

**Amendment No. 1****Sub: Amendment to the referred tender enquiry****Ref.: Tender Enquiry HITES/PCD/PMSSY-III/07/CTVS/2017-18 dated 08-06-2017**

The following changes are being incorporated in the above referred Tender Enquiry Document

**Section VII  
Technical Specification****SCH 01. Instrument Set for Cardio-Vascular & Thoracic Surgery**

<b>Existing Tender Specification</b>	<b>Read As</b>
<b>3 MINI RYDER with round jaw of 1.4 mm, with Titanium tip</b>	<b>3 MINI RYDER with round jaw of 1.4 mm, with TC tip</b>
a) Length 15 cm / 6" – 2 nos.	a) Length 15 cm / 6" – 2 nos.
<b>4 BOZEMANN FINNOCHIETTO Needle Holder with TC inserts gentle smooth curve at the shaft and curve at the box joint</b>	<b>4 BOZEMANN FINNOCHIETTO Needle Holder with TC inserts gentle smooth curve at the shaft and curve at the tip</b>
a) Length 24 cm -1	a) Length 24 cm -1
b) Length 30cm -1	b) Length 30cm -1
<b>16 CASTROVEIJO MICRO SCISSORS, ultra fine nano blade Radialis Round Handle – 1each</b>	<b>16 SPRING POTTS MICRO SCISSORS, ultra fine nano blade Radialis Round Handle – 1each</b>
a) Length 180 mmm/ 7" 45 deg nano blade	a) Length 180 mmm/ 7" 45 deg nano blade
b) Length 180 mmm/ 7" 60 deg nano blade	b) Length 180 mmm/ 7" 60 deg nano blade
c) Length 180 mmm/ 7" 90 deg nano blade	c) Length 180 mmm/ 7" 90 deg nano blade
d) Length 180 mmm/ 7" 125 deg nano blade	d) Length 180 mmm/ 7" 125 deg nano blade
<b>18 METZENBAUM SCISSORS , Straight, ring handle extra light curve edge ultra sharp edge for ultimate cutting performance Gold plate sank</b>	<b>18 METZENBAUM SCISSORS , Straight, ring handle extra light curve edge ultra sharp edge for ultimate cutting performance TC inserts with micro serration</b>
a) Length 180 mm – 1 No.	a) Length 180 mm – 1 No.
b) Length 200 mm -1 No.	b) Length 200 mm -1 No.
<b>19 BABY METZENBAUM SCISSORS ring handle extra light curve super cut ultra sharp edge for ultimate cutting peformance GOLD plate sank</b>	<b>19 BABY METZENBAUM SCISSORS ring handle extra light curve super cut ultra sharp edge for ultimate cutting peformance TC inserts with micro serration</b>
a) Length 12 cm Str. -1 No.	a) Length 12 cm Str. -1 No.
b) Length 12cm CVD – 1No.	b) Length 12cm CVD – 1No.
<b>51. Morse Sternal retractor –double blade</b>	<b>51. Morse Sternal retractor –double blade Aluminium</b>
a) Adult – maximum spread 200mm, length – 150mm	a) Adult – maximum spread 200mm, length – 150mm, 40x20mm blade
b) Pediatric - maximum spread 160mm, length – 120mm	b) Pediatric - maximum spread 150mm, length – 120mm, 12x20mm blade
<b>53. Fino-Chietto rib &amp; sternal retractor – 1 no. each</b>	<b>53. Fino-Chietto rib &amp; sternal retractor Aluminium –</b>

Existing Tender Specification	Read As
	<b>1 no. each</b>
a) Infant- maximum spread 70mm, length – 55mm	a) Infant- maximum spread 70mm, length – 55mm
b) Children- maximum spread 100mm, length – 75mm	b) Children- maximum spread 100mm, length – 75mm
<b>55. Titanium clip applying forceps – 2each</b>	<b>55. Titanium clip applying forceps – 2each</b>
a) small – 19.5cm (length)	a) For small clip – 19.5cm (length)
b) Medium – 19.5cm(length)	b) For Medium clip – 19.5cm(length)
c) Large – 20.5cm(length)	c) For Large clip – 20.5cm(length)
76. Price Thomas brochus clamp 22cm – 1No.	76. Price Thomas brochus clamp 22cm – 1No. Each for Right & Left
77. Instrument Tray with silicone/magnetic mat: For careful sterilization and storage of fine and delicate instruments, for example microsurgery instruments & fine hooks. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 5 Nos.	77. Instrument Tray with silicone mat 280x170x55mm: For careful sterilization and storage of fine and delicate instruments, for example microsurgery instruments & fine hooks. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 5 Nos.
78. Instrument Tray with magnetic mat: For careful sterilization and storage of instruments. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 5 Nos.	78. Instrument Tray with silicone mat 590x290x150mm: For careful sterilization and storage of instruments. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 7 Nos.
<b>Note:</b>	<b>Note</b>
	<b>Added Para:</b> Bidder should quote all the instruments specified above
All instruments should be European CE or USFDA approved. Copy of certificate is to be enclosed with bid.	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
	<b>Added Para</b> iii. All instruments should be matt finish or non reflective

### SCH 02. IABP (Intra Aortic Balloon Pump)

Para	EXISTING TENDER SPECIFICATION	READ AS
3.1	Pneumatics: Drive system: Stepper motor driven bellows Drive gas- Helium (Available with disposable canister or refillable cylinder. Pumping Volume: 0.5 cc-50 cc Counter pulsation rate: 40-200 pulsations per minute	Pneumatics: Drive system: <b>Dual head reciprocating compressor</b> Drive gas- Helium (Available with disposable canister or refillable cylinder. Pumping Volume: 0.5 cc-50 cc Counter pulsation rate: 40-200 pulsations per minute

### SCH 03. Heart lung machine with accessories (Advance Version)

Para	EXISTING TENDER SPECIFICATION	READ AS
2.1.1	5 Pump Console.	<b>5 pump console or 4 pump console with 5 pump heads</b>
2.1.4.b	CO2 Blender	<b>Deleted</b>
2.2.3	Remote Control module for Temperature Control Monitor Instrument tray with mounting arm.	<b>If available</b> , quote for, Remote Control module for Temperature Control Monitor with Instrument tray and mounting arm separately (Quoted rate Will not be considered for comparison. Rate Justification for same needs to be provided with.)
3.6.4	Temperature control module: 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- 50 ° Celsius; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with <b>2 or more</b> temperature display.
3.11.2	REMOTE CONTROL MODULE FOR THE TEMPERATURE CONTROL MONITOR Optional remote control unit - should be capable of taking 3 Temp. Probes and display temperature in digital readouts. Alarm limits setting for at least three probes at crucial sites.	REMOTE CONTROL MODULE FOR THE TEMPERATURE CONTROL MONITOR Optional remote control unit - should be capable of taking <b>2 or more</b> Temp. Probes and display temperature in digital readouts. Alarm limits setting for at least three probes at crucial sites.

### SCH 04. Electric Operated Sternum Saw System

Para	EXISTING TENDER SPECIFICATION	READ AS
1	Driving Unit	

Para	EXISTING TENDER SPECIFICATION	READ AS
	Completely enclosed Motor 220V / 5 amp AC/DC with MCB Supported on a Mobile Folding Stand (Stainless Steel tubes & M.S. square bars, with castors). Should include a Foot Control, (Stainless Steel Body) with step-less speed control & ON / OFF switch with fuse.	No change
2	Reciprocating Saw Pistol Grip Hand piece (Autoclavable)	No change
a	Reciprocating Type Blades	No change
b	Weight 850 gms. Approx.	No change
3	Resternotomy Saw Hand Piece (RD)(Autoclavable)	No change
B	Sector type blade.	No change
C	Weight approx. 750 gms.	No change
4.D	Spring loaded.	No change
5	Company should be ISO 9001, 13485	No change
6	Instrument should be European CE / US FDA CERTIFIED	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
	<b>BOQ</b>	
2	Reciprocating Saw Pistol Grip Hand piece (Autoclavable)	No change
6	Reciprocating Type Blades	No change

### SCH 05. Battery Operated Sternum Saw System

Para	EXISTING TENDER SPECIFICATION	READ AS
1	<b>Vertical (Reciprocating) Sternum Saw Hand Piece</b>	No change
b.	Should have two speed controls with standard and fastmode.	Should have two speed controls with standard and fastmode or pressure sensitive trigger for variable speed operation.
5	Certification: Should have US FDA/European CE certificate and ISO certification	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
7	Should be supplied with following blades free of cost	No change
a.	Vertical Reciprocating SternumBlades: 30 Nos	No change
	<b>BOQ</b>	<b>BOQ</b>
1	Vertical (Reciprocating) Sternum Saw Hand Piece	No change

