ SIMV ○ Volume Targeting ○ High Frequency Ventilation ○ NIV <p>CONTROL</p> <ul style="list-style-type: none"> • Set & measured parameters simultaneously

- Measurement Range/Specification
 - High Frequency Ventilation:5-10Hz
 - Inspiratory Tidal Volume: 2-150 ml or more
 - Respiratory Frequency:5-150bpm
 - Inspiratory Pressure:5-60cm H2O
 - Peep:20cm H2O
 - I:E Ratio:4.1
 - FiO2/O2 Delivery:21-100%
 - Monitoring Parameters for set and measured value simultaneously with Digital Display
 - Total breath rate
 - Oxygen concentration FIO2
 - Expired Minute Volume
 - Expired Tidal Volume
 - Peak expiratory flow
 - I : E Ratio
 - Peak Pressure
 - Mean Pressure
 - Lung Mechanics with pressure and volume loops
- OTHERS CONTROL AND FUNCTIONS**
- Back up Ventilation.
 - Microprocessor Gas Delivery System
 - Breath Circuit Compliance Compensation
 - Expiratory hold/Inspiratory Hold
 - Pressure / Volume and Flow Trigger Sensitivity.
 - Trigger Sensitivity Indication
 - Should able to operate on single air/and gas source at 21% Oxygen.
 - Mounted on trolley with lockable wheel
 - Autoclaveable Reusable Patient Tubing Circuit for Infant & Peads (O2 each)
 - Trend Data
- ALARMS**
- Apnea
 - AC Power Failure
 - High and Low Expired Minute Volume
 - High and Low Peak Air Way Pressure
 - High and Low breathe rate
 - FiO2 Variation
 - Low and High base line pressure
 - Gas Supply Source Failure
 - Low battery
- HUMIDIFIER:**
- Automatic compensation (Servo) controlled heated humidifier with temperature monitoring at air way and
 - Humidification camber with alarm for low/ high limits with water tarp in the patient circuit.
- POWER SUPPLY**
- 220V 50Hz with internal chargeable battery backup with compressor time for minimum 1 hr.
- PNEUMATICS**
- The unit will be driven on the central compressed air and oxygen
 - Should Have built-in Compressor
 - Should have provision of connecting external compressor
- Optional:**
 Nebulizer
 CO2 Analyzer
 APRV mode
- Certifications: CE/MDD,FDA, JIS/MHLW**
(At-least two (02) certificates are mandatory)
Country of Manufacturer and Origin : USA , Europe , Japan
All prices must be Inclusive of installation

		<p>Warranty: As per manufacturers standard warranty with parts and labour</p>
5.	<u>Infusion Pump</u>	<ul style="list-style-type: none"> ▪ Operates on any brand of infusion set. ▪ Automatic control of infusion rate independent of venous or arterial pressure ▪ Solution container height and solution viscosity. ▪ Bolus function automatic. ▪ Air bubble detector. ▪ Automatic pressure release after occlusion. ▪ Automatic switchover to keep-vein-open (KVO) rate of 1.0ml/hr (or previous rate, whichever is less). ▪ Compatible with commonly available Infusion sets. ▪ Portable operation from self-contained rechargeable battery with 03 hours or more operation time. ▪ ON/OFF: ▪ Light indicates main or battery operation ▪ Detects a "no flow" situation i.e. empty container <p>DISPLAY:</p> <ul style="list-style-type: none"> ▪ LED/LCD digital display which indicates flow rate ▪ Infused volume ▪ Volume to be infused ▪ Volume balance ▪ Infusion time ▪ Remaining time ▪ Battery capacity ▪ Occlusion level ▪ Medication name <p>INFUSION RATE:</p> <ul style="list-style-type: none"> ▪ 0.1-999.9 ml/hr in 1 ml increments <p>INFUSION TIME:</p> <ul style="list-style-type: none"> ▪ 99 to 95 hours <p>AUTOMATIC RATE CALCULATION:</p> <ul style="list-style-type: none"> ▪ On total volume + time <p>VOLUME LIMIT SELECTION:</p> <ul style="list-style-type: none"> ▪ From 1 -999 ml ▪ Accuracy of above parameters +/- 5% <p>KVO RATE:</p> <ul style="list-style-type: none"> ▪ 1– 3.0ml/hr <p>AUDIBLE AND VISUAL ALARMS:</p> <ul style="list-style-type: none"> ▪ Activated by: Empty Container ▪ Occlusion ▪ Low Battery ▪ Open Door ▪ Air-in-Line ▪ Internal Malfunction ▪ End of infusion. <p>BATTERY:</p> <ul style="list-style-type: none"> ▪ Rechargeable maintenance free dry batteries with 3 hours or more operation when fully charged. <p>SAFETY FEATURES:</p> <ul style="list-style-type: none"> ▪ Door locks while functioning <p>Certifications: CE/MDD, FDA, JIS/MHLW (At-least One(01) certificates is mandatory) Country of Manufacturer and Origin : USA , Europe , Japan All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
6.	<u>Oxygen Flow meter</u>	<p>within the pressure range given in the Device Specification. ... The Dialflow Meter is intended to control the flow of medical oxygen during oxygen therapy.</p> <p>1. Body brass+chrome plated</p>

		<p>2. Easy to read dual scal gauge with screw-on polycarbonate lens for durability.</p> <p>3. Precision engineered pressure compensated design flowmeter for precise flow.</p> <p>4. Flowmeter with easy to read tube and virtually unbreakable transparent polycarbonate outer cover for strength and 360 visibility</p> <p>5. sintered metal inlet filter to trap impurities</p> <p>6. Reliable external safety relief valve</p> <p>7. Flow range:0-15LPM/0-10LPM.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
7.	<u>Nebulizer (ultrasonic)</u>	<ul style="list-style-type: none"> • Compact and light-weight • Precise nebulization time setting • Quick drain of sink • Adjustable nebulization and flow level • Convenient handle for carry • Max nebulizing rate 2ml/min • Medicine cup capacity: 50ml • Setting of nebulization time: Continuously or from 0 to 60 min • Noiseless <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
8.	<u>SUCTION MACHINE</u>	<p>Portable Oil free pump mechanism. Mobile Suction Unit with twin jars (Polysulfone / Polycarbonate type) of capacity up to 2 or 3 liter each, Autoclaveable. Aspiration rate up to 25-30 liters/minutes or more at 650-900mm.Hg Vacuum continuously adjustable Over flow safety device Change over valve Suction tubing of silicone with coupling connection for each jar having metal suction tube Yanker type. Noise Level 45 dB or less. 220V/50Hz. Accessories:</p> <ul style="list-style-type: none"> • 10 x bacterial filter • Original trolley with lockable wheels. <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
9.	<u>Syringe Pump</u>	<p>Syringe pump for fluid administration.</p> <ul style="list-style-type: none"> ▪ Flow Rates: 0.1 - 400 ml/hr. (Approx) ▪ Digital display of set parameters. ▪ Universal Syringe acceptance capability for disposable, Plastic, Size, 10, 20, 50, 60 ml. ▪ Drive Accuracy. ±3%

