

Notice Inviting e-Tender

West Bengal Medical Services Corporation Limited
Swasthya Sathi
GN-29, Salt Lake, Sector-V
Kolkata-700091

Phone No (033) 40340431/308
E mail: procurement@wbmsc.gov.in

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 – II (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	<p>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</p>	5
3	3	Band saw	<p>Usefull for preparing speciman of big size in Anatomy & meat deptt. Fitted with large table.</p> <p>Specifications :-</p> <p>Size of cutting table 850 x 800 mm in 2 parts (one part Sliding for easy movement)</p> <p>Size of wheel 455 mm</p> <p>Blade length</p> <p>Track 1065x 685 mm</p> <p>Height 1700 mm</p> <p>Meat guaze 3.5mts x 13/12 mm</p> <p>The table is made of thick special heavy C.S. Supplied complete with 1 blade, starter, cord, & plug Suitable to work on220 V single phase, 50Hz, AC supply</p> <p>Should be CE/BIS approved</p>	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

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
6	6	Five Part Hematology Analyzer	RBC, WBC, PLT, HGB, HCT, MCV, MCHC, RDW, MPV, PCT, PDW, MCH, MCHC. 26 Parameters 5 different mode: RBC, HGB, HCT, MCV, MCH, MCHC, RDW, PLT, MPV, PCT, PDW, WBC, LYM, MON, NEU, EOS, BASO, ALY (Atypical Lymphocytes), LIC (Large Immature Cells) in % & # RBC and BASO histograms Fully automated cell counter / hematology analyser providing 26 parameters including results for abnormal lymphocytes and Immature cells, absorbance-based cyto-chemical staining technology for reliability of the WBC differentials. System have option to turn off WBC Differential analysis, with resultant reagent saving. On-board monitoring of reagent levels and display the reagent level on screen whenever required. Sample processing speed of over 55 samples per hour. Whole-blood sample aspiration volume of less than 60uL for samples, quality control and calibration material. System does not have any external or internal pneumatic or compressor device. Should have barcode facility. Should be European CE IVD/US FDA certified. Should have demonstration prior to final price bid. Should have good service centre in Kolkata. Equipment Prints results on ordinary paper and on letter-heads.	5
7	7	Automatic Urine Analyzer	Semi-quantitative - albumin, bilirubin, creatinine, glucose, ketone, leukocytes, nitrite, pH, protein, specific gravity and urobilinogen Should be US FDA/European CE/BIS approved	10
8	8	Centrifuge tubes graduated	1.5ml, 2ml- eppendorf tube; 10ml,15ml- glass tube	200
9	9	Automatic Hematology Slide Stainers. ***	Compact, space saving H&E stainer for routine applications; High specimen throughput; Simultaneous realization of various different staining protocols; Exact incubation times; Continuous slide unload / reload function without having to interrupt a staining cycle or open the lid; Simple, menu-driven programming; Incubation times and sequence of use of reagent stations; freely programmable; Integrated oven for optimal slide drying; Reagent containers can be exchanged quickly and easily; Integrated fume extraction system with activated charcoal filter; Minimized user exposure to hazardous reagent fumes; Easy-to-clean and resistant surfaces made out of polyester epoxy resin and stainless steel; Specimen slide throughput: at least 200 specimen slides per hour; (depending on the selected program – up to 600 slides per hour); Loading capacity: at least 11 slide racks; Loading capacity per slide rack: at least 30 specimen slides; Total number of processing stations: 25-30; Reagent stations: at least 18; Reagent container volume: 400-450 ml; Number of wash stations: max. 5; Oven: 1; Oven chamber temperature: off or 30 °C to 65 °C; Incubation time setting: from 0 sec. up to 99 min, 59 sec.; Load / unload stations: 1 each; Permanent memory capacity: 15 programs, up to 25 program steps each; Should have at least 10 Installations in East India; Should have dedicated Service Support only for East India with a team of service engineers (at least 2 persons) headquartered in Kolkata, having their office in Kolkata to support all districts of West Bengal timely; Should have European CE /US FDA/BIS certificate	5
10	10	Cytocentrifuge	16 tubes/ 32 tubes	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
