



**Appendix No. 2**  
**The Technical Specifications**  
**Related to Tender No. 2/2025/YEM**

| NO.   | Description  |
|-------|--|
| ICU-1 | <b>General ICU</b>   |
| 1     | <b>Lung Ventilator for Adult &amp; Paediatric (with compressor or turbine)</b>   |
|       | Ventilation Modes: volume and pressure type of breaths , Patient types Adult & paediatric .  |
|       | A/C, SIMV, CPAP/PEEP, PSV, BIPASIC , VG and Bi level ventilation modes and newer modes .   |
|       | Pressure Limited Ventilation in volume control Tidal volume 5 - 1500 ml or more than 1500 ml .   |
|       | Automatic regulation of flow in volume controlled breaths  |
|       | Non-Invasive Ventilation   |
|       | Apnea back-up ventilation active in spontaneous breathing modes.   |
|       | Flow acceleration control  |
|       | Automatic leakage compensation ensuring accurate user defined setting to the patient.  |
|       | Adjustable tube reseatant compensation   |
|       | Manual inspiration   |
|       | Integrated pneumatic nebulizer facility.   |
|       | Oxygen enrichment 100% for suctioning procedure  |
|       | Measurement of resistance and compliance   |
|       | Monitoring of patient data   |
|       | Flow acceleration  |
|       | Monitoring of inspiratory O2 concentration   |
|       | <b>Accurate measurement of flow and volume :</b>   |
|       | Airway pressure 0- 99 cm H2O approx.   |
|       | Breathing rate:0-150 bpm or more than 150 bpm  |
|       | I:E ratio (variable) : 1:0.5 to 1:6 or better  |
|       | Flow 3 - ≥ 160 l/min or more than 160 l/min  |
|       | Peak inspiratory pressure : 0 - ≥ 120 cm H2O   |
|       | Inspiratory time 0 - ≥ 20 sec.   |
|       | Measured oxygen concentration 21-100%  |
|       | PEEP/CPAP and P low : 0 to 50 cmH2O  |
|       | <b>Alarms :</b>  |
|       | Power failure  |
|       | Audible and visual alarms should activate when their specific monitored parameter reaches and remains at the set limit to activate the alarm.                  |
|       | Audible alarms should be distinct and easily identified.   |
|       | If the alarm volume is adjustable, it should not be possible to turn the volume down so low that it is not likely to be heard.                                 |
|       | Although an audible-alarm silence is acceptable, the alarm must recur automatically if the condition is not corrected.   |
|       | If an alarm is silenced, a visual display should clearly indicate which alarm is disabled.   |
|       | Visual alarms should be easy to identify.  |
|       | The visual alarm must be specific to the problem and remain on until the alarm condition is corrected; it should not be possible to turn off the visual alarm. |
|       | All alarms should be fully explained in the operator's manual.   |
|       | The delivered oxygen or oxygen/air mixture shall be monitored with an oxygen analyzer that includes an alarm for concentrations outside of acceptable ranges.  |

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|             | Better The analyzer shall be included within the ventilator (Paramagnetic O2 cell) , but if O2 sensor separately and placed in line with the breathing circuit , shall be supplied with 3 - 4 spare O2 sensors (Gelmanic O2 cell 7000 Hr )          |
|             | The delivered oxygen or oxygen/air mixture shall be heated and humidified with an add-on-heated humidifier.   |
|             | Time cycled, volume constant, pressure controlled ventilator >  |
|             | Integrated graphical display , at least 14 " colour monitor , for settings, values , pressure and flow curves.  |
|             | Internal battery operation at least 3 hr or more  |
|             | Should have trending facility for facility for 1 week or more .   |
|             | Automatic gas switch-over if oxygen pressure decreases  |
|             | The machine can be operated by both central gas supply and cylinder   |
|             | Digital port interface RS 232   |
|             | <b>Standard accessories :</b>   |
|             | Ventilator mobile trolley   |
|             | Support arm for patient hoses   |
|             | Heated humidifier complete with accessories   |
|             | Reusable autoclavable silicone breathing sets for adult & other one pediatric including water trap bacterial filter, and disposable autoclavable breathing sets (10 pcs for for adult & others for pediatric including water trap bacterial filter) |
|             | Test lung for adult & pediatric applications  |
|             | Type of Nebulizer : built in  |
|             | 1 temperature probe 1 Kit of adults hoses for humidifier  |
|             | 1 O2 cylinder and medical pressure pre-set regulator.   |
|             | Operation manual & service manual   |
|             | Power requirement: 220 V/50 / 60 HZ.  |
|             | Shall comply to CE marked or FDA Certificate.   |
|             | <b>Installation &amp; Commissioning :</b>   |
|             | 3 Years warranty with spare parts from the date of installation and commissioning if the CE marked or 2 Years warranty with spare parts from the date of installation and commissioning if FDA Certificate  |
|             | Technical Data Sheet must accompany the offers  |
|             | User /Nurses training, by Specialist from the Supplier.   |
|             | <b>Note:</b>  |
|             | All equipment needing consumables must allow the possibility to use generic and/or locally made consumables and/or disposables. Compliance to this condition must be declared here by the bidders.  |
|             | The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.   |
| <b>OP</b>   | <b>Operation Theater Rooms</b>  |
| <b>OP-1</b> | <b>Electric Cautery</b>   |
|             | Diathermy apparatus, generator high frequency   |
