

**INDIRA GANDHI INSTITUTE OF MEDICAL SCIENCES,**  
**SHEIKHPURA, PATNA – 800 014 (Bihar, India)**  
**Tel.: 0612 – 2297631, 2297099; Fax: 0612 – 2297225; Website: [www.igims.org](http://www.igims.org);**  
**E-Mail: [director@igims.org](mailto:director@igims.org)**

Ref. No.: IGIMS/ 2020/ 666 / Store

Date: 08/10/2020

E-Tender Notice No: 07/2020- 2021/Bio-Medical Equipment/IGIMS/Store

**CORRIGENDUM**

Amendment Notice to the Tender Document bearing E-Tender Notice No. **07/2020-21/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:**

<b>Group A – Neurosurgery</b>		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
<b>1. High End Operating Microscope</b>		
<b>Point No 2. Focusing system</b>	Varioskop, aprochromatic 200-500 mm working range	<b>Variable working distance</b> , aprochromatic 200-500 mm <b>or better</b> working range
<b>Point No 2. Tubes and cobservation</b>	Eye piece 10x or 12.5 x magnetic wide field eyepiece with integrated eye cups for main surgeon Binocular tube with dioptre correction of +5D to -5D	Eye piece 10x or 12.5 x wide field eyepiece with integrated eye cups for main surgeon Binocular tube with dioptre correction of +5D to -5D
	Eye piece 10 x or 12.5 x magnetic wide field eyepiece with integrated eye cups,for face to face attachment with dioptre correction of +5D to -5D	Eye piece 10 x or 12.5 x wide field eyepiece with integrated eye cups,for face to face attachment with dioptre correction of +5D to -5D
	Symmetrically configured face to face attachment would be preffered	To be deleted
	Stereo co observation tube remains fixed with tilting of Microscope Head. Stereo coobservation with minimum two joints for complete 360 deg rotation with straight Binocular tube with Diopter setting and IPD adjustment	Stereo coobservation with minimum two joints for complete 360 deg rotation with straight Binocular tube with Diopter setting and IPD adjustment
<b>Point No.4 System operation</b>	Central user interface , single windows operation means all the systems like microscope , Camera & Fluorescence work from there.	Central user interface
	XY robotic movement in 3 axes (variable speed)	XY movement in 3 axes (variable speed)
<b>Point No.7 Illumination system</b>	Integrated two ways illumination brightens shadows.	Integrated two ways illumination <b>or similar technology</b> to brightens shadows.
	Focus light link- working distance controlled light intensity.	Focus light link <b>or similar technology</b> - working distance controlled light intensity.
<b>Point No.8 Intra operative Fluorescence</b>	The quoted model should be capable of getting it upgraded to tumor Fluorescence attachment in built system or better.	The quoted model should be <b>either equipped or</b> capable of getting it upgraded to tumor Fluorescence attachment ( <b>ICG vascular fluorescence or sodium tumor Fluorescence</b> ) in built system or better.
<b>2. Intra Operative Nerve Monitoring System</b>		
<b>Heading 1 Point No.10</b>	Should have two built-in pulse oximeter ports.	Should have built-in pulse oximeter ports.

<b>Heading 1 Point No.13</b>	Secondary windows should have 2 DVR feeds, 2 timers and should allow the user to change the color of the traces.	Secondary windows should have DVR feeds, timers and should allow the user to change the color of the traces.
<b>Heading 2 Point No.04</b>	Fully surgeon controllable from the sterile field with the help of surgeon controlled probe having buttons to give access to system parameters and test modalities.	To be deleted
<b>Heading 2 Point No.05</b>	Probe should allow the surgeon to select the modality, adjust the current and deliver the stimulus directly from the sterile field.	To be deleted
<b>Heading 2 Point No.06</b>	Probe's multicolor LED indicated test results.	To be deleted
<b>5. Microsurgical Instruments</b>		
	<b>Add on</b>	<b>Unit price of each item to be quoted individually.</b>
<b>8. Neuroendoscope System</b>		
<b>4K UHD Camera System</b>		
<b>4K Camera System Point No.03</b>	System should have facility to offer various visualization modes for surgery and diagnosis by shifting the color spectrum ke BLUE & GREEN light for recognition of the finest tissue Structures and their differentiation. Picture in Picture of visualization modes.	System should have facility to offer various visualization modes for surgery and diagnosis by shifting the color spectrum ke <b>BLUE / GREEN/ NIR light</b> for recognition of the finest tissue Structures and their differentiation. Picture in Picture of visualization modes.
<b>Technical Specifications: Point No.03</b>	Lens: Integrated Zoom Lens f = 18 mm	Lens: Integrated Zoom Lens <b>f = 18-20 mm</b>
<b>Technical Specifications: Point No.06</b>	Video output: 1 Display Port 1.2 1 x DVI-D output, 1x 12G-SDI output, 3x camera input for communication with compatible camera modules, LAN connection, 4 x USB connection (2 x front, 2 x back).	Video output: 1 Display Port 1.2 1 x DVI-D output, 1x 12G-SDI output, 3x camera input for communication/ <b>HDMI</b> with compatible camera modules, LAN connection, 4 x USB connection (2 x front, 2 x back).
<b>Technical Specifications: Point No.07</b>	Input: Keyboard input for character generator.	<b>Optional</b>
<b>55 Inch 4K Monitor or more Point No.03</b>	Screen Diagonal: 31.1"	Screen Diagonal: <b>57" minimum</b>
<b>55 Inch 4K Monitor or more Point No.07</b>	Inputs: 1x DP 1.2, 2XDVI-D, 4x3G-SDI / 1X 12G SDI	Inputs: 1x DP 1.2, 2XDVI-D, 4x3G-SDI / 1X 12G SDI / <b>HDMI Output</b>
<b>Power LED with Fiber optic cable Point No.06</b>	Lamp life of approx. 30,000 hrs	To be deleted
<b>Image/Video Recording And Data Archiving System Point No.04</b>	Internal memory 2 TB	Internal memory 1 TB minimum
<b>10. Operating Table for Neuro Surgery</b>		
<b>Point No.04</b>	Should have a powered longitudinal slide for 400-600mm.	Should have a powered longitudinal slide for <b>300 mm or more.</b>
<b>Point No.06</b>	Should have a top that can be adjusted from 50-100 cm height.	Should have a top that can be adjusted from <b>52-100 cm</b> height.
<b>Point No.09</b>	Should have a table top which can rotate towards the right and left by 20-30 deg each.	Should have a table top which can <b>rotate or tilt</b> towards the right and left by 20-30 deg each.
<b>Point No.10</b>	Should have headboard break 100, up, 850 down with manual and electrohydraulic operation.	Should have headboard break <b>90° up, 50° down</b> with manual and electrohydraulic operation.
<b>System Configuration Accessories, spares and consumables</b>		
<b>3 Accessories for Neurosurgery</b>	Mayfield Skull Clamp with necessary adapter, Attachment frame for positioning the patient in sitting position.	<b>Mayfield / Doro</b> Skull Clamp with necessary adapter, Attachment frame for positioning the patient in sitting position.

