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E-Tender Notice No: 10/2020- 2021/Bio-Medical Equipment/IGIMS/Store

CORRIGENDUM

Amendment Notice to the Tender Document bearing E-Tender Notice No. 10/2020-21/Bio-Medical Equipment /IGIMS/Store for the Supply, installation and commissioning of Biomedical Equipment to the various dept. of IGIMS, Patna.

Amendments mentioned hereunder are notified:

Group B- State Cancer Institute-II		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
1. VIDEO ENDOSCOPE UNIT HAVING UPPER AND LOWER GASTROINTESTINAL SCOPES		
TECHNICAL SPECIFICATION	VIDEO Endoscope unit with NBI/HD plus video with upper GI endoscope and Colonoscope with accessories	VIDEO Endoscope unit with NBI/ Equivalent Technology /HD plus video with upper GI endoscope and Colonoscope with accessories
1. Diagnostic Gastrovideoscope: Point No. 2	Should have Chrome endoscopy imaging (NBI/FICE-BLI/ I scan-OE/m BLU/S technology) and preferably dual focus Capacity for detailed mucosal study.	Should have optical enhancement endoscopy imaging (NBI/BLI/I Scan-OE) and preferably dual focus Capacity for detailed mucosal study.
1. Diagnostic Gastrovideoscope: Point No. 5	Should have forward/auxillary water jet for mucosal cleaning	Should have forward and auxillary water jet for mucosal cleaning
3 Colonovideoscope Point No. 2	Should have Chrome endoscopy imaging (NBI/FICE-BLI/ I scan-OE/m BLU/S technology) for detailed mucosal study.	Should have optical enhancement endoscopy imaging (NBI/BLI/I Scan-OE) and preferably dual focus Capacity for detailed mucosal study.
5. Video Processor Point No. 5	Optical chrome endoscopy imaging such as NBI/FICE-BLI/I scan OE/mBLU/S technology and HD plus videoscope.	Should have optical enhancement endoscopy imaging (NBI/BLI/I Scan-OE) and technology and HD plus video scope.
5. Video Processor Point No. 10	Equipped with memory backup for settings and lithium battery	Deleted
5. Video Processor Point No. 12	Should have inbuilt light source or separate light source with NBI/FICEBLI/I scan - OE/m BLU/S technology imaging capacity/ HD plus video.	Should have inbuilt light source or separate light source with NBI/BLI/ I Scan OE.
5. Video Processor Point No. 13	High intensity Xenon light source (300W) with 500 hours life with emergency halogen light for backup	High intensity Xenon light source (150-300W) with 500 hours life with emergency halogen light for backup
Demonstration	Demonstration of the quoted model of the endoscope at AIIMS Raipur is mandatory for technical evaluation and acceptibility.	Demonstration of the quoted model of the endoscope at IGIMS, Patna is mandatory for technical evaluation and acceptibility.
Warranty and CMC: Point No. 6	Should have resident service engineer available in Raipur within 24 hrs to solve the complaints.	Should have resident service engineer available in Patna within 24 hrs to solve the complaints.
2. CYSTOSCOPY SET		
Point No. 2	20 Fr with obturator and 2 luer lock adaptors	19-21 Fr with obturator and 2 luer lock adaptors