|             | bipolar and monopolar channels  |
|             | Up to 350 watts   |
|             | Cutting and coagulation mode  |
|             | Operating frequency up to 350 KHz   |
|             | Microcontroller-based multi-programmable by the user  |
|             | Power supply 220-240V 50/60 Hz  |
|             | Resettable over current breaker shall be fitted for protection  |
|             | Alarm audiovisual in case of power supply disconnection.  |
|             | Power disconnection in case of loose patient plate  |
|             | Mounted on trolley, stainless steel with swivel castor wheels with brake  |
|             | <b>Complete with the following accessories:</b>   |
|             | Two button handle autoclavable 1  |
|             | Two button handle cold sterilization 1  |
|             | cable for plate 1   |
|             | Reusable patient plate 2  |

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|             | Waterproof double foot switch 1  |
|             | Short, general surgery blade electrode   |
|             | Long, general surgery blade electrode  |
|             | Short, general surgery needle electrode  |
|             | Short, general surgery ball electrode  |
|             | Diathermy Quiver Insulated, diathermy Cable Red rubber 5 meter   |
|             | <b>Supply with :</b>   |
|             | User manual in English   |
|             | Service manual in English  |
|             | Shall comply to CE marked or FDA Certificate.  |
|             | <b>Installation &amp; Commissioning :</b>  |
|             | 2 Years warranty with spare parts from the date of installation and commissioning .  |
|             | User /Nurses training, by Specialist from the Supplier.  |
|             | <b>Note:</b>   |
|             | All equipment needing consumables must allow the possibility to use generic and/or locally made consumables and/or disposables. Compliance to this condition must be declared here by the bidders. |
|             | The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.                |
| <b>OP-2</b> | <b>Autoclave Sterilization Machine</b>   |
|             | <b>STEAM STERILIZER Vertical</b>   |
|             | Chamber volume: 80-100 liters  |
|             | (Vacuum – Steam pressure –dry ) Phases   |
|             | Sterilization temperatures : 121°C / 134°C   |
|             | Microprocessor control   |
|             | Seamless stainless steel chamber   |
|             | Over pressure Safety valve   |
|             | 100- 240 V - 50 Hz   |
|             | <b>Supplied with:</b>  |
|             | Set of two door gasket   |
|             | set of four bacteriological filters  |
|             | With suitable water distiller (glass type not acceptable)  |
|             | The product should be at least CE/FDA certified high quality.  |
|             | 2 Years warranty with spare parts from the date of installation and commissioning  |
|             | Technical Data Sheet must accompany the offers User /Nurses training, by Specialist from the Supplier.   |
| <b>OP-3</b> | <b>Dry Heat Sterilization Machine</b>  |
|             | Temp.range: RT+10-300 °C   |
|             | Temp.Resolution Ratio:0.1°C  |
|             | Temp.Motion:± 1°C  |
|             | Temp.Uniformity:± 3.5°C  |
|             | Inner Chamber: Mirror Polished Aluminum  |
|             | Outer shell : cold rolling steel electrostatic   |
|             | Volum:85L  |
|             | Load per rack 15Kg   |
|             | shelf space 35mm   |
|             | shelf : 2  |
|             | POWER RATING 50\60hz:690*695*985   |
|             | Inner chamber size : 450*420*450 Extnal size: 590*610*830  |
| <b>OP-4</b> | <b>Hydraulic Operating Table for General Surgery</b>   |
|             | T shaped base,5 sections (divided leg)   |
|             | together, easily moving wheels with brakes, base and column are constructed from st/st,  |
|             | top plate are X- ray translucent along the full length of the table, with mattress   |
|             | antistatic, head rest can be replaced  |
|             | * Working load: not less than 180 KG   |
|             | * Adjustments :  |
|             | - Height : 750 -1000 mm hydraulically using foot pedal or better   |

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|             | - Trendlenburg : +/- 25 degree manually  |
|             | - Back Section : -15 to + 70 degree manually   |
|             | - Side Tilting : +/- 15 degree manually  |
|             | - Leg Section : -90 degree manually  |
|             | - Head Rest : -40 to + 30 degree manually  |
|             | Castors: twin antistatic, two with foot brakes   |
|             | <b>Accessories with necessary clamps:</b>  |
|             | All ball joints, clamps, rods and fixations should be made from stainless steel  |
|             | . Flat, square head rest, (table width), infinite slope adjustment, integral foam padding, 1 piece each  |
|             | . Leg plates, split type, including integral foam padding, 1 piece each  |
|             | . Patient restraint / body strap, 1 piece  |
|             | . Arm supports, 2 pieces   |
|             | . IV rod, 1 set, adjustable height Stainless Steel.  |
|             | . Shoulder rest / support with pad, 2 pieces   |
|             | . Narrow arm table with pad, 1 piece   |
|             | . "D" shaped ankle pillow, 1 piece   |
|             | . Accessory / setting clamps, circular socket, 4 pieces  |
|             | . Accessory / setting clamps, rotary, 4 pieces   |
|             | 1 Anaesthesia screen with radial support   |
|             | 2 Leg section supports with support  |
|             | 1 Body strap   |
|             | 1 Head support , detachable  |
|             | 1 Set of anti-static ,divided 6 parts  |