		<ul style="list-style-type: none"> ▪ Display of drug name, Infusion rate, infused volume and volume to be infused. ▪ Automatic adaptation of controls according to syringe /infusion set. ▪ Quick freed/rapid infusion facility. ▪ Rechargeable battery and mains operated 220V, 50Hz. ▪ Safety alarm audible and acoustic for occlusion end of infusion, low battery. ▪ Battery back up 3 to 4Hours. ▪ Should be compatible with docking station. ▪ <p>ACCESSORIES: OPTIONAL : TCI / Equivalent Technique Docking station of two/four/six/eight or more.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
10.	<u>Iv stand</u>	<ol style="list-style-type: none"> 1.Stainless steel structure 2.With double or four hooks 3.Height adjustable from 50 to 92cm (Or others upon requirements) 4.Central ring for height adjustment 5.Based on stainless steel structure with 5 castors <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
11.	<u>Ophthalmoscope</u>	superior aspherical optics & 75 single diopter steps <ul style="list-style-type: none"> * unique optical system * xhl-xenon helogen technology * recessed multi-coated viewing window * dust proof housing * optics mounted on precison metal classis * ergonomic shape * soft orbital support * 7 aperture with seperate red free filter (ii)m-3000 <ul style="list-style-type: none"> * compact pocket ophthalmoscope * enhanced xhl xenon halogen technology * 2 piece hendle & head * 5 difference aparature * range of lances -20d to +20d * high quality handle-shockproof,strudy,non slip * attachment clip with integreted on/off switch * replacable batteries <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
12.	<u>Laryngoscope</u>	Complete set (4) With proper packing Set of 4Bulbs Rechargeable cells

		<p>Imported and branded Certifications: CE/MDD,FDA, JIS/MHLW (At-least one certificate mandatory)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
13.	<u>OVER HEAD WARMER</u>	<p>Baby warming system. Microprocessor controlled heating system. Mobile with antistatic castor, lockable, bumper guard.</p> <ul style="list-style-type: none"> • Manual heat output control : 0% to 100% • Skin and Manual temp control settings. • Display range of temperature: LED / LCD • Heating power/ source : 500 W Quartz/Ceramic • Selection for operating modes: Skin or Manual • Pivot arm technology for heating. Head can be moved in both directions allowing XRay procedure without moving the baby. • Integrated observation lamp • Integrated baby bed 700 x 450 mm approx. with secured plexi glass side panels, foldable down, with grid for X-ray. • Manual bed inclination. • Audio and visual alarms for Power failure, Skin Temperature deviations, High Temperature, Skin probe defective/ unplugged. • Lockable antistatic castors <p>Accessories :</p> <ul style="list-style-type: none"> • IV pole, • Skin probe (reusable) <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
14.	<u>Defibrillator</u>	<p>Biphasic transthoracic (external) defibrillator with LCD color display Synchronized output with ECG. Energy selection & delivery on control panel and paddles for external defibrillation. Energy selection and delivery on control panel for internal defibrillation. Charging Indicator The energy range should be adjustable for peads and adults up to 270Joules. Charging Time for full energy should be less than 05 sec Screen Size of approx. 5 inch colored. Display of HR, ECG through paddles and Lead I,II & III patient cable. Built in recorder for printing of full summery on standard 50mm paper. Alarms for High and low Heart rate, low battery warning. Built-in Rechargeable battery with charger for minimum 50 shocks At max energy. Auto tester/self check. External Paddles (Adult, Paed) AED facility with cable. Pacing facility AC 220V / 50Hz operated. Accessories: Complete with standard accessories, including reusable type Adult,</p>

		<p>Paediatric & Neonatal sensors and pedels trolley/cart Certifications: CE/MDD,FDA, JIS/MHLW (At-least two (02) certificates are mandatory) Country of Manufacturer and origin : USA /EUROPE/JAPAN</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
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Laundry Department

S. No.	Name	Specification
1.	<u>CLEANING & WASHING UNIT (01)</u>	<p>Cleaning & washing unit, Approx. 1.0 m to 1.5 m long consisting of Stainless Steel square meter Table Top 50 mm thick made of Ni-chrome steel/SS sheet. 01 Nos. Sinks made of stainless steel with the provision of counter top; equipped with drain valve and stand pipe and with siphon trap. 01 Nos. of Sink substructure cabinets with shelve approx 500x500x250mm. Cabinet is in-chrome steel/SS design. 01 Nos. of integrated Spray Guns for dematerialized water/ air with 08 cleaning nozzles, hose, table lead through</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
2.	<u>WASHING /DISINFECTION / DRYING UNIT (01)</u>	<p>Microprocessor controlled automatic powered two glass doors type. LCD display and integrated printer. Gas operated for Automatic rinsing, washing, disinfecting and drying with integrated internal electric element as backup heating. Capable of washing internal and external surface of items such as instruments, glassware, tubing, syringes, hollow wares etc. Stainless Steel construction. Floor model chamber size 6-DIN basket Capacity. The unit should be complete with baskets, trays, and stands for washing /disinfection of the items mentioned above. The unit should have complete exhaust air condenser for outgoing air with condensate drain. Operation 380-400V.</p> <p>ACCESSORIES. 1xWash Cart including tubes 1xOP Cart five levels 12xInstrument trays for OP Cart 1xRack for six pair shoes 1xWash cart for Instrument containers Transfer trolleys for cart</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>

