Bihar Medical Services & Infrastructure Corporation Limited 4th floor State Building Construction Corporation Limited. Hospital Road, Shastri Nagar, Patna 800023, Phone/Fax: +91612 2283287,+ 91612 2283288

Corrigendum-I

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for selection of agency for providing Laundry Services at PMCH, IGIC and NMCH, Patna in the state of Bihar vide Notice Inviting Tender No.- BMSICL/2022-23/ME-278. During and after Pre-bid meeting various suggestions were received from different prospective bidders regarding amendment in tender specification of equipment /clause which were discussed and deliberated on by the experts. On the basis of their recommendations certain amendments have been made in Schedule of Requirement **(Annexed as Annexure-I of this corrigendum)**, Specification of equipment **(Annexed as Annexure-II of this corrigendum)** and clauses of tender document **(Annexed as Annexure-III** of this corrigendum) .Rest of the terms and conditions of bid document shall remain unchanged. In order to facilitate maximum participation of bidders tender schedule is being revised as following:-

Tender Reference No.	**BMSICL/2022-23/ME-278**
Date and time for downloading of bid document	**Up to 11th May 2022 till 17:00 Hrs.**
Last date and time of submission of online bids	**12th May 2022 till 17:00 Hrs.**
Last date and time of submission of original documents of EMD, Tender Fee and Document.	**13th May 2022 till 14:00 Hrs.**
Date, Time and Place of opening of Technical Bid	**13th May 2022 (at 15:00 Hrs.) on the website of www.eproc.bihar.gov.in in the office of BMSICL**
Date and time of opening of financial Bids	**To be announced later on www.eproc.bihar.gov.in**

Sd/-
GM (Procurement)
BMSICL

Annexure-I

SCHEDULE OF REQUIREMENTS					
Sr No.	**Departments**	**NAME OF THE ITEMS**	**Quantity**	**Type (Main Item/Low cost)**	**Amended Qty.**
1	ANAESTHESIOLOGY	Anesthesia machine and accessories like laryngoscope, all size endotracheal tubes, nasal and oral airways, Magill's forceps,	One set for EACH operation table	Main item	8 No. (One set of Each)
2	ANAESTHESIOLOGY	Multipara monitor- with P, NIBP, ECG facility,SpO2 Etco2, IBP	9	Main item	8
3	ANAESTHESIOLOGY	Electrical Suction apparatus	9	Main item	8
4	ANAESTHESIOLOGY	LMA / PLMA of all sizes	9	Low cost	8
5	ANAESTHESIOLOGY	Defibrillator	9	Main item	8
6	RADIO- DIAGNOSSIS	Flooroscopy with DR 800mA	1	Main item	Deleted
7	Added (OTORHINOLARYNGOLOGY)	Boyle's Apparatus	1	Low cost	1

Annexure-II

Department	Equipment	Technical Specification as per Tender	Amended/ Added specification
BIOCHEMISTRY DEPARTMENT	**PCR Machine**	Not provided in the original document.	**PCR Machine** 1. It Should be Tabletop model. 2. Complete system including basic system, essential accessories, the state-of-art computer workstation, acquisition and analysis software, startup kit inclusive of calibration standards etc. 3. Open system to accommodate Taqman, SYBR green and all other fluorescent dye-based chemistries. 4. Peltier based 96 well block 5. Standard optical 96 well plates, 0.2 ml strips, 0.2ml tubes compatibility 6. Minimum sample volume requirement -5µl 7. CCD camera with halogen/LED and at least five excitation and five emission filters 8. Multiplex ingability up-to five dyes in a single run, 9. Calibrated dyes at installation: FAM/SYBR Green, VIC/JOE, NED/TAMRA/Cy3, ROX/Texas Red®, and Cy5, Should offer flexibility in dye selection. 10. Facility to calibrate new dye within the wavelength range without addition of new filters 11. Passive reference dye ROX or any other calibrated

			dye and should be optional 12. Option for melt curve analysis 13. Temperature range 40C to 1000C 14. Sensitivity: Detection of 1 copy of template 15. Software applications: Comparative Ct, Standard Curve, Relative Standard Curve, Allelic Discrimination / SNP Genotyping, Plus/Minus, dissociation / melt curve 16. 1Voltage: 220 V /50Hz. All accessories should be provided with latest version of software and upgraded yearly with free of cost 17. The IQ, OQ and PQ of the instrument should be performed at the time of installation. 18. CE-IVD compliant along with the tools like security access, auditing and e-signatures. 19. Each unit supply with suitable Online UPS with 30 minutes back up. 20. USFDA (510K)/European CE (Issued by a Notified body) approved Model should be offered. PCR

RADIO-DIAGNOSIS	**Auto Analyzer (Either in the institution or elsewhere on a visit)**	Not provided in the original document.	**Auto analyzer** • The system should be fully automated, random access, for routine chemistries • The system should provide endpoint and Kinetic assay. • The through put should be 300 tests or more per hour (without ISE). · The minimum number of test parameters on board at a time should be 30. · The minimum sample capacity should be 50 at a time. · Minimum number of STAT samples at a time should be 15. · The system should have preferential treatment for STAT samples. · The sample loading: Continuous/sample tray. · The reaction cuvette must be reusable and durable. the reaction cuvettes should be replaced at free of cost when ever required during the warranty period and CAMC period. · Sample cups should be reusable. · Reagent requirement should be less than 300µl. · Required wavelengths, ranging from 340 to 750 or more. Wavelength measured by diffraction gratings. · The system should have on board cooling system (refrigerated/Peltier). · Should have on board quality control programme including Levy Jennings graph. · Should have reagent storing capacity of 50 or more bottles in reagent1 and reagent2together. · Data Management

