

## Notice Inviting e-Tender

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PROCUREMENT OF MEDICAL EQUIPMENT FOR FIVE NEW MEDICAL COLLEGES AND HOSPITALS

(Submission of Bid through *online*)

Bid Reference No.: WBMSCL /NIT-211/2018

Dated –12.10.2018

The following amendments have been made in the tender document. The changes are highlighted in yellow in the document below,

### Amendment – I (Revised Technical specifications)

**Name of the Discipline: PATHOLOGY**

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
1	1	Automated Rotary Microtome (Digital)	<p>Fully automated motorized rotary microtome along with manual operation having microprocessor controlled panel with provision for motorized cutting via operating panel or foot pedal control.</p> <p>Precise micrometer feed system via stepper motor permits precision sectioning selectable at least from 2.0-40/60 micron in 0.5 micron increments.</p> <p>Trimming section selectable from 2 micron onwards.</p> <p>The vertical specimen stroke length of 70mm, larger specimen can be sectioned. The specimen holder should be clamp type and hold 60mm size block.</p> <p>The specimen retraction should occur on return stroke.</p> <p>Cold light source.</p> <p>Precise specimen orientation with zero point indication, with an orientation 8° X-Y axis helps in marking perfect orientation of the sample for sectioning.</p> <p>Motorised coarse feed in two speeds 30 micron/sec and 90 micron/sec. Variable sectioning speed adjustable from 0.5 to 420 mm/sec.</p> <p>Disposable blade holder with lateral displacement feature that can hold both high and low profile blades</p> <p>Integrated section waste tray.</p> <p>Accessories</p> <p>Microtome disposable blades (high profile coated) - 1 packets (50 blades/pack).</p> <p>Microtome disposable blades (low profile coated) - 1packets (50 blades/pack).</p>	5
2	2	Ultrapure water solutions - Distilled water plant	Distillation Unit, Double Stage, with Borosilicate Boiler & Condenser, Built-in Cut-Off with Reset Button, cabinet type, Horizontal Model. Output: 1.5 - 2.5L /Hr. (approx); Electrical point: 1KW single phase (preferable); Cooling Water Consumption: 100 L /Hr; Biological Property: Pyrogen Free; pH of water: 6.9-7.1	5
3	3	Band saw	To be notified later	5
4	4	Fully Automated Immuno-histo-chemistry Setup with Continuous supply of Important Antibodies, Lymphoma Panel etc.	Item deleted	5
5	5	Liquid-based cytology machine	Item deleted	5
6	6	Five Part Hematology Analyzer	To be notified later	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
7	7	Automatic Urine Analyzer	To be notified later	10
8	8	Centrifuge tubes graduated	To be notified later	200
9	9	Automatic Hematology Slide Stainers.	To be notified later	5
10	10	Cytocentrifuge	To be notified later	10
11	11	Coagulometer (Fully automated)	To be notified later	5
12	12	Three Part Fully Automated Cell Counter	To be notified later	5
13	13	Five part Fully Automated Cell Counter	To be notified later	5
14	14	<b>Grossing Station</b> - Stainless steel, with Control panel, air filtration system, Track mounted adjustable computer arm with articulation, LED lights that are color and intensity, Dedicated USB ports for camera control and data transfer adjustable, Integrated pathology camera system, Instrument Set (High quality) Height Adjustable Stainless Steel Chairs With Split AC of appropriate capacity.	To be notified later	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
15	15	Penta Head Microscope with High end Optics with HDMI Multi output Photographic camera (> 5 MP) including Software	To be notified later	5
16	16	For every Tutor – Binocular Microscope with suitable high end lenses.	To be notified later	20
17	17	For every Professor, Associate & Assistant Professor : Binocular Microscopes with High end Semiapochromatic Optics of international standard.	To be notified later	20
18	18	For Diagnostic & Research Work - Trinocular head Microscope with Bright field,	To be notified later	5
19	19	Manual Rotary Microtome	To be notified later	10
20	20	Cryostat	To be notified later	5
21	21	Cold Plate for Modular Tissue Embedding System	To be notified later	5
22	22	Single pan Analytical balance	To be notified later	10
23	23	Automated Tissue Processor –Vaccum	To be notified later	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
24	24	Autoclave	<p>1. High Pressure, electrically heated vertical steam sterilizer is used for sterilization of surgical instruments, dressing material, lined, rubber, plastic material by means of saturated steam under pressure of 15 to 20 psi (adjustable). A part from health services it is also used in scientific research institutions and universities.</p> <p>2. Sturdy double walled construction with boiler made of stainless steel of SS-304 sheet is easy to operate. Outer shell is made of Stainless Steel. Stainless steel Bucket with handle with perforated wall. The boiler and outer shell is provided with air insulation: Lid is made of stainless steel plate and is tightened around by wing nuts. Moulded, jointless gaskets are made of Neoprene rubber: Sterilizer is hydraulically tested upto 40 psi.</p> <p>3. Fitted with water level arrangements to indicate water position inside the boiler, pressure guage, Air/steam release cock. Loaded safety Valve which can be set at any selected point from 10 psi. to 20 psi. + - 3 psi. and drain, ISI marked immersion heating element (one 1KW) heats the water and steam to desired temperature and pressure.</p> <p>4. Size: Dia X Depth = 400 mm X 600mm</p> <p>5. Should be CE/US FDA/BIS</p>	10
25	25	Water bath (Tissue Floatation)	To be notified later	10
26	26	Digital Tissue Floatation bath	<p>Should be able to process wrinkle free specimen</p> <p>Should have round double walled single piece inner and outer chamber made of aluminium rim should be wide enough to dry the wet slides</p> <p>Should have a capillary thermostat from ambient to 70 degree centi grade with accuracy of <math>\pm 2</math> degree celcius</p> <p>Microprocessor based temperature control</p>	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
<b>Name of the Discipline: MICROBIOLOGY</b>				
27	1	Lab Refrigerator	Frost free. Capacity - 400 Liters or more Temperature Range - 2°C to 8°C Temperature Accuracy - ±0.5°C Controller - PID Controller Construction - Exterior: Powder Coated Mild Steel; Interior: Stainless Steel Door - Standard hinged Double doors with double gasket Insulation - PUF insulation Trays - Perforated trays made of stainless steel Refrigeration - CFC Free compressor Air Circulation - Forced air circulation Should be supplied with digital thermometer for upper and lower chamber separately Alarms - Audio / Visual alarm for High / low temperature Power - 220 / 230 Volts 50 Hz Should be CE/US FDA/BIS	25
28	2	Laminar flow (table/Cabinet)	Size: 4 x 2 x 2 (ft) In and outer chamber: SS304 Air flow: Vertical Air Velocity: between 0.4 to 0.5 m/s ±20% HEPA Efficiency Pre-filter - 99.997% at 0.3 microns with DOP test Washable with an arrestance up to 90% at 5 microns Sound Level - Less than 65 dB (Acoustic) UV light source and visual light source Light Intensity (visual): Lux 900 to 1300 Lux Federal Power Supply: 220 V Single phase 50 Hz Should be CE/US FDA/BIS	5