|             | - Paediatric stirrups  |
|             | -Arm and hand table  |
|             | - Stainless steel bowl with drain for gynaecologic   |
| <b>OP-5</b> | <b>Mobile Operation Light</b>  |
|             | Surgical Operating Mobile Lamp Led's type. Shall be very stable on 4/5 castors with antistatic rubber bands.   |
|             | Shadow less cold light.  |
|             | Microprocessor Controlled  |
|             | Adjustable lighting focus by a central handle (autoclavable)   |
|             | Controllable intensity   |
|             | Lamp head diameter shall be 200 to 500mm   |
|             | Requested luminous intensity: > 90.000 - 110.000 Lux at 1.0m   |
|             | Shall run on mains and battery . When used on Battery (DC) the decreasing of intensity shall be less than 20%  |
|             | Lighting autonomy shall not be less than 2 Hrs   |
|             | Lamp rod shall be adjustable in height. As an indication:  |
|             | Battery shall be equipped with an automatic charger with uninterruptible connection to mains   |
| <b>OP-6</b> | <b>Laryngoscope for Adult &amp; Child</b>  |
|             | One Handle With Four Blades sizes 1, 2, 3, 4   |
|             | Supplied With Four Spare Bulbs .   |
| <b>OP-7</b> | <b>Anaesthetist (OT) Trolley with Drawer</b>   |
|             | Fully made from Stainless Steel / Plastic or aluminium with appropriate reinforcements. Mobile on 4 antistatic castors , 2 of which shall have foot brakes                       |
|             | The unit shall carry 2 height adjustable trays, 4 drawers with silent sliders and smooth edges as well as locks. Offer must specify maximum load on drawers.                     |
|             | Upper Part shall carry Stainless Steel / plastic or aluminium pigeon holes on all width and welded in elevation on specific frame. All around Stainless Steel rails with 3 hooks |
|             | Shall be protected with efficient rubber bumpers   |
| <b>OP-8</b> | <b>Patient Monitor</b>   |
|             | Multi-parameter monitor with 12 inch TFT displaying 6 - 8 waveforms :  |
|             | 72 Hr (or more) Trends graphical and Tabular.  |
|             | Built in battery 3 Hrs (Battery is accessible).  |
|             | Arythmia analysis.   |

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|               | HR/PR, ECG/RESP-NIBP-SPO2-2TEMP & available Fi CO2, Et CO2 Module   |
|               | rapid and easy to all functions and parametr settings, alarm mute, on/off freeze, on/off recorder   |
|               | HR/PR, ECG/RESP-NIBP-SPO2-2TEMP-Respiration and Temperature, alarm recall for last  |
|               | 12 alarms with date and time. Built-in battery capable for 30 minutes operation   |
|               | <ul style="list-style-type: none"> <li>- Display of Systolic, Diastolic and mean pressure</li> <li>• ECG: <ul style="list-style-type: none"> <li>- 5/12 Lead, ECG Monitoring, I, II, III, V1, V2, V3, V4, V5, V6, AVR, AVF, AVL</li> </ul> </li> <li>• Respiration: <ul style="list-style-type: none"> <li>- Display of respiration waveform.</li> <li>- Apnea Alarm.</li> </ul> </li> <li>• SP O2 <ul style="list-style-type: none"> <li>- Range: 0-100%.</li> <li>- Pulse Rate range: 25-250 bpm</li> </ul> </li> </ul> |
| <b>INST</b>   | <b>Surgical Instrument</b>  |
| <b>INST-1</b> | <b>Delivery Set</b>   |
|               | <b>Each Set Consists of :</b>   |
|               | Bowl with sterile swabs 2 pc  |
|               | Sponge holder 2 pc  |
|               | Urinary catheters 2 pc  |
|               | Arteries forceps (Curved, Straight) 2 pc  |
|               | Kocher Forceps ( Curved, Straight) 2 pc   |
|               | Episiotomy Scissors 2 pc  |
|               | Dissecting Forceps (Tooth , Plain) 2 pc   |
|               | Needle Holder 2 pc  |
|               | Cord cutting 2 pc   |
|               | Kidney Tray 2 pc  |
|               | Surgical suture 1 pc  |
|               | Strile draping sheet 2 pc   |
|               | Sterile gloves 2 pc   |
|               | Swabs/gauze 2 pc  |
|               | Gynae pads 2 pc   |
|               | Syringe (10cc) 2 pc   |
|               | Needles 2 pc  |
| <b>INST-2</b> | <b>General Surgical Set (Large)</b>   |
|               | <b>Each Set Consists of:</b>  |
|               | Bowl Lotion 250 mm 2 pcs  |
|               | Gallipot/Cup S/S 180 ml 2 pcs   |
|               | Gallipot/Cup S/S 250 ml 2 pcs   |
|               | Tray Kidney shape with Lid S/S 200 X 30 mm 2 pcs  |
|               | Tray Kidney shape with Lid S/S 300 X 50 mm 2 pcs  |
|               | Forceps artery Kocher COF BJ.S/S 180mm. 20 pcs  |
|               | Forceps Artery Spencer Wells CO Flat (bj).S/S 200 mm 15 pcs   |
|               | Forceps Dissecting Plain serrated jaws S/S 150 mm 6 pcs   |
|               | Forceps Dissecting Plain serrated jaws S/S 250 mm 1 pc  |
|               | Forceps Dissecting narrow, serrated jaws S/S 200 mm 1 pc  |
|               | Forceps Dissecting Lane's 2x3 teeth 180 mm 3 pcs  |
|               | Forceps Dissecting Waugh, fine serr.jaws 1x2 Tth 200 mm 1 pc  |
|               | Forceps Tissue Allis fine 4 x 5 Teeth BJ.S/S 150 mm 4 pcs   |
|               | Forceps Towel Holding cross Action S/S 100mm 8 pcs  |
|               | Forceps Towel Moynihan, Double Teeth (bj) 190mm 4 pcs   |
|               | Forceps Sponge Holding Rampley BJ S/S 240 mm 5 pcs  |
|               | Handle size 3 for Scalple blades size 10-15 1 pc  |
|               | Handle size 4 for Scalple blades size 20-24 1 pc  |
|               | Needle Holder Kilner's 165 mm 1 pc  |
|               | Needle Holder Mayo Hegar BJ.S/S 180mm 2 pcs   |
|               | Scissors Blunt Point Straight SJ. S/S 180mm 1 pc  |
|               | Scissors Mayo's CO Flat 200mm S/S 1 pc  |