			System should store calibration and quality Control data, and patient data for 10000 tests. Report should be generated in free format. · Water plant of required capacity should be supplied along with the instrument and warranty includes the consumables. · Free maintenance of the water plant including the resin replacement should be covered under the warranty period. · Should be supplied with 10,000 sample cups. · Should be floor model type or bench top with suitable stand. · Should have facility for reading results on monitor and print out facility. 80 column dot matrix/ Laser printer should be supplied along with the unit. · Should provide 1000ml of reagent for urea, uric acid, creatin in, sugar, Cholesterol, TP, albumin, SGOT, SGPT, alkaline phosphatase, Bilirubin (Total & Direct) calibrator 3mlx5 and quality control 5mlx1 -5 Nos each for normal and abnormal. · The pack size and rate of one pack of reagent for Year 1, 2, and 3(Period will be starting from the date of price bid opening) for - urea, Uric acid, Creat in, Sugar, Cholesterol,TP, Albumin, SGOT, SGPT and Alkaline phosphatase, Bilirubin-Total and Bilirubin Direct shall be quoted separately which will be taken for evaluation as per the amended sample price calculation. · Should be supplied with variable micropipette 10 to100µl and fixed 500µl

			micropipette– 5Nos each. · Refrigerator (300L) with temperature display and stabilizer should be provided by the supplier. · Should work on 200-240Vac 50Hz power supply. . USFDA/ European CE (Issued by Notified Body) Approved model should be offered.
PSYCHIATRY	**ECT machine without monitor**	Not provided in the original document.	**ECT Machine with Monitor** 1. Should have constant current bi-directional square wave Brief Pulses. – 2. Parameter display on LCD as well as on monitor screen. 3. Should be able to deliver ECT from voltage 50-400 volts. 4. Should have protection against paddle –to- paddles short circuit or open circuit conditions. 5. Should have stimulus current 500-800 MA Frequency 20-120 Hz, Pulse Width 0.5-1.5 m.sec stimulation duration of 0.1-5.9 Sec. - Minimum Power – 0.6 Joules for 220-ohm Patient Impedance. - Maximum Power 205.8 Joules for 220-ohm Patient Impedance. - Charge : 5.0 – 1152 mili cimlumba in both manual and timer mode. 6. Should be provided with optical motion sensor for monitoring motor movement during seizure. 7. Should have facility upgrade to 24-32 Channels Digital EEG Systems. 8. Should have provision of monitoring EEG, EMG, ECG, Stimulus and Movement with optical motion sensor for providing assessing seizures efficacy.

			9. Should be provided with monitoring software to view physiological monitoring of upto 4 traces. The trace should be available in real time through our the treatment. 10. Should have facility for the data to be stored with all the treatment parameter on the PC Hard disc or can be transfer to CD. 11. Should having a comprehensive database to store the complete patient information and can be configured according to user needs. 12. Output should displays in joules as well as in millicoulombs. 13. ECT module can be used in stand – alone mode also. COMPUTER SECTION (HARDWARE) 14. System should have following accessories:- - Spring loaded ECT Headband, Instruction Manual, EEG, EMG & ECG Electrodes, OSM sensor, Bite Block, Earthingwire, Conductive Jelly, Paper Rim(A4 Size), Rubber Strap Electrodes. 15. Should be USFDA/European Ce (Issued by Notified Body) approved model should be offered.

PATHOLOGY	**Three Part Fully Automated Cell Counter**	Not provided in the original document.	1. Should be fully automated three part haematology Analyzer providing 20 parameters including a 3- part differential 2. The system should give a differential count as Lymphocytes, mid population and Granulocytes. 3. System should be capable of processing samples at 70 samples/hour & storage memory result capacity 10000. 4. The system should be based on “closed, maintenance free Sample Rotary Valve (SRV)” for precise sample all quoting for dilution. 5. System should have auto Probe wiper to clean the sample probe automatically after sample aspiration and with predilution mode. 6. The system should use non cyanide based reagents for Hb estimation. 7. System for the reliability of the results should have "electrical Impedance" method of cell counting with an integrated temperature sensor for monitoring and compensating for shift in room temperature. 8. The system should use to proven and approved "Volumetric & time Metering" of cell counting, for WBC, RBC and PLT for high precision of the results and stability of the calibration with close measuring chamber. 9. The system should have a system of count and aperture monitoring every 30 sec for precision and reliability of counts. 10. The system should have automatic floating discriminator of RBC /PLT. 11. The system should have

			Open mode as well as prediluted mode of sample aspiration. 12. The system should use high Intensity LED for HB estimation. 13. All reagents required should be available locally from the company or its authorized distributor 14. System should be user friendly with colour touch screen and should option for external printer as well as data inter facing . 15. US FDA and/ European CE (Issued by Notified body) approved model should be offered.
	Coagulometer (Fully automated)	Not provided in the original document.	**Fully automated Coagulation analyzer.**1 Viscosity / Optical based detection system.2 Should be Capable to run Clotting assay, Chromogenic assay & Innmunoturbidimetric assays.4