3. BRONCHOSCOPE- RIGID AND FLEXIBLE		
Point No. 3	Scope should have minimum three user programmable remote switches to improve operability	Scope / Camera Head should have minimum three user programmable remote switches to improve operability
Point No. 4	Should have Narrow Band/ I-SCAN/ FICE Imaging facility.	Should have optical enhancement endoscopy imaging (NBI/ BLI/ I Scan-OE)
Point No. 6	Channel diameter should be 2.0 mm or more. Separate channels for Oxygen and suction	Channel diameter should be 2.0 mm or more.
Point No. 7	Insertion tube length should be 600mm or more.	Insertion tube length should be 540 mm or more.
Point No. 8	Field of view should be 120 degree or more.	Field of view should be 110 degree or more.
Point No. 10	Angulation – UP-180 degree, Down-130 degree or better.	Angulation – UP-180 degree, Down-100 degree or better.
Point No. 15 (a)	LED Light Source (Xenon short arc Ozone free 300 Watt lamp): -Xenon / LED light with scope compatibility having lamp life of at least 500 hours. - Emergency halogen/LED light for backup. - 4 spare bulbs	300 W Xenon Lamp with optional Enhancement endoscopy imaging (NIB/BLI/ I Scan- OE) with 4 spare Xenon Bulbs.
C) Essential Accessories Point No. d	Biopsy valves (Reusable) 2	Biopsy valves (Disposable) – Qty.- 10
RIGID BRONCHOSCOPE SET Point No. 2	Lateral telescope 30°, diameter 2.8mm,length 44 cm fibre optic light transmission. Colour code: yellow.- ONE	Straight forward 0° telescope , diameter 2.8mm,length 44 cm fibre optic light transmission. Colour code: yellow.- ONE
RIGID BRONCHOSCOPE SET Point No. 21	Micro Scissors, 30 cm length, 4.0 mm shaft diameter- ONE	Micro Scissors, ≥30 cm length, ≥2.5 mm shaft diameter- ONE
RIGID BRONCHOSCOPE SET Point No. 23	Cold light source 250 Watt -1	LED 175 cold light source
4 MICRO DRILL AND SAW SYSTEM		
Point No. 12	Should be able to store user setting for different surgeries	Should be able to retain last setting
Drill Handpiece Point No.1	Maximum Speed not less than 60000 RPM	Maximum Speed not less than 40000 RPM
Micro saws, Sagittal Saw, Point No.1	Maximum speed of 23000 cpm	Maximum speed of ≥ 20000 cpm
Micro saws, Oscillating Saw Point No.1	Maximum speed of 22000 cpm	Maximum speed of ≥ 20000 cpm
Micro saws, Reciprocating Saw Point No.1	Maximum speed of 18000 cpm	Maximum speed of ≥ 18000 cpm
Point No.8	Jacobs Chuck with key-01	Jacobs Chuck with key/ Quick Coupling-01
5 LARYNGOPHARYNGOSCOPY SYSTEM		
Point No.1	Sinoscope Rigid D= 3.0 mm	Sinoscope Rigid D= 3.0- 4.0 mm
Point No.3	Diameter= 6.0 mm/ 8.0 mm	Diameter= 6.0 mm/ 8.0 mm/ 10mm
Point No.4	Flexible Laryngoscope Field of view=85° Depth of field = 2.5-50 mm Outer diameter Distal end = 3.4 mm Working length = 300 mm Bending range of distal tip + up 130° down 130°	Flexible Laryngoscope Field of view= ≥ 70° Depth of field = 2.5-50 mm Outer diameter Distal end = 3.1-3.5 mm Working length = 300 mm Bending range of distal tip + up 180° down 90°

Point No.6	175 Xenon light source	LED or Xenon light source
Point No.7	Fiber optic light cable 3.5 mm	Fiber optic light cable 3.5 mm to 4.25 mm
6 NERVE SIMULATOR		
Point No.2	The nerve stimulator should have Remote control for sterile one handed operation.	The nerve stimulator should have Remote control/ Extension Cable for sterile one handed operation.
Point No.5	Stimulation current: 5 mA max	Stimulation current: 6 mA max
Point No.11	Impedance measuring range: 1 KOhms – 90 Kohms for target stimulation current >0.5 mA	Impedance measuring range: 1 KOhms – 60 Kohms for target stimulation current >0.5 mA
Point No.12	Weight: 250 g maximum	Weight: 300 g maximum
Free of Cost Accessories: Point No.1	Nerve stimulation needles 24G; 25mm – 3 nos.	Nerve stimulation needles 24 G; 25mm / 24 G; 25mm – 3 nos.
Free of Cost Accessories: Point No.5	Nerve stimulation needles 18 G, 55mm; length with 40cm length catheter set- 15 nos.	Nerve stimulation needles 18 G, 55mm/ 19G, 50mm ; length with 40/50cm length catheter set- 15 nos.
Free of Cost Accessories: Point No.6	Nerve stimulation needles 18 G, 110mm; length with 100cm length catheter set- 15 nos	Nerve stimulation needles 18 G, 110mm/ 19 G, 100mm ; length with 100cm/ 50 cm length catheter set- 15 nos
7 HYPERTHERMIC INTRA-PERITONEAL CHEMOTHERAPY SYSTEM		
TECHNICAL SPECIFICATIONS	It should also be possible to use the equipment for performing isolated limb perfusion (ILP).	Optional
It should have the following features: Point No.c	The equipment pump should have a perfusion solution flow rate that is adjustable from 100 to 2200 ml/minute.	c. The equipment pump should have a perfusion solution flow rate that is adjustable from 1000ml/minute.
It should have the following features: Point No.d	The equipment should have a user friendly interactive touch Screen display monitor for viewing and/or easily controlling all operational parameters like the heat exchanger temperature, intra-abdominal temperatures, flow rates, timer and preferably circulating volume and pressure. It should prompt the user from initial set-up through the entire operation.	Optional
It should have the following features: Point No. f	The equipment must have the facility to adjust the volume of circulating fluid during the treatment (increasing or decreasing the volume). The entire set-up process should be in a simple and easy manner such that the theatre technicians will be able to perform it themselves.	The equipment must have the facility to adjust the volume of circulating fluid during the treatment (increasing or decreasing the volume). The entire set-up process should be in a simple and easy manner such that the theatre technicians will be able to perform it themselves requirement as per equipment.
It should have the following features: Point No. i	There should be provisions for easily connecting OEM's disposable pre-assembled circuit/HIPEC kits. Vendor must supply 50 nos. (fifty) single use disposable HIPEC sets/kits along with the main equipment. Each kit should contain a soft reservoir of 5-7 litres capacity, at least 1 inflow tubes (preferably two) and at least 2 outflow tubes, high-flow heat exchanger, at least four temperature probes (1 each for monitoring inflow and outflow temperature and two for monitoring intra-peritoneal temperature), pressure sensor and filters to filter cell fragments.	There should be provisions for easily connecting OEM's disposable pre-assembled circuit/HIPEC kits. Vendor must supply 50 nos. (fifty) single use disposable HIPEC sets/kits along with the main equipment. Kits should be compatible with the system
It should have the following features: Point No. k	The equipment should be European CE and US FDA certified and must comply with universal safety regulations and directives	The equipment should be European CE and US FDA/ CDSOC certified and must comply with universal safety regulations and directives and

