

29.03.2022

**Amendment No. 10****Sub: Extension of due dates and Amendment to the referred tender enquiry****Ref.: HITES/PCD/AIIMS-IV/41/Radiology/21-22 dated 18-09-2021 read with its Amendment No 1, 2, 3, 4, 5, 6,7, 8 and 9 dated 26.10.2021, 17.11.2021, 03.12.2021, 27.12.2021, 19.01.2022 07.02.2022, 23.02.2022, 09.03.2022 and 17.03.2022 respectively.**

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

**SECTION – VII**  
**TECHNICAL SPECIFICATIONS**

<b>Item No.1 :- CT 128 Slice (Tender ID : 2021_HLL_88689_1)</b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
Page 46 , Point 1.3	1.3 Gantry Tilt : Minimum tilt of 20 degree on either side	1.3 Gantry Tilt : Minimum <b>Physical/Digital</b> tilt of 20 degree on either side.
1.4	Integrated display panel Gantry front showing <b>current scan parameters such as kV, mA etc.</b>	<b>Integrated display panel Gantry front showing patient information, an ECG, breath-holding and scan guidance.</b>
Page 46 , Point2	2. SINGLE SOURCE DUAL ENERGY	<b>2. DUAL ENERGY TECHNOLOGY</b>
Page 46 , Point2.2.10	Vascular Plaque characterization: Vascular Plaque characterization using dual energy method	Vascular Plaque characterization: Vascular Plaque characterization using dual energy method <b>(Optional)</b>
		<b>Added Para: Dual Energy in Cardiac mode (OPTIONAL )</b>
Page 46 , point 3.3 & 4.1	3. X-RAY GENERATOR : 3.3 KV : 70-140 KVP TUBE ASSEMBLY : 4.1Tube voltage : 70-140KV or more	3. X-RAY GENERATOR : 3.3 KV : <b>80-135 KVP</b> TUBE ASSEMBLY : 4.1Tube voltage : <b>80-135KV</b> or more
Page 47, Point 4.3	Tube ASSEMBLY : Anode heat storage capacity >=8MHU	Tube ASSEMBLY : Anode heat storage capacity >=8MHU <b>or Direct Cooling Technology</b>
Page 46, point 4.5	TUBE ASSEMBLY Focal Spot : 1.0cm X 1.0cm or less	Focal Spot : <b>Please specify.</b>
Page 47, Point 6.1.2	SCANNING MODES : Scan time for full 360 degree rotation in all modes 0.28 sec	SCANNING MODES : Scan time for full 360 degree rotation in all modes <b>0.35 sec</b>

Page 47, point 7.2	Whole brain perfusion : The system should do whole brain CT perfusion with coverage of not less than 12 cm.	Whole brain perfusion : The system should do whole brain CT perfusion with coverage of not less than <b>8 cm</b> .
7.4	2D intervention scan mode 2D intervention for biopsy needle planning	<b>CT – guided intervention 3D fluoroscopy</b>
Page 48 ,Point 11.1	IMAGE POST PROCESSING Architecture A Client Server Architecture based solution (Intellispace portal/ AW Server/Syngo Via etc)	IMAGE POST PROCESSING Architecture A Client Server Architecture based solution (Intellispace portal/ AW Server/Syngo Via etc) <b>Added Para :</b> <b>Server Hardware details: Intel Gold CPU 8-core, 96GB RAM, 3TB storage with separate disks for system SW, Win Server 2019 edition &amp; NVIDIA 8GB GPU Mandatory hardware replacement of the server, client PCs and medical grade monitors to the latest available and compatible version, after 5 years from installation</b>
Page 48, Point 11.2	Client hardware (2 units) specification for each client station	Client hardware ( <b>5 units</b> ) specification for each client station
Page 48 ,point 11.2.2	CPU Unit : CPU unit with 2 six core processors, Minimum 32 GB (8 GB X 4) RAM, NVIDIA 1 GB or equivalent, 1TB hard drive and 256 GB SSD	CPU Unit : CPU unit with 2 six core processors, Minimum <b>96 GB RAM</b> , NVIDIA 1 GB or equivalent, <b>20TB</b> hard drive and 256 GB SSD
Page 48, point 11.4	Advanced application as mentioned below (1 number of floating license)	Advanced application as mentioned below ( <b>2 numbers of concurrent license</b> )
Page 48 , point 11.4.2	CT Neuro perfusion Software for advanced cerebral perfusion study with stroke protocol and summary maps of the perfused area	CT Neuro perfusion Software for advanced cerebral perfusion study with stroke protocol and summary maps of the perfused area <b>Added Para :</b> <b>CT Neuro perfusion Software for advanced cerebral perfusion study with CBV,CBF,TTP, ASPECT Score measurements (OPTIONAL)</b>  <b>Calculation of the ASPECT score (Alberta stroke program early CT score) based on a 10-point quantitative topographic CT scan along with CT Neuro Perfusion software (OPTIONAL)</b>
Page 48, Point 13.2	<b>13. DOSE REDUCTION TECHNIQUES</b> Model based Iterative reconstruction (software & hardware) Advanced model based Iterative	<b>Latest Iterative Reconstruction Technique:</b>  <b>Iterative reconstruction technology for all imaging protocols which reduces dose while simultaneously improving low contrast</b>

	reconstruction technology for all imaging protocols including brain including hardware and software(ADMIRE/VEO) should be offered	<b>detectability &amp; spatial resolution and reduces image noise.</b>
Page 48, Point 13.3	<b>13. DOSE REDUCTION TECHNIQUES</b> Pediatric & infant protocol Low dose 70 kv CT protocols must be provided	<b>Dedicated pediatric / infant protocol to be offered by the vendor.</b>
Page 49 point 14.2	The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid.	<b>The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid. If the quoted model has not been yet installed in India, vendor should submit NOC from AERB. Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC period.</b>
Page 49 point 19.8	TRAINING On site Training for a period of Two Weeks	TRAINING On site Training for a period of <b>4 (four) Weeks</b>
Page 49 ,Point 19.7	Miscellaneous Remote Diagnostics Service Software for Remote Diagnostics Service over a telephone line.	Miscellaneous Remote Diagnostics Service : Software for Remote Diagnostics Service over a telephone line. <b>The broadband line will be provided by end consignee</b>
Page 49 ,Point 20.3	The cost of Site modification work for the area of 1200 sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose.	The cost of Site modification work for the area of <b>1000 sq.ft</b> and Air-conditioning of <b>Tonnage 20 TR (including standby unit/s)</b> will be considered for Ranking / Evaluation purpose.
Page 52 BOQ Para 4	Air Conditioning : 15 TR	Air Conditioning : <b>20 TR</b>
Page 50 ,Point a(1)	Flooring :- 600 x 600 mm vitrified tiles with 100mm tile skirting to match in console room, lobby and patient preparation areas, Radiologist room etc.	Flooring :- 600 x 600 mm vitrified tiles with 100mm tile skirting to match in <b>CT Gantry &amp; Console room</b> , lobby and patient preparation areas, Radiologist room etc.
Page 50 ,Point b(1)	Painting :- Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, CT Gantry & Equipment room etc.	Painting :- Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, CT Gantry & Equipment room, <b>Radiologist room</b> etc.
Page 50 ,Point (1)	Plumbing work : Hot water service to be provided if required	Plumbing work : Hot water service to be provided if required, <b>(The water supply line and drain line will be provided by consignee upto CT complex)</b>
		Added Para under Electrical Work : <b>Adequate number of earthing required for</b>