			Parameters- PT, APTT, Fibrinogen, Factor VIII, IX, VII, X, XI, XII, XIII,TT, ATIII, Heparin, Protien C and S5 Minimum Throughput should be 50 PT test/hour & time to first patents result - PT/APTT/FIB = 6 mts6 Should be minimum 80 test Methodologist available.7 Should be minimum 15 Reagent positions. All should be temperature controlled & and maintained from 15 to 19 deg C. Each reagent can be placed in several positions and analyzer will detect automatically without manual intervention.8 Should be Positive barcode identification for reagents. Should be Barcode identification for reagent name, Lot number, Expiry, on board stability.9 Should be minimum 20 samples carrousels for primary tubes. Capable of adapting pediatric tube & Microtainers.10 Should be Positive barcode identification for samples11 Continues sample loading with ail positions for STAT mode.12 Should be at least 12 programmable tests for one sample.13 Should be Single probe for Samples & Reagents with LLD (Liquid level detection)14 Should be minimum 200 cuvettes on board with continuous loading capability.15 Should be Pre calibrated assays for PT, APTT, FIB & D. Dimer.16 Should be Storage capacity for Calibration curves. Automatic dilution for calibrations.17 Should be Multi tasking software with touch screen with LCD display.18 Should be at least 600 patients' results

			& One year IQC results in memory.19 Should be QC management with Levy Jennings chart & Wesdgard QC alarms.20 Should be facility of Alarm for QC out range message.21 Should be availability of internal printer or capability to adapt external printer.22 Should be LIS capability with Bi directional transferring capacity.23 Should be facility to auto rerun with operator's rules.24 Should have Windows 10 operating system for updated cyber security with touch screen facility 25 Should have same manufacturer for instrument, reagents and consumables .26 Should have insensitive to icteric , lipemic and haemolysed samples. 27 System should be Europeon CE and US FDA Approved

PAEDIATRICS	**Transport Incubator**	Not provided in the original document.	**Transport Incubator** 1. It should have Visual and audible alarms for: (i) Patient and air high/low temperature alarm. (ii) Air circulation / probe / system / power failure alarm. .2. It should have Battery and AC supported. 3. Built-in-sealed rechargeable batteries capable of working for at least 3 hrs when fully charged. 4. Internal noise level 60 dB. 5. Mode of operation should be properly displayed. 6. Indicator light should be provided for its ready to be in normal use. 7. Infants straps should be provided to restrict the baby movement. 8. skin temperature probe should be small in size not more than 10mm diameter and 4mm in height to fix the probe firmly on the infant. Baby contact material should be biocompatible. 9. Infant bed should be drawable. Mattress foam density should be minimum 25kg./cm3 and infant bed mattress cover should be biocompatible material. Baby Mattress should be at least 60X30cm. 10. Examination light should be provided for inspection. 11. Warmup time 30-40 minutes and shall not differ by more than 20%. 12. Shall be equipped with a thermal cut-out. It shall be so arranged that the heater is disconnected and an audible and visual warning is given at an incubator temperature which does not exceed 40^0 C. 13. Patient skin temperature range: 35^0C to 37.5 ^{0} C.

			Temperature accuracy less than ± 0.2^{0}C. 14. Air temperature range: 30 ^{0}C to 39^{0}C. Temperature accuracy less than ± 0.2^{0}C. 15. Display is to be backlit and allows easy viewing in all ambient light levels. 16. Should have Oxygen port with tubing, also mount for oxygen cylinder of 5 litre size. 17. Should have Accommodates shelves, suction unit and I/V poles. 18. Should have collapsible trolley with lockable castors. 19. Two extra sets of all sensors. 20. US FDA / European CE approved model should be offered. 21. Power Supply 220VAC +/- 10 %, 50Hz fitted with Indian plug.
OTORHINOLARYNGOLOGY-DEPARTMENT	**Anaesthesia machine**	32. US FDA (510K) approve model should be offered.	17. US FDA 510 (k)/ European CE (issued by notified body) Approved model should be offered.

	Endoscopic Camera with suitable display with recording & archiving facility. (with High Definition Camera)	Not provided in the original document.	**OTORHINOLARYNGOLOGY** Otoendoscope, Nasalendoscope, Laryngeal telescope with camera, monitor and light source for teaching purposes (1 Unit of the above may be placed either in Minor OT or Endoscopy room or in the OPD in the Consultant Chamber) Oto - Endoscopes 1. Straight forward Telescope 0 ° 3 mm 14cm length 2. Straight forward Telescope 30 ° 3 mm 14cm length-1 3. Straight forward Telescope 0 ° 4 mm 6 cm length-1 4. Strait forward Telescope 30 ° 4 mm 6 cm length-1 5. Pneumatic adapter for Oto-Endoscope With all the attachments-1 NASAL ENDOSCOPES 1. Nasal Rigid Endoscope. – One • Straight forward telescope,0 degree enlarged view, size: 4.0 MM