	and international manufacturing standards.	international manufacturing standards
It should have the following features: Point No. q	The vendor should have installed at least 3 machines in India in the past 3 years and the OEM should have at least 100 installations worldwide. Proof of the same must be provided.	The vendor should have installed at least 3 machines in India in the past 3 years or the OEM should have at least 100 installations worldwide. Proof of the same must be provided.
It should have the following features: Point No. s (3)	There must be at least a 3 year usable period before expiry of consumables, disposable and nondisposable items.	There must be at least a 3 year usable period before expiry of consumables, disposable and nondisposable items or if the expiry is less, unused items should be replenished from time to time at no cost to the hospital till 3 years of time.
It should have the following features: Point No. s (4)	Service and logistic support must be available in Chennai and provided as and when required within 24 hours.	Service and logistic support must be available in Patna and provided as and when required within 24 hours.
9 OT TABLE		
Point No. 17 (2)	Mattress should be double layered, more than 70 cm, ultrasonically sealed and anti-decubitus / antistatic, with easy Velcro free fixation/Velcro and should be easy to detach from the top.	Mattress should be double layered, more than 70 mm , ultrasonically sealed and anti-decubitus / antistatic, with easy Velcro free fixation/Velcro and should be easy to detach from the top.
18 Power and Controls Point No. 8	10 free programmable memory positions for patient positioning	Memory position should be 8-10
Point No. 24	Mattress should be moulded, seamless, anti-static, anti-decubitus, latex free & durable. It should preferably be attached to top with pins and not Velcro and should be easy to clean.	Mattress should be moulded, seamless, anti-static, anti-decubitus, latex free & durable. It should preferably be attached to top with Velcro and should be easy to clean.
10 ANAESTHESIA WORK STATION WITH MONITOR		
Gas Management: Point no.13	Should have 3 gas back up mechanical flow control in case of failure of electronics	Should have emergency oxygen back up mechanical flow control in case of failure of electronics
Display: Point no.1	Around 12-16 " Color TFT Display with High visibility and highly visible alarm light mounted on the Anesthesia Workstation	Around 15-19" Color TFT Display with High visibility and highly visible alarm light mounted on the Anaesthesia Workstation
Display: Accessories -	Accessories - Standard use for ECG (2 in no.), SpO2 probes (2 each for adult & pediatric). NIBP(2 cuffs each for adult and pediatric & 1 for neonate), Temperature probes (1 for core and 1 for skin), IBP cables (2 in no with 10 pressure transducers and their one holder), EtCO2- 5 filter assemblies and 10 tubings, for anaesthesia gas monitoring, depth of anaesthesia monitoring(with 25 disposable leads),NM Monitoring cables Recorder option for printing the up to 4 waveforms and alphanumeric data, and trends etc .	Accessories - Standard use for ECG (2 in no.), SpO2 probes (2 each for adult & pediatric). NIBP(2 cuffs each for adult and pediatric & 1 for neonate), Temperature probes (1 for core and 1 for skin), IBP cables (2 in no with 10 pressure transducers and their one holder), EtCO2- 5 filter assemblies and 10 tubings, for anaesthesia gas monitoring, depth of anaesthesia monitoring(with 25 disposable leads),NM Monitoring cables Recorder option for printing the up to 3 or 4 waveforms and alphanumeric data, and trends etc .
Following upgrades should be offered as options Point no.1 & 4	Mainstream EtCO2 monitoring should be possible Facility for Microstream EtCO2 with dedicated accessories for Adult, Paediatric & Neonates (25 each)	Facility for standalone Mainstream/side stream/Microstream EtCO2 monitoring with dedicated accessories should be possible. For Mainstream sensor two sets of EtCO2 accessories for Adult, Paediatric & Neonates (25 each) should be provided.
11 MULTIPARAMETER MONITOR WITH CENTRAL MONITORING STATION		
MULTI PARAMETER MONITOR Point no. 33	Should have European CE or US FDA certifications.	Should have European CE and US FDA certifications.