		<b>equipment and accessories should be provided by the equipment vendor.</b>
3 - Air conditioning (Pg 50)	Ductable package air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.	<b>Ductable split air conditioners and split AC</b> units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
		Added Para : <b>Dehumidifier of 110 Liter - 2 Nos.</b>
Page 51, Point 3	Broadband connection: for REMOTE SERVICE of CT system.	<b>Broadband connection:</b> <b>Broad band connection will be provided by the end user however, internal LAN cable work should be done by the vendor within the CT room. Also vendor should provide hardware accessories like WIRELESS DUAL BAND outer or required access points.</b>
Miscellaneous , point 4 (Pg 52)	Miscellaneous Dry chemical power type fire extinguisher of 5kgs capacity	<b>Fire extinguisher ABC type of 2kg each as required for the building safety - 5 nos.</b>
Page 52, Point 4	Modification Work Air Conditioning - 15 TR	<b>Air Conditioning - 20 TR</b>
Page 52 , point 3	Miscellaneous Broadband connection: for REMOTE SERVICE of CT system.	<b>Deleted</b>
11.4.3.	Cardiac Function and Ca scoring Left Ventricular Analysis (LVA), Left ventricular wall analysis and Automated left ventricular segmentation	Cardiac Function and Ca scoring Left Ventricular Analysis (LVA), Left ventricular wall analysis and Automated left ventricular segmentation <b>Added Para : CT FFR Software to be provided (OPTIONAL)</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b>Item No.2 :- CT 256 Slice (Tender ID : 2021 HLL 88689 2)</b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
Page 53, Point 1 g.	Gantry : Aperture should be at least 70 cm diameter	Gantry : Aperture should be <b>at least 75 cm diameter</b>
Page 53 ,point 2(d)	The X ray Tube should be essentially Dual Focus. The heat storage capacity should be at least 5.5 MHU or equivalent. Specify the method and technique of cooling.	The X ray Tube should be essentially Dual Focus. The heat storage capacity should be at least <b>8 MHU or equivalent or more</b> . Specify the method and technique of cooling.
Page 55, Pont 7 (K)	Workstations & Server: A multimodality client server architecture based solution with minimum concurrent 24000 slices rendering capacity, with 64GB RAM with storage of minimum 2TB and Additional online storage of 10 TB on the server. Client hardware specification- 2no.s Workstation with two licences : dual quad core processor, 16 GB RAM, 1TB hard drive, DVD Writing with medical grade monitor of minimum 2 MP resolution & 3 button mouse. The server client solution offered should be OEM	Workstations & Server: A multimodality client server architecture based solution with minimum concurrent <b>40000 slices</b> rendering capacity, with <b>96 GB RAM</b> with <b>total</b> storage of minimum <b>20 TB</b> . Client hardware specification- 2no.s Workstation with two licences : dual quad core processor, 16 GB RAM, 1TB hard drive, DVD Writing with medical grade monitor of minimum 2 MP resolution & 3 button mouse. The server client solution offered should be OEM
Page 55, Pont 7 (l)	Whole organ (brain & body) perfusion CT.	Whole organ (brain & body) perfusion CT. <b>Scanner should have capability of Whole brain acquisition of Minimum 10 cm of coverage.</b>
Page 56 , Point i	DUAL ENERGY APPLICATIONS to be provided as standard: Mention the technology for dual energy acquisition: rapid kV switching or dual source or simultaneous or other method. Minimum 2 nos of concurrent users should be possible. Renal Calculi Characterisation, Gout, Cardiac including myocardial perfusion, Lung perfusion & pulmonary emboli dedection, Vascular plaque characterisation, Virtual NCCT, Direct Neuro CTA, Contrast vs blood differentiation, Monoenergetic imaging, Tissue differentiation (tendon ligament), Endo leak assesment	DUAL ENERGY APPLICATIONS to be provided as standard: Mention the technology for dual energy acquisition: rapid kV switching or dual source or simultaneous or other method. Minimum 2 nos of concurrent users should be possible. Renal Calculi Characterisation, Gout, Cardiac including myocardial perfusion, Lung perfusion & pulmonary emboli dedection, Vascular plaque characterisation, Virtual NCCT, Direct Neuro CTA, Contrast vs blood differentiation, Monoenergetic imaging, Tissue differentiation (tendon ligament), Endo leak assesment. <b>Added Para :</b> <b>Dual energy for coronary analysis</b>
Page 56 , Point 8.g	Should have model based iterative reconstruction technique (VEO/ADMIRE/IMR) for X Ray dose reduction. If VEO is not available, vendor	Should have model based iterative reconstruction technique (VEO/ADMIRE/IMR) for X Ray dose reduction. If VEO is not available, vendor should submit an undertaking from OEM.

	should submit an undertaking from OEM.	<b>Added Para : Latest Deep Learning Algorithm for image reconstruction to be provided, if available with the vendor.</b>
(Pg 52), point 3	Dry chemical power type fire extinguisher of 5kgs capacity	<b>Fire extinguisher ABC type of 2kg each as required for the building safety - 5 nos.</b>
		<b>Added Para:</b> <b>1. Acquisition of Dynamic Myocardial Perfusion and post processing of the acquired data to be offered (OPTIONAL)</b> <b>2. CT FFR Software to be provided (OPTIONAL)</b>
		2. Dynamic CTA with a coverage of more than 31 cm to cover large areas greater than detector width <b>Added Para : Dynamic 4D CT should be provided.</b>
		<b>Added Para :</b> <b>For dynamic CTA upto 16 cm coverage should be there (OPTIONAL)</b>  <b>3-4 Concurrent user along with Server should be provided (OPTIONAL)</b>
Page 58 ,point 3	The cost of Site Modification for the area of 1000 sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose. Total capacity of the Air-Conditioning (duct-able) for the entire CT scan centre area should be at least 15 TR.(incl. standby airconditioning) with humidity control between 55-60 % RH	The cost of Site Modification for the area of 1000 sq.ft and Air-conditioning of <b>Tonnage 20 TR (including standby unit/s)</b> will be considered for Ranking / Evaluation purpose. Total capacity of the Air-Conditioning (duct-able) for the entire CT scan centre area should be at least 15 TR.(incl. standby airconditioning) with humidity control between 55-60 % RH
Page 59 , point a(1)	Flooring :- 600 x 600 mm vitrified tiles with 100mm tile skirting to match in console room, lobby and patient preparation areas, Radiologist room etc	Flooring :- 600 x 600 mm vitrified tiles with 100mm tile skirting to match in <b>Gantry &amp; console room</b> , lobby and patient preparation areas, Radiologist room etc
Page 59 , point b(1)	Painting :- Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, CT Gantry & Equipment room etc.	Painting :- Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, CT Gantry & Equipment room, <b>Radiologist room</b> etc.
Page 59 ,point 2	Plumbing work : Hot water service to be provided if required.	Hot water service to be provided if required, <b>(The water supply line and drain line will be provided by consignee upto CT complex)</b>
		<b>Added Para under Electrical Work :</b> <b>Adequate number of earthing required for equipment and accessories should be provided by the equipment vendor.</b>
Page 60 ,	Air Conditioning :- Ductable package air	<b>Ductable split air conditioners and split AC units</b>

point 3	conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day	may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
		<b>Added Para :</b> <b>Dehumidifier of 110 Liter - 2 Nos.</b>
Page 60 point 3	<b>Miscellaneous:</b> Broadband connection: for REMOTE SERVICE of CT system	<b>Deleted</b>
Page 61 , point 4	Components of Site Modification Work : Air Conditioning - 15 TR	Components of Site Modification Work : <b>Air Conditioning - 20 TR</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b>Item No.3 : Biplane DSA (Tender ID : 2021_HLL_88689_3)</b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
Page 63, point A.5	Both gantries should have fast speed for angulations and positioning. The frontal system should have a speed of at least 10 degree/sec. for all positions and lateral plane should have a speed of at least 8 degree/sec	Both gantries should have fast speed for angulations and positioning. The frontal system should have a speed of <b>at least 15 degree/sec</b> . for all positions and lateral plane should have a speed of at least 8 degree/sec
Page 63, point A.7	Both the gantries should have an automatic positioning capability dependent on the reference image being selected	Both the gantries <b>including table</b> should have an automatic positioning capability dependent on the reference image being selected
Page 63 B1.	The table should have motorized Vertical & longitudinal and free floating	The table should have motorized Vertical & longitudinal and free floating <b>with head tilt facility.</b>
Page 63, point D 1.ii)	X-Ray Tubes: 0.5 mm or less with load 15 KW or more in minimum one plane.	X-Ray Tubes: 0.5 mm or less with load <b>40 KW or more</b> in minimum one plane.
Page 63, point D .2	Anode heat storage capacity should be 1.7 MHU or more having liquid bearing technology or metal lubricant	Anode heat storage capacity should be <b>5 MHU or more</b> having liquid bearing technology or metal lubricant
Page 63, point E .2	Collimator : The collimator should have facility for automatic copper pre-filtration for reducing the x-ray dose.	Collimator : The collimator should have facility for automatic <b>/pre-program / suitable alterante technology</b> copper pre-filtration for reducing the x-ray dose.