### SCH 06. Ultrasonic Surgical Aspirator/Dissceter

Para	EXISTING TENDER SPECIFICATION	READ AS
2	The hand piece should work on Piezo Ceramic Technology.	The hand piece should work on Piezo Ceramic/piezoelectric Technology.
4	The system should have at least three different range of working frequency hand pieces. (25, 35, 55 kHz)	The system should have at least two different range of working frequency hand pieces(25, 34/35 kHz). If system supports 55KHz also then quote separately
5	The system should have facility for both types of hand pieces (inside irrigation and outside irrigation)	The system should have facility for irrigation (external or inteernal) for hand pieces
6	The handpiece should be provided with multiple tips (both curved and straight) for aspiration.	The handpiece should be provided with multiple tips (both straight with angled at the tip and straight) for aspiration.
10	The system should have irrigation range of 0 to 150 ml / min.	The system should have irrigation flow rate of 40 ml / min or more
11	The system should have Aspiration / Vacuum range of 0 to 0.9 bar.	The system should have Aspiration / Vacuum of 0.6 bar or more
		<b>Added para: Accessories</b>
		<b>A. For 25kHz hand piece:</b>
		(i) Standard tips for micro length 11cm or more and 12 cm or more - Qty 05 each
		(ii) Standard tips for Macro 11cm or more - Qty 05
		(iii) Standard tips for high fibrotic lesion (standard) outer diameter 1.9mm, length 11cm or more and 2.40mm, length 11cm or more - Qty 05 each
		(iv) Tip for up roofing the bone (bone sculpting): a. length 7.5in, length 20cm or more - qty 05
		(v). 3.8in, with length 9.5cm ore more - qty 05
		(vi) 4.5in, with length 11cm or more, d. 3.5in or more, length 7.5in or more with 2.5mm outer diameter or more - qty 05
		(vii) Ring type tip with outer diameter 3.75mm or more - Qty 05
		<b>B. For 34/35 kHz hand piece:</b> Straight tip with length 12cm or more - Qty 05 no's
		<b>Other Accessories</b>
		1. Step Torque wrench, Offset (7mm)
		2. Plastic Suction Canister, Reusable, qty 5 no's.
		3. Disposable Suction Canister Liner, qty 10 no's.

Para	EXISTING TENDER SPECIFICATION	READ AS
		4. Disposable Tubing Set & Extender Filter Tubing, qty 10 no's.
		5. Sterilization Tray (7mm)
		All disposables and consumables items rate should be quoted separately and it should be fixed for 2 years

### SCH 07. ACT Machine

Para	EXISTING TENDER SPECIFICATION	READ AS
3.2	2 point clot detection facility to get accurate results	The equipment should have 2 channel for measuring the individual clotting time and average difference for the two channels with the help of 2 channel test cartridge
3.6	Digital Display on Screen of any size.	The display should show the coagulation time of 2 channels

### SCH 08. Ultrasonic cutting & Coagulation system

Para	EXISTING TENDER SPECIFICATION	READ AS
3	It should have both 5mm and 10mm instruments.	It should have both 5mm and 9-10mm instruments
	<b>BOQ</b>	<b>BOQ</b>
2	Open Surgery handpiece 5mm (with transducer )	Dissecting Shears Straight Handpiece Open with transducer: a. Dissecting Shears Straight Handpiece Open - 10 pcs. b. Transducer Open for Dissecting Shears Straight - 01 reusable or 25 disposables
3	Open Surgery handpiece 10mm (with transducer )	Dissecting Shears Curved Handpiece Laparoscopic with transducer a. Dissecting Shears 9-10mm Curved Handpiece Laparoscopic - qty 10 pcs. b. Transducer Open for Dissecting Shears curved - 01 reusable or 25 disposables
4	Endosurgery Hand piece 5mm (with transducer )	Vessel Welder Straight Handpiece Open with transducer a. Vessel Welder Straight Handpiece Open - qty 10 nos b. Vessel Welder Straight Transducer Open - 01 reusable or 25 disposables

Para	EXISTING TENDER SPECIFICATION	READ AS
5	Endosurgery Hand piece 10mm (with transducer )	Vessel Welder Straight Handpiece Laparoscopic with transducer a. Vessel Welder Straight Handpiece laparoscopic - qty 10 no's b. Vessel Welder Straight Transducer laparoscopic - 01 reusable or 25 disposables
6	Transducer for hand piece	Deleted
14	It should be supplied with cart, footswitch, cable transducer and one extra probe.	It should be supplied with OEM cart, footswitch and necessary cables

### SCH 10. Extra Corporeal Membrane Oxygenator(ECMO)

Para	EXISTING TENDER SPECIFICATION	READ AS
	BOQ	BOQ
2	ABG Machine 1 no	Inline ABG measurement module as pecified above 1 no

### SCH 12.Surgical Xenon head light and light source

Para	EXISTING TENDER SPECIFICATION	READ AS
1	Surgical Xenon head light with light source on professional head band, headlight Universal Floor stand with 9ft (275cm) premium bifurcated cable, headlight module and gown clips , headband should be lightweight material that's washable and breathable	Surgical Xenon head light with light source on professional head band, headlight OEM Floor stand with 9ft (275cm) premium bifurcated cables, headlight module and gown clips , headband should be lightweight material that's washable and breathable
2	Lightweight and flexible 3mm cable, Translucent outer sheath for visualization of fiber integrity,. Cool and bright light. Vibrant color rendition.	Lightweight and flexible 3mm cable, Translucent/semi translucent outer sheath for visualization of fiber integrity,. Cool and bright light. Vibrant color rendition.
3	Xenon bulb life should be min 1000hrs	Xenon bulb life should be min 1000hrs. If it stops working before 1000hrs then it should be replaced free of cost
4	Simple 2-point adjustment, comfortable to fit for all heads of all sizes. Easy to reach 4-position intensity switch	Simple 2-point adjustment, comfortable to fit for all heads of all sizes : 2 nos. Easy to reach 4-position intensity switch
9	Universal Floor stand new large casters- 75mm, 10° angle for better viewing of LCD display. Display of bulb life and intensity must	OEM Floor stand /trolley with large casters- 75mm, 10° angle for better viewing of LCD display. Display of bulb life and intensity must

Para	EXISTING TENDER SPECIFICATION	READ AS
	ii. Bulb life or guarantee should be clearly mentioned and spare bulb must be provided.	ii. Bulb life or guarantee should be clearly mentioned and one spare bulb must be provided
	iii. The unit should be USFDA or European CE approved.	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
		<b>Added para</b>
		<b>BOQ</b>
		1. Xenon Light source 1 no
		2. Head light band with fiber optic cable 2 nos
		3. Spare bulb 1 no
		4. OEM Floor stand/Trolley 1 no

### SCH 13. LED Head Light

Para	EXISTING TENDER SPECIFICATION	READ AS
14	All accessories should be from the same manufacturer and should be European CE/ US FDA approved	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
		<b>Added Para</b>
		<b>BOQ</b>
		1. LED Head Light Band 1 no
		2. rechargeable battery 3 nos
		3. Battery charger 2 nos
		4. Box for head light band and spares 1 no

### SCH 17. Thoracic Videoscopy System

Para	EXISTING TENDER SPECIFICATION	READ AS
1.1	A thoracoscope is a thin, tube-like rigid endoscope instrument with a light and a lens for viewing.	A thoracoscope is a thin, tube-like semi rigid endoscope instrument with a light and a lens for viewing.
3.1	Technical Specifications Thoracovideoscope	
2	Four-way angulation for complete examination	Two-way or more angulation for complete examination
8	Insertion Portion- Distal end outer diameter <= 10 mm approximately; Rigid portion outer diameter-<= 10 mm approximately; Working Length-300-350 mm	Insertion Portion- Distal end outer diameter <= 10 mm approximately; Rigid portion outer diameter-<= 10 mm approximately; Working Length-270-350 mm



Para	EXISTING TENDER SPECIFICATION	READ AS
9	Bending Section- Angulation range- Up 100-110 degree; Down 100-110 degree; Right 50-60 degree; Left 50-60 degree	Bending Section- Angulation range- Up 100-110 degree; Down 100-110 degree. Additional angulation if any available pls specify and highlight
3.2	Video processor with light source , Monitor and Recording system with capacity of 1TB	Video processor with light source , Monitor and Recording system with capacity of 5TB
	<b>BOQ</b>	<b>BOQ</b>
2	Video processor with light source , Monitor and Recording system with capacity of 1TB	Video processor with light source , Monitor and Recording system with capacity of 5TB

### SCH 18. Suction Machine

Para	EXISTING TENDER SPECIFICATION	READ AS
1.2	Should have max vacuum of 675mm Hg	Should have max vacuum of 650mm Hg or more
1.3	Suction capacity should be 100L/min & twin bottle capacity of 3L each	Suction capacity should be 50-60L/min & twin bottle capacity of 3L each
1.6	System should select second jar automatically	Should selected second jar automatically or manually
		<b>Added para:</b> Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.