Physiotherapy Department

S. No.	Name	Specification
1.	<u>SHORTWAVE DIATHERMY</u>	<ul style="list-style-type: none"> • Short wave diathermy unit with an automatic tuning function suitable for "continuous" and "pulsed" therapy with specially designed microprocessor controls with different parameters i.e. adjustable intensity, continuous and pulsed mode, treatment time and patient safety system etc • The unit should be suitable for thermal and athermal treatments with thermal effects and deep heating with continuous emission. • The therapy should be in continuous mode with increment the circulation and stimulation in metabolism. The continuous mode should has an output of 390W or better with administering the energy and molecular activation without thermal sensation. • The pulsed emission should be used for inflammation and presence of osteosynthetic material. The pulsed mode should have peak power output of 1000 W or better. • The unit should be built in a robust design with digital control panel and operation. • The unit must complies with the all prevailing international standards <p><u>The Unit must be configured with below Technical parameters and features</u></p> <ul style="list-style-type: none"> • Functions should be controlled by microprocessor with digital output power setting and digital indication of the power • The Indication modes should be Continuous and pulsed • Timer memory function with at 28 minutes or above with adjustment each mint • The unit must be capable for wide range of electrodes • The unit must be built on metal housing or better with 4 castors (2 with brakes) • Electric Power: 220 / 240 50/60 Hz • Consumed power 700 VA maximum or better • The unit must be equipped with frequencies i.e. 27,12 MHz \pm 0.6% or better • HF power: 390 W continuous / 1000 W pulsed (peak) or better • Pulse time: 400 μs or better • Adjustable pulse frequency from 100 to 300 Hz with steps of 50 Hz or better <p>The unit must be supplied with below standard accessories 01 x Main Unit Short Wave Diathermy 2 Nos. High Frequency Cable 2 Nos. <u>Schliephake electrode dia \varnothing130 mm</u> or better 2 Nos. <u>Schliephake electrode dia \varnothing 80 mm</u> or better 2 Nos. <u>Silicone electrode 12 x 18 cm with cable</u> or better 2 Nos. <u>High frequency arm for shortwave</u> 2 Nos. <u>Felt 14 x 22 cm</u> or better 2 Nos. <u>Cotton cover</u> 01 x Test Lamp with <u>Velcro - 5 cm</u> 01 x power cable Country of Origin: USA/UK/Japan/Europe</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
2.	<u>ULTRASONIC THERAPY APPARATUS</u>	<p>The ultrasonic therapy apparatus should be portable and lightweight with easy to operate function, electronic timer etc.</p> <ul style="list-style-type: none"> • The unit must have pulsed and continuous emission and it should be stable at high values • It should be in anatomic formed head in synthetic material with a surface of 5cm² on 1 MHz or better and it should conform to safety norms on lateral radiation • It should be connected to an interferential or medium frequency unit for combination therapy. <p><u>The unit must be equipped with below technical parameters</u> Mains: 230-240V \pm 10% - 50/60 Hz or better Consumed power: 55VA or better</p>

		<p>Frequency: 1 MHz - 3 MHz Surface of head: 5 cm² or better Effective intensity: 3 Watts/cm² or better Output power: 15 Watts max or better US emission: continuous, pulsed 1/10 and 1/5 or better Pulse frequency: 100 Hz or better Digital timer: 28 minutes - settings p/r minute or better Below <u>Standard Accessories</u> should be supplied with each unit</p> <ul style="list-style-type: none"> • 01 No. <u>Ultrasonic Head 5 cm² - with 1 MHz</u> frequency • 01 No. <u>Ultrasonic Head 5 cm² - with 3 MHz</u> frequency • 01 No. <u>Ultrasonic Head 2.5 cm² - with 1 MHz</u> frequency • 01 No. <u>Ultrasonic Head 2.5 cm² - with 3 MHz</u> Frequency • 01 x Jel • 01 x Power Cable • 01 x Packing Caser • <p>Country of Origin: USA/Japan/Europe Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
3.	<p><u>LUMBAR AND SERVICAL TRACTION UNIT</u></p>	<ul style="list-style-type: none"> • Microprocessor controlled traction unit for lumbar and cervical traction • The unit should be based on continuous and intermittent mode and with facility for operator to use a large number of preset treatments with memory capacity up to 45 different codes • The unit should be capable for static, progressive, regressive, cyclic and combined modes. • Remote control unit with emergency stop button for patient safety • LCD display indicates all the functions including end of traction • Windows based system • Power: 110-230V - 50/60 Hz or better • Consumed power 75 VA or better • Maximum measurement range from cervical treatment 24 kg, lumbar treatment 85 kg or better • Treatment time form 1-55 min or better <p>STANDARD ACCESSORIES 01 No. Thoracic Traction Harness 01 No. Thoracic Harness Straps 01 No. Pelvic Lumber traction harness 01 No. Cervical Traction head halter 01 No. Spreader bar 01 No. cervical pillow with cover 01 No. Stool</p> <p>Country of Origin: USA/Japan/Europe Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
4.	<p><u>TENS</u></p>	<ul style="list-style-type: none"> • Professional Tens stimulator handheld with at least 1390 memory programs • Two independent circuits may simultaneously apply different protocols during the same session. • The programs should be divided into two macro groups, for men and for ladies with customized training resources satisfying the requirements of both groups, with analgesic, Tens, Rehab, Microcurrents and iontophoresis. • The unit must be equipped with specific protocols i.e. Tens, iontophoresis, micro currents, restoration, stimulation and muscle development, speed, endurance and slimming. • Must be based on 4 independent channels or better

		<ul style="list-style-type: none"> • Power: mains 230V - 50/60 Hz or rechargeable battery or better • Biphasic rectangular with intensity 115ma, Pulse width: 10-440 µs and frequency 1-115 Hz or better • Iontophoresis with intensity 115 mA, Pulse width: 45µs and Frequency 75-115Hz operation with continuous / alternating • Workable Accessories • 02 Nos. Green Patient Cable • 02 Nos. Yellow Patient Cable • 01 No. Rechargeable Battery • 01 No. 5x5cm adhesive electrode <p>Country of Origin: USA/Japan/Europe Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
5.	<u>Neuromuscular stimulator</u>	<p>Neuromuscular stimulator Channel: Dual channels, isolated between channels Pulse Amplitudel: 0 ~ 80mA = 0 ~ 40 Volts, adjustable (at 500 ohm load) Pulse Frequency (Hz): 2 ~ 120 Pulse Width (µs): 50 ~ 300 Contraction (On) Time (sec): 2 ~ 99, adjustable Relaxation (Off) Time (sec): 2 ~ 99, adjustable Waveform: Asymmetric biphasic square pulse. Timer Control (mins): 5 ~ 90 mins or continuous Stimulation Modes: S, C, A Power Supply: 9V DC square shape battery Size (D x W x H): 0.9" x 2.3" x 4.0" (24 mm x 59 mm x 101 mm) Weight (including battery): 4.4 oz (124 g) Safety standard: EN EN60601-1, EN EN60601-1-2 , EC 60601-2-10 Operation Ambient Temperature Range: 50 ~ 95° F (10 ~ 35°C) Operation Ambient Humidity Range: 20 ~ 90% RH Storage & Transportation Temperature Range: 32 ~ 158° F (0 ~ 70°C) Storage & Transportation Humidity Range: 20 ~ 90% RH Country of Origin: USA/Japan/Europe</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory)</p>
6.	<u>INFRARED AND ULTRAVIOLET THERAPY UNIT</u>	<ul style="list-style-type: none"> • Infrared and Ultraviolet therapy combine unit for body wellness • The infrared lights for intense warmth to muscles and joints and UV light for tanning and stimulation of the Vitamin D. • The unit must be mobile type with 2 Nos. 300 Watts UV and 2 Nos. 1100 Watts IR lamps • Digital display with touch screen with optimal tanning area: 190 x 65 cm or better • Power: 2.0 kW or better • The unit must be foldable for easy operations and movement. <p>Country of Origin: USA/UK/Japan/Europe Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
7.	<u>Goniometer</u>	<p>An Instrument for the precise measurement of angles or allow an object to be rotated to a precise angular position, especially are used to measure the angles b/w face and crystals</p>
8.	<u>EMS</u>	<p>8 Built in Burst, Modulated and Conventional TENS programme. 2 additional customisable TENS programmes.</p>