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|               | Scissors Mayo's Straight 200mm S/S   | 3 pcs |
|               | Scissors McIndoe's CO Flat 190mm S/S   | 1 pc  |
|               | Retr.Deaver #1-Blade 25mm, Length 305mm  | 1 pc  |
|               | Retr.Deaver #5-Blade 75mm, Length 305mm  | 1 pc  |
|               | Retr. Lange beck, H/H 26x64 Blade, 210 mm Long   | 2 pcs |
|               | Retr. Morris Double-ended (52x38)&(52x64) mm   | 2 pcs |
|               | Retr. Walton, malleable copper 13mm length 305mm   | 1 pc  |
|               | Needle Aneurysm S/S . Small 146 mm   | 1 pc  |
|               | Pin Safety Mayo, forceps holding, 120mm  | 4 pcs |
|               | Suction Tube McIndoe   | 1 pc  |
|               | Suction Tube Poole's S/S 225mm   | 1 pc  |
|               | Sterilizing and storing case St. St. with filters 260x150x50 mm  | 2 pcs |
|               | Wire Cutting, Tungsten .Carbide inserts 180mm.   | 1 pc  |
| <b>INST-3</b> | <b>Instrument Trolley with Stainless Steel Shelves</b>   |       |
|               | Fully made from Stainless Steel .  |       |
|               | Mobile on 4 antistatic castors, 2 of which shall have foot brakes  |       |
|               | The unit shall carry 2 height adjustable trays with rebatted edges   |       |
|               | Indicative Dimensions: 900 x 600mm   |       |
| <b>MNCH</b>   | <b>MNCH Departemnt</b>   |       |
| <b>MNCH-1</b> | <b>Ultrasound machine\Digital Ultrasonic Diagnostic Imaging System\Powerful B/W System with Full Screen;Exceptional Ergonomic Design ;Enhanced Diagnostic Con dence and Streamlined Work + Ultrasound Printer + UPS 2kVA</b>   |       |
|               | Digital Ultrasonic Diagnostic Imaging System   |       |
|               | <b>1. General Description</b>  |       |
|               | The offered equipment shall be a high-quality Digital Ultrasonic Diagnostic Imaging System (B/W) suitable for use in a variety of clinical settings. The system must provide excellent image quality, streamlined workflow, ergonomic design, and reliable performance for daily diagnostic use. |       |
|               | <b>Technical Specifications</b>  |       |
|               | Digital Ultrasonic Diagnostic Imaging System (B/W)   |       |
|               | Full-screen display with high-resolution imaging   |       |
|               | 2D, M-Mode, Zoom, Measurement &Calculation Functions   |       |
|               | Adjustable monitor, control panel, and user-friendly interface   |       |
|               | Internal storage with USB export capability  |       |
|               | Supports multiple probes (Convex, Linear, Transvaginal – as per clinical need)   |       |
|               | Enhanced image processing and clarity for improved diagnostic accuracy   |       |
|               | Fast boot-up, easy patient data management, and quick image access   |       |
|               | Compatible with UPS for uninterrupted operation  |       |
|               | <b>Standard Accessories Included</b>   |       |
|               | High-resolution thermal printer for direct image printing  |       |
|               | Uninterruptible Power Supply (Minimum 2 kVA capacity)  |       |
|               | One Convex Probe and Linear prob (standard); others optional as required   |       |
|               | Complete operation and service manual in English   |       |
|               | Included for standard installation and operation   |       |
| <b>MNCH-2</b> | <b>Fetal Doppler</b>   |       |
|               | Multi-purpose pocket Doppler for use within general practices and health centres . The Unit shall be supplied with plug-in version transducer to provide a versatile diagnostic aid for foetal heart rate (display FHR)  |       |
|               | Unit shall have only two controls; an on/off switch on the transducer and a volume (1 W Audible Out Put) control on the main unit  |       |
|               | <b>Transducer: 2 MHz - 2.5 MHz ± 10% Waterproof.</b>   |       |
|               | Power shall be from either a conventional 9 volts battery or an rechargeable battery   |       |
|               | Battery indicator shall provide advance warning of low power levels  |       |
|               | Shall be supplied in a compact carrying case fitted with a shaped interior to securely hold equipment and accessories  |       |
|               | Shall be supplied with pocket / belt clip for convenient location during or between procedures.  |       |
|               | <b>Supplied with:</b>  |       |
|               | . 1 transducer 2 MHz ± 10%   |       |

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|               | . 1 carrying case  |
|               | . Gel, electroconductive. 2x250g   |
|               | . 2 rechargeable batteries (if the model proposed functions with rechargeable batteries)   |
|               | . Battery charger (if the model proposed functions with rechargeable batteries)  |
| <b>MNCH-3</b> | <b>Patient Wheelchair</b>  |
|               | Metal construction,Nicle chrome plated,foldable,with two wheels 25-inch dia,and two 8 inch   |
|               | dia, and hand brakes, aluminium foot rest, seat and back are blue leather, adult size. Offer must specify maximum load on chair.   |
| <b>MNCH-4</b> | <b>Weighing Infant Scale</b>   |
|               | weighing range: up to 20 kg.<br>Minimum graduation: 5 g.<br>Accuracy: ±5 g.<br>Precision: ±5 g.<br>Display: kg.<br>Tare function.<br>Autohold function.<br>Automatic switch-off.<br>Auto-calibration with each switch-on.<br>Large LCD display.<br>Reading time max 5 seconds.<br>Splash proof and shock resistant.<br>Smooth surface/finishing for easy cleaning/disinfection.<br>Material: Body and tray made of non absorbent ABS plastic.<br>Colour: white or light grey.<br>With or without levelling feet. |