### SCH 19. Color Doppler Echocardiography System (Mid End)

Para	EXISTING TENDER SPECIFICATION	READ AS
2.1	Latest generation Electronic Phased array Color Doppler system with Minimum 512 Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS..	Latest generation Electronic Phased array Color Doppler system with Minimum 50000 digital processing channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS..
3.1	Latest generation Electronic Phased array Color Doppler system with Minimum 512 Electronic independent channels.	Deleted
3.4	Adult Cardiac and Vascular Probes to be supplied which should be latest generation wide band transducers without frequency selection for higher sensitivity of response over a broader frequency range of operation. All probes to be phased array OPTIONAL Probes for paediatric application and	Adult Cardiac and Vascular Probes to be supplied which should be latest generation wide band transducers without frequency selection for higher sensitivity of response over a broader frequency range of operation. All probes to be phased array Probes for paediatric application and Transesophageal Echo.

Para	EXISTING TENDER SPECIFICATION	READ AS
	Transesophageal Echo for future requirement.	
3.9	Frame rate should be 300 FPS or more	Frame rate should be 800 FPS or more
3.13	Monitor should be 15" or more, high resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.	Monitor should be 18" or more, high resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.
3.17	Cine loop memory- more than 120MB of memory. High Frame rate review for better clarity of playback images study in slow motion. Quad loop with memory for pre and post image comparison of any procedure. Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory-40seconds or more. Frame grabber facility for post analysis.	Cine loop memory- more than 120MB of memory. High Frame rate review for better clarity of playback images study in slow motion. Quad loop with memory for pre and post image comparison of any procedure. Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory- 40seconds or more. Total storage capacity of 5TB (internal and external hard disc combined)
3.23	Tissue movement colorization with quantification possibility for IHD/CAD patients.	2D speckle tracking with quantification possibility for IHD/CAD patients.
3.24	Three transducer ports standard	Three or more active transducer ports
4.4	Multi-plane TEE Probe 4-8 MHz for Adult as well as Paediatric echocardiography. - 01 each (Standard)	Multi-plane 2D TEE Probe 4-8 MHz one for Adult and one for Paediatric echocardiography. - 1 set as standard
4.7	Color printer - 01 nos	High end laser Color printer with autoduplexing - 01 nos
		<b>Added para</b>
		System should provide with Latest PC (off-line licensed workstation) with minimum 1TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 USB port, Inbuilt Bluetooth & Wi-Fi, 24" Touch screen LED Monitor, Keyboard, mouse, 10 or latest Windows professional or equivalent, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software should be supplied. PC should be supplied with the licensed software to work on the below features. i. Strain and Strain rate imaging. ii. Semi-Automated Border Detection. iii. Tissue Motion Annular Displacement. iv. 2D speckle tracking (any other Hardware essential for OFFLINE Quantification)

Para	EXISTING TENDER SPECIFICATION	READ AS
		Other Requirements: 1. Two good quality, branded height chairs (revolving with back rest) to be provided for the echo-cardiographer. 2. There should be one high quality large size table of reputed brand (eg. Godrej, etc.) to keep Workstation (computer & printer).
	<b>BOQ</b>	<b>BOQ</b>
4	Multi-plane TEE Probe 4-8 MHz for Adult as well as Paediatric echocardiography. - 01 each (Standard)	Multi-plane 2D TEE Probe 4-8 MHz one for Adult and one for Paediatric echocardiography. - 1 set as standard
7	Color printer - 01 nos	High end laser Color printer with autoduplexing - 01 nos
		<b>Added para</b>
		12. Workstation as specified above 1 no
		13. Revolving chair as specified above 2 nos
		14. Table as specified above 1 nos

### SCH 20. 4D Colour Doppler Echocardiography System (High End)

Para	EXISTING TENDER SPECIFICATION	READ AS
3	System must have adult and Pediatric cardiology transducer with either single crystal technology or pure wave technology or matrix for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology	a. System must have adult cardiology transducer with either single crystal technology or pure wave technology or matrix for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology b. System must have Paediatric cardiology transducer with either phased array or matrix technology for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology

Para	EXISTING TENDER SPECIFICATION	READ AS
22	<p>Should be provided with (One Each of) :            Adult transthoracic 2 D probe {with Frequency ranging from 1-5 MHz <math>\pm</math>1 MHz, of Single crystal or Pure Wave technology (System offered with normal transducer for Adult ECHO are liable for rejection)},  <b>Adult Transthoracic 3 D probe{Convex Array matrix Transducer with Frequency ranging from 1-5 MHz <math>\pm</math>1 MHz},</b>            Paediatric Transthoracic 2 D probe, Adult Transesophageal 3 D probe, Paediatric Transesophageal 2D probe , Epi-aortic probe, vascular probe {Linear Array Matrix transducer with Frequency of 3-15MHz}. Linear array probe with frequency ranging from 4-11 <math>\pm</math>2 MHz for peripheral vascular examination.</p>	<p>Should be provided with (One Each of) :</p> <ol style="list-style-type: none"> <li>1. Adult transthoracic 2 D probe Phased array matrix transducer with Frequency ranging from 1-5 <math>\pm</math> 1 MHz, of Single crystal or Pure Wave technology (System offered with normal transducer for Adult ECHO are liable for rejection)</li> <li>2. Adult Transthoracic 3 D probe Phase Array matrix Transducer with Frequency ranging from 1-5 <math>\pm</math> 1 MHz,</li> <li>3. Paediatric Transthoracic 2 D probe</li> <li>4. Adult Transesophageal 3 D probe</li> <li>5. Paediatric Transesophageal 2D probe</li> <li>6. Epi-aortic probe, vascular probe Linear Array Matrix transducer with Frequency of 7-15 MHz</li> <li>7. Linear array Probe with frequency ranging from 4-11 <math>\pm</math>2 MHz. for Peripheral vascular</li> <li>8. Optional probes if available quoted separately ( Quoted rate Will not be considered for comparison. Rate Justification for same needs to be provided with.)               <ol style="list-style-type: none"> <li>a. Neonatal TEE probe</li> <li>b. Paediatric 3D transthoracic probe</li> </ol> </li> </ol>
23	<p>System should provide with- a. Latest PC of Apple or equivalent brand (off-line licensed workstation) with licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software and High End colour laser Printer should be supplied. PC should be supplied with a flat panel 17 inch display monitor. (Hardware essential for OFFLINE Quantification) b. Latest B/W Thermal Printer. c. 3KVA online UPS with a backup of 30 min minimum, from any reputed brand</p>	<p>System should provide with a.) Latest PC (off-line licensed workstation) with minimum 2TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 USB port, Inbuilt Bluetooth &amp; Wi-Fi, 24" Touch screen LED Monitor, Keyboard, mouse, 10 or latest Windows professional or equivalent, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software and High End colour laser Printer with auto duplexing should be supplied. PC should be supplied with the licensed software to work on the below features.</p> <ol style="list-style-type: none"> <li>i. Strain and Strain rate imaging.</li> <li>ii. Semi-Automated Border Detection.</li> <li>iii. Tissue Motion Annular Displacement.</li> <li>iv. Mitral Valve 3D data sets</li> <li>v. 2D speckle tracking (any other Hardware essential for OFFLINE Quantification)</li> </ol> <p>b.) Latest B/W Thermal Printer.  c.) One 3KVA online UPS with a backup of 30 min minimum, from APC or Emerson brand  d.) ECG cable: two in numbers</p>

Para	EXISTING TENDER SPECIFICATION	READ AS
		<b>Added Para:</b> System should have DICOM 3.0. System should have DICOM 3.0 print and store service classes with support for modality, worklist, perform procedure set up, storage commit.
		<b>Added Para:</b> Other Requirements: 1. Two good quality, branded chairs (revolving with back rest) to be provided for the echo-cardiographer. 2. There should be one high quality large size table of reputed brand (eg. Godrej, etc.) to keep Workstation (computer & printer). 3. 50 rolls of thermal paper to be provided for thermal printer. 4. Colour Print Paper (Glossy)- 500 sheets 5. One set of Color laser printer (compatible) cartridges, in addition to the supplied with printer.
	<b>BOQ</b>	<b>BOQ amended as follows:</b>
		1. 4D Echo machine with all latest softwares as specified above 1 no
		2. Adult transthoracic 2 D probe as specified above 1 no
		3. Adult Transthoracic 3 D probe as specified above 1 no
		4. Paediatric Transthoracic 2 D probe 1 no
		5. Adult Transesophageal 3 D probe 1 no
		6. Paediatric Transesophageal 2D probe 1 no
		7. Epi-aortic probe, vascular probe as specified above 1 no
		8. Linear array Probe as specified above 1 no
		9. Optional probes if available quoted separately ( Quoted rate Will not be considered for comparison. Rate Justification for same needs to be provided with.) a. Neonatal TEE probe b. Paediatric 3D transthoracic probe
		10. Revolving chair as specified above 2 nos
		11. Table as specified above 1 nos
		12. Workstation as specified above 1 no
		13. Color laser printer 1 no
		14. Online UPS as specified above 1 no
		15. Thermal printer 1 no
		16. 50 rolls of thermal paper to be provided for thermal printer.
		17. Colour Print Paper (Glossy)- 500 sheets

Para	EXISTING TENDER SPECIFICATION	READ AS
		18 One set of Color laser printer (compatible) cartridges, in addition to the supplied with printer.