			• Rod lenses system, Length:18-19 cms, Autoclavable, Fiber optic light transmission incorporated. 2. Nasal Rigid Endoscope. – One • Forward oblique 30 degree enlarged view, size: 4.0 MM rod lenses system, Length:18-19 cms, Auto clavable, Fiber optic light transmission incorporated. 3. Nasal Rigid Endoscope. – One • Wide Angle Forward-Oblique Telescope 45°, enlarged view, diameter 4 mm rod lenses system, length 18-19 cm, autoclavable. Fiber optic light transmission incorporated. LARYNGEAL ENDOSCOPE • Strabo-Laryngoscope with integrated lateral telescope 70 deg, oval sheath, 7.2 x 9.3mm diameter, length 17 cm, autoclavable, fiber optic light transmission incorporated. TECHNICAL SPECIFICATION OF DESKTOP COMPOSITE DOCUMENTATION TERMINAL WITH INBUILT CAMERA, MONITOR, LIGHT SOURCE AND STROBOSCOPE • The system should be compact and portable suitable for a variety of endoscopic applications from physician's offices to operating rooms in a variety of specialties. • The powerful all-in-one unit should consist of everything needed for endoscopic imaging, Video recording, and viewing of saved Videos, the monitor, camera, and light source. • IT should have USB ports and a SD card slot for

			documentation purpose. • It should also have an inbuilt Stroboscope for larynx examination a modern device that generates light with a high-performance LED • For stroboscopic examination (stroboscope-mode) • For normal viewing (continuous light-mode = pulsating light with high frequency) Should also be Suitable for larynx examination, Consisting of: • Mains Cord • Microphone set • One USB pedal footswitch with integrated activation for Stroboscope function • DISPLAY: Crystal clear display • 15" LCD display • LED backlight display technology for extended service life, enhanced image brightness and reduced Image rotation power consumption • 24 bit color depth for lifelike color display • DVI video output for brilliant transmission quality • LED Light Source: • High-performance LED light source: Light output similar to Power LED • Color temperature of 6000 K - similar to daylight - guarantees color fidelity • Long lamp life - with an average lamp life of 50,000 hours - Cost Effective • Easy, extremely reliable control: • Membrane keyboard included, suitable for wipe-down disinfection • Hot keys for rapid and direct manipulation • Arrow buttons for intuitive

			control • Connection socket for pedal control without lag time • Stroboscopy mode can be activated via a special footswitch • Should have flexible storage possibilities • SD card slot for high storage capacity • USB ports for external hard drives, USB flash drives • MPEG4 video recording with sound via microphone input • Compatible with medical-grade USB Color Printer • Picture gallery for records • Playback of saved videos • Patient information input and reports • Technical Specification of Camera Head: • Image sensor: 1/4’’ CCD-Chip. • Resolution:> 450 lines (horizontal). • Pixels- 752(H) x 582(V) • Signal-to-noise ratio: >= 60 dB. • AGC: Microprocessor controlled • LENSE: Integrated optical zoom lens system 25-50mm • Min. sensitivity:3 Lux (f 1.4). • Power input:100 W Power supply • Power supply:100-240 VAC • Weight:Approx 7 kg • Interfaces • a Video interface • b DVI-D (in/out) • c- Audio: 3.5 mm jack Interfaces • d-(rear), Line-in, Line-out • e-Footswitch port: 5-pin • f-socket for footswitch • gLEMO socket (side) • e-Printer port: USB • Light Source

			• Lamp: LED • Color temperature: Light source 6400 K - Average life span: • approx. 30,000 hours Image format • Image Format:JPEG • Video codec:MPEG-4 • Video format:PAL/NTSC • USB 2.0; Storage interface • Storage interface:SD memory card • (SDHC-compatible) - Screen size: 15" LED backlight • Resolution: monitor 1024 x 768 • contrast:1:700 • Loudspeaker:Power: 2 W • Scope of supply should include of : • Complete Integrated Desktop Documentation Terminal with accessories • Stroboscope Kit • One USB of minimum 8GB capacity • ONLY US FDA (510K) /European CE(issued by notified body) approved model should be offered .

	Bronchoscopes different sizes for different age groups	Not provided in the original document.	Rigid Bronchoscope Digital Single Chip Endo vision Camera: one (compatible with telescopes of Bronchoscope, Oesophagoscope , and Cystoscope Color system PAL / NTSC , power supply: 100 – 240 VAC , 50/60 Hz compatible with Pal, NTSC Automatic white balance with control on base unit and also on camera. Integrated zoom lens for manual and automatic control for exposure of fog. Compatible with VHS and Comp and DVI. Minimum sensitivity 3 lux. Instrument coupling for all rigid endoscope. Long camera cable 300 cm. Two pre set function keys on camera for control of camera function , printer, computer , VCR and other peripherals Medical Color Monitor 19” (fully flat screen): one