Page 64, point F.1	Biplane Digital System: Dynamic flat detector system with high spatial and 14 bit contrast resolution	Biplane Digital System: Dynamic flat detector system with high spatial and <b>16 bit contrast resolution with 2k matrix resolution</b>
Page 64, point F.2	Biplane Digital System: Size of frontal plane should be at least 39 cm diagonal	Biplane Digital System: Size of frontal plane should be <b>at least 45 cm</b> diagonal
Page 64, point G.4a	Rotational angiography facility (2D & 3D) at a speed of at least 30 degree/sec. with acquisition frame rate of at least 25 frames/sec. in 1k matrix with facility for online display of subtracted images should be available. Specify if the rotational angiography is with on-line subtraction in 1024 matrix.	Rotational angiography facility (2D & 3D) at a speed of <b>at least 40 degree/sec.</b> with acquisition frame rate of at least 25 frames/sec. in 1k matrix with facility for online display of subtracted images should be available. Specify if the rotational angiography is with on-line subtraction in 1024 matrix.
Page 65, Point G 6	It should have minimum image storage capacity of 75,000 images in the 1024 x 1024/12 bit.	It should have minimum image storage capacity of <b>50,000 or more</b> images in the 1024 x 1024/12 bit.
Page 66, point H.13	Essential accessories: ACT machine and cartridges / tubes	Essential accessories: ACT machine and <b>30 nos</b> cartridges / tubes
		<b>Added Para :</b> <b>TRAINING</b> <b>On site Training for a period of 4 Weeks</b>
Page 66, Point 3	The Site Modification Work - Biplane D.S.A : The cost of Site Modification Work for the area of 1500sq.ft and Air-conditioning of Tonnage 20 TR will be considered for Ranking / Evaluation purpose	The Site Modification Work - Biplane D.S.A : The cost of Site Modification Work for the area of 1500sq.ft and Air-conditioning of <b>Tonnage 25 TR (including standby unit)</b> will be considered for Ranking / Evaluation purpose
Page 67, Point a.1	Flooring : 600 x 600 mm vitrified tiles with 100mm tile skirting to match in console room, lobby and patient preparation areas, Radiologist room etc.	Flooring : 600 x 600 mm vitrified tiles with 100mm tile skirting to match in <b>DSA Examination Room</b> , console room, lobby and patient preparation areas, Radiologist room etc.
Page 67, Point B.1	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, <b>Biplane DSA room</b> & Equipment room etc	Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, & Equipment room etc. <b>Added Para : Full height wall tiles should be provided in the Biplane DSA room.</b>
Page 68	Air Conditioning : Ductable package air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture	Air Conditioning : <b>Ductable split air conditioners and split AC units</b> may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment

	condensation on equipment surface. . The Air conditioning should be designed with standby provision to function 24 hours a day	surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
Page 69,Point IV	Miscellaneous: Broadband connection: for REMOTE SERVICE of Biplane DSA system	<b>Deleted</b>
Page 69,Point VI	Fire extinguisher Dry CO2 type as required for the building safety	<b>Fire extinguisher ABC type of 2kg each as required for the building safety - 5 nos.</b>
Page 71,Point 4	Air Conditioning	<b>Air Conditioning-25 TR</b>
(Pg 71) Point 3	Miscellaneous : Dry chemical power type fire extinguisher of 5kgs capacity	Miscellaneous : <b>Fire extinguisherABC type of 2kg each as required for the building safety - 5 nos.</b>
		<p><b>Added Para :</b></p> <ol style="list-style-type: none"> <li>1. The system should be possible to assess lesion in ischemic stroke patients with intravenous injection (OPTIONAL).</li> <li>2. It should be possible for different density structures such as bone, contrast filled vessels, stents, clips &amp; coils to be identified separately in image in real time.(OPTIONAL).</li> <li>3. It should be possible to fuse the 3D CT data with 3D Angio to combine high resolution vessel information with soft tissue information.(OPTIONAL).</li> <li>4. It should be possible to have CT/MR/PET fusion application (OPTIONAL).</li> <li>5. 3D road mapping facility directly from CT/MR 3D image without rotational angio 3D image to save contrast and radiation (OPTIONAL). (Unit price to be quoted separately and the same should be valid for warranty period)</li> <li>6. Software for 4D DSA to be offered (OPTIONAL)</li> <li>7. Aneurysm flow software to be offered (OPTIONAL)</li> </ol>
Page 62	I. Certifications: 1 The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid. Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC period.	I. Certifications: 1. The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid. <b>If the quoted model has not been yet installed in India, vendor should submit NOC from AERB.</b> Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC

		period.
		Added Para under para H. Essential Accessories : <b>22). Anesthesia Workstation (1 No) : With atleast 8 inch screen and integrated electronic ventilator, 2 vaporiser, inbuilt suction and circle absorber.</b> <b>23). Multiparmeter Vital Signs Patient Monitor (1 No) : With all consumables required for Adult-10Set, Pediatrics-3Set, Neonates -02Set, Dual Temperature (adult and pediatric).</b> <b>24). Suitable Slave Monitor (for monitoring the patient parameter from console room) - 1 No</b> <b>25. Dehumidifier of 110 Litre - 2 Nos.</b>
Page 69	Miscellaneous: i. Knee controlled hand free two station scrub unit with disinfectant/ soap dispenser.	Miscellaneous: i. Knee controlled hand free two station scrub unit with disinfectant/ soap dispenser <b>suitable for simultaneous usage of two persons.</b>
		<b>Added Para under Furniture: Crash Cart - 1 No.</b>
		Added Para under Electrical Work : <b>Adequate number of earthing required for equipment and accessories should be provided by the equipment vendor.</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b><u>Item No.4 :- DRF (Tender ID : 2021 HLL 88689 4)</u></b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
Page 71, point B.2	The X-ray tube should have dual focal spots. Small focus not more than 0.6 mm and large focus not more than 1.2 mm	The X-ray tube should have dual focal spots. Small focus <b>not more than 0.7 mm</b> and large focus not more than 1.2 mm.
Page 72, point C.3	Table should have angulations from longitudinal to head down positions (vertical +90 degrees to Trendelenburg -20 degrees)	Table should have angulations from longitudinal to head down positions ( <b>vertical +/-90 degrees to Trendelenburg -90degrees</b> )

Page 73,point D.6	Direct digital imaging system for fluoroscopy: Serial exposure rates atleast 6 fps and In pulsed fluoroscopy mode frame rate should be at least 15 frames per second	Direct digital imaging system for fluoroscopy: Serial exposure rates atleast 6 fps and In pulsed fluoroscopy mode frame rate should be at least 15 frames per second <b>Added Para : Fluoro recording should be available without any limitation for number of frames captured in single recording .</b>
		<b>Added Para :</b> <b>Image Display System DSA package should include real time subtraction, roadmapping,pixel shift, landmarking,stenosis, measurment, trace &amp; subtract function.</b>
		<b>Added Para :</b> <b>The control software must have latest security windows 10 platform only.</b>
Page 74,point J.1	Radiation safety certificate: the offered model must have a valid AERB certificate at the time of submission of tender	<b>The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid. If the quoted model has not been yet installed in India, vendor should submit NOC from AERB.</b> <b>Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC period.</b>
		<b>Added Para :</b> <b>TRAINING</b> <b>On site Training for a period of 2 Weeks</b>
Page 75, Point 3	Site Modification - Scope of Work – DRF Sub head:3 The cost of site modification for the area of 1000sq.ft and Air-conditioning of Tonnage 12 TR will be considered for Ranking / Evaluation purpose. However, the payment will be paid on pro-rata based on the actual site modification area	Site Modification - Scope of Work – DRF Sub head:3 The cost of site modification for the area of 1000sq.ft and Air-conditioning of <b>Tonnage 20 TR (including standby unit/s)</b> will be considered for Ranking / Evaluation purpose. However, the payment will be paid on pro-rata based on the actual site modification area
Page 77, Point 4	Scope of work for site modifications: Air conditioning: Package air conditioners units and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.	Scope of work for site modifications: Air Conditioning : <b>Ductable split air conditioners and split AC units</b> may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.

		<b>Added Para :</b> <b>Dehumidifier of 30 Litre - 2 Nos.</b>
		<b>Added Para :</b> <b>Post Processing softwares should be from same OEM.</b>
Page 76	b. Painting Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, patient waiting area, console room, <b>DRF room</b> & Equipment room etc.	b. Painting Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, patient waiting area, console room & Equipment room etc. <b>Added Para : Full height wall tiles should be provided in the DRF room.</b>
		<b>Added Para under Furniture:</b> <b>j. Crash Cart - 1 No.</b>
		Added Para under Electrical Work : <b>Adequate number of earthing required for equipment and accessories should be provided by the equipment vendor.</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b>Item No.5 : MRI 3.0 T (Tender ID : 2021 HLL 88689 5)</b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
		<b>Added Para : The model should be the latest and launched in or after 2020.</b>
Page 80 , Point 2(b)	Shim system :- Off-centre shimming should be possible.	Shim system :- Off-centre shimming should be possible. <b>Added Para : System must have Second order/high order shimming.</b>
Page 80 , point 3(a)	Gradient system : Activity shielded Gradient System with strength of at least 44 mT/m at slew rate of 200T/m/sec to be achieved simultaneously for the same FOV & preferably low linearity. The rise time should not be more than 250 micro second to reach the maximum gradient strength	Gradient system : Activity shielded Gradient System with strength of at least 44 mT/m at slew rate of 200T/m/sec to be achieved simultaneously for the same FOV & preferably low linearity. <b>The rise time should not be more than 225 micro second</b> to reach the maximum gradient strength
Page 81 , point 4(b)	It should also have at least minimum of 32 independent ADC hardware RF channels	It should also have at least minimum of 32 independent ADC <b>or channel independent</b>