**All other contents of the tender enquiry including terms & conditions remain unaltered.**

**Note:**

- i. **Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of bids**

**HITES/PCD/PMSSY-III/07/CTVS/17-18**

**SCH 01. Instrument Set for Cardio-Vascular & Thoracic Surgery**

<b>TENDER SPECIFICATION</b>	<b>RESPRESENTATION RECEIVED FROM THE BIDDERS</b>	<b>COMMITTEE RECOMMENDATION</b>
<b>3 MINI RYDER with round jaw of 1.4 mm, with Titanium tip</b>	As discussed in Prebid	<b>3 MINI RYDER with round jaw of 1.4 mm, with TC tip</b>
a) Length 15 cm / 6" – 2 nos.	As discussed in Prebid	a) Length 15 cm / 6" – 2 nos.
<b>4 BOZEMANN FINNOCHIETTO Needle Holder with TC inserts gentle smooth curve at the shaft and curve at the box joint</b>	As discussed in Prebid	<b>4 BOZEMANN FINNOCHIETTO Needle Holder with TC inserts gentle smooth curve at the shaft and curve at the tip</b>
a) Length 24 cm -1	As discussed in Prebid	a) Length 24 cm -1
b) Length 30cm -1	As discussed in Prebid	b) Length 30cm -1
<b>16 CASTROVEIJO MICRO SCISSORS,ultra fine nano blade Radialis Round Handle – 1each</b>	As discussed in Prebid	<b>16 SPRING POTTS MICRO SCISSORS,ultra fine nano blade Radialis Round Handle – 1each</b>
a) Length 180 mmm/ 7" 45 deg nano blade	As discussed in Prebid	a) Length 180 mmm/ 7" 45 deg nano blade
b) Length 180 mmm/ 7" 60 deg nano blade	As discussed in Prebid	b) Length 180 mmm/ 7" 60 deg nano blade
c) Length 180 mmm/ 7" 90 deg nano blade	As discussed in Prebid	c) Length 180 mmm/ 7" 90 deg nano blade
d) Length 180 mmm/ 7" 125 deg nano blade	As discussed in Prebid	d) Length 180 mmm/ 7" 125 deg nano blade
<b>18 METZENBAUM SCISSORS , Straight, ring handle extra light curve edge ultra sharp edge for ultimate cutting performance Gold plate sank</b>	As discussed in Prebid	<b>18 METZENBAUM SCISSORS , Straight, ring handle extra light curve edge ultra sharp edge for ultimate cutting performance TC inserts with micro serration</b>
a) Length 180 mm – 1 No.	As discussed in Prebid	a) Length 180 mm – 1 No.
b) Length 200 mm -1 No.	As discussed in Prebid	b) Length 200 mm -1 No.
<b>19 BABY METZENBAUM SCISSORS ring handle extra light curve super cut ultra sharp edge for ultimate cutting peformance GOLD plate sank</b>	As discussed in Prebid	<b>19 BABY METZENBAUM SCISSORS ring handle extra light curve super cut ultra sharp edge for ultimate cutting performance TC inserts with micro serration</b>
a) Length 12 cm Str. -1 No.	As discussed in Prebid	a) Length 12 cm Str. -1 No.
b) Length 12cm CVD – 1No.	As discussed in Prebid	b) Length 12cm CVD – 1No.
<b>51. Morse Sternal retractor –double blade</b>	As discussed in Prebid	<b>51. Morse Sternal retractor –double blade Aluminium</b>
a) Adult – maximum spread 200mm, length – 150mm	As discussed in Prebid	a) Adult – maximum spread 200mm, length – 150mm, 40x20mm blade

TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
b) Pediatric - maximum spread 160mm, length – 120mm	As discussed in Prebid	b) Pediatric - maximum spread 150mm, length – 120mm, 12x20mm blade
<b>53. Fino-Chietto rib &amp; sternal retractor – 1 no. each</b>	As discussed in Prebid	<b>53. Fino-Chietto rib &amp; sternal retractor Aluminium – 1 no. each</b>
a) Infant- maximum spread 70mm, length – 55mm	As discussed in Prebid	a) Infant- maximum spread 70mm, length – 55mm
b) Children- maximum spread 100mm, length – 75mm	As discussed in Prebid	b) Children- maximum spread 100mm, length – 75mm
<b>55. Titanium clip applying forceps – 2each</b>	As discussed in Prebid	<b>55. Titanium clip applying forceps – 2each</b>
a) small – 19.5cm (length)	As discussed in Prebid	a) For small clip – 19.5cm (length)
b) Medium – 19.5cm(length)	As discussed in Prebid	b) For Medium clip – 19.5cm(length)
c) Large – 20.5cm(length)	As discussed in Prebid	c) For Large clip – 20.5cm(length)
76. Price Thomas brochus clamp 22cm – 1No.	As discussed in Prebid	76. Price Thomas brochus clamp 22cm – 1No. Each for Right & Left
77. Instrument Tray with silicone/magnetic mat: For careful sterilization and storage of fine and delicate instruments, for example microsurgery instruments & fine hooks. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 5 Nos.	As discussed in Prebid	77. Instrument Tray with silicone mat 280x170x55mm: For careful sterilization and storage of fine and delicate instruments, for example microsurgery instruments & fine hooks. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 5 Nos.
78. Instrument Tray with magnetic mat: For careful sterilization and storage of instruments. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 5 Nos.	As discussed in Prebid	78. Instrument Tray with silicone mat 590x290x150mm: For careful sterilization and storage of instruments. May be sterilized and stored together with the instruments in sterilizing container, autoclavable upto 134 deg C, low weight, simple and secure locking system and stackable – 7 Nos.
<b>Note:</b>		<b>Note</b>
	As discussed in Prebid	Added Para: Bidder should quote all the instruments specified above
All instruments should be European CE or USFDA approved. Copy of certificate is to be enclosed with bid.	As discussed in Prebid	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.



TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
	As discussed in Prebid	Added Para iii. All instruments should be matt finish or non reflective

HITES/PCD/PMSSY-III/07/CTVS/17-18

SCH 02. IABP (Intra Aortic Balloon Pump)

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
3.1	Pneumatics: Drive system: Stepper motor driven bellows Drive gas- Helium (Available with disposable canister or refillable cylinder. Pumping Volume: 0.5 cc-50 cc Counter pulsation rate: 40-200 pulsations per minute	Pneumatics drive system : dual head reciprocating compressor Dual head reciprocating compressor is much faster and hence more suitable in patients with tachycardia	Amended as: Pneumatics: Drive system: <b>Dual head reciprocating compressor</b> Drive gas- Helium (Available with disposable canister or refillable cylinder. Pumping Volume: 0.5 cc-50 cc Counter pulsation rate: 40-200 pulsations per minute

HITES/PCD/PMSSY-III/07/CTVS/17-18

SCH 03. Heart lung machine with accessories (Advance Version)

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
2.1.1	5 Pump Console.	5 pump console or 4 pump console with 5 pump heads 4 pump base with 5 pump head this reduces the foot print - 5 pump models have been discontinued by most manufacturers	Amended as: <b>5 pump console or 4 pump console with 5 pump heads</b>
2.1.4.b	CO2 Blender	This should be optional as CO2 blenders are not required as such	<b>To be deleted</b>
2.2.3	Remote Control module for Temperature Control Monitor Instrument tray with mounting arm.	To be removed as this do not enhance the functionality of the machine	Amended as: <b>If available</b> , quote for, Remote Control module for Temperature Control Monitor with Instrument tray and mounting arm separately (Quoted rate Will not be considered for comparison. Rate Justification for same needs to be provided with.)
3.6.4	Temperature control module: Temperature display range of 0- 50 ° Celsius; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with 3-temperature display.	Temp display range 0-50 deg C; remote accuracy of 0.3 deg C and remote temp display unit module with a min of 2 temp display. Since practical requirement for the 3rd display is not common and generally used for locking in specification	Amended as: Temperature display range of 0- 50 ° Celsius; remote accuracy of 0.3 ° Celsius and remote temperature display unit module with <b>2 or more</b> temperature display.
3.11.2	REMOTE CONTROL MODULE FOR THE TEMPERATURE CONTROL MONITOR Optional remote control unit - should be capable of taking 3 Temp. Probes and display temperature in digital readouts. Alarm limits setting for at least three probes at crucial sites.	Alarm limits setting for at least two probes at crucial sites since practical requirement for the 3rd setting is not common and generally used for locking in specification	Amended as: REMOTE CONTROL MODULE FOR THE TEMPERATURE CONTROL MONITOR Optional remote control unit - should be capable of taking <b>2 or more</b> Temp. Probes and display temperature in digital readouts. Alarm limits setting for at least three probes at crucial sites.