29	3	Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)	To be notified later	10
30	4	Biosafety Cabinet Type - 2A	1. Vertical laminar flow air to create ISO-Class III work area 2. Single piece wall of SS, preferably SS- 304 3. Single piece work tray of SS, preferably SS-304. 4. Side walls are surrounded by negative pressure. 5. LUPA filter(efficacy 99.999% . Arrests particles S 0.3micron) — 2( both downflow and exhaust). 6. UV light arrangement with a UV meter. 7. Pressure gauge (dial type). 8. Size : WxDx H = 1000mm x 600 mm x 650 mm ( approx) 9. Air flow velocity : Inflow 0.5 M/S , Outflow 0.3 M/S 10. Heavy Duty Castor wheels Service facility in Kolkata. 5years guarantee of all parts. Thereafter AMC (please quote) Record of installation in reputed institutes in Kolkata and certificate from	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
31	5	Autoclave	<p>High Pressure, electrically heated vertical steam sterilizer is used for sterilization of surgical instruments, dressing material, lined, rubber, plastic material by means of saturated steam under pressure of 15 to 20 psi (adjustable). A part from health services it is also used in scientific research institutions and universities.</p> <p>Sturdy double walled construction with boiler made of stainless steel of SS-304 sheet is easy to operate. Outer shell is made of Stainless Steel. Stainless steel Bucket with handle with perforated wall. The boiler and outer shell is provided with air insulation: Lid is made of stainless steel plate and is tightened around by wing nuts. Moulded, jointless gaskets are made of Neoprene rubber: Sterilizer is hydraulically tested upto 40 psi.</p> <p>fitted with water level arrangements to indicate water position inside the boiler, pressure gauge, Air/steam release cock. Loaded safety Valve which can be set at any selected point from 10 psi. to 20 psi. + - 3 psi. and drain, ISI marked immersion heating element (one 1KW) heats the water and steam to desired temperature and pressure.</p> <p>Size: Dia X Depth = 400 mm X 600mm</p> <ul style="list-style-type: none"> <li>• Service facility in Kolkata</li> <li>• 5 years guarantee of all parts, Thereafter AMC (please quote)</li> <li>• Record of installation in reputed institutes in Kolkata and certificate from users</li> </ul> <p>ISO-2013 Compatible</p>	25
32	6	Biosafety Cabinet Type - 2B	<ol style="list-style-type: none"> <li>1. Vertical laminar flow air to create ISO-Class III work area</li> <li>2. Single piece wall of SS, preferably SS- 304</li> <li>3. Single piece work tray of SS, preferably SS-304.</li> <li>4. Side walls are surrounded by negative pressure.</li> <li>5. HEPA filter(efficacy: 99.99 % at 0.3micron)</li> <li>6. UV light arrangement with a UV meter.</li> <li>7. Pressure gauge (dial type).</li> <li>8. Size : Wx DxH = 1000mm x 600 mm x 650 mm ( approx)</li> <li>9. Air flow velocity : Inflow 0.5 M/S , Outflow 0.3 M/S</li> <li>10. Heavy duty 'Castor Wheels'.</li> </ol> <p>Service facility in Kolkata.</p> <p>5years guarantee of all parts. Thereafter AMC (please quote)</p> <p>Record of installation in reputed institutes in Kolkata and certificate from users</p> <p>ISO-2013 Compatible</p>	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
33	7	BOD Incubator	<p>PARAMETER / FEATURE THRESHOLD LIMIT / RANGE</p> <p>RANGE OF AMBIENT TEMPERATURE IN °C 10 TO 35</p> <p>OPERATING /PRODUCIBLE/ ACHIEVBABLE TEMPERATURE RANGE IN BOD INCUBATOR IN °C 0-70</p> <p>RANGE OF TEMPERATURE SENSITIVITY IN °C ± 0.1</p> <p>RANGE OF TEMPERATURE UNIFORMITY IN °C ± 0.5</p> <p>MAXIMUM HEATING RATE IN °C/ MIN 5 OR LESS</p> <p>MINIMUM HEATING RATE IN °C/ HOUR 2 OR MORE</p> <p>MAXIMUM COOLING RATE IN °C/ MIN 5 OR LESS</p> <p>MINIMUM COOLING RATE IN °C/ HOUR 2 OR MORE</p> <p>AIR CIRCULATION FORCED TYPE WITH FANS 2 OR MORE</p> <p>INNER CHAMBER VOLUME IN CUBIC FT 2 OR MORE</p> <p>INNER CHABER SHELVES 4 OR MORE</p> <p>SUPPLY VOLTAGE/ FREQUENCY 220 V/50 HZ</p> <p>MUST HAVE SPECIFICATION</p> <p>PARAMETER / FEATURE YES/NO</p> <p>DIGITAL TEMPERATURE CONTROLLER DEVICE</p> <p>PROFILE WITH DIFFERENT RAMP UP RAMP DOWN AND SOAK FEATURES</p> <p>PROFILE CONTAINING MORE THAN 8 FEED POINTS</p> <p>INDEPENDENT OVERHEAT PROTECTION SYSTEM INSTALLED WITH SEPERATE TEMPERATURE SENSOR AND BUZZER ALARM</p> <p>HUMIDITY CONTROL FOR CHAMBER, INSTALLED DEHUMIDIFIER FOR LESS THAN 50% REL HUMIDITY</p> <p>INNER CHAMBER WALL WITH INSULATED STAINLESS STEEL (SS 304)</p> <p>BOD OUTER WALL RUST AND CORROSION PROOF</p> <p>LOCK AND BUZZER ALARM FOR DOOR</p> <p>CALIBRATION AND OPERATING MANUAL</p> <p>CFC FREE REFRIGERATION SYSTEM</p> <p>QUALITY STANDARD AND SAFETY CERTIFICATION: EUROPEAN CE OR US FDA</p>	5
34	8	Centrifuge		10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
35	9	Deep Freeze -20° C & Deep Freezer	(-) 20 ° FREEZER Parameter/ Feature THRESHOLD LIMIT / RANGE HOLD OVER TIME IN AMBIENT TEMPERATURE IN HOURS 2 or more Temperature range for machine in °C (-) 20 to (-) 15 Ability to work in ambient room temperature in °C (10 to 35) or more VOLUME in Litres 300 or more No. OF ADJUSTABLE STEEL RACKS IN INNER CHAMBER 3 or more THICKHNESS OF Powder coated CRCA steel sheet of OUTER BODY in mm 1 MUST HAVE SPECIFICATION Parameter/ Feature Yes/No Type: Horizontal INNER CHAMBER WITH Stainless steel for insulation to minimize heat loss MICROPROCESSOR BASED TEMPERATURE CONTROL Solid state digital indicator cum controller with audio visual alarm ALARM FOR: HIGH LOW TEMPERATURE, POWER FAILURE Counter balanced door, Inside acrylic doors to avoid temperature loss CFC FREE REFRIGERANT Digital temperature display with 0.1°C graduation SILICON OR POLYURETHENE FOAM INSULATION PANNEL FOR CASING AND DOOR QUALITY STANDARD & SAFETY CERTIFICATION EUROPEAN CE OR US FDA	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
36	10	Deep Freeze -20° C & Deep Freezer	(-) 80 ° FREEZER Parameter/ Feature THRESHOLD LIMIT / RANGE  HOLD OVER TIME IN AMBIENT TEMPERATURE IN HOURS 2 or more  Temperature range for machine in °C (-) 40 to (-) 80  Ability to work in ambient room temperature in °C (10 to 35) or more VOLUME in Litres 300 or more No. OF ADJUSTABLE STEEL RACKS IN INNER CHAMBER 3 or more THICKHNESS OF Powder coated CRCA steel sheet of OUTER BODY in mm 1 MUST HAVE SPECIFICATION Parameter/ Feature Yes/No Type: Upright INNER CHAMBER WITH Stainless steel for insulation to minimize heat loss MICROPROCESSOR BASED TEMPERATURE CONTROL Solid state digital indicator cum controller with audio visual alarm ALARM FOR: HIGH LOW TEMPERATURE, POWER FAILURE Counter balanced door, Inside acrylic doors to avoid temperature loss CFC FREE REFRIGERANT Digital temperature display with 0.1°C graduation SILICON OR POLYURETHENE FOAM INSULATION PANNEL FOR CASING AND DOOR QUALITY STANDARD & SAFETY CERTIFICATION EUROPEAN CE OR US FDA	