<b>Group B- ENT</b>		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
<b>1. SPECIFICATIONS FOR 4K ULTRA HIGH DEFINITION IMAGING SYSTEM</b>		
<b>Point No.1 Full 4K High Definition Video Image processor</b>	A full 4K high definition processor should have native resolution of 4096x2160 pixels or above.	A full 4K high definition processor should have native resolution of <b>3840x2160</b> pixels or above.
<b>Point No.1 Full 4K High Definition Video Image processor</b>	It should have Touch panel operation for easy control.	It should have Touch panel operation for easy control <b>or control from camera head and key board.</b>
<b>Point No.1 Full 4K High Definition Video Image processor</b>	Should have AE (Automatic Exposure) – Iris function.	Should have AE (Automatic Exposure)
<b>Point No.2 Powerful 300W Xenon Light Source</b>	Built-in special filter for early cancer detection	Built-in special filter for early cancer detection <b>or same feature from processor to be provided.</b>
<b>Point No.2 Powerful 300W Xenon Light Source</b>	Automatic switching to emergency lamp	<b>To be deleted</b>
<b>Point No.3 Full 4K Camera head</b>	Should have Xmor-R CMOS sensor providing high sensitivity and Less noise for clear image	Should have <b>CMOS</b> sensor providing high sensitivity and Less noise for clear image
<b>Point No.3 Full 4K Camera head</b>	Should provide One-touch Auto Focus Function	Should provide One-touch Auto Focus Function <b>or Focusing should be available.</b>
<b>Point No.3 Full 4K Camera head</b>	Should have Focal Length f=23.5 mm	Should have Focal Length f=18 mm or more
<b>Point No.7 Recording System:</b>	<b>Recording System:</b>	<b>4 K Recording System (same manufacturer)</b>
<b>2 HF Electrocautery Combined Unipolar and Bipolar with Smoke Evacuation System with Standard Accessories</b>		
<b>Item 2.</b>	<b>(HF Electrocautery Combined Unipolar and Bipolar with Smoke Evacuation System with Standard Accessories)</b>	<b>(HF Electrocautery Combined Unipolar and Bipolar with Standard Accessories)</b>
<b>Point No.9</b>	System should have Two Monopolar output socket, One Bipolar Output Socket & Two Neutral sockets (single use & reusable) & Voltage and power regulation in a single system for better coagulation.	System should have Two Monopolar output socket, One Bipolar Output Socket & <b>one or more</b> Neutral sockets (single use & reusable) & Voltage and power regulation in a single system for better coagulation.
<b>Point No.14</b>	If required unit should have the option of integrating extra socket modules. Physical demonstration of additional socket is mandatory.	If required unit should have the option of integrating extra socket modules. Physical demonstration of additional socket is mandatory. <b>(Unit should be software upgradable)</b>
<b>Smoke Evacuation</b>	<ol style="list-style-type: none"> <li>1. The system should be able to extract and filter smoke and aerosol- laden air during surgical procedures.</li> <li>2. The system should be able to filter COVID -19 like viruses and other microorganism present in surgical smoke generated during the procedure.</li> <li>3. The system should have a functional 5.7 inches touch screen display for better visibility&amp; ease of control.</li> <li>4. The system display should be able to show settings, operating modes, filter run-time and information messages for the user.</li> </ol>	<b>To be deleted</b>

	<ol style="list-style-type: none"> <li>5. The System should have Bi-Turbo technology for effective filtration.</li> <li>6. The system should have ULPA-15 filter (5 stage filter protection) and active carbon filters.</li> <li>7. The system should have ability to remove 99.9995% of all 0.1µm particles.</li> <li>8. The system filter should have maximum output of 730 l/min.</li> <li>9. The system should have the ability to give a notification when volume flow of more than 300l/min is reached.</li> <li>10. The system filter should be able to change when the unit is in ON as well as OFF condition.</li> <li>11. The system should have ability to be used along with any electrosurgical unit, Laser and ultrasound devices.</li> <li>12. The system should have automatic activation feature, no need of any additional footswitch for activation during monopolar electrosurgical applications.</li> <li>13. The system should have option of turning suction ON and OFF on the screen itself for ease of use.</li> <li>14. The system should have minimum 20 error list than can be displayed.</li> <li>15. The system should display error if filter is not inserted to prevent damage.</li> <li>16. The system should be able to used in vertical as well as horizontal way as per user needs.</li> <li>17. The system should have the ability to be fixed on the ceiling units (OT pendants).</li> <li>18. The system should have the ability to be used with 2 instruments at the same time.</li> <li>19. The system noise development at 100% evacuation should be <math>\leq 59</math> dB.</li> <li>20. The system should be able to used in open as well as lap surgical procedures.</li> <li>21. The system should have sound insulation cladding, integrated ducts and airborne sound absorbers for noise insulation.</li> <li>22. The user should be able to set critical features like - suction efficiency, standby suction efficiency as well as standby suction time in both lap and open surgery modes.</li> </ol>	
--	--	--

	<p>23. The system should have footswitch activation facility for laser and ultrasonic uses during procedure.</p> <p>24. The system should be provided with self-sealing water trap to protect the main filter cartridge from liquids.</p> <p>25. The system should be &lt; 10kgs.</p> <p>26. Service life of the unit filter should be for:</p> <p><b>OPEN SURGERIES</b></p> <ul style="list-style-type: none"> <li>• 40 hrs at 30% evacuation</li> <li>• 32 hrs at 60% evacuation</li> <li>• 25 hrs at 100% evacuation</li> </ul> <p><b>Endoscopic Surgeries</b></p> <ul style="list-style-type: none"> <li>• 80 hrs at 30% evacuation</li> <li>• 60 hrs at 60% evacuation</li> <li>• 25 hrs at 100% evacuations</li> </ul>	
<b>3 ENT Work Station:</b>		
<b>ENT PATIENT EXAMINATION CHAIR</b>	<p>Min. seat height: 53.5 cm</p> <p>Max. seat height: 69.5 cm</p>	<p>Min. seat height: 53-55 cm</p> <p>Max. seat height: 70-75 cm</p>
<b>4 CO<sub>2</sub> LASER FREE BEAM AND FIBER WITH SCANNER AND ACCESSORIES FOR ENT SURGERIES</b>		
<b>Point No.2</b>	<b>It should have in between 50-60 watts power.</b>	<b>It should have in between 40 watts power and above.</b>
<b>Point No.31</b>	It should have a power transmission of greater than 90%, with unlimited power input.	It should have a power transmission of greater than 70%, with unlimited power input.
<b>10 Video Nystagmography systems with HIT (video head Impulse test)</b>		
<b>Air Irrigator: Point no. 1</b>	Air irrigation system air Flow should be 5L/min.	Air irrigation system air Flow should be 5-8 L/min.
<b>Terms Point no. 4</b>	FDA USA/ European CE Certificate	US FDA / CE / ISO 13485 Certificate
<b>11 TECHNICAL SPECIFICATIONS OF HEARING AIDS</b>		
<b>Point no. vi</b>	The Hearing Aid should be CE (European certification)/US FDA approved.	The Hearing Aid should be CE (European certification)/US FDA/ BIS 16127: 2013 approved.
<b>Note</b>	Add on	<b>L1 will be decided on the maximum rebate provided to the Institute on MRP of individual bidder</b>

**Group-C: Dentistry**

<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>2. DENTAL OPERATING MICROSCOPE FOR ENDODONTICS</b>		
<b>Point no. 7</b>	Add on	<b>Color graphic touch screen control panel for control/ change all microscope parameters</b>
<b>Point no. 8</b>	Microscope should have facility of Stereo co-observation /assistant Scope with Minimum two joints for 360 degree movements. Should be provided with Tilttable/straight Binocular Tube with 12.5x magnetic wide field eyepiece with integrated eye cups for main surgeon Binocular tube with diopter correction of + 5D to -8D	Microscope should have facility of Stereo co-observation /assistant Scope with Minimum two joints for 360 degree movements. Should be provided with Tilttable/straight Binocular Tube with 12.5x wide field eyepiece with integrated eye cups for main surgeon Binocular tube with diopter correction of + 5D to <b>-5D</b>
<b>Point no. 16</b>	Endodontic microscope with latest and advance technology will be preferred.	<b>To be deleted</b>
<b>Point no. 17</b>	It is desirable that the manufacture should have local office in Patna for quick service.	<b>To be deleted</b>