HITES/PCD/PMSSY-III/07/CTVS/17-18			
SCH 04. Electric Operated Sternum Saw System			
Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
1	Driving Unit		
	Completely enclosed Motor 220V / 5 amp AC/DC with MCB Supported on a Mobile Folding Stand (Stainless Steel tubes & M.S. square bars, with castors). Should include a Foot Control, (Stainless Steel Body) with step-less speed control & ON / OFF switch with fuse.	A. We would like to request that simple specification should be asked, as at present specification has been made so complicated. B. footcontrol is not required as for electric hand piece - controls are on hand piece only. 1. Electric console unit / driving unit: touch screen control, cpm control with finger control, operates on 220/ 230V. 2. Mobile trolley with lockable castors.	No change
2	Reciprocating Saw Pistol Grip Hand piece (Autoclavable)	Your tender requirement says "Sternum saw", so this has to be Sternum saw not reciprocating saw, cpm should be 12000 cpm or more	No change
a	Reciprocating Type Blades	(i) Should be sternum saw blades (ii) Sternum blades should also be added	No change
b	Weight 850 gms. Approx.	it's always considered with electric cable/ battery, in that case it ahs to be 1.2kg or less	No change
3	Resternotomy Saw Hand Piece (RD)(Autoclavable)	cpm needs to be mentioned: 10,000 cpm or more	No change
B	Sector type blade.	should be deleted, Kindly clarify what is this item, as there are only oscillating types blades with redo saw	No change
C	Weight approx. 750 gms.	it's always considered with electric cable/ battery, in that case it ahs to be 1.2kg or less	No change
4.D	Spring loaded.	should be deleted, as every manufacturer has different system availble	No change
5	Company should be ISO 9001, 13485	Shoud be Manufacturer	No change
6	Instrument should be European CE / US FDA CERTIFIED	European CE with notified body number	Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
<b>BOQ</b>			
2	Reciprocating Saw Pistol Grip Hand piece (Autoclavable)	Sternum saw Pistol Grip Hand piece (Autoclavable)	No change
6	Reciprocating Type Blades	Sternum saw blades with sternum guard	No change

HITES/PCD/PMSSY-III/07/CTVS/17-18			
SCH 05. Battery Operated Sternum Saw System			
Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
1	Vertical (Reciprocating) Sternum Saw Hand Piece	Sternum saw is different and recip saw is different, it should be just "Sternum Saw Hand Piece" As the product asked is wrong, the requirement si for Sternum saw not recip saw	No change
b.	Should have two speed controls with standard and fastmode.	Sternum saw doesn't have two speed controls, it has pressure sensitive trigger for variable speed operation.	Amended as: Should have two speed controls with standard and fastmode or pressure sensitive trigger for variable speed operation.
5	Certification: Should have US FDA/European CE certificate and ISO certification		Amended as: Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
7	Should be supplied with following blades free of cost	No one will give 30 blades free of cost, this line should be deleted	No change
a.	Vertical Reciprocating SternumBlades: 30 Nos	Sternum Blades: 30 Nos	No change
	<b>BOQ</b>		
1	Vertical (Reciprocating) Sternum Saw Hand Piece	Sternum Saw Hand Piece	No change

<b>Prebid-Representations (Pre-Bid date: 20.06.2017)</b>			
<b>HITES/PCD/PMSSY-III/07/CTVS/17-18</b>			
<b>SCH 06. Ultrasonic Surgical Aspirator/Dissceter</b>			
<b>Para</b>	<b>TENDER SPECIFICATION</b>	<b>RESPRESENTATION RECEIVED FROM THE BIDDERS</b>	<b>COMMITTEE RECOMMENDATION</b>
2	The hand piece should work on Piezo Ceramic Technology.	It's Piezo Electric .The hand piece should work on Piezo Electric Technology.	Amended as The hand piece should work on Piezo Ceramic/piezoelectric Technology.
4	The system should have at least three different range of working frequency hand pieces. (25, 35, 55 kHz)	(i) 55Khz should be deleted, as there is no hand piece for CUSA with 55 Khz frequency. (ii) we will request that it should be 34/35 Khz for second hand piece The system should have at least two different range of working frequency hand pieces. (25, 35/35 kHz)	Amended as: The system should have at least two different range of working frequency hand pieces(25, 34/35 kHz). If system supports 55kHz also then quote separately
5	The system should have facility for both types of hand pieces (inside irrigation and outside irrigation)	It should be internal or external, it can't be both. The system should have facility for both types of hand pieces (inside irrigation or outside irrigation)	Amended as: The system should have facility for irrigation (external or inteernal) for hand pieces
6	The handpiece should be provided with multiple tips (both curved and straight) for aspiration.	(i) tips can't be curved, it can only be (1) staright and (2) straight with angled tips There are no curved tips, it's straight tips with angled on the tip	Amended as: The handpiece should be provided with multiple tips (both straight with angled at the tip and straight) for aspiration.
10	The system should have irrigation range of 0 to 150 ml / min.	very specific and very high values are mentioned, which is not even reuqired in actual surgical procedure, it should be made broad based like 3 to 40 ml/min or more for irrigation flow rate	Amended as: The system should have irrigation flow rate of 40 ml / min or more
11	The system should have Aspiration / Vacuum range of 0 to 0.9 bar.	we would like to request yiu to kindly mention the same in Hpa and mmhg, can used by all the manufacturers, it could be 650 hPa or more, which is equivalent to 0 to 500mmHg or more	Amended as: The system should have Aspiration / Vacuum of 0.6 bar or more
		<b>Added Para</b>	
		As you have asked for multiple hand pieces, so tips for them also differs, suggestions for the same are as below	Added para
		<b>A. For 25kHz hand piece:</b>	<b>A. For 25kHz hand piece:</b>

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
		(i) Standard tips for micro length 11cm or more and 12 cm or more - Qty 05 each	(i) Standard tips for micro length 11cm or more and 12 cm or more - Qty 05 each
		(ii) Standard tips for Macro 11cm or more - Qty 05	(ii) Standard tips for Macro 11cm or more - Qty 05
		(iii) Standard tips for high fibrotic lesion (standard) outer diameter 1.9mm, length 11cm or more and 2.40mm, length 11cm or more - Qty 05 each	(iii) Standard tips for high fibrotic lesion (standard) outer diameter 1.9mm, length 11cm or more and 2.40mm, length 11cm or more - Qty 05 each
		(iv) Tip for up roofing the bone (bone sculpting): a. length 7.5in, length 20cm or more - qty 05	(iv) Tip for up roofing the bone (bone sculpting): a. length 7.5in, length 20cm or more - qty 05
		(v). 3.8in, with length 9.5cm ore more - qty 05	(v). 3.8in, with length 9.5cm ore more - qty 05
		(vi) 4.5in, with length 11cm or more, d. 3.5in or more, length 7.5in or more with 2.5mm outer diameter or more - qty 05	(vi) 4.5in, with length 11cm or more, d. 3.5in or more, length 7.5in or more with 2.5mm outer diameter or more - qty 05
		(vii) Ring type tip with outer diameter 3.75mm or more - Qty 05	(vii) Ring type tip with outer diameter 3.75mm or more - Qty 05
		<b>B. For 34/35 kHz hand piece:</b> Straight tip with length 12cm or more - Qty 05 no's	<b>B. For 34/35 kHz hand piece:</b> Straight tip with length 12cm or more - Qty 05 no's
		<b>Important Accessories which are mising</b>	<b>Other Accessories</b>
		1. Step Torque wrench, Offset (7mm)	1. Step Torque wrench, Offset (7mm)
		2. Plastic Suction Canister, Reusable, qty 5 no's.	2. Plastic Suction Canister, Reusable, qty 5 no's.
		3. Disposable Suction Canister Liner, qty 10 no's.	3. Disposable Suction Canister Liner, qty 10 no's.
		4. Disposable Tubing Set & Extender Filter Tubing, qty 10 no's.	4. Disposable Tubing Set & Extender Filter Tubing, qty 10 no's.
		5. Sterilization Tray (7mm)	5. Sterilization Tray (7mm)
			All disposables and consumables items rate should be quoted separately and it should be fixed for 2 years

