Notice Inviting e-Tender

West Bengal Medical Services Corporation Limited
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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-19/2021 **Dated –15.01.2021**

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

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	Ultrapure water purification system	1. It should be standalone single stage combined system(Type1 & 2) to produce Endotoxin and bacteria free ultrapure water Type 1 and Type 2 directly from potable water supply. 2. System should be capable of providing ASTM Type I (18.2 Mega ohm resistivity) Water and have the UF cartridge to cater Biological applications and analytical applications. 3. System should be capable of providing ASTM Type II (1-10 Mega ohm resistivity) Water from potable tap water 4. System has feed water acceptance level of Conductivity upto 1500 µS/cm or more, Fouling Index (SDI) > 3 and Total Chlorine less than 0.1 ppm or more	5

			5. System should have a pretreatment kit with 1µm filter, Harness Stabilizer and Carbon 6. System should have RO Flow rate 15Ltr/Minute or more 7. Type 1 water flow rate should be equal to more than 1 Ltr/Minute 8. Reverse Osmosis module is made up of thin film composite polyamide RO membrane with rejection rate of 94 - 99% 9. System has feed water specific Purification pack before UV lamp consisting of mixed bed ion exchange resin/ micro filter / activated carbon to ensure better purification and longer life of the cartridges. 10. System should be based on the DI based technology to avoid the wastage water and cost of replacement. 11. System should have dual wavelength 185/254 nm for UV-oxidation for reducing the content of microorganisms and their metabolites to ensure the quality of Type 1 water 12. UF life must be 2 years to give RNAse/DNAse/Pyrogen free water to avoid regular cost. 13. Type 2 water available from separate conical bottom storage tank. Tank Water should have the recirculation feature to recirculate through High Purity Cartridge to maintain purity and avoid stagnancy. 14. Reservoir of equal or more than 60 Ltrs conical bottom PE tank with auto cutoff level sensors. Stored water level can be adjusted as lab needs change 15. Additional hand dispenser to dispense type 2 water is required. 16. System be compatible for onsite IQ/OQ(Onsite Validation)	

			17. Production rate of Purified Water @ 15 ltrs/hr or more 18. System should be quoted with Two set of Consumables including RO as optional 19. Water quality should be as below: **Ultra Pure (Type I) water:** **Resistivity……18.2 Mega Ohms.cm @ 25 Degree C.** **TOC ……..…… < 5 ppb** **Bacteria …… < 0.01 cfu /ml or better** **Particulates (.22 micron)…… < 1 /ml** **RNAse……...< 0.003 ng/ml or better** **DNAse……< 0.4 pg/ml or better** **Endotoxin…….0.001 EU/ml or better** **Flow rate ……≥ 1 Ltr/Minute.** **Ultra Pure (Type II) water:** **Resistivity…… > 1 Mega Ohms.cm @ 25 Degree C.** **TOC ……..…… < 30 ppb** **Warranty: Minimum One year.** **Optional: Additional consumable and accessories like filter, cartridge, UV light, cleaning reagent need to be quote as optional to run the machine Three years.** **Should have minimum 50 installation of similar model.**	
2	2	Five Part Hematology Analyzer	1. RBC, WBC, PLT, HGB, HCT, MCV, MCHC, RDW, MPV, PCT, PDW, MCH, MCHC. 2. 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)/ IG, LIC (Large Immature Cells) in % & RBC and BASO histograms 3. Fully automated cell counter / hematology analyzer providing 26 parameters including results for	5

			abnormal lymphocytes and Immature cells, 4. Absorbance-based cyto-chemical staining technology/ Fluorescence flow cytometry for reliability of the WBC differentials. 5. System have option to turn off WBC Differential analysis, with resultant reagent saving. 6. On-board monitoring of reagent levels and displays the reagent level on screen whenever required. 7. Sample processing speed of over 45 samples per hour. 8. Whole-blood sample aspiration volume of less than 60uL for samples, quality control and calibration material. 9. System does not have any external or internal pneumatic or compressor device. 10. Should have barcode facility. 11. Should be European CE IVD/US FDA certified. 12. Equipment Prints results on ordinary paper and on letter-heads.	
3	3	Automatic Urine Analyzer	1. Semi-quantitative - albumin, bilirubin, creatinine, glucose, ketone, leukocytes, nitrite, pH, protein, specific gravity and urobilinogen 2. Should be US FDA/European CE IVD/BIS approved	10
4	4	Automatic Hematology Slide Strainers.	1. Compact, space saving H & amp; E-strainer for routine applications; 2. High specimen throughput; 3. Simultaneous realization of various different staining protocols;	5