**Group-E: Trauma & Emergency**

Description	Specifications mentioned in the Bidding Document	Should be read as follows:
<b>2. Bronchoscope</b>		
1 Full HD Video Processor with Light source	Should be a Compact Processor, inbuilt long life LED light source, having light weight.	Should be a Compact Processor, inbuilt long life LED light source, having light weight. or Should be a Compact Processor, inbuilt 150 watt or more Xenon light source, having light weight.
1 Full HD Video Processor with Light source	Should be able to provide 16:9 and 16:10 output for a HDTV monitor	Should be able to provide 16:9 and 16:10 output for a HDTV monitor or Should be able to provide 16:9 and 16:10 output for a HD Medical Grade monitor
1 Full HD Video Processor with Light source	Should be equipped with real time optical Image enhancement technology for detailed	Should be equipped with real time optical Image enhancement technology for detailed or Should be equipped with real time optical / Digital Image enhancement technology for detailed
1 Full HD Video Processor with Light source	Should have automatic white balance and IRIS control.	Should have automatic/ Manual white balance and IRIS control.
1 Full HD Video Processor with Light source	Should be having both HD-SDI and DVI outputs.	Should be having both HD-SDI /DVI outputs( Any two outputs).
3 Video bronchoscope:	Distal end outer diameter : 4.8mm or less	Distal end outer diameter : 5.5mm or less
3 Video bronchoscope:	Insertion tube diameter: 4.9mm or less	Insertion tube diameter: 5.2 mm or less
3 Video bronchoscope:	Compatible with leakage testing device with its air flow and pressure regulation through light source air pump.	Compatible with leakage testing device with its air flow and pressure regulation through light source air pump/ Manual Leakage testing.
<b>3. Minimally invasive Cardiac Output Monitor</b>		
Point no. 1	1 It should be a touch screen with active area of 10.4 inch	1 It should be a touch screen with active area of 10.4 inch / more
<b>5 Feeding Pump for ICU</b>		
Point no. 13	Should have European CE and valid ISO certificate.	Should have valid USFDA/ European CE and ISO certificate
Point no. 15	Add on	<b>System should have both feeding and flusing facility.</b>

<b>Group -F: General Medicine</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>6: Colnoscope &amp; Upper &amp; lower GI Video Endoscope</b>		
<b>Technical specification of light source; Point no. 2</b>	Emergency Halogens lamp 100-150 W having life of approx 100 hours ( 3W LED)	Emergency Halogens lamp <b>35-150 W</b> having life of <b>100 -500 hours</b> .
<b>Monitor; Point no. 2</b>	Medical grade high definition flat panelLCD/LED colour monitor of size 17 inches with full screen picture capability	<b>Should have 21” Medical grade Monitor with full screen picture capability.</b>
<b>Technical specification of U G.I Video Endoscope Point no. 9</b>	Specify the list of accessories supplied with upper GI video – endoscope Biopsy forceps ty. 20 pcs	- <b>Biopsy Forceps Upper G.I. -20 Pcs.</b> - <b>Biopsy Forceps Lower G.I. -10 Pcs.</b>

<b>Group -G: Nephrology &amp; KTU</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>1 Automatic External Defibrillator</b>		
<b>Point No.04</b>	The unit charging time should be <b>&lt;= 5 second to 200 Joules &amp; &lt; = 8 seconds to 360 joules</b> 1-2-3 step guidance for fast and safety defibrillation	The unit charging time should be approx <b>&lt;= 5 second to 200 Joules &amp; &lt; = 8 seconds to 360 joules</b> 1-2-3 step guidance for fast and safety defibrillation
<b>2 Reverse Osmosis Plant- 2000 Lph Capacity</b>		
<b>2 R O unit main treatment Point No.xxxiv</b>	Emergency operation (optional) in case of electronic failure which may support yield o/p as 50 %	Should have Emergency operation mode (i.e. in case of electronic failure permeate supply be still possible with conductivity monitoring)
<b>4 Computarised Hemodialysis Machine</b>		
<b>Point No. 07</b>	Machine should have blood Volume monitoring system	<b>To be deleted</b>

<b>Group -H: Urology</b>		
Description	Specifications mentioned in the Bidding Document	Should be read as follows:
<b>3(b): Standard Nephroscope</b>		
<b>Point No. 7</b>	Metal or Teflon 9-30 fr. Dilators set	Metal or Teflon <b>9-24</b> fr. Dilators set
<b>Point No. 19</b>	Initial puncture needle - 2 part and 3 part	Initial puncture needle - 2 part <b>or</b> 3 part
<b>6(b): HOLMIUM LASERS 120 WATTS :</b>		
<b>Tissue Morcellator should include: Point No. 3</b>	One Inverted Hand Piece	One Inverted or regular Hand Piece
<b>Laser Resectoscope Continuous flow with Morcelloscope consisting of following: Point No.02</b>	Cystoscope 22-23fr.	Cystoscope 22-23fr- <b>Laser Resectoscope Sheath</b>
<b>7(a): 4K ENDOVISION SET</b>		
<b>4K CAMERA Set or 3 Chip CMOS 4 K Camera system Point No. 4</b>	Picture in Picture of visualization modes.	<b>To be deleted</b>
Technical Specifications: <b>Point No. 5</b>	Control buttons: 3 (2 of them freely programmable).	Control buttons: Minimum 3 (Minimum 2 of them freely programmable).
Technical Specifications: <b>Point No. 6</b>	Video output: 1 Display Port 1.2 ,1 x DVI-D output, 1 x 12G-SDI output	Video output: 1 Display Port 1.2 ,1 x DVI-D output, 1 x 12G-SDI/ <b>HDMI</b> output
Technical Specifications: <b>Point No. 7</b>	Input: Keyboard input for character generator.	<b>Optional</b>
<b>50-60 Inch 4K Monitor or more Point No. 7</b>	Outputs: 1 x DVI-D , 12GSDI	Outputs: 1 x DVI-D <b>or</b> 12GSDI
<b>Image/Video recording and data archiving system Point No. 7</b>	System Should be capable for generating the reports and connect with the external printer.	<b>Optional</b>
<b>Note</b>	All the Above Equipment's are to be supplied by the same manufacturer.	All the Above Equipment's <b>should be manufactured or marketed by same company and USFDA &amp; CE approved</b>
<b>ELECTRONIC CO<sub>2</sub> Insufflator Point No. 2</b>	pressure up to maximum 15 mmhg and flow range up to maximum 15l/min.	pressure up to maximum <b>15-20</b> mmhg and flow range up to maximum 15l/min.
<b>ELECTRONIC CO<sub>2</sub> Insufflator Point No. 3</b>	High flow mode with flow performance up to 50 litre/min or more.	High flow mode with flow performance up to <b>45</b> litre/min or more.
<b>B. LAPAROSCOPY HAND INSTRUEMNTS</b>		
<b>Point No. 2 (i)</b>	Trocar Cannula 10-11 mm diameter with thread and rotating insufflations should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. The working length of the cannula should be 100mm	Trocar Cannula 10-11 mm diameter with thread and rotating insufflations should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. The working length of the cannula should be <b>100mm minimum</b>
<b>Point No. 2 (ii)</b>	Trocar Cannula 10- 11 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 gas. The working length of the cannula should be 100mm	Trocar Cannula 10- 11 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 gas. The working length of the cannula should be <b>100mm minimum</b>
<b>Point No. 3</b>	Trocar Cannula 5-5.5 diameter with thread and rotating insufflations. Should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. it should have stopcock for CO2 insufflation. The working length of the cannula should be 100mm	Trocar Cannula 5-5.5 diameter with thread and rotating insufflations. Should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. it should have stopcock for CO2 insufflation. The working length of the cannula should be <b>100mm minimum</b>