Central Monitoring Station for Multi Para Monitor Point no. 10	All system should have European CE and or US FDA certifications	All system should have European CE and US FDA certifications
12 Fiberoptic Thoracoscope		
Point no. 1	The tip of Thoracoscope should be flexible, having capacity of upward movement of 160 degree and downward movement of at least 130 degree	The tip of Thoracoscope should be flexible, having capacity of upward movement of 160 degree and downward movement of at least 130 degree or more
	Add on	Should have bendable distal tip in up & down direction for better vision in the pleural cavity.
	Add on	Should have chip on tip technology.
13 4 K Laproscopy Set		
	4K imaging System should have integrated /separate unit of Camera Console, LED /Xe Light Source & Imaging Management System.It should have intuitive tablet controller to control fetatures of imaging system. The Tablet should have provision to drape in a cover for used in a sterile field. Camera console, LED/XE light source & Image Management System should have following features—	4K imaging System should have integrated /separate unit of Camera Console, LED /Xe Light Source & Imaging Management System. Camera console, LED/XE light source & Image Management System should have following features—
A) 4K Camera Console: Point No. 2	Built in Wi-Fi router for wireless connectivity	Optional
A) 4K Camera Console: Point No. 3	One Console and One Unique Tablet Interface should simplify use, and programmable individual surgeon preferences to enhance the user experience.	Optional
A) 4K Camera Console: Point No. 4	Camera rear Panel should have numerous input & Display Port/DVI Outputs/3G SDI Outputs.	Camera rear Panel should have numerous input & Display Port/DVI Outputs/3G SDI Outputs/ HDMI Output.
B) LED/XE Light Source – Point No. 1	LED light source should have 30,000-hour Life span (14 years at 40 hours per week)	LED light source should have 30,000-hour Life span. LED Life span should be covered in warranty & CAMC period
D) Ultra HD 4K Camera Head Point No. 1	4K Camera head with resolution of 3840 x 2160 Pixel(8.3 Million Pixels)	3 Chip 4K Camera head with resolution of 3840 x 2160 Pixel(8.3 Million Pixels)
D) Ultra HD 4K Camera Head Point No. 2	Camera Head should be of Titanium Housing and Hermetically Sealed for Autoclaving	Camera Head should be Sealed for Autoclaving / Sterilizable
D) Ultra HD 4K Camera Head Point No. 6	Camera Head should have 7 Years warranty against autoclaving	Camera Head should have 7 Years warranty against autoclaving/ Sterilizing
5) Fiber Optic Light Cable Point No. 1	Fiberoptic Light Guide Cable fused at proximal end to maximize light transmission having diameter of 5 mm & length 2.5-2.7 mm	Fiberoptic Light Guide Cable fused at proximal end to maximize light transmission having diameter of 2.5-3 mm & length 2.5-2.7 mm
14 Video Mediastinoscope		
Point No. 4	Camera control unit for camera head 1 no	Camera control unit for camera head should have in built recording capability for capturing full HD videos and HD stills.
Point No. 8	Sponge and Dissecting Forceps, with ratchet, length 20 cm QTY 1 no	Sponge and Dissecting Forceps, length 20 cm QTY 1 no
Point No. 10	Biopsy Forceps, with suction channel, length 30 cm- QTY 1 no.	Biopsy Forceps, with suction channel, length 20 cm- QTY 1 no.
Point No. 20	26’’ FULL HD FLAT SCREEN 1 no.	26’’ or more FULL HD FLAT SCREEN 1 no.
16 Operating Microscope		

Point No. 5	200° inclinable tubes with central PD adjustment, 10x wide-angle eyepieces for eyeglass wearers	0 to 180° inclinable tubes with central PD adjustment, 10x wide-angle eyepieces for eyeglass wearers
Point No. 16	Should have face to face attachment (Diploscope).	Should have symmetric face to face attachment with 0 to 180° tilt able binocular tube with PD adjustment and dioptre setting of +5 D to -8 D.
Point No. 20	Should have the inbuilt hardware and software for ICG fluorescence for vascular surgeries and ALA fluorescence for tumors.	Should have the inbuilt hardware and software for ICG fluorescence for vascular surgeries and Yellow fluorescence for tumors.
	Add on	Microscope should have 18 x magnification or more magnification without additional external image multiplier.
	Add on	OEM/ Manufacturer should have service centre in Patna for best and prompt service.
19 Portable USG		
Point No. 27 b	Compatible Endo-cavity Transducer as per GTS	Compatible Endo-cavity Transducer 5-8 MHz as per GTS
	Add on	8-3 MHz Transoesophageal (a) Transducer (For future Up gradation) (b) 6-13 Mhz Hockey Stick Transducer for Intraoperative. (c) 8-5 Mhz 11 mm FOOT PRINT FOR Nerve and vascular.
	Add on	The system should be ability to provide preset exam for compatible with all transducer without TGA control to provide easy , fast and point of case operation All type of available Biopsy attachment mst be quoted.
20 ICU Bed		
	Add on	The System should have USFDA or European CE Certification.