			4. Exact incubation times; 5. Continuous slide unload / reload function without having to interrupt a staining cycle or open the lid; 6. Simple, menu-driven programming; Incubation times and sequence of use of reagent stations; 7. freely programmable; 8. Integrated oven for optimal slide drying; 9. Reagent containers can be exchanged quickly and easily; 10. Integrated fume extraction system with activated charcoal filter; 11. Minimized user exposure to hazardous reagent fumes; 12. Easy-to-clean and resistant surfaces made out of polyester epoxy resin and stainless steel; 13. Specimen slide throughput: at least 200 specimen slides per hour; (depending on the selected program – up to 600 slides per hour); 14. Loading capacity: at least 11 slide racks; 15. Loading capacity per slide rack: at least 30 specimen slides; 16. Total number of processing stations: 25-30; 17. Reagent stations: at least 18; 18. Reagent container volume: 400-450 ml; 19. Number of wash stations: max. 5; 20. Oven: 1; 21. Oven chamber temperature: off or 30	

			°C to 65 °C; 22. Incubation time setting: from 0 sec. up to 99 min, 59 sec.; 23. Load / unload stations: 1 each; 24. Permanent memory capacity: 15 programs, up to 25 program steps each; 25. Should have European CE /US FDA/BIS certificate	
5	5	Cyto-centrifuge	16 tubes/ 32 tubes	15
6	6	Coagulometer (Fully automated)	1. Fully automated random access Coagulation analyzer. 2. Open System with random & STAT mode of operation. 3. Viscosity based / optical / mechanical detection system for clotting test and optical system for Chromogenic & Immunoturbidimetric tests. 4. Capable to run Clotting assay, Chromogenic assay & Immunoturbidimetric assays. 5. Parameters – PT, APTT, TT, ATIII, Heparin. 6. Fibrinogen, Fondaparinux, Rivaroxaban. UFH & LMWH, D-dimer, FM, FDP PC (clot & Chromogenic), PS. 7. Free PS, APCR. Plasminogen, Antiplasmin, TAFI, VWF: Ag, Extrinsic & Intrinsic Pathway Factors & LA. 8. Throughput – minimum 60 PT/hour & 90 PT & APTT/hour. 9. Minimum 50 Assay Methodologist available. 10. Reagent positions – Minimum 10	5

			with 5 stirring positions. 11. All are temperature controlled & and maintained from 15 to 19 deg C. 12. Each reagent can be placed in several positions and analyzer will detect automatically without manual intervention. 13. Barcode identification for reagents with continues loading. 14. Barcode identification for reagent name, Lot number, Expiry, on board stability. 15. Minimum 10 samples positions, with 84 for primary tubes & 12 for pediatric tubes. 16. Adaptors available for Microtainers. Barcode identification for samples. 17. Continuous sample loading with all positions for STAT mode. 18. 12 programmable tests for one sample. 19. Needle for Samples, Intermediate reagent & Starter reagents with LLD (Liquid level detection) 60 unitary Cuvettes on board with continuous loading capability. 20. Pre calibrated assays for PT, FIB & D. Dimer, and Free Pro S & VWF: Ag. Storage capable for Calibration curves-optional. 21. Automatic dilution for calibrations. Minimum 500 patients' results & One year IQC results in memory. 22. Re run & reflex facility. QC management with Levy Jennings chart & Westgard QC alarms. 23. Alarm for QC out range capability. LIS capability with Bi directional	

			transferring capacity. 24. Auto validation for patient results & Calibrations. 25. Auto rerun with operator's rules. 26. Based on windows embedded operating systems with multitasking. LCD Touch screen. 27. The system is complied with CE (EC), US FDA certification.	
7	7	Binocular Microscopes with High end Semi-apochromatic Optics of international standard.	1. Metal body with all critical movements based on ball bearing & wire guides thereby ensuring smooth & precise manipulation. 2. 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. 3. Co-axial coarse & fine controls with a focus adjustment and fine adjustment knobs, Coarse Focus range 20 mm. 4. Fine focus range 0.2 mm. 5. Rack & pinion mounted condenser holder. 6. Center able 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. 7. LED light source High brightness, long life (30,000). 8. Quintuple revolving nosepiece based on precision ball-bearing mechanism with positive click stop. 9. Semi-apochromatic objective:-Plan 4X (N.A 0.13 W.D 25 mm), Plan 10X (N.A 0.30 W.D 5 mm), Plan 20X (NA	20