		<p>4 Triggered EMS/STIM programmes using the remote switch. 4 Conventional EMS/STIM programme. 1 Customisable Remote or Conventional EMS/STIM programme.</p> <ul style="list-style-type: none"> • Clear LCD screen displays Intensity, Rate, Pulse Width, Time and Programme Mode. • Selecting another programme or altering the power is a simple button press. • Pulse Rate Range: 2 Hz - 200 Hz. • Pulse Width Range: 50 µS to 450 µS • Time setting up to 12 hours for custom TENS programmes and 90 minutes for custom EMS programmes. • Constant Current (to extend your battery life). • Lock mode function for recording time in use, average current and locking the units parameters. • Automatic switch off after 4 minutes if unit is not in use <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
9.	<u>Massager /Vibrator (thrive)</u>	<p>Specifications: Power supply: 220-240V 50/60 Hz 13 VattSkorost: ~ 3800 r / min (intensive massaging) / 2500 rev / min (slight massaging) .The max duration of continuous operation: 30 minut.Razmer: 230 x 100 x 140 mm .Ves 950 gramm.Dlinna cable 2 m.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
10.	<u>COG WHEEL</u>	<p>All 16g tube constructed, 100cm dia wheel revolve smoothly with C.I drum & is fitted with calibrated sensitive resistance mechanism, the resistance is controllable from zero to maximum. A 360 deg. scale is provided on the drum to measure and record the degree of revolution from either direction. Arc of motion can be varied from 30cm to 80cm dia. Wheel is mounted on three laminated wall boards of which two boards are fitted with Two stainless steel channels (813mm H x 60cm W)to give wheel 50cm height adjustment to suit each patient. Oven baked finish</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
11.	<u>Electric Treadmill</u>	<ul style="list-style-type: none"> • Treadmill with motor 4.0 HP DC - speed: 0.8 - 20 km/h with belt thickness: 2,0 mm or better foldable unit • Treadmill Running area: 50 x 149 cm with Monitor: 6.0" color LCD backlit or more • Maximum Patient 145 kg or better <p>Features</p> <ul style="list-style-type: none"> • Monitor: 6.0" color LCD backlit • Programs: 1 manual - 16 preset - 2 user - 2 heart rate - 1 body mass or better • Elevation: 0 - 11% or better • Shock absorbing unit • Power: 220V, 50/60Hz • Built in rehabilitation handle bar • Contact heart rate • Telemetric HR receiver • Transport wheels • Bluetooth and USB charger • Tablet support <p>Country of Origin: USA/Japan/Europe All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>

Radiology Department

S. No.	<u>Name</u>	Specification
1.	<u>C.R System</u>	<p><u>Specifications:</u> Computerized Radiography system with compatible UPS: Exposure size: 14"x17" /14"x14" / 11"x14" / 10"x12" / 8"x10" Sampling pitch: 2 Types: 80µm to 180 µm or better. Digital Gradation level: 4096 Levels (12-Bit), Processing Capability: up to 80 Plates / hour (14"x14"/14x17" (180µm), Cassette Feed: 45 seconds for (14"x14"/ 14x17" (180µm) or better Console, Image Processing: Automatic Body Part recognition, Automatic Processing Parameter study. Image Output: Maximum: Host: 2ch for Normal, 1ch for backup Printer: 1ch for Normal, 1ch for backup. DICOM Support: Basic Gray scale Print Management (SCU) Storage (SCU) Modality work list Management, Modality performed Procedure step Gray scale Standard Display Function (Print Output), Computer Desktop (branded from original manufacturer), CPU Core i 7 Processor: 3.4 GHz, Bit Processing: 64 Bits, Cache L1-L2: 8MB CD/DD/Super Drive Support Installed Processor Core i7 Hard Disk: 1TB, Memory Ram type: DDR3, Number of memory /Ram Slots: 2 Slots, Memory Ram Size: 8 Giga Byte, supported up to 16 Giga Byte, USB: 06 USB Ports or better Monitor :Medical grade monitor, color TFT (LCD) (model must be mentioned) Size: 19" or better, Resolution: 1280x1024 or better. Brightness: 300 Cd/m2 or better. Contrast Ratio: 2000:1 or better With brightness stabilization, Back light sensor. Power saving mode & USB Port.</p> <p>Accessories: AC power cord, Signal Cable, USB cable. Cassettes / Imaging Plates Active dual tray system: 14"x17" (2Nos), 14" x 14" (2Nos), 11" x 14" (2Nos), 10" x 12" (2Nos), 8" x 10"(2Nos) Laser / thermal with dual tray system: Laser Source: Semi-conductor Laser Films Size: 14"x17" (35x43cm), 14" x 14" (35 x35cm), 11"x14" (28x35 cm), 10"x12" (25x30 cm) 8"x10" (20x25 cm) Film: dry LASER image recording firm Image Memory: Print Memory (64MB/Standard) Number of Pixels: 78.6 um (300dpi) or better Image Data Input: 8 -Bits /12-Bits. Output Gradation: 16834 levels (14-Bits) Image Mode: Pixel Replication / Function Interpolation Process Processing Capability: 90-Sheets/ hour or better Protocol: DICOM Print Management. Compatible UPS branded with dry batteries</p> <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least two (02) certificates are mandatory) Country of manufacturer and Origin USA/ Europe/ JAPAN All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
2.	<u>Digital Color Doppler Machine</u>	<p><u>Specifications:</u></p> <ul style="list-style-type: none"> • Fully Digital Beam Former Having 800,000 Or More Digital Processing Channels • With Integrated Data Management System Having 1TB Hard Disk Drive for Still and Cine Clips Storage. • Modes: 2D/M-Mode, Doppler, Pw, Hprf Doppler, Color Flow Imaging • System Capability 2 – 18MHz or More • Tissue Harmonic Imaging • Viewing Depth: 38cms or better.