	with each having bandwidth of 1MHz or more along with necessary hardware to support Quadrature/CP array coils.	<b>hardware RF channels</b> with each having bandwidth of 1MHz or more along with necessary hardware to support Quadrature/CP array coils.
Page 81 , point 4(c)	It should support Parallel acquisition techniques like ASSET/SENSE/iPAT with a factor of at least 4.	It should support Parallel acquisition techniques like ASSET/SENSE/iPAT with a factor of at least <b>9</b> .
Page 81 , point 5(i(a))	Shoulder coil: a. Dedicated Shoulder coil – Multi channel - 1 No	Shoulder coil: a. Dedicated Shoulder coil – <b>16 channel or more</b> - 1 No
Page 81 , point 5(i(b))	b. flex coils – 2nos. (One large and one small)	b. flex coils ( <b>16 Channel or more</b> ) – 2nos. (One large and one small)
Page 81 , point 5(j)	High resolution knee coil 8 channels or more; Tx & Rx.	High resolution knee coil <b>16 channels or more; Tx &amp; Rx.</b>
Page 81 , point 5(k)	High resolution foot/ ankle coil – 8 channels or more	High resolution foot/ ankle coil – <b>16 channels or more</b>
Page 81 , point 5(l)	Endocavitary Coil - Prostrate Study	Endocavitary Coil - Prostrate Study ( <b>OPTIONAL</b> )
Page 81,Point 6(c)	The table should have facility for manual traction in case of emergency	The table should have facility for manual traction in case of emergency. <b>Added Para : Table should have facility for dockable table /Table top in any of emergency evacuation (Optional)</b>
Page 82,point 7 d	COMPUTER SYSTEM IMAGE PROCESSOR / OPERATOR CONSOLE : The main console should have facility for music system for the patient in the magnet room.	COMPUTER SYSTEM IMAGE PROCESSOR / OPERATOR CONSOLE : The main console should have <b>integrated</b> facility for music system for the patient in the magnet room <b>or dedicated music system should be supplied, if the main console does not have integrated facility for music system</b>
Page 82 , point 8(1)	One server with 2 node with concurrent licenses to be supplied with the system. Licenses: 2 nos Concurrent license here implies the capability to process all the loaded software to be accessible and usable on all the systems simultaneously without any processing delay. The software should also include a reputed antivirus software of a perpetual type or renewed by the supplier. Hardware: Node: The vendor has to supply the hardware in the form of CPU and Medical grade monitor 18” or more of 2MP resolution. Hardware Server: The server (single/dual configuration) should have image storage capacity of at least 2.5 Tera bytes, minimum	One server with 2 node with concurrent licenses to be supplied with the system. Licenses: 2 nos Concurrent license here implies the capability to process all the loaded software to be accessible and usable on all the systems simultaneously without any processing delay. The software should also include a reputed antivirus software of a perpetual type or renewed by the supplier.  Hardware: Node: The vendor has to supply the hardware in the form of CPU and Medical grade monitor 18” or more of 2MP resolution. Hardware Server: The server (single/dual configuration) should have image storage capacity of at least <b>20 TB minimum 40,000 concurrent slice processing</b>

	20,000 concurrent slice processing power and at least 64GB RAM. The server hardware to be included with 21" or more TFT/LCD monitor with dual processor. DICOM 3.0 compatibility and interfacing with other modalities must be possible. The workstation shall have the resolution, software and all functionality of a stand-alone workstation	<b>power</b> and at least <b>128 GB RAM</b> . The server hardware to be included with 21" or more TFT/LCD monitor with dual processor. DICOM 3.0 compatibility and interfacing with other modalities must be possible. The workstation shall have the resolution, software and all functionality of a stand-alone workstation
Page 82 , point 8(2)	<b>Cardiac Package: One License:</b> The workstation should have display of Cardiac cine images in movie mode with rapid avi creation and should have comprehensive cardiac post processing software including for coronary MRA with regular free upgrades in future. Calculation of ventricular area and volume, stroke volume, ejection fraction and relative ejection fraction, Time volume diagram generation, filling rates and myocardial wall motion, Graphic display of output calculation of flow and velocity parameter with colour coded display of velocity parameters. Diffusion tensor Imaging, 3D myocardial tagging should be possible.	<b>Cardiac Package: Two Licenses:</b> The workstation should have display of Cardiac cine images in movie mode with rapid avi creation and should have comprehensive cardiac post processing software including for coronary MRA with regular free upgrades in future. Calculation of ventricular area and volume, stroke volume, ejection fraction and relative ejection fraction, Time volume diagram generation, filling rates and myocardial wall motion, Graphic display of output calculation of flow and velocity parameter with colour coded display of velocity parameters. Diffusion tensor Imaging, 3D myocardial tagging should be possible.
		<b>Added Para :</b> <b>32" size or more LCD/LED based FMRI sytem should be provided..</b>
Page 87 ,point 16 (5)	ACCESSORIES : MRI Compatible Anaesthesia Machine with integrated Ventilator, 2 vaporiser, circle absorber	ACCESSORIES : <b>MRI Compatible ( upto 3 Tesla ) Anaesthesia Machine with atleast 8 inch screen and integrated electronic ventilator, 2 vaporiser, inbuilt suction and circle absorber</b>
Page 87 ,point 16 (5b)	ACCESSORIES : b) Soft ware for ventilation should support Volume control, Pressure control and Pressure support modes.	ACCESSORIES : <b>b) Software for ventilation should support Volume control, Pressure control and Pressure support modes and advanced modes (SIMV,PSV and PRVT) along with inbuilt suction</b>
Page87 ,point 16 (5f)	MRI Compatible Anaesthesia Machine: f) All consumables required for Adult-10Set, Pediatrics-3Set, Neonates -02Set	MRI Compatible Anaesthesia Machine: f) All consumables ( <b>including patient circuits</b> ) required for Adult-10Set, Pediatrics-3Set, Neonates -02Set
Page 87 ,point 16	Temperature (adult and pediatric)	<b>Dual</b> Temperature (adult and pediatric)

(6g)		
Page 88 , point 16(14)	Two non-magnetic patient transfer trolleys should be provided	Two non-magnetic <b>height adjustable</b> patient transfer trolleys should be provided
Pgae 88,point 16	ACCESSORIES : 16. Metal detectors:,i. Hand held metal detector- 02 nos.ii. Walk through Metal detector - 01 noiii. Walk through Metal detector with multiple sensor and multiple location LED (Zone IV type) - 01 no (to be installed at the entry door to the patient preparation area and must allow passage of patient trolley)	ACCESSORIES : <b>16. Walk through Metal detector with multiple fluxgate sensor to help detect approaching ferro magnetic hazards and with door ignore function to be installed at entry door of MRI Scanner Room (Zone III type) - 01 no. Must have continuous detection or alert capability following MRI door opening, or following preceding alert. Must allow passage of patient trolley.</b>
Page 91, point i	Miscellaneous: 5 kg MRI compatible fire Extinguisher - 2 nos to be also supplied	Miscellaneous: <b>4.5 kg</b> MRI compatible fire Extinguisher - 2 nos to be also supplied
Page 92	BOQ 9.Shoulder coil: Dedicated Shoulder coil – Multi channel - 1 No	BOQ : 9. Shoulder coil: a. Dedicated Shoulder coil – <b>16 channel or more- 1 No</b>
Page 92	BOQ 10. Shoulder coil: Flex coils (Large) - 1 No	BOQ : 10. Shoulder coil: Flex coils (Large) <b>16 Channel or more - 1 No</b>
Page 92	BOQ 11. Shoulder coil: Flex coils (Small) - 1 No	BOQ : 11. Shoulder coil: Flex coils (Small) <b>16 Channel or more - 1 No</b>
Page 92	BOQ 12. High resolution foot/ ankle coil – minimum 8 channel - 1 No	BOQ : 12. High resolution foot/ ankle coil – <b>16 channels or more - 1 No</b>
Page 92	BOQ 13. High resolution Tx & Rx KNEE coil minimum 8 channel - 1 No	BOQ : <b>13. High resolution knee coil 16 channels or more; Tx &amp; Rx. - 1 No</b>
Page 92	BOQ 19. Cardiac Package - License - 1 No	BOQ: 19. Cardiac Package – License - <b>2 Nos.</b>
page 88 Para 17	TRAINING : Qualified personnel nominated by the deptt, should be given application training by the vendor in India for 4weeks at site	TRAINING : <b>On site Training for a period of 4 Weeks</b>
		<b>Added Para :</b> <b>System should have facility of Respiratory Sensors like Vital Eye/Bio matrix sensors or equivalent technology.</b> <b>(OPTIONAL)</b>
		<b>Added Para :</b> <b>Sequence optimization using compressed sensing/Hyper Sense/Compressed Sense</b>