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
37	11	Elisa Reader	Parameter/ Feature THRESHOLD LIMIT / RANGE NO. OF WELLS RUN PER ASSAY (INCLUDING CONTROLS AND CALIBRATORS) 96 MINIMUM SAMPLES CAN BE RUN PER ASSAY (WITH CONTROLS AND CALIBRATORS) 1 ABSORBANCE Range (0.0-3.0) or more Wavelength of 6 Position filter wheel filters in nm 405- 690 READER ACCURACY in OD $\pm$ 0.010 READ TIME FOR SINGLE WAVELENGTH in Sec $\leq$ 10 READ TIME FOR DUAL WAVELENGTH in Sec $\leq$ 20 POWER SUPPLY 220 V $\pm$ 10% 50 HZ Range of ELISA WASHER Volume of solution dispense PROGRAMABLE in $\mu$ l 50-1000 WASHER ACCURACY well to well (NOT EXCEEDING) in $\mu$ l 300 $\pm$ 10% WASHER PROCESSING TIME (350 $\mu$ l x3 cycles x 8 port) in sec 180 or less RESIDUAL VOLUME in $\mu$ l $\leq$ 2 NO. OF PROGRAM 30 or more POWER REQUIREMENT 230 V $\pm$ 10%; 50/60 Hz Range of Soak Time (In Strip Mode) in Sec 0-10 Range of Soak Time (In Plate Mode) in Min 0-30 WORKING CONDITION HUMIDITY in % 0-95 WORKING CONDITION TEMPERATURE in $^{\circ}$ C (10 to 35) or more MUST HAVE SPECIFICATION Parameter/ Feature Yes/No MACHINE IS COMPATIBLE WITH REAGENTS AND KITS OF OTHER MANUFACTURER DETECTOR- Silicon Photodiode MEASUREMENT MODE Monochromatic & Bi-chromatic LIGHT SOURCE - LED Lamp / Halogen KEYBOARD RUGGED , WATER PROOF , MEMBRANE TYPE ELISA WASHER : LIQUID CONTACT MATERIALS Glass, polypropylene, polyethylene, stainless steel, tygon, teflon, derlin &	5
38	12	Elisa Plate 96 Well	To be notified later	10
39	13	Centrifuge tubes graduated. (Glass & Plastic)	To be notified later	500
40	14	Centrifuge	To be notified later	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
41	15	Water bath with variable temperature	1 Rectangular water bath for flattening paraffinembedded tissue sections in all areas of biomedical research and routine diagnostics.used for matntarmng specimens and solutions at requiredtemperature for immunohistochemical and enzymechemical application 2 Digital display, temperaturerange from ambient to 75°C, set value memory 3.High temperature consistency(control accuracy 0.2°C), working temperature above 44°C Indicated by flashing LED Settemperature displayed in addition to actual temperature. 4.Jet-black aluminium surface with specialscratch-proof plastic coating ensures highest thermal conductivity. 5. Tank: High grade SS tank 6. Operating Voltage: 230±10VAC 50Hz 7.Capacity: 5-8 ltr.	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
<b>Name of the Discipline: FORENSIC MEDICINE</b>				
42	1	Distillation Plant	Item deleted	0
43	2	Spectroscopic lens with adjustable slit	Item deleted	0
44	3	Automatic tissue processing machine	To be notified later	10
45	4	Microtome	<p>Fully automated motorized rotary microtome along with manual operation having microprocessor controlled panel with provision for motorized cutting via operating panel or foot pedal control.</p> <p>Precise micrometer feed system via stepper motor permits precision sectioning selectable at least from 2.0-40/60 micron in 0.5 micron increments.</p> <p>Trimming section selectable from 2 micron onwards.</p> <p>The vertical specimen stroke length of 70mm, larger specimen can be sectioned. The specimen holder should be clamp type and hold 60mm size block.</p> <p>The specimen retraction should occur on return stroke.</p> <p>Cold light source.</p> <p>Precise specimen orientation with zero point indication, with an orientation 8° X-Y axis helps in marking perfect orientation of the sample for sectioning.</p> <p>Motorised coarse feed in two speeds 30 micron/sec and 90 micron/sec. Variable sectioning speed adjustable from 0.5 to 420 mm/sec.</p> <p>Disposable blade holder with lateral displacement feature that can hold both high and low profile blades</p> <p>Integrated section waste tray.</p> <p>Accessories</p> <p>Microtome disposable blades (high profile coated) - 1 packets (50 blades/pack).</p> <p>Microtome disposable blades (low profile coated) - 1 packets (50 blades/pack).</p>	10
46	5	Thin layer Chromatography	Item deleted	0
47	6	Gas Chromatography	Item deleted	0
48	7	Infra Red Spectroscopy	Item deleted	0
49	8	Mass Spectroscopy	Item deleted	0