<b>Prebid-Representations (Pre-Bid date: 20.06.2017)</b>			
<b>HITES/PCD/PMSSY-III/07/CTVS/17-18</b>			
<b>SCH 07. ACT Machine</b>			
<b>Para</b>	<b>TENDER SPECIFICATION</b>	<b>RESPRESENTATION RECEIVED FROM THE BIDDERS</b>	<b>COMMITTEE RECOMMENDATION</b>
3.2	2 point clot detection facility to get accurate results		The equipment should have 2 channel for measuring the individual clotting time and average difference for the two channels with the help of 2 channel test cartridge
3.6	Digital Display on Screen of any size.		The display should show the coagulation time of 2 channels



Prebid-Representations (Pre-Bid date: 20.06.2017)			
HITES/PCD/PMSSY-III/07/CTVS/17-18			
SCH 08. Ultrasonic cutting & Coagulation system			
Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
2	It should be functional for both open and endoscopic surgery.	only 5mm instruments are required for both open and endoscopic surgery in CTVS department Kindly make it as it should be functional for open surgery and delete Endoscopic	No change
3	It should have both 5mm and 10mm instruments.	It should be 5mm/ 10mm, or 10mm should be deleted as 10mm instrument are required for Laparoscopic surgery not for open surgery like CTVS 10mm instrument are not required for the speciality for which this system has been asked Kindly amend it as It should have 9-10mm instruments.	Amended as: It should have both 5mm and 9-10mm instruments
6	It should have vibration range of 50-100 µm.	The vibration is always in Khz, it should be 35Khz or more to be broad based as you have mentioned in first point "ultrasonic generator capable of incising tissue and providing haemostasis with minimal injury"	No change
7	It should have 230 watt max. output.	Kindly delete this line.	No change
12	Necessary accessories required for cardiac procedures are to be provided.	1. Accessoires like transducer and shears should be specified with it's life 2. Some companies has reusable transducers which can be used for 50 times and some has disposable for single use, so there should be ratio like " reusable transducer or 25 numbers of transducers should be quoted" Kindly specify the accessories or probes and add this to BOQ	No change
<b>BOQ</b>			
2	Open Surgery handpiece 5mm (with transducer )	Dissecting Shears Straight Handpiece Open with transducer: a. Dissecting Shears Straight Handpiece Open - 10 pcs., as it's always disposable b. Transducer Open for Dissecting Shears Straight - 01 reusable or 25 disposables	Amended as: Dissecting Shears Straight Handpiece Open with transducer: a. Dissecting Shears Straight Handpiece Open - 10 pcs. b. Transducer Open for Dissecting Shears Straight - 01 reusable or 25 disposables

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
3	Open Surgery handpiece 10mm (with transducer )	Dissecting Shears Curved Handpiece Laparoscopic with transducer a. Dissecting Shears Curved Handpiece Laparoscopic - qty 10 pcs., as it's always disposable b. Transducer Open for Dissecting Shears curved - 01 reusable or 25 disposables Kindly amend Open Surgery hand piece 9-10mm (with transducer ) 1 No's	Amended as: Dissecting Shears Curved Handpiece Laparoscopic with transducer a. Dissecting Shears 9-10mm Curved Handpiece Laparoscopic - qty 10 pcs. b. Transducer Open for Dissecting Shears curved - 01 reusable or 25 disposables
4	Endosurgery Hand piece 5mm (with transducer )	Vessel Welder Straight Handpiece Open with transducer a. Vessel Welder Straight Handpiece Open - qty 10 no's, as it's always disposable b. Vessel Welder Straight Transducer Open - 01 reusable or 25 disposables	Amended as: Vessel Welder Straight Handpiece Open with transducer a. Vessel Welder Straight Handpiece Open - qty 10 nos b. Vessel Welder Straight Transducer Open - 01 reusable or 25 disposables
5	Endosurgery Hand piece 10mm (with transducer )	Vessel Welder Straight Handpiece Laparoscopic with transducer a. Vessel Welder Straight Handpiece laparoscopic - qty 10 no's, as it's always disposable b. Vessel Welder Straight Transducer laparoscopic - 01 reusable or 25 disposables	Amended as: Vessel Welder Straight Handpiece Laparoscopic with transducer a. Vessel Welder Straight Handpiece laparoscopic - qty 10 no's b. Vessel Welder Straight Transducer laparoscopic - 01 reusable or 25 disposables
		Kindly delete Endo surgery 10 mm hand piece	
6	Transducer for hand piece	Tansducers has been asked above also with all the types of shears, so it should be removed from here.	To be deleted
14	It should be supplied with cart, footswitch, cable transducer and one extra probe.		Amended as: It should be supplied with OEM cart, footswitch and necessary cables
		Add or specify: No of shares/Probes to be quote for 5mm & 9/10mm for open surgery	Already amended as above
		Add or specify: Also mention the no of reusable /Autoclavable transducers to be quoted ,	Already amended as above
		Add or specify: As our transducer is Autoclavable and is reusable consumable hence we request you to add reusable /Autoclavable	Already amended as above

<b>Prebid-Representations (Pre-Bid date: 20.06.2017)</b>			
<b>HITES/PCD/PMSSY-III/07/CTVS/17-18</b>			
<b>SCH 10. Extra Corporeal Membrane Oxygenator(ECMO)</b>			
<b>Para</b>	<b>TENDER SPECIFICATION</b>	<b>RESPRESENTATION RECEIVED FROM THE BIDDERS</b>	<b>COMMITTEE RECOMMENDATION</b>
E	IN LINE MEASUREMENT module OF PH, PCO2, PO2, electrolytes, lactate , HB and other calculated values	Please make this optional. The incorporation of the IN LINE measurement in the circuit needs an incorporation of a uncoated sensor or cell. This will break the integrity of the circuit and will introduce a non coated segment into the tip to tip ccoated circuit, which might result in thrombogenic activity which may lead to activation of and formation of clots. This will also nullify the benefits of fully coated circuit	No Change
	<b>BOQ</b>		<b>BOQ</b>
2	ABG Machine 1 no		Inline ABG measurement module as pecified above 1 no

Prebid-Representations (Pre-Bid date: 20.06.2017)			
HITES/PCD/PMSSY-III/07/CTVS/17-18			
SCH 12.Surgical Xenon head light and light source			
Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
1	Surgical Xenon head light with light source on professional head band, headlight Universal Floor stand with 9ft (275cm) premium bifurcated cable, headlight module and gown clips , headband should be lightweight material that's washable and breathable		Surgical Xenon head light with light source on professional head band, headlight OEM Floor stand with 9ft (275cm) premium bifurcated cables, headlight module and gown clips , headband should be lightweight material that's washable and breathable
2	Lightweight and flexible 3mm cable, Translucent outer sheath for visualization of fiber integrity,. Cool and bright light. Vibrant color rendition.		Lightweight and flexible 3mm cable, Translucent/semi translucent outer sheath for visualization of fiber integrity,. Cool and bright light. Vibrant color rendition.
3	Xenon bulb life should be min 1000hrs		Xenon bulb life should be min 1000hrs. If it stops working before 1000hrs then it should be replaced free of cost
4	Simple 2-point adjustment, comfortable to fit for all heads of all sizes. Easy to reach 4-position intensity switch		Simple 2-point adjustment, comfortable to fit for all heads of all sizes : 2 nos. Easy to reach 4-position intensity switch
9	Universal Floor stand new large casters- 75mm, 10° angle for better viewing of LCD display. Display of bulb life and intensity must		OEM Floor stand /trolley with large casters- 75mm, 10° angle for better viewing of LCD display. Display of bulb life and intensity must
	ii. Bulb life or guarantee should be clearly mentioned and spare bulb must be provided.		ii. Bulb life or guarantee should be clearly mentioned and one spare bulb must be provided
	iii. The unit should be USFDA or European CE approved.		Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
			<b>Added para</b>
			<b>BOQ</b>
			1. Xenon Light source 1 no
			2. Head light band with fiber optic cable 2 nos
			3. Spare bulb 1 no