		technique should be offered in Neuro, body, cardiac &MSK imaging for all sequence 2D, 3D Scans.
		<b>Added Para:</b> Sequence to Provide tumor grading by using endogenous cellular proteins to produce an MR signal that directly correlates with cell proliferation, a marker of tumor activity. (OPTIONAL).
		<b>Added Para :</b> Multi-slice Simultaneous Sequence to provide Better image quality in EPI sequence.
		<b>Added Para :</b> Sequence to provide IRON and FAT quantification.
		<b>Added Para :</b> 4D flow Sequence & Strain analysis sequence.
		<b>Added Para :</b> Multinuclei Spectroscopy
		<b>Added Para:</b> System must have facility to upgrade the Gradient in Future. (OPTIONAL).
		<b>Added Para:</b> RF power of 25 KW for all sequence including brain and body imaging.(OPTIONAL).
		<b>Added Para:</b> 1. Lobe segmentation and volume -MR liver health. (OPTIONAL) 2. Liver and prostate spectroscopy should be offered as OPTIONAL.
Page 88	SITE MODIFICATION WORKS: The Site-Modification Scope of Work - MRI The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Airconditioning, <b>Fire fighting</b> and miscellaneous works for the construction of MRI Scan Centre. While preparing the plan, the following aspects have to be addressse	SITE MODIFICATION WORKS: The Site-Modification Scope of Work - MRI The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Airconditioning, <b>Fire detection system</b> for the construction of MRI Scan Centre. While preparing the plan, the following aspects have to be addressse
Page 89	The cost of Site Modification Work for the area of 1200sq.ft and Air-conditioning of Tonnage 15 TR will be considered for Ranking / Evaluation purpose	The cost of Site Modification Work for the area of <b>1500sq.ft</b> and Air-conditioning of <b>Tonnage 25 TR (including standby unit/s)</b> will be considered for Ranking / Evaluation purpose
Page 89	Civil work Any ab initio new construction or demolition of existing structure/walls etc and	Civil work Any ab initio new construction or demolition of <b>existing walls</b> etc and reconstruction is

	reconstruction is unambiguously included in the Site Modification scope of work. This includes, but is not limited to expanding the area of MRI gantry room so as to make it compliant for installation of a 3T strength magnet.	unambiguously included in the Site Modification scope of work. This includes, but is not limited to expanding the area of MRI gantry room so as to make it compliant for installation of a 3T strength magnet
Page 89	<p>Civil Works : Flooring Anti static Vinyl flooring within the Magnet/gantry room. The rest of the MRI area - Providing and laying approved quality , colour, design and shade fully homogeneous 600 x 600 mm(thickness to be specified by the manufacturer) vitrified tile flooring (Marbonite or Granamite, confirming to IS code 15622 with water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the EIC and grouted with matching colour approved quality readymade grout, curing, cleaning etc to required line level etc. all complete at all leads, lifts and heights to the entire satisfaction of the EIC. Providing and fixing 2-3mm thick POP protection over polythene covering sheet to flooring areas till handed over and cleaning, etc all complete as per drawings &amp; specification and as directed by EIC with 100mm tile skirting to match in MRI room , console room , equipment room , patient preparation room, reporting room , patient waiting area and radiologist room. Note: Mode of measurement (Finished surface area of the tiles shall be measured and paid. Rate shall be inclusive of providing and laying levelling course, PVC spacers, providing and applying epoxy grout and no additional payment shall be made for wastages).</p>	<p>Civil Works : Flooring Anti static Vinyl flooring within the Magnet room Providing and laying approved quality , colour, design and shade fully homogeneous 600 x 600 mm(thickness to be specified by the manufacturer) vitrified tile flooring (Marbonite or Granamite, confirming to IS code 15622 with water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the EIC and grouted with matching colour approved quality readymade grout, curing, cleaning etc to required line level etc. all complete at all leads, lifts and heights to the entire satisfaction of the EIC. Providing and fixing 2-3mm thick POP protection over polythene covering sheet to flooring areas till handed over and cleaning, etc all complete as per drawings &amp; specification and as directed by EIC with <b>100mm tile skirting to match in console room</b> , equipment room , patient preparation room, reporting room , patient waiting area and radiologist room. Note: Mode of measurement (Finished surface area of the tiles shall be measured and paid. Rate shall be inclusive of providing and laying levelling course, PVC spacers, providing and applying epoxy grout and no additional payment shall be made for wastages)</p>
Page 91 , Point F	<p>AIR CONDITIONING i. Total capacity of the Air-Conditioning (duct-able) for the entire MRI scan centre area should be at least 18 TR.(incl. standby airconditioning) with humidity control between 55-60 % RH ii. Ductable package air conditioners units may be used according to room requirement</p>	<p>AIR CONDITIONING Total capacity of the Air-Conditioning (<b>duct-able + split</b>) for the entire MRI scan centre area should be at least <b>25 TR.(incl. standby airconditioning)</b> . However, if the installed system requires more capacity, it will be the responsibility of the supplier. ii. Ductable package air conditioners and split AC units may be used according to room requirement</p>

	and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. . The Air conditioning should be designed with standby provision to function 24 hours a day	and suitability.
		<b>Added Para :</b> <b>Dehumidifier of 110 Liter - 2 Nos.</b>
		<b>Added Para under Electrical Work :</b> <b>Adequate number of earthing required for equipment and accessories should be provided by the equipment vendor.</b>
Page 91 , Point i(3)	3 Broadband connection: for REMOTE SERVICE of MRI system.	<b>Deleted</b>
Page 92	Accessories : Air Conditioning - 18 TR	Accessories : Air Conditioning - <b>25 TR (including standby unit/s)</b>
Page No 93	Miscellaneous: Dry chemical power type fire extinguisher of 5kgs capacity	<b>Fire extinguisher ABC type of 2kg each as required for the building safety - 5 nos.</b>
		<b>Added Para under Cardiac Package:</b> <b>Myocardial Mapping (T1 &amp; T2, T2* Map) should be provided as standard.</b>
		<b>Added Para under RF Coils :</b> <b>The bidder should provide line wise break-up for offered number and name/model of the coil against each coil specified in the technical specification &amp; BOQ.</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

**Item No.6 : MRI 1.5 T (Tender ID : 2021 HLL 88689 6)**

<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
		<b>Added Para :</b> <b>The model should be the latest and launched in or after 2020.</b>
Page 94,Point 3(B)	Gradient System : The gradient should be actively shielded with each axis having independently a slew rate of at least 200 T/m/s and a peak amplitude of 44mT/m.	Gradient System : The gradient should be actively shielded with each axis having independently a slew rate of at least 200 T/m/s and a peak amplitude of 44mT/m. <b>Added Para : The rise time should not be more than 225 micro second to reach the maximum gradient strength</b>

Page 94 , 4 (c)	It should support Parallel acquisition techniques with a factor of up to 2 in 2D.	It should support Parallel acquisition techniques with a factor of up to <b>9</b> in 2D.
Page 94 , 5(a)	The table should be fully motorized, MRI Compatible computer controlled table movement in vertical and horizontal directions Position accuracy should be +/- 1.0 C mm or better	The table should be fully motorized, MRI Compatible computer controlled table movement in vertical and horizontal directions Position accuracy should be +/- <b>1.0 mm</b> or better
		<b>Added Para :</b> <b>Table should have facility for dockable table /Table top in case of emergency evacuation. (Optional)</b>
Page 95 6.c	COMPUTER SYSTEM /IMAGE PROCESSOR / OPERATOR CONSOLE : The main console should have facility for music system for patient in the magnet room. The system should have DVD / CD / Flash drive archiving facility. Supply 500 DVD along with the system	COMPUTER SYSTEM /IMAGE PROCESSOR / OPERATOR CONSOLE : The main console should have <b>integrated</b> facility for music system for the patient in the magnet room <b>or dedicated music system should be supplied, if the main console does not have integrated facility for music system.</b>
Page 95 , Point 8(d)	Coil System :- f.Body Array/Matrix coil with 28 channels or more with at least 38 cm Z-axis coverage for imaging of abdomen, angiograms and heart with one or two body coils	Coil System :- f.Body Array/Matrix coil with <b>32 channels or more</b> with at least 38 cm Z- axis coverage for imaging of abdomen, angiograms and heart with one or two body coils
Page 95 , Point 8(e)	Dedicated 32 channel Peripheral Angio Coil or 32 channel whole body coil with coverage of minimum 80 cm with max combination of 2 coils	<b>Dedicated Suitable surface coil/coil combination for peripheral angiography of 32 or more channel with coverage of 80cm or more.</b>
Page 95 , Point 8(f)	One Bilateral Breast Coil with at least 16 channels. OR Two Bilateral Breast Coil with at least 8 channels	<b>One Bilateral Breast Coil with at least 16 channels.</b>
Page 95 , Point 8(g.a)	SHOULDER coils a. Dedicated Rigid Shoulder coil – Multi channel - 1 No	<b>Dedicated Rigid Shoulder coil –16 channel - 1 No</b>
Page 95 , Point 8(g(b))	Flex Coil (4 channel or more) - 2nos. (One large FOV and one small FOV	Flex Coil ( <b>16 channel or more</b> ) - 2nos. (One large FOV and one small FOV
Page 95 , Point 8 (i)	High resolution foot/ ankle coil – 8 channels or more	High resolution foot/ ankle coil – <b>16 channels or more</b>
Page 96 , point 1	Work station One server with 2 node with 2 concurrent licenses to be supplied with the system for all the application. Licenses: two Concurrent license here implies the capability to process all the loaded software to be accessible and usable on all the systems simultaneously	One server with 2 node with 2 concurrent licenses to be supplied with the system for all the application. Licenses: two Concurrent license here implies the capability to process all the loaded software to be accessible and usable on all the systems simultaneously without any processing delay. The software should also include a