11	11	Coagulometer (Fully automated)	<p>Fully automated random access Coagulation analyzer. Open System with random & STAT mode of operation. Viscosity based detection system for clotting test and optical system for Chromogenic & Immunospectrophotometric tests. Capable to run Clotting assay, Chromogenic assay & Immunospectrophotometric assays. Parameters – PT, APTT, TT, ATIII, Heparin. Fibrinogen, Fondaparinux, Rivaroxaban. UFH & LMWH, D-dimer, FM, FDP PC (clot & Chromogenic), PS. Free PS, APCR. Plasminogen, Antiplasmin, TAFI, VWF: Ag, Extrinsic & Intrinsic Pathway Factors & LA. Throughput – 150 PT/hour & 90 PT & APTT/hour. 80 Assay Methodologist available. Reagent positions – 45 with 5 stirring positions. All are temperature controlled & maintained from 15 to 19 deg C. Each reagent can be placed in several positions and analyzer will detect automatically without manual intervention. Barcode identification for reagents with continuous loading. Barcode identification for reagent name, Lot number, Expiry, on board stability. 96 samples positions, with 84 for primary tubes & 12 for pediatric tubes. Adaptors available for Microtainers. Barcode identification for samples. Continuous sample loading with all positions for STAT mode. 12 programmable tests for one sample. Three separate needles for Samples, Intermediate reagent & Starter reagents with LLD (Liquid level detection) 1000 unitary Cuvettes on board with continuous loading capability. Pre calibrated assays for PT, FIB & D.Dimer, and Free Pro S & VWF: Ag. Storage capable for Calibration curves. Automatic dilution for calibrations. 600 patients' results & One year IQC results in memory. Re run & reflex facility. QC management with Levy Jennings chart & Westgard QC alarms. Alarm for QC out range capability. LIS capability with Bi directional transferring capacity. Auto validation for patient results & Calibrations. Auto rerun with operator's rules. Based on windows embedded operating systems with multitasking. Color LCD 22" Touch screen. The system is complied with CE (EC), US FDA certification.</p>	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
12	12	Three Part Fully Automated Cell Counter	<ol style="list-style-type: none"> 1. The machine should be Fully Automated Haematology Analyzer providing at least 19 parameters including 3-part differential, with user definable settings to have both RDW-CV & RDW-SD. 2. Cost per test, onboard stability & test pack size to be included in Form 9 & Form 12. 3. The system should be capable of processing samples at a speed of at least 60 samples per hour in whole blood mode. Pediatric mode should be there for analyzing low volume samples with reportable results for differential parameters along with total counts. 4. The system should use the proven and approved "Volumetric Metering" system of cell counting for WBC's, RBC's and PLT's for high precision of the results & stability of the calibration. WBC differential parameters such as Granulocytes / Neut, Lym & Mixed Cells in absolute count will be preferred. 5. The system should have a large LCD display to have a review of all results along with the three histograms of WBC, RBC & PLT on the screen with automatic floating discriminator. 6. The system should be a two reagent system other than a cleaner with non-cyanide based reagent for Hb estimation, using high intensity LED and not lamp. 7. The system should have world reference "Electrical Impedance" method of cell counting for the reliability of the results, with an integrated temperature sensor for monitoring & compensating for shifts in room temperature. The system should have inbuilt probe wiping after every sample. 8. 4 sets of tri-level control to be supplied in a staggered manner over a period of 6 months. 9. External Roller Mixture with capacity of at least 6-9 vials to be supplied. 10. Equipments should be supplied (staggered) with a free reagent for testing 1000 samples in a span of 6 months. 11. The system should have a low cost per test (considering work load of 400 samples per month). 12. Should be supplied with 1KVA online UPS (Libert / APC) having 30 minutes back up. 13. All reagents required should be available locally from the company or its authorized distributor within 7 days of placement of order. 14. Warranty: 2 years; CMC: 5 years. 15. Product certification: CE (Declaration of Conformity on compliance with In Vitro Diagnostic Device Directive IVD – 98/79/EC) or US FDA Certified. 	5
13	13	Five part Fully Automated Cell Counter	Item deleted	5