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
50	9	Cold storage for 6 dead bodies	<p>SS304 chamber of 6 cabinets  2 storied (3 column &amp; 2 rows; i.e. maximum 2 bodies vertically)  Each cabinet is for storing one cadaver  Temp +2 to +5 degree celsius  Microprocessor based temperature control  Drawer with auto lock  81 1/2" High x 55" Wide x 34.6" Deep  Epoxy coated wire shelves  Door mounted security lock  Top-mounted, non-CFC refrigeration system (R404A)  Air Cooled Condensor  Automatic Defrost  Digital Thermometer LED  Perimeter anti-condensate door opening heater wires to prevent "freeze-out"  Door activated interior fluorescent light  Condensation is automatically evaporated in a collection pan.  Cabinet interior and exterior door and sides are fabricated of premium grade stainless steel.  Galvanized exterior top and bottom corrosion proof powder coated.</p> <p><u>My specifications were:- (Please combine and see whichever is best)</u>  Size of Tray: 2100 – 2200 mm (length) × 500 – 600 mm (breadth) × 300 – 450 mm (height)  Dimension: 2500 – 2700 mm × 1600 – 1700 mm × 1900 – 2000 mm  Temperature range: 1- 4 C  Other features: Must have rust-proof coating paint  Must be equipped with temperature indicator  Refrigeration unit must be plug-in type for easy operation  Must be Trolley-mounted for easy shifting  Company or Product should be certified by ISO / appropriate authorities</p>	5
51	10	Portable X-Ray Machine	To be notified later	10
52	11	Digital Spectrometer	Item deleted	0
53	12	Microscope student type	To be notified later	125