	without any processing delay. The software should also include a reputed antivirus software of a perpetual type or renewed by the supplier. Hardware: Node: The vendor has to supply the hardware in the form of CPU and Medical grade monitor 18" or more of 2MP resolution. Hardware Server: The server (single/dual configuration) should have image storage capacity of at least 4 Tera bytes, minimum 20,000 concurrent slice processing power and at least 32GB RAM. The server hardware to be included with 21" or more TFT/LCD monitor with dual processor. DICOM 3.0 compatibility and interfacing with other modalities must be possible. The workstation shall have the resolution, software and all functionality of a stand-alone workstation	reputed antivirus software of a perpetual type or renewed by the supplier. Hardware: Node: The vendor has to supply the hardware in the form of CPU and Medical grade monitor 18" or more of 2MP resolution. Hardware Server: The server should have image storage capacity of at least 5 Tera bytes or more, <b>minimum 40,000 concurrent slice processing power and at least 128 GB RAM.</b> . The server hardware to be included with 21" or more TFT/LCD monitor with dual processor. <b>Mandatory hardware replacement of the server, client PCs and medical grade monitors to the latest available and compatible version, after 5 years from installation.</b> DICOM 3.0 compatibility and interfacing with other modalities must be possible. The workstation shall have the resolution, software and all functionality of a stand-alone workstation.
Page 97, Point 14	Suitable RF Enclosure RF Cabin: The system should be supplied with the <b>imported</b> RF cabin with RF room shielding, RF Door, RF window, and interiors for the same should be carried out suitably.	Suitable RF Enclosure RF Cabin: The system should be supplied with the RF cabin with RF room shielding, RF Door, RF window, and interiors for the same should be carried out suitably.
Page 97 , Point 16 (4)	MRI Compatible Anaesthesia Machine with integrated Ventilator, 2 vaporiser, circle absorber	<b>MRI Compatible ( upto 1.5 Tesla ) Anaesthesia Machine with atleast 8 inch screen and integrated electronic ventilator, 2 vaporiser, inbuilt suction and circle absorber</b>
Page 97 , Point 16 (4(b))	Soft ware for ventilation should support Volume control, Pressure control and Pressure support modes	<b>Software for ventilation should support Volume control, Pressure control and Pressure support modes and advanced modes (SIMV,PSV and PRVT) along with inbuilt suction</b>
Page 97 , Point 16 (4(f))	MRI Compatible Anaesthesia Machine: All consumables required for Adult-10Set, Pediatrics-3Set, Neonates -02Set	MRI Compatible Anaesthesia Machine: All consumables ( <b>including patient circuits</b> ) required for Adult-10Set, Pediatrics-3Set, Neonates -02Set
		<b>Added Para in MRI compatible Multiparmeter Vital Signs Patient Monitor specification: Dual Temperature (adult and pediatric)</b>
Page 97 , Point 16 (6)	1.5T MRI compatible syringe pump – 1 No	<b>1.5T MRI compatible Syringe Infusion Pump (1 No) and MRI compatible Volumetric Infusion Pump (1 No)</b>
Page 97 ,	Walk through Metal detector with multiple	<b>Walk through Metal detector with multiple fluxgate</b>

Point 16 (18 iii)	sensor and multiple location LED (Zone III type) - 01 no (Optional)	<b>sensor to help detect approaching ferro magnetic hazards and with door ignore function to be installed at entry door of MRI Scanner Room (Zone III type) - 01 no. Must have continuous detection or alert capability following MRI door opening, or following preceding alert. Must allow passage of patient trolley.</b>
Page 98, point 16(1)4	Two non-magnetic patient transfer trolleys should be provided	Two non-magnetic <b>height adjustable</b> patient transfer trolleys should be provided
Page 100,Point i(4)	i) Miscellaneous Dry chemical power type <b>MRI compatible fire extinguisher of 5kgs capacity</b> , with initial filling in brand new cylinder with power coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, discharge hose, wall mounting bracket etc. complete, confirming t IS:2171 of approved make & complete as directed by EIC	i) Miscellaneous Dry chemical power type <b>MRI compatible fire extinguisher of 4.5kgs capacity (2 Nos)</b> , with initial filling in brand new cylinder with power coated finish, fitted with Gun metal union, high pressure CO2 gas cartridge, discharge hose, wall mounting bracket etc. complete, confirming t IS:2171 of approved make & complete as directed by EIC
Page 100 & 101	BOQ : 5. Body Array/Matrix coil with 18 – 32 channels Qty- 1no	BOQ : <b>5. Body Array/Matrix coil with 32 channels or more (with one or two body coils) - 1 No</b>
Page 100 & 101	BOQ : 6. Dedicated 32 channel Peripheral Angio Coil or 32 channel whole body coil with coverage of minimum 80 cm with max combination of 2 coils - qty 1 no	BOQ : <b>6. Dedicated Suitable surface coil/coil combination for peripheral angiography of 32 or more channel -1 No</b>
Page 100 & 101	BOQ : 7. (One Bilateral Breast Coil with at least 16 channels. OR Two Bilateral Breast Coil with at least 8 channels) - 1 set	BOQ : <b>7. One Bilateral Breast Coil with at least 16 channels - 1 Set</b>
Page 100 & 101	BOQ : 8. Multi channel (minimum 4 channel) flex loop Large FOV qty-1no	BOQ : <b>8. Flex Coil (16 channel or more) - Large FOV - 1 No</b>
Page 100 & 101	BOQ : 9. Multi channel (minimum 4 channel) flex loop SMALL FOV qty-1no	BOQ : <b>9. Flex Coil (16 channel or more) - Small FOV - 1 No</b>
Page 100 & 101	BOQ : 10. Shoulder coil: Dedicated Rigid Shoulder coil – Multi channel qty-1 no	BOQ : <b>10. Dedicated Rigid Shoulder coil –16 channel - 1 No</b>
Page 100 & 101	BOQ : 12. High resolution foot / ankle coil – minimum 8 channel qty-1 no.	BOQ : <b>12. High resolution foot/ ankle coil – 16 channels or more - 1 No</b>
Page 98 Para 17	Qualified personnel nominated by the deptt, should be given application training by the	<b>TRAINING On site Training for a period of 4 Weeks</b>

	vendor in India for 2 weeks	
		<b>Added Para : SCREENER FOR IMPLANT DETECTION - 1 No</b>
Pg. No.95		<b>Added Para under APPLICATION SEQUENCES :</b> The vendor should quote the latest technology available like : a) Respiratory sensor / Vital Eye b) Bio Matrix select and Go / Vital Screen <b>(OPTIONAL)</b>
		COMPUTER SYSTEM/ IMAGE PROCESSOR / OPERATOR CONSOLE <b>Added Para :</b> The MR system should be regularly maintained in the latest version of computing software, including software platform upgrades released for the offered system as per tender that can prepare it for future enhancements. If a HW upgrade is required to run the latest software version to its normal performance, the respective HW should be upgraded at no additional costs during the complete life of the system.
		COMPUTER SYSTEM/ IMAGE PROCESSOR / OPERATOR CONSOLE <b>Added Para :</b> The MR computing software system should offer built-in security controls to protect the system from vulnerabilities that can result in cyber attacks or inappropriate access to patient data. The built-in security should comply with the latest international standards of data security and encryption, as well as with existing regulations to protect personal and protected health information (e.g. GDPR, HIPAA, any local regulation) , during the complete life of the system
		<b>Added Para :</b> System should have facility of Respiratory Sensors like Vital Eye/Bio matrix sensors or equivalent technology. <b>(OPTIONAL)</b>
		<b>Added Para :</b> Sequence optimization using compressed sensing/Hyper Sense/Compressed Sense technique should be offered in Neuro, body, cardiac &MSK imaging for all sequence 2D, 3D