14	14	<p>Grossing Station - 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.</p>	<p>2 ventilation options:- High-quality stainless steel construction, Vacuum breaker-protected water supply, disposal, Polyethylene dissecting, Magnetic instrument holder, Dissecting area rinse, Shelving, Spray hose assembly, with facility for formalin gas exhaust. Should be CE/BIS approved</p>	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	Focusing System is Co-axial coarse & Fine Focusing control on both sides. It should also have a focusing stopper. Objectives are Plan Achromat objectives of 4x, 10x, 20x, 40x (spring) and 100x (spring, oil) should be quoted. Nosepiece are Quintuple revolving nosepiece with inward tilt (facing away from the operator) Condenser- 1.25 with built in aperture iris diaphragm Illumination by Pre-centered LED illumination with consumption of 3 W or higher having lifetime of 30,000 working hours or higher. Eyepiece - Paired Widefield eyepiece of 10x having field of view of 20 mm or higher with diopter setting of +/- 5 should be available on one eyepiece position. Multi Viewing attachment Multi Viewing attachment for additional 4 observers. Binocular Observation tube inclined at 30 degrees with diopter setting - 4 units, Widefield paired eyepieces 10x having field of view of 20 mm - 4 pairs. All the co-observers should get the same orientation and view as main observer. It should have a arrow pointer attachment. Demonstration is a must for technical evaluation before price bid After Sales Service Support - The manufacturer should have their service engineer based in Kolkata so that after sales service is attended promptly. The Quoted Microscope should have European CE certification/USA-FDA (Certificates should be provided on the brand of microscope which the bidder mentioned in the tender).	5
16	16	For every Tutor – Binocular Microscope with suitable high end lenses.	Metal body with all critical movements based on ball bearing & wire guides thereby ensuring smooth & precise manipulation. 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. Co-axial coarse & fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. Fine focus range 0.2 mm. Rack & pinion mounted condenser holder. Centerable abbe condenser with aperture iris diaphragm (N.A. 1.25) focusable with rack & pinion through 20 mm and a continuously variable iris diaphragm with a removable blue filter for daylight observation. LED light source High brightness, longlife (30,000). Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop. Objectives: Plan 4X (N.A 0.10 W.D 25 mm), Plan 10X (N.A 0.25 W.D 5 mm), Plan 20x, Plan 40X. Infinity corrected plan optics, Uniformly centered, Interchangeable & Parfocal, Anti-fungus treated, Tropicalised anti fungus treatment ensures image excellence for long periods in conditions, favouring to fungus growth. Binocular (30 deg inclined seidentopf), 360 deg rotatable, dioptre adjustment WF 10X (F.N 18 mm Or better) paired eyepiece and left eyepiece should have eyepiece micrometer. The unique optical design of the compensating eyepiece provides relief from eye fatigue and renders color- compensated wide-field images of utmost clarity. Compatible with optionally available eyepiece micrometer. Certification: European CE/BIS (Certificates should be provided on the brand of microscope which the bidder mentioned in the tender).	20

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
17	17	For every Professor, Associate & Assistant Professor : Binocular Microscopes with High end Semiapochromatic Optics of international standard.	<p>Metal body with all critical movements based on ball bearing & wire guides thereby ensuring smooth & precise manipulation. 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. Co-axial coarse & fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. Fine focus range 0.2 mm. Rack & pinion mounted condenser holder. Centerable abbe condenser with aperture iris diaphragm (N.A. 1.25) focusable with rack & pinion through 20 mm and a continuously variable iris diaphragm with a removable blue filter for daylight observation. LED light source High brightness, longlife (30,000). Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop. Objectives: Plan 4X (N.A 0.10 W.D 25 mm), Plan 10X (N.A 0.25 W.D 5 mm), Plan 20x, Plan 40X. Infinity corrected plan optics, Uniformly centered, Interchangeable & Parfocal, Anti-fungus treated, Tropicalised anti fungus treatment ensures image excellence for long periods in conditions, favouring to fungus growth. Binocular (30 deg inclined seidentopf), 360 deg rotatable, dioptr adjustment WF 10X (F.N 18 mm Or better) paired eyepiece and left eyepiece should have eyepiece micrometer. The unique optical design of the compensating eyepiece provides relief from eye fatigue and renders color- compensated wide-field images of utmost clarity. Compatible with optionally available eyepiece micrometer. Certification: European CE/BIS (Certificates should be provided on the brand of microscope which the bidder mentioned in the tender).</p>	20