		<ul style="list-style-type: none"> • Frame Rate: 1000 FPS or better. • Built-In Cine Loop: 2000 Frames/900 MB or better. • Real Time Freeze & Image Magnification Ability better than 4x Pre & Post Processing • Sweep Speed: Slow, Medium, Fast • 10.4" or better Touch Command Screen for easy Operation of the System. • System Dynamic Range: 50 to 250db or better <p>Doppler Mode Specifications:</p> <ul style="list-style-type: none"> • Pulse Repetition Frequency Range; • PWD: 0.3 To 50 KHz • Doppler Beam Steering • On Line 4-Ports for Trans-thoracic Probes • Doppler Beam Steering and Bi-Directional Stereo Audio • Color Doppler • PW Doppler Must Be Continuously Steerable In Color Blood Flow Imaging • Mode in Real Time • Colorized Spectrum Display • Tissue Harmonic Imaging With Two Frequencies • 2D Image With Color Flow • Power Doppler • Auto Image Optimization/Quick Scan for Single Button Optimization Of All Scanning Parameters Including STC Overall Gain And Doppler Spectrum. • Compound Scanning Using Frequency As Well As Spatial Compounding. • Trapezoid Imaging for Linear Probes • Measurement Package: • To Provide Comprehensive Software Package For Measurement Of Distance • Circumference, • Area, Time, Depth etc. • System Complete With Following Facilities and Accessories: • 21.5-Inches or better Color Monitor • Shearwave Elastography in convex, linear, TVS probe. • Standard Probes: • 2.0 – 5.0 MHz or More Multi-Frequency Convex Probe with shearwave elastography • 4.0 – 10 MHz or More Multi-Frequency Linear Probe • 4.0 – 10 MHz or More Multi-Frequency TVS Probe • STD Recording Devices: • Built-In CD/DVD Recorder For Digital Image Storage • Built-In / Separate Compatible Imported Online Ups (Minimum Backup Time greater than 10 Minutes) • B/W Thermal Printer. (Model/ Make must be mentioned) • Input power 220VAC 50Hz <p>Optional (must be quoted separately):</p> <ul style="list-style-type: none"> • Strain Elastography. <p>Country of Manufacturer and Origin: USA /EUORPE/ JAPAN Certifications: CE/MDD,FDA, JIS/MHLW (At-least two (02) certificates are mandatory)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
3.	<u>ECG Machine</u>	<p>06 channels ECG Machine</p> <ul style="list-style-type: none"> • Should be portable and lightweight • ADC:24bits, resolution:1uV/LSB • Voltage 220 volts, 50hz • Display 5" or more • Simultaneous 12 leads acquisition • Must have continuous display of patient heart and rate • Must have integrated pediatric analysis. • Support the 12-lead ECG analysis program for complete ECG Analysis reports with measurement data table should be provided. • Must be able to indicate at least four critical values that require immediate clinical attention. • Printer: High Resolution and in built thermal array printer.

		<ul style="list-style-type: none"> • Battery Capacity: Must be 5 hours without printing. • Can save up to 550 ECGs in internal memory or more • Complete with Patient Cable. • Reusable Electrodes Set. • ECG Rolls 20 Nos. • Gel 5 liters and Standard Accessories with each unit. <p>Country of origin and manufacturing : USA / EUROPE / Japan Certifications: CE/MDD,FDA, JIS/MHLW (At-least one certificate mandatory)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
4.	<u>ECHO Machine</u>	<ul style="list-style-type: none"> • A complete dedicated digital Echocardiography unit for wide range of premium performance application of cardiovascular imaging in pediatrics and adult. • Digital Echocardiography Machine • Fully Digital Beam Former Having 800,000 Or More Digital Processing Channels With Integrated Data Management System Having 1TB Hard Disk Drive for Still and Cine Clips Storage. <p>Modes:</p> <ul style="list-style-type: none"> • 2D/M-Mode, Doppler, Pw, Cw&Hprf Doppler, Color Flow Imaging • System Capability 2 to 18Mhz or More, M-Mode, Tissue Harmonic Imaging, • Tissue Doppler Imaging With Pulse Wave TDI Doppler Spectrum. • Viewing Depth: 33cms or better. • Frame Rate: 1000 or better. • Built-In Cine Loop: 2000 Frames/900 MB or better. • Real Time Freeze & Image Magnification Ability better than 4x Pre & Post Processing • Sweep Speed: Slow, Medium, Fast • 10" or better Touch Command Screen for easy Operation of the System. • System Dynamic Range: 50 to 280db or better • Doppler Mode Specifications: • Pulse Repetition Frequency Range; <ul style="list-style-type: none"> ▪ PWD: 0.3 To 52Khz ▪ CWD: 1.4 to 52KHZ • Doppler Beam Steering • On Line 4-Ports for Trans-thoracic Probes. • Doppler Beam Steering and Bi-Directional Stereo Audio. • Color Doppler • Both CW & PW Doppler Must Be Continuously Steerable In Color Blood Flow Imaging Mode in Real Time Colorized Spectrum Display. • Tissue Harmonic Imaging With Three Frequencies • 2D Image With Color Flow • Power Doppler • Auto Image Optimization/Quick Scan for Single Button Optimization Of All Scanning Parameters Including STC • Overall Gain And Doppler Spectrum. Compound Scanning Using Frequency As Well As Spatial Compounding. • Trapezoid Imaging for Linear Probes. <p>Measurement Package:</p> <ul style="list-style-type: none"> • To Provide Comprehensive Software Package For Measurement Of Distance Circumference, Area, Time, Depth etc. And Separate Software For, Cardiovascular Including Venous Doppler • Study, IMT (Intima Medial Thickness) • Wall motion tracking for strain rate imaging. <p>System Complete With Following Facilities and Accessories:</p> <ul style="list-style-type: none"> • 21-Inches or better Color Monitor. • ECG Including Cables and Transducers/Electrodes. <p>Standard Probes</p> <ul style="list-style-type: none"> • 2-5 MHz or More Multi-frequency Sector Probe For Adult. (Model and Make must be mentioned) • 3-6 MHz Sector Probe for Paeds. (Model and Make must be mentioned) <p>STD Recording Devices</p>