			0.5, WD 2.1), Plan 40X 20X (NA 0.75, WD 0.5). Infinity corrected plan optics, uniformly centered, Interchangeable & Par focal, Anti-fungus treated, Tropicalised anti fungus treatment ensures image excellence for long periods in conditions, favoring to fungus growth. 10. Binocular (30 deg inclined seidentopff), 360 deg rotatable, dioptre adjustment WF 10X (F.N 18 mm Or better) paired eyepiece and left eyepiece should have eyepiece micrometer. 11. The unique optical design of the compensating eyepiece provides relief from eye fatigue and renders color- compensated wide-field images of utmost clarity. 12. Compatible with optionally available eyepiece micrometer. 13. Certification: US FDA/ European CE/BIS (Certificates should be provided on the brand of microscope which the bidder mentioned in the tender).	
8	8	Manual Rotary Microtome	1. User selectable coarse feed wheel turn direction 2. Retraction on/off function 3. Two mechanical trim steps, trimming thickness 10um & 50um 4. Blade holder for disposable blades and standard specimen clamp 5. The object head with +/-8° X/Y orientation should be equipped with a fast specimen clamp exchange system for improved workflow. 6. Storage space on top of the instrument housing must provide	10

			room for sectioning tools and accessories. 7. The instrument must feature a low-maintenance micrometer feed system with backlash 8. Must have maintenance-free vertical cross-roller guides and horizontal specimen feed via precision cylinder guide system. 9. Distortion-resistant base plate should ensure optimum overall stability. 10. The vertical stroke of approx. 59 mm • Horizontal specimen travel range of 25 mm 11. Should allow to section specimens up to a size of 50 mm x 40 mm x 40 mm. • Ergonomically designed hand wheel grip. 12. Hand wheel lockable in any position via brake lever attached to base plate 13. Lockable hand wheel in upper position via hand wheel grip. 14. Section thickness setting range 0.5–60 µm 15. Section thickness selection from 0.5–2 µm in 0.5 µm-steps • 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 16. Vertical specimen stroke 59 mm • Specimen retraction ON/OFF 17. Specimen orientation: Horizontal 8° & Vertical 8° with Rotation ± 90° 18. Should have CE / USFDA certificate	
9	9	Cryostat	1. Freestanding cryostat with encapsulated, splash-proof microtome.	5

			2. Spacious, stainless-steel cryo-chamber with antiglare illumination. 3. Easy to clean and disinfect. Heated, removable sliding window. 4. Stable, self-contained cryo-cabinet on casters. 5. Hand wheel manually lockable in two positions. 6. Easy-to-handle and stable clamping system for clamping the specimen discs. 7. 8° XYZ specimen orientation with zero point reference. 8. Cryo-chamber temperature selection from 0 °C to -30 °C, adjustable in 1K; increments at ambient temperature of 20 °C. 9. Easy-to-clean, actively cooled specimen preparation zone with quick-freezing shelf for up to 10 specimens (max. temperature preferred up to -37 °C). 10. Cryo-chamber may be defrosted manually or via automatic hot-gas defrosting once every 24 hours. 11. The cycle may be programmed in 15-minute increments. 12. Defrost cycle: 10-12 minutes. Cryo-chamber and quick-freezing shelf can be defrosted manually. 13. Should be equipped with an acoustic warning signal to prevent unintentional defrosting. 14. Manual defrost cycle for chamber and quick-freezing shelf: 10-12 minutes. 15. Low-maintenance microtome with cross roller guides. 16. Reproducible, high-quality thin sections via stepper motor specimen feed.	