18	18	For Diagnostic & Research Work - Trinocular head Microscope with Bright field,	<p>Metal body with all critical movements based on ball bearing & wire guides thereby ensuring smooth & precise manipulation. 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. Co-axial coarse & fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. Fine focus range 0.2 mm. Rack & pinion mounted condenser holder. Centerable abbe condenser with aperture iris diaphragm (N.A. 1.25) focusable with rack & pinion through 20 mm and a continuously variable iris diaphragm with a removable blue filter for daylight observation. LED light source High brightness, longlife (30,000). Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop. Objectives: Plan 4X (N.A 0.10 W.D 25 mm), Plan 10X (N.A 0.25 W.D 5 mm), Plan 20x, Plan 40X (spring loaded) (N.A 0.65 W.D 0.5 mm), Plan 100x (oil, spring loaded) (N.A 1.25 W.D 0.14 mm). Infinity corrected plan optics, Uniformly centered, Interchangeable & Parfocal, Anti-fungus treated, Tropicalised anti fungus treatment ensures image excellence for long periods in conditions, favouring to fungus growth. Trinocular tube & 30 deg inclined seidentopf binocular head, 360 deg rotatable, dioptr adjustment WF 10X (F.N 18 mm Or better) paired eyepiece and left eyepiece should have eyepiece micrometer. The unique optical design of the compensating eyepiece provides relief from eye fatigue and renders color- compensated wide-field images of utmost clarity. Compatible with optionally available eyepiece micrometer. Certification: European CE/BIS (Certificates should be provided on the brand of microscope which the bidder mentioned in the tender)</p>	5

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
19	19	Manual Rotary Microtome	<ul style="list-style-type: none"> • User selectable coarse feed wheel turn direction <ul style="list-style-type: none"> • Retraction on/off function • Two mechanical trim steps, trimming thickness 10um & 50um • Blade holder for disposable blades and standard specimen clamp • The object head with +/-8° X/Y orientation should be equipped with a fast specimen clamp exchange system for improved workflow. <ul style="list-style-type: none"> • Storage space on top of the instrument housing must provide room for sectioning tools and accessories. • The instrument must feature a low-maintenance micrometer feed system with backlash • Must have maintenance-free vertical cross-roller guides and horizontal specimen feed via precision cylinder guide system. <ul style="list-style-type: none"> • Distortion-resistant base plate should ensure optimum overall stability. <ul style="list-style-type: none"> • The vertical stroke of approx. 59 mm • Horizontal specimen travel range of 25 mm • Should allow to section specimens up to a size of 50 mm x40 mm x 40 mm. <ul style="list-style-type: none"> • Ergonomically designed hand wheel grip. • Hand wheel lockable in any position via brake lever attached to base plate <ul style="list-style-type: none"> • Lockable hand wheel in upper position via hand wheel grip. <ul style="list-style-type: none"> • Section thickness setting range 0.5–60 µm • Section thickness selection from 0.5–2 µm in 0.5 µm-steps <ul style="list-style-type: none"> • from 2–10 µm in 1 µm-steps • from 10–20 µm in 2 µm-steps • from 20–60 µm in 5 µm-steps • Total horizontal specimen feed 25 mm <ul style="list-style-type: none"> • Vertical specimen stroke 59 mm • Specimen retraction ON/OFF • Specimen orientation: Horizontal 8° & Vertical 8° with Rotation ± 90° • Should have min. 40-50 no of installations in East India in which –at least 50% should be in Government Institutions • Should have dedicated Service Support only for East India with a team of service engineers (at least 2 persons) headquartered in Kolkata, having their office in Kolkata to support all districts of West Bengal timely. 	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