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
54	13	Dissection Set	<p><b>Autopsy Instrument Box</b> containing at least the following instruments –</p> <ul style="list-style-type: none"> <li>• Cartilage Knife (6-9 cm blade)</li> <li>• Mallets (18 – 22 cm)</li> <li>• Operating Knives (various sizes having 12 – 18 cm blades)</li> <li>• Amputation Knife</li> <li>• Rib shears (Rt &amp; Lt)</li> <li>• Probe</li> <li>• Ratchet (18 – 22 cm)</li> <li>• Toothed Forceps</li> <li>• Forceps without tooth</li> <li>• Scissors</li> <li>• Resection Saw</li> <li>• Spare Blade for Saw</li> <li>• Retractor</li> </ul> <p>Or</p> <p>Set of Post mortem Instruments complete in wooden case consisting of:</p> <ul style="list-style-type: none"> <li>• 1 Chisel, rectangular</li> <li>• 1 Chisel with cross handle</li> <li>• 1 Forceps, Bone cutting</li> <li>• 1 Forceps Dissecting</li> <li>• 1 Hammer with hooked handle</li> <li>• 1 Set Hook and Chain</li> <li>• 1 Knife. Brain, solid forged</li> <li>• 3 Knife, Cartilage, solid forged</li> <li>• 6 Needles, curved triangular</li> <li>• 1 Saw with 8" blade</li> <li>• 3 Scalpel, solid forged</li> <li>• 1 Scalpel, extra large, solid forged</li> </ul>	350
55	14	Binocular Research type microscope with attachment for camera		20