<b>Point No. 4</b>	Trocar Cannula 5-5.5 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be 100mm	Trocar Cannula 5-5.5 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be <b>100mm minimum</b>
<b>Point No. 5</b>	Trocar, pyramidal tip, diam. 10 mm working length 100 mm compatible to cannula	Trocar, pyramidal tip, diam. 10 mm working length <b>100 mm minimum</b> compatible to cannula
<b>Point No. 6</b>	Trocar with blunt tip, diam. 10 mm working length 100 mm compatible to cannula	Trocar with blunt tip, diam. 10 mm working length <b>100 mm minimum</b> compatible to cannula
<b>Point No. 7</b>	Trocar, pyramidal tip tip 5 mm ,length 100 mm compatible to cannula	Trocar, pyramidal tip tip 5 mm ,length <b>100 mm minimum</b> compatible to cannula
<b>Point No. 10</b>	Three piece laparoscopic autoclavable Maryland dissecting and Grasping Forceps. 360 degree rotational sheath, with connector pin for unipolar coagulation size 5 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button.	<b>To be deleted</b>
<b>Point No. 11</b>	Three piece laparoscopic automatic autoclavable double window curved Grasping forceps 360 degree rotational sheath, size 5mm length 33-36cm. single action jaws ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of button.	<b>To be deleted</b>
<b>Point No. 12</b>	Three piece laparoscopic automatic autoclavable Grasping forceps DeBakey 360 degree rotational sheath, size 5mm length 33-36cm. curved double action jaws ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores can be dismantled with the press of button.	<b>To be deleted</b>
	<b>All above items should be USFDA/European CE</b>	<b>All above items should be USFDA &amp; European CE</b>
<b>7(b): 4 K with 3D Endovision System</b>		
<b>B. LAPAROSCOPY HAND INSTRUMENTS</b>		
<b>Point No. 3</b>	Trocar Cannula 5-5.5 diameter with thread and rotating insufflations. Should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. it should have stopcock for CO2 insufflation. The working length of the cannula should be 100mm	Trocar Cannula <b>5-6</b> diameter with thread and rotating insufflations. Should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. it should have stopcock for CO2 insufflation. The working length of the cannula should be 100mm
<b>Point No. 4</b>	Trocar Cannula 5-5.5 mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be 100mm	Trocar Cannula <b>5-6</b> mm diameter: should have multifunctional valve to prevent damage of sharp instruments and tip lens while passing through the cannula valve. It should have stopcock for CO2 insufflation. Trocar should have pyramidal tip with pin holes near the tip for safety outlet of CO2 gas. The working length of the cannula should be 100mm
<b>Point No. 5</b>	Trocar, pyramidal tip, diam. 10 mm working length 100 mm compatible to cannula	Trocar, pyramidal tip, diam. <b>10 -11</b> mm working length 100 mm compatible to cannula
<b>Point No. 6</b>	Trocar with blunt tip, diam. 10 mm working length 100 mm compatible to cannula	Trocar with blunt tip, diam. <b>10 -11</b> mm working length 100 mm compatible to cannula

<b>Point No. 7</b>	Trocar, pyramidal tip tip 5 mm ,length 100 mm compatible to cannula	Trocar, pyramidal tip tip <b>5-6</b> mm ,length 100 mm compatible to cannula
<b>Point No. 8</b>	Trocar with blunt tip, diam. 5 mm working length 100 mm compatible to cannula	Trocar with blunt tip, diam. <b>5-6</b> mm working length 100 mm compatible to cannula
<b>Point No. 15</b>	Three piece laparoscopic autoclavable Right angled Dissection and Grasping Forceps, double action jaws fenestrated, 360 degree rotational sheath, size 10 mm, length 33-36 cm long double action jaws. Ergonomic plastic handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button	Three piece laparoscopic autoclavable Right angled Dissection and Grasping Forceps, double action jaws fenestrated, 360 degree rotational sheath, size 10 mm, length 33-36 cm long double action jaws. Ergonomic <b>plastic or metal</b> handle with plastic finger rings with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button
<b>Point No. 16</b>	Three piece laparoscopic autoclavable claw Grasping forceps with ratchet 2x3 teeth, 360 degree rotational sheath size 10mm length 36 cm long single action jaws, with ergonomic plastic handle can be dismantled with the press of a button	Three piece laparoscopic autoclavable claw Grasping forceps with ratchet 2x3 teeth, 360 degree rotational sheath size 10mm length 36 cm long single action jaws, with ergonomic <b>plastic or metal</b> handle can be dismantled with the press of a button
<b>Point No. 28</b>	Three piece laparoscopic autoclavable spoon forceps, 360 degree rotational sheath, without connector pin for unipolar coagulation size 10 mm. length 33-36 cm double action jaws, with ergonomic plastic handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button	Three piece laparoscopic autoclavable spoon forceps, 360 degree rotational sheath, without connector pin for unipolar coagulation size 10 mm. length 33-36 cm <b>Single action or double action</b> jaws, with ergonomic <b>plastic or metal</b> handle with larger contact area at the finger ring to avoid pressure sores, can be dismantled with the press of a button
<b>Point No. 41</b>	Fascial Closure Instrument for subcutaneous ligature of trocar incisions, size 2.0 mm,	Fascial Closure Instrument for subcutaneous ligature of trocar incisions, size <b>2-3</b> mm.
<b>Point No. 43</b>	Retrieval of foreign body/stones forceps, 10 mm without ratchet length 31-33cm, dismantlable into handle, insert & outer tube	Retrieval of foreign body/stones forceps, 10 mm without ratchet length <b>31-36 cm</b> , dismantlable into handle, insert & outer tube
<b>Point No. 44</b>	Fan shaped retractor-Rotating, 5mm, WL 31-33cm , dismantling facility	Fan shaped retractor-Rotating, 5mm, WL <b>31-36</b> cm , dismantling facility
<b>8: Urodynamics</b>		
<b>Technical Specification of Advance Integrated Video Urodynamic System</b>		
<b>Point No.1(iii)</b>	Connectivity to Hospital information system and DICOM work-list & DICOM storage	<b>To be deleted</b>
<b>Point No.3</b>	Should have minimum 5-8 Configurable channels and should be able to display upto at least 10 channels. Should have 3 regular channel & two spare channel for profile applications like UPP & Anorectal manometry.	Should have minimum <b>6</b> Configurable channels and should be able to display upto at least <b>16</b> channels. Should have 3 regular channel & two spare channel for profile applications like UPP & Anorectal manometry.
<b>Point No.4</b>	Should be able to attach 3 Pressure Transducers, Radio frequency / Bluetooth based weight flow channel. Colour coded labels and cable (Vesicle, Abdominal and Urethral channels). Should have auto 80-100 mm Hg test/calibration button for checking the transducers. Fitted to bracket/clamp. Transducer should be reusable having pressure range(-50-350 mm Hg)	Should be able to attach 3 Pressure Transducers, Radio frequency / Bluetooth based weight flow channel. Colour coded labels and cable (Vesicle, Abdominal and Urethral channels). Should have auto 80-100 mm Hg test/calibration button <b>or through software</b> for checking the transducers. Fitted to bracket/clamp. Transducer should be reusable having pressure range(-50-350 mm Hg)
<b>Point No.5</b>	Should have Automatic Air Pump for profile applications like UPP & ARM. Should have integrated infusion Censor / Infusion transducer to check correct infused volume.	Should have Pump for profile applications like UPP & ARM. Should have integrated infusion Censor / Infusion transducer to check correct infused volume.