			17. Section thickness selection from outside the cryo-chamber. 18. 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. 19. Total horizontal specimen feed: 25 mm. 20. Motorized coarse feed in 2 speeds: slow is max.600 µm/s and fast is min. 900 µm/s. Specimen orientations -- 8° (x-, y-, z-Axis) Step function: 20 µm each time the key is pressed at slow coarse feed speed. 21. Control panel with membrane-protected buttons and locking function. 22. Self-explanatory symbols for all essential functions and displays.LED display for cryo-chamber temperature, actual time, defrost time, and section thickness selection. 23. Visual indication of specimen stop positions (Front/Home). 24. Should have European CE / USFDA certificate.	
10	10	Cold Plate for Modular Tissue Embedding System	1. Operating temperature: -6 °C (self-regulating); 2. Min. guaranteed workload capacity: 60 blocks solidified in 30 minutes Cooling 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. 3. Provision for Self Regulation so that no need to turn down the temperature in summer or worry about too fast cooling in winter. 4. Should have European CE / USFDA	5

			certificate.	
11	11	Single pan Analytical balance	1. Range: 0.1mg-200g (at least) 2. Pan size: 125mm (approx) 3. Repeatability: 0.02 mg 4. Transparent casing 5. Digital display 6. Automated Tarring system 7. Internal calibration 8. External calibration with weight from statutory body	10
12	12	Automated Tissue Processor –Vacuum	1. Carousel type with 12 stations Configurations: 2. Basic instrument with Vacuum Capacity- 80-100 cassettes 3. Option: 1 baskets loading 4. Tissue baskets made of metal with varying capacities of up to 100 cassettes 5. Ergonomic control panel with foil-protected keyboard and LCD Infiltration time separately programmable for each station 6. Delayed start functions up to 9 days 7. Possibility of interrupting an automatic process for reloading or removing cassettes for special applications before the end of a run 8. Easy editing and changing of programs, even during a processing run 9. Audible alarms, error messages and warning codes 10. Advanced safety concept with Wide range of accessories should be available 11. Nominal voltage:100 / 120 / 230 / 240 V AC ±10%	5

			12. Nominal frequency: 50 / 60 Hz 13. Wax baths: Number: 2 Capacity: at least 1.8 litres 14. Temperature range 45 °C – 65 °C 15. Excess temperature cutout: 75 °C ± 4 °C 16. Reagent containers: Number: 9 to 10 17. Capacity: at least 1.8 litres 18. Standard tissue basket: Number: 1 Capacity: max. 100 cassettes 19. Programs: Number: 8 to 9, freely selectable Programmable infiltration time per station: 99 h 59 min Delayed start: 9 days Drain time: 60 s 20. Should have European CE / USFDA certificate.	
Name of the Discipline: MICROBIOLOGY				
13	1	Complete Electrophoresis apparatus with power supply (Paper, PAGE, agarose)	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: Suitable for constant voltage and constant current mode. 9. Output voltage: adjustable from 0 to 500 with an increment of 1 volt 10. Output current: upto 800 mA with an increment of 1mA. 11. Output power: 300W or more (450) 12. Input voltage: 230V + 10 VAC,	5

			50Hz 13. Should have CE/US FDA/BIS	
14	2	Biosafety Cabinet Type - 2B	Size 4 feet X 2 feet x 2 feet 2. NSF/ EN 12469 Certified 3. Exhaust 100% with virus burn-out unit 4. Average Air Flow Velocity a. Inflow : 0.45 m/s (90 fpm) at initial set point, audible/visual alarm should activate at 0.45 m/s (90 fpm) b. Down flow : 0.30 m/s (60 fpm) at initial set point with uniformity of better than +/- 20% 5. Noise Level < 62 dBA according to EN 12469 6. Fluorescent Light Intensity At Zero Ambient >1190 Lux (>111 foot candles) 7. Cabinet Construction 8. Main Body: 1.2 mm (0.06") 16 gauge electrogalvanized steel with white oven-baked epoxy antimicrobial powder coated finish 9. Work Zone: 1.5 mm (0.06") 16 gauge stainless steel, type 304, with 4B finish 10. ULPA filters with efficiency greater than 99.999 % for superior operator and product protection 11. Standard Compliance 12. Filter performance: IEST-RP-CC034.1, IEST-RP-CC007.1, IEST-RP 13. Electrical safety: IEC 61010-1 / EN 61010-1 / UL 3101-1 / hsirig, CSA C22.2 No. 1010.1-92 14. ISO Class 3 or higher air cleanliness in work zone. 15. Negative pressure plenum should surround contaminated positive pressure plenum for quiet, uniform airflow 16. Microprocessor Control with temperature compensated airflow sensor for supervising	10