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
56	15	Deep Freezer	(-) 20 ° FREEZER Parameter/ Feature THRESHOLD LIMIT / RANGE HOLD OVER TIME IN AMBIENT TEMPERATURE IN HOURS 2 or more Temperature range for machine in °C (-) 20 to (-) 15 Ability to work in ambient room temperature in °C (10 to 35) or more VOLUME in Litres 300 or more No. OF ADJUSTABLE STEEL RACKS IN INNER CHAMBER 3 or more THICKHNESS OF Powder coated CRCA steel sheet of OUTER BODY in mm 1 MUST HAVE SPECIFICATION Parameter/ Feature Yes/No Type: Horizontal INNER CHAMBER WITH Stainless steel for insulation to minimize heat loss MICROPROCESSOR BASED TEMPERATURE CONTROL Solid state digital indicator cum controller with audio visual alarm ALARM FOR: HIGH LOW TEMPERATURE, POWER FAILURE Counter balanced door, Inside acrylic doors to avoid temperature loss CFC FREE REFRIGERANT Digital temperature display with 0.1°C graduation SILICON OR POLYURETHENE FOAM INSULATION PANNEL FOR CASING AND DOOR QUALITY STANDARD & SAFETY CERTIFICATION EUROPEAN CE OR US FDA	5
57	16	Water Bath for Tissue floatation		10
58	17	Ultra Violet Spectroscopy		5
59	18	Brain knife	Not necessary, should be marked in red, as this is included in dissection set 1. Blade Shape: Straight 2. Cutting Edge: 30cm 3. Thickness: 1.7mm 4. Alloy / Material: Stainless Steel 5. Length: 45cm	40
60	19	Rib. Shears, right and left	Item deleted	0
61	20	Hacksaw	<ul style="list-style-type: none"> <li>Industrial quality hacksaw frame designed for the professional user</li> <li>Square section tubular frame for perfect combination of balance and rigidity</li> <li>Fitted with a 12" (300 mm) chrome alloy steel blade</li> <li>Size- 400mm</li> <li>Height- 130mm</li> </ul>	20