			Special 19 “monitor, medical grade, Trintron colour tube, PAL , NTSC & SECAM color system. For Bronchoscopy, Oesophagoscopy and cystoscopy Telescope Straight forward telescope , 0 degree , diameter 2.9 mm , length 36 cm , autoclavable, fiber optic light transmission incorporated(one) Straight forward telescope 0 degree , diameter 2.9 mm , length 30 cm , autoclavable, fiber optic light transmission incorporated (one) Straight forward telescope 0 degree , diameter 2.7mm , length 18cm autoclavable, fiber optic light transmission incorporated (one) Bronchoscope Sheath Bronchoscope sheath , size 4.5 outer diameter 7.3 mm ,inner diameter 6.6 mm , length :30 cm (one Bronchoscope sheath , size 4 outer diameter 6.7mm ,inner diameter 6mm , length :30 cm (one) Bronchoscope sheath , size 3.7 outer diameter 6.4 mm ,inner diameter 5.7 mm , length :30 cm (one Bronchoscope sheath , size 3.5 outer diameter 6.4 mm ,inner diameter 5.7 mm , length :30 cm (one Bronchoscope sheath , size 4.0 outer diameter 6.7 mm ,inner diameter 6.4 mm , length :26 cm (one Bronchoscope sheath, size 3.7outer diameter 6.4 mm ,inner diameter 6.4 mm , length :26 cm (one Bronchoscope sheath , size 3.5 outer diameter 5.7 mm ,inner diameter 5.0 mm , length :26 cm (one

			Bronchoscope sheath , size 3.0 outer diameter 5.0 mm ,inner diameter 4.3 mm , length :26 cm (one Bronchoscope sheath , size 3.5 outer diameter 5.7 mm ,inner diameter 5.0 mm , length :18.5cm(one) Bronchoscope sheath , size 3.0outer diameter 5.0 mm ,inner diameter 4.3 mm , length :18.5m (one Bronchoscope sheath , size 2.5 outer diameter 4.2 mm ,inner diameter 3.5 mm , length :18.5m (one) Optical forceps (compatible with above mentioned telescopes and bronchoscope sheaths Optical alligator forceps , 2x2 teeth , with spring action handle , for controlled removal of flat foreign bodies (such as coins) ;(two) Optical forceps, with spring action handle for controlled removal of soft foreign bodies (such as peanuts) : (two) Optical alligator forceps, with forced controlled handle , for removal of hard foreign bodies (two Forceps (one each) Forceps alligator, grasping , double action jaw , sheath diameter 1.5 mm , working length: 35 cm Forceps alligator, grasping, double action jaw, sheath diameter 1.5 mm , working length: 35 cm , pointed serrated for coins and foreign bodies. Forceps alligator , grasping double action jaw, sheath diameter 1.5 mm , working length 35 cm , pointed for peanuts and soft foreign bodies. Biopsy Forceps 35 Cm

			Sponge holder: Spring handle, working length 35 cm (one) Rigid suction tube with rubber tip(one each) Rigid suction tube, straight length 35 cm, diameter: 3 mm Rigid suction tube, straight length 25 cm. diameter: 3 mm Foreign body basket with rigid handle, working length 35 cm Telescope bridge for fixed position between telescope and bronchoscope. Compatible with above mentioned telescopes and bronchoscope sheaths (Three) Prismatic light deflection with connection for fiber optic light cable, autoclave (Two) Glass Window Plug (Two) Rubber Telescope Guide for use with telescopes or optical forceps (Two) FLUVOG Adaptor with sliding glass window plug, sealing cap, notched lens and keyhole opening , moveable (Two) Injection canula with Leur lock outer diameter – 3.5 mm, for use with bronchoscope tubes (for positive pressure assisted ventilation (Two) Injection canula with Leur lock outer diameter – 2.7 mm, for use with bronchoscope tubes (for positive pressure assisted ventilation (Two) Instrument guide for suction catheter (Two) Adaptor from bronchoscope to any type of pediatric respiration equipment (Two) Sealing plug for ventilation attachment of bronchoscopes (Two) Adjustable magnifier, swing – away type, autoclave (One) Fiber optic light cable size 3.5mm, length 180 cm (Two)

			Cold light fountain twin bulb Halogen 150 watts Power supply 220 VAC, 50 Hz. (One) Facility to capture images and record videos of the procedure should be available. Storage facility should be adequate for at least 100 videos. Only US FDA (510 K) Approved model should be offered.
OBSTETRICS & GYNAECOLOGY-DEPARTMENT	**Fetal Monitor for Antepartum Surveillance**	Not provided in the original document.	1. Should be portable. 2. Should have the measurement of FHR, and Uterine activity. 3. Should be supplied with event marker cable. Automatic identification of events possible 4. Should have an alert indication for probe contact, high/low FHR. 5. Should have a volume control for FHR. 6. Should have large format LED/LCD/TFT display. 7. Should be provided with thermal printer for printing FHR, uterine activity pressure. 8. Thermal paper should be available locally.