		<ul style="list-style-type: none"> • Built-In CD/DVD Recorder For Digital Image Storage • Built-In / Separate Compatible Imported Ups (Minimum Backup Time > 10Minutes) • B/W Thermal Printer. (Model/make must be mentioned) • Optional: TEE. Probe (Trans Esophageal probe) for adults • Optional: TEE probe for Paeds (Model and Make must be mentioned) • Optional: Contrast Harmonic Imaging <p>Certifications: CE/MDD,FDA, JIS/MHLW (At-least two certificates are mandatory) Country of Origin: USA /EUROPE / JAPAN</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour</p>
5.	<p><u>DIGITAL</u> <u>ELECTRO</u> <u>ENCEPHALO</u> <u>GRAPH</u> <u>32-</u> <u>CHANNELS</u></p>	<p>NO. OF CHANNELS: 32 Channels of EEG (7 active/reference pairs). TYPICAL MAINS NOISE REJECTION: >120dB at 50 or 60 Hz minimum. NOISE: <2 µV. IMPEDANCE MEASUREMENT RANGE: 0-50K ohms. SENSITIVITY: 19 STEPS BETWEEN 0.5 – 1000 µV/MM. SAMPLING RATE: 24 KHz PER CHANNEL. STORAGE RATE: 250 Hz or 500Hz. ANTI-ALIASING FILTER: >40 dB. CALIBRATION: SQUARE WAVE. 50 µV, 0.5 HZ. LOWCUT FILTER: (0.16 – 10HZ) at 250Hz or 500Hz storage rate. HIGHCUT FILTER: (10 – 100 HZ) at 250Hz storage & (10 – 200Hz) at 500Hz storage. NOTCH FILTER: 50 OR 60 HZ. CONNECTION: USB connection to acquisition PC. ANALOG-TO-DIGITAL CONVERSION: 20 BIT. PHOTIC STIMULATOR: Rates from 1-60Hz SYSTEM WHICH MUST CONFORM TO ALL SAFETY STANDARDS AND APPROVED BY THE I.E.C and FDA. PRINTING SYSTEM : B &W LASER PRESET MONTAGE: PROGRAMMEBALE.</p> <ul style="list-style-type: none"> - UNIT SHOULD HAVE USER DEFINED VIEWS AND SETTINGS. - UNIT SHOULD HAVE MEASUREMENT TOOL FOR EEG WAVEFORM. - UNIT SHOULD HAVE REPORT GENERATION UTILITY. <ul style="list-style-type: none"> - UNIT SHOULD HAVE DATABASE (MANAGEMENT OF PATIENT FILES AND USER SETTINGS). - UNIT SHOULD HAVE FEATURE OF IMPEDENCE CHECK. - UNIT SHOULD BE ABLE TO PERFORM SPLIT SCREEN, TIME, MONTAGE DISPLAY FACILITY TO EEG MACHINE. - UNIT SHOULD HAVE SATELITTE VIEW FEATURE TO VIEW AT LEAST 100 PAGES ON ONE SCREEN. - RETROSPECTIVE PAPER SPEED, FILTER, AND SENSITIVITY RESCALING. - POWER REQUIREMENT: 220V AC, 50 HZ, SINGLE PHASE, WITH HIGH FREQUENCY FILTERS, FLOATING INPUT, STABILIZED POWER SUPPLY. - DIGITAL VIDEO. <p>ORIGINAL CART. OFFERED EEG SYSTEM SHOULD HAVE MULTI-MODALITY OPTION SUCH AS (EEG+EMG), IF REQUIRED IN THE FUTURE.</p> <p><u>OPTIONAL:</u></p> <ul style="list-style-type: none"> - HL7 CLIENT. - REMOTE INPUT BOX. - REMOTE VIEW. <p>Certifications: CE/MDD,FDA, JIS/MHLW At-least One certificate is mandatory) Country of Origin: USA / EUROPE / JAPAN All prices must be Inclusive of installation</p>

Warranty: As per manufacturers standard warranty with parts and labour

2. Fatima Jinnah Chest & General Hospital, Quetta

1.	<p><u>Beds Motorized for ICU & HDU</u></p>	<p><u>BED MOTORIZED IN 43.1 ELECTRONIC LOW BED, 4 MOTORS</u></p> <ul style="list-style-type: none"> • Electrical operated backrest, height and largest adjustment • Electrical operated Trendelenburg, Reverse Trendelenburg, fowler and vascular position • Patient handset • Foot end nurse control unit • Footrest adjustment by ratchet • Auto-CPR • Retracting backrest and largest • Auto contour • Hygienic design (PP), lockable and tuck away side rails • Easy cleanable, hygienic, HPL Mattress platform • Removable head and footboards • Electrostatic epoxy painted metal frame. • Height adjustable stainless steel IV pole. • Plastic crash bumpers. • Central Lockable Castors, double 125mm • Comprehensive range of accessories available. • Angle gauge for back. • Angle gauge for Trendelenburg and Reverse Trendelenburg positions. • Cardiac chair position with single button • Shock position with single button • Semi-Fowler position with single button • Bed exit position with single button • Examination position with single button • Electronic CPR with one touch button • Activation key at remote control to prevent any undesired positions • Dual sided manual CPR levers at backrest • Rechargeable Battery Backup • Bed size extension <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
2.	<p><u>CARDIAC MONITORS</u></p>	<p>12" or above high resolution screen, ECG, NIBP, Temp, SpO2, Respiratory rate 5 leads or more ECG waveform display Adjustable alarms, resistance to interference of defibrillation and ESU. 1 lead acid rechargeable battery with backup up of up to 4 hours Electrode + cable + wires: Adult, 3-lead, Snap, AHA MR cable + 512F Adult Finger Tubing + Adult cuff (24-35 cm)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>

3. Sandeman Provincial Hospital Quetta

1	<u>Dialysis Machine</u>	<p>Online Clearance Monitoring-OCM Blood Pressure Monitor –BPM Endotoxin Filter (Diasafe Plus) In Line Bicarbonate Mixing Module (bibag) Color TFT-LCD Monitor 10.4” Sodium & UF Profiling. Built –in backup battery Ultrapure Dialysis, at flow capabilities adapted to the need of high efficiency dialysis. Automated dialysis Preparation (testing, filling, tube Threading, etc.) Heat disinfection at 80Co decalcification, & rinsing in one process. Accepts pediatric blood line systems Processor-controlled syringe pump w/ bolus capability.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
2	<u>Water Treatment System</u>	<p>Premature Capacity: 1500 Liters Per Hour</p> <ul style="list-style-type: none"> • Duplex System with two RO Modules • Dead space Free System design for Improved hygiene • High Performance Composite polyamide Spiral wound membranes • Water saving Technology for the efficient water Consumption • Duplex Carbon Filter with auto programmable control head • Duplex Softener with auto Programmable contol head • Electronic Hardness Monitor with illuminated text display cartage filter 05 Micron Loop • PEX-A Type Loop piping with the Strain Less Steel Machine Connections <p>Other Features</p> <ul style="list-style-type: none"> • Emergency operation of RO unit, in case of Electronic system Failure • RO Water bypass in case of conductivity and temperature alarm <p>Optional: Hot Disinfection of permeate loop</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
3	<u>Infant Incubators</u>	<p>Air Mode Control. Set Temperature and air Temperature are displayed Separately. Natural air flow Humidity. Multiple failure alarm Indication RS-232 Connector. Configured with fixed Neonate bilirubin phototherapy equipments with blue fluorescent lamp. Optional Configuration: The Light Source of fixed Neonate Bilirubin phototherapy equipments LED blue light.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
4	<u>Infant Radiant Warmer</u>	<p>Pre-Warm Warm mode, manual mode and baby mode controlled by micro-computer. Set Temperature and baby temperature can be displayed separately. Horizon Angle of heater head and inclination of the bassinet can be adjusted. The panels around bassinet can be disassembled.</p>