| <b>MMCH-5</b> | <b>Infant Warmer</b>   |
|               | Infant warmer to be used in neonatology.   |
|               | Microprocessor control system and manual controlling the temp between skin and air automatically .   |
|               | <b>Specifications</b>  |
|               | · <b>Temperature control:</b>  |
|               | · Range 30-38° C   |
|               | · Skin range 25 – 42 °   |
|               | · Increment 0.1°   |
|               | · Monitor display for all parameters   |
|               | · Control Unit (to be supplied with.)  |
|               | · Automatic heat control type  |
|               | · Set point mechanism  |
|               | · Heater Indicator.  |
|               | · built-in halogen or led light  |
|               | · APGAR score facility   |
|               | · Accessible from 4 sides with plexi glass safety frame  |
|               | <b>Alarms (Audible and Visual)</b>   |
|               | · High air temperature   |
|               | · Sensor disconnect  |
|               | · Power Failure  |
|               | · System fail.   |
|               | · Alarm in manual mode: every 15 minutes with automatic shutoff  |
|               | <b>The warmer should includes:</b>   |
|               | · Self- check features   |
|               | · Breaks for casters   |
|               | · Skin sensor  |
|               | · Shelf &I.V Pole  |
|               | · Protection against breaks and bursts of radiant and light source   |
|               | · Spares and all accessories   |
|               | <b>Power Supply :</b>  |
|               | • Power input to be 220-240VAC, 50Hz Power Cord must be (3PIN) universal.  |
|               | <b>Accessories:</b>  |

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|              | · Backup thermostat   |
|              | Temperature Reusable sensor (skin 1 )   |
|              | <b>Standards, Safety and Training :</b>   |
|              | • Should be FDA or CE &TUV approved product   |
|              | • User /Nurses training, by Specialist from the Supplier.   |
|              | • Installation &Commissioning   |
|              | 2 Years warranty with spare parts from the date of installation and commissioning   |
|              | <b>Documentations to be provided :</b>  |
|              | • User/Technical/Maintenance manuals to be supplied in English.   |
| <b>LAB</b>   | <b>Laboratory and blood room</b>  |
| <b>LAB-1</b> | <b>Automatic Hematology Analyzer (CBC) – Complete Blood Counter</b>   |
|              | <b>Principle:</b> Electrical Impedance Method- WBC / RBC / PLT, Colorimetric- HGB   |
|              | Open or Closed System, Reagents device must have an economic consumption of reagents mechanism.   |
|              | <b>Reportable Parameters:</b> 5 Part Differential, 23 Parameters - WBC, LYM#, MID#, GRA#, LYM MID%,GRA%, RBC,HGB, HCT,MCV, MCH, MCHC, RDW-SD, RDW-CV, PL MPV, PDW, PCT,P-LCR, WBC Histogram, RBC Histogram, PLT Histogram   |
|              | <b>Operating Platform:</b> Windows interface with mouse control (Not Compulsory).   |
|              | <b>Speed :</b> 40-60 samples per hour   |
|              | <b>Calibration:</b> Both Automatic and Manual Calibration mode. 3 sets of Calibration co-efficient for Whole Blood, Anti-coagulant Peripheral Blood and Pre-diluted Peripheral Blood.   |
|              | <b>Quality Control:</b> 3 QC Method; and X-R QC with appropriate QC Charts, Westgard  |
|              | <b>Results:</b> Internal memory can store at least 40,000 Test values with Histograms   |
|              | <b>Printer / Display:</b> Builtin thermal printer with optional external printer, Color LCD, 9"   |
|              | <b>Interface:</b> 2- 4 USB, 1 RS232 serial port, 1 Lan, 1 PS2 Mouse, 1 PS2  |
|              | <b>Power Supply / Input Power:</b> 220 / 50 Hz  |
|              | Backup suitable UPS   |
|              | <b>Supplied with:</b>   |
|              | Operation Manual  |
|              | Service Manual  |
|              | Service/ maintenance and technical documents inclusive of schematics, component diagrams, trouble shooting , spare parts ordering information etc.  |
|              | 2 Years comprehensive warranty, from the date of installation and commissioning   |
|              | Installation &Commissioning must be done by manufacturer engineer   |
|              | Users training, by Specialist from the Supplier.  |
|              | Shall comply with CE marked or FDA Certificate.   |
|              | <b>NOTE</b>   |
|              | Machine with close Or open system, the supplier must supply free quantity of reagents with machine and must mention how many free kits and tests of reagents would be supplied. The cost of solutions &consumables per Test for one Year should also be offered.                                      |
|              | Machine with close Or open system, should be put cost of solutions, consumables per Test ,,should be put cost of reagents kits for at least 5 years (price / kit ) and how many tests per kit. Device must be supplied with manufacturer reference test sample for calibration and quality assurance. |
|              | Depended of above we will choose the system   |
|              | The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.   |
| <b>LAB-2</b> | <b>Fully Automatic Chemistry Analyzer</b>   |
|              | Fully Automatic Clinical Chemistry Analyzer   |
|              | <b>1. General Description</b>   |
|              | Compact, benchtop, fully automatic discrete chemistry analyzer.   |
|              | <b>2. System Performance</b>  |
|              | Throughput: Minimum 50 -100 tests/hour.   |
|              | Analysis Types: End-point, kinetic, two-point, and optional ISE.  |
|              | Reaction Volume: 100–300 µL (programmable).   |