			9. Should provide alarm limit settings for high, low FHR. 10. Should provide belt for both ultrasound and toco transducer. 11. Should be supplied with SS trolley. 12. Should operate on mains (230v,50Hz). 13. Should be USFDA/European Ce (Issued by Notified Body) approved model should be offered. 14. Accessories: i. Gel – 4 bottle ii. Thermal paper-10Nos iii. Voltage Stabilizer 15. Should have built in rechargeable Li –ion battery with backup of at least one hour or suitable UPS need to be supplied .
FORENSIC MEDICINE & TOXICOLOGY	**Portable X-Ray Machine**	Additional Specification: - Prescribed Technical Specifications not available.	**Portable X-Ray Machine** General-purpose mobile diagnostic x-ray system used in a variety of routine x-ray imaging applications. 1) High Frequency generator of 50KHz or more compatible with conventional and computerized radiography. 2) Must have a digital display of mAs and kV. 3) Ergonomically designed unit with total soft touch switches for various operations. 4) Self Diagnostic Program with indicators for earthing fault error, KV error or filament error. 5) kV range at least 40kV to 100kV, digitally displayed mAs range at least 0.5 to 250 mAs or more. 6) Exposure time range at least 10 ms to 5s. 8) Tube power rating at least 4 kW. 9) Adjustable multileaf

			collimator, rotatable $90^0$with patient centring light. 10) Must be supplied with protective dust cover at least for control panel. 11) Should be compatible with various basinet size in NICU & PICU. 12) The generator should have microprocessor/micro-controller based electric overload system. Settings 1) KV increase & decrease switches. 2) mAs increase & decrease switches. 3) Machine On/Off Switch. 4) Collimator lamp On/Off switch. 5) X-rays ON indicator should available. 6) Foot switch should available for trigger X-rays. Dimensions (metric) 1. Unit should have max. 7 foot in height, 2 foot in width and 5 foot in length. 2. Weight -Maximum 160 Kg. Configuration 1) The unit must have an effective braking system for parking, transport and emergency braking. 2) The tube stand must be fully counterbalanced for rotation in all directions. 3) It must have an articulated arm for imaging with any patient position. 4) All cables should be concealed in the arm system. 5) Unit base wheels must be easily accessible for cleaning. Safety / Certificate & Electrical configuration 1. Valid AERB type approval (national standards) certificate to be submitted. 2) Should work on 220VAC +/-10%, 50 Hz. 3) US FDA (510K) /

			European CE (issued by notified body only) & AERB Approved model should be offer
General Medicine	**Flexible Video Colonoscope**	3- Only US FDA (510K) Approved model should be offered.	9. US FDA 510 (k)/ European CE (issued by notified body) Approved model should be offered.
		19-Only US FDA (510K) Approved model should be offered.	9. US FDA 510 (k)/ European CE (issued by notified body) Approved model should be offered.
	Sigmoidoscope	2. Only US FDA (510K) model should be offered.	9. US FDA 510 (k)/ European CE (issued by notified body) Approved model should be offered.

Emergency Medicine	Portable X-ray Machine	**Additional Specification :-Prescribed Technical Specifications not available.**	**Portable X-Ray Machine**General-purpose mobile diagnostic x-ray system used in a variety of routine x-ray imaging applications.1) High Frequency generator of 50KHz or more compatible with conventional and computerized radiography.2) Must have a digital display of mAs and kV.3) Ergonomically designed unit with total soft touch switches for various operations.4) Self Diagnostic Program with indicators for earthing fault error, KV error or filament error.5) kV range at least 40kV to 100kV, digitally displayed mAs range at least 0.5 to 250 mAs or more.6) Exposure time range at least 10 ms to 5s. 8) Tube power rating at least 4 kW.9) Adjustable multileaf collimator, rotatable $90^0$with patient centring light.10) Must be supplied with protective dust cover at least for control panel.11) Should be compatible with various basinet size in NICU & PICU.12) The generator should have microprocessor/micro-controller based electric overload system. Settings1) KV increase & decrease switches.2) mAs increase & decrease switches.3) Machine On/Off Switch.4) Collimator lamp On/Off switch.5) X-rays ON indicator should available.6) Foot switch should available for trigger X-rays. Dimensions (metric)1. Unit should have max. 7 foot in height, 2 foot in width and 5 foot in length.2. Weight - Maximum 160

			Kg.Configuration1) The unit must have an effective braking system for parking, transport and emergency braking.2) The tube stand must be fully counterbalanced for rotation in all directions.3) It must have an articulated arm for imaging with any patient position.4) All cables should be concealed in the arm system.5) Unit base wheels must be easily accessible for cleaning. Safety / Certificate & Electrical configuration1. Valid AERB type approval (national standards) certificate to be submitted.2) Should work on 220VAC +/-10%, 50 Hz.3) US FDA (510K) / European CE (issued by notified body only) & AERB Approved model should be offer
	Defibrillator	2. Only US FDA (510K) model should be offered.	**14. US FDA (510K)/ European CE (Issued by Notified Body) Approved model should be offered.**

	Portable ultrasound with multiple probes including ECHO probe (including probes for peadiatric/infant evaluation)	Not provided in the original document.	**Portable Ultrasound With ECHO** The Portable DICOM compatible Ultrasound machine is useful to observe structures within the body for diagnostic purposes. It is used for vascular, abdominal, obstetric and gynaecological studies. 1. Should be able to operate both on AC and battery. 2. It should have in built full alphanumeric keyboard and track ball/mouse 3. Latest technology all-digital portable Ultrasound System suitable for adult & paediatric ultrasound 4. Should have broad band frequency Transducer Technology. 5. Should have B mode, M-mode, 6. Should have inbuilt rechargeable Battery and the system should operate for at least 90 minutes on battery 7. Should have integrated display screen size at least 10”. 8. Should have standard calculation package. 9. Should have image storage facility for at least 1000 images. 10. Sorting of data base with patient name and date should be possible. 11. USB port connectivity to printer or computer. 12. Facility for storage (external/internal)on CDR/DVD/USB drive should be available. Data should be transferable through the network to any other workstation. 13. Should have cineol memory. Power Doppler