20	20	Cryostat	<p>Freestanding cryostat with encapsulated, splash-proof microtome.Spacious, stainless-steel cryochamber with antiglare illumination.Easy to clean and disinfect. Heated, removable sliding window.Stable, self-contained cryocabinet on casters.Handwheel manually lockable in two positions.Easy-to-handle and stable clamping system for clamping the specimen discs.8° XYZ specimen orientation with zero point reference.Cryochamber temperature selection from 0 °C to -30 °C, adjustable in 1K; increments at ambient temperature of 20 °C.Easy-to-clean, actively cooled specimen preparation zone with quick-freezing shelf for up to 10 specimens (max. temperature preferred upto -37 °C).Cryochamber may be defrosted manually or via automatic hot-gas defrosting once every 24 hours.The cycle may be programmed in 15-minute increments.Defrost cycle: 10-12 minutes.Cryochamber and quick-freezing shelf can be defrosted manually.Should be equipped with an acoustic warning signal to prevent unintentional defrosting.Manual defrost cycle for chamber and quick-freezing shelf: 10-12 minutes.Low-maintenance microtome with cross roller guides.Reproducible, high-quality thin sections via stepper motor specimen feed. Section thickness selection from outside the cryochamber.Sectioning thickness range: 2-60 μm,selectable in 0.5 μm increments from 2-5 μm;selectable in 1 μm increments from 5-20 μm;selectable in 5 μm increments from 20-60 μm;Total vertical specimen stroke: 59 mm.Total horizontal specimen feed: 25 mm.Motorized coarse feed in 2 speeds: slow is max.600 $\mu\text{m}/\text{s}$ and fast is min. 900 $\mu\text{m}/\text{s}$.Specimen orientation – 8° (x-, y-, z-Axis)Step function: 20 μm each time the key is pressed at slow coarse feed speed.Control panel with membrane-protected buttons and locking function.Self-explanatory symbols for all essential functions and displays.LED display for cryochamber temperature, actual time, defrost time, and section thickness selection. Visual indication of specimen stop positions (Front/Home). Should have at least 8-10 installation in Eastern region incl of Govt & Pvt accounts, with at least 4-5 in Central Govt./State Govt. Institutes or Hospitals; Should have CE / USFDA certificate. Should have dedicated Service Support only for East India with a team of service engineers (at least 2 persons) headquartered in Kolkata, having their office in Kolkata to support all districts of West Bengal timely.</p>	5
21	21	Cold Plate for Modular Tissue Embedding System	<p>Operating temperature: -6 °C (self-regulating); Min. guaranteed workload capacity: 60 blocks solidified in 30 minutesCooling efficiency is important, so the cold plate must be designed with an environment adaptive control module to make sure the operating temperature is always stabilized at -6 °C. Provision for Self Regulation so that no need to turn down the temperature in summer or worry about too fast cooling in winter.Should have CE / USFDA certificate Should have minimum 10 installation in government institution in East India Should have dedicated Service Support only for East India with a team of service engineers (at least 2 persons) headquartered in Kolkata, having their office in Kolkata to support all districts of West Bengal timely.</p>	5
22	22	Single pan Analytical balance	<ol style="list-style-type: none"> 1. Range: 0.1mg-200g (at least) 2. Pan size: 125mm (approx) 3. Repeatability: 0.02 mg 4. Transparant casing 5. Digital display 6. Automated Taring system 7. Internal calibration 8. External calibration with weight from statutory body 	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
23	23	Automated Tissue Processor –Vacuum	<p>Carousel type with 12 stations Configurations: – Basic instrument with Vacuum Capacity- 80-100 cassettes Option: 1 baskets loading Tissue baskets made of metal with varying capacities of up to 100 cassettes Ergonomic control panel with foil-protected keyboard and LCD Infiltration time separately programmable for each station Delayed start functions up to 9 days Possibility of interrupting an automatic process for reloading or removing cassettes for special applications before the end of a run Easy editing and changing of programs, even during a processing run Audible alarms, error messages and warning codes Advanced safety concept with Wide range of accessories should be available Nominal voltage: 100 / 120 / 230 / 240 V AC \pm 10% Nominal frequency: 50 / 60 Hz Wax baths: Number: 2 Capacity: at least 1.8 litres Temperature range 45 °C – 65 °C Excess temperature cutout: 75 °C \pm 4 °C Reagent containers: Number: 9 to 10 Capacity: at least 1.8 litres Standard tissue basket: Number: 1 Capacity: max. 100 cassettes Programs: Number: 8 to 9, freely selectable Programmable infiltration time per station: _ 99 h 59 min Delayed start: 9 days Drain time: 60 s Should have min. 30 no of installations in East India in which –at least 7-10 nos. should be in Government Institutions in West Bengal state Should have dedicated Service Support only for East India with a team of service engineers (at least 2 persons) headquartered in Kolkata, having their office in Kolkata to support all districts of West Bengal timely. Should have European CE / USFDA certificate.