|              | Sample Volume: 2–50 µL (programmable).  |
|              | Reagent Positions: Minimum 20 on-board reagent slots.   |



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|              | Sample Positions: Minimum 20 sample positions with continuous or batch loading.                          |
|              | <b>3. Analytical Features</b>  |
|              | Photometric system with LED or halogen light source.   |
|              | Wavelength range: 340–800 nm (minimum 8 wavelengths).  |
|              | Temperature-controlled incubation at 37°C ± 0.2°C.   |
|              | Disposable or washable cuvettes.   |
|              | Supports full biochemistry panels including liver, renal, lipid, glucose, enzyme, and electrolyte tests. |
|              | <b>4. Sample and Reagent Handling</b>  |
|              | Barcode system for sample and reagent identification (preferred).  |
|              | Clot detection and liquid level sensing.   |
|              | STAT sample access and emergency testing.  |
|              | <b>5. Calibration and Quality Control</b>  |
|              | Automatic multi-point calibration.   |
|              | Integrated QC with Levey-Jennings and Westgard rules.  |
|              | Long-term data storage for calibration and QC history.   |
|              | <b>6. User Interface</b>   |
|              | Touchscreen or PC-based interface.   |
|              | Multilingual user-friendly software (English required).  |
|              | Minimum storage for 10,000 patient results.  |
|              | Bi-directional LIS compatibility.  |
|              | <b>7. Connectivity and Data Management</b>   |
|              | USB and LAN ports for data transfer and connectivity.  |
|              | HL7 protocol support.  |
|              | Export formats: PDF, Excel, CSV.   |
|              | <b>8. Power and Environmental Requirements</b>   |
|              | Power Supply: 220–240 V AC, 50/60 Hz.  |
|              | Ambient Temperature: 15°C to 30°C.   |
|              | Humidity: Less than 80% non-condensing.  |
|              | Water type: Deionized or distilled water, if required.   |
|              | <b>9. Accessories and Consumables</b>  |
|              | Starter kit with reagents  |
|              | consumables for 500 tests Option   |
|              | Maintenance kit and spare cuvettes for 12 months.  |
|              | UPS (minimum 2 kVA with 30-minute backup).   |
|              | <b>10. Certifications and Compliance</b>   |
|              | CE-IVD or FDA certification.   |
|              | Manufacturer must be ISO 13485 certified.  |
|              | Compliance with IEC electrical and EMC standards.  |
|              | <b>11. Warranty and After-Sales Support</b>  |
|              | Minimum 2-year warranty.   |
|              | On-site installation, calibration, and training included.  |
|              | Service response within 48 hours.  |
| <b>LAB-3</b> | <b>Fully Automated Benchtop CLIA Analyzer</b>  |
|              | Fully Automatic CLIA (Chemiluminescence Immunoassay) Analyzer  |
|              | <b>1. General Description</b>  |
|              | Fully automatic bench-top chemiluminescence immunoassay (CLIA) analyzer.                                 |
|              | Performs qualitative and quantitative immunoassays using chemiluminescent detection.                     |
|              | <b>2. System Performance</b>   |
|              | Throughput: Minimum 50 -80 tests/hour.   |
|              | Principle: Magnetic particle-based chemiluminescence.  |
|              | Assay Time: <30 minutes per test.  |
|              | Loading: Continuous or batch sample loading.   |
|              | Sample Types: Serum, plasma, whole blood .   |
|              | <b>3. Sample and Reagent Handling</b>  |
|              | Sample Positions: Minimum 15- 30 sample positions.   |
|              | Reagent Positions: Minimum 15 -30 reagent positions with onboard cooling.                                |

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|              | Reagent recognition via barcode (preferred).   |
|              | Clot detection and liquid level sensing.   |
|              | <b>4. Test Menu and Capabilities</b>   |
|              | Must support assays for: TSH, T3, T4, FT3, FT4, LH, FSH, Prolactin, Beta-HCG, Ferritin, Vitamin D, Cortisol, PSA, and HbA1c.                           |
|              | test menu including infectious disease markers, tumor markers, cardiac markers, etc.   |
|              | Test menu including SARS-CoV-2 IgM/IgG and hepatitis panels.   |
|              | <b>5. Calibration and Quality Control</b>  |
|              | Automatic calibration with multi-point curves.   |
|              | Internal quality control.  |
|              | Graphical QC display with historical data storage.   |
|              | <b>6. User Interface and Software</b>  |
|              | Touchscreen or PC interface with intuitive operation.  |
|              | Software must support data management, patient records, and maintenance logs.  |
|              | Minimum 5,000 patient result storage.  |
|              | LIS compatibility (unidirectional/bidirectional).  |
|              | <b>7. Connectivity and Data Management</b>   |
|              | USB and LAN interfaces for data export and connectivity.   |
|              | Export formats: PDF, Excel, CSV.   |
|              | LIS/EMR integration with HL7 protocol preferred.   |
|              | <b>8. Environmental and Power Requirements</b>   |
|              | Power: 220–240 V AC, 50Hz.   |
|              | Ambient Temperature: 15–30°C.  |
|              | Humidity: <80% non-condensing.   |
|              | Onboard cooling for reagent storage (2–8°C).   |
|              | <b>9. Accessories and Consumables</b>  |