<b>Point No.7</b>	Should have infusion pump 4 roller or more, software control (start/stop & speed selection) Cystometry: Filling and Voiding	Should have infusion pump <b>8</b> or more, software control (start/stop & speed selection) Cystometry: Filling and Voiding
<b>Point No.8</b>	Should have facility to attach 2 Uroflow transducers. Should be supplied with one wired and wireless RF/Bluetooth/JIGBEE/XBEE Based Weight uroflow transducer with flow range of 0-50ml/sec, volume range up to 2000ml. Must have auto record and zero facility for Uroflowmeter. Should have auto artifact detection. It should be supplied with height adjustable commode chair one and height adjustable uroflow stand one. Should be supplied with security cover for Flow transducers to protect from water spillage.	<b>To be deleted</b>
<b>Point No.11</b>	Should have all in one PC with optical mouse, microphone & Speaker for EMG. Should be supplied with UPS of suitable rating for minimum 10Minute back up. Computer should run on Windows 10 or latest having 8GM RAM and 512 GB SSD / HDD with 1 TB External HDD & 1GB Graphic Card. Should be supplied with Color Laser Printer & UPS of suitable ratings with Minimum 30 Min back up.	Should have <b>Desktop Computer /PC</b> , microphone & Speaker for EMG. Should be supplied with UPS of suitable rating for minimum 10Minute back up. Computer should run on Windows 10 or latest having 8GM RAM and 512 GB SSD / HDD with 1 TB External HDD & 1GB Graphic Card. Should be supplied with Color Laser Printer & UPS of suitable ratings with Minimum 30 Min back up.
<b>Optional items</b>	<ul style="list-style-type: none"> <li>i) 4 Channel Anorectal Manometry</li> <li>ii) Ambulatory Urodynamics with reusable catheter having Live streaming facility and Leak Point detection</li> <li>iii) Near Infrared spectroscopy (NIRS) to establish co-relation with Uds Findings during foiding Cystometry</li> </ul>	<b>To be deleted</b>
<b>Optional items</b>	iv) UPP Puller with stand & software for doing Urethra pressure profilometry	<b>UPP Puller operated through PC by software to maneuver the pulling speed of catheter.</b>
<b>Point No.18</b>	- Dual Lumen Catheter for Cytometer 7/ 8 Fr. – 30 No Dual Lumen Catheter for Cystometry 5/6 Fr. – 10 Nos	Dual Lumen Catheter for Cytometer 7/ 8 Fr. – <b>50 Nos</b> Dual Lumen Catheter for Cystometry 5/6 Fr. – <b>20 Nos</b>
<b>Point No.18</b>	<b>Add on</b>	<ul style="list-style-type: none"> <li>- EMG Surface cable -5 nos.</li> <li>- EMG Needle Cable – 2 nos.</li> <li>- Needle electrode- 5 nos.</li> </ul>
<b>11: Electro Hydraulic Operation Table</b>		
<b>Operation theatre table : Point No.3 b.</b>	With remote control table top longitudinal sliding both cranially and caudially. The total sliding should be atleast 300 mm or better.Powered longitudinal sliding should be possible on both head side and leg side.	With remote control table top longitudinal sliding both cranially and caudially. The total sliding should be atleast <b>400</b> mm or better.Powered longitudinal sliding should be possible on both head side and leg side.
<b>Operation theatre table : Point No.5</b>	Should have manual Kidney bridge of 110 mm or more	Should have manual Kidney bridge of 110 mm <b>or more or the same facility can be achievable by break extension position.</b>
<b>Operation theatre table : Point No.13</b>	The mattress should be a pressure management pad mattress with at least 70- 80 mm thicknesses	The mattress should be a pressure management pad mattress with at least <b>50- 80</b> mm thicknesses
<b>Technical data : Point No.1</b>	Height adjustment minimum should be 650mm or less and maximum 1100 mm or more.	Height adjustment <b>range should be 660 mm-1050 mm</b>
<b>Technical data : Point No.2</b>	Side Tilt 20 degree or more	Side Tilt <b>20-25 degree</b> or more

<b>Technical data : Point No.6</b>	Extendable head rest 45 -60 degree up and 90 degree down.	<b>To be deleted</b>
<b>Technical data : Point No.7</b>	Tabletop Width (w/o Side Rails) should be more than 500mm.	Tabletop Width (w/o Side Rails) should be <b>500mm or more.</b>
<b>Technical data : Point No.9</b>	Powered longitudinal sliding – 300mm or more, should be possible both head side & leg side.	Powered longitudinal <b>should be sliding – 400mm or more, should be possible both 200mm towards leg side.</b>

<b>Group -I: Obstetrics &amp; Gynaecology</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b><u>LAPAROSCOPIC SURGERY SET ( with Harmonic ) and HYSTEROSCOPE&amp; RESECTOSCOPE</u></b>		
<b>3.3 INSUFFLATOR Point No. b</b>	Flow rate of 20-30 liters per minute	Flow rate of 20-50 liters per minute
<b>Point No. 3.9 (c)</b>	Camera control unit with three chip HD camera head having HD CCD chip of same aspect ratio of 16: 9 and camera control unit should be able to produce following video output: DVI – D 2 nos RGB- 1 no SDI- 1 no., S – VHS – 2 nos. composite Video- 1 no.	Camera control unit with three chip HD camera head having HD CCD chip of same aspect ratio of 16: 9 and camera control unit should be able to produce following video output: <b>2* DVI and 1* 3 G- SDI</b>
<b>Point No. 3.9 (o)</b>	Video outputs composite to BNC, Y/C to S-VHS, RGB to D socket, HDTV – DVI- D, DV for recording Input key board for character Generator, 5 pole Din	Video outputs <b>2* DVI, 1* 3 G –SDI and 4* USB</b> for recording Input key board for character Generator, 5 pole Din
<b>Point No. 3.10 (c)</b>	26” High resolution HD video Medical grade Monitor – 2 nos	<b>26” or more</b> High resolution HD video Medical grade Monitor – 2 nos
<b>Point No. 3.10 (d)</b>	Resolution :1920 x 1200 pixels	Resolution :1920 x 1080 pixels
<b>Point No. 3.10 (k)</b>	Luminance: 500 cd / m2 contrast ratio: 800:1	Luminance: <b>900 cd / m2</b> contrast ratio: <b>1000:1</b>
<b>Point No. 4.3 A (a)</b>	Operating and contact – Hysteroscope Forward – Oblique Telescope 30 , enlarge view, magnification 1x, 60 x, diameter 4.0 mm , length 30 cm, autoclavable , fibre optic light transmission incorporated- 1 no,	Operating– Hysteroscope Forward – Oblique Telescope 30 , enlarge view, magnification 1x, <b>20 x</b> , diameter 4.0 mm , length 30 cm, autoclavable , fibre optic light transmission incorporated- 1 no,
<b>Point No. 4.3 B</b>	Diagnostic sheath with obturator 5 mm diameter for the above 4 mm Hysteroscope telescopes item (A), with luer lock adapter.	Diagnostic sheath <b>5.1 mm</b> diameter for the above 4 mm Hysteroscope telescopes item (A), with luer lock adapter.
<b>Point No. 4.3 C</b>	<b>Continuous irrigation:</b> Operative Hysteroscope sheath with obturator, outer and inner sheath for the above 4 mm mm hysteroscope telescope (item A) with channel for semi – rigid 5/8 Fr size instruments. Should have facility for self closing cases	<b>Continuous irrigation:</b> Operative Hysteroscope sheath, outer and inner sheath for the above 4 mm mm hysteroscope telescope (item A) with channel for semi – rigid 5/8 Fr size instruments. Should have facility for self closing cases
<b><u>2. LAPROSCOPIC SURGERY SET</u></b>		
<b>Point No.1</b>	Forward – Oblique tele-scope 30 deg enlarged 1 view diameter 6.5mm length 35 cm, autoclavable, fiber optic light transmission incorporated, color code ; red	Forward – Oblique tele-scope 30 deg enlarged 1 view diameter <b>10 mm length 31 cm</b> , autoclavable, fiber optic light transmission incorporated, color code ; red
<b>Point No.2</b>	Trocar , size 7mm color code: yellow, consisting of 1 trocar only with pyramidal tip cannula without valve, with insufflations stop-cock, length, 10.5 cm Automatic valve.	Trocar , size <b>7&amp; 11mm - 01 no. each</b> color code: yellow, consisting of 1 trocar only with pyramidal tip cannula without valve, with insufflations stop-cock, length, 10.5 cm Automatic valve.
<b><u>3: CARDIOTOGRAPHY (CTG) MACHINE FOR FETAL MONITORING – CORD LESS</u></b>		
<b>Point No.1</b>	Seven inches high tech color TFT screen with TLT adjustment up to 90 degrees , touch screen menu settings interface,	<b>Ten or more</b> inches high tech color TFT screen with TLT adjustment up to 90 degrees , touch screen menu settings interface,
<b><u>4. LED OT LIGHT:</u></b>		