</p>	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)	<p>Rectangular water bath for flattening paraffinembedded tissue sections in all areas of biomedical research and routine diagnostics.used for maintaining specimens and solutions at requiredtemperature for immunohistochemical and enzymechemical application. Digital display, membrane keyboard, temperaturerange from ambient to +75°C, set value memory. High temperature consistency(control accuracy 0.2°C), working temperature above +44°C indicated by flashing LED. Settemperature displayed in addition to actual temperature. Jet-black aluminium surface with specialscratch-proof plastic coating ensures highest thermal conductivity. Capacity- approx 2L</p>	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 ± 2 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
Name of the Discipline: MICROBIOLOGY				
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)	<ol style="list-style-type: none"> 1. Complete set – including base gel running unit, safety lid, at least two casting trays and combs. 2. Gel casting Tray: Standard form; 3. Combs size: 1.0mm – 4 wells, 8 wells & 12 wells 4. Buffer chamber capacity: 150 ml approx. 5. Buffer chamber must have safety lid 6. No. of platinum electrodes : positive & negative (each one) 7. Connecting Cord: Red and Black (each one) 8. Power supply: <ul style="list-style-type: none"> Suitable for constant voltage and constant current mode. Output voltage: adjustable from 0 to 500 with an increment of 1 volt Output current: upto 800 mA with an increment of 1mA. Output power: 300W or more (450) Input voltage: 230V + 10 VAC, 50Hz 9. Should have CE/US FDA/BIS 	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
30	4	Biosafety Cabinet Type - 2A	<p>1. Vertical laminar flow air to create ISO-Class III work area</p> <p>2. Single piece wall of SS, preferably SS- 304</p> <p>3. Single piece work tray of SS, preferably SS-304.</p> <p>4. Side walls are surrounded by negative pressure.</p> <p>5. LUPA filter(efficacy 99.999% . Arrests particles S 0.3micron) — 2(both downflow and exhaust).</p> <p>6. UV light arrangement with a UV meter.</p> <p>7. Pressure gauge (dial type).</p> <p>8. Size : WxDx H = 1000mm x 600 mm x 650 mm (approx)</p> <p>9. Air flow velocity : Inflow 0.5 M/S , Outflow 0.3 M/S 10. Heavy Duty Castor wheels</p> <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</p>	5
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.</p> <p>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"> • Service facility in Kolkata • 5 years guarantee of all parts, Thereafter AMC (please quote) • Record of installation in reputed institutes in Kolkata and certificate from users <p>ISO-2013 Compatible</p>	25
32	6	Biosafety Cabinet Type - 2B	<p>1. Vertical laminar flow air to create ISO-Class III work area</p> <p>2. Single piece wall of SS, preferably SS- 304</p> <p>3. Single piece work tray of SS, preferably SS-304.</p> <p>4. Side walls are surrounded by negative pressure.</p> <p>5. HEPA filter(efficacy: 99.99 % at 0.3micron)</p> <p>6. UV light arrangement with a UV meter.</p> <p>7. Pressure gauge (dial type).</p> <p>8. Size : Wx DxH = 1000mm x 600 mm x 650 mm (approx)</p> <p>9. Air flow velocity : Inflow 0.5 M/S , Outflow 0.3 M/S</p> <p>10. Heavy duty 'Castor Wheels'.</p> <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	Item deleted	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
35	9	Deep Freeze -20° C	(-) 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 -80° C	(-) 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 μ l 50-1000 WASHER ACCURACY well to well (NOT EXCEEDING) in μ l 300 \pm 10% WASHER PROCESSING TIME (350 μ l x3 cycles x 8 port) in sec 180 or less RESIDUAL VOLUME in μ 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	Item deleted	10
39	13	Centrifuge tubes graduated. (Glass & Plastic)	Item deleted	500
40	14	Centrifuge	Item deleted	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
41	15	Water bath with variable temperature	<p>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</p> <p>2 Digital display, temperaturerange from ambient to 75°C, set value memory</p> <p>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.</p> <p>4.Jet-black aluminium surface with specialscratch-proof plastic coating ensures highest thermal conductivity.</p> <p>5. Tank: High grade SS tank</p> <p>6. Operating Voltage: 230±10VAC 50Hz</p> <p>7.Capacity: 5-8 ltr.</p>	10