|              | Starter pack with reagents   |
|              | consumables for at least 300 test option.  |
|              | Printer (built-in or external).  |
|              | UPS (1.5–2 kVA) for backup power support.  |
|              | <b>10. Certifications and Compliance</b>   |
|              | CE-IVD, or FDA, certification.   |
|              | Manufacturer must be ISO 13485 certified.  |
|              | System must comply with electrical and EMC safety standards.   |
|              | <b>11. Warranty and Support</b>  |
|              | Minimum 2-year warranty including parts and labor.   |
|              | On-site training and installation.   |
|              | Remote support and guaranteed spare parts availability for at least 5 years.   |
| <b>LAB-4</b> | <b>Laboratory Microscope, Binocular</b>  |
|              | Standard Laboratory Use Type.  |
|              | With Binocular Observation Tube, Mechanical Stage, Condenser And Filter Holder.  |
|              | Objectives Magnification: 4X, 10X, 40X & 100X Achromatic Objective lines   |
|              | Eyepieces: Two eyepieces 10X widefield & 2 eyepiece 16X.   |
|              | Stand Focusing Mechanism: built-on graduated mechanical stage fine adjustments: single lateral with coarse and coaxial adjustment graduated both sides |
|              | Square stage Type  |
|              | Illumination: Condenser type: focusable condenser  |
|              | Low voltage Light source: Halogen or LED illumination System ( Easy to replace the lamp )  |
|              | Tension Adjustment: Coaxial, X-Y controls  |
|              | Full range objectives magnification  |
|              | Complete with:   |
|              | 2 pcs. Ground glass filter.  |
|              | 3 pcs. spare lamps (ONLY FOR HALOGEN LAMP TYPE)  |
|              | 2 pcs, 150 ml Bottle of immersion oil  |
|              | 1 pc. Dust cover.  |
|              | 1 Cabinet with lock and key  |
|              | 1 Cleaning brush   |

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|              | Supplied With Complete Accessories.<br>• Guarantee Spare Parts: (Ensure the supply of spare part for a Period of (7-10) years from the supply date of the device)   |
|              | Power Supply:-<br>- 100 to 240 V ~ $\pm 10\%$ , 50/60 Hz , 6V, 20W Halogen Bulb Illumination System or LED type   |
| <b>LAB-5</b> | <b>Bench Top Centrifuge</b>   |
|              | Table Top Centrifuge.   |
|              | Maximum Revolution = 5,500 RPM.   |
|              | Full Automatic Microprocessor Control.  |
|              | Timer = From 0 - 60 Minute With Hold Mode .   |
|              | Capacity = 15ml x 16 Tubes.   |
|              | Supplied With Complete Accessories.   |
|              | Supplied With One Year Recommended Spare Parts.   |
|              | 1 Year comprehensive warranty, from the date of installation and commissioning  |
|              | User / Nurses training, by Specialist from the Suplier.   |
|              | Shall comply to CE marked or FDA Certificate  |
| <b>EMG</b>   | <b>General Emergency</b>  |
| <b>EMG-1</b> | <b>Biphasic Defibrillator – Adult/Pediatric, with Heart Rate Alarm &amp; Sync</b>   |
|              | High resolution LCD monitor, ECG recorder and ECG monitor, separate ECG input, freeze function, high resolution printer, synchronous and asynchronous modes, internal rechargeable battery, visual and audible alarms |
|              | <b>Technical Specifications:</b>  |
|              | Max. output : 260 - 360 joule   |
|              | Max. charging time to 360 joule : 5-8 seconds   |
|              | ECG monitoring time : 10 hr   |
|              | Battery charging time to full : 4 hr  |
|              | With Automated External Defibrillation (A.E.D ) Mode with it's conections & Electrode   |
|              | System and malfunction alarms with visual and audible alarm indicators  |
|              | Supplied with Reusable adult pedals and children pedals & trolley   |
|              | should be supplied with all accessories & all conection for adult chilled and another one for paediatrics   |
|              | Must be Certified with CE/FDA Markets high Quality.   |
|              | 2 Years waranty with spear parts from the date of installation and commissioning  |
|              | Technical Data Sheet must accompany the offers User /Nurses training, by Specialist from the Suplier.   |
| <b>EMG-2</b> | <b>Portable Suction Pump</b>  |
|              | Vacuum range 0- 600mm Hg,   |
|              | Flow rates – open flow > 20 litres/ minute  |
|              | Overflow safety protection  |
|              | Re-usable collection Jars dual not less than (1500cc) complete with caps and tubing (with disposable liners)  |
|              | Splash proof protection   |
|              | Hydrophobic filters (bacteria & exhaust) supplied with extra spares at least 2 additional Filters each.   |
|              | Adjustable vacuum level control knob (high vacuum)  |
|              | Suction capacity : 20 l/m   |
|              | Containers : 2 x not less than 1.5 litters each (Autoclavable)  |
|              | Hose : 2 m silicon rubber (Autoclavable)  |
|              | All accessories – i.e., Catheters, etc..  |
| <b>EMG-3</b> | <b>ECG Recorder – 12 Channels with Complete Accessories</b>   |
|              | 12 Leads Simultaneous Acquisition 12 Channel Electrocardiograph.  |
|              | Recording channels: 3, 6 & 12 channels Recording ECG leads: 12  |
|              | Shall have a LCD display.   |
|              | HR Thermal Printer.   |
|              | Digital filtering   |
|              | <b>Selectors:</b> I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6   |
|              | <b>Input Imoedance:</b> 50 M $\Omega$ Minimum   |