<b>Point No.10</b>	Depth of illumination should be 100- 140 cms, or more for main & satellite dome.	Depth of illumination should be <b>80- 140 cms</b> , or more for main & satellite dome.
<b>Point No.11</b>	Illuminated field diameter should be approx . 20- 30 cms	Illuminated field diameter should be approx . <b>16- 30 cms</b>
<b><u>7: TECHNICAL SPECIFICATION OF ICU VENTILATOR</u></b>		
<b>Point No.8</b>	It should have External compressor (US-FDA) from same manufacturer.	It should have External compressor (US-FDA/ European CE) from same manufacturer.
<b><u>8: PORTABLE COLOUR DOPPLER ECHOCARDIOGRAPHY SYSTEM WITH TEE</u></b>		
<b>Transducer to be supplier as standard.</b>	<ol style="list-style-type: none"> <li>1-5 mhz multi- frequency broadband phased array transducer for adult cardiac , abdominal , fast imaging.</li> <li>4- 8 mhz phase array paediatric Echocardiography with PW &amp; CW facility.</li> <li>6-13 MHz multi frequency broadband linear array transducer for vascular, nerver imaging with less than 40 mm size for vascular access, small parts , vascular ,musculoske ; etalinterascalene, spraclavicular , Axiliary, Musculocuntaneous, popliteal , saphenous, Higher frequency will be preffered.</li> </ol>	<b>Optional</b>
<b>Transducer to be supplier as standard.</b>	Add on	2.5 mhz multi-frequency broadband curved array transducer for general purpose , abdominal , deep nerve access specilly celiac, scitic nerve, Epidural, sub gluteal & abdominal applications.
<b>Transducer to be supplier as standard.</b>	Add on	<b>8-5 MHz Curved for Obs &amp; Gyne applications.</b>
<b>Optional transducer:</b>	<ol style="list-style-type: none"> <li>8-3 Mhz Trans esophageal transducer for trans echocardiography applications.</li> <li>6- 13 MHz Linear ( hockey stick shaped)Musculoshletal Nerve superficial vascular venous 6 cm Depth (introperative USE)</li> </ol>	<b>To be deleted</b>
<b>Note</b>	Warranty : the unti Transducer and all accessories should bef covered with comprehensice onsite warranty for 5+5 years commencing from the date of issue of installation certificate.	<b>To be deleted</b>

**Group-L: Reproductive Medicine**

<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>2. Blastocyst culture incubation (multipurpose &amp; multi chamber) / Benchtop Incubator</b>		
<b>Point no. 03</b>	The dual chambers should have individual temperature control.	<b>To be deleted</b>
<b>Point no. 09</b>	Maximum power consumption: 140 VA	Maximum power consumption: 1150 Watts (approx.)
<b>Point no. 16</b>	Each chamber preferably must have a heated lid.	<b>To be deleted</b>
<b>Point no. 17</b>	Should have ultraviolet C decontamination of air stream	<b>To be deleted</b>
<b>Point no. 23</b>	Should provide computer with necessary software's.	Should provide computer with printer.

## Group -M: Radiology

Description	Specifications mentioned in the Bidding Document	Should be read as follows:
<b>4. Microwave ablation machine</b>		
<b>Generator</b>	9. Generator should have reflected microwave power monitoring system.	Optional
<b>Antenna:</b>	5. The vendor should supply at least _____10_____Nos. of antennas along with the equipment.  Rate contract for consumable items including antenna for five years will be mandatory.	Vendor will supply 10 antennas along with equipment. Unit price should be quoted. This unit price x 100 quantity will be added to price of machine and then will be calculated for L1. Rate contract of antenna is mandatory for next 10 yrs.
<b>Note</b>	Add on	<b>USFDA certification is needed if OEM is from outside India.</b>
<b>1. Digital Subtraction Angiography (DSA)</b>		
<b>Gantry:</b>	C arm angulation of minimum RAO/LAO +/- 120deg/100deg. System should have 45deg cranial and 45deg caudal angulation	C arm angulation of minimum RAO/LAO +/- <b>115deg</b> /100deg. System should have 45deg cranial and 45deg caudal angulation
<b>X-Ray Tube</b>	<b>Focal spote-1.0 mm or less and 3.0 mm or less</b>	Focal spot – Larger focal spot should be 1.0 mm or less and <b>smaller focal spot is 0.5 mm or less</b>
<b>Monitor / display</b>	The monitor in examination room should be ceiling suspended and should be possible to position it left or right of patient table. Two high grade monitor of at least 8 MP with PIP facility to display live and reference images from each plane, patient hemodynamic monitoring, 3D images, CT images or IVU images.	Monitor / display, in examination room, size should be 55” or more. Monitor should be at least 8 MP with PIP facility to display live and reference images, patient hemodynamic monitoring, 3D images, CT images or IVU images
<b>Turnkey</b>	Add on	Visit the site to make necessary changes in the existing room. Following items are required: 1. Carpet area- 2. Partition of room to make console 3. Lead glass window in between console and DSA room – size 120x180cm. 4.Floor: Vitrified tiles (size 600 x 600 mm) except in Catheterization room. In catheterization room PVC antistatic floor-2mm. 5. False ceiling : modular type metal false ceiling with LED lights 6. Wall: Ceramic tiles up to ceiling height in DSA room & Console room (300 x 300 mm). Wall paint with enamel coating after proper preparation. 7. Doors: Wooden doors with lead shielding as per AERB norms for DSA rooms. Doors in all other rooms should be anidized aluminium door. 8. Electrical: Power will be supplied by hospital authority up to UPS room. After that all necessary work will be done by vender. Earthing: 04 nos. Copper plate earthing. Adequate light and power points to be considered in whole area. High quality LED light to be provided. 9. Air Conditioning: the entire carpet area should be air-conditioned with AC machine of appropriate tonnage to maintain temperature 20 to 22 degree Celsius. In case of breakdowm of any AC, alternative should be present. HVAC machine for DSA room, console room and

		technical room should have dehumidifier system.
<b>Accessories</b>	1.Dry chemistry laser imager 500dpi 2.Furniture	Optional 1.Revolving chairs on wheels without arm rest from reputed brand – 10 2. Full Secretariat table – 03 3. Cupboards for the storage of catheter & other items– 12ft x 6ft x 3ft -01 no. Another cupboard – 10ft x 2.5 ft x 3ft – 01 no. 4. Steel storewel-02 5. Steel Trolley for instruments-03 6. Drug trolley-02 5. Medical patient trolley – 01
<b>AERB Norms</b>	Add on	work related with AERB norms-eg Lead pasting on doors QA test AERB certifications
	Add on	<b>USFDA certification is needed if OEM is from outside India.</b>
<b>3 Digital flat Panel Detector for low dose radiography</b>		
<b>Warranty/After Sale Service</b>		<b>Warrant 3 yrs, APMC-7yrs DICOM Printer Optional. Quote the price.</b>
<b>Note: USFDA certification is needed for all machine whose OEM is from outside India.</b>		