			14. Should be light weight system weighing less than 10kg. 15. Transducers: (1) Convex probe (2) Linear probe (3) Echocardiography probe. 16. System should also have the capability to be upgraded advance software. 17. Imaging modes of Real time 2D, Colour Doppler, Pulsed wave Doppler, Power (energy) Doppler should be available. 18. Should work on 200Vac +/- 10% 50Hz power supply. 19. Should supply online UPS of suitable capacity with 30 minutes' backup. 20. US FDA 510 (k)/ European CE (issued by notified body) Approved model should be offered.
	Point of care laboratory for quantitative estimation of cardiac enzymes, ABG and electrolytes	Not provided in the original document.	**For this Purpose each of the following equipment is required (one in number) the specifications of which are as following:-** 1. **cardiac marker machine:-** Should be able to measure the high sensitive quantitative measurement of Troponin-T / Troponin I. Should be at least a third[1]generation assay. It should be a portable unit and have an inbuilt battery backup. It should have a parameter-wise QC checking facility. Should have a memory capacity of a minimum of 500 test results with date time and comments. Should have memory storage for results of minimum 200

			cartridges. Should have a minimum sample volume of approximately 300 microlitres. Should have an operating temperature ranging from 18-30 degrees Celsius. Should work on 200-240Vac 50Hz power supply. It should have an internal printing facility or supply with an external thermal printer. Should be supplied with 50 strips of Troponin T/I Parameter. Should be provided with a calibration certificate issued by the manufacturer at the time of installation. It should be USFDA/European CE (Issued by Notified body)APPROVED MODEL SHOULD BE OFFERED. Test parameters must be incorporated bellows specification Test parameters: CKMB, Myoglobin, Troponin T and NT-pro BNP Infection Marker: CRP, Coagulation Marker: D-dimer , Pregnancy marker: beta Hcg, Sepsis Marker: Procalcitonin(PCT) & customizable test selection option

			2.ABG machine :- 1. Compact system for measuring pH, pCO2, pO2, -HCO3 & four Electrolytes like Na, K, Ca+ and Cl - in blood. 2. All should be measured in a single injection / aspiration of Sample. 3. May have provision of modular platform for future up gradation to include glucose, lactate & hemoglobin the same machine with the inspiration of single sample. 4. Should be able to analyze all parameters using low blood volume directly from syringe or capillaries. 5. Fast and accurate result of test made available in about 60 seconds. 6. Automatic Calibration by liquid calibrators with flexible time mode. Instrument should have Stand-by mode facility and Economy mode. 7. It should not be cartridge based system. 8. Startup Kit, Calibrators, Consumables, Accessories and spares required performing initial 500 tests. 9. All the consumables and spares should be quoted separately unit wise. 10. Compatible online UPS with battery back up of at least one hour 11. US FDA 510 (k)/ European CE (issued by notified body) Approved model should be offered.

	ACLS, BLS and Airway mannequins (child and adult)	Not provided in the original document.	**ACLS, BLS & IRWAYS Management Mannequin** For adult it should consist of a full-body adult mannequin with CPR and advanced airway capability and for child it should consist of pediatic manikin with CPR and advanced airway capability. The mannequin should have the following features and items :- 1. All parameters of CPR should be electronically measured and recorded with a wireless/wired device with details about the rate, depth, the effectiveness of compression and ventilation. 2. Should be capable of interfacing with a clinical manual defibrillator and AED for rhythm analysis and electrical therapy including pacing, synchronized shock and defibrillation. 3. Should be supplied with a monitor to display ECG, SPO2, BP, ETCO2, and other waveforms with supportive software. 4. Should have the capability to display oesophageal intubation 5. Should have an intubation facility and display effective ventilation. 6. Should have adjustable chest compliance 7. Iv arm for insertion of a cannula, the ability for detection of pulse, the ability for IO line placement 8. Should have software and hardware support to mimic and demonstrate various ECG patterns, Breathing sounds, and ability to program scenarios. 9. Should have an effective

			feedback system that can be demonstrable, results storable and retrievable for debriefing 10. The software support and audiovisual support for the above purpose should be supplied allowing upgradability to the universal guidelines from time to time and with no additional cost. 11. Should run on KSEB power source 12. Should be USFDA/European Ce (Issued by Notified Body) approved model should be offered.
Respiratory Machine	**Rigid Bronchoscope**	Not provided in the original document.	**Rigid Bronchoscope** Digital Single Chip Endo vision Camera: one (compatible with telescopes of Bronchoscope, Oesophagoscope , and Cystoscope Color system PAL / NTSC , power supply: 100 – 240 VAC , 50/60 Hz compatible with Pal, NTSC Automatic white balance with control on base unit and also on camera. Integrated zoom lens for manual and automatic control for exposure of fog. Compatible with VHS and Comp and DVI. Minimum sensitivity 3 lux. Instrument coupling for all rigid endoscope. Long camera cable 300 cm.