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|              | <b>Frequency:</b> 0.05 Hz - 100 Hz (-3dB)  |
|              | <b>Time:</b> 3.2 seconds   |
|              | <b>Filter:</b> Muscle filter at 36 Hz (-3 dB)  |
|              | Patient Safety   |
|              | <b>Sensitivity:</b> 2.5mm/mV, 5mm/mV, 10 mm/mV, 20 mm/mV push button   |
|              | <b>Auxiliary Input:</b> 10mm deflection for 30 mV input  |
|              | <b>Calibration:</b> 1 mV push button effective at input amplifier  |
|              | Sequential lead print-out on 50mm width thermosensitive paper  |
|              | <b>Print-out format:</b> 3 Channel, 6 channel, 12 Channel  |
|              | Shall permit Automatic/Manual printing modes.  |
|              | Mains/Battery operated, Battery can sustain 30 - 60 mins.  |
|              | <b>Power supply:</b> 100-220V/50Hz, Universal Power Cord with 3 PIN, Must be supplied with external Earthing connection.   |
|              | The system offered shall be designed to operate normally under the conditions of the purchaser's country. The conditions include Power Supply, Climate, Temperature, Humidity, etc.                  |
|              | Please declare in detail compliance of this item offered with any relevant quality and safety standards.   |
|              | <b>ACCESSORIES</b>   |
|              | Case, carrying   |
|              | 4 Packs, thermosensitive. 50mmx20m   |
|              | 4 pcs Electrodes, Limb. clamp type   |
|              | 3 pcs Electrodes, Suction  |
|              | 500 pcs Electrodes, Resting. Disposable  |
|              | 10 pcs Adaptors, Clip.Alligator.4mm  |
|              | Gel, electroconductive. 5x250g   |
|              | 1 Patient cable. Banana plug   |
|              | 1 Spare rechargeable batteries   |
|              | <b>Installation &amp;Commissioning :</b>   |
|              | 2 Years comprehensive warranty, from the date of installation and commissioning  |
|              | User / Nurses training, by Specialist from the Supplier.   |
|              | Shall comply to CE marked or FDA Certificate .   |
|              | <b>NOTE</b>  |
|              | All equipment needing consumables must allow the possibility to use generic and/or locally made consumables and/or disposables. Compliance to this condition must be declared here by the bidders.   |
| <b>EMG-4</b> | <b>IV Stand – On Castors, Double Hook, Adjustable Height</b>   |
|              | Drip Stand or Rod for I.V. procedures  |
|              | Shall be mobile on very stable stand with 4/5 castors, 4 cross-shaped / 5 stars-shaped. Castors shall be orientable and shall have a smooth running  |
|              | Rod made of chrome-plated steel tubing, Adjustable height  |
|              | Rod equipped with 2 hooks configuration, made of polyamide   |
| <b>EMG-5</b> | <b>Patient Stretcher – Removable Top with Side Rails and IV Stand</b>  |
|              | stainless steel construction,painted with electrostatic powder with removable top and mattress protected by Durable cover, anti-bacterial, anti-static, acid-resistant and waterproof for easy Clean |
|              | 4 castors five 5 diameter two of them with brakes  |
|              | Guiding Dimentions of trolley : 190 * 60 * 75 cm   |
| <b>EMG-6</b> | <b>Mercury Sphygmomanometer (Desk Type, 300 mm) – Adult &amp; Pediatric Arm Bands</b>  |
|              | Sphygmomanometer, mercury deskType   |
|              | Range of measurement shall be 0 to 300mmHg as standard with at least a precision of +/-3mmHg (static measure). Display of digits shall be easily readable (4mm high minimum)                         |
|              | Mercury tank shall be monobloc and mercury proof. Safety tap shall be compulsory   |
|              | Cuff shall be made of PVC, and shall ensure a constant and precise decompression, Velcro fixation  |
|              | . 1 Cuff for Adult   |
|              | . 1 Cuff for Children / Pediatrics   |
| <b>EMG-7</b> | <b>Resuscitation Set (Adult)</b>   |

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|               | Resuscitation Adult including:  |
|               | (Bag resuscitator with: patient valve, relief valve, oxygen reservoir Tube and face mask suitable for adults)   |
|               | Supplied with Spare Valve   |
| <b>EMG-8</b>  | <b>Resuscitation Set (pediatric)</b>  |
|               | Resuscitation Pediatric including:  |
|               | (Bag resuscitator with: patient valve, relief valve, oxygen reservoir Tube and face mask)   |
|               | Supplied with Spare Valve   |
| <b>EMG-9</b>  | <b>Oxygen Cylinder – 40 Liters</b>  |
|               | Regulator O2 with Flowmeter and Humidifier  |
|               | Flow range: From 0.15 L/min to 15 L/min   |
|               | Maximum possible flow: 35 L/mn above range  |
|               | Input pressure: Not less than 3.5 bar +/- 0,7   |
|               | Suitable for all types of fitting: wall outlet, trolley.  |
|               | Autoclavable, unbreakable   |
|               | Clear vision of bubbles   |
|               | Humidification at 4 L/mn - 20° C: ~3 ml/h   |
|               | Humidification at 12 L/mn - 20° C: ~9 ml/h  |
|               | Capacity: 100 ml (distilled water)  |
|               | Porosity of diffuser: No more than 70 microns   |
|               | Humidifier, Autoclavable, for multipurpose uses in Medical and Surgical Sections. Shall have the capability to be associated with Flowmeters (O2) or Air , O2 Reserve Cylinders and O2 Generators |
|               | Fixation to flowmeters or any compatible devices shall be easy and fast (1/4 twist shall be acceptable)   |
|               | CE marked   |
|               | Supplied With Tubing And Face Mask suitable for adults.   |
| <b>EMG-10</b> | <b>Finger Pulse Oximeter</b>  |