		<p>APGAR timer Failure alarm Indication.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
5	<u>Infant Phototherapy Lamp/ On Caster / Blue Light</u>	<p>Provides prescribe measurement of blue specter light intensity to ensure the optimum phototherapeutic treatment. Safety – Treatment effectiveness - Time Savingpeutic treatment Simple handling & Easily Legible display perfect optical system & measurement accuracy Safety and Calibration Easy cleaning Long Battery Life Adjustable Stand Both Tilting up to 90 Degree in one direction and effective irradiation of patient entire body. Anti-slip pads on the lamp surface.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
6	<u>Infant Portable Monitors</u>	<p>Portable baby Electric monitor with 220 V 8.4 Touch Screen 3.5 Kg and 5-Lead ECG Display. Thermal recorder with high resolution printing, paper width 75-80 mm Up to 4- hour built in battery working time auto manual operation mode, modes for display & printing (3 lead & 12 lead + rhythm), Lead-off detection and display, recording time 3- 20 seconds Selectable printing formats: standard 3 leads, Rhythm lead, 3/2 leads, manual 1 leads, 100 patient data storage</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
7	<u>Ultrasound Doppler</u>	<p>1. The system should be State of the art with full Digital Technology with Broadband beam former & should be for Whole Body applications including Abdominal, Ob/Gyn, Cardiac, Cerebrovascular, Peripheral Vascular, Musculoskeletal, Transcranial & Small Parts Imaging such as Breast, Thyroid, Testes, Intracavitary applications like Transvaginal & Transrectal, & Intraoperative applications. System should have the capability of Elastography and contrast imaging.</p> <p>2. The broadband beamformer should be capable of simultaneously processing ultrasound signals from 1 MHz to 17 MHz.</p> <p>3. The system should incorporate facility for High-resolution 2D. M Mode, PW, CW, Colour Flow Imaging, Power Doppler Angio, Duplex, Triplex, Imaging modes. Should be capable of Dual Live display of grayscale reference image with colour Doppler image.</p> <p>4. The equipment should have minimum 50,000 Digital Channels or more, and should be upgradable on the site to higher number of Channels. Higher Number of Channels is preferred</p> <p>5. The system should employ the state of the art Transmit Real Time Compound Imaging Technology with Multiple Transmitted lines of sight of at least 9 lines. Wherein Multiple Coplanar Images from different</p>

		<p>viewing angles are obtained and combined into a single compound Image at real-time frame rates for Improved visualization & better image quality in Abdominal & Vascular Imaging & to virtually clean up the image of artifacts.</p> <p>6. System should have advanced Image Processing algorithms to analyze between targets and artifacts so as to sharpen target anatomy and reduce the speckle & artifacts for improved Image quality.</p> <p>7. The system should have 256 Greyscale or more</p> <p>8. The system should offer a scan depth up to 30 cm</p> <p>9. The system shall have at least three universal transducer ports with electronic switching capability allowing any transducer to be connected to any port.</p> <p>10. The system should support Convex, Linear, Sector, Volume, Matrix Array and static transducers. It should support volume imaging by freehand, mechanical, and electronic methods</p> <p>11. The system should support multiple fully sampled live Volume Imaging, for both adult and paediatric imaging</p> <p>12. All transducers should have Broad Bandwidth technology for extreme High Resolution 2D Imaging. The system should be able to capture all frequencies in a single Probe, without the need for user selection</p> <p>13. The system should have a high dynamic range of 160 Db or more</p> <p>14. The system should have facility for zoom (real-time and frozen image) and manipulation of Image through pre processing and post processing with Cine loop viewing of Images of all modes</p> <p>15. System should have Cineloop review facility in individual and mixed modes with memory upto minimum of 2000 images and 100 seconds of M Mode data.</p> <p>16. The system should offer a very high frame rate upto 500 frames per second. The system shall be able to perform mechanical 4D acquisitions at 30 Volumes per second. Please specify</p> <p>17. There should not be any reduction or change in pulsed Doppler PRF/scale when moving between duplex pulsed wave Doppler and simultaneous/triple modes. Also, system should offer automatic single button optimization of Doppler baseline and scale.</p> <p>18. The system should have Harmonic Imaging for Tissues for hard to image patients. The system shall support Tissue Harmonic imaging capability on phased, linear, 3D and curved array transducers. Tissue Harmonic Imaging should be available in colour flow imaging, M-Mode and 3D rendering modes.</p> <p>19. System should be able to work in combined mode of Harmonic Imaging and Real time Compound Imaging to get excellent Image quality. The system shall offer Tissue Harmonic Imaging in Power Doppler imaging mode for improved sensitivity and specificity in differentiating blood / agent from tissue</p> <p>20. The system should have Contrast Harmonic Imaging and should have optimization settings to detect the Contrast Agents. Please specify other advanced Technologies to perform better Contrast Harmonic Imaging</p> <p>21. System should offer real time extended field of view Imaging (Panoramic imaging) up to 100 cm with curved and linear transducers. All grayscale imaging must be capable of real time spatial Compounding during the panoramic imaging</p> <p>22. The system shall quantitatively calibrate panoramic images, allowing the user to perform area, circumference, distance and curved-linear distance measurements.</p> <p>23. The system shall support simultaneous display of volume and multiplanar reconstructed (MPR) views.</p> <p>24. The system should have the in-built software tool for imaging MPR. Thick Slice, and slice plane views</p>
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8	<u>Echocardiography machine</u>	<p>gold cardiovascular portable echo machine. It has tissue enchantment imaging (TEI) Tissue velocity mapping(TVM) Multi view imaging Contrast tuned imaging Real time adaptive algorithm</p>
9	<u>Fowler/motorized beds with movable head & foot sides</u>	<p>Matters top having full fowler adjustment with the help of screw cranks. 4 section lying area, full catch adjustable by ratchet mobile on 4 quality castors dia 125 mm (2 diagonal lockable)fitted under the legs of head & foot penal. 3 sections of adjustable lying area made of wire mesh and fixed portion made from reinforced steel sheet. Having employed the international manufacturing technique and lates machinery in the production line with final</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
10	<u>Cardiac monitors With Central Plasma System</u>	<p>12'' or above high resolution screen, ECG, NIBP, Temp, SpO2, Respiratory rate 5 leads or more ECG waveform display Adjustable alarms, resistance to interference of defibrillation and ESU. I lead acid rechargeable battery with backup of to 4 hours Electrode + cable + wires: Adult, 3-lead, Snap, AHA MR cable + 512F Adult finger Tubing + Adult cuff 924-35 cm)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
11	<u>BIPAP machine</u>	<p>Respironics BIPAP machine Made by USA</p> <p>Pressure range 4-25CM Ramp time 0-45 mins Starting ramp pressure : 4 to EPAP Filters: foam and optional ultra fine Device setup LCD/ Control Screen / push button</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>