			4. OEM Floor stand/Trolley 1 no
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Prebid-Representations (Pre-Bid date: 20.06.2017)			
HITES/PCD/PMSSY-III/07/CTVS/17-18			
SCH 13. LED Head Light			
Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
14	All accessories should be from the same manufacturer and should be European CE/ US FDA approved		Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
			<b>Added Para</b>
			<b>BOQ</b>
			1. LED Head Light Band 1 no
			2. rechargeable battery 3 nos
			3. Battery charger 2 nos
			4. Box for head light band and spares 1 no

**Prebid-Representations (Pre-Bid date: 20.06.2017)**

**HITES/PCD/PMSSY-III/07/CTVS/17-18**

**SCH 17. Thoracic Videoscopy System**

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
1.1	A thoracoscope is a thin, tube-like rigid endoscope instrument with a light and a lens for viewing.	kindly amend it as Up & Down angulation only A Thoracoscope is a thin , tube -like semi rigid endoscope instrument with a light and alens for viewing	Amended as: A thoracoscope is a thin, tube-like semi rigid endoscope instrument with a light and a lens for viewing.
3.1	Technical Specifications Thoracovideoscope		
2	Four-way angulation for complete examination	kindly amend it as Up & Down angulation only	Amended as: Two-way or more angulation for complete examination
7	Optical System- Field of view -90-100 degrees; Directional of view- 0 degree (forward viewing); Depth of field- 18 to 100 mm; Chip-1/4" CCD	kindly amend field of view as 90-120 degree kindly amend depth of field as 3 to 100mm	No change
8	Insertion Portion- Distal end outer diameter <= 10 mm approximately; Rigid portion outer diameter-<= 10 mm approximately; Working Length-300-350 mm	Kindly amend working length as 270 mm-350mm	Amended as: Insertion Portion- Distal end outer diameter <= 10 mm approximately; Rigid portion outer diameter-<= 10 mm approximately; Working Length-270-350 mm
9	Bending Section- Angulation range- Up 100-110 degree; Down 100-110 degree; Right 50-60 degree; Left 50-60 degree	Kindly amend bending section - angulation range -up100-160 degree kindly amend down 100-130 kidly delete right 50-60 degree : left 50-60 degree	Amended as: Bending Section- Angulation range- Up 100-110 degree; Down 100-110 degree. Additional angulation if any available pls specify and highlight
3.2	Video processor with light source , Monitor and Recording system with capacity of 1TB		Amended as: Video processor with light source , Monitor and Recording system with capacity of 5TB
	BOQ		

2	Video processor with light source , Monitor and Recording system with capacity of 1TB		Amended as: Video processor with light source , Monitor and Recording system with capacity of 5TB
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<b>Prebid-Representations (Pre-Bid date: 20.06.2017)</b>			
<b>HITES/PCD/PMSSY-III/07/CTVS/17-18</b>			
<b>SCH 18. Suction Machine</b>			
<b>Para</b>	<b>TENDER SPECIFICATION</b>	<b>RESPRESENTATION RECEIVED FROM THE BIDDERS</b>	<b>COMMITTEE RECOMMENDATION</b>
1.1	Should be noiseless & should have fast vacuum build up	CTVS suction system is low pressure not high pressure, It should have adequate pressure build up for air leaks and chest drainage Should have a graphic display for all features like flow, fluid drainage, on/off, and battery charging, alarms and therapy numbers selection buttons.	No Change
1.2	Should have max vacuum of 675mm Hg	It should be minimum 700 mmHg or more for the capacity asked below for OT Use It should be -75mmHg with - 10Kpa for CTVS dept	Amended as: Should have max vacuum of 650mm Hg or more
1.3	Suction capacity should be 100L/min & twin bottle capacity of 3L each	Suction capacity should be 50-60 L/min	Amended as: Suction capacity should be 50-60L/min & twin bottle capacity of 3L each
		For OT use: Suction capacity should be 60 ltr/min or more, there is no USFDA product which is above 60 ltr/min, European CE declaration for suction capacity has no relevance as the European CE certificate is issued after the documents presented by company, it's not issued after checking teh quality of the product For CTVS Dept: Suction capacity of 5 ltr/min	No Change
1.4	Should have mechanical overflow protection system	Should have double lumen patient tubing to prevent from any blockage.	No Change
1.5	Should be supplied with all necessary accessories for the complete system	System should consist of digital low flow suction pump, 0.3 and 0.8 ltrs disposable containers and double lumen tubing	No Change
1.6	System should select second jar automatically	Should selected second jar automatically or manually (automatic feature make by only one manufacturer)	Amended as: Should selected second jar automatically or manually
		OT Use: It can't be selected automatically, you need change over device for this CTVS Dept use: System should give alarm, Should be ready to dock disposable canisters with capacity 0.3L, 0.8L	Already amended as above
1.8	Should have 4 castors with 2 of them have breake	Weight of the system should not be more than 1 Kg, it should be a portable device	No Change

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
1.9	Oil free and maintenance free vacuum pump	It should be carbon fiber based piston cylinder, which is noiseless and maintainence free	No Change
		Added para:	
		It should be USFDA and European CE approved, with 4 digit notiifed body number	Added para: Product should be European CE approved (with 4 digit notifying body no) or USFDA Approved.
		It should have ISO and IP5 protection, nesessary for suction device	No Change
		System should give alram and visual indicator for any blockage, cantister full and for abnormal air leaks	No Change
		it should be a complete digital system	No Change

**Prebid-Representations (Pre-Bid date: 20.06.2017)**

**HITES/PCD/PMSSY-III/07/CTVS/17-18**

**SCH 19. Color Doppler Echocardiography System (Mid End)**

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
2.1	Latest generation Electronic Phased array Color Doppler system with Minimum 512 Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS..	<p>Request to consider atleast 10,00,000 digitally processed channels as we moved away from analog processing to digital processing</p> <p>Latest generation Electronic Phased array Color Doppler system with Minimum 1.5 Lakhs or more Electronic independent channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS. Justification: You would agree that all major vendors can offer these specs and this would ensure all vendors quote on same level platform.</p>	Amended as: Latest generation Electronic Phased array Color Doppler system with Minimum 50000 digital processing channels. System should be DICOM ready and capable of being interfaced with HIS/RIS/PACS..
3.1	Latest generation Electronic Phased array Color Doppler system with Minimum 512 Electronic independent channels.	<p>Request to consider atleast 10,00,000 digitally processed channels as we moved away from analog processing to digital processing</p> <p>Latest generation Electronic Phased array Color Doppler system with Minimum 1.5 lakhs Electronic independent channels. Justification: You would agree that all major vendors can offer these specs and this would ensure all vendors quote on same level platform.</p>	To be deleted
3.4	Adult Cardiac and Vascular Probes to be supplied which should be latest generation wide band transducers without frequency selection for higher sensitivity of response over a broader frequency range of operation. All probes to be phased array OPTIONAL Probes for paediatric application and Transesophageal Echo for future requirement.		Amended as: Adult Cardiac and Vascular Probes to be supplied which should be latest generation wide band transducers without frequency selection for higher sensitivity of response over a broader frequency range of operation. All probes to be phased array Probes for paediatric application and Transesophageal Echo.
3.9	Frame rate should be 300 FPS or more	<p>The system should have a frame rate of at least 1000 frames per second (fps) in B mode better resolution and color scensitivity</p> <p>Request you to increase to 1200 frames per second</p>	Amended as: Frame rate should be 800 FPS or more

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
		Frame rate should be 1000 FPS or more	

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
3.13	Monitor should be 15" or more, high resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.	<p>Monitor should be 19" or more, high resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.</p> <p>Request you to increase to 19 inch monitor</p> <p>Monitor should be 21" or more, high resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.</p>	<p>Amended as:</p> <p>Monitor should be 18" or more, high resolution colour Monitor. Tilt and Swivel monitor should be able to view in all angles and all light conditions.</p>
3.17	Cine loop memory- more than 120MB of memory. High Frame rate review for better clarity of playback images study in slow motion. Quad loop with memory for pre and post image comparison of any procedure. Memory- 256 frames or more in quad loop. M Mode & Doppler Scroll Memory-40seconds or more. Frame grabber facility for post analysis.	Request you to increase to 500 GB	<p>Amended as:</p> <p>Cine loop memory- more than 120MB of memory. High Frame rate review for better clarity of playback images study in slow motion. Quad loop with memory for pre and post image comparison of any procedure. Memory- 256 frames or more in quad loop. M Mode &amp; Doppler Scroll Memory-40seconds or more. Total storage capacity of 5TB (internal and external hard disc combined)</p>
3.23	Tissue movement colorization with quantification possibility for IHD/CAD patients.		Amended as: 2D speckle tracking with quantification possibility for IHD/CAD patients.
3.24	Three transducer ports standard	Four transducer ports standard	Amended as: Three or more active transducer ports
4.4	Multi-plane TEE Probe 4-8 MHz for Adult as well as Paediatric echocardiography. - 01 each (Standard)	Most of the company do not have Pediatric TEE transducer for Echocardiography .So it should amended as Multiplaner TEE probe 4-8 MHZ for Adult only	Multi-plane 2D TEE Probe 4-8 MHz one for Adult and one for Paediatric echocardiography. - 1 set as standard