			Two pre set function keys on camera for control of camera function , printer, computer , VCR and other peripherals Medical Color Monitor 19” (fully flat screen): one Special 19 “monitor, medical grade, Trintron colour tube, PAL , NTSC & SECAM color system. For Bronchoscopy, Oesophagoscopy and cystoscopy Telescope Straight forward telescope , 0 degree , diameter 2.9 mm , length 36 cm , autoclavable, fiber optic light transmission incorporated(one) Straight forward telescope 0 degree , diameter 2.9 mm , length 30 cm , autoclavable, fiber optic light transmission incorporated (one) Straight forward telescope 0 degree , diameter 2.7mm , length 18cm autoclavable, fiber optic light transmission incorporated (one) Bronchoscope Sheath Bronchoscope sheath , size 4.5 outer diameter 7.3 mm ,inner diameter 6.6 mm , length :30 cm (one Bronchoscope sheath , size 4 outer diameter 6.7mm ,inner diameter 6mm , length :30 cm (one) Bronchoscope sheath , size 3.7 outer diameter 6.4 mm ,inner diameter 5.7 mm , length :30 cm (one Bronchoscope sheath , size 3.5 outer diameter 6.4 mm ,inner diameter 5.7 mm , length :30 cm (one Bronchoscope sheath , size 4.0 outer diameter 6.7 mm ,inner diameter 6.4 mm , length :26 cm (one Bronchoscope sheath, size 3.7outer diameter 6.4 mm

			,inner diameter 6.4 mm , length :26 cm (one Bronchoscope sheath , size 3.5 outer diameter 5.7 mm ,inner diameter 5.0 mm , length :26 cm (one Bronchoscope sheath , size 3.0 outer diameter 5.0 mm ,inner diameter 4.3 mm , length :26 cm (one Bronchoscope sheath , size 3.5 outer diameter 5.7 mm ,inner diameter 5.0 mm , length :18.5cm(one) Bronchoscope sheath , size 3.0outer diameter 5.0 mm ,inner diameter 4.3 mm , length :18.5m (one Bronchoscope sheath , size 2.5 outer diameter 4.2 mm ,inner diameter 3.5 mm , length :18.5m (one) Optical forceps (compatible with above mentioned telescopes and bronchoscope sheaths Optical alligator forceps , 2x2 teeth , with spring action handle , for controlled removal of flat foreign bodies (such as coins) ;(two) Optical forceps, with spring action handle for controlled removal of soft foreign bodies (such as peanuts) : (two) Optical alligator forceps, with forced controlled handle , for removal of hard foreign bodies (two Forceps (one each) Forceps alligator, grasping , double action jaw , sheath diameter 1.5 mm , working length: 35 cm Forceps alligator, grasping, double action jaw, sheath diameter 1.5 mm , working length: 35 cm , pointed serrated for coins and foreign bodies. Forceps alligator , grasping

			double action jaw, sheath diameter 1.5 mm , working length 35 cm , pointed for peanuts and soft foreign bodies. Biopsy Forceps 35 Cm Sponge holder: Spring handle, working length 35 cm (one) Rigid suction tube with rubber tip(one each) Rigid suction tube, straight length 35 cm, diameter: 3 mm Rigid suction tube, straight length 25 cm. diameter: 3 mm Foreign body basket with rigid handle, working length 35 cm Telescope bridge for fixed position between telescope and bronchoscope. Compatible with above mentioned telescopes and bronchoscope sheaths (Three) Prismatic light deflection with connection for fiber optic light cable, autoclave (Two) Glass Window Plug (Two) Rubber Telescope Guide for use with telescopes or optical forceps (Two) FLUVOG Adaptor with sliding glass window plug, sealing cap, notched lens and keyhole opening , moveable (Two) Injection canula with Leur lock outer diameter – 3.5 mm, for use with bronchoscope tubes (for positive pressure assisted ventilation (Two) Injection canula with Leur lock outer diameter – 2.7 mm, for use with bronchoscope tubes (for positive pressure assisted ventilation (Two) Instrument guide for suction catheter (Two) Adaptor from bronchoscope to any type of pediatric respiration equipment (Two) Sealing plug for ventilation

			attachment of bronchoscopes (Two) Adjustable magnifier, swing – away type, autoclave (One) Fiber optic light cable size 3.5mm, length 180 cm (Two) Cold light fountain twin bulb Halogen 150 watts Power supply 220 VAC, 50 Hz. (One) Facility to capture images and record videos of the procedure should be available. Storage facility should be adequate for at least 100 videos. Only US FDA (510 K) Approved model should be offered.

Annexure-III

Section	Clause as per Tender document	Proposed Amendment
Section-I (Instruction to Bidder)	**Clause-27.1 (Preliminary Evaluation)** Purchaser shall evaluate the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the bids are generally in order. Bids from representatives, without proper Authorization	**Clause-27.1 (Preliminary Evaluation)** Purchaser shall evaluate the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the bids are generally in order. Bids

	from the manufacturer as per Section VI, shall be treated as non-responsive	from representatives, without proper Authorization from the manufacturer as per Section VI, may be treated as non-responsive. However in case of an equipment without such authorization at the time of submission of bid, the undertaking from the bidder to comply with the conditions laid down in clause 16.3 supra as well as to cover full warranty/CMC of such equipment shall be taken into account for the purpose of technical responsiveness under this clause.