Group-C: G.I. Surgery		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
1 Upper & Lower GI Video Endoscope		
Special Features: Point No. 1	System should be on High Definition Platform , Max resolution 1080p	System should be on High Definition Platform , Max resolution 1080i
Special Features: Point No. 3	Fully compatible to the color systems PAL & NTSC	Fully compatible to the color systems PAL / NTSC
Special Features: Point No. 9	Should have USB interface at front panel for Image & Video storage & rear for compatible USB Printers	Should have USB interface at front panel for Image & Video storage front / rear panel for compatible USB Printers
HDTV 16: 9 widescreen Monitor LED- 26 Inches Point No.2	1080 p/ 50 & 1080 p/60 displays possible.	1080 i / 50 & 1080 i /60 displays possible.
Gastro videoscope Point No.2	Should have optical enhancement technology i.e. NBI / BLI / OE i SCAN	Should have optical enhancement technology/ chrome endoscopy technology i.e. NBI / BLI / OE i SCAN
Gastro videoscope Point No.6	Depth of field : must be 2-100 mm or better	Depth of field: must be 2-100 mm or better (Near- 1.5-3 mm or better, Far- 3-100 mm or better)
Gastro videoscope Point No.7	Distal end outer diameter: 9.2 mm or less	Distal end outer diameter: 10 mm or less
Gastro videoscope Point No.8	Insertion tube outer diameter : 9.2 mm or less	Insertion tube outer diameter : 10 mm or less
Colonovideoscope Point No.1	Built in HDTV compatible CCD with close focus observation capacity	Built in HDTV compatible CCD/ CMOS near enamel with focus observation capacity
Colonovideoscope Point No.2	Should have optical enhancement technology i.e. NBI / BLI / OE i SCAN	Should have optical enhancement technology/ chrome endoscopy technology i.e. NBI / BLI / OE i SCAN
Colonovideoscope Point No.6	Depth of field : 2-100 mm or better	Depth of field : 2-100 mm or better (Near- 1.5-3 mm or better, Far- 3-100 mm or better)
2 MOBILE ELECTRO-HYDRAULIC OPERATION THEATER TABLE		
Point No.2	Provision for adjustment of base locked / unlocked via hand control unit by means of a four post, self- levelling hydraulic locking system.	Provision for adjustment of base locked / unlocked via hand control unit/ Manual foot lever by means of a four post, self- levelling hydraulic locking system.
Point No.3	OR table in standard configuration of the tabletop generally capable to support a max. patient weight of 450kg or more in normal orientation for all articulating patient positions and 225kg. or more in reverse orientation for all articulating patient positioning.	OR table in standard configuration of the tabletop generally capable to support a max. patient weight of 350kg or more in normal orientation for all articulating patient positions and 175kg. or more in reverse orientation for all articulating patient positioning.
Point No.4	Maximum tabletop height: 1050mm or better and minimal tabletop height: 650mm or better.	Maximum tabletop height: 1050mm or better and minimal tabletop height: 650-680 mm or better.
Point No.11	OR tabletop surface should be of radiolucent – Phenolic for superior imaging and strength.	OR tabletop surface should be of radiolucent for superior imaging and strength.
Point No. 18	OR table additionally equipped with integrated power drive unit to provide ease of manoeuvring when moving the table over longer distances.	OR table additionally equipped with integrated or separate power drive unit to provide ease of manoeuvring when moving the table over longer distances.
Point No. 19	For instant trouble shoot identification, the Table should have the provision of RS-232 Port for Device Control & Computer Assisted Error Diagnosis for Easy and Fast Service.	For instant trouble shoot identification, the Table should have the provision of RS-232 Port for Device Control / self- diagnosis or remote or Computer Assisted Error Diagnosis for Easy and Fast Service.
5 URETEROSCOPE		
Point No.1 Sub point no. 3	Working channel diameter should be 400-450mm.	Working channel length should be 400-450mm.

Point No.4 (c & d)	Membrane retainer, standard-1 Membrane retainer with luer-1	Membrane retainer, standard-1 (Optional) Membrane retainer with luer-1 (Optional)
6 NEPHROSCOPE		
Point No.1 (a)	20 – 22 Fr. Autoclavable, with >12 fr working channel and having working length or more than 30mm	20 – 22 Fr. Autoclavable, with >12 fr working channel and having working length up to 30cms
Point No.3 (a)	Should be 24-26 fr for compatible telescope 20-22fr, autoclavable, with >12 fr working channel with standard hollow obturator.	Should be 24-26 fr for compatible standard telescope, autoclavable, with >12 fr working channel with standard hollow obturator.
Point No.4 (f & g)	Compatible scissors for use with nephroscope set. Sickle knife for use with nephroscope set.	To be deleted
Point No.8	All instruments must be CE and FDA certified wherever applicable.	All instruments must be CE and FDA certified whenever applicable.