			all cabinet functions. 17. Antimicrobial coating on all painted surfaces to protect against surface contamination 18. Should utilize an extremely efficient backward curve fan, allowing for exceedingly low levels of cabinet power consumption. 19. Advanced separator less mini-pleated ULPA filters tested to > 99.999% efficiency for 0.1 - 0.3 micron particulates. 20. Digital read-out with alpha-numeric display should indicate all input, status and alarm functions. 21. An administrator controlled PIN (Personal Identification Number) which can be set to restrict access to main menu 22. The cabinet work zone should not have welded joints to collect contaminants or rust. 23. A recessed central area and stainless steel drain pan channels for preventing liquids from entering the lower filtration and blower systems 24. Angled viewing window and narrow profile front grille to improve reach into the work area 25. Front armrest raised above the work zone to improve comfort and to ensure no airflow blockage 26. Frameless, shatterproof sash for easier cleaning, and for larger, unobstructed viewing area 27. The Biohazard Safety Cabinet Should be individually tested, documented by serial Number and validated with the following test methods. a. Inflow / downflow velocity	

			b. PAO Aerosol challenge for filter integrity c. Light, noise and vibration d. Airflow pattern visualization e. Electrical safety to IEC61010-1 28. Electrical 220-240V, AC, 50Hz, 1Ø 29. All accessories including ducting pipe (average 20 feet) needed to make the equipment functional, must be supplied 30. Safety Certification: European CE or US FDA	
15	3	Centrifuge	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.	10

16	4	Elisa Reader and washer	1. Parameter/ Feature THRESHOLD LIMIT / RANGE 2. 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 3. Wavelength of 6 Position filter wheel filters in nm 405- 690 4. READER ACCURACY in OD ± 0.010 5. READ TIME FOR SINGLE WAVELENGTH in Sec ≤10 6. READ TIME FOR DUAL WAVELENGTH in Sec ≤20 7. POWER SUPPLY 220 V±10% 50 HZ 8. Range of ELISA WASHER Volume of solution dispense PROGRAMABLE in µl 50-1000 9. WASHER ACCURACY well to well (NOT EXCEEDING) in µl 300 ±10% 10. WASHER PROCESSING TIME (350 µl x3 cycles x 8 port) in sec 180 or less 11. RESIDUAL VOLUME in µl ≤2 12. NO. OF PROGRAM 30 or more 13. POWER REQUIREMENT 230 V±10%; 50/60 Hz 14. Range of Soak Time (In Strip Mode) in Sec 0-10 15. Range of Soak Time (In Plate	5

			Mode) in Min 0-30 16. WORKING CONDITION HUMIDITY in % 0-95 17. WORKING CONDITION TEMPERATURE in ° C (10 to 35) or more 18. MUST HAVE SPECIFICATION Parameter/ Feature 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 & nylon HIGH RESOLUTION , FULL GRAPHIC THERMAL TYPE PRINTER SUPPLIED ACCESSORIES - COMPUTER AND PRINTER INTERFACE - RS-232 serial interface with computer READING MODE 6/12/24/48/96 WELL PLATES (ADJUSTABLE) USB 1.1/2.0 8-12 CHANNEL OPTICAL SYSTEM VARIABLE SHAKING SPEED AND TIME WASHER WITH 8 / 12 WAY MANIFOLD CONFIGURATION ADAPT TO U, FLAT AND CURVED BOTTOM PLATES ALERT FOR WELL OVERFLOW AND WASTE BOTTLE	

			QUALITY STANDARD & SAFETY 19. CERTIFICATION EUROPEAN CE IVD / US FDA Note: In case the machine is offered with Halogen, free replacement of light source for next 10 years with free calibration at the time of changing of light source	
17	5	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	5
18	6	Loop sterilizer	1. Diameter of Sterilization tube:0.59 inch (15mm) 12mm 2. Length of sterilizing tube: 4.64 inch (118mm) 145mm 3. Sterilization temperature: 7000- 800°C (1472°F) 4. Power supply: AC220V ; 50Hz ; 350W 5. Measurements (w x h x d): 250 x 260 x 250 mm 6. Weight: Approx 4.5Kg 7. Heat transfer: A stainless steel surface, located above. Warms up at motionless air and at an ambient temperature of 20°C Distance : 25 cm : 55°C / 35 cm : 38°C / 45 cm : 32°C	25