		<b>Scans.</b>
		<b>Added Para : Multi-slice Simultaneous Sequence to provide Better image quality in EPI sequence.</b>
		<b>Added Para : Sequence to provide IRON and FAT quantification.</b>
		<b>Added Para : 4D flow Sequence &amp; Strain analysis sequence.</b>
		<b>Added Para : Multinuclei Spectroscopy</b>
		<b>Added Para : Liver spectroscopy and prostate spectroscopy must be offered.</b>
		<b>Added Para: RF power of 15KW for all Sequence including brain Sequence (OPTIONAL)</b>
		<b>Added Para: Lobe segmentation and volume -MR liver health. (OPTIONAL)</b>
		<b>Added Para: Minimum Three concurrent license for all advance application. Client Server based with multimodality and multivendor workstation.</b>
Page 98	SITE MODIFICATION WORKS: The Scope of Work - Site Modification Work - MRI The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Air-conditioning and <b>Fire fighting</b> for the construction of 1.5 T MRI	SITE MODIFICATION WORKS: The Site-Modification Scope of Work - MRI The scope of work includes complete Civil work, Electrical, Plumbing, Furnishing, Airconditioning, <b>Fire detection system</b> for the construction of 1.5 T MRI Scan Centre.
Page 98	SITE MODIFICATION WORKS The cost of Site Modification Work for the area of 1500sq.ft and Air-conditioning of Tonnage 20 TR will be considered for Ranking / Evaluation purpose	SITE MODIFICATION WORKS The cost of Site Modification Work for the area of 1500sq.ft and Air-conditioning of <b>Tonnage 25 TR (including standby unit/s)</b> will be considered for Ranking / Evaluation purpose
Page 98	Civil work Any ab initio new construction or demolition of existing structure/walls etc and reconstruction is unambiguously included in the Site Modification scope of work. This includes, but is not limited to expanding the area of MRI gantry room so as to make it compliant for installation of a 3T strength magnet	Civil work Any ab initio new construction or demolition of <b>existing walls</b> etc and reconstruction is unambiguously included in the Site Modification scope of work. This includes, but is not limited to expanding the area of MRI gantry room so as to make it compliant for installation of a 3T strength magnet
Page 99. Point a)	Civil WORKS : A. Flooring : Flooring Added Para: Anti static Vinyl	Civil WORKS : A. Flooring : Flooring Added Para: Anti static Vinyl flooring within

	<p>flooring within the Magnet room Providing and laying approved quality , colour, design and shade fully homogeneous 600 x 600 mm(thickness to be specified by the manufacturer) vitrified tile flooring (Marbonite or Granamite, confirming to IS code 15622 with water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the EIC and grouted with matching colour approved quality readymade grout, curing, cleaning etc to required line level etc. all complete at all leads, lifts and heights to the entire satisfaction of the EIC. Providing and fixing 2-3mm thick POP protection over polythene covering sheet to flooring areas till handed over and cleaning, etc all complete as per drawings &amp; specification and as directed by EIC with <b>100mm tile skirting to match in MRI room</b> , console room , equipment room , patient preparation room, reporting room , patient waiting area and radiologist room. Note: Mode of measurement (Finished surface area of the tiles shall be measured and paid. Rate shall be inclusive of providing and laying levelling course, PVC spacers, providing and applying epoxy grout and no additional payment shall be made for wastages)</p>	<p>the Magnet room Providing and laying approved quality , colour, design and shade fully homogeneous 600 x 600 mm(thickness to be specified by the manufacturer) vitrified tile flooring (Marbonite or Granamite, confirming to IS code 15622 with water absorption less than 0.08%) flooring in pattern as detailed in drawing or as directed by the EIC and grouted with matching colour approved quality readymade grout, curing, cleaning etc to required line level etc. all complete at all leads, lifts and heights to the entire satisfaction of the EIC. Providing and fixing 2-3mm thick POP protection over polythene covering sheet to flooring areas till handed over and cleaning, etc all complete as per drawings &amp; specification and as directed by EIC with <b>100mm tile skirting to match in console room</b> , equipment room , patient preparation room, reporting room , patient waiting area and radiologist room. Note: Mode of measurement (Finished surface area of the tiles shall be measured and paid. Rate shall be inclusive of providing and laying levelling course, PVC spacers, providing and applying epoxy grout and no additional payment shall be made for wastages)</p>
<p>Page 99,point f(i)&amp; ii)</p>	<p>AIR CONDITIONING Total capacity of the Air-Conditioning (duct-able + split) for the entire MRI scan centre area should be at least 20 TR.(incl. standby airconditioning). However, if the installed system requires more capacity, it will be the responsibility of the supplier. ii.Ductable package air conditioners and split AC units may be used according to room requirement and suitability.</p>	<p>AIR CONDITIONING Total capacity of the Air-Conditioning (duct-able + split) for the entire MRI scan centre area should be at least <b>25 TR.(incl. standby airconditioning)</b> . However, if the installed system requires more capacity, it will be the responsibility of the supplier. ii.Ductable package air conditioners and split AC units may be used according to room requirement and suitability.</p>
<p>Page 99</p>	<p>AIR CONDITIONING: Ductable package air conditioners and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning</p>	<p><b>Ductable split air conditioners and split AC</b> units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.</p>

	should be designed with standby provision to function 24 hours a day	
		<b>Added Para :</b> <b>Dehumidifier of 110 Liter - 2 Nos.</b>
		<b>Added Para under Electrical Work :</b> <b>Adequate number of earthing required for equipment and accessories should be provided by the equipment vendor.</b>
Page 100 ,point i(3)	Miscellaneous: Broadband connection: for REMOTE SERVICE of MRI system	<b>Deleted</b>
Page 101, point 4	Components of site modification works: 1500 sq ft Air Conditioning -20 Tr	<b>Air Conditioning - 25 TR</b>
page 102,point 3	Miscellaneous: Broad band Connection : for remote service of MRI System qty -1 nos	<b>Deleted</b>
Page no 102	Miscellaneous: Dry chemical power type fire extinguisher of 5kgs capacity	<b>Fire extinguisher ABC type of 2kg each as required for the building safety - 5 nos.</b>
		<b>Added Para under Coil System :</b> <b>The bidder should provide line wise break-up for offered number and name/model of the coil against each coil specified in the technical specification &amp; BOQ.</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b><u>Item No.7 : Digital X-Ray 1000 mA (Tender ID : 2021 HLL 88689 7)</u></b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
Page 103 , point 6c	X-Ray Table: Table should support patient weight of 200 kg. or more.	X-Ray Table: Table should support patient weight of 200 kg. or more <b>without restriction of table movement</b>
page 104 , point 14	Approvals : The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid	Approvals : The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid. <b>If the quoted model has not been yet installed in India, vendor should submit NOC from AERB.</b> <b>Regular QA according to AERB norms will be responsibility of bidder during warranty and CMC</b>

		period.
		<b>Added Para :</b> <b>Detectors should be integrated built in horizontal Bucky table &amp; Vertical Bucky wall Stand. Wireless and tethered detectors are not acceptable.</b>
		<b>Added Para:</b> <b>Ortho stitching should be available in vertical stand as well as on table. The stitching should be automated and it should be possible on main system with built in measurement scale.</b>
		<b>Added Para :</b> <b>TRAINING</b> <b>On site Training for a period of 2 Weeks</b>
Page 105,point 3	Site Modification - Scope of Work – DR The cost of site modification work for the area of 1000sq.ft and Air-conditioning of Tonnage 12 TR will be considered for Ranking / Evaluation purpose.However the payment will be paid on prorata based on the actual site modification area.	Site Modification - Scope of Work – DR The cost of site modification work for the area of 1000sq.ft and Air-conditioning of Tonnage <b>20 TR (including standby unit)</b> will be considered for Ranking / Evaluation purpose.However the payment will be paid on prorata based on the actual site modification area.
Page 105	b. Painting Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, Lobby area, console room, <b>DR room</b> & Equipment room etc.	b. Painting Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, patient waiting area, console room & Equipment room etc. <b>Added Para : Full height wall tiles should be provided in the DR room.</b>
Page 106, Point 4.a	Site Modification - Scope of Work – DR Air Conditioning : Package air conditioners units and split AC units may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. . The Air conditioning should be designed with standby provision to function 24 hours a day.	Site Modification - Scope of Work – DR Air Conditioning : <b>Ductable split air conditioners and split AC units</b> may be used according to room requirement and suitability. Humidity control should be effective to eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
Page 106,point 7c	Scope of work for site modifications: DR System Miscellaneous: c. Fire extinguisher Dry CO2 type as required for the building safety	Scope of work for site modifications: DR System Miscellaneous: <b>c. Fire extinguisherABC type of 2kg each as required for the building safety - 5 nos.</b>
		<b>Added Para under Electrical Work :</b> <b>Adequate number of earthing required for equipment and accessories should be provided by the equipment vendor.</b>

		<b>Added Para :</b> <b>Dehumidifier of 30 Litre - 2 Nos.</b>
		<b>Added Para:</b> <b>OPTIONAL AI Softwares :</b> 1. Detection of Lung nodules 2. HDD encryption for safety and security of the images (Unit price be quoted separately and the same should be valid for warranty period)
		<b>Added Para under Furniture:</b> <b>j. Crash Cart - 1 No.</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b><u>Item No.8 : Mobile X-Ray (High Frequency) (Tender ID : 2021 HLL 88689 8)</u></b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>
Page 108 ,Point 1(i)	1. Generator : i. Power : 4 kW or more	1. Generator : i. Power : <b>3.5 kW or more</b>
Page 108 ,Point 1(iv)	m A range : 10 mA to 100 mA or more	m A range : <b>20 mA to 70 mA or more</b>
Point 7	The unit should have small foot print. The height of the column stand should not be more than 150 cm for easy transportation in the lift etc. and areas with small height doors. The equipment should be light weight, not more than 130 kg.	The unit should have small foot print. The height of the column stand should not be more than 150 cm for easy transportation in the lift etc. and areas with small height doors. The equipment should be light weight, not more than <b>150 kg.</b>
Page 108 Para 8 i	System be AERB type approved.	The system should be AERB type approved and the copy of E-LORA Listing should be submitted along with bid. If the quoted model has not been yet installed in India, vendor should submit NOC from AERB.
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