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
Name of the Discipline: FORENSIC MEDICINE				
42	1	Distillation Plant	Item deleted	0
43	2	Spectroscopic lens with adjustable slit	Item deleted	0
44	3	Automatic tissue processing machine	<p>Carousel type with 12 stations Configurations: – Basic instrument with Vacuum Capacity- 80-100 cassettes Option: 1 baskets loading Tissue baskets made of metal with varying capacities of up to 100 cassettes Ergonomic control panel with foil-protected keyboard and LCD Infiltration time separately programmable for each station Delayed start functions up to 9 days Possibility of interrupting an automatic process for reloading or removing cassettes for special applications before the end of a run Easy editing and changing of programs, even during a processing run Audible alarms, error messages and warning codes Advanced safety concept with Wide range of accessories should be available Nominal voltage: 100 / 120 / 230 / 240 V AC \pm 10% Nominal frequency: 50 / 60 Hz Wax baths: Number: 2 Capacity: at least 1.8 litres Temperature range 45 °C – 65 °C Excess temperature cutout: 75 °C \pm 4 °C Reagent containers: Number: 9 to 10 Capacity: at least 1.8 litres Standard tissue basket: Number: 1 Capacity: max. 100 cassettes Programs: Number: 8 to 9, freely selectable Programmable infiltration time per station: _ 99 h 59 min Delayed start: 9 days Drain time: 60 s Should have min. 30 no of installations in East India in which –at least 7-10 nos. should be in Government Institutions in West Bengal state Should have dedicated Service Support only for East India with a team of service engineers (at least 2 persons) headquartered in Kolkata, having their office in Kolkata to support all districts of West Bengal timely. Should have European CE / USFDA certificate.</p>	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. Precise micrometer feed system via stepper motor permits precision sectioning selectable at least from 2.0-40/60 micron in 0.5 micron increments. Trimming section selectable from 2 micron onwards. The vertical specimen stroke length of 70mm, larger specimen can be sectioned. The specimen holder should be clamp type and hold 60mm size block. The specimen retraction should occur on return stroke. Cold light source. Precise specimen orientation with zero point indication, with an orientation 8° X-Y axis helps in marking perfect orientation of the sample for sectioning. Motorised coarse feed in two speeds 30 micron/sec and 90 micron/sec. Variable sectioning speed adjustable from 0.5 to 420 mm/sec. Disposable blade holder with lateral displacement feature that can hold both high and low profile blades Integrated section waste tray. Accessories Microtome disposable blades (high profile coated) - 1 packets (50 blades/pack). Microtome disposable blades (low profile coated) - 1 packets (50 blades/pack).</p>	10
46	5	Thin layer Chromatography	Item deleted	0

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
47	6	Gas Chromatography	Item deleted	0
48	7	Infra Red Spectroscopy	Item deleted	0
49	8	Mass Spectroscopy	Item deleted	0
50	9	Cold storage for 6 dead bodies	<p>SS304 chamber of 6 cabinets 2 storied (3 column & 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	CAT	10
52	11	Digital Spectrometer	Item deleted	0
53	12	Microscope student type	Item deleted	125

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
54	13	Dissection Set	<p>Autopsy Instrument Box containing at least the following instruments –</p> <ul style="list-style-type: none"> • Cartilage Knife (6-9 cm blade) • Mallets (18 – 22 cm) • Operating Knives (various sizes having 12 – 18 cm blades) • Amputation Knife • Rib shears (Rt & Lt) • Probe • Ratchet (18 – 22 cm) • Toothed Forceps • Forceps without tooth • Scissors • Resection Saw • Spare Blade for Saw • Retractor <p>Or</p> <p>Set of Post mortem Instruments complete in wooden case consisting of:</p> <ul style="list-style-type: none"> • 1 Chisel, rectangular • 1 Chisel with cross handle • 1 Forceps, Bone cutting • 1 Forceps Dissecting • 1 Hammer with hooked handle • 1 Set Hook and Chain • 1 Knife. Brain, solid forged • 3 Knife, Cartilage, solid forged • 6 Needles, curved triangular • 1 Saw with 8" blade • 3 Scalpel, solid forged • 1 Scalpel, extra large, solid forged 	350