19	7	Hot air oven	1. Double Walled, inner wall made of aluminum and outer wall Mild Steel sheet. 2. Shelves: 3 to 5 stainless steel, perforated shelves, could be adjusted at any levels. 3. Heating Elements: placed at the bottom and sides. 4. Temperature control: Thermostatic control from 40 to 250 o C with Regulator and digital temperature-indicator. 5. Automatic timer 0 - 60 minutes. 6. Air circulating fan. 7. Volume : Minimum 100 L 8. Accuerecy: +-0.5 9. Standard, Safety and Training: The manufacturer should have ISO certification. 10. Documentation: User Manual in English	10
20	8	Incubator	a) Control: Equipped with Microprocessor controlled with a large digital display. b) Work Chamber Volume: minimum 100 Litres. c) Working temp.: Ambient temp. +5°C to 75°C whereas room temperature is around 20° – 24° C. d) Temp. deviation:±0.5°C. e) Display: Digital display located on front panel of the equipment. f) Easy to clean: A silicon door	30

			gasket & removal of shelf supports make thorough cleaning and disinfection of the working chamber easy & safe g) Inner casing: Should be made of corrosion resistant 304 grade stainless steel. h) Shelves (adjustable): Two perforated shelves made of corrosion resistant 304 grade stainless steel. Standard supply 3 nos. , inter shelves gap – 6" approx. i) Heat conduction: Gravity convection and air circulation. j) Heater on rear / side / bottom of the equipmen t. k) Power requirement: 230 V, single phase, 50 Hz. l) **Certifications:** • **Product certification:** CE ; Should be supported with documentations or US FDA (The product must be enlisted under US FDA and the quoted model must have US FDA permission to market in US & export to other countries. • **Quality Certification:** ISO certified	

			m) Quality Certification: ISO certificate of manufacturing unit n) Product should have NABL accrediated calibrated thermometer (temp. range 0°-100°C).	
Name of the Discipline: Forensic Medicine				
21	1	Automatic tissue processing machine	1. Carousel type with 12 stations. 2. Configurations: – Basic instrument with Vacuum Capacity- 80-100 cassettes. 3. Option: 1 baskets loading Tissue baskets made of metal with varying capacities of up to 100 cassettes 4. Ergonomic control panel with foil-protected keyboard and LCD Infiltration time separately programmable for each station 5. 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 6. Easy editing and changing of programs, even during a processing run 7. Audible alarms, error messages and warning codes 8. Advanced safety concept with Wide range of accessories should be available 9. Nominal voltage:100 / 120 / 230 / 240 V AC ±10% 10. Nominal frequency: 50 / 60 Hz	10

			11. Wax baths: Number: 2 12. Capacity: at least 1.8 litres 13. Temperature range 45 °C – 65 °C 14. Excess temperature cutout: 75 °C ± 4 °C 15. Reagent containers: Number: 9 to 10 16. Capacity: at least 1.8 litres 17. Standard tissue basket:Number:1 Capacity: max. 100 cassettes 18. Programs: Number: 8 to 9, freely selectable 19. Programmable infiltration time per station: _ 99 h 59 min 20. Delayed start: 9 days 21. Drain time: 60 s 22. Should have European CE / USFDA certificate.	
Name of the Discipline: Community Medicine				
22	1	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 Tarring system. 7. Should be European CE approved	10
23	2	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	5

			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.	
24	3	Dissecting microscope	1. Binocular type: glass lens (anti fungal coated) 2. Objective: 2X & 4X 3. Working distance: 105 mm (approx) 4. Field of view: 2X=11.5 mm (approx), 4X=5.7 mm (approx) 5. Transmitted light: LED 6. Eyepiece: 10X pair 7. Should be CE/US FDA/BIS approved	100

General Amendment

Amendment-II:

1. **Clause 4. Annual Turnover requirements: (E)**

   The Tenderers should have annual sales turnover (i.e. total turnover of the company) of minimum on an average of last three financial years (2016-17, 2017-18 & 2018-19) as per the Audited Accounts of the Organization as mentioned in the table below:

Sl. No.	Item Name	Department	Annual Turnover in INR
1	All other remains same	All other remains same	50,000.00

Amendment-III:

Clause 6. Performance Security (PS) under Section I: Instructions to Tenderers

(In the form of unconditional and irrevocable Bank Guarantee)

Medical equipments for different Medical Colleges and Hospitals
03% of the Bid Value (Validity should be till the completion of Warranty + 60 days).