<b>Group-N: Neurology</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>3 TRANSCRANIAL DOPPLER</b>		
<b>Point no. 6</b>	Should be Cyber security ready according to recent FDA guidelines	Deleted
<b>Point no. 14</b>	Should support network share of examinations, patients and other data between multiple Dolphin work and review stations using background sync	Deleted
<b>Point no. 38</b>	Should have Anonymous Output option to export PDF files anonymously for research purposes	Should have facility to export data in PDF files.
<b>Point no. 65</b>	Should be supplied with PC of Quad Core 2GHz, 4 GB RAM, 18" LED touch panel monitor, 4 USB 3.0 Ports, Genuine Windows 10 operating system, Mini Keyboard, Optical Mouse, 1TB SSD Enterprise Grade hard drive with Power-Loss Protection (Data at Rest & Data in Flight)	Should be supplied with PC/laptop of Quad Core 2GHz, 4 GB RAM, <b>18" LED touch panel monitor/15" touch screen</b> , 3/4 USB 3.0 Ports, Genuine Windows 10 operating system, Mini Keyboard, Optical Mouse, 1TB SSD Enterprise Grade hard drive with Power-Loss Protection (Data at Rest & Data in Flight)
<b>Point no. 75</b>	Should display battery level status information in software status bar	Deleted
<b>Point no. 76</b>	Should allow the main unit to hand carry while the charger is unplugged and the system is still powered on, and to allow the main unit to run continuously on battery and unplugged from charger for at least 3 hours	Deleted
<b>5 Long term &amp; Quantitative EEG system with Video</b>		
<b>Point no.02</b>	Amplifier should have USB technology for connecting to system	Amplifier should have <b>USB/LAN/WIFI</b> technology for connecting to system
<b>Point no.06</b>	Input impedance: 110 M ohms.	100 or 110 M ohms
<b>Point no.07</b>	System should have CMRR > 110dB	CMRR > 105 db
<b>Point no.09</b>	Sampling rate should be 2KHz or more.	1024 Hz - 2 KHZ or more
<b>Video Camera Point no.01</b>	System should have Facility for MPEG 4 Video Compression and should Supply with High resolution PTZ Zoom Camera and IR camera	Deleted
<b>Video Camera Point no.02</b>	The system should have facility to perform Video EEG picture in picture with <b>one Camera.</b>	The system should have facility to perform Video EEG picture in picture with one/dual Camera.
<b>7 64 channel Video EEG system</b>		
<b>Point no.2(b)</b>	Amplifier should be Portable and patient-worn (less than 700 g weight <b>with batteries</b> )	Amplifier should be Portable and patient-worn (less than 700 g weight )
<b>Point no.2(m)</b>	LED status indicator on breakout box	Deleted
<b>Point no.5(a)</b>	Processor : Intel® Quad Core, <b>i7</b> or higher processor ≥ 3 GHz	Processor : Intel® Quad Core, <b>i5</b> or higher processor ≥ 3 GHz
<b>8 8 Channel EMG / NCS / EP SYSTEM with Ultrasound</b>		
<b>Point no.6</b>	System should have Dual Electrical Stimulator with option for Constant voltage/ Constant Current Electrical stimulator with both current	System should have Dual Electrical Stimulator with option for Constant voltage/ Constant Current Electrical stimulator with current (0 to 100mA)

	(0 to 100mA) and <b>voltage</b> (0 to 400V) stimulation facility.	stimulation facility.
<b>Point no.07</b>	The System should have functionalities like Quality meter and firing rate meter	Deleted
<b>Point no.8</b>	The system should have the facility for rapid selection of side and anatomical area.	Deleted
<b>Point no.17(b)</b>	The system should have the special test such as Autonomic Exams (R-R Interval/ Valsalva with metronome, Sympathetic/ Galvanic Skin Response), Single fiber/ Macro EMG analysis, Multi-MUP analysis, Spike Triggered EMG, <b>Bereitschafts</b> Potential and P300 / CNV test.	The system should have the special test such as Autonomic Exams (R-R Interval/ Valsalva with metronome, Sympathetic/ Galvanic Skin Response), Single fiber/ Macro EMG analysis, Multi-MUP analysis, Spike Triggered EMG, Potential and P300 / CNV test.
<b>Point no.17(c)</b>	System should have advanced NCV Software (includes Conduction Velocity Distribution CVD), Triple Stimulation Test (TST), Tremor Analysis, CMAP Scan software and MUNIX Software.	System should have advanced NCV Software (includes Conduction Velocity Distribution CVD), Triple Stimulation Test (TST), Tremor Analysis, CMAP Scan software and MUNIX/ <b>MUNE</b> Software.
<b>Point no.32</b>	The system should have Automatic online summary report facility based on Institute reference values.	The system should have Automatic online / Quick summary report facility based on Institute reference values.
<b>Point no.33</b>	The system should have the facility for Institute standard Microsoft Word Online Report generation	The system should have the facility for Institute standard online/ Microsoft Word quick Report generation
<b>9 4 channels Digital EMG, NCV, EP System</b>		
<b>The System hardware should consist of Point no.3</b>	The amplifier should have USB powered and enabling the amplifier to be connected to any PC/Laptop and transfer data through same USB	The amplifier should have <b>USB powered /230V AC</b> and enabling the amplifier to be connected to any PC/Laptop and transfer data through same USB
<b>The System hardware should consist of Point no.6</b>	The system should have wireless control panel for easy operation	The system should have <b>wireless / USB/ inbuilt</b> control panel for easy operation
<b>EMG/NCV/EP Software should have:- Point no.6</b>	F wave with split screen display with automatic marking of F responses showing the Max F, Min F and F block values.	F wave with split screen display with automatic marking of F responses showing the Max F, Min F .

<b>Group -O: Paediatrics</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>1 Biphasic Defibrillator, Monitor &amp; Recorder</b>		
<b>Point no.2</b>	External energy selection from 2 to 200 J, biphasic	External energy selection from 1 to 360 J, biphasic
<b>7 Paediatrics ventilator</b>		
<b>Point no.3.7 (e)</b>	Non Invasive ventilation in all ventilation modes	Non Invasive ventilation in <b>pressure</b> ventilation modes
<b>Point no.4</b>	Autoclavable flow sensor -10 nos. with each ventilator.	Autoclavable flow sensor <b>02</b> nos. with each ventilator.

<b>Group -P: Pulmonary Medicine</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>2 POLYSOMNOGRAPHY MACHINE (SLEEP LAB)</b>		
<b>Technical specification Point no. 3.1 (d)</b>	The machine should have ECG:4 ( 2 physical and 2 derived)	The machine should have ECG 1 channel
<b>Technical specification Point no. 3.1 (0)</b>	Sensors 5 sets (each set includes flow)	To be deleted
<b>3 ECG MACHINE</b>		
<b>Point no.7.1</b>	Should be US FDA and European CE, approved product.	Should be US FDA/ European CE, approved product.
<b>4 Multipara Monitors</b>		
<b>Point no.02</b>	Monitor should have 18-20" independent flat panel display.	Monitor should have 15" or more independent flat panel display.
<b>5 SYRINGE PUMP</b>		
<b>Point no.5</b>	Flow rate programmable with minimum infusion rate of 0.01-0.1ml/hour	Flow rate programmable with minimum infusion rate of 0.1 ml/hour
<b>Point no.8</b>	Operational in intravenous , epidural, Enternal ETC delivery routes.	Operational in intravenous , epidural
<b>Point no.10</b>	There should be stackling facility for pumps, minimum of five pumps can be stacked at a time. Enable power to stacked pumps with a single power cable.	There should be minimum of five pumps can be stacked at a time. Enable power to stacked pumps with a single power cable.
<b>6 Defibrillator Machine</b>		
<b>Point no.15</b>	It should meet international safety standard, US-FDA and CE certification.	It should meet international safety standard, US-FDA / CE certification.

<b>Group -Q: Paediatric Surgery</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>2 PAEDIATRIC URETERO RENOSCOPE</b>		
<b>Point No. 01</b>	Sheath 4.5 to 06 fr., angle of view 05 to 07 degree.	Distal Tip 4.5 to 6.5 Fr., angle of view 05 to 07 degree with working length of 34 cm
<b>6 FLEXIBLE FIBRE OPTIC CYSTO URETEROSCOPE</b>		
<b>Item No. 06</b>	<b>FLEXIBLE FIBRE OPTIC CYSTO URETEROSCOPE</b>	<b>To be deleted from Tender</b>
<b>7 INTENSIVE CARE VENTILATOR (NEONATAL&amp;PAEDIATRIC)</b>		
<b>2.1 Technical characteristics Point No. 04</b>	Should have build in color screen TFT/LCD display of minimum 8” for display of waveforms and monitored value;	Should have build in color screen TFT/LCD display of minimum 12” for display of waveforms and monitored value;
<b>8 HIGH END MULTIPARA MONITORS WITH CENTRAL MONITORING SYSTEM</b>		
<b>Point No. 01</b>	Patient monitor system should be of modular type and capable of monitoring adult, pediatric neonatal patients with touch screen and rotary knob user interface.	Patient monitor system should be of modular type and capable of monitoring adult, pediatric neonatal patients with touch screen user interface.
<b>Point No. 02</b>	Monitor should have 18-20 “independent flat panel display. Should be capable of 6 traces display.	Monitor should have 18-20 “independent flat panel display. Should be capable of 12 traces display.
<b>Point No. 10</b>	Minimum 72 hours trend data should be displayed at bedside monitors.	Minimum 120 hours trend data should be displayed at bedside monitors.