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
<b>Name of the Discipline: COMMUNITY MEDICINE</b>				
62	1	Audiometry	deleted	0
63	2	Portable X-ray (Maybe shared with other departments)	deleted	0
64	3	Balance Analytical 200 gm.	1. Range: .1mg-200g (at least) 2. Pan size: 150mm (approx) 3. Repeatability: 0.02 4. Casing: Glass casing 5. Digital display 6. Automated Taring system. 7. Should be European CE approved	10
65	4	Centrifuge clinical	a) Capacity: At least 16 holes x15ml round bottom test tube (plastic & glass). b) Built in time and speed regulator (digital controlled) with suitable speed & time indicator (digital display) and lid lock system. c) RPM: 500 to 4000 rpm with full load with swing out rotor head. d) Power Supply: 220/240 volts, single phase, 50 Hz e) A line voltage corrector of appropriate rating will form part of standard configuration. The servo voltage corrector should be capable to correct input voltage range from 160 – 280 V AC to 220/240 VAC, 50Hz. f) Technical Literature: The firm shall submit printed illustrated technical literature/ leaflet indicating the model number. If quoted model is a modified version of their any standard product that also be indicated in the offer g) Product certification: CE / US FDA / BIS certified. h) Quality Certification: ISO certified.	5
66	5	Dissecting microscope	Binocular type: glass lens (anti fungal coated) Objective: 2X, 4X &10X Working distance: 105 mm (approx) Field of view: 2X = 11.5 mm (approx), 4X = 5.7 mm (approx) Transmitted light: LED Eyepiece: 10X pair Should be CE/US FDA/BIS approved	100
67	6	Autoclave (Can be shared with Pathology/Microbiology department)	deleted	0

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
68	7	Spirometer	<ol style="list-style-type: none"> <li>1. FVE, SVC, MVV Tests.</li> <li>2. Evaluation of all other parameters with Flow-Volume/Volume-Time graphs</li> <li>3. Pre &amp; Post medication tests</li> <li>4. Store data for 2500 patients approx</li> <li>5. Flow range – 10 l/s to 16 l/s</li> <li>6. Built in printer to print graph and measurement values</li> <li>7. Liquid crystal display for graphs and measurement values</li> <li>8. Mains and battery operated</li> <li>9. Result Table with Predicted, result achieved, %Predicted, %improvement</li> <li>10. High resolution LCD (320x240 pixels)</li> <li>11. Microsoft Windows-based PC</li> <li>12. USB port</li> <li>13. Color printer required for color printouts.</li> <li>14. Software CD</li> <li>15. Reusable Mouth pieces</li> <li>16. Nose clip</li> <li>17. Transducer bidirectional turbine cartridge</li> <li>18. Turbine sensor-infrared interruption</li> <li>19. Disposable mouth pieces</li> <li>20. Handset</li> </ol>	15
69	8	Oil immersion Microscope (new inclusion)	<ul style="list-style-type: none"> <li>• Co-axial low drive mechanical stage (125mm x 145mm)(+/- 5 mm) with traverse area of 50 mm x 76 mm (+/-5mm) with single side holder</li> <li>• Co-axial coarse &amp; fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. Fine focus range 0.2 mm</li> <li>• Rack &amp; pinion mounted condenser holder</li> <li>• Centerable abbe condenser with aperture iris diaphragm (N.A. 1.25) focusable with rack &amp; pinion through 20 mm and a continuously variable iris diaphragm with a removable blue filter for daylight observation.</li> <li>• LED light source (with battery back-up) High brightness, longlife (30,000).</li> <li>• Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop.</li> <li>• Objectives: Plan 4X, Plan 10X, Plan 20X, Plan 40X &amp; Plan 100X (oil)</li> </ul> <p>Infinity corrected plan optics, Uniformly centered, Interchangeable &amp; Parfocal, Anti-fungus treated, Tropicalised anti fungus treatment ensures image excellence for long periods in conditions, favouring to fungus growth</p> <ul style="list-style-type: none"> <li>• Binocular (30 deg inclined seidentopf), 360 deg rotatable, dioptr adjustment</li> <li>• Certification: CE &amp; ISO 9001:2015</li> </ul>	5