<b><u>Item No : Colour Doppler 4D (Tender ID : 2021_HLL_88689_9)</u></b>		
<b>Page &amp; Para No.</b>	<b>Tender Specification</b>	<b>Amended as :</b>

		Added Para : System should have B- flow. (OPTIONAL)
		Added Para : System should onboard tutor / online support for learning and enhancing the technical skill for patient scanning.
		Added Para : The System should be upgradable to Fatty Liver Imaging Finding (OPTIONAL)
		Added Para: The System Upgradable to 2D Linear Matrix Probe. (OPTIONAL)
		Added Para : Multi Parametric Report page should be Available for Comprehensive Liver Package Report with Shear wave, Fatty Liver Information along with BMI and Blood Test Information to give Current condition of Liver status whether Normal to Severe Cirrhosis Condition (OPTIONAL)
		Added Para: The System should Upgradable to Auto Volume Measurement for Hypo echoic structures. (OPTIONAL)
		Added Para: System should Upgradable to Automatic Fetal Heart Volume scan using Volume probe. (OPTIONAL)
		Added Para : The System Should Upgradable to 2D Strain/Wall Motion Tracking for Fetal Heart using Normal Convex probe. (OPTIONAL)
		Added Para: System should have auto biometry measurement in OBS application (OPTIONAL)
		Added Para : System should be upgradable to Fusion Imaging with Convex, Linear and Endocavity Probe (OPTIONAL)
		Added Para : Suitable ultrasound contrast material of atleast 30 vials should be supplied with atleast 1 year expiry date.
		Added Para :

		All the Optional items offered should be quoted separately and the price should be valid for warranty period
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<u>Item No.10 : Colour Doppler (2D &amp; 3D) (Tender ID : 2021 HLL 88689 10)</u>		
Page & Para No.	Tender Specification	Amended as :
Page 111, Pont 1.2	The system shall include at least a 17" LCD monitor to allow for both excellent images viewing as well as providing for workflow and productivity features	The system shall include <b>at least a 19" LCD monitor</b> to allow for both excellent images viewing as well as providing for workflow and productivity features
		<b>Added Para :</b> The System Should Upgradable to advanced Contrast Package available in the Industry (OPTIONAL).
		<b>Added Para :</b> The System should be Upgradable to Shear wave Elastography (Support for Convex Probe) (OPTIONAL).
		<b>Added Para:</b> System should be upgradable for 4D imaging and STIC for fetal echo (OPTIONAL).
		<b>Added Para :</b> System should to be upgradable for 4D imaging with convex & TVS probes (OPTIONAL).
		<b>Added Para :</b> All the Optional items offered should be quoted separately and the price should be valid for warranty period

<u>Item No.11 : Portable Colour Doppler (Tender ID : 2021 HLL 88689 11)</u>		
Page & Para No.	Tender Specification	Amended as :
		<b>Added Para :</b> All the Optional items offered should be quoted separately and the price should be valid for warranty period

<u>Item No.13 : Digital Mammography (Tender : ID 2021 HLL 88689 13)</u>
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Page & Para No.	Tender Specification	Amended as :
Page 116 , Point I	<b>General description: Large field of view digital mammography system for general screening, diagnostics and interventional applications.</b>	General description: Large field of view digital mammography system for general screening, diagnostics and interventional applications. <b>Added Para : System should be provided with 3D Tomosynthesis</b>
Page 116 , Point II	The system should be AERB type approved	The system should be AERB type approved <b>and the copy of E-LORA Listing should be submitted along with bid. If the quoted model has not been yet installed in India, vendor should submit NOC from AERB.</b>
Page 116, Point IV ,10	Suitable hardware & software for Stereotactic breast Biopsy	Suitable hardware & software for Stereotactic breast Biopsy <b>Added Para :</b> <b>1. Motorized Biopsy chair should be offered as standard.</b> <b>2. Positioner precision for positioner <math>\pm 1</math> mm (0.004 in.) or less</b> <b>3. Stereo angle <math>\pm 15^\circ</math></b> <b>4. Both vertical and lateral Biopsy should be possible.</b>
Page 116, point 4	Single track dual focus mammography X-ray tube with additional beam filters and automatic collimator	<b>Single or Dual</b> track dual focus mammography X-ray tube with additional beam filters and automatic collimator
Page 116 , Point 1(g)	g. Displayed parameters kV, mAs, target filter, density selection Auto record of the exposure parameters for each mammogram	g. Displayed parameters kV, mAs, target filter, density selection Auto record of the exposure parameters for each mammogram. <b>Added Para : Breast Density measurement tool to offered (OPTIONAL)</b>
Page 116, Point 3©	Gantry assembly : c. Dual speed movements	Gantry assembly : c. Dual <b>or Single</b> speed movements
Page 117, point 7(d)	d. DQE at 0 LP/mm: 60% OR DQE at 5LP/mm : 25% or more	d. DQE at 0 LP/mm <b>or DQE at 0.5 LP/mm</b> : 60% OR DQE at 5LP/mm : 25% or more
Page 112 ,Point 12 (f)	f. Spot sliding compression paddle	<b>Deleted</b>
Page 118 , Point 12(f)	Spot sliding compression paddle	<b>Deleted</b>
Page 118 , Point 12(k)	Dry view camera: 508 DPI or more, with 300 films each (size 18x24cm and 24x30cm)	Dry view camera: <b>600 DPI or more</b> , with 300 films each ( size 18 X 24cm and 24X30cm)
Page 119 , Point 13(a)	Display workstation : a. Mammography diagnostic workstation	Display workstation : a. Mammography diagnostic workstation <b>Added Para : Reporting workstation software of</b>

		the same brand as that of the mammography system
Page 119 , Point 13(k)	RAM: minimum 6 GB	<b>RAM: atleast 16GB</b> <b>HDD Storage: Atleast 2 TB along with external hard disk of 1 TB</b> <b>CPU Memory: atleast 4 GB</b> <b>INTEL XEON 2133 3.6 Ghz</b> <b>6 Core CPU</b>
Page 119 , Point 13(x)	Display workstation : x.DICOM Print (Color and B&W)	Display workstation : x.DICOM Print ( <b>B&amp;W</b> )
		<b>Added Para :</b> <b>Vaccum assisted Biopsy to be offered (OPTIONAL)</b>
		<b>Added Para :</b> <b>TRAINING</b> <b>On site Training for a period of 4 Weeks in multiple intervals as required by the department.</b>
Page 119 ,Point 3	The Site Modification Work - Scope of Work MAMMOGRAPHY The cost of Site Modification Work for the area of 600sq.ft and Air-conditioning of Tonnage 6 TR will be considered for Ranking / Evaluation purpose	The Site Modification Work - Scope of Work MAMMOGRAPHY The cost of Site Modification Work for the area of 600sq.ft and Air-conditioning of Tonnage <b>10 TR (including standby unit/s)</b> will be considered for Ranking / Evaluation purpose
Page 119 ,Point 1-ii	Civil work : Concrete bed at Mammography equipment area.	Civil work : Concrete bed at Mammography equipment area <b>if required.</b>
Page 119 ,Point 1-b	Civil Work : Painting :- Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, <b>Lobby area</b> , console room, Mammography room	Civil Work : Painting :- Two coats Plastic Emulsion Paint over 2 coats of wall putty including primer in patient preparation area, console room, Mammography room
Page 119 ,Point 2	The Site Modification Work - Scope of Work MAMMOGRAPHY. Plumbing work : All water pipes and fittings shall be of high density polythene of approved and standard make. The gratings shall be brass chrome plated. All plumbing accessories should be of standard make	<b>Deleted</b>
Page 120 ,Point 4	The Site Modification Work - Scope of Work MAMMOGRAPHY. AIR CONDITIONING : Package air conditioners units/Split AC units may be used according to room requirement and suitability. Humidity control should be	The Site Modification Work - Scope of Work MAMMOGRAPHY. AIR CONDITIONING : <b>Ductable split air conditioners and split AC units</b> may be used according to room requirement and suitability. Humidity control should be effective to

	effective to eliminate moisture condensation on equipment surface	eliminate moisture condensation on equipment surface. The Air conditioning should be designed with standby provision to function 24 hours a day.
		<b>Added Para:</b> <b>Dual Energy-Contrast Enhancement Digital Mammography should be offered (OPTIONAL)</b>
		<b>Added Para :</b> <b>Steriotactic biopsy attachment should be offered as standard</b>
		<b>Added Para :</b> <b>All the Optional items offered should be quoted separately and the price should be valid for warranty period</b>

**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**