<b>Group -R:Gastroenterology</b>		
<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>1. High resolution image intensifier (Digital Flat Panel Fluoroscopy) System</b>		
<b>D. Direct digital imaging system for fluoroscopy:</b>	Add on	System should preferably have DSA facility for Hepatic vein portal gradient (HVPG) measurement. Transjugular liver biopsy(TJLB)
<b>D. Direct Digital</b>	Add on	Automatic composing software will be preferable.
<b>E. Detector system; Point no. 06</b>	DQE at 0.1Lp/mm should be atleast 65% Specify refresh cycle	DQE at 0.1Lp/mm or better should be atleast 65%specify refresh cycle
<b>H. Image Storage and transmission Point no. 02</b>	The system should support recording of image on compact discs/ DVD along with archieving on Jukebox/RAID (20 TB)	Storage memory of 20 TB. The system should support recording of image on compact discs/DVD along with archieving on jukebox/RAID(20 TB)
<b>3: Vibration Controlled Transient Elastography (VCTE)</b>		
	Following to be added to the technical Specification.	<ol style="list-style-type: none"> <li>1. A Non –invasive device to measure spleen and liver Fibrosis with dedicated Probes capable of generating vibrated transient elastic wave in a controlled manner through the skin then to the liver along with 2D ultrasound Screening module intended for anatomical screening of human liver and spleen.</li> <li>2. System should have the capability of future upgrade of the penetration of the probes suitable for Adults &amp;Obese patients.</li> <li>3. Paediatric probe should have 2 distinct features of selection for a child having thoracic perimeter&lt; 45cm &amp; teenager having thoracic perimeter 45 cm -&lt;75cm.</li> <li>4. The ultrasound output should be less than 3.9mW &amp;the mechanical index of 0.5.</li> <li>5. The transducer and the vibrator should generate a completely painless vibration (frequency 50Hz for liver and 100Hz for spleen and amplitude 2mm peak to peak) which is similar to a flick, maximum mean output of the vibrator being 16mW.</li> </ol>
<b>4: Gastroendosonography system</b>		
<b>Ultrasound Processor With Colour Doppler Function Point no. 9</b>	Elastography capability	Elastography with pulsed wave Doppler,tissue harmonic, image and contrast harmonic imaging
<b>VIDEO PROCESSOR MODULE Point no. 6</b>	System should have facility of processing images to enhance the visibility of fine capillaries and mucosal details using latest technology (NBI,FICE, i-scan)	System should have facility of processing images to enhance the visibility of fine capillaries and mucosal details using latest technology ( <b>NBI,BLI,I-SCAN preferably OE-ISCAN</b> )
<b>LIGHT SOURCE Point no. 1</b>	Lamp xenon 150 – 300 watts which can support NBI,FICE,i-SCAN	Lamp of at least 300 watts with Xenon High resolution medical HD grade monitor of 26 inch or more
<b>UPS</b>	1 Kv 1 no.	2 KB online UPS with 30 min backup with voltage stabiliser of 2KB
<b>5:VIDEO ENDOSCOPY SYSTEM (SCOPES ONLY)</b>		
<b>Duodenovideoscope</b>	Duodenovideoscope	Demand of Duodenovideoscope should be omitted.

		Proposal of Dual channel Therapeutic scope can be considered for procurement
<b>7: NON RADIOACTIVE 13 C BASED UREA BREATH ANALYZER FOR H.PYLORI DETECTION</b>		
	Non radioactive 13 C basal UREA Breath Test	Non Radioactive 12 C based urea breath analyser can also be considered
<b>8:Hydrogen Breathe Test System</b>		
	<b>Add on</b>	1.Zero controls, flow check and sample correction . 2.Solid- state senors and results are displayed in less than 50 seconds. 3. Internalpump flushes previous sample out. 4. self – correction feature.
<b>9:High Resolution Manometry</b>		
Point no. 1	1.Manometry system and computer for high resolution manometry with impedence	Manometry system and computer for high resolution manometry with impedence , 24 hour PH metry and impence recording
Point no. 4	3.The system should be upgradable optionally for the sphincter of Oddi manometry and Antrodudenal manometry .	With latex ballon for anorectal mannometry at the least 100 no.
Point no. 6	6. The system must be based on latest windows software (windows 7.....)	The system must be based on latest windows software (windows 10...
Point no. 9	software	Include chicago classification 3.0
	add	Solid state catheter system will be preferred
<b>10: High End Electro Surgery Unit</b>		
Point no. 13(d)	Disposal patient plate with cable – 10 pcs	Disposable patient plate with cable – 100 pcs.

**Group -S: Hematology**

<b>Description</b>	<b>Specifications mentioned in the Bidding Document</b>	<b>Should be read as follows:</b>
<b>1: FLOW CYTOMETER</b>		
<b>Point No. 18</b>	Suitable Online UPS with 1 hour back, Color laser Printer and 24" Monitor should be included.	<b>To be deleted</b>
<b>Point No. 24</b>	The price of antibodies (leukemia panel, lymphoma panel, myeloma panel, PNH panel), calibration beads, set up beads and buffers supplied by the company as per catalogue should be fixed for the next 5 years.	<b>To be deleted</b>

Amendments mentioned hereunder are notified:

Description	Specifications mentioned in the Bidding Document	Should be read as follows:
Last date & Time for submission / uploading of complete tender at <a href="http://www.eproc.bihar.gov.in">www.eproc.bihar.gov.in</a> .	19 / 10 / 2020 up to 17.00 Hours	29 / 10 / 2020 up to 17.00 Hours
Last date, time and place for submission of hard copy of the Technical bid along with EMD & Tender Document Fee at Director's office, I.G.I.M.S., Patna by Speed / Registered post / Courier only	20 / 10 / 2020 up to 16.00 Hours, at Director IGIMS,- Patna-800014, P/O- B. V. College Patna	30 / 10 / 2020 up to 16.00 Hours, at Director IGIMS,- Patna-800014, P/O- B. V. College Patna
Date, Time and Place of opening of Techno Commercial bid only on <a href="http://www.eproc.bihar.gov.in">www.eproc.bihar.gov.in</a> .	On <a href="http://www.eproc.bihar.gov.in">www.eproc.bihar.gov.in</a> a. Group A, B & C on 21 / 10 / 2020 at 15.00 hours b. Group D, E & F on 23 / 10 / 2020 at 15.00 hours c. Group G, H & I on 26 / 10 / 2020 at 15.00 hours d. Group J, K & L on 28 / 10 / 2020 at 15.00 hours e. Group M, N & O on 30 / 10 / 2020 at 15.00 hours f. Group P, Q & R on 02 / 11 / 2020 at 15.00 hours g. Group S & T on 04 / 11 / 2020 at 15.00 hours	On <a href="http://www.eproc.bihar.gov.in">www.eproc.bihar.gov.in</a> a. Group A, B & C on 02 / 11 / 2020 at 15.00 hours b. Group D, E & F on 03 / 11 / 2020 at 15.00 hours c. Group G, H & I on 04 / 11 / 2020 at 15.00 hours d. Group J, K & L on 05 / 11 / 2020 at 15.00 hours e. Group M, N & O on 06 / 11 / 2020 at 15.00 hours f. Group P, Q & R on 07 / 11 / 2020 at 11.00 hours g. Group S & T on 09 / 11 / 2020 at 15.00 hours

**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](http://www.eproc.bihar.govt.in) and the IGIMS website [www.igims.org](http://www.igims.org).

Director,  
IGIMS - Patna.