55	14	Binocular Research type microscope with attachment for camera	<p>Metal body with all critical movements based on ball bearing & wire guides thereby ensuring smooth & precise manipulation. 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. Co-axial coarse & fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. Fine focus range 0.2 mm. Rack & pinion mounted condenser holder. Centerable abbe condenser with aperture iris diaphragm (N.A. 1.25) focusable with rack & pinion through 20 mm and a continuously variable iris diaphragm with a removable blue filter for daylight observation. LED light source High brightness, longlife (30,000). Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop. Objectives: Plan 4X (N.A 0.10 W.D 25 mm), Plan 10X (N.A 0.25 W.D 5 mm), Plan 20x, Plan 40X. Infinity corrected plan optics, Uniformly centered, Interchangeable & Parfocal, Anti-fungus treated, Tropicalised anti fungus treatment ensures image excellence for long periods in conditions, favouring to fungus growth. Binocular (30 deg inclined seidentopf), 360 deg rotatable, dioptr adjustment WF 10X (F.N 18 mm Or better) paired eyepiece and left eyepiece should have eyepiece micrometer. The unique optical design of the compensating eyepiece provides relief from eye fatigue and renders color- compensated wide-field images of utmost clarity. Compatible with optionally available eyepiece micrometer. Certification: European CE/BIS (Certificates should be provided on the brand of microscope which the bidder mentioned in the tender).</p>	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 THICKNESS 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	Rectangular water bath for flattening paraffinembedded tissue sections in all areas of biomedical research and routine diagnostics.used for maintaining specimens and solutions at requiredtemperature for immunohistochemical and enzymechemical application. Digital display, membrane keyboard, temperaturerange from ambient to +75°C, set value memory. High temperature consistency(control accuracy 0.2°C), working temperature above +44°C indicated by flashing LED. Settemperature displayed in addition to actual temperature. Jet-black aluminium surface with specialscratch-proof plastic coating ensures highest thermal conductivity. Capacity 2L	10
58	17	Ultra Violet Spectroscopy	Item deleted	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"> • Industrial quality hacksaw frame designed for the professional user • Square section tubular frame for perfect combination of balance and rigidity • Fitted with a 12" (300 mm) chrome alloy steel blade • Size- 400mm • Height- 130mm 	20

Sl. No.	Item Sl. No.	Name of the Equipments (Item)	Specification	Total Qty for 5 MCH
Name of the Discipline: COMMUNITY MEDICINE				
62	1	Audiometry	Item deleted	0
63	2	Portable X-ray (Maybe shared with other departments)	Item 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)	Item 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"> 1. FVE, SVC, MVV Tests. 2. Evaluation of all other parameters with Flow-Volume/Volume-Time graphs 3. Pre & Post medication tests 4. Store data for 2500 patients approx 5. Flow range – 10 l/s to 16 l/s 6. Built in printer to print graph and measurement values 7. Liquid crystal display for graphs and measurement values 8. Mains and battery operated 9. Result Table with Predicted, result achieved, %Predicted, %improvement 10. High resolution LCD (320x240 pixels) 11. Microsoft Windows-based PC 12. USB port 13. Color printer required for color printouts. 14. Software CD 15. Reusable Mouth pieces 16. Nose clip 17. Transducer bidirectional turbine cartridge 18. Turbine sensor-infrared interruption 19. Disposable mouth pieces 20. Handset 	15
69	8	Oil immersion Microscope (new inclusion)	<ul style="list-style-type: none"> • 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 • Co-axial coarse & fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. Fine focus range 0.2 mm • Rack & pinion mounted condenser holder • Centerable abbe condenser with aperture iris diaphragm (N.A. 1.25) focusable with rack & pinion through 20 mm and a continuously variable iris diaphragm with a removable blue filter for daylight observation. • LED light source (with battery back-up) High brightness, longlife (30,000). • Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop. • Objectives: Plan 4X, Plan 10X, Plan 20X, Plan 40X & Plan 100X (oil) <p>Infinity corrected plan optics, Uniformly centered, Interchangeable & 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"> • Binocular (30 deg inclined seidentopf), 360 deg rotatable, dioptr adjustment • Certification: CE & ISO 9001:2015 	5