Group-F: CTVS		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
1 HEART LUNG MACHINE		
3.1 Point no. 5	Individual pump heads should have Harvey Roller pumps with facility for tubing to be used adjustable and easily changeable mechanism.	Individual pump heads should have Harvey Roller/ Horse shoe shape design pumps with facility for tubing to be used adjustable and easily changeable mechanism.
3.1 Point no. 8	Should have unidirectional hand crank facility as a critical safety feature hand crank loading should be from top for faster access.	Should have unidirectional/ bidirectional hand crank facility as a critical safety feature hand crank loading should be from top for faster access.
3.6 Point no. 4	Temperature display range of 0- 50 ° Celsius; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with 3-temperature display.	Temperature display range of 0-2° to 41-50° Celsius; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with 3-temperature display.
3.6 Point no. 6	Water outlet temperature of heat exchanger and blanket range 0-42° C.	Water outlet temperature of heat exchanger and blanket range 0-2° to 41-42° C.
3.6 Point no. 7	Maximum flow performance of oxygenator heat exchanger supply port 15 – 22 LPM for fast cooling; 480mmHg maximum pressure; Blanket 1.5 to 2.5 LPM at zero head.	Maximum flow performance of oxygenator heat exchanger supply port 15 – 22 LPM for fast cooling; 480mmHg maximum pressure.
3.6 Point no. 8	Built in Ice Maker to provide 50 lbs of ice in about 8 hours from 25° C water.	Built in Ice Maker to provide 50 lbs of ice in about 8 hours from 25° C water or ice water 2°C.
3.6 Point no. 9	Should be capable of providing ice water for cardioplegia independently with variable cooling rate	Should be capable of providing 0-2°C ice water for cardioplegia independently with variable cooling rate
3.10 Point no. 5	On Line Measurement of PH, PCO2*& HB FOR NEONATAL CARDIAC SURGERY	On Line Measurement of PH, PCO2*& HB FOR NEONATAL CARDIAC SURGERY (Optional)

Group -H: Central Library		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
1. Supply, Installation & Commissioning of RFID		
Point No. 2 RFID smart card Printer	Single Side Smart Card Printer (DTC 1250e) along with card printing software, printer Ribbon (Full Color-250 Prints/One Side), Cleaning Kit etc. Warranty/AMC 3 years.	Single Side Smart Card Printer (DTC 1500) along with card printing software, printer Ribbon (Full Color-250 Prints/One Side), Cleaning Kit etc. Warranty/AMC 3 years.
Point No. 4 RFID Smart Cards	1024 Bits Memory, Frequency 13.56 MHz, Operation Mode Passive, Operating Protocol ISO 15696/18000-3, Size: CR80 with Gloss Printable Surface (Details to be printed on the smart card e.g. Student Name, PRN, Address, Parent Details etc)	1024 Bits Memory, Frequency 13.56 MHz, Operation Mode Passive, Operating Protocol ISO 15696/18000-3, Size: CR80 with Gloss Printable Surface (Details to be printed on the smart card e.g. Student Name, PRN, Address, Parent Details etc) or ISO 14443A (Mifare) in place of ISO 15696 (i-code)
Point No. 7 Library Security Gate single Aisle (EAS Pedestals)	Two EAS Pedestal Library Security Gate (Quantity: One set) with in- built Electronic control Unit. It should include two theft detection pedestals, 2 antennas for large detection field range of 1.35 mtr between two pedestals which are interdependent of each other and also have an overlapping protection zones providing additional security.	Two EAS Pedestal Library Security Gate (Quantity: One set) with in- built Electronic control Unit. It should include two theft detection pedestals, 2 antennas for large detection field range of 100 cm between two pedestals which are interdependent of each other and also have an overlapping protection zones providing additional security.
	Add on	<ol style="list-style-type: none"> 1. Anti- Theft Stickers for protection of RFID Tags 2. Koha Installation and support as it is not mentioned 3. Data Entry of Books 4. Printer Ribbon