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
4.7	Color printer - 01 nos		High end laser Color printer with autoduplexing - 01 nos
			System should provide with Latest PC of Apple or equivalent brand (off-line licensed workstation) with minimum 1TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 USB port, Inbuilt Bluetooth & Wi-Fi, 24" Touch screen LED Monitor, Keyboard, mouse, 10 or latest Windows professional or equivalent, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software should be supplied. PC should be supplied with the licensed software to work on the below features. i. Strain and Strain rate imaging. ii. Semi-Automated Border Detection. iii. Tissue Motion Annular Displacement. iv. 2D speckle tracking (any other Hardware essential for OFFLINE Quantification)
			Other Requirements: 1.Two good quality, branded increased height chairs (revolving with back rest) to be provided for the echo-cardiographer. 2 There should be one high quality large size table of reputed brand (eg. Godrej, etc.) to keep Workstation (computer & printer).
	<b>BOQ</b>		<b>BOQ</b>
4	Multi-plane TEE Probe 4-8 MHz for Adult as well as Paediatric echocardiography. - 01 each (Standard)		Amended as: Multi-plane 2D TEE Probe 4-8 MHz one for Adult and one for Paediatric echocardiography. - 1 set as standard
7	Color printer - 01 nos		Amended as: High end laser Color printer with autoduplexing - 01 nos
			<b>Added para</b>
			12. Workstation as specified above 1 no
			13. Revolving chair as specified above 2 nos
			14. Table as specified above 1 nos

**Prebid-Representations (Pre-Bid date: 20.06.2017)**

**HITES/PCD/PMSSY-III/07/CTVS/17-18**

**SCH 20. 4D Colour Doppler Echocardiography System (High End)**

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
3	System must have adult and Pediatric cardiology transducer with either single crystal technology or pure wave technology or matrix for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology	System must have adult cardiology transducer with either single crystal technology or pure wave technology or matrix for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology	a. System must have adult cardiology transducer with either single crystal technology or pure wave technology or matrix for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology b. System must have Paediatric cardiology transducer with either phased array or matrix technology for excellent gray scale image quality on difficult to image patients. Please mention the technology used in the transducer. Original technical data sheet should be enclosed in technical bid to support the crystal technology
22	Should be provided with (One Each of) : Adult transthoracic 2 D probe (with Frequency ranging from 1-5 MHz $\pm$ 1 MHz, of Single crystal or Pure Wave technology (System offered with normal transducer for Adult ECHO are liable for rejection)), <b>Adult Transthoracic 3 D probe(Convex Array matrix Transducer with Frequency ranging from 1-5 MHz <math>\pm</math>1 MHz)</b> , Paediatric Transthoracic 2 D probe, Adult Transesophageal 3 D probe, Paediatric Transesophageal 2D probe, Epi-aortic probe, vascular probe (Linear Array Matrix transducer with Frequency of 3-15MHz). Linear array probe with frequency ranging from 4-11 $\pm$ 2 MHz for peripheral vascular examination.	Should be provided with (One Each of) : 1.) Adult transthoracic 2 D probe (with Frequency ranging from 1-5 MHz $\pm$ 1 MHz, of Single crystal or Pure Wave technology (System offered with normal transducer for Adult ECHO are liable for rejection)), <b>2.) Adult Transthoracic 2 D probe(Convex with Frequency ranging from 1-5 MHz <math>\pm</math>1 MHz),</b> 3.) Paediatric Transthoracic 2 D probe, 4.) Adult Transesophageal 3 D probe, 5.) Paediatric Transesophageal 2D probe 6.) Epi-aortic probe, vascular probe (Linear Array Matrix transducer with Frequency of 3-15MHz) 7.) Linear array probe with frequency ranging from 4-11 $\pm$ 2 MHz for peripheral vascular examination. <b>8) Pediatric TEE Probe (to be added)</b>	Should be provided with (One Each of) : 1. Adult transthoracic 2 D probe Phased array matrix transducer with Frequency ranging from 1-5 $\pm$ 1 MHz, of Single crystal or Pure Wave technology (System offered with normal transducer for Adult ECHO are liable for rejection) 2. Adult Transthoracic 3 D probe Phase Array matrix Transducer with Frequency ranging from 1-5 $\pm$ 1 MHz, 3. Paediatric Transthoracic 2 D probe 4. Adult Transesophageal 3 D probe 5. Paediatric Transesophageal 2D probe 6. Epi-aortic probe, vascular probe Linear Array Matrix transducer with Frequency of 7-15 MHz 7. Linear array Probe with frequency ranging from 4-11 $\pm$ 2 MHz. for Peripheral vascular 8. Optional probes if available quoted separately ( Quoted rate Will not be considered for comparison. Rate Justification for same needs to be provided with.) a. Neonatal TEE probe b. Paediatric 3D transthoracic probe

Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
23	<p>System should provide with- a. Latest PC of Apple or equivalent brand (off-line licensed workstation) with licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software and High End colour laser Printer should be supplied. PC should be supplied with a flat panel 17 inch display monitor. (Hardware essential for OFFLINE Quantification) b. Latest B/W Thermal Printer. c. 3KVA online UPS with a backup of 30 min minimum, from any reputed brand</p>		<p>System should provide with a.) Latest PC of Apple or equivalent brand (off-line licensed workstation) with minimum 2TB Hard drive, 2x8 GB DDR 3 RAM, Intel i7- 3.5 GHz or higher processor, Two serial port, Minimum 4 USB port, Inbuilt Bluetooth &amp; Wi-Fi, 24" Touch screen LED Monitor, Keyboard, mouse, 10 or latest Windows professional or equivalent, licensed software for analyzing and quantification of 2D and 3D data sets, CD/DVD writer with Image Management Software and High End colour laser Printer with auto duplexing should be supplied. PC should be supplied with the licensed software to work on the below features.</p> <ul style="list-style-type: none"> <li>i. Strain and Strain rate imaging.</li> <li>ii. Semi-Automated Border Detection.</li> <li>iii. Tissue Motion Annular Displacement.</li> <li>iv. Mitral Valve 3D data sets</li> <li>v. 2D speckle tracking (any other Hardware essential for OFFLINE Quantification)</li> </ul> <p>b.) Latest B/W Thermal Printer. c.) One 3KVA online UPS with a backup of 30 min minimum, from APC or Emerson brand d.) ECG cable: two in numbers</p>
			<p>Added Para: System should have DICOM 3.0. System should have DICOM 3.0 print and store service classes with support for modality, worklist, perform procedure set up, storage commit.</p>
			<p>Other Requirements:</p> <ol style="list-style-type: none"> <li>1. Two good quality, branded increased height chairs (revolving with back rest) to be provided for the echo-cardiographer.</li> <li>2 There should be one high quality large size table of reputed brand (eg. Godrej, etc.) to keep Workstation (computer &amp; printer).</li> <li>3. 50 rolls of thermal paper to be provided for thermal printer.</li> <li>4. Colour Print Paper (Glossy)- 500 sheets</li> <li>5. One set of Color laser printer (compatible) cartridges, in addition to the supplied with printer.</li> </ol>
BOQ			BOQ amended as follows:



Para	TENDER SPECIFICATION	RESPRESENTATION RECEIVED FROM THE BIDDERS	COMMITTEE RECOMMENDATION
			1. 4D Echo machine with all latest softwares as specified above 1 no
			2. Adult transthoracic 2 D probe as specified above 1 no
			3. Adult Transthoracic 3 D probe as specified above 1 no
			4. Paediatric Transthoracic 2 D probe 1 no
			5. Adult Transesophageal 3 D probe 1 no
			6. Paediatric Transesophageal 2D probe 1 no
			7. Epi-aortic probe, vascular probe as specified above 1 no
			8. Linear array Probe as specified above 1 no
			9. Optional probes if available quoted separately ( Quoted rate Will not be considered for comparison. Rate Justification for same needs to be provided with.) a. Neonatal TEE probe b. Paediatric 3D transthoracic probe
			10. Revolving chair as specified above 2 nos
			11. Table as specified above 1 nos
			12. Workstation as specified above 1 no
			13. Color laser printer 1 no
			14. Online UPS as specified above 1 no
			15. Thermal printer 1 no
			16. 50 rolls of thermal paper to be provided for thermal printer.
			17. Colour Print Paper (Glossy)- 500 sheets
			18. One set of Color laser printer (compatible) cartridges, in addition to the supplied with printer.