12	<u>CPAP machine</u>	<p>Respironics CPAP machine Made by Netherlands</p> <ol style="list-style-type: none"> Should be light weight, easily portable, reliable and sturdy CPAP generator: <ul style="list-style-type: none"> <input type="checkbox"/> Option of pressure setting from 3 to 12 cm H2O <input type="checkbox"/> Should have a detachable overflow container <input type="checkbox"/> Should deliver the intended pressure constantly and accurately <input type="checkbox"/> Easy to clean/sterilize <input type="checkbox"/> The gradations (on the sliding rod) should be easily visible from distance of 6 feet. Air Oxygen Blender <ul style="list-style-type: none"> <input type="checkbox"/> FiO₂ concentration should be adjustable (21-100%) and accurate Humidifier <ul style="list-style-type: none"> <input type="checkbox"/> Should automatically regulate the required temperature <input type="checkbox"/> Should be a closed system for filling up water <input type="checkbox"/> Should have ports for heater wire as well as temperature probe <input type="checkbox"/> Should display the chamber temperature and temperature at the patient end. Patient circuits <ul style="list-style-type: none"> <input type="checkbox"/> Should have the option of using both disposal and reusable circuits <input type="checkbox"/> Disposal circuits should be readily available and reasonably priced. <input type="checkbox"/> Should be able to accommodate a heater wire: heat loss should be minimal along its length. Battery back up <ul style="list-style-type: none"> <input type="checkbox"/> Should have a battery back-up for at least 45-60 min. Safety Features <ul style="list-style-type: none"> <input type="checkbox"/> Limiting the delivered pressure in the event of an occlusion <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
13	<u>ECG machine</u>	<p>3 channel digital ECG MACHINE WITH ATLEAST 4.3'' led display, Automatic ECG interpretation and analysis complete digital filter to avoid baseline drifting and interfering from ac, emg Auto-adjusts baseline to optimize printing position full digital processing, real time ECG wave form simultaneous 12 – lead acquisition Thermal recorder with high resolution printing, paper width 75-80 mm Up to 4- hour built in battery working time auto manual operation mode, modes for display & printing (3 lead & 12 lead + rhythm), Lead-off detection and display, recording time 3- 20 seconds Selectable printing formats: standard 3 leads, Rhythm lead, 3/2 leads, manual 1 leads, 100 patient data storage</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
14	<u>Suction machine</u>	<p>Heavy duty electric suction machine complete with 2x3.5 liters suction jar AC 220V, 50/60 Hz, sturdy cluster free design. Stainless steel instrument shelf. Stainless steel handles and bottle bump protectors. 2x3.5 liters polycarbonate jars with over flow safety., Separate safety bottle with bacterial filter to protect pump. Technical specification:. Suction rate at 50 Hz:48 ipm Suction rate at 60 Hz: 60 ipm Ultimate pressure: 740 mmHg or 29.13 inch Hq Pump type : piston type oil less, maintenance</p> <p>All prices must be Inclusive of installation</p>

		<p>Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
15	<u>BP apparatus</u>	<p>BP apparatus, Floor Stand type, mobile type, durable, mercury sphygmomanometer, Measure scope 0 – 300 mmHg, sub division 2 mm, accuracy +/- 3 mmHg Adult and thigh size cuffs and tubes, cuff tray, metal support pole and iron base with casters.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
16	<u>Crash carts trolley</u>	<p>Emergency carts trolley with specialized accessories for emergency Delivered fully assembled, no tools required Top constructed of solid high density polyethylene 100% Total Replacement Lifetime Guarantee 31 x 42 x 24 inches (width height depth); 88 pounds Lightweight aluminum composite construction Multiple accessories available for any application 5 inch enclosed high compressive nylon rubber casters Adjustable and customizable built in track system Made of aluminum and high density polyethylene 5 inch casters standard 5 drawers</p>
17	<u>Wheel chairs</u>	<p>Foldable wheel chairs with chromic body & Rexene sheet & black plastic rim</p> <p>Chromed steel frame Fixed Armrest Fixed Footrest Solid Castor Solid rear wheel Front Width (Including Wheels)-64cm Front Width (Without Wheels)-46cm Rear Wheel Radius-58cm Front Wheel Radius-20cm Height-86.5cm Net Weight-17kg Gross Weight-18.9kg</p>
18	<u>Stretchers</u>	<p>Stretchers Trolley constructed from MS steel pipe with frame of 16SWG & with SS top 143 – A – 55 Rubber bumpers guards on all side for wall safety Provided with oxygen cylinder holder safety belt & pillow fitted two stretched top</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
19	<u>X-ray machine</u>	<p>Computerized radiopaque system (CR machine) Approx. dimensions (mm): 800 x 600 x 700 for single-plate reader; 1300 x 600 x 800 for multi-plate reader Approx. weight (kg): 20-400 (100 typical) for single-plate reader; 200 for multi-plate reader Consumables: Photostimulable-phosphor imaging plate(s) housed in cassette(s)</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>

<p>20</p>	<p><u>ICU / CCU Ventilators</u></p>	<p>Assisted/Controlled Pressure Control Ventilation (PCV), Assisted/Controlled Pressure Support Ventilation (PSV), SIMV(VCV)+PSV SIMV(PCV)+PSV Mandatory Minute Ventilation (MMV) Continuous Positive Airway Pressure (CPAP) 12.1 inch TFT color screen, big screen could show more information. Screen could be rotated freely, suitable to operate in any angle and height With heater device to prevent water into ventilator Could show Paw-t、 Flow-t、 Volume-t、 Paw-V、 Flow-V five waveform at the same time, also could show one or Several waveforms according to our operation. Curve size, time scale, pressure-flow ratio adjustable, watch the details more good. Curve pause function, could watch details. Flow, pressure two trigger functions, could effect at a same time. Automatically inspiratory synchronous nebulizing function, nebulizing time adjustable; 100% Oxygen inspiratory function, oxygen inspiratory time is adjustable. High, medium, low- grade alarm function; Alarm record functions, could record the last 100 pieces of information, show alarm grade, alarm time and the alarm Parameter. Pressure, volume, time respiratory mode security, could inspect pressure in inspiratory phase, volume, time exceed the Regulated value, turn into expiratory, ensure patient safety. Volume security function, keep the minimum tidal volume in pressure mode. Adjust MMV function automatic, adjust inspiratory pressure and breathing frequency, approaching the target tidal Volume and minute ventilator. VGA connector could output the screen signal to other screen.</p> <p>All prices must be Inclusive of installation Warranty: As per manufacturers standard warranty with parts and labour Certifications: CE/MDD,FDA, JIS/MHLW (At-least One (01) certificates is mandatory) Country of manufacturer and Origin :USA / Europe/ JAPAN</p>
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