Group -I: Microbiology		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
4 FLUORESCENT MICROSCOPE		
Point No. 3	6 position objective nose-piece.	6 position or more encoded objective nose-piece.
Point No. 4	3 position Trinocular head with 10x22 m FOV eyepiece dipole displacement (+5 to -5) upper eyes lid (pair) intra with inter papillary distance of at least 50-70 mm adjustable to accommodate observer height.	2/3 position Trinocular head with 10x22 m FOV eyepiece dipole displacement (+5 to -5) upper eyes lid (pair) intra with inter papillary distance of at least 50-70 mm adjustable to accommodate observer height.
Point No. 8	Objectives: Infinity plan achromatic 2/2.5x Infinity plan achromatic 5x NA 0.12 WD > 11.5mm Infinity plan achromatic phase 10x NA 0.25 WD> 11.5 mm infinity plan apochromatic phase 20x NA 0.50 WD> 1.1 mm Infinity Semi Plan apochromatic phase 40 x NA 0.80 WD 0.40 mm Infinity Semi Plan apochromatic phase 100 x oil NA 1.30 WD > 0.17 mm One extra lens according to the need..	Objectives: Infinity plan achromatic 2/2.5x Infinity plan achromatic 5x NA 0.12 Infinity plan achromatic phase 10x NA 0.25 infinity plan apochromatic phase 20x NA 0.45 or more Infinity Semi Plan apochromatic phase 40 x NA 0.65 or more Infinity Semi Plan apochromatic phase 100 x oil NA 1.30.
Point No. 9	Epi fluorescense illumination system and 100 W mercury illuminations, filter blocks for UV,blue and green excitation . The system should have filter blocks on a turrent.	Epi fluorescense illumination system and 100 W mercury illuminations/ LED and LED/ Normal filter for UV, blue and green excitation. The system should have a reflector turrent.
Point No. 19	List of Equipment available for providing caliberation and routine preventive maintenance Support.	List of Equipment available for providing caliberation and routine preventive maintenance Support. One additional mercury halogen/ led lamp.
Point No. 20	Digital Camera Fire wire digital Camera with the following features : Recent module with 7 mega pixel CCD camera with appropriate lens system mounted . Image analysis : system for capture, morphometry, thresh holding (grey level profiling) and analysis, annotation , etc.	Scientific grade camera/Digital Camera Fire wire digital Camera with the following features : Recent module with 7 mega pixel or more CCD/ CMOS camera with appropriate lens system mounted . Image analysis : system for capture, morphometry and analysis, annotation , etc.

Group -K: Trauma & Emergency		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
1 ANAESTHESIA WORK STATION WITH MONITOR		
Gas Management: Point no.13	Should have 3 gas back up mechanical flow control in case of failure of electronics	Should have emergency oxygen back up mechanical flow control in case of failure of electronics
Display: Point no.1	Around 12-16 " Color TFT Display with High visibility and highly visible alarm light mounted on the Anesthesia Workstation	Around 15-19" Color TFT Display with High visibility and highly visible alarm light mounted on the Anaesthesia Workstation
Display: Accessories -	Accessories - Standard use for ECG (2 in no.), SpO2 probes (2 each for adult & pediatric). NIBP(2 cuffs each for adult and pediatric & I for neonate), Temperature probes (1 for core and 1 for skin), IBP cables (2 in no with 10 pressure transducers and their one holder), EtCO2- 5 filter assemblies and 10 tubings, for anaesthesia gas monitoring, depth of anaesthesia monitoring(with 25 disposable leads),NM Monitoring cables Recorder option for printing the up to 4 waveforms and alphanumeric data, and trends etc .	Accessories - Standard use for ECG (2 in no.), SpO2 probes (2 each for adult & pediatric). NIBP(2 cuffs each for adult and pediatric & I for neonate), Temperature probes (1 for core and 1 for skin), IBP cables (2 in no with 10 pressure transducers and their one holder), EtCO2- 5 filter assemblies and 10 tubings, for anaesthesia gas monitoring, depth of anaesthesia monitoring(with 25 disposable leads),NM Monitoring cables Recorder option for printing the up to 3 or 4 waveforms and alphanumeric data, and trends etc .
Following upgrades should be offered as options Point no.1 & 4	Mainstream EtCO2 monitoring should be possible Facility for Microstream EtCO2 with dedicated accessories for Adult, Paediatric & Neonates (25 each)	Facility for standalone Mainstream/side stream/Microstream EtCO2 monitoring with dedicated accessories should be possible. For Mainstream sensor two sets of EtCO2 accessories for Adult, Paediatric & Neonates (25 each) should be provided.
2 DEFIBRILLATOR		
Point no. 3.1	Should be a Low Energy Biphasic defibrillator monitor with Recorder, having capability to arrest all arrhythmia within a maximum energy of 200 Joules in Manual mode & for AED mode upto 150J	Should be a Low Energy Biphasic defibrillator monitor with Recorder, having capability to arrest all arrhythmia within a maximum energy of 360 Joules in Manual mode & for AED mode up to 150J
3 MULTIPARAMETER MONITOR WITH CENTRAL MONITORING STATION		
MULTI PARAMETER MONITOR Point no. 33	Should have European CE or US FDA certifications.	Should have European CE and US FDA certifications.
Central Monitoring Station for Multi Para Monitor Point no. 10	All system should have European CE and or US FDA certifications	All system should have European CE and US FDA certifications
4 PULSE OXIMETER		
Point no. 1	Should have plethismographic wave form with numeric display for SPO2 and Heart rate on LCD/TFT display.	Should have plethismographic wave form with numeric display for SPO2 and Heart rate on approx 8 inch LCD/TFT display.
5 Portable X-Ray Machine		
Generator:- Point no. 2	Voltage output: 40 to 120 kV	Voltage output: 40 to 100 kV

Group -L: Hematology		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
<u>1. DECA-HEAD MICROSCOPE</u>		
MICROSCOPE BODY	Infinity corrected APOCHROMATIC Optical System Trinocular (three step light path divider) Research Upright anti-fungal treated Microscope with highly ergonomic Design for user comfort.	Infinity corrected APOCHROMATIC Optical System Trinocular (two/three step light path divider) Research Upright anti-fungal treated Microscope with highly ergonomic Design for user comfort.
ILLUMINATOR:	Koehler Illumination of 14 watt high power LED (Minimum 50,000 hrs) / 12V 100W Halogen Transmitted light illumination with 10 Spare Bulbs, Light Intensity LED indicator and light preset switch for photography. Illuminator should be suitable for Indian voltage and intensity should be continuously adjustable. We prefer 12V 100W Halogen illumination.	Koehler Illumination of 10 watt high power LED or more (Minimum 50,000 hrs). We prefer both LED & Halogen.
TRINOCULAR TUBE:	Field No. 25mm or better, Three position prism Trinocular tube, 100% light for viewing, 20% - 80% viewing & photography, 100% light for photography.	FOV 23mm or more, two or more position prism Trinocular tube (100;0, 0;100, 80;20) / (100;0/0:100)
EYEPEICE:	Paired eyepiece 10X magnification with Wide Field F.N 25mm or better, Focusable / diopter adjustment +/- 5 on both eyepiece or Better.	FOV 23mm or better with 10 x eyepiece.
NOSEPIECE:	Interchangeable reversed turret type of 7 position nosepiece.	Six or more position nosepiece.
OBJECTIVE:	PLAN ACHROMAT 2X/0.06, WD 7.0mm or better PLAN ACHROMAT 4X/0.10, WD 30.0mm or better PLAN ACHROMAT 10X/0.25, WD 10.0mm or better PLAN ACHROMAT 20X/0.40, WD 1.0mm or better PLAN FLUOR 40X/0.75, spring loaded PLAN APOCHROMAT / SUPER APO 100X / 1.40 oil spring loaded Higher NA is accepted	PLAN ACHROMAT 2X/0.06, or 2.5x/0.07 PLAN ACHROMAT 4X/0.10, or 5x/0.15 WD 12 mm or better.
Condenser:	Swing out Achromat condenser (N.A 0.90/ 0.22), suitable for 2x - 100x	Swing out Achromat condenser (N.A 0.90/ 0.22), suitable for 2x /2.5 x- 100x
Teaching Attachment:	Should have teaching head for ten persons (1+9) including main observer, binocular tube with 25mm F.O.V along with paired eyepiece 10X magnification, 25mm F.O.V, diopter adjustment +/- 5 on both eyepiece. Should have LED arrow pointer with intensity adjustment feature & having arrow pointer two color selection option with 360 degree rotation feature.	Should have teaching head for ten persons (1+9) including main observer, binocular tube with 23mm F.O.V or more along with paired eyepiece 10X magnification, 23mm F.O.V , diopter adjustment +/- 5 on both eyepiece. Should have LED arrow pointer with intensity adjustment feature & having arrow pointer two or more color selection option with 360 degree rotation feature.
High Resolution Camera & Software:	Scientific grade High resolution CMOS / CCD color camera of Chip size (for CMOS: 34 X 22mm) / (for CCD: 2/3") or higher, resolution of at-least 15 MP or more, 30-40 frame per second live display at 1 k X 1K resolution, pixel size 6 x 6 micrometer, Live cell imaging with binning feature. Camera should be capable to capture BF/PH/ weak Fluorescence/ DIC/ polarizing /dark field images with good quality projection compatibility without blurring the image quality. Microscope, camera and imaging software should be from same manufacturer. No Memory card slot kind camera accepted. Image display and image data save on computer. USB 3.0 PC connection.	Scientific grade High resolution CMOS / CCD color camera of CMOS chip size (7.1 mm x 4.0 mm) or higher, resolution of at- least 8 MP or more.

Point No. 15	Microscope should be upgradable in motorized feature, 130 watt mercury fluorescence attachment and DIC application as required. Microscope, optics, camera and software should be from same manufacturer for better compatibility & upgradability	Microscope should be upgradable in motorized feature, 120 watt mercury fluorescence attachment and DIC application as required.
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Note:

1. All other specification, terms and conditions of the original tender documents shall remain unchanged.
2. This amendment shall be part of the tender document and become effective immediately is supersession to the earlier corresponding version.

The document also can be downloaded from www.eproc.bihar.govt.in and the IGIMS website www.igims.org.



**Director,
IGIMS - Patna.**